



THE POSITIVE MONEY PROPOSAL

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2nd April 2013

This paper is now out of date and should not be quoted. Please see the current version at: <http://bit.ly/1mdt7Yo>

ABSTRACT

This document presents a plan for monetary reform, based on a proposal 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. Variations of these ideas have since been proposed by Milton Friedman (1960), James Tobin (1987), John Kay (2009) and Laurence Kotlikoff (2010). Most recently, economists at the International Monetary Fund modelled Irving Fisher's original proposal and found both "strong support" for all of its claimed benefits and additional positive effects (Benes & Kumhof, 2012). While inspired by Irving Fisher's original work and variants on it, the proposals in this paper have some significant differences. The starting point was 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. The reform presented here develops Huber and Robertson's proposal further, building on a submission made by Ben Dyson (Positive Money), Josh Ryan-Collins and Tony Greenham (new economics foundation), and Richard Werner (University of Southampton) to the UK's Independent Commission on Banking in 2010. The proposals are also outlined in greater detail by Andrew Jackson and Ben Dyson in the book *Modernising Money* (2013).

The authors welcome feedback and suggestions for improvement.

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THE POSITIVE MONEY PROPOSAL IN BRIEF:

1. Commercial banks' demand deposits would be removed from their balance sheets and converted into state-issued currency held at the central bank.
 - Banks would be prohibited from holding or creating new demand deposits on their balance sheets
2. Commercial banks' time deposits would be converted into illiquid, non-transferable bank liabilities.
3. Thus, unlike in the current system where two types of money circulate separately – reserves created by the central bank and deposits created by commercial banks – in the reformed system there would be just one integrated quantity of central bank money used by banks, businesses and members of the public alike.
4. Individuals would then be faced with two choices with regards to where they could place their money:
 - In a 'Transaction Account' (similar to a current account today.) Although these accounts would be administered by commercial banks, they would be owned by the customer, with the funds in them held at the Bank of England. They would therefore be 100% safe, regardless of the financial position of the commercial bank that administered them. These accounts would collectively make up the payments system. No interest would be paid on these accounts.
 - In an 'Investment Account'. These accounts would remain on the commercial banks' balance sheets, and would not be guaranteed by the government (i.e. they would be risk-bearing). They would be non-transferable, and illiquid, with either maturity dates or minimum notice periods.
5. In the Conversion, banks' demand deposits would be converted into Transaction Accounts holding funds at the central bank. The demand deposit liability that banks presently hold to their customers (and which would be extinguished in the conversion process) would be replaced with an equal 'Conversion Liability' to the Bank of England, which would be repaid as the banks' assets mature.
 - The Bank of England would gain an asset, in the form of a conversion liability from the commercial banks.
6. In order to maintain the money supply, repayments to the Bank of England would be automatically circulated to the Treasury's account, from where they would be spent back into circulation, funding one or more of:
 - Tax cuts.
 - Spending increases.

- A citizens' dividend.
 - The repayment of the national debt.
7. With banks no longer able to create deposits through lending, the Bank of England would be the only institution able to alter the money supply.
 8. The decision on whether to increase or decrease the money supply would be taken by a completely democratically accountable, independent and transparent body, the Monetary Creation Committee, in line with a democratically mandated target set by government.
 9. The Bank of England would increase the money supply by either:
 - Granting money to the government to be spent into circulation, as above, or
 - Lending money to the banks to on-lend to businesses (to ensure an adequate supply of money for businesses to borrow).
 10. The Bank of England would decrease the money supply by one or more of the following:
 - Issuing/selling financial assets.
 - Not re-circulating some of the Conversion Liability (during the transitional period).
 - Not rolling over loans it made to banks to on-lend to businesses.
 - Removing from circulation taxes collected by the government (with the government's permission).

The Objectives of the Positive Money proposal:

1. To prevent banks from being able to create new money, in the form of bank deposits, in the process of making loans (or buying assets). As bank lending would no longer increase the amount of money in the economy, the money supply would be stable and permanent regardless of any over- or under-lending by banks. This would limit:
 - Asset price bubbles caused by bank credit creation.
 - Financial instability caused by asset price bubbles.
 - Business cycles caused by bank credit creation.
2. To separate the payments system from the lending/investing side of a bank's balance sheet.
3. To turn banks into true financial intermediaries: Banks would become money brokers, rather than money creators.
 - Banks would lend by borrowing state-issued currency from savers/investors (via Investment Accounts), and lending it to borrowers. New lending would not create new money, but simply transfer existing money (and purchasing power) from one entity to another.
4. To align risk and reward:

- Those individuals who did not want to take a risk with their money could place their money in a Transaction Account, where it would be 100% risk-free.
 - Those individuals who wanted to earn a return on their money could place their money in an Investment Account. They would earn an interest rate, but also take some risk.
 - There would be different Investment Accounts for different types of loan. This would prevent banks from taking large risks with funds from customers who wanted a low level of risk.
 - There would therefore be a clear distinction between truly risk-free money in a bank account, and a risk-bearing investment that could lose value.
 - Moral hazard would therefore be removed.
 - The subsidy to the banking sector would thereby be removed (which occurs due to some banks being ‘too big to fail’ and because of deposit insurance).
5. To allow banks to fail:
- Without large macroeconomic effects, and at no cost to the taxpayer:
 - The failure of a bank would no longer affect the broad money supply or the payments system.
 - While protecting depositors who had opted to keep their money safe:
 - Since funds in Transaction Accounts would never be placed at risk and would not sit on the bank’s balance sheet, when a bank failed due to insolvency its customers’ Transaction Accounts could easily be transferred across to another bank.
 - Thus solvency and liquidity issues affect the lending side of the bank’s business only – the Investment Accounts, the owners of which would become bank creditors in the event of an insolvency.
6. To return the power of money creation to the state.
- Newly created money would be spent into circulation by the government, allowing the private sector to pay down its debt without sparking a recession:
 - During the transition, when bank customers repay their loans to their banks, their banks would then repay their ‘Conversion Liability’ to the Bank of England. The Bank of England would then credit the government account with the value of the money repaid, and from there this money would be spent by the government, back into circulation.
 - In effect, the equality between money, in the form of bank deposits, and private debt, would be broken.

INTRODUCTION

Financial crises and business cycles are a common feature of economic 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, in both gold standards and fiat money systems, as well as within a huge variety of regulatory regimes. 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.”

Positive Money believes that financial crises and business cycles are not inevitable, but rather often occur as a result of allowing money, in the form of bank deposits, to be created by banks when they make loans or buy financial assets (see, for example, Ryan Collins et al. (2011), for a description of how commercial bank lending creates deposits¹). Indeed, a common denominator in all these monetary systems is that commercial banks have been the creators of the money supply. As economists such as Joseph Schumpeter (1934), Charles Kindleberger (1978), Hyman Minsky (1986), Richard Werner (2005), Dirk Bezemer (2009) and Steve Keen (2011) have pointed out, the creation of money by the banking sector increases the quantity of purchasing power in the economy, which can lead to temporary booms in the real economy and asset bubbles in financial markets. These debt-fuelled booms can in turn lead to recessions and in some cases full-blown financial crises. The recent global financial crisis is a case in point – as Lord Adair Turner (2012), the chairman of the UK’s Financial Services Authority, made clear: “The financial crisis of 2007/08 occurred because we failed to constrain the private financial system’s creation of private credit and money”.

Likewise, historical crises can be explained by the lending behaviour of commercial banks. Looking at a dataset comprising 14 advanced countries between 1870 and 2008, Schularick and Taylor (2009) find that “for the most part, financial crises throughout modern history can be viewed as “credit booms gone wrong””. The most important variable in predicting financial crises, they find, is past credit growth. In a separate paper Taylor (2012) goes further, stating that:

“Over 140 years there has been no systematic correlation of financial crises with either prior current account deficits or prior growth in public debt levels. Private credit has always been the only useful and reliable predictive factor.”

In addition, bank lending is also a major cause of the business cycle:

“...that credit booms matter as a financial crisis risk factor is a rather narrow conclusion, and that a more general and worrying correlation is evident. During any business cycle, whether ending in a financial crisis recession or just a normal recession, there is a very strong relationship between the growth of credit (relative to GDP) on

1. That is, banks do not need reserves, cash, or deposits before they lend, instead bank lending creates deposits. Base money is then endogenous to bank lending, and so the money multiplier model is incorrect.

the upswing, and the depth of the subsequent collapse in GDP on the downswing.”
(Taylor, 2012)

Essentially, excess creation of credit and money by the banking sector in an economic boom increases the severity of any subsequent downturn, whether it results in a financial crisis or just a normal recession. As Taylor (2012) notes, “economic outcomes are systematically worse the larger has been the prior credit boom”.

Attempts to regulate the current monetary system are unlikely to be successful. Capital, although useful for other purposes, cannot control the expansion of banks’ balance sheets: during relatively benign economic periods it is easy for banks to raise more capital in order to expand their lending. Likewise, as outlined in Arestis and Sawyer (2003), Jackson and Dyson (2013), Sanchez (2005) Tymoigne (2009) and Werner (2005, 2011), the setting of interest rates by the central bank is generally ineffective at controlling inflation. Even if these instruments did give a measure of control it would be unlikely to last – as Hyman Minsky (1986) argued, stability itself is destabilising. In a sense the problem is not a lack of regulation per se, rather, that in the current monetary system companies profit from the creation of money. As a result in relatively benign economic periods for banks to make profits and increase market share requires that they increase their lending (and in so doing create money). This lending, particularly when applied against assets with an inelastic supply, leads to asset price bubbles and financial crises.

Therefore, rather than the central bank’s attempting to regulate the current monetary system, it is the fundamental method of issuing and allocating a nation’s money supply that needs to change. The proposal outlined here is 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. 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 and additional positive effects (Benes & Kumhof, 2012).

While inspired by Irving Fisher’s original work and variants on it, the proposal in this paper has some significant differences. The starting point was the work of Joseph Huber and James Robertson in their book *Creating New Money* (2000), which updated and modified Fisher’s proposal to take account of the fact that money, the payments system and banking in general is now electronic, rather than paper-based. The reform presented here further develops Huber and Robertson’s proposal, building on a submission made by Ben Dyson (Positive Money), Josh Ryan-Collins and Tony Greenham (new economics foundation), and Prof. Richard Werner (Southampton University) to the UK’s Independent Commission on Banking in 2010. The proposal is outlined in greater detail by Andrew Jackson and Ben Dyson in the book *Modernising Money* (2013).

The rest of this paper proceeds as follows: In Part 1 the reforms are outlined from the perspective of an individual. Part 2 outlines the reforms from the perspective of a commercial bank. In Part 3 the reforms are outlined from the perspective of the central bank. An accounting perspective is given in Part 4, while Part 5 describes a method for transitioning from the current monetary system to the reformed system.

PART 1: THE REFORM FROM AN INDIVIDUAL'S PERSPECTIVE

After the reform there would be two distinct types of bank account available to businesses and members of the public:

Transaction Accounts would hold risk-free electronic money (created by the central bank), which could be used to make payments via the usual channels. The money in Transaction Accounts would legally belong to individual account holders and could not be used by banks to fund their own lending and investments, and therefore would never be put at any risk. Behind the scenes, this risk-free money would actually be held at the Bank of England, rather than being held on the banks' balance sheets, so that even if a bank became insolvent and failed, the money in its Transaction Accounts would be protected and not lost. Transaction Accounts, and the payment networks that allow electronic money to be transferred from one Transaction Account to another, collectively would make up the payment system.

Investment Accounts would be a way for a customer to hand money to the bank on the understanding that the bank would invest or lend it – i.e. intentionally place it at risk and try to earn a rate of return for the customer. The customer placing funds into an Investment Account would have to agree to lose access to those funds for a period of time, and would also bear some of the risk of the investment.

From the perspective of a bank customer, these two account types broadly correspond to a) the present-day current/checking account, where money can be withdrawn or spent on demand, and b) savings accounts that have fixed terms or minimum notice periods. However, as explained later, there are fundamental differences. Crucially, these changes mean that banks would no longer be able to lawfully create the type of (demand) deposits that can be used to make payments and therefore could no longer increase the total money supply as a result of their lending activities.

Transaction Accounts

Present-day current accounts would be replaced by Transaction Accounts. Transaction Accounts would still:

1. Provide cheques and ATM or debit cards.
2. Provide electronic payment services, including for salaries and other payments.
3. Provide instant access, for both electronic money transfers and cash withdrawals.
4. Provide overdrafts, if the bank saw fit.

However, unlike present-day current accounts, where the safety of the deposits in a current account depends on the health of the bank's balance sheet, Transaction Accounts would be entirely risk-free and secure. This would be because, while a Transaction Account holder may appear to be banking with a private commercial bank, the money in a Transaction Account would no longer be a liability of the bank. Instead, it would actually represent electronic money, issued by and held at the central bank. Funds in a Transaction Account would remain the legal property of the account holder, rather than

becoming the legal property of the bank (as they do in the current system). The customer would in a sense be hiring the bank to act as a middleman, whose role would be to relay instructions and information between the customer and the central bank. The bank would never actually take possession of the money, and would not be allowed to instruct the central bank to transfer it without the customer's express permission.

As a result, a bank would not be able to use the money in Transaction Accounts for making loans or funding its own investments. Because Transaction Accounts would not be held on any commercial bank's balance sheet but would actually be held in full at the Bank of England, they could be repaid in full (to all customers) at any time, without having any impact on any commercial bank's overall financial health or liquidity (and regardless of any bank's solvency). In effect, this would make Transaction Accounts 100% risk-free, electronic 'safe deposit boxes' for money. This would be in stark contrast to the present system where the money in checking accounts is lawfully the property of the bank, not the customer, with the customer being dependent on the continuing solvency of the bank.

With the money in Transaction Accounts safe by design, there would no longer be a need for a deposit guarantee scheme – any amount of money could be held in a Transaction Account with zero risk of loss and no exposure to the financial health of the commercial bank.

Account Fees for Transaction Accounts: Funds in Transaction Accounts would not be available to the bank to lend or invest, and therefore the bank would be unable to earn a return on these funds. However, banks would still incur the costs of administering these accounts (wages, etc.) and providing services associated with them (cheque books, ATM cards, etc.). With the cost of running a U.K. current account currently standing at around £5 per month, commercial banks would need to charge fees for these accounts to cover their costs and make a profit. In practice, there will be significant market pressure to keep account fees as low as possible.

Investment Accounts

After the reform, the bank would need to attract the funds that it wanted to use for any investment purpose (whether for loans, credit cards, mortgages, long term investing in stocks or short-term trading). These funds would be provided by customers, via their Investment Accounts. Investment Accounts would replace present-day savings accounts, including instant-access savings accounts and fixed-term investments through a bank. The term "Investment Account" has been chosen as it more accurately describes the purpose of these accounts – they would be risk-bearing investments rather than a 'safe' place to 'save' money.

Investment Accounts, like present-day savings accounts, would still:

1. Be used by customers who wish to earn interest on their spare money (savings).
2. Pay varying rates of interest.
3. Be provided by normal high-street banks.
4. Be liabilities of the bank to the customer who made the investment.

However, Investment Accounts would have some significant differences from present-day savings accounts:

An Investment Account would not hold money: An Investment Account would never actually hold any money. Any money 'placed in' an Investment Account by a customer would actually be immediately transferred from the customer's Transaction Account (which represents electronic money held at the Bank of England) to the commercial bank's 'Investment Pool' account (also held at the Bank of England and discussed in more detail below). At this point, the money would belong to the bank, rather than the Investment Account holder, and the bank would record the Investment Account as a liability to the customer, and the Investment Pool account as its asset. When the money invested was then lent to a borrower, it would be transferred from the commercial bank's Investment Pool (held at the Bank of England) to the borrower's Transaction Account (also held at the Bank of England).

An Investment Account would not be money: If a bank were to provide a service whereby a customer could 'reassign' ownership of all or part of his Investment Account, then it would be possible to use Investment Accounts to make payments. This would effectively give banks the ability to create money again, particularly if banks made it very easy for customers to reassign Investment Account ownership. Consequently, to prevent banks from being able to use their liabilities as substitutes for state-issued money, it would be necessary to ensure that ownership of Investment Accounts could not be 'reassigned'.

Investment Accounts would be illiquid: At the point of investment, customers would lose access to their money for a pre-agreed period of time. Customers would agree to either a 'maturity date' or a 'notice period' that would apply to the account. There would no longer be any form of 'instant access' savings accounts. This prohibition on instant access savings would be necessary in order to prevent banks from creating liabilities that could be used to make payments and thereby replicating the ability, that they have in the present system, to create money.

Investment Accounts would not be protected by government guarantee: The Financial Services Compensation Scheme would not apply to Investment Accounts (or Transaction Accounts – although Transaction Accounts would be entirely risk-free). Customers who wished to keep their money completely free of risk could put their money into Transaction Accounts, while customers who wanted to earn a return would be expected to take some risk (rather than having the risk passed onto the taxpayer).

Investment Accounts would be risk-bearing: If some borrowers failed to repay their loans, then the loss would be split between the bank and the holder of the Investment Account. This sharing of risk would ensure that both the bank and the investor's incentives were aligned correctly. Any investor opening an Investment Account would be made fully aware of the risks at the time of the investment, and those who did not wish to take a certain level of risk would be able to opt for alternative accounts that offered lower risks and consequently lower returns. Risk and reward would therefore be aligned, and much of the moral hazard associated with the current banking system would be removed.

If a commercial bank suffered such a large number of defaults (borrowers who were unable to repay their loans) that it became insolvent and failed, the bank would be closed, the remaining assets liquidated and the creditors paid off. Investment Account holders would have depositor preference (i.e. they would have priority in the queue of creditors waiting to be repaid). Amongst all Investment

Account holders, those who opted for the lowest risk accounts would be repaid before those who opted for the higher risk accounts.

Investment Accounts would have a specific purpose: At the point of opening an account, the bank would be required to inform the customer of the intended uses for the money to be invested. Typically the broad category of investment would correspond to the level of risk taken. The broad categories of investment would need to be set by the financial authorities.

This change is designed to ensure that the types of investment made by the bank (with customers' money) more closely represent the types of investments that the customers themselves would want. These categories would be at the industry or sectoral level, so Investment Account holders would have the choice of investing in property, businesses, or financial markets, for example, but would not be picking the particular companies in which they wanted to invest.

PART 2: THE REFORM FROM A COMMERCIAL BANK'S PERSPECTIVE

The previous section described the different types of accounts available to non-banks. This section describes the types of account that commercial banks would hold at the central bank. The important thing to take away from the previous section is that although individuals and businesses would from their perspective still be banking with HSBC, RBS, etc., commercial banks would actually only be administering these accounts on their customers' behalf. In reality, all Transaction Accounts would be held at the central bank – i.e. everyone would in fact be banking at the central bank. Thus, unlike in the current system where two types of money circulate separately – central bank reserves which are only used by the banking sector, and commercial bank deposit money which is used by everyone else – in the reformed system there would no longer be a split circulation of money, just one integrated quantity of money circulating among banks and non-banks alike.

In this section the reforms are presented from the point of view of a commercial bank. In particular, the types of accounts available to a commercial bank at the central bank are presented.

Accounts Available to Commercial Banks at the Bank of England

Under the present-day system, commercial banks have accounts at the Bank of England in which they keep 'central bank reserves'. After the reform, each bank would instead manage three distinct accounts at the Bank of England. These accounts would hold electronic money that had been created exclusively by the Bank of England. The accounts would be:

The Operational Account: This would be an account where the bank would hold funds for its own purposes: retained revenue, proceeds of capital raising from shareholders, money to pay staff wages, etc. In short, it would be a bank's 'own money' acquired through the running of the bank. The money in this account would be owned by the bank and the account would be recorded as an asset of the bank.

The Investment Pool: This would be the account that a bank would use to receive funds from customers, make loans to borrowers, receive loan repayments from borrowers and make payments back to Investment Account holders. In short, this account would represent the lending side of the bank's activities. The money in this account would be owned by the bank and the account would be recorded as an asset of the bank.

The Customer Funds Account: This would be the account in which the bank's customers' Transaction Account funds would be held. When someone at another bank made a payment to a Transaction Account holder, the balance of the receiving bank's Customer Funds Account would increase. When a Transaction Account holder made a payment to someone who used a different bank, the balance of this account would decrease. The money in this account would not be owned by the bank nor would the account be an asset of the bank. The bank would merely administer this account on behalf of its customers.

The Customer Funds Account and its Relationship to the Balance Sheet

The money placed into Transaction Accounts at a bank would actually be held, in electronic form, at the Bank of England. However, the Bank of England would not need to hold any information on individual customers or the balance of individual customer accounts – this would be the responsibility of the individual banks.

The aggregate balance of all the Transaction Accounts administered by a particular bank would make up the Customer Funds Account, which would be held at the Bank of England. However, while the commercial bank would administer payments into and out of this account on behalf of its customers, it would not own this account or any of the money within it.

Each bank would record the amount of this money owned by each and every one of its individual Transaction Account holders and the transactions made in and out of each customer's account. A simple example of a bank's internal database may be something like this:

MegaBank's Transaction Accounts	
Customer	Balance
Mrs K Smith	£546.21
Mr W Riley	£1942.52
Mr J Heath	£26.78
...	...
Total Balance of Customer Funds Account at Bank of England:	£168,023,163,295.72

Because the Customer Funds Accounts would not be the property of the commercial bank they would not appear on its balance sheet. Instead they would be the property of the individual Transaction Account owners and as such would be recorded on a separate register.

Other changes include the addition of the Operational Account and Investment Pool at the Bank of England, replacing the former entry of 'Deposits at the Bank of England' (i.e. central bank reserves). Investment Accounts (representing investments made by customers) would be recorded as a liability of the bank to a customer, just as present-day time deposits are. For example:

MegaBank's Balance Sheet	
Assets	Liabilities
Loans outstanding	Investment Accounts
Cash	Interbank borrowing
Operational Account	Shareholder equity

MegaBank's Administered Customer Funds Accounts
Transaction Accounts

Investment Pool

Property & fixed assets

Meanwhile, the Bank of England's own database would appear as below, recording the aggregate balance of the Customer Funds Accounts, Investment Pools and Operational Accounts, but no details of any individual's accounts²:

Bank of England	
Bank	Customer Funds Account Balance
MegaBank Administered Customer Funds Account	£168,023,163,295.72
MegaBank Investment Pool	£145,023.00
MegaBank Operational Account	£295,451.72
NewBank Administered Customer Funds Account	£156,023,123,714.52
...	...
Total Balance of all accounts	£868,023,163,295.72

Payments, Loans and Maturity transformation

Payments: Payments between accounts held at different banks would be made in much the same way that interbank payments are made today – money would move between the Customer Funds Account of the payer bank to the Customer Funds Account of the payee bank, and the individual banks would update their records of Transaction Account balances as appropriate.

Loans: By placing money into an Investment Account the customer will have transferred ownership of their money to their bank. This will involve a decrease in the balance of their Transaction Account and an increase in the balance of their Investment Account. Behind the scenes, money will have moved from the Customer Funds Account to the bank's Investment Pool at the Bank of England. This money is then lent when the bank transfers the money from their Investment Pool into the Customer Funds Account, with the borrowing customer's Transaction Account being marked up accordingly.

Unlike in the current system, this would not increase the quantity of money in circulation – the act of making loans would merely transfer pre-existing money from one Transaction Account to another Transaction Account (via a bank's Investment Pool). While the quantity of Investment Accounts would have increased, these would be illiquid and non-transferable and so could not be considered money.

Maturity transformation: in this system maturity transformation – the funding of long term loans with short term investments – would still be possible. As a simplified example, a 10-year loan of £2,000 could be funded by 10 individuals each placing £2000 into an Investment Account for a year at a time, in sequence.

2. However, this need not be the case: the Bank of England could have details of every individual account.

In addition, loans would not need to be funded by an Investment Account deposit of the same size – several smaller Investment Account deposits could be used to fund a large loan, or conversely a large Investment Account deposit could be used to fund several loans.

PART 3: THE REFORM FROM THE CENTRAL BANK'S PERSPECTIVE

In this section the reforms are presented from the perspective of the central bank. The major change for the central bank would be that with commercial banks no longer able to create money, the central bank would be the sole creator of money in the economy. Money created by the central bank would be the only type of money circulating in the economy, used by banks and non-banks alike. In the main this new money would be granted to government to be spent into circulation. In a monetary system reformed as proposed in this paper, the spending – rather than lending – of money into circulation would raise fundamental questions about the way in which money is accounted for on the central bank's balance sheet. This issue will be discussed in a subsequent section.

Creating new 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 would 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?

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.

In short, neither profit-seeking bankers nor vote-seeking politicians can be trusted with the power to create money, as the incentives both groups face will lead them to abuse this power for personal, party, or company gain. Instead, we must ensure that the creators of the money supply do not benefit from creating it. This requires the separation of the decision on *a*) how much new money is to be created from *b*) how that newly created money is to be used.

The two decisions are therefore given to completely separate bodies. We recommend that an independent body, the Monetary Creation Committee (MCC), should take decisions over how much new money should be created, while the elected government of the day should make the decision over how that money will be spent. Alternatively, the MCC may lend money to the banks to on-lend into the 'real' economy, in which case the decision over where the money is lent will be made, within broad guidelines, by the banks.

Deciding how much money to create: the Monetary Creation Committee (MCC)

The decision over how much new money to create would be given to an independent body, to be known as the Monetary Creation Committee (MCC). The MCC must be politically independent and neutral, just as the Monetary Policy Committee at the Bank of England (responsible for setting interest rates) is today.

In line with democratic principles, Parliament should determine the target of monetary policy. In the UK today the Bank of England follows a flexible inflation targeting regime, however if under a reformed system Parliament decides objectives other than price stability are desirable, it would have the ability to change the MCC's mandate.

Assuming for the sake of simplicity that the central bank has an inflation target, in deciding the amount of money that would be added or removed from circulation, the MCC would broadly aim to change the growth rate of the money supply in order to keep inflation at the target level (e.g. 2% a year). If inflation was above the target rate, and the MCC believed that this was due to monetary reasons, then the MCC would slow or stop the creation of new money. Note that the MCC's decision would be based on the amount of additional money it considered necessary to meet the inflation target. Under no circumstances would the MCC be creating money for the purpose of enabling the government to fulfil its election manifesto promises.

The Monetary Creation Committee would have no control over how the newly created money granted to government would be used. Whilst the way the money is used would determine to some degree its effect on inflation, giving the MCC any influence over how the money is spent would introduce a conflict of interest, whereby its members might find that their judgement was swayed by their opinion on the government's policies and projects (this is also the reason why the amount of newly created money should not be determined by the government - they are likely to be incentivised to create too much money in the run up to elections, leading to a political business cycle). In order to prevent this conflict of interest from arising, and to ensure that the MCC did not become politicised, the decision over how much money would be created and what that money would be used for would have to be taken by separate bodies.

Interest rates and Monetarism

Currently, the Monetary Policy Committee attempts to control bank lending – and therefore the quantity of broad money in the economy – by influencing the interest rate at which banks lend to each other on the interbank market (for a good description see Clews et al., 2010). After the reform, the MCC would have direct control over the money supply and so there would be no need for the MCC to use interest rates to affect it. Instead the money supply would be controlled directly, with interest rates determined by the markets.

A common misconception of these proposed reforms is that they are in a sense advocating a return to monetarist policies of the 1980s. It is important to note that the main reason monetarism failed was because central banks were attempting to control the growth in bank deposits (mainly through bank lending) through restricting the monetary base (although there is evidence that the central bank was actually using interest rates to achieve its goals rather than restricting reserves). The theory was that

the quantity of money on deposit at the central bank (reserves) could be used to restrict the quantity of deposits at private banks (broad money). This policy was in part based on a money multiplier view of bank lending – that banks required deposits (or central bank reserves) before they could make loans. However, the money multiplier model gets causality the wrong way round – loans in fact create deposits and reserves are required by banks only to settle payments between themselves. In short, base money is endogenous to the creation of bank deposits and is supplied by the central bank on demand. Central Banks were unable to credibly restrict the supply of reserves to any private bank once it had made loans, as to do so could have led to the bank in question being unable to make payments to other banks. This could have led to a bank run and as such would have contravened the central bank's remit to maintain financial stability.

However, under the reforms outlined here commercial banks would no longer hold deposits on their balance sheets – all money would exist on the central bank's balance sheet (i.e. there would only be one quantity of money circulating in the economy, used by banks and non-banks alike). As a result, the central bank would not be attempting to control the creation of deposits on commercial banks' balance sheets through limiting deposits on its own balance sheet; rather, as money would exist only on the central bank balance sheet, and because the central bank would be the only creator of money, the MCC would be able to control the money supply directly.

With the MCC having direct control over the amount of money in the economy, the Monetary Policy Committee at the Bank of England would no longer be needed and could be disbanded.

How the Monetary Creation Committee would work

Each month, the Monetary Creation Committee would meet and decide whether to increase, decrease, or hold constant the level of money in the economy. During their monthly meetings the MCC would decide upon two figures:

1. The amount of new money needed in order to hit their democratically mandated target. If this target was a simple inflation target, as in the example above, this would mean creating money in order to maintain aggregate demand at the level consistent with the targeted rate of inflation (similar to the setting of interest rates today).
2. The amount of new lending needed in order to avoid a credit crunch in the real (non-financial) economy and therefore a fall in output and employment.

Both figures would be determined, as is the case now when setting interest rates, by reference to appropriate macroeconomic data, including the Bank of England's Credit Conditions Survey. Once a conclusion had been made on the two figures mentioned above, then the Monetary Creation Committee would authorise the creation of a specific amount of new money. This newly created money could then enter the economy in one or both of two ways:

1. The first (and most common) of these would be to grant the money to the government (by increasing the balance of the Central Government Account), which would then spend this money into circulation, as discussed in the next section. This process would increase the money supply without increasing the level of private debt in the economy and can therefore be thought

of as 'debt-free' money creation.

2. The second method would be for the central bank to create new money and lend it to banks, with the understanding that this money would be on-lent to businesses that contributed to GDP (but not for mortgages or financial speculation). This option would provide a tool to ensure that businesses in the real economy did not suffer from a lack of access to credit.

Both options are outlined in detail below.

Spending money into circulation

Upon making a decision to increase the money supply, the MCC would authorise the Bank of England to create new money by increasing the balance of the government's account. This newly-created money would be non-repayable and therefore debt-free.

The newly-created money would then be added to tax revenue and distributed according to the elected government's manifesto and priorities. The newly-created money could be used for any one or a combination of the following: 1) increase spending; 2) reduce taxes; 3) pay a citizens' dividend; 4) pay down the national debt.

1. **Increasing government spending:** By using the newly created money to increase government spending, the government could increase the provision or quality of public services such as education, health care or public transport, without increasing the tax burden on the public.
2. **Cutting taxes:** Rather than increasing government spending, the elected government of the day could choose to reduce the overall tax burden. As a general principle, any government using the proceeds of this reform to reduce taxation could aim to reduce or eliminate some of the most regressive or market distorting taxes. There are, however, problems with this approach: while changes in taxes are made infrequently, the amount of newly created money spent into the economy would be determined on a monthly basis. Not being able to predict or influence the decisions of the MCC would mean that the government would have little idea as to how much new money would be created each year and therefore by how much it would be able to reduce taxes. For this reason, cancelling or reducing taxes may not be the most effective way (in terms of the government's financial planning) of distributing newly created money into the economy.
3. **Making direct payments to citizens:** One alternative is for the newly created money to be shared equally between all citizens (or all adults, or all registered taxpayers). This would also mean that the newly created money would be most widely distributed across the economy, rather than being concentrated in particular areas of the country or sectors of the economy as a result of large government projects.
4. **Paying down the national debt:** The government could use the newly created money to retire (pay down) some of the national debt. However, there are problems with this approach, one of which is the fact that the newly created money would go first to holders of government bonds and would tend to stay circulating within the financial markets, rather than reaching the real economy. In addition, the national debt is currently smaller and incurs a lower rate of interest than private debt.

Lending money into circulation and regional investment banks

After the reform, the Monetary Creation Committee would also be tasked with ensuring that businesses in the real (non-financial) economy have an adequate access to credit. The Bank of England would monitor the UK economy both through quantitative and qualitative methods (such as the Credit Conditions Survey). If, based on this analysis, the Bank of England concluded that banks were unable to meet demand for loans from creditworthy borrowers and businesses and this is negatively affecting the economy (perhaps because difficulties in securing funding is placing large numbers of otherwise healthy companies in financial distress), then the Bank of England may make up the shortfall by lending a pre-determined amount to commercial banks expressly for this purpose.

This is especially important in the UK, where less than 10% of all bank lending goes towards businesses that contribute to GDP (Ryan-Collins et al. 2011). For example, the MCC may decide in its monthly meetings to lend some newly created money to banks, with the restriction that the banks could only lend this money to businesses that contribute to GDP (i.e. it could not be lent for financial speculation, consumer finance or mortgages). Banks would still be responsible for deciding which businesses they should lend to - the Bank of England would not be making loans direct to businesses., nor choosing the businesses that were to receive loans.

The government could, if it so desired, make this lending facility permanent, by turning it into an overdraft facility that banks could use to access funds (perhaps on the condition that these loans were only for businesses that contribute to GDP). Alternatively, the government could set up a series of regional investment banks for this purpose, which would lend and create money under the central bank's stewardship.

PART 4: THE REFORM FROM AN ACCOUNTING PERSPECTIVE

This section discusses the different ways in which the central bank's balance sheet might be presented after the reform. Whichever system is used is a matter of taste and is largely immaterial. Accountancy is after all not the reality; rather it is the recording of the reality. The American Institute of Certified Public Accountants (AICPA) defines accountancy as:

“the art of recording, classifying, and summarizing in a significant manner and in terms of money, transactions and events which are, in part at least, of financial character, and interpreting the results thereof.” (AICPA Committee on Terminology, 1953)

The fundamental issue considered is how to account for money on the central bank's balance sheet, and what backs this money. The following section explains how the Positive Money proposal could be implemented within the current accounting classification framework and given current norms in central banking. However, for reasons given in the subsequent section (alternative accounting treatments) we suggest that money should be reclassified on the balance sheet to reflect the realities of the current fiat money system.

The Traditional Method

During the transitional period (as explained in the subsequent section) the money on the central bank's balance sheet would be 'backed' by the outstanding debt the banks have to the central bank (as a result of the conversion liability - see part 5 for a description). As this money was repaid the central bank would reduce its assets and its liabilities one for one. To keep the stock of money constant (or to increase it) the central bank would be obliged to credit the government's account (a liability), from where it would be spent back into circulation. This would create a dilemma for the central bank: at this point its liabilities would be increasing yet its assets would not. If this were to continue it would lead to the central bank eventually becoming insolvent in a strict accountancy sense.

To remain solvent the central bank would have to find a way of increasing the government's account at the central bank (its liability to the government) at the same time as it increased its stock of assets. One method for doing so would be through what Turner (2013) has recently called 'Overt Monetary Financing' (2013). In short, this would involve the central bank creating money and using it to buy government debt, which would result in the government account being credited. In this scenario the central bank would increase its assets (as it purchased the bond) in tandem with the increase in its liabilities. These bonds would then be rolled over as they matured – the government would pay the central bank the money it owed, reducing the money supply by that amount, only for the central bank to immediately buy an equivalent amount of government bonds in order to maintain the money supply. Likewise any coupons (interest) paid on these bonds throughout the course of their lifetime would be paid back to government (at present, the central bank's profits are paid to government). This has the effect of preventing the money supply from falling as well as preventing any interest costs to government incurred from the issuing of the bonds.

It should be noted that the portion of government debt that would be used to 'back' the money supply,

and in effect keep the central bank solvent, would not be the same as other forms of government debt – i.e. this debt would never need to be repaid (as it would be financed by money creation), as long as the increase in the money supply is viewed as permanent. If the government and central bank were so inclined, the charade of continuously rolling over the bonds could be solved by issuing a perpetual bond such as a consol. Likewise, the charade of the government paying interest to the central bank only to be paid it straight back could be solved by a zero coupon.

This ‘traditional method’ relies on the coordination of the government and the central bank – in order to create money the central bank requires that the government issues bonds. The traditional method also requires that the government debt increase in line with increases in the money supply (although in one sense these are not really debts of the government, as they do not need to be repaid). While this is not a problem technically it could be politically, given the concerns that some parts of the press and the public have with the size of the national debt. These concerns could spill over into economic impacts – if the increase in the money supply was not viewed as permanent (i.e. if people thought the government debt held against the increased supply of money would need to be repaid), there might be some Ricardian equivalence effects.

One method which could be used to circumvent the political issues of increasing government debt would be to simply not include debt held against increases in the money supply as part of the preferred measure of calculating the national debt. The UK government currently employs a similar technique with regard to the national debt incurred in the bank bailouts of RBS and Lloyds: the national debt figures commonly quoted in the press do not include the debts incurred in the bank bailouts; instead they are only counted in the ‘unadjusted measure of public sector net debt’ figure.

Bank of England Balance Sheet	
Assets	Liabilities
Other Assets	Other Liabilities
Government Bonds / Consols	Customer Fund Accounts
	Commercial Banks' Operational Accounts and Investment Pools
	Central Government Accounts
	Equity

Alternative Accounting treatments

The problem of accounting for money

There are two fundamental problems with how money is classified. One is what backs it – since the end of the gold standard the national currency has not been exchangeable at the central bank for anything other than the same amount of national currency, yet the central bank still feels the need to hold financial assets against the money it issues, mainly in the form of bonds, or repos backed with

government bonds. Yet government bonds are merely promises to pay money (central bank liabilities) at a future date. As a result, money held in hand today is supposedly backed by the promise of money in the future. Why does money need something behind it to make it valuable?

The second problem is how to classify money on a balance sheet. Money has traditionally been classified as a liability, which The International Accounting Standards Board defines as:

“a present obligation of the entity arising from past events, the settlement of which is expected to result in an outflow from the entity of resources embodying economic benefits.” (IASB Framework, paragraph 49(b))

A liability implies that at some point in the future, some value is expected to be paid over to a creditor. This is clearly an inappropriate treatment for fiat money since fiat money is its own means of settlement. As a result of these apparent contradictions, Positive Money would like to see money reclassified and the accounting for money creation altered to make it logically consistent with a fiat money system (alternative method 2 or 3, below).

However, whether accountants and central bankers do get round to reclassifying money is relatively unimportant as far as the implementation of the Positive Money system is concerned.

Alternative Method 1: In the traditional method above, the central bank buys government financial assets in order to prevent its balance sheet from showing insolvency. Alternatively, it could choose to recognise the charade of buying and forever rolling over government issued assets for what it is, and acknowledge that in a fiat currency system money does not need anything backing it to give it value – the value of money comes from the fact that it is demanded to buy goods and services and pay taxes, and because there are goods and services available to be purchased. (If there was a massive fall in the productive capacity of an economy, the value of the currency would be likely to drop sharply).

For example, the central bank could simply grant the money to the government (by crediting the government’s account), from where the government could spend this money into circulation. Under a traditional accounting system, where the money created by the central bank is its liability, the creation and granting of money to government will eventually lead, technically, to the insolvency of the central bank, as the central bank will not receive a financial asset to balance the increase in its liabilities. However, although insolvency is a problem for a commercial bank, it could be argued that this is not the case for central banks:

“... despite the common belief that central banks need to have assets that exceed their notional liabilities, there is no concrete basis for this position. Systems like the Gold Standard required a central bank to “back” the money in circulation with a specific asset but there is no such requirement when operating a modern fiat currency. A central bank operating a fiat currency could have assets that fall below the value of the money it has issued – the balance sheet could show it to be “insolvent” – without having an impact on the value of the currency in circulation. A fiat currency’s value, its real purchasing power, is determined by how much money has been supplied and the factors influencing money demand, not by the central bank’s stock of assets.” (Whelan, 2012)

So the central bank could simply create a certain amount of money, and credit it to the central government account (increasing its liabilities but not its assets). From here the newly created money would be spent into circulation. Again, while this method of money creation is not a problem technically, to the extent that financial markets view it as a problem it could have real effects, particularly in the short run.

Bank of England Balance Sheet (method 1)	
Assets	Liabilities
Other Assets	Other Liabilities
Negative Equity	Customer Funds Accounts
	Commercial Banks' Operational Accounts and Investment Pools
	Central Government Accounts

Alternative Method 2: as was outlined in the previous sections the treatment of money is somewhat a hangover from the gold standard and is therefore logically incoherent – money neither has anything backing it nor conforms to the proper definition of a liability.

This leaves us with the question of how should money then be accounted for on a balance sheet? One option would be to reclassify money on a balance sheet to be part of capital (equity), as coins are currently classified by the US Mint:

“[It] is critical to realize that the stock of reserves, or money, newly issued by the government is not a debt [i.e. liability] of the government. The reason is that fiat money is not redeemable, in that holders of money cannot claim repayment in something other than money. Money is therefore properly treated as government equity rather than government debt, which is exactly how treasury coin is currently treated.”
(Benes & Kumhof, 2012)

Alternatively, money could be accounted for in the same way that gold is – as an asset of the holder and a liability of no one. This would in effect convert money into an electronic token (and is outlined in the subsequent section).

Should money be classified as capital? If we consider that within countries, those that use a currency constitute an economic community that co-operate in the production of goods and services: those that accept money trust that there will be things available to spend the money on in the future, entailing production by other members of the community. Holding currency therefore entitles the holder to a share of the productive capacity of the economy in line with their money holding. Individuals who give their own resources are partners in the enterprise, with the moral (although not always the legal) right to a share in the benefits in line with their input arising from the operation of that enterprise. In short, holdings of a currency give evidence of the commitment of productive resources, by or on behalf of the holders of the currency, to the common enterprise delimited by that currency. Currency

holders are therefore shareholders in that enterprise and their currency holdings represent their share in the benefits arising from that enterprise, benefits that take the form of the goods and services available for sale, or to be made available, and priced in that currency.

And what should back money? As discussed previously, what backs money is not bonds or loans, but the belief that there will be something available to swap money for in the future. As Niall Ferguson puts it in the *Ascent of Money*: “Money is not metal. It is trust inscribed. And it does not seem to matter much where it is inscribed: on silver, on clay, on paper, on a liquid crystal display.” (2008) Money is therefore backed by the productive capacity of the economy – this can be seen quite clearly with reference to certain historical episodes of hyperinflations. For example, in Zimbabwe it was the sudden drop in production that led to the initial surge in inflation – changes in economic output led to a change in the value of the Zimbabwean dollar.

What backs money is therefore the ‘productive capacity of the economy’, and the asset side of the central bank’s balance sheet should reflect this fact. The central bank should therefore hold an asset named the ‘productive potential of the economy’, which will account for the benefits accruing to the economy from the newly issued money. So, if the Monetary Creation Committee wishes to increase the money supply of the economy it will simultaneously increase the balance of the Government Account and the ‘productive potential of the economy’ asset on the central bank’s balance sheet. Any loans from the central bank to private banks will be accounted for in the normal way.

In conclusion, the ‘asset’ backing money is in fact the productive capacity of the economy, while money itself should be classified as equity in the commonwealth rather than government debt. While these ideas may seem strange to accountants and central bankers, in effect they simply recognise the reality of what money really is, and what gives money its value in a fiat currency system.

Bank of England Balance Sheet	
Assets	Liabilities
Other Assets	Other Liabilities
The ‘productive capacity of the economy’	Customer Funds Accounts (in equity)
	Commercial Banks’ Operational Accounts and Investment Pools (in equity)
	Central Government Account (in equity)
	Equity

Alternative Method 3: The final method of accounting for money will seem to be the most radical to accountants, whilst simultaneously being the way in which the majority of the general public thinks of money now. In short, electronic, state-issued money would be an asset of the holder but not a liability of the central bank or the Treasury. Electronic, state-issued currency would simply be a number in an account at the Bank of England. These accounts would be held off the Bank of England’s balance sheet, so these numbers are not liabilities of the Bank of England. Instead, they should be seen as electronic tokens, held in custody for the owners of the tokens (money). The owners may be banks (for the

Investment Pools and Operational Accounts), the government (for the Central Government Account) or members of the public (for the aggregated Customer Funds Accounts).

There would therefore be no need to have any asset ‘backing’ the currency. Any money created by the central bank and granted to the government would simply result in an increase in the value of the government’s account – as money would not be recorded as a liability of the central bank there would be no need to increase any of the central bank’s assets.

Bank of England Balance Sheet (method 3)	
Assets	Liabilities
Other Assets	Other Liabilities
Bank of England’s Operating Funds Account	Equity

Bank of England Database
Accounts held in Custody
Central Government Account
Bank of England Account
Commercial Banks’ Operational Accounts and Investment Pools
Commercial Banks’ Customer Funds Accounts

PART 5: MAKING THE TRANSITION TO A REFORMED SYSTEM

The previous sections showed how an alternative monetary system could operate. In this section one method for transitioning to this new monetary system from the current system is discussed.

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

1. The overnight 'switchover' on a specified date when the demand deposits of banks would be converted into state-issued currency and customers' accounts would 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 would allow a significant reduction in household debt and a gradual reduction in the size of the aggregated balance sheet of the banking sector.

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

Stylised balance sheets for the Bank of England, the commercial banking sector and the household sector prior to the reforms are shown in Figure 1. Figure 2 shows the same balance sheets one day after the reform, whereas Figure 3 shows the balance sheets 30 years after the reform. These balance sheets can be found at the end of the paper.

The overnight 'switchover' to the new system

The following steps would take place instantaneously on a specified date, known as the 'switchover' date.

The first step would be to calculate each bank's total amount of pound sterling demand liabilities. Secondly, the total aggregate demand liability of each bank would be removed from its balance sheet, and an equal amount of new state-issued currency would be created and placed into the new Customer Funds Account that the bank would administer.

This would be state-issued currency, held at the Bank of England, which would belong to the demand deposit account holders. In effect, the Bank of England would have 'extinguished' the banks' demand liabilities to their customers by creating new state-issued electronic currency and transferring ownership of that currency to the relevant customers. Simultaneously, each bank would convert its fixed-term and fixed-notice savings accounts into Investment Accounts. These Investment Accounts would still be recorded on the balance sheet of each bank as liabilities of the bank to the customer.

Customers of banks would then have either a) electronic money in their Transaction Account, with the actual money being held at the central bank, and which could be used to make payments on demand, or b) a claim on a bank, via their Investment Account, which has a maturity date or notice period and which would still be a liability of the bank, to be paid in the future. Each bank would no

longer have any demand deposits at all, and the only accounts held on its balance sheet would be Investment Accounts, with fixed term and/or fixed notice periods.

If removing the demand liabilities from bank balance sheets were the end of the process, then the UK banking sector in aggregate would lose a liability without losing an asset, which would increase their collective net worth and shareholder equity. To negate this effect, the old demand liability to the customers would be replaced with a new liability, called the Conversion Liability to the Bank of England, leaving the net worth and balance sheets of the banks completely unchanged (fig. 2). The assets side would also be unchanged, as reserve accounts – deposits of banks at the Bank of England – would have simply been converted into the new Operational Accounts, which would still be held as an asset of the commercial bank.

The Conversion Liability owed by each commercial bank to the Bank of England would in effect be a charge, at face value, for the money that the Bank of England would have created to extinguish the bank's demand liabilities to its customers. The liability would be repayable to the Bank of England at a schedule that matches the maturity profile of the bank's assets (i.e. as the bank's loans to businesses and the public were gradually repaid, the bank would repay the Bank of England). Under normal circumstances the Bank of England would be required to automatically grant the money paid to it as a result of the repayment of the Conversion Liability to the Treasury to be spent back into the economy.

Ensuring banks will be able to provide adequate credit immediately after the switchover

From the changes made in the previous section, we can see that on the morning immediately following the switchover, the Investment Pools of banks would have balances of zero, implying that banks would be unable to lend until they had first acquired funds from elsewhere (although banks would be able to lend the money from their Operational Accounts). This section looks at where this funding for lending could come from.

As a matter of routine banks would be able to access funds from their customers:

1. From new Investment Accounts opened by customers. On any particular day, there will be a number of customers who wish to put money aside to earn some interest. Upon opening Investment Accounts they will provide funds for lending.
2. From loan repayments from existing borrowers. The money from these borrowers, if it were not needed to repay Investment Account holders (many of whom could be expected to roll over their investments) could be re-lent. On any particular day, significant sums of money would be collected from borrowers in loan repayments and interest - for example, banks currently earn around £200 million per day in interest payments (although some of this money would be needed to pay off Investment Account investors wishing to withdraw money.)

Taken together, these points suggest that it is unlikely that banks will find themselves short of funds to lend immediately after the reform. However, if these sources provided inadequate, banks could also obtain funds from two additional sources.

3. Lending the money created through quantitative easing. After the overnight switchover the reserve accounts at the Bank of England would be converted into Operational Accounts, which would hold state-issued electronic currency. Crucially, unlike central bank reserves (which can only be used to make payments to other banks), this state-issued currency can be lent to members of the public.

As a result, on the morning after the switchover, there would be £217.6bn of state-issued currency in the bank's Operational Accounts (on 2012 figures). This sum would be far beyond what the banks would need for actual operating funds (i.e. to cover salaries, rent and other operating costs) and so they would probably wish to use a significant proportion of these funds for lending. For that reason, it would be unlikely that there would be any shortage of funds available for lending by banks on the day after the switchover.

In fact, the danger immediately after the reform may not be that there would be a shortage of lendable funds, but that there would be a glut of funds due to the large balances in these Operational Accounts, and as a result an incentive for banks to lend too much too quickly. For that reason, the Bank of England may want to take steps to actually reduce the amount of central bank reserves before the switchover, to avoid the risk of a potential lending boom.

4. As explained in Part 4, if the Bank of England concluded that banks were unable to meet demand for loans from creditworthy borrowers and businesses and that this was negatively affecting the economy, then it could make up the shortfall by lending a pre-determined amount to commercial banks expressly for this purpose - i.e. the Bank of England would lend to banks to on lend into the economy. The government could, if it so desired, make this lending facility permanent, by turning it into an overdraft facility that banks could use to access funds (perhaps on the condition that these loans were only for businesses that contribute to GDP).

The longer-term transition

Repayment of the Conversion Liability

Figure 3 details how the balance sheets of the economy would look after the transition was complete. The Conversion Liability would be repaid as the bank's loans were gradually repaid. The exact rate of repayment would need to be agreed between the bank in question and the Bank of England, to ensure that the repayments would be spread fairly evenly over a number of years and that the rate of repayment did not reduce the bank's ability to provide a useful level of lending throughout the transition.

Repayment of the Conversion Liability momentarily reduces the money supply and the Bank of England's assets in equal measure as funds in commercial banks' Operational Accounts at the central bank are used to repay the commercial banks' conversion liability to the central bank. Normally (i.e. when the Bank of England does not want the money supply to fall) the repayment of this liability would result in the Bank of England immediately creating an equivalent amount of money by crediting the Treasury's account, from where it could be spent back into the economy. Over a period of around 20 years this would give the government additional seigniorage revenue equal in value to the conversion liability.

This seigniorage does not increase the money supply; it is simply the recycling of loan repayments (by

businesses and households) back into the economy via spending rather than new lending.

Allowing deleveraging by reducing private sector debt

There is a crucial difference between loan repayments made by borrowers in the reformed and current monetary systems. Within the current system, when loans are repaid, the bank reduces both its assets (the loan) and its liabilities (the borrower's bank account balance) in tandem, reducing the quantity of bank deposits and thus the money supply. For the money supply to return to its previous level requires someone else to borrow, which restores the overall level of personal debt. This precludes any significant reduction in the level of private sector debt, as a smaller broad money supply tends to be associated with a lower level of economic activity and an increased likelihood of recession. After the reform, loan repayments would not reduce the money supply, because the act of repaying a loan would simply involve transferring state-issued electronic currency from the borrower's Transaction Account to the bank's Investment Pool. From the bank's Investment Pool the money would either be used to make further loans, repay Investment Account holders, or, during the transitional period, repay the bank's Conversion Liability to the Treasury.

The repayment of the Conversion Liability would transfer money to the government's bank account, from where it would be spent back into the economy. As a result, the money supply would be maintained, although because the money would be spent and not lent into circulation, debt would be lower.

It is important to remember that while the transition process requires banks to repay the Conversion Liability to the Bank of England, it would not require there to be money equal to the conversion liability in circulation; the same units of state-issued currency, when recycled through the system, could be used to repay multiple debts. For example, with a conversion liability of £1 trillion, if the banks were to pay back just £50bn of their Conversion Liability each year, the entire Conversion Liability could be repaid in around 20 years, as each time money was repaid to the Bank of England it would grant an equivalent sum of money to the government to be spent back into the economy. This would have the effect of maintaining the money supply while levels of private debt decreased.

In addition, the Conversion Liability would not drain money from economy or the banking system. When the money that would be received by Treasury was spent back into the economy it would be transferred back to the Customer Funds Accounts administered by the banks. Each bank would then be able to encourage customers to transfer some of this money into Investment Accounts to fund its lending.

CONCLUSION

The purpose of this paper has been to set out an alternative monetary system, one in which banks would no longer create and destroy money in the form of bank deposits. The advantages and benefits of this plan are covered in detail in Jackson and Dyson (2013). The effects of similar proposals have been modelled by Benes and Kumhof (2012) and Yamaguchi (2011). A brief overview of these benefits are as follows:

1. Preventing banks from being able to create new money would create a stable and permanent

money supply regardless of the over- or under-lending of banks. This would limit:

- Asset price bubbles caused by bank credit creation.
- Financial instability caused by asset price bubbles.
- Business cycles caused by bank credit creation.

In addition, greater stability would be likely to lead to greater investment, and therefore higher output and lower unemployment.

2. Preventing banks from creating money would turn banks into true financial intermediaries. Those individuals who did not want to take a risk with their money could place their money in a Transaction Account, while those individuals who wanted to earn a return on their money would also have to accept some risk (an Investment Account). There would therefore be a clear distinction between truly risk-free money in a bank account, and a risk-bearing investment that could lose value. This would have the effect of aligning risk and reward – those who stood to benefit from the upside would also be those who stood to lose out if the investment went bad, thus removing moral hazard.

3. The separation of the payments system from the lending/investing side of a bank's business would create a system where banks could be allowed to fail without large macroeconomic effects. Since funds in Transaction Accounts would never be placed at risk and would not sit on a bank's balance sheet they would not be affected by a bank failure and could be instantly transferred across to another bank. Solvency and liquidity issues would affect the lending side of a bank's business only, with the Investment Account holders becoming bank creditors in the event of insolvency. The failure of a bank would therefore no longer affect the broad money supply or the payments system. As a result there would be no costs to the taxpayer in the event that a bank failed, and the subsidy to the banking sector which occurs due to banks being both 'too big to fail' and because of deposit insurance would be removed.

4. The benefits of money creation would be returned to society as a whole. As newly created money would be free of debt and would be spent into circulation, the private sector would be able to pay down its debt without sparking a recession, allowing private debt levels to be substantially reduced.

Likewise, the additional source of funds would allow the government to reduce its debt, which should have positive economic effects by reducing the phenomenon of 'crowding out'. Alternatively, the government may choose to increase spending or lower taxes, both of which should have positive economic effects.

Figure 1: Stylised balance sheets in the current monetary system

Bank of England		Commercial Banks		Households and Firms	
Assets	Liabilities	Assets	Liabilities	Assets	Liabilities
Loans to Commercial Banks	Reserve Accounts	Loans	Customer Sight Deposits	Bank Sight Deposits	Bank Loans
Gilts			Other Liabilities	Other Assets	
Other Assets	Equity	Central Bank Reserves	Customer Time Deposits	Bank Time Deposits	Other Liabilities
		Other Assets	Loans from the Bank of England	Other Assets	Equity
			Shareholder Equity		

CONCLUSION

Bank deposits exceed the quantity of loans due to the effects of QE. During QE the Bank of England purchased bonds from non-banks. This led to an increase in deposits and reserves one for one.

Figure 2: Stylised balance sheets for the monetary system the day after the reform

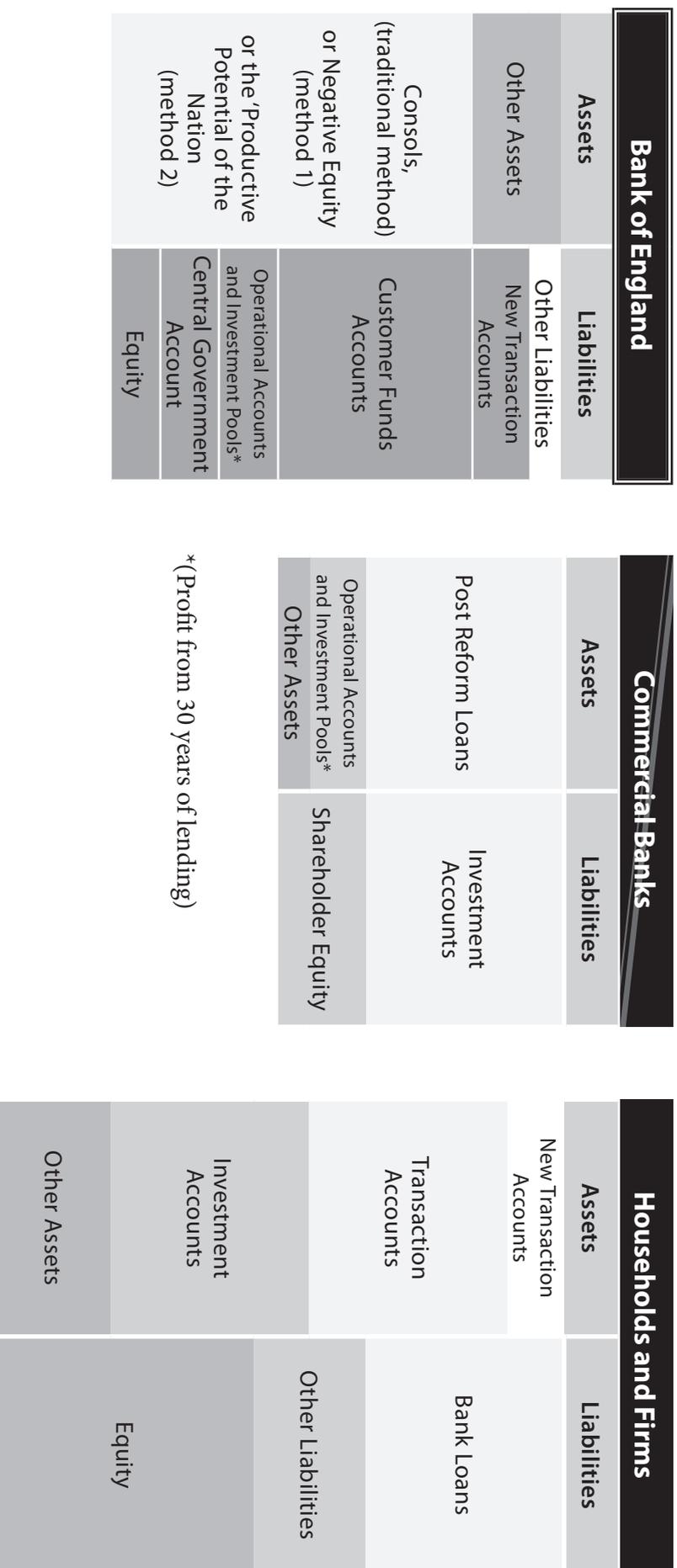
Bank of England			
Assets		Liabilities	
Loans to Commercial Banks		Other Liabilities	
Gilts		Customer Funds Accounts	
Other Assets		Operational Accounts and Investment Pools	
Commercial Bank Liability to Bank of England		Central Government Account	
		Equity	

Commercial Banks			
Assets		Liabilities	
Pre Reform Loans		Liability to Bank of England	
		Investment Accounts	
Operational Accounts and Investment Pools		Loans from Bank of England	
Other Assets		Shareholder Equity	

Households and Firms			
Assets		Liabilities	
Transaction Accounts		Bank Loans	
Investment Accounts		Other Liabilities	
Other Assets		Equity	

In this exposition, money remains on the central bank balance sheet. If money is removed from the central bank's balance sheet (accounting method 3), central bank equity increases to incorporate all the dark gray boxes on the liabilities side of the central bank's balance sheet (i.e. transaction accounts, operational accounts and investment pool accounts, the central government account and equity).

Figure 3: Stylised balance sheets for the monetary system 30 years after the reform



CONCLUSION

Again, in this exposition money remains on the central bank balance sheet. If money is removed from the central bank's balance sheet (accounting method 3), all the accounts are removed from the central bank's balance sheet (transaction accounts, operational accounts and investment pool accounts, the central government account). Likewise, on the assets side of the central bank's balance sheets the light grey box is also removed (consols / negative equity / productive potential of the nation).

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