

Contents lists available at [ScienceDirect](http://ScienceDirect.com)

International Review of Financial Analysis



How do banks create money, and why can other firms not do the same? An explanation for the coexistence of lending and deposit-taking[☆]



Richard A. Werner

Centre for Banking, Finance and Sustainable Development, Southampton Business School, University of Southampton, United Kingdom

ARTICLE INFO

Available online 29 October 2014

JEL classification:

B00
E51
G20
G28
L51
M41

Keywords:

Bank accounting
Bank lending
Client money rules
Credit creation
Loans
Monetary reform

ABSTRACT

Thanks to the recent banking crises interest has grown in banks and how they operate. In the past, the empirical and institutional market micro-structure of the operation of banks had not been a primary focus for investigations by researchers, which is why they are not well covered in the literature. A neglected detail is the banks' function as the creators and allocators of about 97% of the money supply (Werner, 1997, 2005), which has recently attracted attention (Bank of England, 2014a,b; Werner, 2014b,c). It is the purpose of this paper to investigate precisely how banks create money, and why or whether companies cannot do the same. Since the implementation of banking operations takes place within a corporate accounting framework, this paper is based upon a comparative accounting analysis perspective. By breaking the accounting treatment of lending into two steps, the difference in the accounting operation by bank and non-bank corporations can be isolated. As a result, it can be established precisely why banks are different and what it is that makes them different: They are exempted from the Client Money Rules and thus, unlike other firms, do not have to segregate client money. This enables banks to classify their accounts payable liabilities arising from bank loan contracts as a different type of liability called 'customer deposits'. The finding is important for many reasons, including for modelling the banking sector accurately in economic models, bank regulation and also for monetary reform proposals that aim at taking away the privilege of money creation from banks. The paper thus adds to the growing literature on the institutional details and market micro-structure of our financial and monetary system, and in particular offers a new contribution to the literature on 'what makes banks different', from an accounting and regulatory perspective, solving the puzzle of why banks combine lending and deposit-taking operations under one roof.

© 2014 Published by Elsevier Inc.

1. Introduction

Thanks to the recent banking crises interest has grown in the details of how banks operate. In recent decades, the empirical and institutional micro-structure of how banks operate had not been a primary focus of attention by investigators. This lack of interest may partly be due to the predominance of the hypothetico-deductive research methodology in economics, which begins by posing axioms and assumptions. Such a theoretical and hypothetical framework has also been the basis for bank regulations. As is well known to historians, reality may be less logical and rational than the designers of theoretical constructs may envisage. This is known in other areas of finance, where market and investor behaviour often does not conform to the precepts of theoretically posed 'rational agents'. By contrast, an inductive approach begins by establishing the empirical facts.

Over the past century and a half, three competing theories of banking have been influential – the financial intermediation, the fractional

reserve and the credit creation theories of banking. Most current models, theories and textbooks in finance and economics assert the validity of the financial intermediation theory. According to it, banks do not have the ability to create money, neither individually (as the credit creation theory argues) nor collectively (as the fractional reserve theory maintains). Recently, two events have upset the status quo in this debate. The Bank of England has come forward clearly in support of the credit creation theory (Bank of England, 2014a, 2014b). Secondly, the first empirical tests of the three theories have been conducted (Werner, 2014a, 2014c). These tests showed that the financial intermediation and fractional reserve theories are not supported by the evidence: Banks do not gather deposits and then lend these out, as the financial intermediation theory assumes. Nor do they draw down their deposits at the central bank in order to lend, as the fractional reserve theory of banking maintains. The empirical facts are only consistent with the credit creation theory of banking. According to this theory, banks can individually create credit and money out of nothing, and they do this when they extend credit. When a loan is granted by a bank, it purchases the loan contract (legally considered a promissory note issued by the borrower), which is reflected by an increase in its assets by the amount of the loan. The borrower 'receives' the 'money' when the bank credits the borrower's account at the bank with the

[☆] The author would like to acknowledge conversations with Mr Wesley Wright, helpful comments from Mr John T. C. Cooke, as well as, and most of all, the source of all wisdom (Jeremiah 33:3).

E-mail address: werner@soton.ac.uk.

amount of the loan. The balance sheet lengthens. Through the process of credit creation 97% of the money supply is created in the UK today (Werner, 2005), and similar proportions apply to most industrialised economies. Not surprisingly, the use to which bank credit is put to determines its effect, namely whether bank credit is extended for productive, consumptive, or speculative purposes (the Quantity Theory of Credit, see Werner, 1997, 2005, 2012a).

One reason for the neglect of the institutional and operational details of banks in the research literature in the past decades is likely the fact that no law, statute or bank regulation explicitly grants banks the right (usually considered a sovereign prerogative) to create and allocate the money supply. As a result, many economists, finance researchers, lawyers, accountants, even bankers, let alone the general public, have not been aware of the role of banks as creators and allocators of the money supply.

The establishment of these facts motivates a number of new research questions, many of which did not arise within the two alternative theories of banking. In this paper the question is considered of what exactly it is that enables banks to individually create credit and money out of nothing, and why or whether other financial firms and intermediaries, or ordinary corporations not active in the financial sector, cannot do likewise. Is what enables banks to create money a feature unique to banks, or is Minsky's (1986) claim more relevant that "everyone can issue money"? Being able to create money is a desirable ability, and if it was possible for other agents to do so, they would likely also engage in this activity. Are non-bank financial institutions, including so-called 'shadow banks', engaged in money creation? With financial deregulation and the development of hybrid financial instruments, the demarcation between banks and non-banks often is said to be elusive. Is it possible to pinpoint the difference?

Furthermore, there are a number of fundamental questions concerning banks that remain unanswered in the literature. "What are the defining characteristics of a bank?" ask Kashyap, Rajan, and Stein (2002). Specifically, it remains a conundrum to economists why banks combine what are effectively very different operations, namely deposit-taking and granting of loans, and why securities or capital markets cannot substitute these functions, despite in theory being capable of doing so separately:

"...commercial banks are institutions that engage in two distinct types of activities, one on each side of the balance sheet—deposit-taking and lending. ...A great deal of theoretical and empirical analysis has been devoted to understanding the circumstances under which each of these two activities might require the services of an intermediary, as opposed to being implemented in arm's-length securities markets. While much has been learned from this work, with few exceptions it has not addressed a fundamental question: why is it important that one institution carry out both functions under the same roof?" (Kashyap et al., 2002, p. 33f).

They also argue that it is of utmost importance to answer this question:

"The question of whether or not there is a real synergy between deposit-taking and lending has far-reaching implications" (op. cit., p. 34).

They cite the question of monetary reform as one of the reasons why the question needs to be answered. Their own answer is based on the provision of loan commitments by banks — a particular institutional feature that does not apply to all banks and does not usually dominate bank lending. It is hence difficult to argue that the question they raise has been answered fully. This is especially true, since the authors are adherents of the financial intermediation theory of banking which claims, erroneously, that banks gather deposits and then lend these deposits out.

It is the purpose of this article to offer new answers to these questions, which are in line with the empirical record. Joseph Schumpeter (1917/18) argued that banking is primarily accounting, and that banks

are the 'bookkeeping centre' of the economy and act as its 'social accountants' (1934, p. 124). Stiglitz and Weiss (1989) also consider banks as operating 'society's accounting system'. Werner (2014a, 2014c) shows that the three theories of banking are distinguished by their differing bank accounting and that the crucial difference of banks and firms without a banking licence revolves around the issue of lending. Werner (2005) had argued:

"Bank credit creation does not channel existing money to new uses. It newly creates money that did not exist beforehand and channels it to some use.... What makes this 'creative accounting' possible is the other function of banks as the settlement system of all non-cash transactions in the economy. ... Since banks work as the accountants of record – while the rest of the economy assumes they are honest accountants – it is possible for the banks to increase the money in the accounts of some of us (those who receive a loan), by simply altering the figures. Nobody else will notice, because agents cannot distinguish between money that had actually been saved and deposited and money that has been created 'out of nothing' by the bank" (p. 179).

However, surprisingly little has been written about the actual accounting details of bank operations, especially concerning their lending, and how precisely it differs from the accounting of non-bank firms. It is thus corporate accounting that we must turn to in order to analyse the questions at hand in a comparative analysis of the treatment of lending by different types of corporate lenders.

2. Comparative accounting of lending

Although the implementation of banking services relies heavily on accounting, hardly any scholarly literature exists that explains in detail the accounting mechanics of bank credit creation and precisely how bank accounting differs from corporate accounting of non-bank firms. There is also virtually no scholarly literature on the question of which regulations precisely enable banks to create money. These issues are however of great interest, especially since the function of banks as the creators and allocators of the money supply is not explicitly stated in any law, statute, regulation, ordinance, directive or court judgement.

From the absence of explicit statutory powers to create money it can be deduced that this ability of banks is likely derived from the operational, that is, accounting conventions and regulations of banking. These either differ from those of non-banks, so that only banks are able to create money, or else non-banks have missed out on the significant opportunities money creation may afford.

In order to identify the difference in accounting treatment of the lending operation by banks, we adopt a comparative accounting analysis perspective. For this purpose, we compare the accounting of a loan extended by (a) a non-financial corporation (NFC, such as a manufacturer extending a financial loan to a supplier), (b) a non-bank financial institution (NBFI, such as a stock broker extending a margin loan to a client) and (c) a bank. Table 1 shows the changes in balance sheets of a new loan of \$100 m, after its issuance and remittance.

When the non-financial corporation, such as a manufacturer, grants a loan to another firm, the loan contract is shown as an increase in assets: the firm now has an additional claim on debtors — this is the borrower's promise to repay the loan. The lender purchases the loan contract, treated as a promissory note. Meanwhile, when the firm disburses the loan (and hence discharges its obligation to make the money available to the borrower), it is drawing down its cash reserves or monetary deposits with its banks. As a result, one gross asset increase is matched by an equally-sized gross asset decrease, leaving net total assets unchanged.

In the second case, of a non-bank financial institution, such as a stock broker engaging in margin lending, the loan contract is the claim on the borrower that is added as an asset to the balance sheet, while the disbursement of the loan — for instance by transferring it to the client or

Table 1
Comparative accounting: taking out a loan and disbursing it.

Contract signed (\$m) & money made available (changes in B/S)	NFC		NBFI		BANK	
	A	L	A	L	A	L
Loan	+100	0	+100	0	+100	0
Deposit	-100	0	-100	0	Client Deposit +100	+100
	0	0	0	0	100	100

This table shows how accounting conventions handle the granting and disbursing of a loan by different types of firms: a non-financial corporation (NFC), a non-bank financial institution (NBFI, e.g. a stock broker), and a bank. In this and the following tables, only the change in balance sheet items is shown. As can be seen, something is different in the case of the bank.

the stock exchange to settle the margin trade conducted by its client – reduces the firm’s monetary balances (likely held with a bank). As a result, total assets and total liabilities remain unchanged.

While the balance sheet total is not affected by the granting and disbursement of the loan in the case of firms other than banks, the picture looks very different in the case of a bank. While the loan contract shows up as an increase in assets with all types of corporations, in the case of a bank the disbursement of the loan takes a different form from that of the other firms: it appears as a positive entry on the liability side of the balance sheet, as opposed to being a negative entry on the asset side, as in the case of non-banks. As a result, it does not counter-balance the increased gross assets. Instead, both assets and liabilities expand. The bank’s balance sheet lengthens on both sides by the amount of the loan (see the empirical evidence in Werner, 2014a, 2014c). Thus it is clear that banks conduct their accounting operations differently from others, even differently from their near-relatives, the non-bank financial institutions.

What precisely, however, causes this very different treatment of lending on bank balance sheets as opposed to its treatment by all other types of firms? In order to answer this question, the comparison of the above accounting information is insufficient. It is necessary to gain further, more detailed insight into the accounting operations shown in Table 1. Specifically, what is it that enables banks to discharge their loan without drawing down any assets (as both the financial intermediation and fractional reserve theories of banking had indeed maintained, erroneously)?

In order to answer this question, the device is chosen to break down what currently is one set of double-entry operations, into smaller steps in order to be able to analyse them in greater detail. Specifically, the lending process is broken down into two steps, whose accounting representations are shown separately and in sequence. Assume, for instance, that the borrower asked out of convenience to proceed with signing the loan contract, but for the disbursement of the loan to be delayed by a week, while all other paper work and accounting are completed. In other words, the act of signing a loan contract and both borrower and lender contractually agreeing to their respective obligations is analytically and practically

separated from the act of disbursing the loan and thereby the lender discharging the lender’s obligation to pay out the funds.

Step 1 shows the loan upon signing, committing both parties to their respective obligations (the bank to pay soon, the borrower to repay with interest much later). At this stage the loan funds are not yet made available by the lender. So the lender has an open liability, namely the disbursement of the loan to the borrower. In corporate accounting this is identified as a liability of the category ‘accounts payable’. (Step 2 will then describe the situation when the lender has in fact made the loan money available to the borrower and thus discharged the liability arising from its accounts payable item to the borrower.) Table 2 shows Step 1 of this disaggregated lending operation, by recording the changes in balance sheet items.

The same operation is shown for the non-financial corporation, the non-bank financial institution and for the bank (Table 2). In all cases, in Step 1 the loan contract creates an asset for the lender, as the money will be repaid in the future, and a liability in the form of the ‘accounts payable’, as the loaned money will have to be made available to the borrower at some stage. Therefore, for all types of firms, including banks, the balance sheet lengthens, as both an asset and a liability is added to the balance sheet. What emerges is, therefore that, surprisingly, in Step 1, the accounting is identical for all types of firms, including the bank. In other words, whatever makes banks different and special from non-banks is not visible in the act of agreeing to and implementing a loan contract without disbursing it. Moreover, we see what lengthens the balance sheet of firms – any firm, not just banks – namely agreeing to lend money, while not (yet) paying out the funds to the borrower.

That banks and non-banks are identical in their operations at this stage is an interesting finding. Upon reflection, it is not surprising, as it makes legal and regulatory sense: The act of granting a loan by one legal person to another is not a regulated activity. Business lending in the UK does not require authorisation of any supervisory or regulatory authority. Thus any firm can specialise in lending to other companies at interest, without requiring any authorisation from the financial regulators (Financial Conduct Authority or Prudential Regulatory Authority) or a banking licence in general. Hence it would indeed be surprising to see accounting differences in the operations conducted so far.

Table 2
Disaggregating lending: Step 1 – lender and borrower agree.

Contract signed (\$m) but no money disbursed (changes in B/S)	NFC		NBFI		BANK	
	A	L	A	L	A	L
Loan	+100	0	+100	0	+100	0
AC payable	0	+100	0	+100	AC payable +100	+100
	+100	+100	+100	+100	+100	+100

This table shows Step 1 of the loan operation, now disaggregated into two steps. All parties have signed the loan contract, but the borrower has asked, out of convenience, to delay the disbursement of the loan, which happens in Step 2. Interestingly, at Step 1 it is seen that the accounting treatment is the same for all lenders, including the bank. Banks are not different in any way concerning Step 1.

Table 3
Disaggregating lending: Step 2 – loan funds paid out.

Money disbursed (\$m) (changes in B/S)	NFC		NBFI		BANK		
	A	L	A	L	A	L	
Loan	+100	AC payable	0	Loan	+100	AC payable	0
Deposit	-100			Deposit	-100	Client Deposit	+100
	0	0	0	0	+100	+100	

This table shows Step 2 of the loan operation, disaggregated into two steps. All lenders now disburse the loan and thus discharge their liability. For firms without a banking licence, the balance sheet contracts and thus reverts back to the original position. For banks only the balance sheet remains unchanged in its expanded position – banks remain stuck in Step 1. In other words: banks do not discharge their liability.

It is thus time to proceed to Step 2, the disbursement of the money from the lender to the borrower. We now already know that whatever it is that enables banks to create money out of nothing, it must take place in the act of making loan funds available to the borrower.

Considering the comparative accounting in Step 2, we observe that for the firm (NFC) and the broker (NBFI) to make the funds available to the borrower, so that the borrower can use them for transactions, involves drawing down the lender's monetary funds (cash at hand, or the lender's deposit balances held with a bank): firms need to give something up, when they pay out the loan (Table 3). Hence, as the money is made available, the cash or deposit balance (an asset) is drawn down and simultaneously the accounts payable item disappears from the firm's liabilities: the firm has paid its account payable and thus discharged its obligation. *For firms without a bank licence, the disbursement of the loan is from funds elsewhere within the firm. Thus there is an equal reduction in balance of another account from which the lent funds came from.* Therefore, the balance sheet shrinks again. There is no overall change in the total size of the balance sheet as a result of Steps 1 and 2 together.

However, as can be seen in Table 3, the story is quite different for the bank. Surprisingly, we find that unlike the other firms whose balance sheets shrank back in Step 2, the bank's accounts seem in standstill, unchanged from Step 1. The total balance sheet remains lengthened. No balance is drawn down to make a payment to the borrower.

So how is it that the borrower feels that the bank's obligation to make funds available are being met? (If indeed they are being met). This is done through the one, small but crucial accounting change that does take place on the liability side of the bank balance sheet in Step 2: the bank reduces its 'account payable' item by the loan amount, acting as if the money had been disbursed to the customer, and at the same time it presents the customer with a statement that identifies this same obligation of the bank to the borrower, but now simply reclassified as a 'customer deposit' of the borrower with the bank.

The bank, having 'disbursed' the loan, remains in a position where it still owes the money. In other words, the bank does not actually make any money available to the borrower: No transfer of funds from anywhere to the customer or indeed the customer's account takes place. *There is no equal reduction in the balance of another account to defray the borrower.* Instead, the bank simply re-classified its liabilities, changing the 'accounts payable' obligation arising from the bank loan contract to another liability category called 'customer deposits'.

While the borrower is given the impression that the bank had transferred money from its capital, reserves or other accounts to the borrower's account (as indeed major theories of banking, the financial intermediation and fractional reserve theories, erroneously claim), in reality this is not the case. Neither the bank nor the customer deposited any money, nor were any funds from anywhere outside the bank utilised to make the deposit in the borrower's account. Indeed, there was no depositing of any funds.

In Step 1 the bank had a liability – an obligation to pay someone. How can it discharge this liability? A law dictionary states:

"The most common way to be discharged from liability ... is through payment."¹

And yet, no payment takes place in Step 2 (and hence in the entire 'lending' process), which is why the bank's balance sheet in total remains stuck in Step 1, when all lenders still owe the money to their respective borrowers. The bank's liability is simply re-named a 'bank deposit'. However, bank deposits are defined by central banks as being part of the official money supply (as measured in such official 'money supply' aggregates as M1, M2, M3 or M4). This confirms that banks create money when they grant a loan: they invent a fictitious customer deposit, which the central bank and all users of our monetary system, consider to be 'money', indistinguishable from 'real' deposits not newly invented by the banks. Thus banks do not just grant credit, they create credit, and simultaneously they create money.

While other non-bank firms can also grant credit, in their case it would be misleading to speak of 'credit creation', since their granting of a loan results in a gross increase in credit (and temporary lengthening of their balance sheet; Step 1), but the discharging of their accounts payable liability arising from the loan contract results in an equal reduction in another credit balance, resulting in a reduction of the overall balance sheet and thus no change in total net credit or money in the economy (Step 2). There is no money creation in the case of firms that are not banks.

The bank, on the other hand, creates gross credit, just like non-banks, but this is not counter-balanced by an equal reduction in credit balances elsewhere, leaving a net positive addition to credit and deposit – hence money – balances: net credit creation. This credit creation is visible in the permanent expansion in the bank's balance sheet, and is executed through the operation that makes banks unique, namely that instead of discharging their liability to pay out loans, the banks merely reclassify their liabilities originating from loan contracts from what should be an 'accounts payable' item to 'customer deposit' (in practise of course skipping Step 1 entirely and thus neglecting to record the accounts payable item). The bank issues a statement of its liability to the borrower, which records its liability as a 'deposit' of the borrower at the bank.

We have gained important insights, which raise new questions: Why are non-banks not able to do the same, and what precisely is it that allows banks to act differently in Step 2? Could non-banks also create credit in this way? A necessary condition for being able to create an imaginary deposit in the name of the borrower is that the lender ordinarily maintains customer deposits and thus is solely in charge of the record-keeping of customers' deposits. In this case, this controlling power over customers' deposit account records can be used to invent make-belief customer deposits that did not in fact originate from any new deposits (and hence cannot honestly be called 'deposits').

Maintaining customer deposits is not part of the regular business operations of non-financial institutions, so we cannot expect them to be

¹ <http://legal-dictionary.thefreedictionary.com/Discharge+from+Liability>.

able to engage in credit and money creation. However, there are a number of non-bank financial institutions that in the course of ordinary business do maintain deposit accounts for their customers – for instance, stock broking firms. Why, then, are stock brokers which receive client funds and deposits, not able to create credit and money out of nothing, just like banks?

3. Regulation: the little-known ‘client money rules’

It is necessary to move beyond corporate accounting rules to the wider field of regulations of business conduct. Tobin (1963) argued about banks that

“Any other financial industry subject to the same kind of regulations would behave in much the same way” (p. 418).

This is likely true, but the question remains precisely *which* regulations are crucial to allow banks to engage in the activity that makes them unique, and likewise, *which* regulations, if applying equally to non-banks, would allow non-banks to behave in the same way as banks. As noted, lending to other firms is unregulated. It is necessary to examine the regulations of the business of taking customer deposits. An examination of the regulations concerning this reveals that, unlike the lending business, it is a highly restricted type of activity. Regulations differ starkly between banks and non-banks.

In the UK, the cradle of modern banking, financial regulations, specifically, the so-called ‘Client Money Rules’ (FCA, 2013), require all firms that hold client money to segregate such money in accounts that keep them separate from the assets or liabilities of the firm itself:

“Depositing Client Money

7.4.1. R

A firm, on receiving any client money, must promptly place this money into one or more accounts opened with any of the following:

- (1) a central bank;
- (2) a CRD credit institution²;
- (3) a bank authorised in a third country;
- (4) a qualifying money market fund” FCA (2013).

For firms that do not have a banking authorisation, client deposits must be held in segregated accounts with banks or money market funds. This means the client assets remain off-balance sheet for the firm, including non-bank financial intermediaries, and the depositor remains the legal owner. This is why the extension of a bank loan by a stock broker cannot result in any addition to the balance sheet: the stock broker will owe the borrower the money (an increase in accounts payable), but since any account of the borrower is not held directly with the stock broker, it is not possible for the stock broker (or other non-bank entities) to mix the clients’ deposit accounts with the other liabilities that the broker has towards the clients (such as an accounts payable item arising from loan contracts). So it would be impossible for the stock broker to engage in the re-classification exercise of referring to accounts payable items as (imaginary) customer deposits.

However, things are different, if one has a banking licence:

“Depositaries

1.4.6 R *The client money chapter does not apply to a depositary when acting as such” ...*

“Chapter 7 Client Money Rules

Credit Institutions and Approved Banks

7.1.8 R *The client money rules do not apply to a CRD credit institution in relation to deposits within the meaning of the CRD held by that institution. ...*

7.1.9. G *If a credit institution that holds money as a deposit with itself is subject to the requirement to disclose information before providing services, it should, in compliance with that obligation, notify the client that: (1) money held for that client in an account with the credit institution will be held by the firm as banker and not as trustee (or in Scotland as agent); and (2) as a result, the money will not be held in accordance with the client money rules”* (FCA, 2013).

It follows then that what enables banks to create credit and hence money is their exemption from the Client Money Rules. Thanks to this exemption they are allowed to keep customer deposits on their own balance sheet. This means that depositors who deposit their money with a bank are no longer the legal owners of this money. Instead, they are just one of the general creditors of the bank whom it owes money to. It also means that the bank is able to access the records of the customer deposits held with it and invent a new ‘customer deposit’ that had not actually been paid in, but instead is a re-classified accounts payable liability of the bank arising from a loan contract.

Whether the Client Money Rules were designed for this purpose, and whether it is indeed lawful for banks to reclassify general ‘accounts payable’ items as specific liabilities defined as ‘customer deposits’, without the act of depositing having been undertaken by anyone, is a matter that requires further legal scrutiny, beyond the scope of this paper.

We conclude that by disaggregating bank lending into two steps we have identified precisely how banks create credit, and we have solved a long-standing conundrum in the literature, namely why banks combine what at first appear to be two very different businesses: lending on the one hand, and deposit-taking on the other. The answer is that banks are not financial intermediaries, but creators of the money supply, whereby the act of creating money is contingent on banks maintaining customer deposit accounts, because the money is invented in the form of fictitious customer deposits that are actually re-classified ‘accounts payable’ liabilities emanating from loan contracts. Banks could not do this if they did not combine lending and deposit taking activities. But, as we saw, combining these activities is a necessary yet insufficient condition for being able to create credit and money. The necessary and sufficient condition for being able to create credit and money is *being exempt from the Client Money Rules*.

Kashyap et al. (2002) argued that what makes banks unique and the reason why they engage in the two tasks of lending and deposit-taking simultaneously was the granting of loan commitments and the resulting need for liquidity provision. However, loan commitments are a subset of lending activity, and we have found that what makes banks unique and requires them to combine lending with deposit-taking does not derive from the lending function per se – since business lending is not even regulated, so that anyone can engage in it without a licence, and, as we saw, the impact of signing a loan contract is common to all firms (Step 1 in the disaggregated accounting of lending).

What makes banks unique and explains the combination of lending and deposit-taking under one roof is the more fundamental fact that *they do not have to segregate client accounts, and thus are able to engage in an exercise of ‘re-labelling’ and mixing different liabilities, specifically by re-assigning their accounts payable liabilities incurred when entering into loan agreements, to another category of liability called ‘customer deposits’*.

What distinguishes banks from non-banks is their ability to create credit and money through lending, which is accomplished by booking what actually are accounts payable liabilities as imaginary customer deposits, and this is in turn made possible by a particular regulation that renders banks unique: their exemption from the Client Money Rules.

² FCA Handbook Glossary: “CRD credit institution means a credit institution that has its registered office (or, if it has no registered office, its head office) in an EEA State...” (FCA, 2013).

4. Some implications

The argument that it is bank regulation that makes banks special has been used to justify deregulation of interest rates and reserve requirements. The logic was that it was the regulation of interest rates and reserve requirements that made banks different and hindered a level playing field. However, this argument has not focused on what really makes banks different from other firms. It is in the business of taking deposits that the regulations make a crucial difference for banks and non-banks. It would appear that those who argue that bank regulations should be liberalised in order to create a level playing field with non-banks have neglected to demand that the banks' unique exemption from the Client Money Rules – a regulation benefitting only banks – needs to be deregulated as well, so that banks must also conform to the Client Money Rules. Indeed, it would appear that monetary reformers (see, for instance, [Benes and Kumhof, 2012](#)) could very simply achieve their goal of revoking the banks' ability to create money through credit creation, by simply scrapping banks' exemption from the Client Money Rules. In the case of UK regulation, deleting CASS 7, 1.4.6 and 7.1.8. should be sufficient.³ A reasonable justification for cancelling the banks' exemption would be the fact that (a) no reasonable grounds for their exemption have been made, and (b) banks have routinely abused this exemption in order to misrepresent other liabilities as 'customer deposits'. While the latter would not have been possible if the Client Money Rules had applied to banks, it is not obvious that the Client Money Rules were designed for this purpose.

Alternatively, one could argue that it would level the playing field, if the banks' current exemption from the Client Money Rules was also granted to all other firms – in other words, if the Client Money Rules themselves were abolished. This would allow all firms to also engage in the kind of creative accounting that has become an established practise among banks. It would certainly ensure that competition between banks and non-bank financial institutions would become more meaningful, since the exemption from the Client Money Rules, together with the banks' deployment of this exemption for the purpose of re-labelling their liabilities, has given significant competitive advantages to banks over all other types of firms: banks have been able to create and allocate money – virtually the entire money supply in the economy – while no other firm is able to do the same. However, apart from the new risks for the public arising from such deregulation, even in this case banks would maintain their advantage and their monopoly on money creation, if the state maintained the rule that taxes need to be paid in privately created bank money only: Today, tax payments cannot be made in legal tender (Bank of England notes), but only in bank credit money, which is private company credit, created by banks' re-classification of their accounts payable liabilities as imaginary customer deposits. By forcing all tax payers to acquire bank money in this way, the state effectively transfers sovereignty over money creation to the banks. The importance of the denomination of taxes has long been recognised. Adam Smith commented on it as follows:

“A prince, who should enact that a certain proportion of his taxes should be paid in a paper money of a certain kind, might thereby give a certain value to this paper money” (1776, p. 328).

The findings are important also for other types of reforms, including the reform of bank regulation. So far, bank regulation has emphasised capital adequacy requirements in order to manage bank activity. This has failed spectacularly, as Basel I could not prevent, and likely contributed to the propagation of the Japanese and Asian crises in the 1990s, and Basel II is similarly implicated in the 2008 financial crisis. As

³ For a more detailed discussion of how to implement monetary reform by changing the Client Money Rules, please see [Werner \(2012b\)](#), which was submitted upon invitation to the Althing, Iceland's Parliament.

[Werner \(2005, 2010, 2014a, 2014c\)](#) argues, Basel rules were doomed to failure, since they consider banks as financial intermediaries, when in actual fact they are the creators of the money supply. Since banks invent money as fictitious deposits, it can be readily shown that capital adequacy based bank regulation does not have to restrict bank activity: banks can create money and hence can arrange for money to be made available to purchase newly issued shares that increase their bank capital. In other words, banks could simply invent the money that is then used to increase their capital. This is what Barclays Bank did in 2008, in order to avoid the use of tax money to shore up the bank's capital: Barclays 'raised' £5.8 bn in new equity from Gulf sovereign wealth investors – by, it has transpired, lending them the money! As is explained in [Werner \(2014a\)](#), Barclays implemented a standard loan operation, thus inventing the £5.8 bn deposit 'lent' to the investor. This deposit was then used to 'purchase' the newly issued Barclays shares. Thus in this case the bank liability originating from the bank loan to the Gulf investor transmuted from (1) an accounts payable liability to (2) a customer deposit liability, to finally end up as (3) equity – another category on the liability side of the bank's balance sheet. Effectively, Barclays invented its own capital. This certainly was cheaper for the UK tax payer than using tax money. As publicly listed companies in general are not allowed to lend money to firms for the purpose of buying their stocks, it was not in conformity with the Companies Act 2006 (Section 678, Prohibition of assistance for acquisition of shares in public company). But regulators were willing to overlook this. As [Werner \(2014b\)](#) argues, using central bank or bank credit creation is in principle the most cost-effective way to clean up the banking system and ensure that bank credit growth recovers quickly. The Barclays case is however evidence that stricter capital requirements do not necessary prevent banks from expanding credit and money creation, since their creation of deposits generates more purchasing power with which increased bank capital can also be funded. To manage bank credit creation more effectively, the differing consequences of different types of lending need to be recognised (bank credit creation for financial transactions affects asset prices and is in aggregate unsustainable, bank credit for consumption affects consumer prices, and bank credit for productive investment purposes is sustainable and non-inflationary, as the Quantity Theory of Credit, [Werner, 1997](#), maintains). Given the reality of market imperfections and rationing, more direct interventions in the credit market, in the form of 'guidance' of bank credit (for instance by curtailing costly and dangerous financial credit creation) need to be re-considered ([Werner, 2005](#)). They have a good track record for preventing credit and hence asset boom-bust cycle. Alternatively, the structure of the banking system needs to be designed such that it is dominated by banks that mainly lend for productive investments in the ordinary course of their business, such as local banks lending to SMEs ([Werner, 2013](#)).

5. Conclusion

In this paper a number of fundamental questions concerning banks have been answered. This includes the old questions of why banks combine what are effectively very different operations, namely deposit-taking and granting of loans under one roof, what are the “defining characteristics of a bank”, and “why securities markets and non-bank firms cannot do the same” ([Kashyap et al., 2002](#)). It also includes new questions predicated on the recognition that banks create credit and money, namely what exactly it is that enables banks to create credit and money out of nothing, and whether or why other financial firms and intermediaries, or ordinary corporations cannot do the same. This includes the question of whether non-bank financial institutions, including so-called 'shadow banks', can engage in money creation as well, the question whether “everyone can issue money” ([Minsky, 1986](#)), and the questions of how bank regulation should and how monetary reform could be structured.

To answer these questions, the accounting details of banks' credit and money creation were examined in a comparison of corporate accounting for lending. Breaking the act of lending into two steps, it was possible to isolate just what makes bank accounting different from the accounting of non-financial firms and non-bank financial institutions, and precisely how banks manage to create money newly. The act of signing the loan contract and purchasing it as a promissory note of the borrower without yet making the borrowed funds available to the borrower (Step 1) has the same accounting implications for banks, non-banks and non-financial corporations alike. In all cases, the balance sheets lengthen, as an asset (the loan contract) is acquired and a liability to make money available to the borrower is incurred (accounts payable). In Step 2, the lender makes the funds available to the borrower. The fact that in Step 2 the bank is alone among firms in showing the same total impact on assets and liabilities as everyone else at Step 1, when the money had not yet been made available to the borrower, demonstrates that the bank did not actually make any money available to the borrower. This means that the bank still has an open 'accounts payable' liability, as it has not in fact discharged its original liability. What banks do is to simply reclassify their accounts payable items arising from the act of lending as 'customer deposits', and the general public, when receiving payment in the form of a transfer of bank deposits, believes that a form of money had been paid into the bank. As a result, the public readily accepts such 'bank deposits' and their 'transfers' to defray payments. They are also the main component of the official 'money supply' as announced by central banks (M1, M2, M3, M4), which is created almost entirely through this act of re-classifying banks' accounts payable as fictitious 'customer deposits'. No wonder an expert in bank accounting has warned me, upon presentation of my analysis, that I must never use the concept of 'accounts payable' in the context of bank accounting! In my view, the only reason why one would not wish to use it as presented in this paper is because through this device the truth is revealed for all to see.

The 'lending' bank records a new 'customer deposit' and informs the 'borrower' that funds have been 'deposited' in the borrower's account. Since *neither the borrower nor the bank actually made a deposit at the bank* – nor, in connection with this transaction, anyone else for that matter, it remains necessary to analyse the legal aspects of bank operations. In particular, the legality of the act of reclassifying bank liabilities (accounts payable) as fictitious customer deposits requires further, separate analysis. This is all the more so, since no law, statute or bank regulation actually grants banks the right (usually considered a sovereign prerogative) to create and allocate the money supply. Further, the regulation that allows only banks to conduct such creative accounting (namely the exemption from the Client Money Rules) is potentially being abused through the act of 'renaming' the bank's own accounts payable liabilities as 'customer deposits' when no deposits had been made, since this is also not explicitly referred to in the banks' exemption from the Client Money Rules, or in any other statutes, laws or regulations, for that matter.

This raises the broader problem that much of the terminology in banking appears to mislead the public. An innocent bank customer could be forgiven for believing that money 'deposited' with a bank was still the property of the depositor and hence safe in the case of a bankruptcy of the institution, while money deposited with a stock broker with the intention to speculate in the markets was at risk of being lost should the stock broker go bust. That the legal reality is precisely the opposite – money deposited with stock brokers is unencumbered by the broker's bankruptcy since it remains the property of the depositor, held in safe custody as segregated Client Money, while money deposited with a bank, exempt from the Client Money Rules, is no longer the property of the depositor and thus in principle goes under together with the bank – is testament to the misleading character of banking terminology.

In this paper it was found that banks combine what are effectively very different operations, namely deposit-taking and granting of loans

under one roof, because in this way they can invent new money in the form of fictitious 'customer deposits' when purporting to engage in the act of 'lending'. It was found that the defining characteristic of banks is that they are exempt from the Client Money Rules, which prevent other firms from creating money in the same way. It was found that, in practise, only banks can issue money in this way. It was also found that bank regulation needs to be reconsidered, as focusing on capital adequacy, already proven ineffective by the many banking crises since its introduction in the 1980s, is likely to remain unable to prevent credit booms and subsequent banking crises. Finally, a simple way was found to implement monetary reform, should the sovereign – the people – decide to introduce a more transparent way of creating and allocating the money supply: one only needs to revoke the one-sided exemption from the Client Money Rules granted to banks (and combine this with Client Money custody services offered to all banks by HM Treasury). Having said this, since the privilege to create money is a public prerogative, it can be justified if it is used for the benefit of the public. How can this be achieved? I have come to be convinced that probably the best method to implement monetary reform realistically – since possible without waiting for grand top-down reforms and since in this way breaking power up into small, manageable units – is to establish many small, local, not-for-profit community banks, as the success of the German economy has demonstrated over the past 170 years.

References

- Bank of England (2014a). *Money in the modern economy: An introduction*, by Michael McLeay, Amar Radia and Ryland Thomas of the Bank's Monetary Analysis Directorate. *Quarterly Bulletin*, Q1, 2014.
- Bank of England (2014b). *Money creation in the modern economy*, by Michael McLeay, Amar Radia and Ryland Thomas of the Bank's Monetary Analysis Directorate. *Quarterly Bulletin*, Q1, 2014.
- Benes, Jaromir, & Kumhof, Michael (2012). *The Chicago plan revisited*, WP/12/202. Washington DC: IMF.
- Financial Conduct Authority (2013). *Client asset sourcebook (CASS). FCA PRA handbook* (accessed on 22 October 2014 at <http://fsandbook.info/FS/html/FCA/>).
- Kashyap, Anil, Rajan, Raghuram, & Stein, Jeremy (2002). Banks as liquidity providers: An explanation for the coexistence of lending and deposit-taking. *Journal of Finance*, 57(1), 33–73.
- Minsky, Hyman P. (1986). *Stabilising an unstable economy*. New Haven: Yale University Press.
- Smith, Adam (1776). *An inquiry into the nature and causes of the wealth of nations* (1976 ed.). Oxford: Oxford University Press.
- Stiglitz, Joseph E., & Weiss, Andrew M. (1989). Banks as Social Accountants and Screening Devices for the Allocation of Credit. In A. Couralies, & C. Goodhart (Eds.), *Essays in Monetary Economics in Honor of Sir John Hicks* (1989 ed.). Macmillan Publishers.
- Tobin, James (1963). Commercial banks as creators of 'money'. In C. Carson (Ed.), *Cowles foundation paper 205*. Irwin: Banking and monetary studies. Homewood.
- Werner, Richard A. (1997). Towards a new monetary paradigm: A quantity theorem of disaggregated credit, with evidence from Japan. *Kredit und Kapital*, 30(2), 276–309 (July 1997).
- Werner, Richard A. (2005). *New paradigm in macroeconomics*. Basingstoke: Palgrave Macmillan.
- Werner, Richard A. (2010). *Comment on strengthening the resilience of the banking sector, official submission to public call for comments on 'Strengthening the Resilience of the Banking Sector. Consultative Document' by the Basel Committee on Banking Supervision, September 2009*. Basel: Bank for International Settlements ((<http://www.bis.org/publ/bcbs164.htm>). Submitted 16 April 2010).
- Werner, Richard A. (2012a). Towards a new research programme on 'banking and the economy' – Implications of the quantity theory of credit for the prevention and resolution of banking and debt crises. *International Review of Financial Analysis*, 25, 94–105. <http://dx.doi.org/10.1016/j.irfa.2012.06.002>.
- Werner, Richard A. (2012b). *How to turn banks into financial intermediaries and restore money creation powers to the state. CBFSO policy discussion paper 3–12, 8 November 2012*. University of Southampton.
- Werner, Richard A. (2013). Commentary: Crises, the spatial distribution of economic activity and the geography of banking. *Environment and Planning A*, 45, 2789–2796 (December).
- Werner, Richard A. (2014a). Can a bank create money out of nothing? Using accounting information to test the three theories of banking empirically. *Finance and sustainable development discussion paper, CBFSO 2-2014, Southampton*. University of Southampton Centre for Banking.
- Werner, Richard A. (2014b). Enhanced debt management: Solving the eurozone crisis by linking debt management with fiscal and monetary policy. *Journal of International Money and Finance* (in press, July 2014, accessed at <http://www.sciencedirect.com/science/article/pii/S0261560614001132>).
- Werner, Richard A. (2014c). Can banks individually create money out of nothing? The theories and the empirical evidence. *International Review of Financial Analysis*, 36, 1–19 (in this issue).