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Reflections on the reconciliation problem

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IES Working Paper: 12/2011



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Reflections on the reconciliation problem

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Abstract:

This paper deals with the so called problem of reconciliation, a contentious and puzzling issue in Post Keynesian monetary theory. The crux of the matter is the question of mechanisms that would reconcile the loan-created supply of deposits with the willingness of agents to hold these deposits. The paper reviews and comments on the solutions proposed so far and argues that the reconciliation problem might not be eliminated entirely. The argument is twofold. First, it is argued that the income multiplier and Kaldor-Trevithick reflux mechanism cannot do the trick. Second, certain factors affecting the mechanism based on changes in relative interest rate differentials are identified that might preclude the mechanism from working as envisaged by its proponents. If this is the case, what we are left with is the concept of convenience lending.

Keywords: convenience lending, endogenous money, Post Keynesian economics, reconciliation problem

JEL: B50, E12, E51

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1 INTRODUCTION

The idea of money supply being endogenous, rather than exogenous as asserted by textbook economics, is central to Post Keynesian monetary theory. Although there are many propositions regarding the theory of money that all Post Keynesians endorse, certain differences seem to prevail even after two decades of intensive discussions, and proponents of money endogeneity are still divided into two groups – horizontalists (accommodationists) and structuralists.

Besides numerous and extensive discussions that mostly (for the worse rather than for the better) concentrated on the shape of the money supply curve, there are also other disputes between horizontalists and structuralists. This paper focuses on the problem of reconciling the demand for deposits with their loan-created supply, an issue referred to as the “reconciliation problem”. In a nutshell, the problem of reconciliation deals with the following question: what ensures that the loan-created supply of deposits is matched with the willingness of agents to hold these deposits?

There were a few discussions in the literature dealing with or related to this question (see Table 1 for an overview). Although the last debate took place more than a decade ago, the issue remains unsettled. This paper aims to clarify some points raised in previous discussion and brings new arguments showing that the reconciliation problem might not be completely eliminated. The paper is structured as follows: the next section briefly introduces basic, least controversial, principles of Post Keynesian theory of money endogeneity. The third section sums up the problem of reconciliation and mechanisms believed to provide a solution to the problem, and includes some comments and remarks. The fourth section discusses a number of factors that were not included in previous debates. The final section then concludes.

Table 1 Previous debates related to the reconciliation problem

<i>Debate 1</i>	<i>Debate 2</i>	<i>Debate 3</i>
Moore (1989)	Howells (1995)	Arestis & Howells (1996)
Goodhart (1989)	Moore (1997)	Lavoie (1999)
Moore (1991)	Howells (1997)	Arestis & Howells (1999)
Goodhart (1991)		

2 LOANS MAKE DEPOSITS, DEPOSITS MAKE RESERVES

The title of this section points to the fact that unlike in textbook economics, where the causal chain of the money supply process starts with the discretionary decision of the central bank to increase reserves of the banking system, in Post Keynesian economics it is the demand for loans which is the driver of the whole process.

Commercial banks, viewed as retailers of credit operating in oligopolistic markets, must respond to the demand for loans, either by accommodating it or not. Banks accommodate the demand of credit-worthy borrowers only, the creditworthiness being decided on the basis of borrowers' credit history, provided collateral, income and indebtedness etc.

The interest rate on loans is given as a markup on banks' financing costs (the usual proxy is the key short-term interest rate of the central bank). Riskier borrowers are, of course, charged higher interest rate. By granting a loan, the bank credits borrower's account at the bank – loans make deposits. Commercial banks look for reserves only after providing loans to their clients. Hence, deposits make reserves. It also follows that money is destroyed by repayment of loans.

The central bank's main role is to guarantee the stability of the financial system; it therefore cannot refuse to provide reserves to the banking system¹. However, the central bank does so at a price of its own choosing. The central bank can influence money supply only indirectly, through setting its key short-term interest rate.

3 THE PROBLEM AND SOLUTIONS PROPOSED SO FAR

We have seen in the previous section that deposits arise as a by-product of the demand of creditworthy borrowers for loans. The decision to spend in excess of one's income

“is a decision made by a subset of the community since not everyone is involved in demanding an increase in their indebtedness to banks. ... By contrast, the decision to hold (i.e., not spend) the newly created deposits is a portfolio decision. Furthermore, it is a decision made by different people ('the community as a whole') from those concerned with borrowing. If we assume we are

¹ In the past there were considerable disputes concerning possible quantitative restrictions on the demand for reserves imposed by the central bank, but consensus seems to have been reached that the supply of reserves is horizontal.

not in the liquidity trap ... it would seem an extraordinary coincidence if the *ex ante* preferences of deficit units for more bank debt matched the *ex ante* preferences of the whole community to hold the resulting additional deposits with the precision and continuity required to maintain banks' balance sheet identity. ... The question, then, is how are these *ex ante* preferences to be reconciled, *ex post*?" (Howells, 1995, p. 92)

We should add that what is meant by the *ex ante* demand for loans must be effective rather than notional demand for loans. Wolfson (1996), who first drew this distinction, defines effective demand for loans as the demand of creditworthy borrowers, i.e. the demand accommodated by banks. On the contrary, notional demand is the total demand for credit, irrespective of whether it is accommodated or not.

An important point in the above quotation concerns banks' balance sheet identity. Since banks use double-entry bookkeeping, the balance sheet identity always holds, quite irrespective of agents' preferences or whatever else. Therefore, banks' balance sheet identity does not require that the *ex ante* preferences of the whole community to hold deposits match the *ex ante* preferences of deficit units. Nevertheless, the question whether there are any mechanisms that could reduce or even eliminate the likely discrepancy between these two sets of preferences *ex post* is perfectly legitimate.

Howells (1995) lists several mechanisms that could alleviate the extent of the reconciliation problem. Nevertheless, he argues that all these mechanisms taken together are not enough to resolve it entirely. He then proposes another mechanism based on changes in relative interest rate differentials that is believed to provide the necessary fine-tuning. All those mechanisms are summarized below.

3.1 KALDOR-TREVITHICK REFLUX MECHANISM

"Unlike commodity money, credit money comes into existence as a result of borrowing from the banks ... and it is extinguished as a result of the repayment of bank debt (which happens automatically under a system where an excess of receipts over outlays is directly applied to a reduction of outstanding overdrafts). Hence in a credit money economy, unlike with commodity money, the outstanding 'money stock' can never be in excess of the amount which individuals wish to hold." (Kaldor & Trevithick, 1981, p. 7; quoted from Howells, 1995, p. 93)

The obvious problem with the mechanism proposed by Kaldor and Trevithick is that not everyone has an overdraft. Excess money balances can therefore circulate within the system for long enough to influence output, prices, interest rates etc. Howells (1997) claims that the same problem arises even under a relaxed assumption that all businesses

have credit lines. He rejects the assumption on the basis of lack of realism and argues that in reality only some, not all, agents have an overdraft, which tends to limit the problem of reconciliation, although it is not eliminated entirely. The *ex ante* discrepancies in preferences, then, have to be reconciled by some other mechanism.

Let us relax the assumption of everyone having an overdraft and suppose instead that everyone is indebted to a bank (which is somewhat more realistic, but it does not follow it is true). What can we conclude about debt repayment under this assumption? Does it follow that if agents find themselves with excess deposits they will use them to repay their debts, so that the reconciliation problem is quickly resolved? Not necessarily.

First, debt repayment may be costly or not possible at all. It depends on particular arrangements of the loan contract, which may preclude early repayment or make it possible only with a penalty. Such a charge or fee may make debt repayment an uneconomic use of money. Second, we should take liquidity preference into account. When liquidity preference is low, agents are unlikely to use excess deposits for debt repayment (this does not include overdrafts, where the repayment is automatic). When liquidity preference is high, mostly in periods of bust, agents often deleverage and we may safely conjecture that under such circumstances agents are more likely to dispose of excess deposits by repaying their debts.

These liquidity preference considerations imply that the strength of the Kaldor-Trevithick reflux mechanism varies over the business cycle. Nevertheless, it still holds that this mechanism alone cannot provide a solution to the reconciliation problem (even under the very strong presumption that all agents are indebted to a bank), unless the preference of liquidity is so high that we are in a liquidity trap.

For a different perspective on the reflux mechanism, see Lavoie (1999).

3.2 INCOME MULTIPLIER PROCESS

Another mechanism identified by Howells (1995) can be found, at least implicitly, in the work of Victoria Chick. The mechanism

“features the multiplier process and is a valuable reminder that people borrow in order to spend. That spending, *sometimes*, involves a multiple expansion of income that will help to increase the demand for active balances, which in turn takes up the ‘excess’ money supply that resulted from the initial one-to-one expansion of loans/deposits and spending. (We might at this point remind ourselves that some of the variables driving the demand for net new lending are simultaneously helping to expand the demand for money.)” (Howells, 1995, p. 104, emphasis in original)

That income drives both demand for credit and demand for money is unquestionable. However, multiple expansion of income resulting from spending on credit is far from certain, for the strength of the multiplier depends on a number of factors (e.g. openness of the economy). Therefore, this mechanism can only alleviate the extent of the reconciliation problem.

3.3 THE BUFFER STOCK NOTION

In the “buffer stock”, “disequilibrium money” or “shock absorber” approach (Laidler, 1984), the quantity of money demanded

“does not refer to an amount of money which an agent will want to hold at each and every moment, but rather to an amount which he will want to hold on average over some time interval. The phrase ‘quantity of money demanded’ denotes, that is to say, the average or target value of an inventory, of a *buffer stock*, of cash balances.” (Laidler, 1984, p. 18–19, emphasis in original)

According to Laidler, agents see some value in allowing their demand for money to fluctuate even under perfect certainty. But the real world is uncertain, and agents’ buying and selling activities in markets are subject to unforeseen surprises, depending on the time and effort they devote to seeking and processing relevant information. With this respect, money is seen as a substitute to information, since holding

“a buffer stock of generally acceptable purchasing power prevents, at least in part, surprises in markets where the agent is a seller from impinging upon his buying activities, and *vice versa*.” (Laidler, 1984, p. 19)

Although the buffer stock notion comes from views unsympathetic to money endogeneity, some of its aspects appear in the concept of convenience lending² (Howells, 1995). This view seems to be supported by the following quotations from Moore (2006), who writes that:

“Deposits are held as a **buffer stock**, to ensure agents maintain sufficient liquidity. ... ‘Convenience lending’ may alternatively be viewed as a ‘**buffer stock**’ demand for money.” (Moore, 2006, p. 213, emphasis added)

3.4 CONVENIENCE LENDING

Convenience lending is a concept associated with Basil John Moore, the leading proponent of horizontalism. The following quotation should be illustrative:

“Asset holders are always prepared to *accept* indefinite additional amounts of money in exchange for goods, irrespective of the level of interest rates. Increases in the supply of money are always accepted in exchange without a change in any price. ... An increase in deposits represents an endogenous increase in ‘*convenience lending*’ by depositors of fiat money to the banking system. Individual depositors may hold an increase in deposits only for nano-seconds. But all the deposits that have ever been created must be held by someone. Depositors suffer no decrease in liquidity, and no abstention from consumption when they increase their lending of fiat money to the banking system in exchange for bank deposits. ... *The demand to hold bank deposits by individual depositors is not a volitional decision.* It may be viewed as ‘*convenience lending*,’ i.e. simply ‘doing nothing’ when additional deposits are received in exchange...” (Moore, 2006, p. 213, emphasis in original)

What we may notice from the above quotation is that agents are viewed as supplying deposits to the banking system. What is the rationale?

“For all nonmonetary goods in a monetary economy, ‘supply’ may be expressed *in terms of units of the good* that suppliers wish to exchange, and ‘demand’ may be expressed *in terms of units of money* that demanders wish to exchange for that good.” (Moore, 1997, p. 425, emphasis in original)

But because deposits are themselves money, agents cannot be said to demand deposits. Instead, it is better to say that agents supply deposits to the banking system. Of course, agents can only do so if they already have the deposits in their possession. Howells (1997) also makes the point that a similar distinction can be seen in mainstream macro textbooks in their emphasis on that agents demand commodities in order to consume,

² For these reasons, the buffer stock notion is not discussed further.

whereas they demand money to hold them. Be that as it may, I think Howells (1997) is right to insist that such “play on words” (i.e. whether agents demand deposits or supply them to the banking system), as he calls it, does not change anything fundamental. After all, language is a social convention, just like money.

More serious problems concerning convenience lending were dealt with in a debate between Moore and Goodhart. The central criticism Goodhart (1989, 1991) makes is that

“... Moore completely suppresses any independent demand for money.” (Goodhart, 1989, p. 33)

Moore (1991) defends his position on the basis of distinction between the understanding of money in Post Keynesian and neoclassical economics. Neoclassical economics treats money as an exogenous variable, under the control of the central bank. It then makes sense to postulate an independent demand for money as a function of income, interest rates etc. In Post Keynesian economics, however, money enters the economy via the process of credit creation. Growth of income and wealth drives the state of expectations of economic units and, through this channel, impacts upon their demand for credit. Moreover, since agents enter into loan contracts in order to spend, money supply drives output. Since the demand for money depends, among other factors, on income, it can never be independent of the supply of money (see also the income multiplier process).

Both Goodhart and Moore agree on that agents will always accept the deposits they receive, because deposits function as a medium of exchange. Further, they both admit that agents may not wish to hold those deposits as their preferred form of saving. For Goodhart, however,

“the discrepancy between the stock of money created by credit expansion and the stock that would be demanded in equilibrium sets up subsequent portfolio readjustments involving purchases/sales of a wide range of goods, services, and assets, until full equilibrium is restored.” (Goodhart, 1989, p. 33)

It is here, where the most serious disagreement between Moore and Goodhart arises. Moore (1991) not only doubts the potential of portfolio readjustments in restoring full equilibrium between the supply of and demand for money, but he also strongly opposes the very existence of general equilibrium on methodological grounds.

3.5 CHANGES IN INTEREST RATE DIFFERENTIALS

This mechanism was proposed by Howells (1995). It is based on an assumption that agents with excessive holdings of deposits will spend them on non-money financial assets, say bonds. Prices of bonds will then tend to go up, hence the bonds to money interest rate differential will be smaller. As opportunity costs of holding money decline, the demand for money rises. This is, in fact, the standard textbook mechanism. Moreover, as the bonds to money interest rate differential goes down, so does the difference between interest rate paid on bonds and bank loans. Firms' demand for bank loans should therefore decline, at least on margin, and should be replaced by bond finance. This in turn would reduce the flow of net new lending and hence deposits.

4 SOME CRITICAL REMARKS

4.1 INTERPRETATION OF THE RECONCILIATION PROBLEM

The key question we should ask first is whether an unexpected addition to one's holdings of deposits leads to any action whatsoever? Well, it all depends on what we think about agents' behaviour. The traditional view of *homo oeconomicus* as a perfectly rational being endowed with immense capacity to find an optimal solution would imply that we might expect optimizing changes in individual portfolios and that such changes are based on a thorough consideration of a large number of variables.

Post Keynesian theory of consumer behaviour (see Lavoie, 2009, for an overview), however, leads to different conclusions. As long as the composition of individual portfolios remains in an acceptable range, agents do not take any actions – the only thing that happens in such case is that agents increase their convenience lending to the banking system (in Moore's terminology). If the reverse is true, agents do react, but given the costs of acquiring up-to-date information on relevant variables and agents' limited ability to process them, such actions are based on simple rules of thumb. Therefore, the problem of reconciliation is limited only to the latter case.

Further, we should also ask whether a situation with no problem of reconciliation can arise. It was argued above that the Kaldor-Trevithick reflux mechanism is insufficient to prevent the problem of reconciliation, nor is it likely that the multiplier could do the job. The question then is whether there are any other mechanisms capable of keeping

preferences of the whole community at least in touch with preferences of those concerned with borrowing. Arestis and Howells believe that

“changes in relative interest rates ... would provide a mechanism whereby *ex ante* discrepancies between the growth rate of advances and desired deposits could be eliminated quickly and continuously.” (Arestis & Howells, p. 549)

I will now try to show there are factors that can potentially limit the strength of this mechanism.

4.2 HOW TO DISPOSE OF EXCESS DEPOSITS

First of all, I will question the key assumption made by Howells

“...that the ‘surplus’ deposits are swept into nonbank liabilities, many of which will be tradable securities.” (Howells, 1995, p. 101)

Besides the possibility of repaying their debts, agents may spend (some part of) excess deposits on consumption (after planned consumption had been carried out). But this is downplayed by Howells on the basis of rejection of the real balance effect. So far so good. Another option agents have is to turn the excess deposits into higher-yield bank liabilities (included in a broader monetary aggregate, e.g. term deposits) or into cash. I am not sure why Howells does not allow for the former (i.e. turning demand deposits into other bank liabilities), although this is in my view a perfectly legitimate option.

Howells strongly advocates the last option, i.e that agents spend their excess deposits on nonmoney assets. He also emphasizes that

“nonmoney assets (to savers) are someone else’s liabilities. The return on existing nonmoney assets sets the return required on newly created assets and thus on the cost to the issuer of these liabilities. These liabilities are an alternative to bank borrowing.” (Howells, 1995, p. 105)

The trouble with this statement is that there are different classes of issuers of such liabilities. For the purpose of this paper, I distinguish between the government, banks and nonfinancial corporations.

The extent to which bank borrowing constitutes an alternative source of finance for the central government is very likely of low significance. Agents’ purchases of government bonds, therefore, have only a limited potential to influence the source (loans, bonds) the government uses to finance its operations. However, should there be a stable

relationship between the yields on government and corporate bonds, the mechanism based on changes in interest rate differentials would work as expected by Howells.

Then there are financial institutions who can (and do) issue nonmoney securities³ (e.g. bonds, covered bonds or some other asset-backed securities). As a consequence of agents' purchases of bank bonds (as an example), the yield of existing bank bonds declines. Banks then, at least on margin, have an incentive to finance their assets with bonds rather than from other sources. These lower costs of bond finance might be passed on to banks' clients in the form of lower interest rate on loans, which would tend to increase the flow of net new bank lending. (I have to admit there are many *ifs* that can significantly reduce practical relevance of such mechanism).

What then remains are nonmoney liabilities issued by nonfinancial corporations, which have the effect expected by Prof. Howells. However, as argued above, this may not be the case of nonmoney securities issued by the government and banks. But there are other complications to the functioning of Prof. Howells's reconciliation mechanism, to which I now turn.

³ An interesting problem is securitization. Securitization may be viewed as economizing on reserves and (regulatory) capital, since by removing loans from their balance sheets banks achieve lower requirements on reserves and (regulatory) capital. Moreover, as the subprime financial crisis has clearly shown, banks' incentives to closely assess the creditworthiness of borrowers are weakened under the originate and distribute model of financial intermediation. With securitization, therefore, the ratio of effective to notional demand for loans rises, which leads to larger flows of net new bank lending than would otherwise be the case, thus at first increasing the extent of the reconciliation problem. However, if an (nonbank) agent uses deposits to buy the securitized loans, the actual outcome is destruction of money, which provides a solution to the reconciliation problem.

4.3 MUTUAL FUNDS

An issue related to the previous section concerns agents' investment opportunities. Suppose that an agent chooses to spend his or her excess deposits on bonds. The first option he or she has is to buy the bonds outright. A feasible alternative is to buy bond mutual fund shares, which offers the agent much better diversification. The bond fund, however, might not invest in bonds only – certain part of fund's assets might be held e.g. in deposits. For instance, during the period Q3 2004–Q4 2010, bond investment funds in the Czech Republic⁴ held on average 74 % of their total assets in bonds. Therefore, investing in bond funds as opposed to an outright purchase of bonds might tend to weaken the reconciliation mechanism of Prof. Howells.

But how important, relative to outright purchases/sales of bonds, are transactions in mutual funds shares? Tables 2 and 3 might provide some clue⁵. They imply that transactions in securities other than shares can be significantly outweighed by transactions in mutual funds shares, which suggests that the aforementioned complications could be of some importance. However, the results are highly volatile and economy and sector (households vs. non-financial corporations) specific.

Table 2 Investment behaviour of households (including NPISH⁶)

The ratio of absolute values of **transactions** in *Mutual funds shares (F.52*)* to **transactions** in *Securities other than shares, excluding financial derivatives (F.33*)*

	2009	2008	2007	2006	2005	2004	2003	2002	2001	2000	av. 2003–2008
Belgium	0,58	1,28	0,16	0,55	0,74	0,37	0,48	0,37	2,01	4,83	0,60
Germany	5,47	5,53	0,45	0,11	1,00	0,14	1,43	2,98	9,29	15,59	1,44
Ireland	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Greece	0,05	1,98	9,14	0,71	4,45	0,13	5,23	0,07	0,34	0,13	3,61
Spain	0,36	5,68	1,14	0,34	9,24	14,62	19,93	0,47	10,70	78,74	8,49
France	NA	58,38	0,52	0,56	0,03	44,41	0,06	1,39	1,98	52,68	17,33
Italy	NA	1,22	0,47	0,59	0,41	0,16	2,73	0,04	0,14	0,56	0,93
Luxembourg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Netherlands	NA	2,32	1,25	6,12	1,78	8,84	3,93	NA	NA	NA	4,04
Austria	NA	0,78	0,09	1,40	2,47	1,16	0,77	0,30	8,83	2,19	1,11
Portugal	12,35	3,38	1,68	1,71	31,43	0,63	0,64	0,40	0,74	0,06	6,58
Finland	4,60	9,01	1,76	2,95	6,20	2,01	2,59	8,72	0,87	9,48	4,09

Source: Eurostat

⁴ The data are taken from the Czech National Bank's time series system ARAD, see http://www.cnb.cz/cnb/STAT.ARADY_PKG.PARAMETRY_SESTAVY?p_sestuid=1882&p_strid=AADAA&p_lang=EN

⁵ Data in these tables as of September 9, 2010

⁶ Non-Profit Institutions Serving Households

* ESA 95 codes

Table 3 Investment behaviour of nonfinancial corporations

The ratio of absolute values of **transactions** in *Mutual funds shares (F.52^{*})* to **transactions** in *Securities other than shares, excluding financial derivatives (F.33^{*})*

	2009	2008	2007	2006	2005	2004	2003	2002	2001	2000	av. 2003–2008
Belgium	0,00	0,07	0,00	0,02	0,03	0,02	0,24	0,05	0,03	0,55	0,06
Germany	10,65	2,35	0,03	1,83	0,26	0,16	0,28	0,00	0,14	0,07	0,82
Ireland	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Greece	0,03	0,57	0,00	0,07	0,30	0,06	0,20	0,09	0,50	0,57	0,20
Spain	0,06	1,65	2,00	0,91	1,41	1,30	1,44	0,13	0,19	1,19	1,45
France	NA	0,94	1,38	1,90	0,28	0,64	1,33	1,23	2,40	0,09	1,08
Italy	NA	1,14	0,03	0,02	1,03	0,06	0,12	0,01	0,20	0,04	0,40
Luxembourg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Netherlands	NA	0,35	0,20	0,10	0,00	0,00	0,00	NA	NA	NA	0,11
Austria	NA	1,14	1,93	0,23	1,60	0,78	1,66	0,61	5,49	6,01	1,22
Portugal	1,85	8,88	0,60	1,12	0,24	0,06	0,11	0,03	0,03	0,08	1,83
Finland	0,07	2,37	0,16	1,70	8,70	0,58	0,56	0,13	8,16	0,13	2,34

Source: Eurostat

4.4 CREDIT RATIONING

When deciding between different sources (bank vs. nonbank) of external financing, the bank lending–nonbank lending spread is unlikely to be the only factor firms take into account. In his seminal paper on Post Keynesian theory of credit rationing, Martin Wolfson (1996) highlights the importance of the relationship the borrower has with the bank. He finds out that if banks tighten their credit standards it is correct to expect that

“borrowers with an established borrowing record would be subject to less tightening of credit standards than would borrowers without such a record.” (Wolfson, 1996, p. 458)

What’s important is that credit standards comprise not only interest rates, but also nonprice terms like requirements on collateral, size of the credit line, loan to value ratio etc. Since the borrower must fulfill credit standards in order to obtain a loan, having a good relationship with the bank means not only better terms for the borrower (compared with new borrowers), but it also increases the chances of a loan request being approved.

Suppose that the bank lending–nonbank lending spread has narrowed, inducing some firms looking for finance to issue bonds instead of asking for a loan. The costs of nonbank finance have decreased relative to the costs of bank loans, but by issuing bonds these companies simultaneously give up the potential benefits outlined above (as they do not build up the relationship with a bank).

Moreover, one may argue that just like there is a permanent fringe of unsatisfied borrowers asking for bank loans, there are agents unable to raise funds on capital

* ESA 95 codes

markets (because they are too risky). For such agents, bank borrowing may be the only alternative. In addition, it is likely that the set of agents rationed on both credit and financial markets is nonempty.

4.5 BANK-BASED VS. ASSET-BASED SYSTEMS

The strength of the mechanism proposed by Prof. Howells is likely to be influenced by the nature of financial intermediation, i.e. whether the financial system could be characterized as bank-based or asset-based. We can find some empirical support for this proposition in the surveys⁷ on bank lending practices conducted by the ECB and the Fed.

In the Euro area (which is taken as an example of bank-based system), we may rely on questions 2 and 5 of the ECB Bank Lending Survey⁸. In Question 2 banks are asked to specify how have selected factors influenced their credit standards, as applied to loans to businesses. Those factors include, among others, *Competition from market financing*. In the July 2010 survey (ECB, 2010), no bank indicated that this factor contributed to the change in its credit standards. On the contrary, competition from market financing was not important (contributed to basically unchanged credit standards) for 90 % of banks⁹. Question 5 asks banks about the factors contributing to changes in the demand for loans or credit lines to businesses. Only 11 % of banks identified *Issuance of debt securities* as contributing to higher/lower demand for loans, whereas 70 % of banks responded that the issuance of debt securities contributed to basically unchanged demand. For *Issuance of equity*, the corresponding numbers were 7 % and 73 %, respectively.

For the US (asset-based system), we get a very different picture. The July 2010 Senior Loan Officer Opinion Survey on Bank Lending Practices¹⁰ (Fed, 2010) shows that for almost 70 % of responding banks, competition from other financial intermediaries or capital markets was (either somewhat or very) important in setting their credit standards

⁷ Both July 2010 surveys considered below are representative, in the sense that their qualitative results can be extended to other periods.

⁸ See the Questionnaire (http://www.ecb.int/stats/pdf/bls_questionnaire.pdf) for their exact formulation.

⁹ Similar percentages hold for *Competition from other banks* and *Competition from non-banks*, both in Question 2 and Question 5.

¹⁰ Table 1 of the survey, covering selected large banks in the US

on commercial and industrial loans (Question 3). In addition, for approximately 47 % of responding banks the attractiveness of other bank or nonbank sources was an important factor affecting the demand for commercial and industrial loans (Question 5).

4.6 OTHER CONSIDERATIONS

- Issuance of corporate bonds increases supply on the bond market. This pushes the price of bonds down (the yield goes up), which in effect increases the bank lending–nonbank lending spread and contributes to increasing the flow of new bank lending.
- We should also account for historical time and uncertainty. The firm never knows in advance the price for which it can sell its bonds, just like it may never be sure about the amount it will be able to sell. Moreover, the process of issuing bonds takes time and a lot can happen between the decision to issue bonds (i.e. when one starts to prepare the emission) and the emission itself. These considerations suggest that although, from the theoretical point of view, firms should (on margin) respond to the changes in bank lending–nonbank lending spread, larger changes in this differential are needed to induce firms alter their source of new external finance in practice.
- Since we do not live in a world with zero transaction costs, an emission of bonds, just like a loan request, means costs to the borrower due to various fees and charges. When choosing between bank and nonbank finance, these costs should be taken into account.

5 CONCLUSIONS

It is a well established finding of Post Keynesian monetary theory that the money supply is determined by the demand for credit, not by the demand for money. However, the total amount of loan-created deposits is unlikely to be in line with agents' *ex ante* demand to hold money (deposits) as an asset, since the decision to enter in a loan contract and to hold money is made by different groups of agents. This paper dealt with the problem of reconciling the preferences of those two groups of economic units. Since deposits are generally accepted as a means of payment, no reconciliation is necessary (this is not to say there will be no reconciliation) for the deposits created in the process of credit expansion to be held in the system.

I have argued that a complete reconciliation might not be possible. First, Kaldor-Trevithick reflux mechanism and the income multiplier are not enough to assure complete reconciliation. Second, I have listed a number of factors (I do not claim that all the factors discussed above are equally important, but rather they are important if taken together) that have a potential negative impact on the working of the mechanism based on changes in relative interest rate differentials. This mechanism, as was argued by its proponents, was supposed to be capable of eliminating the discrepancies in preferences quickly and continuously. But is it always able to deliver on its promise? The answer suggested by this paper is negative. Therefore, we shouldn't altogether dismiss the concept of convenience lending. Or is there some other, not yet known, alternative?

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