# The Meaning of Bank Deposits

by

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## *Introduction*

Ever since Cannan's (1921) famous article, the nature of bank deposits has been puzzling a number of scholars who have explored the characteristics of modern money (see, for example, Keynes, 1930; Lerner, 1943; Schneider, 1962; Schumpeter, 1970). More recently, this issue has regained interest within academic circles on account of the ongoing research programme aiming to forge ahead Keynes's (1933) monetary theory of production. In this respect, over the past decade or so the two most active fringes of monetary economists have been Post Keynesians (see, for instance, Davidson, 1990; Arestis and Howells, 1996, 1999; Chick, 2000) and Circuitists (see e.g. Graziani, 1990, 1994; Lavoie, 1994, 1999; Parguez and Seccareccia, 2000). Deleplace and Nell (1996) have provided an open confrontation between these two strands of thought, which share a number of principles of monetary economics although their emphasis on the functions of money is different. In fact, as clearly summarised by Fontana, 'Post Keynesians in general have emphasized that money is a liquid store of wealth held by agents to provide an escape route from an uncertain future. […] Circuitists have stressed that in modern economies money serves as the means of payment' (Fontana, 2000, p. 44).

Now, as Fontana cogently argues, 'there is an urgent need to build a more general monetary theory that allows for money being store of wealth and means of payment' (Fontana, 2000, p. 45). This is what this paper is all about. More precisely, in an attempt to build a bridge between the liquid store of wealth and the means of payment conceptions of money, this paper suggests that Smith's (1976) distinction between money proper and money's worth may be useful in order to disentangle,

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at the conceptual level, the two principal functions that the thing called 'money' carries out within a modern production economy. To put it differently, building on the distinction between monetary flows and stocks (Gnos, 1999), this paper concentrates on the two important functions of modern banking, namely the emission of money as such and the transfer of money balances between economic agents. It is argued that despite the advances in the theory of endogenous money, as well as the persevering attempts to carry on Keynes's monetary theory of production, the nature of modern banking still awaits to be fully explored and understood. In particular, there are two questions that call for a more elaborate theory of money and banking at the macroeconomic level. First, on ontological grounds, can one and the same 'thing' be a means of payment as well as a temporary abode of purchasing power? In the negative, what does it bring to distinguish analytically the two 'things' that carry out these two functions at different points in time? Recent contributions within the Post Keynesian and Circuitist traditions have pointed out that '[n]o one aspect of money can stand on its own as a complete account of what money is and what money does in a modern economy' (Fontana, 2000, p. 28).[1] Yet, so far both have failed to bring to light the distinction between bank money (i.e. money proper) and bank deposits (i.e. money balances), perhaps because from a common-sense point of view money and deposits are synonyms and coextensive (cash is irrelevant here).[2]

The aim of this paper is to explore the positive distinction that exists in modern banking between money and deposits, in connection with the working of a monetary production economy. The following section focuses on the book-keeping nature of bank money, and explains the distinction between money proper and money's worth following what may be called a modern approach to Keynes's monetary theory of production. Next, the money-purveying and the credit-purveying functions of modern banking are investigated by referring to banks' double-entry system of accounts. Some final remarks conclude the paper.

## *Money and bank deposits: a new view*

Consider the process of money creation. According to the theory of the monetary circuit, money is created when a bank grants a credit to one of its clients and is destroyed when this loan is reimbursed to the bank. In the meantime, money circulates between agents, who accept it as a means of payment on the basis of its purchasing power. Let us focus exclusively on the point at issue here, namely the origin of money's worth. Parguez and Seccareccia maintain that the value of modern money stems

'from the certainty that accepting bank debt as payment is to acquire a right on the existing as well as future output that will be created by the agents who have been granted bank credit' (Parguez and Seccareccia, 2000, p. 101). So far, so good: every seller of goods and services is aware of the fact that bank deposits have a positive purchasing power and hence accepts them. Yet, a problem arises when one wants to grasp the source of 'the society-wide certainty that any temporary holder of bank debt has a right to acquire present and future real resources generated by initial spending of those debts' (Parguez, 2001, p. 72). To put it clearly, is it 'the social production of trust and confidence' that can *explain* the value of money, as Post Keynesians and many others claim (see, for instance, Dow and Smithin, 1999, p. 80; Ingham, 2000, p. 29), or do people accept money *because* the latter has a positive exchange value independently of their beliefs? Generally speaking, the purchasing power of money is explained by referring to the universal acceptability of the latter, on the basis of the traditional social consensus argument,[3] which has also been recast in terms of credibility of the banking system. 'Banks are deemed to be so creditworthy that no holder of their debts would ever ask for reimbursement either in kind or in the debt of another agent' (Parguez and Seccareccia, 2000, p. 103). In addition, the endorsement of bank money by the State is often said to provide further guarantee to the banks' acknowledgment of debt entered in the liabilities side of their balance sheets (Wray, 2000; Bell, 2001).

Now, confronted with the historical evolution of the material that has been used to represent money – especially in the present days of nearly full dematerialisation of the money stuff driven by information technology (see Dembinski and Perritaz, 2000) –, economists may wonder whether there really is nothing more fundamental than the 'general acceptability' hypothesis in order to explain the purchasing power of bank money. In particular, one might be led to ask if Smith's distinction between the value of money and money proper – which he portrayed as the great wheel of (output) circulation – can be given a modern interpretation with respect to banks' accounting. In fact, referring to the rigorous apparatus of double-entry book-keeping, the theory of money emissions developed by Schmitt's school provides an explanation of the value of money which is not determined by trust and confidence. In a nutshell, this theory considers that banks issue money as a mere numerical form, deprived of purchasing power.[4] It is through its association with production that money is given a positive value, and not as a result of the social acceptance of the banks' acknowledgement of debt (see e.g. Schmitt, 1996a; Cencini, 2001). In this framework, therefore, money creation may be seen

as the application of banks' double-entry book-keeping to express, and record, payments in their numerical form, that is to say, in the form of an 'asset-liability' entered in a bank's balance sheet. To put it in Schmitt's own words, 'the meaning of money creation [is that] the bank creates $+x$ and $-x$ units of money in one and the same "impulse"' (Schmitt, 1996a, p. 134). As a matter of fact, when banks provide transactions services to the public, they make payments as demanded by their clients (hence the endogenous nature of modern money), debiting and crediting them through 'bookkeeping entries [that] are used to allow economic units to exchange one form of wealth for another' (Fama, 1980, p. 43).

It is at this juncture that the liquid store of wealth function of modern money, on which the Post Keynesian literature has focused, can be made fully consistent with the means of payment function underlined by Circuitists, provided that the latter recognise that the monetary circuit they focus upon is, in fact, the circuit of income (in the form of bank deposits) and not the circuit of money as such (money proper).[5] Going beyond the negative, yet necessary, task of criticising alternative approaches to a monetary production economy, let us proceed step by step in order to point out some 'first principles' for the construction of a more general monetary theory.[6]

The first step forward in this direction is to draw a distinction between money as such and bank deposits. In order to show the nature of this distinction, which is yet unperceived in monetary literature, let us start from the *tabula rasa*. To be sure, this research strategy will avoid the temptation to explain a deposit formation by having recourse to a pre-existent deposit (whose origin would remain unexplained). Further, to understand the scope of the above distinction, let us consider the payment of the wage bill, since '[i]f there were no workers to remunerate, then money could not circulate and hence exist' (Rochon, 1999, p. 31).[7] We shall address here neither the reasons lying behind the actual amount of the workers' remuneration nor the distribution of income between workers (i.e. wages) and capitalists (profits). We abstract thus from any value judgement about income distribution, to concentrate on a positive analysis of the income-generating process as recorded by the banks' double-entry system of accounts. Indeed the only aim of this section is to draw a distinction between money and deposits which is not merely rhetoric.

When one considers the result of the payment of a wage bill, say, of $x$ units of money, in book-keeping terms, one has to start from the double-entry recorded in Table 1.

**Table 1.** *The result of a payment on the factor market*

| Bank | | | |
|---|---|---|---|
| liabilities | | | assets |
| Workers | x | Firm | x |

There is no need to explain the mechanics of the transaction entered in the bank's balance sheet. However, it is worth exploring the very payment that gives rise to this double-entry. In the case in point, Post Keynesians and Circuitists agree that firms have to finance their expenditure on the factor market by obtaining a loan from banks. As Lavoie put it, '[t]hese flows of credit then reappear as deposits on the liability side of the balance sheet of banks when firms use these loans to remunerate their factors of production' (Lavoie, 1984, p. 774). In fact, this is the loans to deposits causality put to the fore by both strands of thought, first spelled out by Withers back in 1909 (see Realfonzo, 1998, ch. 6).

Now, to focus exclusively on the point at issue in this section, one has to consider that in the income-generating process depicted in Table 1, the money creation process carried out by the bank only provides the economy with the number of money units asked for by the firm (on the assumption that the firm's creditworthiness satisfies the benchmark set by the banker). To state it clearly, it is the remuneration of labour that gives a purchasing power to money, which, as such, is a mere numerical form of no value whatsoever. Were it not for the monetisation of the production process, banks would be unable to create purchasing power on their own. So, bank deposits are a 'liquid, multilaterally accepted asset' (Chick, 2000, p. 131), because they are the organic *result* (that is, a stock magnitude) of two intimately related *actions* (or flows): (1) creation, on the monetary side, of the numerical form of payments (money proper) by the banking system, and (2) production, on the real side, of physical output (money's worth) by the non-bank public, that is, firms and workers taken together.[8] So, the flow of money and the flow of production are complementary aspects of the same (income-generating) process. 'From the beginning, banking and productive systems thus contribute to the determination of a unique macroeconomic structure' (Cencini, 1997, p. 276).

In sum, from this point of view money as such is a flow, whose result is a stock (of liquid wealth) in the form of bank deposits. Contrary to the 'cloakroom theory of banking' *à la* Cannan (1921),

bank deposits are not a financial asset *sui generis*, originating in some 'central mystery of modern banking' (Chick, 2000, p. 131). According to the theory of money emissions, bank deposits are the alter ego of physical output, and come to light as soon as the latter is monetised via the remuneration of wage-earners by firms. The purchasing power of bank deposits has therefore nothing to do with the agents' trust and confidence in the banking system. In this framework, let us emphasise it, money balances are net worth because they are output – before final consumption of the latter takes place on the goods market.[9] Then, when output is sold on the market for produced goods, an equivalent (some would say identical) sum of bank deposits are destroyed, since deposit holders transform a liquid store of wealth into a physical value-in-use, or, to put it in the phraseology of Fama (1980), they exchange a monetary form of wealth for a real form. This exchange, taking place on the product market, destroys a sum of bank deposits equal to the amount of money wages adding up to the production cost of output sold. In fact, the firm recovers on the market for produced goods the income (in the form of deposits) that the bank did lend to it for the payment on the factor market (see Table 1). Now, two cases may occur at this stage, depending on the existence of profits or not. Since this issue lies beyond the scope of this paper, let us assume that the firm does not earn a profit on output sold (for a reason that does not matter here) and that it does not make a loss either. Suppose also that this firm does not sell all produced output. In this case, the price of the output sold is equal to its production cost (say, $x - y$, with $y > 0$). The exchange on the product market gives thus rise to the double-entry recorded in the second line of Table 2, where the last line indicates the end-result: the firm could reimburse the bank for an amount equal to $x - y$ and has thus a remaining debt of $y$.[10]

**Table 2.** *The result of a payment on the product market (zero profit)*

| | | Bank | |
|---|---|---|---|
| liabilities | | | assets |
| Workers | x | Firm | x |
| Firm | x – y | Workers | x – y |
| Workers | y | Firm | y |

A further point can then be noted as far as the distinction between money and deposits is concerned. Money as such exists each time a payment is carried out, so that one might argue that '[m]oney and payments are one and the same thing. No money, if correctly defined, exists either before or after a given payment' (Schmitt, 1996b, p. 88). Money balances, on the other hand, have a positive duration

in time, and are saved in the form of bank deposits – a part of which may be represented by bank notes[11] – until they are transformed into values-in-use as noted above. More precisely, bank deposits exist *between* payments, whereas money as such only exists '*within*' payments – which are instantaneous events on account of the fact that it takes an instant, that is, a zero duration in time, to enter a payment in the banks' system of accounts.[12] To be sure, this is tantamount to distinguishing monetary flows and stocks: money as a means of payment is a flow ('money on the wing' in Robertson's (1937) language), while money as a store of wealth (i.e. bank deposits) is a stock ('money at rest') – it is indeed a temporary abode of purchasing power. However, it should be noted that, contrary to a widely-held belief, money 'on the wing' is not a stock of money in motion. In fact, the causality runs from money as a flow (means of payment) to bank deposits (stock of wealth).

To conclude this section, a last point can be inferred from the preceding analysis. When one considers that money proper is the *means* of payment, that is to say, the form in which payments are made, one notices that the *object* (or content) of any payment is not money as such, but output in the form of a bank deposit (a liquid stock of wealth). In short, a distinction has to be drawn between form and substance. Owing to today's (nearly) full dematerialisation of the money stuff, the form is issued by the banking system at a trifling cost. In fact, bank money is entirely non-dimensional, since it is a mere numerical form, that is, a double-entry in the banks' book-keeping. By contrast, the substance of monetary transactions is the result of human effort, i.e. production,[13] and as such implies what Keynes dubbed the disutility of labour – measured in terms of wage-units (see Carabelli, 1992; Bradford and Harcourt, 1997)[14] It is then possible to clarify Fama's quotation according to which 'bookkeeping entries are used to allow economic units to exchange one form of wealth for another' (Fama, 1980, p. 43). As is shown by the theory of money emissions, which has a clear affinity with Ricardo's (1823) work on this point, the transformation of wealth (from a real to a monetary form, or vice versa) is an absolute exchange, whereby a single object, that is, output, changes its form as a result of the payment entered in the book-keeping system of banks. Let us explain this point at some length, since at first sight it may seem an extraordinary statement indeed. Consider again the payment of the wage bill (see Table 1). Workers earn a claim on a deposit in exchange for the physical output that they have produced over the relevant period, which gives rise to a stock of new goods that are stored with the firm in order to be sold on the product market. In this

situation, money proper, i.e. the numerical form in which the workers' remuneration takes place, is a mere vehicle of the output produced by wage-earners: it allows the newly-produced goods to be physically deposited in the firm, while their monetary form is entered as a deposit in the bank's book-keeping on behalf of wage-earners. In other words, physical output is the real content of the firm's debt to the banking system – for the payment of the wage bill – and the corresponding bank deposit of wage-earners is a positive net worth for them as well as for the economy as a whole (Figure 1).

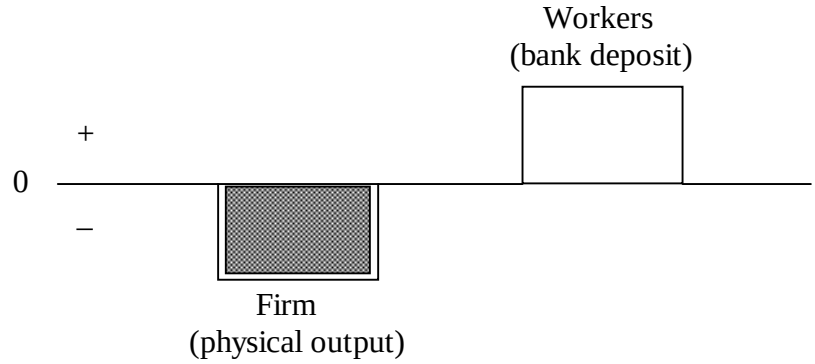


**Figure 1.** *The result of an absolute exchange on the factor market*

Similarly, when output is sold on the market for produced goods, an absolute exchange of the opposite algebraic sign is recorded in the bank's book-keeping (see Table 2). The object of the payment is thus transformed from its monetary into its real form. By spending their bank deposit on the product market, workers (or, more generally, deposit holders) obtain the real content of their deposit, namely the chosen goods or services.[15] Here, too, money proper is the vehicle of the transformation by means of which a claim on a bank deposit is surrendered by those willing to obtain a physical output, i.e. value-in-use. When this happens, an equivalent bank deposit is destroyed since the firm recovers it and can therefore reimburse the bank that had paid out wages (Figure 2).

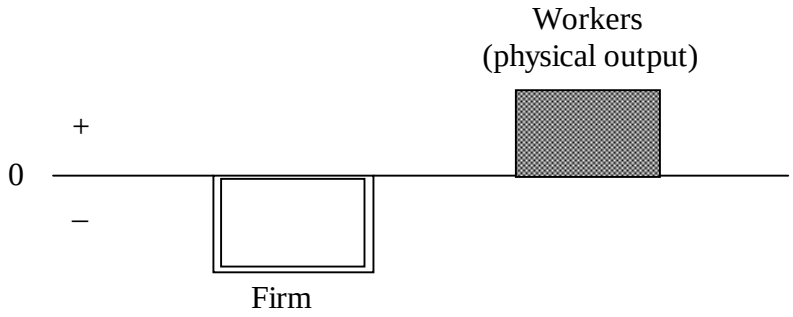


**Figure 2.** *The result of an absolute exchange on the product market*

In this framework, therefore, money proper and physical output are the twin aspects of the same reality: a net worth existing in the form of bank deposits until final consumption occurs on the product market. As argued by Cencini, 'money takes the place of the physical product and becomes its numerical form, so that the exchange between money and output defines their integration: money and output become the two complementary faces of a unique object' (Cencini, 1995, p. 16). The analysis of production from a 'bank money' point of view acquires thus a new light, which may contribute to elaborate a more general monetary theory of production by distinguishing money from deposits, that is, money as a means of payment from money as a stock of (liquid) wealth.

*The banks' intermediation process within a monetary economy of production*

Let us reconsider the money creation process in connection with the payment of wages (or the wage bill), as seen from the banks' point of view. Again, what is of interest here is the interpretation of the book-keeping entries in the balance sheet of the bank that carries out the monetisation of current production (see Table 1). Two points can be noted in this section. They have been clearly illustrated by Fischer's analysis of the functions of modern banking within a monetary economy. 'Banks do two things in this economy. First, they act as financial intermediaries. […] Second, they provide transactions services, making payments as demanded by the households' (Fischer, 1983, p. 4). Although the Fischer framework basically concerns exchanges of already produced goods, it may also serve as a gambit to investigate a monetary economy of production.

First, as already noted in the previous section, banks create the monetary form in which payments are made, and recorded, by them. In this respect, they act according to the principle that 'loans make deposits', as has been so clearly underlined by Post Keynesians and Circuitists as well (see e.g. Lavoie, 1999; Fontana, 2000; Rochon, 2001). As can be inferred from the analysis of the bank's book-keeping entered in Table 1, starting from the *tabula rasa*, the payment on the factor market on behalf of the firm leads to the formation of an entirely new bank deposit. In fact, as soon as the bank enters the payment of the wage bill in its balance sheet, workers are credited with a deposit (entered on the liabilities side of the bank's account) and the firm is debited by the same amount (entered on the assets side of the bank's account). As seen from the bank's point of view, this operation, crucial as it is for the monetisation of current production, is nothing other than the use of double-entry book-keeping to provide the non-bank public with a number of units of money proper.[16] To be clear,

what originates in the bank, and in the banking system as a whole, is the creation of the monetary form in which payments are made. So, this 'money-purveying' function – as Keynes labelled it in his early drafts of *A Treatise on Money* (1930)[17] – may be called in present language a monetary intermediation: when making a payment, the bank delivers the exact number of money units asked for by the economy,[18] and enters them as an 'asset-liability' in its balance sheet.

Now, as already noted, the purchasing power of money does not originate in the banking system alone, independently of production. It is, in fact, the joint result of the banking and productive systems (see above). More precisely, the material result of the monetisation of current production is physical output moulded by its monetary form. It is as such that it is deposited with the banking system as a whole. This is precisely the point that matters here: for every deposit entered on the liabilities side of a bank's balance sheet there is a corresponding entry on the assets side testifying a loan to the public, so much so that banks lend at once all the income saved by their clients in the form of bank deposits.[19] Consequently, in this case the relevant 'banking proverb', as identified by Schumpeter (1970) in his posthumous work, is that deposits make loans. However, let us point out that this causal link between deposits and loans is not at all a restatement of the classical loanable funds theory, according to which bank loans depend on *pre-existent* savings (i.e. bank deposits). The deposits-to-loans causality results here from the fact that no deposit holder can spend this deposit *at the very instant when it is formed*, that is, when it is entered in the bank's account.[20] So, the act of saving of the newly formed deposit by its original owner implies that this amount is immediately lent by the bank where it is recorded. This is independent of the agents' forms of behaviour and has nothing to do with them, since it follows directly from the basic, and essential, rule of double-entry book-keeping, a point that Moore has recast in terms of 'convenience lending' (Moore, 1988, ch. 12). To quote Cencini on this point, '[t]hrough the financial intermediation of banks, savings are instantaneously lent by their initial owners and spent by their borrowers' (Cencini, 1995, p. 71). This is precisely the 'credit-purveying' function of modern banking, as Keynes dubbed it in the *Treatise*'s early drafts.[21]

It is therefore correct to claim that banks are financial intermediaries, as claimed by the neoclassical school, even if their distinguishing characteristic with respect to other (non-bank) financial intermediaries is to act also, and foremost, as monetary intermediaries in so far as they are involved in the money creation process (see above). In this respect, Pesek and Saving (1968) recognised indeed that '[e]ssentially, commercial banks engage in two basically different business functions.

First, and most important, commercial banks produce and sell demand deposit money for cash or on credit. In this, the commercial banks are unique among all financial institutions. Second, commercial banks serve as financial intermediaries […]. In this second function, the commercial banks compete with many other institutions, such as savings and loan associations and mutual savings banks' (Pesek and Saving, 1968, p. 144). However, Pesek and Saving did not succeed in clearly focusing on the specific function of monetary intermediation carried out exclusively by banks, because they were led astray by the view that money is produced and sold. In fact, as shown in the previous section, being a means of payment of a mere numerical form, money proper is not produced and hence cannot be sold: it is entered in the system of banks' accounts as an asset *and simultaneously* a liability, that is, an 'asset-liability' of no value of its own. If money were actually produced, it would have to be included in the set of goods and services defining national output. But this would also imply that monetary transactions are 'dyadic' exchanges – of the same kind as those occurring in a barter economy –,[22] which have been epitomised by Clower's view that '*money buys goods and goods buy money; but goods do not buy goods*' (Clower, 1967, p. 5).[23] If this were true, the famous Ricardo problem of finding an invariant measure of value would find no solution indeed. Clearly, including money among the set of produced output is bound to raise the problem of measuring goods by means of goods, a problem that Ricardo had been trying to solve without success until his death. Whilst one may claim that bank notes are the result of a production process (namely, the material result of the printing press) whose costs participate in the definition of national income, the paper is only the physical support (a representative sign) of the means of payment *proprio sensu*.[24] Essentially, the means of payment is the economic measure (or the monetary form) of produced goods and services, because, being a number of money units, it does not have to be measured. As a matter of fact, in a monetary economy of production the result of the payment on the factor market is a sum of bank deposits that are the monetary measure of current output (in terms of the wage bill).

On the whole, there is therefore a two-way causality between loans and deposits, so much so that banks' double-entry book-keeping can be referred to in order to explain that loans make deposits as well as that deposits make loans, depending on the focus of the analysis. The first reasoning refers to the fact that bank deposits result from the income-generating process originating in the loans that banks grant to firm, while the second refers to the fact that the savings entered as a deposit in the liabilities side of a bank's balance sheet are immediately lent to creditworthy borrowers to finance their deficit spending.

## *Conclusion*

The distinction between money and deposits pointed out in this paper may be helpful in clarifying Keynes's original intuition that 'the money-of-account is the *description* or *title* and the money is the *thing* which answers to the description' (Keynes, 1930, p. 3). Coupled with the claim that '[m]oney of account, namely that in which debts and prices and general purchasing power are *expressed*, is the primary concept of a theory of money' (p. 3), this passage might indeed suggest that money as such is a nominal form, i.e. a mere counter (to use Hicks's own words, as quoted above), and that the thing which is counted is a bank deposit (that Keynes unfortunately simply called money, a slippage which may explain why up to date his followers have failed to notice the distinction between money and deposits). In fact, when considered from what may be called a modern view of Keynes's monetary theory of production, the meaning of bank deposits is to represent physical output in its monetary form – as a result of the payment on the factor market for the current production of goods and services. As such, bank deposits are the bridge between present and future that has been so cogently emphasised by Keynes himself and by those Post Keynesians who have been in the front line to investigate agents' behaviour under conditions of uncertainty.[25] In this respect, with no loss of consistency, one may then also consider the construction of a microeconomic theory of banks' behaviour, as attempted by Rochon (1999, ch. 8), where the issues of uncertainty, liquidity preference, and Kalecki's principle of increasing risk can be investigated following Keynes's insights. Post Keynesians have gone a long way indeed into these important issues concerning a monetary production economy. Their analyses on these topics have provided sound thinking on the idea that 'money matters', a central tenet shared at present by all heterodox schools of thought. Were they to distinguish analytically money proper from bank deposits along the lines shaping this paper, a more general monetary theory that allows for money being means of payment and store of wealth would be provided with a solid, and positive, scientific foundation, doing away with all 'sociological' or 'psychoanalytical' explanations of money's worth, which, let us note it in passing, eventually deprive monetary economics from its own object of enquiry.[26] This would enable the economics profession to further understand the working of our monetary production economies, in order to try to make them work better (for example, by a new policy-oriented analysis of inflation in light of the meaning of bank deposits).

*Notes*

[1] See also Rochon (2000).

[2] 'To Post Keynesians, money is bank liabilities, that is, deposits' (Chick, 2000, p. 130). The same definition is given by Circuitists, who claim that 'money is also a liability, i.e., bank deposits used as purchasing power' (Rochon, 2000, p. 974). Certainly, the fact that this definition conforms to the statistical definition used by central banks and international financial institutions does not provide an incentive to further investigate the nature of bank money.

[3] Using neoclassical language, 'one person gives up goods (objects that appear as arguments of utility functions, directly or indirectly) for fiat money only because the person believes that someone else will subsequently give up goods for fiat money at an acceptable rate of exchange' (Wallace, 1980, p. 49). In this framework, money has also been compared to ordinary language, in the sense that both are said to be valuable because of people's willingness to use them for (facilitating) social interactions (see Tobin, 1963). As is maintained also by Moore, '[money's] usefulness and value is based entirely on social convention. Money is like a language. It is acceptable to me only if it is acceptable to you' (Moore, 2001, p. 17).

[4] As Fama observes in his famous *Journal of Monetary Economics* article, the essence of the transactions services provided by the banking system is to rely on mere numerical units – integers having a concrete economic meaning, as we shall see later on – to carry out monetary transactions within the economy (Fama, 1980, pp. 39–43). This was indeed already pointed out by Hicks back in 1975: 'money is now a mere counter, which is supplied by the banking system just as it is required' (Hicks, quoted in Laidler and Parkin, 1975, p. 742).

[5] See Cencini's (1997) critical review of Graziani (1994) on this point.

[6] Contrary to Fontana, who deems it impossible 'to establish any one set of principles that are broad enough to support a unique theoretical structure [which allows for money being store of wealth and means of payment]' (Fontana, 2000, p. 45), it will be shown here that such a theoretical synthesis may be accomplished, provided that one is willing to abandon firmly-held beliefs and reconsider the whole theoretical structure afresh.

[7] This is a point on which Circuitists are unanimous (see e.g. Lavoie, 1987).

[8] We abstract here from the State, which however can be added to the group of firms (namely those of the public sector) without altering the results of our analysis.

[9] See Rossi (1998, pp. 33–35) for elaboration on this point.

[10] Circuitists have focused on this point to note that it poses 'a problem for the closure of the monetary circuit: hoarded saving represents a leakage' (Rochon, 1999, p. 35). However, as will be shown in the next section, since in this framework income is saved in the form of bank deposits, the latter are not withdrawn from circulation. Owing to their book-keeping nature, in fact, these deposits remain entirely available within the banking system until they are finally spent on the market for produced goods and services. What Rochon labels 'hoarded saving' is therefore immediately lent – by the bank where these savings are recorded on the liabilities side of its balance sheet – to those firms which can recover their production costs neither on the product market nor on the financial market through the sale of securities. This is indeed a point recognised by the circuit school, as noted by Rochon: 'At the end of the monetary circuit, firms owe banks the exact amount that households have decided to entrust to banks as saving deposits. Banks will use these funds to refinance firms' debt under longer term conditions' (Rochon, 1999, p. 36).

[11] As pointed out by Eichner (1991, p. 845), the notes issued by the central bank are recorded in the liabilities side of its balance sheet. Bank notes are therefore the physical representation of a bank deposit, namely a deposit in the central bank.

[12] As clearly stated by Cencini, 'since it is through payments that money circulates, [...] the displacement of bank deposits does not require an interval of time greater than zero, for it occurs at the very moment the account of the payee is credited by the amount transferred by the payer' (Cencini, 1988, p. 74).

[13] As Keynes wrote in *A Treatise on Money*, '[h]uman effort and human consumption are the ultimate matters from which alone economic transactions are capable of deriving any significance; and all other forms of expenditure only acquire importance from their having some relationship, sooner or later, to the effort of producers or to the expenditure of consumers' (Keynes, 1930, p. 134).

[14] This issue is beyond the scope of the present paper. See Rossi (2002, ch. 5).

[15] Note that bank deposits are fungible assets.

[16] As noted by Moore, '[i]ndividual units of money as the medium of exchange are perfectly homogeneous' (Moore, 2001, p. 17), a point already made by Keynes (1936, p. 41). Now, Carabelli (1992, p. 23) observes that Keynes did not explain why money is homogeneous. She thus puts forward an explanation based on an analogy between the role of money in the economic process and the role of ordinary language in present-day societies. However, as pointed out by Bradford and Harcourt (1997, p. 129, fn. 16), this analogy is forced and unnecessary. Since money as such is a mere counter, issued by the banking system as an 'asset-liability', each unit of money is essentially identical to any other unit of money existing at the same time, because their origin and nature are the same.

[17] See Keynes (1973, p. 91).

[18] Recall the endogenous nature of modern money.

[19] As Keynes wrote in connection with the saving–investment relationship, '[t]he prevalence of the idea that saving and investment, taken in their straightforward sense, can differ from one another, is to be explained, I think, by an optical illusion due to regarding an individual depositor's relation to his bank as being a one-sided transaction, instead of seeing it as the two-sided transaction which it actually is. It is supposed that a depositor and his bank can somehow contrive between them to perform an operation by which savings can disappear into the banking system so that they are lost to investment, or, contrariwise, that the banking system can make it possible for investment to occur, to which no saving corresponds' (Keynes, 1936, p. 81). With respect to the book-keeping nature of bank money, this point has been further clarified by Moore: 'Since bank liabilities are only as good as the bank assets behind them, bank depositors are ultimately the creditors of bank borrowers' (Moore, 1988, p. 20). In fact, when one considers the remuneration of wage-earners from the banks' point of view, one notes that, owing to double-entry book-keeping, the deposits earned by workers are immediately lent to firms to finance their costs of production. This may be seen as a modern restatement of Keynes's finance motive (for a different interpretation of it see Graziani, 1987; Rochon, 1997).

[20] The actual period of time elapsing before this deposit is spent (on the market for produced goods) does not interest us here. This duration varies according to agents' behaviour and, as such, may be influenced by uncertainty within a non-ergodic economic system (see Davidson, 1988). In fact, a deposit may be spent on the market for produced goods *before* it is formed: this is indeed the role of bank advances. Yet, even in this case it remains true that the deposit

holder cannot spend this deposit when it is formed. Since he has already spent the deposit in advance, he has to reimburse the bank when it becomes available and, therefore, cannot spend it twice: the reimbursement of a bank loan destroys a deposit of the same amount (Howells, 1995, p. 100; Arestis and Howells, 1999, p. 118).

[21] See Keynes (1973, p. 91). Of course, banks assess the creditworthiness of potential borrowers before entering any new commitment, but this issue is not germane to the present analysis.

[22] As Ingham argues, '[b]arter exchange of commodities, whatever the complexity of the system, is essentially bilateral; but, monetary relations are trilateral. […] It has been the fundamental error of economic orthodoxy to subsume monetary exchange under the general rubric of pure dyadic exchange' (Ingham, 2000, p. 23). As a matter of fact, in a monetary economy '[e]very transaction involves three parties, buyer, seller, and banker' (Hicks, 1967, p. 11).

[23] Recall that the Clower aphorism serves to make money useful in general-equilibrium models of monetary economies, in which production is a bilateral exchange between two distinct objects, a sum of monetary assets, on the one side, and a productive service, on the other side. This contrasts with the conception of absolute exchange pointed out in the preceding section.

[24] Simmel (1978) was aware of this point and hence made a distinction between the essence of money and the material used to carry out its functions.

[25] See Keynes (1936, p. 293) and more recently Minsky (1994, pp. 154–155), among many others.

[26] Investigating the psychoanalytical concept of the role of money in contemporary society, Dostaler and Maris conclude that '[m]oney cannot be analysed in isolation from one's vision, not only of the functioning of the economy but of the whole of social life, including its psychological components' (Dostaler and Maris, 2000, p. 251).

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