

# Monetary Policy and Illiquidity

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## Working Paper No. 218

January 24<sup>th</sup>, 2024

### ABSTRACT

The discussion of financial stability, and the role of monetary policy, is incoherent because there is very little agreement on what constitutes financial stability (and, by implication, instability) - exchange rate stability, asset price stability, absence of debt default. By implication, there is a gap between the claims of various authors to the general applicability of their respective analyses, and the actual applicability of their conclusions, let alone the usefulness of some of their policy recommendations. The paper argues that the key issue is the regulation of the liquidity of all financial markets, and not just that of the banking system, through the markets for government securities. The paper examines the sources of this liquidity in the financial portfolios of the private sector, and how that liquidity may be managed through the open market operations of central banks and the debt management operations of governments. An implication of this approach is yield curve control and the use of

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**Acknowledgements:** I am grateful to Marina Clavijo and Enrico Pulieri for discussion of some of the issues in this paper, and for comments on an earlier draft by Charles Goodhart, David Laidler and Perry Mehrling. I am solely responsible for the interpretation and any remaining errors in this paper.

(government) debt management to control the liquidity of the markets. These elements of monetary policy have been neglected in theory and policy since the 1950s.

**<https://doi.org/10.36687/inetwp218>**

**JEL codes:** E50, G24, G29, H63

**Keywords:** monetary policy, liquidity, debt management, yield curve control.

## 1. The financial circulation of money

Successive financial crises have highlighted the problem of illiquidity in credit markets, that is the *portfolio* problem of an insufficiency of money to settle current financial obligations and, by implication, the insufficiency of money in ‘financial circulation’ keeping financial markets liquid (Keynes 1930/1971a, pp 222-230, Toporowski 2000, part 1). This then requires an accommodating monetary policy that goes beyond merely keeping short-term rates of interest stable or close to ‘official’ rates desired by central bank policy-makers, as postulated in the horizontalist account of monetary endogeneity (Moore 1988). Such an accommodating monetary policy must make sure that there is sufficient liquidity in *all* financial markets that make up the yield curve to avoid abrupt switches in asset and liability management that show up as capital flight from particular markets, and hence a breakdown in the normal conduct of business in those markets.

In the wake of the 2010 financial crisis in Europe, this failure of monetary policy, in respect of markets for bonds issued by particular governments, became the target of much criticism. It was illustrated by stories of indebted villagers (with no income) who were able to pay off their debts to each other by mere circulation of borrowed money that was returned after it had fulfilled its function of paying off everyone’s debts. Such a fable of financial circulation was told by Kalecki back in the 1960s, and may even be found in novels of the later nineteenth century (see Toporowski 2022, chapter 5). The need for such liquidity may be illustrated somewhat more analytically, using as a first approximation an economy made up of indebted agents and their banks.

Consider a group of mutually-indebted agents (MIAs) who have no income other than payments that they may receive on their financial assets, made up of their claims against each other. The agents may be rentiers (with assets, in the form of debt claims against each other, but no income, apart from the interest on those claims), or retired persons holding such debt claims and owing money, but without any pensions. How can they make debt payments to each other? The answer is very simple. Those who *receive* interest or debt payments can make payments from the interest or payments on debts that they have received. The rest can *sell* financial assets, in the form of the debt claims that they hold, in order to make their own debt payments. Obviously for such payments to be made, the system requires some minimum holdings of monetary assets (bank deposits), say  $\acute{M}$ .<sup>1</sup>

If actual holdings of money or bank deposits,  $M$ , are less than  $\acute{M}$ , and money cannot be raised in the credit system through borrowing or the sale of financial assets, the MIAs have to

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<sup>1</sup> Strictly speaking, the money or liquidity required to settle debt payment in this situation depends on three factors. First of all, there is the actual sum of debts outstanding (in money terms). Secondly, there is the distribution of debts and debt claims among the MIAs. Total debts obviously equal total debt claims, but not for every agent, so that there will be some *net* debtors and some *net* creditors. Thirdly, there is the sequence over time of contracted debt payment (interest and principal repayment) commitments of the MIAs. In turn these depend on the term (short or long term) of the debts and the interest payments are annual, quarterly, or weekly.

depend on net revenue from real activities (surplus). Only in this sense is interest an actual deduction from a surplus generated in the real (non-financial), as affirmed by the theory of interest that prevailed in classical political economy, that the rate of interest is ultimately determined by the rate of profit in the economy (see Toporowski 2020a). From this classical view is derived the widely held view that interest must somehow be paid out of a surplus generated in the real economy. This link to current surplus is the foundation of the Wicksellian theory: that the money rate of interest may deviate from the rate of profit; that capitalists do not have bank deposits so that interest does not redistribute such deposits among capitalists, but takes those deposits out of circulation among capitalists; and therefore that the rate of profit places a ceiling on the interest that may be paid in an economy.

To test this supposed link between interest and income from non-financial activities we may consider a situation in which the circle of mutually-indented agents not only have no other income, except the interest that they may receive on their debt claims on each other, but also find that their holdings of money,  $M$ , are less than the amount  $\dot{M}$  required to allow payments to be made to each other. In this situation interest payments cannot be made in full. What would our MIAs do now? They would sell the debt claims that they hold in exchange for money, to those MIA's who have money, and use that money to pay what they owe. In this situation, the velocity of circulation of money among the MIAs would increase, because it is now not only being used to pay interest, but it is also being used to buy and sell debt claims. In a credit economy, commercial banks may ease the shortage of money by offering credit against the security of debt claims held by the borrower. With bank deposits acceptable as means of payment of interest, bank lending has the capacity to ease the shortage of money, but at the expense of increased borrowing by our MIAs, who now not only owe money directly to each other, but also to banks. However, the interest that they pay to their bankers is offset by the interest that our MIAs may now receive on their bank deposits. Thus, the role of commercial banks is the creation of new debt claims. With each new bank debt claim an equivalent deposit is created (and hence an addition to  $M$ ).

However, this mechanism requires a commercial banking system willing to grant, on demand, new credit against the value of debt claims.

What happens if the MIAs jointly become net sellers of their debt claims. In that situation, the price of their debt claims will fall in relation to the interest that comes with ownership of the debt claim. This price will continue falling until, at some point, the yield on the debt claims will attract into the market for debt claims holders of money who will wish to obtain a generous income from holding debt claims rather than money. This will continue until the market for debt claims has absorbed enough money for the indebted to be able to service their debts.

However, the creation of new credit against existing debt claims, or the attraction of money into the market for debt claims is not a reliable mechanism, not least because holders of money stocks may be deterred from buying debt claims by the prospect that their purchase may not be sufficient to stem the fall in the prices of those debts. The markets for debts are the hunting grounds of speculators who buy debts in the conviction, not always borne out, of a rise in the value of those debts. This, after all, is the basis of Keynes's famous 'beauty

contest' theory of financial speculation (Keynes 1936, chapter 12). If the mechanism of selling off debt claims breaks down, then interest payments cannot be made.

Keynes's Treasury rival, Ralph Hawtrey called this situation a 'credit deadlock', clearly in reference to the situation after the First World War, when the foreign debts of the Western powers were supposed to be paid from reparations paid by the government of Germany, which had been stripped at Versailles of its ability to pay those reparations.<sup>2</sup> He recommended that 'a credit deadlock which is impervious to cheap money may (thus) yield to treatment of through open market purchases of securities' by the central bank. In Hawtrey's view such operations would make banks more liquid and therefore more inclined to lend (Hawtrey 1938, p. 256). But the same logic applies to direct purchases of debt claims in the event of a debt market breakdown, if net selling continues. Net selling by indebted agents requires a net buyer and, if commercial banks will not do this on behalf of their depositors, the central bank can perform this operation through its open market operations. We are familiar with this from the Quantitative Easing programs that have been pursued by central banks in the United States, Europe and Japan, since the crisis of 2008.<sup>3</sup>

The analysis has reached the point where the debts of mutually-indebted agents with no income have been used to expand borrowing from commercial banks, and the liquidity of those banks is maintained by the central bank buying debt claims from commercial banks. These are the conditions for keeping the portfolios of MIA's sufficiently liquid for them to make payments on their debts to each other, directly or through commercial bank intermediation, or to the central bank. Over time, more interest is diverted among MIAs, through commercial banks, or paid to the central bank as opposed to other MIAs, as their debts pass into the ownership of the central bank. 'In the long run we are all dead' (Keynes 1923, p. 80) and on decease our remaining debt claims may pass into the possession of commercial banks or the central bank to help write off debt claims against the deceased held by those commercial banks or the central bank.

## 2. Sources of liquidity

The previous section examined the financial circulation of money that is the basis of financial stability, defined as when there is sufficient liquidity (credit money) in financial circulation to keep prices and the yield curve stable. This section examines the sources of such liquidity in

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<sup>2</sup> This contradiction in the financial policies of the Western Powers had been noted by Keynes in his critique of the Versailles settlements, *The Economic Consequences of the Peace* (Keynes 1920, chapters V and VI; see also Keynes 1922, chapter VI).

<sup>3</sup> This now introduces a fourth factor affecting the minimum money stocks or liquidity necessary to ensure debt payments, namely the class of debt and from which agent debt claims are purchased by the central bank, or the class of debt accepted as security against loans by commercial banks; and in turn the sequence by which the additional liquidity meets the contracted debt obligations of MIAs. This is not a random process, subject to shocks. These factors are given by the structure and distribution of debts inherited from the past at any one time.  $\dot{M} - M$  is therefore determinate at any one time, even though the process of making debt claims liquid (selling them to the central bank, or to commercial banks, or borrowing against them from commercial banks) will modify the structures of debt and debt claims.

a closer approximation to a modern economy. Historically in economic theory it has been thought that the source of financial market liquidity is ‘saving’ or savings, from which is derived the neo-classical ‘loanable funds’ theory of interest. This explains interest as a mechanism to secure the saving or credit creation necessary to finance current investment. This corresponds to the earlier ‘classical’ phase of capitalism, when businesses were financed using their owners’ savings, or bank borrowing.<sup>4</sup> This earlier phase was superseded by a capitalism dominated by corporations financed by long-term bonds and stocks (Toporowski 2017). This is the phase that continues today.

Financing with long-term bonds and stocks gave rise to secondary markets in those stocks. A basic level of liquidity is provided by **household buying of stocks and shares** directly, and through investment intermediaries such as insurance companies and pension funds. These transfer bank credit in payment accounts to the financial portfolios of investment and pension funds and insurance companies. However, such portfolios also draw down the liquidity in the market when they make insurance, pension and other payments to their beneficiaries. Although portfolio theory has traditionally regarded flows of such ‘savings’ as being brought into equilibrium by the rate of interest, or yield on the securities in the portfolios, in practice there is no equilibrium. Rather there are phases of inflation and deflation of the market corresponding to net credit inflows into and out of the markets (Toporowski 2020b).

However, such flows on household accounts are by no means the only source of liquidity in capital markets. Precisely because they facilitate the realization or sale of financial instruments, secondary markets gave rise to a new source of liquidity namely **bank advances against financial collateral**. Assets that can be quickly bought and sold at prices displayed to all participants provide a form of instant collateral. This was a major advance on earlier systems of industrial lending that was unsecured, or secured on business stocks of finished or unfinished goods, or land, that took much longer to dispose of. Bank advances against the security of financial assets become the most immediate and efficient form of secured bank lending (Hobson 1924, pp. 88-89. See also Kaldor 1939). Moreover, much of this lending is used to buy more financial assets, thereby pushing up the price of collateral. As the prices of financial securities rise, with such additional buying, the value of collateral rises and therefore the security for additional borrowing increases. In the extreme case, when bank advances raise collateral values by the amount of the borrowing, liquidity preference may be satisfied by holding either long-term securities or bank credit, because collateral values stay equivalent to bank credit. This would correspond to perfectly liquid markets in financial assets (Toporowski 2000 pp. 28-41).

The effect of monetary policy on such bank advances depends on how monetary policy is defined. Since the 1990s, monetary policy has been defined in neo-Wicksellian terms as the setting of short-term interest rates (and making those terms effective in inter-bank markets). Higher interest rates would tend to discourage the holding of liquidity in payments accounts (Kalecki 1954 chapter 6). Interest-bearing liquid assets, such as bills and term deposits would

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<sup>4</sup> ‘... the neo-classical school, who believe that saving and investment can be actually unequal...’ Keynes 1936 p. 177.

then become more attractive financial assets. But then more of the credit in payments accounts in commercial banks and other financial intermediaries, and their corporate customers, would be absorbed in turning over bills and term deposits as they become due. Moreover, higher interest rates would tend to lower the amount of credit available on security of a given value, at the same time as raising the interest cost of credit advanced against security. These considerations would tend to discourage advances on financial collateral and thin out the liquidity in the financial system.

Lower official interest rates also lower the cost of borrowing and would tend to raise the possible loan-to-value ratio of new secured advances. This may increase the liquidity of the financial markets; but not necessarily so. The initiative for such borrowing remains with the individual borrower. Hence no necessary relationship exists between lower interest rates and liquidity in the financial markets. Keynes's 'liquidity trap' is one explanation of why attempts to increase the liquidity of financial markets by means of lower rates of interest may be, in the words often attributed him, like 'pushing on a piece of string' (Keynes 1936, p. 207). The practical meaning of this is that liquidity accumulates in payments accounts, where credit does not circulate in the real economy, or in the financial system.

A third source of liquidity in the financial system is in **purchases of stocks by non-financial corporations**. Corporations do this in the process of mergers and acquisitions and balance sheet restructuring, including debt management and stock buy-backs. A notable feature since the 1980s has been the rise of private equity firms that borrow prodigiously in order to buy corporations that then become subsidiaries of the private equity firm. ('Private' in this case refers to the status of these companies as no longer 'publicly' quoted on stock markets – see Toporowski 2012). In general, the liquidity function of corporate treasurers (and associated investment bankers) is to raise the liquidity of long-term securities by such borrowing and then, as stock prices rise with the circulation of this liquidity in the capital or stock market, to take such liquidity out of the markets for these securities by selling the companies back into the market at a profit.

For individual corporate treasurers, if not their investment banker associates, the liquidity of securities markets is an abstraction with which, on the whole, such treasurers do not concern themselves, unless that liquidity falls to such a low level that corporate treasurer cannot 'fund' their activities through the issue of new stock. What they have in mind in general is the liquidity that they need to hold in their asset portfolios in order to conduct their business (Minsky 1975, pp. 121-124). They regulate this internal liquidity by issuing long-term securities, corporate bills and bank borrowing.

Monetary policy, in the sense of the management of official interest rates, has a direct impact on the return on liquid financial assets that corporations may hold. But it does not on the whole affect directly the amount of internal liquidity that companies may need to hold. The internal liquidity that companies seek to hold corresponds to Keynes's transactions and precautionary motives for holding money, to which he added a 'finance' motive, the desire to hold liquidity in anticipation of fixed investment costs (Keynes 1937. See also Graziani 2003). Except for its interest income, the liquidity kept for transactions or precautionary purposes is not affected by changes in the rate of interest, and the liquidity kept for payments on

investment is predicated on the amount of those costs, rather than on the rate of interest that may currently be obtained by holding liquid assets such as bills and term deposits at a commercial bank, (or the interest costs of bank borrowing). In short, the exercise of monetary policy by varying the rate of interest may affect distribution of corporate liquid assets between bank payment accounts and bills and interest-bearing term accounts, but will not affect the total of desired liquid assets. A higher central bank rate of interest will, if effective in money markets, cause more liquid assets to be held in the form of bills and interest-bearing deposits. A lower effective central bank rate of interest will tend to concentrate corporate liquidity in payment accounts.

The other possible channel of transmission of monetary policy to corporate balance sheet management is through the effect that changes in official interest rates may have on merger and acquisition activity. In recent years low central bank rates of interest have been associated with higher merger and acquisition activity. The relative stability of long-term rates of interest, noted since the 1930s (Hawtrey 1938, Akram 2021), would suggest that there is weak transmission from short-term interest rates to the stock market (the equity channel). However, it is difficult to isolate effects of interest rate policy on markets in long-term securities because of the buying of securities by central banks (quantitative easing), since at least 2008. A **fourth source of liquidity in open market operations** by central banks is considered in the next section of this paper, on debt management.

### 3. Debt management

While it is commonly thought that central banks may influence the liquidity of the financial system through their setting of interest rates that may precipitate portfolio adjustments to hold more or less liquid financial assets, the most direct way of affecting the liquidity of the financial system is by means of open market operations. Purchases of long-term securities are paid for by a central bank by adding to the reserves of commercial banks the amount that corresponds to the bank deposits that the seller of the securities acquires in exchange for the securities they have sold. Sales of long-term securities are conducted by the transfer of reserves from the reserve accounts of commercial banks to the central bank, and a corresponding reduction in the payment accounts of the seller. In this way, the balance sheet of the banking system expands or contracts by the value of the securities bought or sold from or to the ‘non-bank public’, (insurance, pension and investment funds).

Traditionally, such operations have been conducted with a view to regulating the reserves in the banking system.<sup>5</sup> These considerations came to be the guiding principle of monetary

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<sup>5</sup> ‘... “management” consists in the habitual employment of an “open market” policy by which the Bank of England buys and sells investments with a view to keeping the reserve resources of the member banks at the level which it desires. This method – regarded as a method – seems to me to be the ideal one. In combination with the peculiarities of the British system already described, it enables the Bank of England to maintain an absolute control over the creation of credit by the member banks... the individual member banks have virtually no power to influence the aggregate volume of bank money...’ Keynes 1930/1971b).



policy in the 1970s and the 1980s, when monetarism dictated that controlling the reserves of the banking system was the key to controlling bank credit, or broad money aggregates to regulate the rate of inflation, a framework of monetary policy that was referred to as the ‘reserve position doctrine’ (Bindseil 2004). The failure of the assumed close link between broad money and inflation at the end of the 1980s, and its replacement by the neo-Wicksellian policy of concentrating on the short-term rate of interest in order to control inflation (or ‘inflation-targeting’) led to the abandonment of open market operations.

In the wake of the 2007 crisis, open market operations were rediscovered and given novelty value by being dubbed ‘quantitative easing’. This was to distinguish such ‘outright purchases’ (additions to central bank asset portfolios) from the use of purchase and resale agreements (or ‘repos’) to ensure that money market interest rates corresponded to official rates of interest. (Toporowski 2019).

While ‘quantitative easing’ has been largely put forward as an additional tool of monetary policy, defined as operating through rates of interest and bank credit channels, its impact on the liquidity of the financial system has tended to be underestimated. Central bank purchases of securities make asset portfolios more liquid (as witnessed in the quantitative easing from 2008). Given certain portfolio preferences, or liquidity preference defined as given by the proportion of liquid assets in asset portfolios, rather than a general demand for money (Kahn 1984, p. 33), making asset portfolios more liquid would tend to induce portfolio managers to use the additional liquidity to buy more long-term securities to replace the ones that had been sold to the central bank. In this way, the increase in commercial bank credit is put into further circulation in the financial system, making the markets in long-term securities more liquid.<sup>6</sup>

With the revival in central bank open market operations there has been renewed interest in a **fifth source of liquidity**, namely **government debt management**. Earlier, as inflation-targeting prescribed that central banks should merely set short-term interest rates and use discount facilities to ensure that commercial banks kept to these rates in their money market activities, open market operations had virtually become extinct, it was noted that government Treasury departments actually conducted their own open market operations in the course of selling their bonds, and repaying bonds as they matured. This was not a new discovery: James Tobin had pointed out in 1963 that the issue and repayment of government debt must affect the money supply, and therefore that monetary policy could not be conducted by the central bank independently of the debt management by the government.<sup>7</sup>

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<sup>6</sup> ‘If the central bank supplies the member banks with more funds than they can lend at short term, in the first place the short-term rate of interest will decline towards zero, and in the second place the member banks will soon begin to, if only to maintain their profits, to second the efforts of the central bank by themselves buying securities.’ (Keynes 1930/1971b p. 333). It should be pointed out that Keynes here had in mind open market operations to bring down the long-term rate of interest in order to match a depressed ‘natural rate of interest’ or return on productive capital (Keynes 1930/1971b pp. 334-335).

<sup>7</sup> Tobin (1963). The idea of controlling the money supply by means of government debt operations had earlier been put forward by Henry Simons (1934).

In general, government Treasury departments have adopted a convention of conducting their debt operations in a way that did not change the yield curve decided by the market. In this way, it is thought, ‘financial stability’ can be assured by ensuring that ‘market expectations’ are satisfied. The exception to this convention was a fairly aggressive policy of yield curve management adopted by the Bank of Japan.<sup>8</sup> Similar policies were undertaken by some European central banks after 2014.

However, it should be pointed out that, under inflation-targeting as generally understood, the instrument of monetary policy is the short-term rate of interest. A policy of debt management consisting solely of issuing government debt that does not cause any shifts in the yield curve is feasible only if the amount of debt issued by the government is marginal to the capital market, or, with issuance on a larger scale, if that debt is issued at the short-term end of the maturity spectrum, because that is the section of the spectrum that is ‘anchored’ by monetary policy, and will not change very much with larger government debt issues.

Such a concentration of government debt on short-term issues is undesirable for a number of reasons. Beyond a certain point it would tend to undermine the central bank’s control over short-term interest rates, thereby putting pressure on the monetary transmission mechanism through short-term interest rates. But from the point of view of the liquidity of the capital market, the issue of long-term government bonds restricted to short-term debt, leaves the financial system with less good collateral, in the form of long-term securities, for borrowing to add to the liquidity of the capital market. Furthermore, the concentration of government obligations at the short end of the maturity spectrum adds to the drain on liquidity in the capital market because more of that liquidity is absorbed by the turnover in the short-term obligations, as new obligations have to be issued to replace old obligations. The resulting imbalance in liquidity along the maturity spectrum creates the conditions for an inversion of the yield curve, as a shortage of long-term bonds drives up prices of such bonds, while the issuance of short-term debt puts upward pressure on short-term interest rates. Such an inversion is usually taken to be an indicator that a ‘bubble’ has been created in the stock market. Considerations of financial stability would suggest that such an inversion should be avoided.

Thus, a given monetary policy stance, in the sense of a policy rate of interest made effective in money markets solely at the short end of the maturity range, opens the possibility that government debt issues may destabilize the liquidity in the financial system. To avoid this government debt management operations need to be supported by ancillary debt management operations to maintain a stable yield curve for government bonds. A yield curve stabilized in this way would allow government bonds to be issued at the longest possible maturities. If this puts upward pressure on the long-term rate of interest ancillary debt operation would consist of issuing short-term bonds or bills and using the proceeds from them to buy in longer-term bonds. When the pressure to raise long-term interest rates has been removed, an additional issue of long-term bonds could then be made, whose proceeds would be used to repay the short-term obligations. Stabilized in this way, the yield curve would help to maintain the

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<sup>8</sup> Amamiya 2017. See also essays in Stenfors and Toporowski (2021).

liquidity of the capital market at all maturities (Kalecki 1943 pp. 45-46). In central banking, such operations are known as ‘operation twist’ and provide an example of central bank co-operation with government Treasury Departments that is rare, but not unknown.<sup>9</sup>

For critics of government fiscal policy and management of capital markets, such measures of managing the liquidity of the financial system constitute a departure from a natural ‘equilibrium’ that is assured by allowing ‘market forces’ to determine the liquidity of the markets. It should be pointed out that there is no natural equilibrium in the financial system. An equilibrium is static. What actually exists is a financial process that, financial history reveals, is quite capable of generating its own instability and crisis when the funding needs of corporations cannot be accommodated by the liquidity spontaneously generated by commercial bank lending into the capital market. While academic studies have focused on apparently destabilizing ‘shocks’ and ‘events’ as explanatory variables, the common feature of modern crises since the twentieth century is the illiquidity of the capital markets that may be generated by private sector itself, when ‘funding’ operations (corporate stock issues) are not coordinated with measures to ensure that the capital market has sufficient liquidity to accommodate such issues.

In the absence of a common, private sector debt management office, liquidity problems and the resulting financial stability have become the responsibility of central banks. However, as the above consideration shows, the focus of central banking on money rates of interest, or monetary aggregates, may exacerbate the problems of liquidity in the financial system (Goodhart 2011).

## Conclusion

With the notable exception of Minsky, liquidity management in Keynesian and Post-Keynesian economics is associated with managing the demand and supply of money. This focus on the stability of the money market is in contrast with the systemic need to maintain the liquidity of the financial system through yield curve management. The liquidity of the financial system is crucial not only to avoid ‘bubbles’ in asset markets, but also to maintain sufficient liquidity to allow indebted banks, corporations and the government to roll over debts in orderly fashion, avoiding crises of illiquidity, such as occurred in 2007-2008, and earlier in 1987, going right back to the beginnings of the twentieth century and beyond.<sup>10</sup> The open market operations of the central bank, and the government’s debt management must walk a fine line in between providing enough liquidity to the financial markets to sustain the

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<sup>9</sup> Ehlers, 2012. For a more general discussion, see Michell and Toporowski 2019.

<sup>10</sup> Cf. ‘What precipitates a reduction of banking facilities and a crisis is not lack of money, that is to say of gold coins, but a lack of free, uninvested capital. It is not so much the proportion of bank’s commitments to its cash reserves, as the *character* of the commitments. No doubt, a tendency of the cash reserves to fall at such a time is a symptom, but it is not at all a fundamental cause. Since some of the old commitments do not clear themselves off, the bank cannot enter into new business on the former side without lowering its proportion of reserves...’ Keynes 1913, pp. 9-10). Anastasia Nesvetailova (2012) shows how much Keynes’s insights may be found in more recent discussions.

debt operations of banks, corporations and the government itself, while ensuring that the liquidity in the financial system generated by private sector (bank advances and corporate funding and stock purchase operations) does not render the financial system so liquid that it precipitates capital flight between markets and along the yield curve, creating financial instability.

The liquidity approach to the financial system was laid out in the Radcliffe report of 1959. The relevant section of the report concluded:

‘It is not merely that monetary action and debt management interact, so that they ought to be under one control: they are one and indivisible; debt management lies at the heart of monetary control, and it is essential that this unity should be adequately reflected in our institutional arrangements.’ (Committee on the Working of the Monetary System 1959, par. 603).

However, the implications of this approach for the management of the financial system were largely overlooked. The years after Radcliffe are a road back from this high point in monetary and financial understanding. The retreat from this approach was marked by road-signs directing policy and economic analysis away from finance towards monetary control of the economy, whether through money interest rates, or monetary aggregates, and punctuated by the monetary and financial instability that arises when considerations of liquidity throughout the financial system are abandoned in favor of maintaining some notional equilibrium in the money markets (Goodhart 2011, Chick and Dow 2002).

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