

Keynes's monetary theory: a partial survey*

VICTORIA CHICK**

1. INTRODUCTION



In all of Keynes's work there is both continuity and radical change. In his monetary theory one can see a gradual progression of his ideas from the *Tract on Monetary Reform* to the *Treatise on Money* to the *General Theory*, yet the *General Theory* represents a breakthrough in monetary theory both broadly and narrowly defined. It marks a radical departure from previous economists' work and also from Keynes's own, though the seeds of dissatisfaction with received doctrine are clearly present in the *Tract*. He there expounded the Quantity Theory but fully realised its limitations, especially its long-run orientation. The reference point of the *Treatise*, too, was long-period, and the Quantity Theory held in equilibrium.

By contrast, money pervades the *General Theory*. It is a theory, Keynes declares, of a money production economy or an entrepreneur economy, not a real exchange, co-operative, or even neutral-money economy. It has a role to play in all markets: (i) in the labour market through the separation of money wages and prices (instead of using real wages); (ii) in the market for goods, where prices and output are determined by expected and actual money-

* Revised version of paper delivered a "teaching seminary" on Keynes's economics and philosophy at Roskilde University, 6 September 1990. The author wishes to thank Jesper Jespersen for the opportunity to participate in the seminar and for his stimulating comments on the paper.

** University College London.

demand; and (iii) in the financial circulation, where liquidity preference - the monetary theory Keynes is best known for - ties the demand for output, and hence employment, together with portfolio choice.

After the General Theory, in response to criticism, Keynes added the finance motive to the three motives which we all know - transactions, precautionary and speculative. Post-Keynesians have now developed this idea to provide the endogenous money so vitally needed to modify the *General Theory* to fit today's banking conditions.

Keynes's breakthrough in monetary theory is tied to and results in a drastic shift of economic method. The *General Theory* used Marshall's short period, and even partial equilibrium, at the macroeconomic level. Within the short period, some variables are kept constant by definition (the capital stock, technology). The rest, both real and monetary, are determined. By contrast, in classical theory, real variables were determined by long-run considerations (the "fundamentals"), and money and credit were given the task of explaining deviations from this long-run position: short-run fluctuations which were expected to be transitory.

There is a long-run in the *General Theory*, but it is qualitatively different from that of classical economics. It is Marshallian in that the capital stock is allowed to vary, but the question of uniform profit and all that goes with it does not arise. Keynes merely asks whether the outcome of capital accumulation is likely to be full employment. His answer shatters the classical presumption: it may well be the case that the system will not tend to full employment in the long-run. And the reason is monetary: the liquidity of money may prevent the rate of interest falling sufficiently far for the desire to invest to continue until the desire to save is satisfied.

Little of this monetary theory has survived in modern mainstream economics. Some of it did not even survive more than a year after the *General Theory's* publication, as the simplicity and neatness of the Walrasian IS-LM system replaced the complexities of the argument of the *General Theory*. IS-LM excludes supply conditions; it cannot explain production. It was, and by many still is, believed that it did determine output because output became identified with (real) income. Things got worse as time went on: real wages returned, and real balances replaced money. And even post-Keynesians spent time justifying fixed prices, which were no part of the *General Theory*. Real exchange economics had been restored. So it is worth rehearsing the monetary economics of the *General Theory*. That is all I shall be doing, trying to substantiate the points made above.

Making an old distinction, I shall look first at the role played by the existence of money in the *General Theory* and then at monetary theory more narrowly defined, where the outcome of *changes* in the supply of or demand for money is analysed. In this section (3), I shall spend quite a bit of time discussing what happened to Keynes's original conception. A brief section (4) points to the new, uncompleted project of endogenising money in the model of the *General Theory*.

2. MONEY IS ESSENTIAL

What are the properties of money in the *General Theory*? Keynes was an economist who lived and worked in the real world, much of it in the financial world.

He wrote of money as he knew it: money was used in exchange for traded goods and assets and for labour; it was liquid; possession of it gave one freedom of choice; it was a safe haven when asset values were falling; it was the homogeneous standard of value and the legal basis of contracts. It enters at almost every point in the core of economic activity (the core could almost be defined as the monetary sphere). So, immediately, we come to the first role for money in the *General Theory*: labour is paid money wages.

Compare the situation in which workers produce, say, bread rolls and are actually paid in bread rolls. Thus workers are (unless there is no compulsion) in a position to decide to work just long enough to obtain the number of bread rolls they want. And the producer is sure of demand for his product: workers have signalled their demand by their willingness to work. This yields the version of Say's Law in, for example, J.S. Mill: there can be no general glut.

Keynes allowed money to be essential in his theory, as it is in life. Workers are paid in money at a rate agreed before production begins. It is then that the decision as to how much to produce must be made, without any guarantee of sales. Given cost conditions, demand will determine prices. Wages and prices, therefore, are determined at separate points of time. Prices may be estimated by workers at the time of the wage bargain, but they are not *known*.

Now it is a well-known property of money that it overcomes the double coincidence of wants. In the bread-roll economy, the producer's demand for labour and the worker's demand for bread rolls are made to coincide, by virtue of labour's actually being paid a real wage. There is a real exchange of labour time for food; this is a cooperative, real exchange, economy.

It is possible to build a model which uses money but comes to the same result: a neutral money economy, in Keynes's terms, or in Hahn's, where money is inessential. This is done either by pre-reconciling the demand for labour and the demand for output, as in Walras, or by restricting the applicability of the model to equilibrium only. In this first case, the time-shape of production described above reduces to a point, and in the second case, although time goes on it is merely repetitive and becomes, like money, inessential.

In some sense it is money, therefore, which makes time essential and thus opens up the role for uncertainty which has been considered the hallmark of Keynes's economics - where, in Hahn's words, the future plays a dangerous game with the present. Where money at the microeconomic level separates purchase from sale, at the macroeconomic level it separates production from consumption, while retaining the dual role of factor payments as both cost and income which is such a key part of the Keynes story. It also has repercussions on the risk-bearing, benefit-sharing properties of production for market sale: in the short run, firms bear the risk of not being able to sell their output - at least not at the prices they expect - and take all profit, while labour bears the risk of unemployment if firms turn pessimistic; and the pessimism may be self-fulfilling. This is the entrepreneur economy.

It is money, too, which allows Keynes to escape from equilibrium theory. This may be a confusing statement, as the *General Theory* is built around the concept of short-period equilibrium, but by contrast to the bread-roll economy, the *General Theory* determines the position of the economy both in and out of equilibrium: so the theory has equilibria but is not Equilibrium Theory. Through money comes history,

as money permits the storage of purchasing power through time. This while in the *General Theory* the “labour market” is reduced to a single blade of Marshall’s scissors (firm’s demand for labour) this does not mean that the “labour market” is indeterminate, for both the history of money wages and expectations of future demand for output enter to determine employment - in and out of macroeconomic equilibrium.

Money is essential, too, in the “product market”. Firms seek profit, which is unavoidably monetary. The entrepreneur economy is characterised by Marx’s sequence M-C-M’. Firms commit themselves to money costs well before they know what their revenue will be. And as a group, entrepreneurs partly, perhaps chiefly, determine their own revenue and profit, through their expenditure on investment.

Investment expenditure is the driving force of Keynes’s system, because it is the chief type of autonomous expenditure. From a technical point of view, investment is autonomous because, unlike consumption, it does not depend on current income. The reasons for this are two-fold, having to do with the desire to invest and the source of finance for investment. The desire to invest is based on expectations of *future* income, and the finance which makes investment possible is also independent of current income: finance is provided, at least in the first instance, by the banks, not by the current or past cash-flow. It is not explicit in the *General Theory*, but part of the world which Keynes lived in and took for granted, that the banking system could create credit in advance of prior saving (Chick, 1983, 1986). By the time Keynes was writing the *General Theory*, the banks had long since provided the main circulating medium; therefore all income, consumption as well as saving, flowed through the banking system. It is this which gave the banks power to lend independently of prior saving and which is the foundation of the proposition that investment precedes saving. This is the point which the modern reformulation of the finance motive and the endogeneity-of-money literature picks up.

3. MONETARY THEORY NARROWLY DEFINED

Although the factors just considered are in some sense more fundamental, Keynes as a monetary theorist is best known for introducing to economics the idea of liquidity preference and, more specifically, the speculative demand for money. Cambridge monetary theory had always accepted the transactions and precautionary demands for money, but these were compatible with loanable funds theory, in which money is either not held idle for long (transactions) or is held idle in small amounts in a regular and predictable manner (precaution). Speculative demand raises the spectre of large amounts of money, from accumulated wealth held in all monetary forms, moving about in financial markets to affect, with the other demand-for-money motives, the rate of interest. The rate of interest in turn determines, jointly with expectation of the further future, investment and thus output and employment.

The speculative demand for money was highly subversive, as Townshend (1937) immediately understood. It led, as Shackle (1968) has emphasised, to “the destruction of determinate price”. By this he does not mean that there was no mechanism in the *General Theory* by which price (in this case the interest rate) was determined, but that orderly supply and demand factors were not alone responsible. Speculative

demand is “disorderly” in respect of the fact that demand is determined by a combination of convention and expectations of the future value of the variable itself. The convention is not really explained, and the expectations both refer to the convention and are subjective: each speculator is portrayed as forming his expectations with respect to deviations from his conception of the “normal” rate of interest. A rate which he perceives as high (low) in comparison to the normal rate is expected to fall (rise) and produce capital gains (losses). Thus he wishes to buy securities (that is, equally, reduce his speculative money holdings) when rates of interest are high and sell securities (add to his speculative money holdings) when rates are low with reference to his subjective normal rate. The fact that speculators disagree as to what is “normal” provides a market: if everyone wished to buy or sell at the same time, buying and selling would be impossible.

Hicks (1939) and Robertson (19**) immediately objected to this theory: it was a theory which left the rate of interest to be pulled up by its own “bootstraps”; it was a Cheshire cat - there was a grin but no cat. Robertson, in this latter metaphor, is referring to the absence of the “fundamentals” of productivity and thrift, which formed the basis of all classical theory of the rate of interest, including in Keynes's *Treatise on Money*. Hicks's objection is more about the element of subjective expectations in the theory.

The speculative demand for money was gradually transformed into an asset demand for money, a much more tractable beast from the standpoint of mainstream economic theory. The process started with Hick's famous “Mr. Keynes and the Classics” (1937). An inverse relation between the rate of interest and the demand for money was there acknowledged but the root of the relation in speculative expectations was glossed over. The only reason, in Keynes's theory, for the inverse relation is that the higher the current rate of interest the more likely it is that speculators will be expecting it to fall and will therefore have a smaller demand for money on speculative account than when the rate is lower. There is no role for the absolute level of the rate except as an indicator of expectations.

Once this link between the level and the expected direction of change in the rate was lost, it was easy for Tobin (1957) to supplant Keynes's demand for money in the face of uncertainty with “behaviour toward risk”, amenable to standard, symmetrical probability calculus.¹ His notion of risk aversion is inappropriate to speculation: the risk-averse person does not speculate at all, at least not actively². His implication that the speculator is irrational because he “plunges” rather than diversifying shows that Tobin had missed the point, simultaneously, of both the *modus operandi* of the speculator and the fact that Keynes's speculative demand is embedded in liquidity preference as a whole, whereas at the very least the agent diversifies to the extent that he always holds his transactions balances in the form of money.

Tobin's article suggests that money is held in an investment portfolio, along with bonds and equities. Textbooks today attribute the interest-elasticity of the demand for

¹ For a full discussion of the differences in these two approaches see Chick, 1983, Chapter 10 and its Appendix.

² Since all asset-holding is speculation of a kind, it is necessary to specify “actively”.

money to an asset demand, based on opportunity cost. This they say “without a smile in the face, but what an absurd place to put (money)”.

The asset demand for money was also the basis of Friedman’s (1956) modern quantity theory, in which the speculative demand has no more place than in old quantity theory, and for the same reason: hoarding disrupts the circular flow.

Hicks also missed the point of speculative demand through the years. It is interesting to trace his very obvious aversion to the concept, but that is the subject of another paper (Chick, 1991). It is sufficient to look at his last book (1989) to see how difficult it is to hang on to the idea of the speculative demand when someone is determined to get rid of it. In carrying out this exploration we can also show the link between Keynes’s formulation of monetary theory narrowly conceived and his broader conception. This may go some fair way to explaining why one might want to hang on to the concept.

Hicks distinguishes three motives for holding not just financial but all assets: to meet running expenses (transactions), as a reserve (precaution) and as an investment. These are systematised in Table 1 (Hicks, 1989: 66).

TABLE 1

	Running	Reserve	Investment
Real Assets	A	B	C
Financial	D	E	F

He associates money with a non-interest-bearing asset and distinguishes two types of investor: he who invests *solid* (i.e., plans to hold indefinitely) and he who invest *fluid* (actively managing his portfolio). The former holds for income and the latter for capital gain, though Hicks is at pains to say that the two are commensurate, or would be if it were not for differential tax treatment. Both would seem to fit into class F, but Hicks identifies speculative demand with choices within category E! Why?

Hicks correctly says that money does not fit in well with investing solid, as (to him) money earns no interest, and assets held for the investment motive are held for income. And since speculation involves choosing between bonds and money, and the only category admitting of this choice is E, speculation becomes a reserve-asset phenomenon while investing solid takes over the whole of the motive of investment.

Let us recapitulate how speculation was transformed into precaution - for that is the more familiar name of the reserve motive. At the very beginning there were two vital steps: (i) defining money as non-interest-bearing instead of the asset which is capital-safe and (ii) making income and capital gains commensurate. The first ignores a very important aspect of the *General Theory* - that definitions are not hard and fast and must change for different circumstances. Thus

“... we can draw the line between 'money' and 'debts' at whatever point is most convenient for handling a particular problem. For example, we can treat as *money* any command over general purchasing power which the owner has not parted with for a period in excess of three months, and as *debt* what cannot be recovered for a longer period than this; or we can substitute for 'three months' one month or three days or three

hours or any other period; or we can exclude from money whatever is not legal tender on the spot. It is often convenient in practice to include in *money* time-deposits with banks and, occasionally, even such instruments as, e.g., treasury bills. (...) I shall assume that money is co-extensive with bank deposits.” (*General Theory*: 167, n° 1).

Non-interest-bearing money is cash and, formerly, current accounts. Identifying money with these assets indeed prejudices the roles that money can play, for this definition derives from seeing money’s distinctive role as medium of exchange, where at best it can satisfy only the transactions and precautionary motives. *This view of money is not compatible with speculation.* The whole object of a speculator’s operations is to capture capital gains and avoid capital losses. Therefore from the point of view of speculation, the important attribute of “money” is not its (zero, or limited) rate of return but the fact that money does not vary in capital value when the rate of interest changes. It would be absurd for speculators to hold non-interest-bearing money when they could hold a deposit account or a short-term security instead. But as the passage quoted above indicates, it is Hicks’s (and Tobin’s) identification of money as non-interest-bearing which makes the absurdity, not Keynes.

While capital gains can be made commensurate with income if the time horizon is specified, to take a united period as the framework of analysis ignores the fact that the time horizons of the speculator and the investor are different: the (solid) investor is committing funds to particular assets for a long time, while the essence of working to capture capital gains is that large gains or losses appear in very short periods of time and interest has little time to accrue. So while capital gains and losses may be commensurate with income, the relevant time horizon is such that for speculators income is not very important and for investors paper capital gains and losses need not be realised. There is a third element in this story. Hicks looks at speculative demand as a branch of portfolio theory: a choice between money and bonds, which exists only in the reserve motive, once investment is identified with investing solid. The conflation of portfolio theory with speculation follows Tobin and his own treatment in the *Critical Essays* (Hicks, 1967, Chapter).³

Hicks charges Keynes’s theory of interest with ignoring the (solid) investment motive. Keynes’s theory looks at the determination of the rate of interest from the side of money rather than the more obvious way, from the side of securities. Why might Keynes have made this choice? Perhaps Table 2 can clarify, at least in part, what is at stake.

Table 2 is a scheme which I have given to my students over the years. It makes two separations beyond the categories delineated by Hicks: (i) speculation is treated as a distinct motive while investment is restricted to long-term, solid choices and (ii) financial assets are split into “money” and “bonds”. It treats these latter categories in the fluid way which Keynes recommended: one can see that what is being included in them - and in real assets, which are listed for comparison with Hicks - varies with the motive under consideration. Some of the elements included in Table 2 indicate how the theory might be amended to suit current conditions - by looking at speculation in foreign exchange or property, for example.

³ Among modern theorists I think only Harris (19**) recognised that Tobin’s portfolio model reduces speculation to precaution. Hicks is doing the same thing by a different sleight of mind.

Note that in Table 2 there are two *empty* boxes: no money is held for (solid) investment purposes and bonds do not serve transactions needs. So looking at the rate of interest either from the side of bonds or from the side of *money* is partial - some decision under some motive is bound to be left out. If Keynes had modelled his theory from the side of bonds, there is an empty box and solid investment was left out.

TABLE 2

	Transactions	Precaution	Speculation	Investment
'Money'	cash & current accounts	current and deposit accounts	deposit a/cs & short-term assets	
'Bonds'		short-term assets	(l. t.) bonds, foreign exchange	bonds & equities
Real Assets	raw materials	buffer stocks of raw materials	commodities	industrial & domestic capital

There is good reason for Keynes's choice. However, we cannot see this if we continue to look at the problem from a microeconomic point of view, as we have been doing. Hicks's perspective is choice-theoretic, and in that perspective there is little to choose between bond-oriented and a money-oriented theory of interest. But from the perspective of macroeconomic theory there is more to be said for the monetary theory. Keynes was building a theory which was to hold in disequilibrium as well as equilibrium. Unlike Equilibrium Theory, it could cope with economic change. In particular, income must be allowed to change. And a change in income would have its effect on the rate of interest, through the transactions demand for money, while to argue from the side of bonds would imply, because of the empty box second down on the left, *leaving* out changes in income, precisely the fault of which he accused the classics.

It is well known that Keynes wanted to give nothing away to the loanable funds theory, with its origins in productivity and thrift, and any connection between the bond market and investment would play into their hands. Perhaps that is the only reason for the shift to liquidity preference theory, but I should like to propose another. Let us at the matter in terms of Keynes's partial-equilibrium construction (which is the way the *General Theory* unfolds although a full equilibrium is specified in the end).

In the partial equilibrium story there is an implicit ordering of events, connected with the different time horizons in each market. First the rate of interest is determined by the supply of money and liquidity preference. Within the time horizon of the speculator the level of income may be taken as given, so determination is possible. Then the rate of interest and long-period expectations determine investment. Meanwhile, producers have made their (short-period) expectations and have determined employment, on the basis of which consumption plans are laid. Not until their output comes on to the market is income determined. Then for full equilibrium one must check back with liquidity preference, though this is a purely formal stage, to establish existence. In practice this would never happen; time has gone on, new interest rates and new expectations now rule.

In this timeful story, investment precedes saving. This is achieved partly by assuming that whatever funds are wanted for investment are forthcoming; only their price is relevant.⁴ Contrast this with looking at the rate of interest from the side of bonds. It would be hard to avoid the implication that investment was predicated on new issues. New issues are bought out of savings. Direct lending has been restored and with it the classical priority of saving over investment.⁵

4. FINANCE MOTIVE AND ENDOGENOUS MONEY

The finance motive was first formulated, in response to the criticism that the finance of (real) investment appeared not to disturb the rate of interest at all, as an extra and temporary demand for cash, to get an investment project going while awaiting long-term funding. While that narrowly-defined need is likely to be small, the general problem of financing investment is given little attention in the *General Theory*, as the above discussion indicates. It is rather assumed that the banks have excess lending capacity at the rate of interest determined by liquidity preference and the (exogenous) supply of money. If investment rises, however, the assumption of an elastic supply of funds and exogenous money do not fit well together.

Post-Keynesians are now emphasising the connection between variations in investment and the supply of bank credit and thus money. Unfortunately this is not only difficult to reconcile with exogenous money - an assumption which I dare say no-one but a monetarist would mind dropping - but also with liquidity preference theory as we know it. Liquidity preference really assumes that the supplies of money and of bonds are, roughly speaking, given except their change by open market operations. Open market operations are now not much used and supplies of all assets are rapidly changing, so one did not need the internalist critique that the modern exploration of the finance motive presents to know that something has to be done with this aspect of Keynes's theory. That much work is being done in this area is a good sign: it shows that the basic framework of the *General Theory* is robust enough to remain useful when modified.

REFERENCES

- CHICK, V. (1983) *Macroeconomics after Keynes: a reconsideration of the General Theory*. Cambridge, Mass.: MIT Press.
- CHICK, V. (1986) "The evolution of the banking system and the theory of saving, investment and interest". *Economies et sociétés. Cahiers de l'ISMEA*, Serie "Monnaie et production", n° 3, pp. 111-126.

⁴ There is a connection here with bank credit which I explored pretty thoroughly in Chick, 1983, 189091, Chapter 12).

⁵ Hicks's complaint that the effect of new issues of bonds cannot be dealt with in the *General Theory* is quite correct.

- CHICK, V. (1991) "The place of value and capital in monetary theory" in A.S. Courakis & C.A.E. Goodhart *Hicks's Monetary Thought*. Macmillan, forthcoming.
- FRIEDMAN, M. (1956) "The quantity theory of money — a restatement" in *M. Friedman Studies in the Quantity Theory of Money*. Chicago: University of Chicago Press.
- HARRIS, L. (19**) *Monetary Theory*.
- HICKS, J. R. (1937) "Mr. Keynes and the classics" *Econometrica*, April.
- HICKS, J.R. (1939) *Value and Capital*, OUP.
- HICKS, J.R. (1967) *Critical Essays in Monetary Theory*, OUP.
- HICKS, J.R. (1989) *A Market Theory of Money*, OUP.
- SHACKLE, G.L.S. (1968) *Expectations, Investment and Income*. OUP.
- TOBIN, J. (1957) "Liquidity, preference as behavior toward risk". *Review of Economic Studies*, April.
- TOWNSHEND, H. (1937) "Liquidity-premium and the theory of value". *Economic Journal*, March.

ABSTRACT

The title of the paper alerts the reader to the fact that while the role of money in Keynes's earlier work is alluded to, it is mostly the monetary contribution of the *General Theory* (to which the author is particularly partial) which is surveyed here.

The *General Theory* represents a breakthrough in monetary theory both broadly and narrowly defined. Money in the *General Theory* is all-pervasive. It is essential in the sense of Radner and Hahn. Money is also essential in allowing Keynes to break away, more profoundly than before, from equilibrium economics.

Monetary theory narrowly defined also represents a breakthrough: speculative demand is a revolutionary concept, driving a wedge between the rate of interest and the rate of profit. The concept is elaborated and compared with Hicks's treatment. The article ends with a brief section on the finance motive and endogenous money.