

Rogers on Money

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There should be no doubt that this is an important book on "the foundations of monetary theory". It is written in two parts. The first is concerned with a critique of neoclassical monetary theory, while in the second part the author attempts to develop a post-Keynesian alternative. The first part is more successful than the second, and, in fact, some of the criticisms that the author correctly levels against neoclassical theory can also be levelled against his alternative formulation. As I am in agreement with much of the argument of the first section of the book, I will concentrate on the more problematic second part.

Money, Interest and Capital presents an excellent analysis of Wicksellian and post-war monetary theory, reviewing most of the important debates and controversies in the literature; offering new and valuable insights into the issues. However, the book assumes some background knowledge, and familiarity with the issues and controversies is necessary to fully appreciate many of the arguments.

In the first part of the book, Rogers outlines the two main types of neoclassical monetary theory, exposing their limitations before examining more modern developments. Neoclassical monetary theory has developed from either Walrasian or from Wicksellian roots, and all versions are reducible to those roots. Both are shown to have serious shortcomings. Neo-Walrasian theory has no role for money, except as a trivial addendum to the underlying theory with no real effect. Wicksellian monetary theory relies crucially on the concept of the natural rate of interest which has logical flaws which are now recognized as having been exposed by the Cambridge capital controversies. The natural rate of interest was derived from the interaction of forces within the real sector, and determined the equilibrium monetary rate of interest. The natural rate of interest is derived from Wicksell's capital theory on the assumption that all forms of capital must earn a uniform rate of return. The natural rate is the price which determines the equilibrium of savings and investment. By applying the results of the Cambridge critique of neoclassical capital theory to Wicksell's concept of the natural rate of interest, Rogers is able to show that it has no rigorous theoretical foundation. Since, for Wicksell, it is the natural rate which determines the market (or monetary) rate of interest, this leaves Wicksell's monetary theory also without foundation.

The Wicksellian connection is linked to the neo-classical synthesis, and the IS/LM model which was derived from it. As this also relies on the role of the rate of interest as the price which equates savings and investment, it is likewise suscep-

Review article of Colin Rogers, Money, Interest and Capital, (Cambridge University Press; 1989 pp.xviii, 318), Aus. pb \$39.95 hc \$102.00 ISBN 0521 35956 2/3

tible to capital theoretic problems. Rogers shows that Tobin's investment theory, which concentrates on the analysis of the asset market, as well as the monetary theories of Brunner and Meltzer are all essentially of the same species as that of Wicksell, except that income is now taken as being variable. In all of them, it is the rate of return on real capital which determines the monetary rate of interest; and it is the former which has been shown to be problematic. The assumption of rational expectations cannot help to sustain these versions of neoclassical theory, as it is the underlying analysis of the real sector that causes the problems, not the impact of expectations, *per se*.

Following other post-Keynesian economists (notably Kaldor), Rogers shows that the quantity theory of money is applicable only to a economy with commodity money, and not to the modern capitalist credit economy. To overcome this difficulty modern monetarists posit policy rules, particularly concerned with money supply growth, which would effectively "force a modern bank money, capitalist economy to behave as if it were a commodity money economy." (p.290) However, this is shown to be impossible in a credit economy, and may have destabilizing effects. Instead, as Rogers argues, the money supply should be treated as an endogenous variable, driven by the demand of the private sector for credit.

The second root of modern neoclassical monetary theory identified and discussed by Rogers, is neo-Walrasian general equilibrium. Since most neo-Walrasian theory relies on some concept of *tatonnement* or recontracting, all decisions are effectively made before trade takes place, so money cannot have an essential role in the analysis.

'Money' may be incorporated into a neo-Walrasian model but it will always amount to no more than an inessential extension of the model. This is the seductive property of neo-Walrasian theory that is responsible for its popularity but it also accounts for its sterility.(p.67)

This argument also applies to the temporary equilibrium version of the theory, as developed by Hicks and Patinkin, and to the "rationed" equilibrium version of Clower, Barro and Grossman. With these approaches there is the additional problem that the equilibrium outcome is crucially dependent on expectations, yet there has been no satisfactory theory of expectations, except, arguably the analysis of rational expectations where there is (again) no role for money. In any case, within temporary equilibrium models, when the market meets every Monday prices are all worked out via the *tatonnement* process, so that the only role for money is the superficial one of financing the predetermined trades for the rest of the week.

In his final Chapter in the first section of the book, Rogers examines Friedman's restatement of the quantity theory of money, as well as his methodological position. With respect to the later, the now generally accepted view is that Friedman's position is extremely ambiguous, and can hardly be thought of, nowadays, as a significant contribution to the literature on methodology.

The second section of his book contains Rogers' suggestions for a new type of monetary analysis. It begins by pointing to a critique of neoclassical theory based on Schumpeter's distinction between real analysis and monetary analysis. According to Schumpeter for real analysis the fundamental phenomena of the economy are all real; monetary variables, on the other hand, can have no persistent or long run influence on real variables. In other words, the economy behaves essentially as if it

were a barter economy. By way of contrast, monetary analysis introduces money as an essential variable which has important influences on real variables, so that a monetary economy behaves quite differently to a barter one. One of the most important insights of the book is that:

The behaviour of a capitalist economy is compatible with the properties of Monetary but not Real Analysis. p.275

Most classical and neoclassical monetary and price theory can be classified as belonging to the domain of real analysis. It is the real rate of profit (or the natural rate of interest in Wicksell) which determines the monetary rate of interest (market rate). Rogers identifies two important writers whose works are exceptions to this view, Marx and Keynes. According to Rogers, both writers used monetary analysis whereby a "conventionally" determined monetary rate of interest determines the "normal rate of profit in long-period equilibrium." The concept of the "normal rate of profit in long period equilibrium", as raised by Rogers, is a highly problematic one, and it is extremely contentious as to whether this concept is applicable to Keynes' analysis; however, I will postpone discussion of this issue.

According to Rogers, by relying on a "conventionally" determined rate of interest, both Marx and Keynes effectively treated interest as an exogenously determined variable. It is never totally clear exactly what is meant by "exogenous" in this context. In some places, Rogers stresses the argument that the rate of interest, for these authors, is conventionally determined, seeming to imply that it is determined outside the normal range of economic parameters, "in empirical fashion by the institutional structure and the bargaining power of borrowers and lenders" (p.169). He also indicates that the only important issue for the question of "exogeneity" is that the rate of interest be determined outside the real sector, by a different process to that which determines the rate of profit. This is the "weaker" position, but is all that is needed for most of the subsequent analysis. However, I believe that it is wrong to ascribe a "pure" version of either of these meanings of exogenous rate of interest to Keynes. Although Keynes clearly believed that the rate of interest was mainly a monetary phenomena, it is not correct to say that he thought it was "purely" so. In Keynes' analysis, changes in the level of nominal income will have a significant influence on the rate of interest,² via its influence on the demand for money. So that it cannot be regarded as exogenous in either sense, nor as being a purely monetary phenomena.³ Rather the interest rate is determined, within the theoretical structure of the *General Theory*, by the interplay of expectations with monetary and real variables. It is generally presumed that if the money supply is taken to be determined exogenously, then the rate of interest must be determined endogenously, and vice versa. Rogers seems to maintain this position since he argues for the exogenous determination of the rate of interest and the endogenous determination of the money supply. However, if this argument is accepted, it lends further evidence for our view, as it is extremely clear that, in the *General Theory* Keynes took the money supply to be exogenously determined by the monetary authority.

There are deeper problems with relying on the concept of the "conventionally" determined rate of interest. The concept is amorphous, and it is never clear exactly what is meant by it. If we follow Keynes, then the clue to the determination of the conventional rate of interest lies in expectations about what the "normal" rate of interest should be. For Rogers, the implication is that conventions and institutions

allow the emergence of a unique rate of interest. However, this conclusion directly contradicts both Keynes' analysis and the conventional wisdom concerning the behaviour of financial markets. For Keynes' analysis of liquidity preference to be operational, it is important that there is not a unique "conventional" rate of interest but rather a range of possible rates. Otherwise, if all members of a society had the same concept of the conventional rate, there could be no trading in financial markets, as everyone would have the same expectation as to future movements in the value of financial assets. In other words, because either everyone was equally bull or everyone was equally bear, no trade could occur. If we accept that there will be a range of "conventional" rates of interest, then this leaves Rogers' exogenously determined rate of interest in the air, indeterminate, unless the conventional rate emerges as the mean of the distribution of expected interest rates, or, following Tobin, of risk aversions. However, in this case it would not be entirely exogenous, as the expected values would have to be weighted by the wealth and income of the relevant agents. Clearly more needs to be said about the determination of the conventional rate.

If we accept Rogers' argument about the conventional/exogenous determination of the rate of interest, there are serious implications for economics. In his analysis, the rate of interest is the key variable influencing the emergence of the long period position of the economy. If we admit, as Rogers suggests, that this variable is *not* capable of economic analysis, then we beg the important question of "What, exactly can economics do?" While there is certainly more than a grain of truth in the view that there is a conventional aspect to the long run rate of interest, it is a very different matter to argue that it is purely conventionally determined. In any case, there is an important role for expectations in the determination of interest rates, although Rogers himself makes no suggestions in this area (apart from remarks in his critique of neoclassical expectations analysis). It seems too extreme to argue that the rate of interest is not, and can not be, influenced by economic factors. Certainly most governments and many economists (including post-Keynesians such as Kaldor)⁴ believe that the rate of interest is heavily influenced by economic considerations. By postulating a purely "conventional" determination of the rate of interest are we to understand that economic forces have no effect?

Rogers next discusses the distinction between general and partial equilibrium analysis, arguing for the advantages of the partial equilibrium approach for macro-economics. He associates the partial approach with a methodology of examining problems one at a time, so that key relations can be isolated and closely examined. This approach is similar to the view of the classical method of analysis by stages which has been revived by the neoRicardian economists.⁵ By analysing problems this way, it permits a study of causality, which is clearly vital for the macroeconomist. By way of contrast, in the general equilibrium framework the simultaneous determination of all variables does not permit causal inferences nor allow the analysis to focus on key variables, and therefore is not compatible with the method of macro-economics. Hence the search for general equilibrium microfoundations for macro-economics is a vain one.

This methodological discussion is related to another theme which plays an important role in the more constructive analysis of the book: the view of long-period analysis as the only viable method for analysing a capitalist economy. However, this

is a red herring. The argument for such "long-period" analysis is that "persistent forces exist in capitalist economies" (p.187), and that these can only be analysed with long period equilibrium analysis. Within such a framework, long period equilibrium solutions are determined with "a given conventional rate of interest, stable long-term expectations, i.e. the belief that the existing rate will continue, and realized short-period expectations". (p.199) There are serious problems with this story, which forms a recurrent theme of the constructive part of the book. Firstly, those persistent forces which Rogers focuses on, will influence the economy *not only* in the long run, but also in the short term, and so should be susceptible to being modelled in this way. So, there are not convincing arguments for replacing short run theory with long run ones. Secondly, many problems arise due to Rogers anchoring the long period analysis in the concept of the conventionally determined rate of interest. Third, it is not correct to argue that Keynes' set his analysis of effective demand in a long period framework, or even that he emphasised the long period. (pp. 219-220) It is clear from the list of variables that Keynes takes as given for the sake of his analysis (Keynes 1973 p.245), that the framework of the analysis is the traditional Marshallian short-period one with the quantity and composition of the capital stock assumed to be given. It is an entirely different to argue that Keynes' analysis *should* have dealt primarily with the long period.

An interesting feature of Rogers' suggested reformulation of monetary analysis involves a reversal of the causality of Wicksellian theory. For Rogers it is the exogenously determined monetary rate of interest which will determine the "own" marginal efficiencies of capital and marginal efficiencies of holding of all other commodities. In other words, it is Wicksell's market rate which determines the natural rate. This is monetary analysis in the manner defined by Schumpeter where the monetary sector affects the real sector in nontrivial ways. Rogers considers a mechanism whereby any disruption to monetary equilibrium will lead to adjustments in the real sector via changes in the spot prices of real assets, as adjustment which will bring their marginal efficiencies back into equality with the interest rate. For example, if at the going rate of interest the demand for capital (investment) is not equal to the supply of capital (saving) this will lead to changes in the demand and supply prices of capital goods which will have implications for output and employment. In other words, for Rogers, the exogenously determined long run monetary rate of interest is the centre of gravity to which all real rates of return gravitate. Within this framework, Rogers presents an excellent discussion of why the price of nonreproducible commodities rise the most during inflationary times. This argument will do much to disprove the neutrality of money hypothesis of much mainstream work. (p.226)

The fundamental concept on which this analysis relies is the adjustment of the marginal efficiencies to changes in the exogenous rate of interest. According to Rogers:

The analysis of the relation between the rate of interest and the MEC outlined ... is not open to the Cambridge critique. (p.230)

This claim is crucial to Rogers' whole attempted reconstruction of monetary theory, but, is only asserted and is not demonstrated, except by a reference to Pasinetti (1974). It is my contention that it is incorrect to state that this relationship is immune to the Cambridge critique. To illustrate this, consider Keynes' definition

of the marginal efficiency of capital as "being equal to that rate of discount which would make the present value of the series of annuities given by the returns expected from the capital-asset during its life equal to its supply price." (Keynes 1973 p.13) The same definition is used by Rogers (p.215) Utilization of it requires looking at expected net returns (or profits) for the life of the project and calculating the discount rate which makes this rate of return equal to its supply price. In Keynes' analysis, the marginal efficiency of capital is derived with the assumption that the price of capital goods are fixed, so that valuation problems are avoided. However, in Rogers' long run analysis, this cannot be the case, especially as it is the implications of changes in the rate of interest which are being examined, and the adjustment is achieved through changes in the supply and demand prices of capital goods. The rate of interest, as well as profit and wage rates enter into the price determination of all the factors which determine the marginal efficiencies. Changes in the rate of interest will cause changes in these variables, as well as in all expected future costs and revenues, and these will cause changes in the marginal efficiencies of capital of all projects, in a *non-systematic* way. So, the MECs for all commodities, and the MEC schedule for the economy as a whole, can only be drawn for a given rate of interest, and a given profit rate and given wage rates. Changes in any of these variables will lead to changes in *all* MECs, so that the schedule will have to be completely redrawn. Assets have yields, costs and liquidity premiums and all of these will be affected by changes in the interest rate. In other words, the variables Rogers considers to be "independent" and "given" (eg. on p.216 the supply price of capital, the number of entrepreneurs who can obtain necessary finance, expectations about future profits) are all influenced by the rate of interest. So, the simple relationship between the rate of interest and the marginal efficiencies of capital which is the heart of Rogers' new monetary theory, is susceptible to exactly the same Cambridge criticism that he earlier applied to certain neoclassical writers.

Rogers supplements his polemic with the fundamental equations of Keynes' *Treatise*. Keynes' original use of the equations was flawed because of his reliance on neoclassical/Wicksellian notions of the natural and market rates of interest, with the former determined by saving and investment. Rogers argues, however, that the exogenously determined rate of interest determines the rate of investment via its influence on the marginal efficiencies, via the adjustment processes discussed above. This, in turn, determines the point of effective demand, which is incorporated into the framework of monetary equilibrium.

It should be noted that Rogers' concept of effective demand is idiosyncratic. Whereas most post-Keynesians would define the principle of effective demand as the idea that it is changes in the level of income which equates saving and investment, rather than changes in the rate of interest; for Rogers:

the definition used here applies the concept of monetary equilibrium to define effective demand as that level of output beyond which it is not profitable to expand production. (p.231)

Clearly the two usages are related, but that of Rogers' is more specifically related to an equilibrium concept.

According to Rogers, the "point of effective demand determines employment" and output (p.245). Once the corresponding equilibrium is established, we are stuck there: no degree of flexibility in prices or wages can influence the level of output. So,

unemployment would have to be the result of insufficient autonomous demand at the given interest rate, and not of price or wage rigidity. This view represents a clear contradiction to the predominant neoclassical view that it is price rigidities which explain unemployment.

Rogers recasts his analysis in terms of Metzler's version of the IS/LM framework (Metzler 1981), which is, in turn, a variant of Wicksellian analysis. Metzler's analysis is adjusted using "Marshallian analytical techniques" so as to reflect the concerns of monetary rather than real analysis. In particular, the neoclassical analysis of the labour market is modified, and Rogers' version of the principle of effective demand is incorporated into the model. Although the model remains a static equilibrium one, it is still useful in demonstrating that wage and price flexibility will not bring the economy to full employment.

When a more dynamic approach is considered, Shackle's "Keynesian kaleidics" is taken as the role model. Shackle showed that the rate of interest is "expectational, subjective, psychic, indeterminate." (quoted on p.268) But, if the rate of interest is subject to chronic instability, then the economy will also be unstable. Rather than drawing nihilistic inferences from this, Rogers concludes that the responsibility for the stability of the long term interest rate, and hence for the whole economy, must rest with the monetary authority. This, as is well known, is a "responsibility" which they have abdicated, in the course of following monetarist monetary policy. The resulting chaos we now witness.

In marrying his variant of post-Keynesian analysis within a restatement of the Wicksellian approach, Rogers is attempting to reconcile two quite different interpretations of the role of the rate of interest. For neoclassical economists the rate of interest reflects the rate of time preference and is the reward for postponing consumption. Within this role, it is the price which equates the desire to postpone consumption (saving) with the ability to provide future consumption goods (investment). For Keynesian economists, on the other hands, the rate of interest is the reward for parting with liquidity. As such it is the price which equates the demand for liquidity with the desire for it. It is possible for the rate of interest seen this way to be exogenously determined, but only if the supply of money is endogenously determined. The first part of Rogers' book illustrates the inadequacies of the first conception of the rate of interest; while the second represents his attempts to incorporate the second within a long period post-Keynesian model.

With this in mind, I can draw some overall conclusions about the book. To give judgement is difficult owing to the disjoint nature of its two parts. The first part is a well written critical survey of mainstream "monetary" theory, which can be highly recommended for advanced students and professionals alike. It raises important questions which mainstream economics has not solved, and perhaps cannot answer. The second part contains an interesting attempt to develop a non-marginalist monetary theory by marrying post-Keynesian theory to the monetary analysis of Wicksell. Unfortunately, for the reasons documented above, this attempt must be seen as much less successful.

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Notes

1. It should be noted that, while there are various formulations of the IS/LM framework, the Rogers' critique is applicable to all those versions which rely on a monotonic decreasing relation between the rate of interest and investment demand.
2. See for example Keynes (1973) pp.248-9
3. This is in contrast with Pasinetti (1974) p.34 who argues the opposite position.
4. The Radcliffe Report, which Rogers quotes with approval (p.253) thought that the main instrument of monetary policy was via the monetary authority's influence over the interest rate.
5. See, for example, Roncaglia (1978) p.22 Pasinetti (1974) pp.42-48, and Garegnani (1984) pp.292-299. See also Keynes (1973) p.297.
6. It should be noted that it is precisely because he took both the nominal and real capital stock as given that Keynes was able to avoid capital theoretic problems.
7. It should also be noted that one of the variables which Keynes took as "given" was the degree of competition. This is interesting in the light of Rogers' contrast between Keynes' use of Marshallian tools and the alternative of "allowing for some degree of imperfect competition and assuming the state of competition to be given". (p.202)

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