

SAVING, INVESTMENT AND THE RATE OF INTEREST*

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Introduction

In its work on the U.K. financial system, the Wilson Committee on the Functioning of the Financial Institutions found itself obliged to consider the factors which determine the cost of capital in Britain. The Committee's remit had included a request to give particular attention to the adequacy of the supply of finance for industry and trade. It quickly emerged that there was no general shortage of funds—in a sophisticated financial system such as Britain's this was hardly surprising. Indeed, the evidence pointed overwhelmingly to the conclusion that sound, large enterprises could generally obtain all the finance they asked for. But the price at which funds could be obtained - the rate of interest - was clearly a relevant consideration, and for some types of finance such as longterm loans the price in recent years had been altogether too high. Industrial companies did not blame the financial institutions for this state of affairs: the cost of capital was something which they regarded as being essentially beyond the institution's control. But the Committee could not leave it at that. It had to go further and examine the forces governing the cost of capital with some care. This proved to be a contentious matter, on which it was not possible to reach agreement, and in its report the Committee sets out two views, one based upon a loanable funds approach to interest theory and the other on a Keynesian approach.

The Keynesian Theory

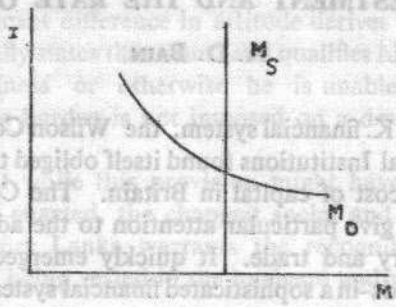
All economists are familiar with the textbook version of the Keynesian theory. People have several motives for holding money: a transactions motive, reflecting their everyday payments needs; a precautionary motive, reflecting the desire for a reserve against unexpected spending; a finance motive - the wish to build up money balances in advance of planned spending; and a speculative motive. The speculative motive - the major innovation in Keynes's theory of the demand for money - reflected the preferences of asset-holders, who took a view on the probable future level of interest rates, and chose to hold money rather than long-term assets if they expected interest rates to rise sufficiently. So long as their expectations were borne out by events they would be able to buy long-term securities more cheaply in the future, and so earn a higher yield on their assets.

Money held for the first three motives would depend upon the level of income, Y , and might also in part vary with the rate of interest, r , while money held for speculative purposes depended upon r and the expected rate of interest, p . This meant that the demand for money could be expressed as follows :

$$M_D = f(Y, r - p)$$

Equality of M_D with an exogenously given supply of money, M_S , determines r , as is illustrated in Diagram 1.

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That, in outline, is what is taught to most economics students as the theory of interest today, possibly without the complication of p in the more elementary versions. The expected rate of interest, p , was at the centre of a heated debate in the late 1930s, and the absence of any relation between p and more fundamental economic factors led to the accusation that Keynes's theory was a 'bootstrap' theory. I do not think that the determination of p was ever satisfactorily resolved by Keynesians - what determined expectations? - but in their view, whatever the determinants of p , they certainly did not include either the propensity to save or the propensity to invest. The rate of interest was a monetary, not a real phenomenon.

Reasons for Keynes's Theory

The speculative demand for money and its effect on the interest rate are vital to Keynes's theory of unemployment, because ultimately it is the failure of the rate of interest to fall which can give rise to persistent involuntary unemployment in the economy. In contrast to the classical view that the rate of interest would ultimately equate aggregate supply and aggregate demand in the economy at a full employment level, Keynes argued that changes in income were the most important causes of changes in the flow of saving, and that saving could not therefore be treated independently of income. Keynes also believed that changes in the desired composition of wealth holdings (stocks) would dominate flows of new saving and investment in determining interest rates and it was the high interest-elasticity of demand for the stock of money (or, what is equivalent in this case, the stock of securities) which meant that wealth owners could hold the interest rate at too high a level.

The Loanable Funds or Flow of Funds Approach

In contrast with Keynesian theory the loanable funds approach (which links closely with flow of funds analysis and is frequently employed by practitioners in financial markets) focuses on the flows of funds which impinge on the securities and loans markets. Leaving the effects of inflation on one side -

I shall return to these later—the basic determinants of the rate of interest are the flows of saving (demand for securities, including deposits) and the need for investment finance (supply of securities and loans). In principle both saving and investment, particularly *long-term* investment, are likely to vary with the rate of interest, and the rate of interest is therefore the price which maintains balance in the financial markets. Structural shifts in saving propensities (due, for example, to the spread of banking into new areas or the development of funded pension schemes), or structural shifts in the demand for finance (due, for example, to increased government borrowing or investment opportunities arising from natural resource discoveries) will both affect the rate of interest.

While loanable funds theorists stress the flows of saving and investment they do not neglect the effect of changes in the demand for and supply of money in their analysis. Money creation augments saving - there is an *unplanned* rise in saving until people adjust to the change in their money incomes. This allows the demand for funds for investment to be satisfied at a lower rate of interest than would otherwise be possible. On the other side, an increased demand for money (“hoarding”) absorbs part of the saving flow and raises interest rates. The basic loanable funds equation is therefore :

$$S + \Delta M = I + H$$

Where

s = saving

i = investment

ΔM = change in the quantity of money

H = “hoarding” (change in the demand for money)

all within the time period under consideration.

The effects of changes in the demand for and supply of money are comparable to those implied by the Keynesian model, but the difference between Keynesian and loanable funds theorists in this respect is that the former expect changes in the demand for money and supply of money to be very large relative to flows, and so to dominate them over periods of time relevant for analysis, whereas the loanable funds theorists treat these stock changes as if they were flows, commensurate with the flows of saving and investment.

This is partly an empirical matter, and there are a number of points which seem worth making.

- (i) The relative importance of flows and changes in stocks depends upon the length of the time period considered. Flows cumulate through time, whereas shifts in desired stocks are often reversed. The longer the time period under consideration, therefore, the more important are flows in relation to stock changes.

(ii) Some monetary changes are similar in character to flows. For example, changes in the money supply usually take place gradually, and, at least in developed financial systems, monetary assets do not by any means dominate the financial system. On the demand side, an increase in the demand for money reflecting Keynes's finance motive is likely to show up gradually as firms build up their money balances out of accruing funds.

(iii) However, some monetary changes are undoubtedly stock shifts, which in the short-run are likely to outweigh flow effects. There is sometimes a sharp increase in the demand for money in response to some external shock to confidence – liquidity provides manoeuvrability in an uncertain world. Such shifts in the demand for money can be associated with quite substantial short-run changes in interest rates, as the prices of long-term assets fall in order to discourage sales. But in their nature increases in the demand for money due to uncertainty are usually reversed, because the demand for money subsides to a more normal level as events unfold, uncertainty diminishes and confidence is restored.

(iv) Looking at U.K. experience the importance of monetary factors in certain periods is undeniable. Rapid monetary expansion in 1972 and 1973 – over 25% per year – pushed interest rates down, because the rise in the money stock was large in relation to the flow of saving. And 1974 provides another illustration. For in that year, due to the uncertain business climate, there was a sharp increase in the demand for money; simultaneously the real money stock declined (thanks to inflation and a slower rate of monetary growth) and interest rates shot to record levels as part of the general financial crisis. More usually, however, fluctuations in money holdings have been modest in comparison with the annual levels of saving and investment.

My own conclusions drawn from the experience of the U.K. in the last two decades is that monetary factors have sometimes played an important part in explaining short-run fluctuations in interest rates. But so far as the *real* rate of interest is concerned, the flows of saving and investment have been much more important for the average level. Monetary factors may, of course, have had an effect on *nominal* interest rates through their influence on inflation, and it is to the effect of inflation on nominal interest rates that I now turn.

Inflation

The Keynesian approach to interest rate theory has very little to say on the relation between nominal and real rates of interest. The influence of inflation on nominal rates of interest would have to come through the expected rate, p , and the mechanism by which inflation will affect p is unclear. Without a fully-fledged theory of what determines the expected rate, p , it is impossible to predict the effect of inflation upon nominal rates of interest.

The loanable funds approach to interest theory relies upon the classical analysis. Saving and investment, according to the classical model, both depend on real returns, so in the absence of uncertainty concerning the rate of inflation the nominal rate of interest both sought and offered would rise by the expected rate of inflation. Thus if \dot{p} is the expected rate of inflation, the relationship between the nominal rate, i , and the real rate, r , can be expressed as

$$i = r + \dot{p}$$

The assumption that the rate of inflation in future is known with certainty is, however quite unreal. One characteristic of inflation is its unpredictability, and a *certain* rate of inflation is a contradiction in terms. The uncertainty inherent in inflation affects both saving and investment. Moderate inflation, coupled with financial assets which are likely (on balance) to yield a positive real return, probably raises saving, because people are likely to save more in order to ensure that they have sufficient assets to meet their needs and the risk that inflation will erode the value of their assets increases the amount they require for this purpose. Rapid inflation, however, when people cannot hope to recover the loss of capital value through interest payments and which is associated with strongly negative real returns, discourages saving—at least in the form of financial assets which are likely to lose their value, even if saving by acquiring tangible assets or land may increase.

Business investment, other than for short-term, speculative purposes, is almost certainly discouraged by inflation. Many of the risks faced by business are increased by inflation, and the higher nominal rate of interest places additional burdens on a business's cash flow and balance sheet. Again, investment in real property may be an exception, as people try to switch out of financial into physical assets.

The net effect of inflation on the equilibrium real rate of interest is therefore uncertain. In a developed country, faced with moderate inflation, it is likely to fall - due to a rise in saving combined with a decline in investment demand. For countries at an earlier stage of development, such as Sri Lanka, the reverse seems more likely to be the case, because saving in financial assets is likely to be adversely affected and the demand for physical goods may well increase. In these circumstances, as well as causing a gap between the nominal and real rates of interest, inflation may raise the real rate itself.

Foreign Influences

Any statement of the loanable funds approach to interest theory would be incomplete without some mention of foreign influences on the capital market. As well as taking account of the domestic flows of saving and investment and of domestic monetary factors, the possibility of inflows and outflows of capital must also be included. This is important whenever international capital flows can take place freely, and such flows ensure that real domestic interest

rates in these countries are influenced by the general international level. In countries, such as Sri Lanka, where exchange controls are strict capital inflows from abroad are not affected by domestic interest rates. But capital imports do still affect the balance between saving and investment, and appear as an exogenous element, ΔF , on the left hand side of the equation, which therefore becomes:

$$S + \Delta M + \Delta F = I + H$$

Conclusion

The Keynesian theory of interest was proposed as part of an analysis of the behaviour of an advanced capitalist economy, with a sophisticated capital market and during a period of depression. In these conditions the levels of saving and of economic activity were closely linked, prices (including the rate of interest) were sticky and price changes could not be relied upon to maintain overall economic balance. Expectations in the capital market may well have created a highly elastic demand for loanable funds at prevailing long-term interest rates. Keynes's theory provided valuable insight into the working of his contemporary world.

The Keynesian approach to interest theory seems much less relevant today. Major current economic problems include investment which is depressed by inflation and by other economic disturbances, saving which reacts to many factors other than income, and high nominal interest rates. Some of the ideas from Keynes – the notion that long-run real interest rates may be sticky downwards seem to me to provide part of the explanation for the behaviour of the U.K. economy in recent years, and shifts in liquidity preference do still seem to account for some short-run fluctuations in interest rates. But the background level of interest rates has been influenced much more by structural matters, such as are highlighted in loanable funds theory, concerning the flows of saving and the demand for funds.

For Sri Lanka too I am sure that the loanable funds approach to interest theory will prove more readily applicable than the Keynesian alternative. The relevance of the speculative demand for money to capital markets which are practically devoid of long-term financial assets is doubtful, and increases in the quantity of money have much more to do with the financing of expenditure in the economy than with changes in the composition of financial asset holdings. In these circumstances flow factors are likely to be dominant. As a matter of theory it is obviously desirable that the determination and role of interest rates in your country should be properly understood. But it is also important in the context of economic policy. For without proper recognition of the importance of saving in the economy, and of its effect through the rate of interest on the level of investment, there is a danger that the growth of your financial structure may be stunted and the more general development of your economy unnecessarily impeded.