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THE "EX-ANTE" THEORY OF THE RATE OF INTEREST

AFTER reading the articles by Prof. Pigou, Prof. Ohlin, Mr. Robertson and Mr. Hawtrey in the last issue of the *ECONOMIC JOURNAL*,¹ I feel that Mr. Robertson has summed up the position very well when, at the end of his contribution, he tells me that I am shying at a "composite Aunt Sally of uncertain age." Whilst truth is one, error is indeed many, and I promise to give up any further attempt to maintain the contrary!

I restrict myself in what follows to the discussion between Prof. Ohlin and myself, because this, I think, may prove to be a fruitful one. He has compelled me to attend to an important link in the causal chain which I had previously overlooked, and has enabled me to make an important improvement in my analysis; and as regards the difference which still remains between us, I do not yet abandon the prospect of convincing him. Whilst, however, the latter must probably await a future article which I intend to write dealing with the relation of the "ex-ante" and "ex-post" analysis in its entirety to the analysis in my "General Theory," I have, meanwhile, some comments on his latest contribution.

According to Prof. Ohlin, the rate of interest depends on the interaction at the margin between the supply of new credit due to ex-ante saving and the demand for it arising out of ex-ante investment. I understand that the amount of "ex-ante" saving in any period depends on the subjective decisions made during that period to make objective savings out of income which will accrue subsequently; and, similarly, the amount of "ex-ante" investment depends on the subjective decisions to invest which will take objective effect subsequently. Now, ex-ante investment is an important, genuine phenomenon, inasmuch as decisions have to be taken and credit or "finance"² provided well in advance of the actual process of investment; though the amount of the preliminary credit demanded is not necessarily equal

¹ Sept. 1937—"Real and Money Wage Rates in Relation to Unemployment," by Prof. Pigou, p. 405, and "Alternative Theories of the Rate of Interest: Three Rejoinders," by Prof. Ohlin, D. H. Robertson, and R. G. Hawtrey, p. 423. In regard to Prof. Pigou's article, see the note below (p. 743).

² In what follows I use the term "finance" to mean the credit required in the interval between planning and execution.

to the amount of investment which is projected.¹ There is, however, no such necessity for individuals to decide, contemporaneously with the investment-decisions of the entrepreneurs, how much of their future income they are going to save. To begin with, they do not know what their incomes are going to be, especially if they arise out of profit. But even if they form some preliminary opinion on the matter, in the first place they are under no necessity to make a definite decision (as the investors have to do), in the second place they do not make it at the same time, and in the third place they most undoubtedly do not, as a rule, deplete their existing cash well ahead of their receiving the incomes out of which they propose to save, so as to oblige the investors with "finance" at the date when the latter require to be arranging it. Finally, even if they were prepared to borrow against their prospective savings, additional cash could not become available in this way except as a result of a change of banking policy. Surely nothing is more certain than that the credit or "finance" required by ex-ante investment is not mainly supplied by ex-ante saving. What part, if any, is played by it, we will consider in a moment.

How is it supplied? The entrepreneur when he decides to invest has to be satisfied on two points: firstly, that he can obtain sufficient short-term finance during the period of producing the investment; and secondly, that he can eventually fund his short-term obligations by a long-term issue on satisfactory conditions. Occasionally he may be in a position to use his own resources or to make his long-term issue at once; but this makes no difference to the amount of "finance" which has to be found by the market as a whole, but only to the channel through which it reaches the entrepreneur and to the probability that some part of it may be found by the release of cash on the part of himself or the rest of the public. Thus it is convenient to regard the twofold process as the characteristic one.

Now, the markets for new short-term loans and for new long-term issues are substantially the same as the markets for old ones, such minor anomalies as may be occasioned by the imperfection of the market as between bankers and other suppliers of finance or between different sections of the investment market not being relevant on our present plane of discussion. Thus the terms of supply of the finance required by ex-ante investment depend on the *existing* state of liquidity-preferences

¹ *E.g.*, when a new railway is undertaken, it is not usual to borrow the *whole* of what it will cost before the first sod is cut.

(together with some element of forecast on the part of the entrepreneur as to the terms on which he can fund his finance when the time comes), in conjunction with the supply of money as governed by the policy of the banking system. Broadly speaking, therefore, the rate of interest relevant to ex-ante investment is the rate of interest determined by the *current* stock of money and the *current* state of liquidity preferences at the date when the finance required by the investment decisions has to be arranged. So far, no modification is required in the analysis which I have previously expounded.

The additional factor, previously overlooked, to which Prof. Ohlin's emphasis on the ex-ante character of investment decisions has directed attention, is the following.

During the interregnum—and during that period only—between the date when the entrepreneur arranges his finance and the date when he actually makes his investment, there is an additional demand for liquidity without, as yet, any additional supply of it necessarily arising. In order that the entrepreneur may feel himself sufficiently liquid to be able to embark on the transaction, someone else has to agree to become, for the time being at least, more unliquid than before. Prof. Ohlin seems to be suggesting that this supply of liquid finance is forthcoming from those individuals who have the intention to save at some future date. But if so, how do they do it? They must deplete their cash balances, overdraw their accounts, or take up securities to be paid by instalments over the whole period of the investment. Now, I readily admit that the intention to save may sometimes affect the willingness to become unliquid meanwhile. This factor should certainly be included in the list of motives affecting the state of liquidity-preferences (it is not emphasised sufficiently by merely referring to the amount of expected future income). But it is only one amongst many, and, in practice (I should have thought), one of the least important. Even in what might seem at first sight a plausible case for ex-ante saving—namely, where a man causes a house to be built for himself through a building society to which he mortgages his future savings for repayment, it is not his promise which provides the builder with the finance he requires, but the deposits which the building society (supported, no doubt, by its member's promise to repay) collects by the offer of a suitable rate of interest from the general pool of liquid resources, provided out of existing cash which its owner can spare or out of new cash provided by the banks. The ex-ante saver has no cash, but it is cash which the ex-ante investor

requires. On the contrary, the finance required during the interregnum between the intention to invest and its achievement is mainly supplied by specialists, in particular by the banks, which organise and manage a revolving fund of liquid finance.

For "finance" is essentially a revolving fund. It employs no savings. It is, for the community as a whole, only a book-keeping transaction. As soon as it is "used" in the sense of being expended, the lack of liquidity is automatically made good and the readiness to become temporarily unliquid is available to be used over again. Finance covering the interregnum is, to use a phrase employed by bankers in a more limited context, necessarily "self-liquidating" for the community taken as a whole at the end of the interim period.

In a simplified schematism, designed to elucidate the essence of what is happening, but one which is, in fact, substantially representative of real life, one would assume that "finance" is wholly supplied during the interregnum by the banks; and this is the explanation of why their policy is so important in determining the pace at which new investment can proceed. Dr. Herbert Bab has suggested to me that one could regard the rate of interest as being determined by the interplay of the terms on which the public desires to become more or less liquid and those on which the banking system is ready to become more or less unliquid. This is, I think, an illuminating way of expressing the liquidity-theory of the rate of interest; but particularly so within the field of "finance."

I return to the point that finance is a revolving fund. In the main the flow of new finance required by current ex-ante investment is provided by the finance released by current ex-post investment. When the flow of investment is at a steady rate, so that the flow of ex-ante investment is equal to the flow of ex-post investment, the whole of it can be provided in this way without any change in the liquidity position. But when the rate of investment is changing in the sense that the current rate of ex-ante investment is not equal to the current rate of ex-post investment, the question needs further consideration.

Even if there was a tendency for ex-ante saving to change in the same direction, and at the same time as ex-ante investment, this—as we have pointed out—would only solve the difficulty in so far as the ex-ante savers were prepared to deplete their *existing* cash by the amount of their *prospective* saving; and, though ex-ante saving may have *some* favourable influence on current liquidity-preferences, it would seem out of the question that it

can have a decisive influence. At any rate, it is only through its influence on current liquidity-preferences that ex-ante saving can come into the picture.

Now, an important conclusion follows from all this, attention to which may help to bridge the gulf, at any rate between myself and Prof. Ohlin, and perhaps between myself and those who attach to changes in the amount of bank loans a decisive influence on the rate of interest.

It follows that, if the liquidity-preferences of the public (as distinct from the entrepreneurial investors) and of the banks are unchanged, an excess in the finance required by current ex-ante output (it is not necessary to write "investment," since the same is true of *any* output which has to be planned ahead) over the finance released by current ex-post output will lead to a rise in the rate of interest; and a decrease will lead to a fall. I should not have previously overlooked this point, since it is the coping-stone of the liquidity theory of the rate of interest. I allowed, it is true, for the effect of an increase in *actual* activity on the demand for money. But I did not allow for the effect of an increase in *planned* activity, which is superimposed on the former, and may sometimes be the more important of the two, because the cash which it requires may be turned over so much more slowly. Just as an increase in actual activity must (as I have always explained) raise the rate of interest unless either the banks or the rest of the public become more willing to release cash, so (as I now add) an increase in planned activity must have a similar, superimposed influence.¹

But this only serves to buttress the liquidity-theory of interest against the savings-theory of interest, whether ex-post or ex-ante. The fact that savings ex-post increase by the same amount as investments ex-post does not help the situation in the least. The higher scale of planned activity increases, so long as it lasts, the demand for liquidity altogether irrespective of the scale of saving. Exactly the same is true whether the planned activity by the entrepreneur or the planned expenditure by the public is directed towards investment or towards consumption. How would Prof. Ohlin deal with that point? Would he say that the finance required by the increase in planned activity to produce consumers' goods is supplied by ex-ante consumption? He ought to. For consumption is just as effective in liquidating the

¹ This adds no support to the bank-loans theory of interest which remains only half-a-theory, inasmuch as it allows for changes in the supply of money but not for changes in the liquidity-preferences of the lending public.

short-term finance as saving is. There is no difference between the two. If the entrepreneur gets wind of ex-ante consumption in the mind of the consumer, he is not only just as safe to get liquid and pay off his bank in due course as where there is ex-ante saving, but indeed much safer—for there is no risk that the consumption, when it matures, will take the form of an enhanced desire for cash. The only advantage of ex-ante saving over ex-ante consumption is in its possible effect on the current liquidity-preference of the individual.

The demand for liquidity can be divided between what we may call the active demand which depends on the actual and planned scales of activity, and the inactive demand which depends on the state of confidence of the inactive holder of claims and assets; whilst the supply depends on the terms on which the banks are prepared to become more or less liquid. In a given state of expectation both the active and the passive demands depend on the rate of interest. So sometimes does the supply; but not necessarily, for the banking system may aim at the quantitative regulation of money without much regard to the rate. In any case, given the state of expectation of the public and the policy of the banks, the rate of interest is that rate at which the demand and supply of liquid resources are balanced. Saving does not come into the picture at all. Completed activity, whether the proceeds of it are invested or consumed, is self-liquidating and makes no further net demands on the supply of liquid resources (except, indirectly and in the long run, to the extent that the inactive demand for liquidity partly depends on the aggregate of wealth).

The point remains, however, that the transition from a lower to a higher scale of activity involves an increased demand for liquid resources which cannot be met without a rise in the rate of interest, unless the banks are ready to lend more cash or the rest of the public to release more cash at the existing rate of interest. If there is no change in the liquidity position, the public can save ex-ante and ex-post and ex-anything-else until they are blue in the face, without alleviating the problem in the least—unless, indeed, the result of their efforts is to lower the scale of activity to what it was before.

This means that, in general, the banks hold the key position in the transition from a lower to a higher scale of activity. If they refuse to relax, the growing congestion of the short-term loan market or of the new issue market, as the case may be, will inhibit the improvement, no matter how thrifty the public purpose

to be out of their future incomes. On the other hand, there will always be *exactly* enough ex-post saving to take up the ex-post investment and so release the finance which the latter had been previously employing. The investment market can become congested through shortage of cash. It can never become congested through shortage of saving. This is the most fundamental of my conclusions within this field.

An *obiter dictum* arising out of the above is worth mentioning, which may help to illustrate the nature of the argument. In Great Britain the banks pay great attention to the amount of their outstanding loans and deposits, but not to the amount of their customers' unused overdraft facilities. The aggregate amount of the latter is not known, probably not even to the banks themselves, nor their division between the purely precautionary facilities which are not likely to be used in the near future and those which are associated with an impending planned activity. Now, this is an ideal system for mitigating the effects on the banking system of an increased demand for ex-ante finance. For it means that there is no effective pressure on the resources of the banking system until the finance is actually used, *i.e.* until the phase of planned activity has passed over into the phase of actual activity. Thus to the extent that the overdraft system is employed and unused overdrafts ignored by the banking system, there is no superimposed pressure resulting from planned activity over and above the pressure resulting from actual activity. In this event the transition from a lower to a higher scale of activity may be accomplished with less pressure on the demand for liquidity and the rate of interest.

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