

A Pseudo-Problem of Monetary Theory: Analysis of the Rate of Interest (*)

by

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No other subject of the theory of money has caused so much fundamental difference of opinion as the analysis of the rate of interest. There is disagreement as to whether the rate of interest is a *monetary* phenomenon, or whether it must be defined as a phenomenon of *barter economy*. According to KEYNES and the loanable funds theory represented by ROBERTSON, OHLIN, GEORGE HALM, and others, the principal determinant of the rate of interest is a certain proportion of the supply of money to the demand for money (1). Most of the other theories, which may be termed classic or neoclassic doctrines, consider a certain kind of disposing of goods to be the factor determining the rate of interest. Some variants of this initial position are: increased productivity; comparative over-valuation of present goods; comparative under-valuation of future goods; restraint or impatience in the consumption of goods; the entrepreneur's disposal of means of subsistence; increase in the value of productive factors; taking away of the additional value of production created by the workers, etc., etc. While monetary explanations converge in the point that

use of money is temporarily renounced and a compensation is given therefore, the gist of all definitions based on the barter of goods is deferment of consumption or temporary renouncement of immediate consumption.

Every systematist adhering to the theory of interest sides with either one of these two contrasting definitions. In this conflict as such, any compromise seems impossible. According to the definition of interest as set forth in the author's *«Economic Theory of Liquidity»*, however, this is by no means the case. If the rate of interest is considered to be a compensation for renouncing liquidity, the monetary and the barter pattern *merge* into each other — although only in the case of the phenomenon of liquidity being interpreted as a factor of barter economy. Since KEYNES attributes liquidity to money only, he stresses the alleged contrast all the more.

In an economic system operating without money there is also borrowing and lending, for which a reward is paid and received. There will be such reward, if future additional consumption may be expected as a result of present non-consumption of certain portions of the income. Whoever is willing to bear such non-consumption, whoever saves or accumulates property *is entitled*, in return for this performance, *to a reward* out of the future additional yield. But he has such claim only if, and insofar as, he does not reserve, by the manner he invests, the possibility to consume any time. Whether this is possible, depends on the degree to which the investment is liquid. The reserve exists if funds are invested in the most liquid form, that is, in money. As has been demonstrated, the advantage of keeping money is the

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First Pseudo-Problem: Commodity Money and Token Money (Representative Money);

Second Pseudo-Problem: Limits of the Concept of Money;

Third Pseudo-Problem: Money-Capital-Savings;

Fourth Pseudo-Problem: Analysis of the Rate of Interest.

This Review is glad to publish the English version of the chapter on the fourth pseudo-problem.

(1) As to the co-ordination of theories considering the rate of interest to be a monetary phenomenon, cf. BERNARD F. HALEY, *Value and Distribution* in: Howard S. Ellis, *A Survey of Contemporary Economics*, Philadelphia 1948/49, p. 41 seq.

possibility of choosing the most favourable moment for purchasing consumers' goods; at the same time there is the chance of being able *any time subsequently to make up for the consumption previously deferred*. Due to this faculty, the utility of the monetary unit is greater than the utility of the consumers' goods which can be acquired by means of this unit. The additional utility takes the place of the yield from the monetary unit. The latter has an intrinsic utility. There is no need for interest to be added.

Thus an explanation is supplied of the fact that money is the only investment good which does not bear any interest, even if the total investment, of which the money forms a part, promises some profit (natural interest, marginal efficiency of capital). This explanation, however, must be supplemented. While it is based in the first line on the difference in degree of money as compared with all other goods, that is to say, a quantitative factor, the absence of interest may at the same time be considered to be a quality of money. *Quantum* is changed into *quale*. The reason for the *absence of interest* in the case of money may at the same time be used as a clue to the *accrual of interest* in the case of other investment goods. The fact that securities which are similar to money bear interest is explained by J. R. HICKS as a consequence of imperfect moneyness (2). Savings deposits and other interest-bearing monetary claims are equivalent, in this sense, to securities, while payment of interest on sight deposits, which are of purely monetary character, appears to be an anomaly theoretically. Wherever interest is paid in this case, this is determined by historical circumstances.

A peculiar reversion of the same fundamental idea appears in the theory of interest set forth by KEYNES. Understanding of relationships is rendered unnecessarily difficult, however, by this reversion. For KEYNES, «demand for cash» and «liquidity preference» are synonymous. He who curbs these, who renounces cash, is content with imperfect moneyness. He renounces liquidity. By way of compensation, he is paid interest.

(2) J. R. HICKS, *Value and Capital* p. 163. Hicks considers money to be the only non-interest-bearing security.

There is a fundamental difference between this purely monetary liquidity concept and the *economic theory* of liquidity advocated in my study. Liquidity is not a function of money but, on the contrary, money is a function of liquidity. If a compensation is paid for the renouncement of liquidity, this compensation is by no means formed exclusively of the difference between all goods yielding profit, on the one hand, and money, which solely does not yield any profit, on the other. Since all goods can be used for barter and therefore have a certain degree of liquidity, the compensation for interest falls due by degrees, as soon as the next higher degree of liquidity is renounced. This also offers a clue for the differentiation of the rate of interest. The latter depends on the degree of liquidity of the goods used for investment; the degree of liquidity being, in general, inversely proportional to the yield. And it is the yield by which the expected result of the investment is reflected.

For KEYNES, one of the factors determining the rate of interest is the marginal efficiency of capital. For him, this concept is an auxiliary determinant in defining the rate of interest; in the main, his definition is based on the theorem of liquidity preference, interpreted in a monetary sense; however, the difference attributed by KEYNES to these determinants does not, in fact, exist between the monetary and non-monetary theories. The desire for liquidity (liquidity preference) is essentially influenced by the need for liquidity on the part of the entrepreneur. This need is a reflection of the anticipated marginal productivity of the entrepreneur's capital. The latter, in turn, is a complex of investment goods according to degree of liquidity. If we consider, for example, using the term coined by GUSTAV CASSEL, *disposal of capital (Kapitaldisposition)* to be the prerequisite of production, the convergence of capital and liquidity becomes obvious. Disposal of capital is economic liquidity of the entrepreneur.

This leads up to a conclusion which sounds revolutionary. The great contrast between the monetary and the classical theory of interest, which latter was based on equation of demand and supply on a capital market understood in the sense of goods transactions, completely

disappears. Being the price of liquidity, the rate of interest is at the same time the price of capital. Since in the modern economic system liquidity chiefly consists of money, the convergence, in theory, of equation of liquidity on the market (money market) and equation of capital on the market (capital market) is explained by the convergence of money, capital, and savings, as demonstrated previously (3). If we trace back the phenomenon of liquidity, and consequently the phenomenon of money, to their actual roots which lie in the barter of goods, the rate of interest is nothing else but what it was maintained to be by the classical school, namely, the premium for real saving devoted to production. If, finally, we add the creation of money by the banks as a determinant on the side of supply, we arrive at the interpretation given by WICKSELL. The demand for liquidity is replaced by the natural rate of interest, that is, the yield of the investment capital expected by the entrepreneur. The money rate of interest, on the other hand, arises from the supply of liquidity offered by the banks. Thus we have the *same contents* in three different forms (Keynes-classical school-Wicksell)!

If finally, we set aside the whole *quid pro quo* of the various theories on interest, there remains the following train of thought:

From the outside, every owner of property has the alternative of either consuming directly, or investing in some form or other. If he chooses to invest, he has another problem—the choice between various degrees of liquidity. If he prefers the highest degree of liquidity, he does not obtain any interest rate, in spite of his foregoing consumption. Instead, he enjoys liquidity. He obtains a compensation to the extent only to which he renounces higher degrees of liquidity and chooses a lower degree, when investing his property. Therefore, after the first renouncement of immediate consumption, he has to put up with another renouncement, namely the renouncement of a certain degree of liquidity (4).

(3) The only remaining distinctions between money market and capital market are differences in the degree of liquidity.

(4) A higher risk involved in an investment also reduces the degree of liquidity. The definition of interest as a «risk-

premium» is therefore included in the definition of interest as presented in this study. Investments at very short term hardly involve any risk, because no change in the debtor's financial position is to be expected. This, in part, explains the low rate of interest charged for short-term lending. On the other hand, in the case of long-term credits the risk is reduced by guarantees in order to prevent the «risk-premium» contained in the interest rate from increasing too much.

Thereby, at the same time, he foregoes the possibility of making up for the consumption originally postponed. For this renouncement of *later effecting* the deferred consumption, that is to say, for another deferment, he is compensated by obtaining an interest rate. The fact that highest liquidity is not awarded a premium in the form of interest is thus explained, in the final analysis, by the advantage of being at liberty to make use of the most favourable opportunity to purchase. The higher the degree of liquidity, the nearer the enjoyment of consumption proper. The lower the degree of liquidity, the more remote is consumption and the longer is the way from the accumulation of property to the deferred enjoyment. However, the length of the deferment is always limited. No man renounces finally. Accordingly, the owner of property obtains an interest rate only for a limited period — for the period during which he again defers consumption. During this period, the rate of interest will be the higher, the more prolonged the space of time is during which he renounces, and the more closely has tied himself during this space of time to the less liquid investment.

Thus the rate of interest, instead of merely being a compensation for renouncement of consumption as such, rather is a compensation for renouncement of consumption *and* of a high degree of liquidity during the period in which consumption is renounced. Interest is paid and received for a *double renouncement*. The qualitative connection between the two forms of renouncement is shown most clearly in the repeatedly mentioned additional utility of liquidity. The renouncement of the highest degree of liquidity of money is also a renouncement of enjoyment as is the renouncement of the immediate use of income for food, clothing, and other needs. Seen in this light, two similar renouncements of enjoyment are to be made.

This bridges the gap in the general conflict

between the monetary and commodity definitions of interest. At the same time it provides an answer to the often repeated question, as to what interest is able to achieve in the process of saving and capital formation. If interest in accordance with the classical conception provided the equation on the capital market, the most that is acknowledged today is that it limits the demand for investment funds; it is, however, contested that interest stimulates the offer of such funds, and thus has the *function of an incentive towards saving*. This is the nearly unanimous opinion in modern literature, even though otherwise accepting the classical conception.

What is correct here, and what needs correction?

The answer is given by the newly developed theorem of double renouncement. If interest is no compensation for the mere renouncement of consumption, it lacks, indeed, the function of an incentive towards saving, in so far as saving is defined as renouncement of immediate consumption. As regards consumption or non-consumption and the formation of property from income, other considerations are decisive. The most important of these considerations is the choice of the period considered most favourable for the purchase of goods. In case prospects are judged more favourable if the purchase of goods is postponed to a future date, earned income will not immediately be used to the full extent, but property will be created, people will « save ». The compensation therefore is liquidity. If the owner of the property renounces his liquidity, he is entitled to a compensation in the form of interest; but this interest is only attractive to him in connection with his expectations of being able to procure goods in the future.

Thus, while interest does not in itself provide the incentive for the action of saving, properly speaking, it provides it for the choice of the form of saving (payment into a savings bank, purchase of securities, real investment etc.). In this choice, the saver naturally considers all known possibilities for increasing his property. He compares the possible increase which interest will bring with the possible increase or loss in the commodity purchase value of his property. In doing so, he is guided by his

anticipation of the movement of commodity prices. If he anticipates a rise in prices he will prefer a form of saving which will assure him a purchase value of his savings corresponding to the rise in prices. As a rule this means real investment. If he anticipates a fall in prices, he will give preference to monetary investment. What is here decisive is that money not only serves as a means of investment (function of safekeeping of property), but that at the same time it is a standard for all other prices (function of the unit of calculation). With falling commodity prices, every unit of money represents an increase in the commodity purchase value. If no change in the purchasing value is expected, then it is the rate of interest alone which regulates the degree of liquidity renouncement and thus the choice of the form of saving. Naturally there are traditional influences as well.

This train of thought with which every business-minded individual is familiar, and which continually determines the attitude of the saver, can be explained by comparing the nominal interest which is expressed as a percentage of the money value of the property with the *real final value of the property*. This is formed out of two elements which are operative during the period of the property investment, *i. e.*, the interest and the change in the purchasing value of the property. If the investor compares his property at the end and at the beginning of the period, he does not only consider the increase in this property resulting from the interest rate, but also the possibility of acquiring the volume of commodities which, at the beginning of the period of investment, corresponded to his property. The saver knows very well that, when comparing property in terms of monetary units, he is subject to possible « arithmetic mistakes » (FRITZ SCHMIDT). He avoids this by measuring his property and his interest yield in terms of commodity units. That is to say, he calculates with what IRVING FISHER defined as real interest (5).

(5) IRVING FISHER, *Appreciation of Interest*, New York, 1896. The same: *The Theory of Interest as determined by Impatience to spend Income and Opportunity to invest it*, 1930. HAYEK has repeatedly pointed to the difference between real interest, which results from appreciation and depreciation, thus from the changes in the purchasing value of money, and the

A special difficulty arises when savings are made in a medium which determines the values of all other commodities, whose corresponding value in commodities, however, cannot be expressed in any standard. In the case of property investment in *money*, in *savings accounts*, or time deposits with a bank, there is lacking the expression of value which otherwise is given by the price or (in the case of securities) by the quotation rate. Nevertheless the owner of a savings or bank account compares the purchasing value of the money at the end of the investment period with the purchasing value at the beginning. If his decision in favor of an investment in savings or bank account is based on the re-purchasing value of his property, this means that he will take into account, in addition to the nominal interest rate, his anticipation of the development of the purchasing power or the money. This is the theoretical explanation of the widely known fact that whenever a rise in commodity prices is anticipated, there is a falling off in savings with savings banks and banks in favor of real investment and direct consumption.

It is not the confusion of the theory of interest alone which is responsible for the question of the incentive to save being continually misunderstood. An important contributory factor is the lack of precision of the expression « saving ». What is meant by this? The renouncement of consumption alone or the choice of a property investment? No one can answer this question in a generally valid manner. If complaint is made about insufficient saving, very often only a particular kind of investment is contemplated, *i. e.*, deposits of money into sav-

ings banks. Sometimes, of course, one also thinks that the total share of non-consumption is insufficient. As this, however, can also be caused by additional hoarding of cash, it is possible that the renouncement of consumption is precisely very marked if deposits with savings banks are forthcoming very slowly. The conception of saving becomes still more problematical if real investment be included. Sometimes the latter is considered the opposite of saving, sometimes as a variety thereof. Also in the train of thought of experts there arise problems, which only spring from the choice of a model.

Although it is not possible in economic science to avoid altogether the expression « saving », it should disappear from the Theory of the Cycle. It suffices to state here that temporary renouncement of consumption creates property which will be invested according to liquidity degrees. Such a conception of the Theory of the Cycle can be satisfactorily supplemented by the analysis of the rate of interest as developed in this paper. This makes particularly apparent the on-sidedness with which KEYNES demonstrates the liquidity theory of the rate of interest. At the end of the chapter on « General Theory of the Rate of Interest » he says (6) that the mistakes of previous theories were based on the fact that the rate of interest was regarded as the reward of not-spending, whereas in fact it is the reward of not-hoarding. Thereby is set up an alternative which does not exist. The rate of interest is the reward for *both*: for non-consumption and for investment of the unutilized funds in a relatively illiquid form (non-hoarding). Out of the large conflict between theories in the rate of interest nothing remains except what results from the diversity of the models used. But these models all have the same content.

(6) J. M. KEYNES, *The General Theory of Employment, Interest and Money*, London, 1936, p. 174.