Chapter I

MONEY AND ITS MANAGEMENT.

Money and Money economy.

Our modern industrial civilization with its minute division of labour and a complicated system of production and distribution owes its development not to a little extent to the institution of money. The difficulties of barter are too well known to deserve any mention and the first foundation stone was supplied by money for founding a monetary economy by alleviating the necessity of double co-incidence for a sucesful exchange of goods. Specialiation and division of labour which made ever rising productions of goods possible are unthinkable without the institution of money. For, a man being assured that he would be able to purchase all his needs by means of money was able to devote his time, energy and skill to the production of goods which yielded the highest return in terms of money. This made possible the exploitation of immense potentialities of production of wealth by the combination of human skills and endeavour with the resources supplied by benevolent nature.

Money, as a common medium of exchange, which is generally acceptable to all, at once demarcates the frontiers of a barter economy and a money economy. But a thing which has to fulfil the attribute of general acceptability must have also a stable value through time. The medium of exchange also requires to be a numeraire or a unit of account the numerical value of which remains the same through time. Money then becomes a transmitter of value through time and space . Without the second attribute of money, exchange of goods would have been extremely limited and money economy would have been quite narrowly separated from that of barter.

In practice, a thing which is a medium of exchange can also be

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a unit of account, though both these attributes can be theoritically separated by saying that ' money of account is the description or title and money is the thing that answers to the description'.[1] It is money as a unit of account that made fine and precise economic calculations possible. With the help of money, it also became possible to compare values of goods at two different points of time and this, in turn, made possible the settlement of debts. In this case i.e. of deffered payments, when the State, with its authority and power, gave a definiteness of description to the unit of account, confidence in transactions involving deffered payments was enhanced. It is true that general acceptability of money did not essentially owe its origin and existence to the sovereign authority of the State. Even then, it is not improper to attribute a certain modicum of power to the State in guaranteeing the general acceptability of money. Originally, no doubt, money derived its value from the precious metals like gold and silver. Even when gold coins were replaced by paper money, the general acceptability of the latter was insured by gold backing rather than by the State. But, as to how general acceptability came to be established prior to the development of well organised sovereign national State of modern times may be only of historical importance.[2] The emergence of fiat money and bank deposits as circulating media at once brought in the picture the authority of the State. The State essentially secures the valuableness of money by limiting its supply i.e. by regulating its quantity. It is true that, so long as gold standard prevailed, the supply of money (at least the increase in the supply of it) did not depend upon the discretion of the State. But, even within the frame-work of the gold standard with convertible paper, the State could significantly influence the quantity of

1. J.M.Keynes. Treatise on Money Vol.I. 1950 p.4.
2. A.P.Lerner. Money as a creature of the State. A.E.R.May 1947, p.313.

money via the bank deposits. That is to say, the monetary authority cou bring about changes in the quantity of money by influencing the cash reserves of banks. That is why, the contention of the German economist, Prof. Knapp, that money is the creature of the State, howsoever incorrec it may sound from a theoritcal point of view, is much near reality of ou times.[1]

When a man is able to obtain whatever he wants by exchanging money, money becomes generalized purchasing power. Such power enables its holder to make economic choices in such a way that the purchases made are expected to yield maximum satisfaction. The aggregate of the economic choices of all the individuals consitutes the choices of society as a whole . As these choices are expressed in terms of money payments made and money payments received for different goods taken separately, (that is to say in prices) they enable the society to ascertain what goods should be produced. The society is thus enabled to utilize its productive resources in the best manner possible to serve the desired ends. In the case of an individual, money that he receives by exchanging his service or his produce, that is to say his money income, enables him to make hi individual choices as to what description of goods he wants to consume and in what quantity.[2] He can also make a choice whether he should consume all his income as soon as it is received or postpone the consump tion of some of it to some future date. This is possible because money, in addition to its being a medium of exchange and unit of account, is also a store of value. It is not possible for a man to anticipate precisely all his wants. Even if it may be possible to know before hand the future needs, it is not convenient and, some time, not possible to store all future needs. But storing of money as generalized purchasin

1. H.S.Ellis. German Monetary Theory. Harward University Press & 1934 pp.14-22.
2. D.H.Robertson 'Money'. London 1946. P.5.

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power is the least inconvenient when this purchasing power is embodied, as it is the case in the present context, in metallic coins or paper money.

When all values are expressed in terms of a single commodity, that is to say money, which is ~~g~~ of a definite description, precise comparison of values becomes at once possible. Money places at the disposal of individuals freedom of choice in the true sanse of the term which is not possible in a moneyless economy. The economic calculations which can be made in terms of monetary quantities bring about the allocation of productive resources without any directional control by Gover ment. The price-mechanism , given a certain pattern of the distribution of national income, brings about also the distribution of consumers' goods according to the subjective valuations of each consumer.

In spite of all these services of money, money cannot have importance of its own. It is only an intermediary which divides the exchange of goods for goods into two separate transactions. As for example, a seller of goods exchanges goods for money with the consumer while the latter would have obtained money by exchanging his services o produce with some other man. Though the consumer has been enabled to purchase his needs by means of money in the first place, he had to work or sell his goods for getting the neccessary amount of money for purchasing his needs. Ultimately , therefore, goods exchange against goods. The difference by money is that it alleviates the necessity of double coincidence for effecting a successful exchage. It only intervenes in the exchange of goods against goods and, in so doing, it only conceals the real nature of exchange which cannot be materially changed by the intervention of mon It is only a veil and as soon as this veil is removed, the realk nature of the exchange of goods against goods becomes obvious. Such a descripti of the role of money characterises money only as a passive agent of exchange, which, even if left to itself, is incapable of

changing the real nature of the working of the economic system. It is, therefore, said that economic life would not become meaningless without money.[1]

Why money should be managed?

When money is considered to be a passive agent of exchange, ther arises a question as to why it should be managed. This is a relevant question. In a community in which production takes place in a highly decentralised fashion so that there are no classes such as employer and workers (that is to say all producers of goods work for themselves) and where production is a simple process so that the producer has not to calculate the risk involved in far off future, money would be essentially a medium of exchange. Such an economic society can be said to have existed before Industrial Revolution. The problem of monetary management was a simple one in such a society. It was restricted to an adequate supply of money for the purpose of exchanging commodities. In order that this need may be better served, there was the further need to supply money as a unit of account with the greatest possible degree of similarity in appearance , weight and fitness and to provide it with a stamp that was not easy to immitate and that could be recognised by every body. This was and still is the most primary purpose of monetary management. In such a society fluctuations in prices i.e. in the value of money, no doubt, would take place but the range of these fluctuations would be negligibly narrow. The system of distribution, i.e. organisation of markets, was also a simple one in the period preceding the Industrial Revolution in England. Large masses of people participated in trade only to the extent of purchasing the absolute necessities of life such as salt, spices, simple tools etc. , which the themselves could not produce. The bulk of their needs were satisfied by the products of their own agricultural activities. The volume of exchange that money was required to help was considerably small in such

1. A.C.Pigou. 'The Veil of money.' London 1949.p.24.

a society. Money was in this context only a passive agent which helped the exchange of goods by alleviating the necessities for double coincid-ence.

In such a simple monetary economy, changes in the quantity of money would influence prices too. But these changes were not considered to be of much importance. David Hume has well described the effects of changes in the quantity of money with reference to the mid 18th. Century England in which industrial production with its attendant increasing importance of wage-payments had not developed as yet. Thus he states;

> "All augmentation(of money) has no other effect than to highten the price of labour and commodities and even this variation is little more than that of a name. . . After the prices are settled suitably to the new abundance of gold and silver it has no manner of influence".1

This is because the changes in the quantity of money were calculated to exert proportionate changes in prices of commodities, the relative prices of which would remain unchanged. Thus Hume observes, "The greate or less plenty of money is of no consequence since the prices of commodities are always proportioned to the plenty of money".[2]

With the beginning of industrialisation, money could not remain only a passive means of exchange. The capitalistic system of productio which characterised new industrial society made the rewards of the factors of production essentially monetary as against real. The interes of a large mass of new working population, namely wage-earners and salaried employees, in the product of their labour was limited to the money income they received in the form of wages. The suppliers of raw-materials were paid in terms of money. The producers of goods were also interested in monetary gains, for, the larger these gains the greater

1. David Hume in 'Political Discourses' quoted by K.H.Niebyl in 'Studi in the Classical Theories of Money' New York 1946, p.46.
2. D.Hume in 'Essays, moral , political and literary' quoted ibid ib page 47.

the command over productive resources that they could secure. The new type of consumer, i.e. the industrial wage-earner, was no longer ~~to~~ able to supply his needs out of the product of his own labour. He was required to purchase almost all his needs by means of money and the importance of commodities on the market to the consumer lay in their prices. Money in the developing industrial society was no longer a passive means of exchange . It provided strong stimulus to trade and economic activity in general.[1]

The volume of exchange transactions in the new industrial society considerably increased. For carrying out this large volume of the exchange of goods there also arose a need for an equally large volume of money. The producer needed money to purchase raw materials and to pay wages to the workers employed in his factory. The supply of precious metals fell short of the requirements for ~~liquid~~ liquid capital. The volume of the means of payment had to be increased. This need for a larger volume of the means of payments was supplied by merchant bankers in England. They issued notes on their own credit in favour of producers. These notes were readily accepted by the public because the merchant houses were better known.[2] This marks the early beginning of using bankers' debts as a means of making payments. After the centralization of note issue by the Bank Act of 1844 in England, though the system of issuing notes by individual bankers was abolished, the system of using bankers' promises to pay on demand for making payments did not vanish. On the contrary, with the increasing enormity and complexities of exchange, the bankers' debts or bank deposits became more popular as means of making payments than even legal tender. The preponderating use of this new type of money namely bank deposits, considerably minimised the need for hard cash. For, the banker was not required to redeem all his debts at a time. He, therefore, required only a fraction of his deposit liabilities to be maintained with him in the form of cash. The result of this system was

1. J.Viner 'Studies in the theory of International Trade' 1937,p.36.
2. K.H.Niebyl. Op.Cit.p.20.

that the volume of money (which now included both cash and bank deposits became considerably unstable. For, a small rise or fall in the cash reserves of the banker was capable of bringing about several times larger corresponding rise of fall in the volume of bank money.

Two important consequences followed from these two products of the Industrial Revolution viz., the change in the mode and organisation of production and the emergence of a new type of money i.e. bank money. In the first place, the capitalistic system of production divided the income-earners into two broad income groups as those with contractual incomes and those with fluctuating incomes. When all incomes are fluctuating, changes in prices consequent upon the changes in the quantity of money will induce corresponding changes in almost all incomes. But when certain incomes are contractual, i.e. fixed by contract, and other incomes are fluctuating in response to changes in prices, fluctuations in prices have different significance in real terms for different levels of incomes. In the second place, as the fluctuations in the volume of money at times proved violent due to the prepondarance of bank money, they induced corresponding fluctuations in prices with equal violence.

These two consequences of industrial revolution have important bearing for monetary management. Abnormal changes in the value of money have to be avoided, for , they bring about a redistribution of wealth the ultimate effects of which, some time, prove catastrophic for society. A fall in the value of money or rise in prices benefits the producers whose money incomes rise. As a result, their command over real resources far increases. While, those incomes which are fixed by contract suffer a fall in their real value. Quite the opposite happens when the value of money rises or prices fall. But even in this case, the wage-earners as a class may suffer. For, their employment is conditioned by high busines activities, which in their turn are dependent upon expectations of profits. Falling prices considerably reduce these expectations and,

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therefore business activity in general slackens. It follows from these observations that changes in the value of money are important to society. For, they produce vast social consequences especially when they are abnormal and sudden. This is because when the value of money changes it does not change equally for all persons and for all purposes.[1]

However, changes in the value of money at all times should not be condemned. They some times exercise salutary influence on business activity. Thus, a small rise in prices brought about by increasing the quantity of money improves the expectations of profits whereby business -men are induced to expand their business undertakings. This results in an increase in output and employment. This indicates that money in a monetary economy can be used as a potent instrument for economic mobil-isation, for, it provides a strong incentive to work and enterprise. All individuals are interested to a large extent in monetary gains and they try to avoid monetary losses. Wage-earners can be made to exert them-selves more by offering to them higher wages though some time the gains from these may be quite illusory. Entrepreneurs are also interested in money profits . They are induced to take business risks when prices are rising. Money can be used as a strong force for increasing production and employment. In spite of this its use should be made with great caution . For, relying on the benevolent effects of money on production and employment, if the monetary authority increases its quantity beyond limits, such a policy is likely to be followed by unfavourable reactions on the body economic. For, though such a policy may excite the body economic to greater activity this excitement would be a morbid excitement stimulated largely by a concentrated intoxicant of money profits. It is therefore bound to be succeeded soon by equally morbid langour. For, the abnormal rise in prices that is inherent in this policy considerably reduces the real consumption of those whose money incomes do not experience a rise so as to be

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1. J.M.Keynes. 'A Tract on Monetary Reform' 1923, p.1.

commensurate with the rise in prices. The prosperity of community ultimately depends upon real consumption, for, the ultimate purpose of all production is that whatever has been produced should be consumed. When real consumption does not rise, the prosperity brought about by money comes to a standstill and, after a brief interval of time, suffers a catastrophic reversal.[1]

Money, as it began to function in a complicated industrial society, no longer remained only a passive means of exchange. Changes in its value exercise a strong influence on production and distribution of wealth. Such changes, therefore, have to be regulated by properly managing money so that highest possible real national income and an equitable distribution of this income may be secured.

Money - a Veil ?

The above discussion points out that money is not only a passive instrument the use of which only facilitates the exchange of goods. It cannot be called only a veil that shrouds the real nature of exchange. In a monetary economy when people hold money with them, they hardly do so with a conscious understanding on their part that what they hold is only a means to an end and not an end in itself. This is because, when money becomes an instrument of storing wealth or of settling debts, we take into consideration essentially the dynamic character of monetary economies - economies in which the expectations of future exercise a strong influence on the present situation. A society in which money functions only as a medium of exchange is only a barter economy from which inconvenience due to want of double coincidence is removed. Such a society is a static society in which the expectations of future do not influence the present.

The importance of money in a dynamic economy, as Keyens has rightly observed, essentially flows from its being a link between the

1. K.E.Niebyl. 'What rights should the holders of money have?' A.E.R. May 1947, p.302.

present and the future.[1] No possible economic anticipations about future can be free from uncertainty and holding of money balances is meant to remove or much reduce this uncertainty. The future trends of prices and income cannot be ascertained with any exactitude because they are the result of the interaction of innumerable individual decisions. In an economy without friction, where everybody could foresee with perfect certainty his tastes, income, future prices and the dates as well as the size of his purchases, no body would keep a cash balance.[2] In such an economy, though money would be retained for sometime in the form of cash, , it would be earmarked for some future definite transactions. Demand for money in this case would be only a derived demand and money, therefore, would not have utility of its own. But, when money balances are held not for any pre-determined purpose, money obtains utility of its own for all practical purposes.[3] When money has got the utility of its own, demand for money is competitive with that for other goods or, saying it the other way, one has got to exercise a choice between money and other goods. This is nothing but the general theory of choice which is applied whenever the choice is between alternatives that are capable of quantitative expression.[4] As money becomes substitutable for other goods, it would also have a marginal utility of its own for, substitution between goods can take place only at the margin.

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1. G.T. p.293.
2. P.N.Rosentein Rodan 'The Coordination of the General Theories of Money and Prices' Economica New Series, August 1936 p.
3. It is true that 'whenever money is valued by any body it is because he supposed it to have a certain purchasing power. This means that money cannot have its subjective value independent of its objective exchange value. (See Ludwig Von Mises.'The Theory of Money & Credit 1953 p.99). But this view does not properly take into consideration the dynamic character of a money economy. In such an economy holding of money satisfied the want for certainty and convenience just as any other economic good has the characteristic of satisfying a want. As money satisfied this want, the demand for money is not a derived demand only, but it can be said to have utility of its own as other goods have.
4. J.R.Hicks 'A suggestion for simplifying the Theory of Money'. Economica Vol.II.Nos.5-8. P.

Demand for Money and its Alternatives.

This leads one to the consideration of how an individual disposes of his money income. In the first instance, the money income of an individual can be divided into two parts as one that he uses for purchasing his consumption needs and the other that remains after meeting these needs. This is exactly the way in which the classical writers divided the money income of an individual. The part of income that is not spent on consumption is called saving. So long as the part of income that is saved is held by the individual in the form of cash with him, it represents his demand for money which is competitive with his demand for consumption goods. An individual will dispose of his money income in such a way that the marginal satisfaction derived from spending an extra unit of his money income is equal to the marginal unit of safety and convenience that he derives from holding it in the form of cash. But, according to the classical explanation as regards the disposal of money income of an individual, the part that is saved is not held in the form of cash by the individual but it is used for purchasing investment goods or securities which bear a return in the form of rate of interest. According to this explanation, demand for money is not competitive with the demand for consumption goods. It is the demand for investment goods or securities that is competitive with demand for consumption goods. Here, therefore, the individual exercises a choice not between holding money and purchasing consumption goods but between the latter and purchasing securities. Demand for money as such has no place in this explanation of the disposal of money income.

The classical explanation, however, is not the correct explanation of the disposal of money income. For, in actual practice, whatever is saved is not used for purchasing securities by the individual. Keyens has made a distinct contribution by extending one step further

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the explanation of the disposal of the money income of an individual. After deciding what amount the individual would use for consumption, he has to decide in what form he would hold the rest of his income. He will have to decide, in the next instance , whether he would hold the surplus of his income in the form of money i.e. cash or in the form of non-cash assests such as securities which bear an interest yield.[1] Thus the demand for money has an important alternative in the form of demand for securities. In selecting between these two alternatives of holding one's surplus income, one has to take into consideration the relative liquidity of the two ways and their capacity to yield income. Both the alternatives have certain advantages and disadvantages which an individual has to weigh against one another. In the first instance , money is an asset whose face value does not depreciate. A hundred rupees currency note remains worth rupees hundred through years (provided the authority of the State does not withdraw its legal backing). Secondly money that is held in the form of cash is readily available at any time in future, for, it can be made use of as purchasing power directly due to its general acceptability. But against these advantages, there are disadvantages too. Money does not bear any yield in the form of interest as its alternative-securities- bears. This is the point where the rate of interest emerges as an important factor in the theory of money. If a man is certain as regards the period after which he would be required to make payments in cash, he can hold his money savings in the form of securities and can enjoy an interest income. The traditional theory of the rate of interest based on psychological time-preference and abstinance from present consumption did not take into account the advantages of holding one's money savings in cash or the disadvantages of holding them in the form of securities. That is why they equated under conditions of equilibruim savings and investment. Interest was a reward paid for the abstinance suffered by the supplier of saving. As this

1. General Theory, p.166.

theory did not take into consideration the alternative of holding saving in the form of cash, it could not provide a correct explanation for interest. For, as Keyens, has pointed out, if a man hoards his savings in cash, he earns no interest, though he saves just as much as before.[1] Again, the classical theory presents an anamalous explanation of the rate of interest. According to it, greater abstinance on the part of the recipients of income is not rewarded by a higher rate of interest. On the contrary more savings are likely to bring about a fall in the rate of interest, for, greater abstinance reduces the demand for consumers' goods and this, in turn, adversely affects the demand for savings (i.e. investment).

The demand for money and demand for securities have been described by Keyens in his Treatise on Money as two competitive alternatives for holding money.[2] In his General Theory also he points out the same relationship between demand for money and demand for bonds, while elaborating his general theory of the rate of interest.[3] Keynes has, however, brought about this correlation between money and securities more or less in terms of speculation of 'bearishness' and 'bullishness' of the public. Demand for cash according to such a representation, would largely be governed by the considerations of the interest yield borne by bonds. This may not be true under all circumstances. For, though the essential difference between money and other assets springs forth from the difference in their relative liquidity, liquidity cannot be the sole criterion of this difference. It may be true in a large number of cases that the greater the degree of liquidity the lower the interest-yield that would be borne by an assest. But there are assets which are almost as liquid as money and despite that they bear some yield in the form of rate of interest. Though such

1. General Theory p.267.
2. Treatise Vol.I. Macmillan 1950.
3. General Theory Ch.13.

assets may be as liquid as money, they stand at a discount in comparison with money proper or they have imperfect 'moneyness' in them. If this were not so, they would not have borne any reward for holding them in the form of interest yield. This is well pointed ~~by~~ out by J.R.Hicks.[1]

If the risks arising out of the default of paying back the amount of borrowing and the uncertainty as to the future course of interest-rates are assumed to be absent from a particular type of asset which is not money, the rate of interest borne by such an asset will be pure rate of interest. A practical illustration of this is supplied by the modern Treasury bill. There is absolutely no risk of default of redeem-ing the Treasury bill on par and, as during war-time, when the policy of Government is to keep the interest rates pegged at a particular level, there cannot be any uncertainty as to the future trends of interest rates at least during the short period of three months. Despite that, the Treasury bill bears an interest yield. Investment in assets like the Treasury bills is perfectly safe and liquid. But, though the Treasury bills bear these monetary qualities , they are ~~not~~ at a discount, in comparison with money. This is because of two reasons. Firstly, conversion of pure money in any other asset involves a separate transaction. The trouble of undertaking this transaction must be compensated by some return in the form of interest. The smaller the amount of money to be converted into a non-cash asset the greater the inconvenience and trouble. Secondly, even if a complete absence of default risk may be assumed in the case of certain short term bills, such bills may not acquire the qualities of money. This is because debts of private individuals cannot be generally acceptable as means of payments as the debts of a monetary authority or those of a banker are. This lack of general acceptability in certain assets causes trouble for investing in them and therefore, they stand at a discount vis-a-vis money.

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1. J.R.Hicks. Value and Capital. II Edn. 1948. Ch.XIII and Ch.XIX.

As the degree of risk of default and uncertainty is increasing, the quality of 'moneyness' in an asset or security declines. The less the degree of moneyness in different securities, the higher the rate of interest that they bear. Amongst the assets in which a man can hold his purchasing power to be used in future, money is the most liquid and generally acceptable asset. The policy of Government or private institution which aims at reducing the element of risk from non-cash assets, drives them closer and closer towards money. The opposite policy would drive them to the other extreme.

Determination of the Rate of Interest.

While deciding as to in what form they would hold their money savings, people have to take into consideration the relative advantages and disadvantages of the two alternatives viz., cash and securities. If people decide to prefer securities to money, they will purchase more securities than before and, as a result, the prices of securities will rise, their supply remaining the same. The opposite will happen, if people prefer money to securities. As the prices of securities would rise or fall in response to more or less demand for them, there would be a corresponding fall or rise in the interest yield that the securities would be carrying. Thus, the rate of interest depends upon the desire of people to hold more or less money at a particular time. This is the explanation of the rate of interest that is given by Keynes in his General Theory.[1] According to him the rate of interest is the reward for parting with liquidity for a specified period. It is a measure of the unwillingness of those who possess money to part with their liquid control over it. The rate of interest equilibrates, not saving and investment as the classical theory assumes, but the desire to hold wealth in the form of cash or liquidity-preference, with the available quantity of cash.

1. General Theory, Ch.

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This way of explaining the rate of interest differs to a large extent from the classical explanation which describes the rate of interes as a price which equates saving and investment. The classical explanation is based on the demand and supply of capital while the liquidity preference theory of the rate of interest is based on the demand and supply of money. The demand for capital or investment, according to the classical theory, rests on the marginal productivity of capital, while the supply of capital depends upon the psychological time-preference of people in order to overcome which an inducement in the form of interest has to be given. This psychological time-preference, i.e. the decision to consume a part of current income in future rather than at present, gives rise to savings. These savings would be demanded for investment when the marginal productivity of capital is higher than the current rate of interest. If the marginal productivity of capital is greater than the current rate of interest, demand for savings will rise and as a result the rate of interest will also rise. But at a higher level of the rate of interest, supply of savings will increase and this will exercise a downward pressure on the rate of interest. Ultimately, therefore, the rate of interest will rest at a level at which savings and investment are equal.

This theory of the determination of the rate of interest has been rejected by Keynes on especially two grounds. Firstly, as stated before, the decision of not consuming a part of current income ~~has~~ does not straight away increase the supply of savings for investment. A part of income saved may be haorded and, therefore, it would have no influence on the rate of interest. Secondly, saving primarily does not depend upon the rate of interest, but on income currently earned. The classical theory assumes the level of income as given. This particular assumption may not hold good in practice. For, increased investment would automatically raise income and out of increased income more savings would be effected so that savings and investment would be equal irrespective of the change in the rate of interest[1].

1. General Theory. p.184.

Keynes contends that not only that there cannot be any discrepancy between savings and investment but both these quantities are equal and identical. This is because savings represent the difference between total income currently earned and total consumption expenditure out of this income. While investment also represents total current income minus the expenditure on consumption. Therefore, saving and investment are equal and identical as both constitute the difference between total income and consumption. Saving and investment for the community as a whole are merely different aspects of the same thing.[1] When there is, thus, established an identity between saving and investment, they cannot be the determinants of the rate of interest, for, they would be always equal at any level of the rate of interest.

Keynes and his followers agree that at a certain level of the rate of interest saving would definitely take place and an individual may try to increase his saving at a higher rate of interest in order to equate the marginal satisfaction from consumption foregone to the marginal utility of interest-bearing assets acquired. In the same way, businessmen would try to calculate the profitability of investment or marginal efficiency of capital as Keynes calls it, on the basis of the current rate of interest. He would try to increase investment until the marginal efficiency of capital is equal to the rate of interest. But "what the schedule of marginal efficiency of capital tells us is not what the rate of interest is, but the point to which the output of new investment will be pushed, given the rate of interest".[2] Thus, according to Keynes, though saving and investment may be influenced by the rate of interest, they do not determine it.

The contention of Keynes that saving and investment are identical and, therefore, always equal irrespective of the changes in the rate of interest is based on the peculiar way in which he has approached the problem.

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1. General Theory, p.63 and p.74.
2. General Theory, p.184, also A.P.Lerner, New Economics p.641.

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According to Keynes, during any given period factor costs incurred by the entrepreneurs plus their pfofits are equal to the total income of the community. It is, therefore, necessarily equal to the value of the output. The value of output is equal to what people spend on consumption plus what they spend on investment. This amount of expenditure constitutes the income of the community. Keynes then expresses both saving and investment as difference between total income and total consumption expenditure. This can be true so long as total expenditure remains the same so that whatever amount the community does not spend on consumption, it spends on investment. But what will happen if the total expenditure falls, suppose, due to a fall in the expenditure on consumption and thereby a certain amount of output remains unsold ? Clearly, in ordinary language, one would say in this case, that saving exceeded investment. But, even here, the Keynesians would say that the equality between saving and investment has not been disturbed. The part of output that remains unsold due to a fall in consumption expenditure or a rise in saving is nothing but investment which just counterbalances the increase in saving.[1] In the above example what ordinarily would be described as a rise in saving over investment is described in keynesian terminology as a fall in total expenditure and, therefore, in income. The difference between the explanation of the relationship between saving and investment as given by Keynes and that given by other writers is only terminological and not fundamental. Keynes himself has accepted that the same thing can be expressed differently by using his or Prof.Robertson's terminology. Thus he writes: " When Mr.Robertson says that there is an excess of saving over investment, he means literally the same thing as I mean when I say that income is falling, and the excess of saving in his sense is exactly equal to the decline in income in my sense".[2]

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1. Haberter, 'Prosperity and Depression', 1946, U.N.p.173.
2. General Theory, p.78.

But, even if it is proved that saving and investment necessarily differ, the first contention of Lord Keynes, that whatever has not been consumed is not ~~interested~~ invested and, thereby, cannot influence the rate of interest, remains. This is not all. According to Keynes, not all money balances that are hoarded are responsible for influencing the rate of interest. Only a part of these money balances that is not used for purchasing securities, is responsible for bringing about changes in the rate of interest. Keynes divides the money balances held by an individual, (or the individuals's demand for cash) into three parts based on the different motives for holding these money balances. Firstly, an individual would hold cash for meeting certain transactions which are almost foreseen for, they may be regularly taking place. This motive is called, the transactions motive, by Keynes. Secondly, cash may be demanded for certain transactions which cannot be foreseen but which may crop up and which, therefore, require a sort of precaution on the part of an individual or a firm to make provision of cash to meet them conveniently whenever they ------occur. This is the precautionery motive for holding cash. And thirdly, people hold cash for purely speculative purposes, i.e.'for securing profits from knowing better than the market what the future will bring forth'.* The demand for cash or the liquidity-preference for transactions-motive and precautionary motive has no relation to the rate of interest. For, changes in the quantity of cash held for these two motives depend upon the levels of economic activity and income and not upon the rate of interest.

Given these assumptions, the Keynesian theory of the determination of the rate of interest, rests on the activities of the speculators or 'bears' and 'bulls' as Keynes calls them. The whole position can be described as follows: On any day there will be a certain amount of money in possession of some one and also there will be a certain amount

of securities held by some individuals, banks and other financial as well as non-financial business establishments. This holding of money and holding of securities would be in equilibrium at a certain rate of interest so that at this particular rate of interest no one who holds money wishes to part with money for securities or vice-versa. Now, if the rate of interest rises, some people would try to exchange their cash for securities in order to take advantage of a higher rate of interest. Such a behaviour on the part of holders of money would drive up the prices of securities and hence lower the rate of interest to a level at which no more money would be exchanged for securities. In the same way if the rate of interest is lower than the level at which people's demand for money and that for securities can be balanced, people will sell of securities in order to obtain more cash and thus would put up the rate of interest at a level at which there would be no more offer of securities for money and vice-versa. Thus, at any time the level of the rate of interest is determined by the behaviour of the speculators and would rest at a level at which no one who owns securities wants to sell them and no one who owned money wants to buy them.[1]

The Keynesian Approach and its Alternatives.

It is worthwhile to examine the Keynesian approach in the light of the alternative theories of the rate of interest. One of such alternatives theories is the classical theory which postulates the rate of interest as a price which equilibrates supply and demand for saving. The second alternative theory is provided by approaching the problem from the side of the activities of lending and borrowing or supply and demand for 'credit' or 'loans' and viewing the rate of interest as a price that is paid and received for borrowing and lending respectively.

The first alternative which postulates the rate of interest as a price which equilibrates the supply and demand for savings is the 'real' theory as against a monetary theory of the rate of interest. This point is worth emphasizing for Keynes has criticized it on the point of how 'monetary' savings are disposed of by those who save a part of their

1. J.Robinson 'Introduction to the Theory of Employment',1947 p.57.

current income. Money income according to the classical theory represents only a command over real resources. This command may be used either for purchasing consumers' goods or producers' goods. When a community saves a part of its current income, it does not consume real goods available to the full extent of the money income earned. The command over consumption goods thus spared may be used for purchasing productive resources or investment. But those who spare this command over real resources or those who effect savings are generally different people from those who intend to use these spared command over real resources productively. As a result, the latter set of people who may be conveniently called the entrepreneurs, have to purchase this command over real resources from those who have spared it, by paying a price. This price is nothing but the rate of interest.

If we interpret saving in this way, its role in the economic system can be very easily understood. Suppose, for the sake of illustration, that the community decides to effect no saving and spends all the income that is currently earned for purchasing consumers' goods. The prices of consumers' goods will begin to rise as soon as the stocks are exhausted. The rise in prices will provide an incentive to producers to invest in consumers' goods industries. But, for this purpose, they will need money (or command over real resources) to purchase productive resources. Suppose they obtain necessary funds by borrowing from banks or private individuals. So long as there are unused resources, it would be possible to undertake investment expenditure without raising prices. But as soon as all resources become fully employed, prices will rapidly begin to rise indicating an inflationery situation in the Keynesian sense. After this stage, no more investment will be possible except by 'forced saving'. That is to say that entrepreneurs will be able to get command over resources only by bidding up prices. Thus, to make any investment possible at full employment without inflation, savings are

essential. As the classical economists assumed the existence of ~~mk~~ full employment, the importance of savings cannot be over-emphasized in their case. During the time of war or a period in which Government expenditure is rising with rapid strides irrespective of the increases in the proceeds of taxation the savings drive organized by Government is not intended to bring down the rate of interest by increasing the supply of saving but to make people spare real resources for Government use without causing inflationery rise in prices.

This significance of savings cannot be denied. But the relation of savings to the rate of interest remains still unexplained. At any rate it cannot be direct as the classical theory postulates it. Whatever effect the changes in the volume of savings can have on the rate of interest, it will be through the changes in the marginal productivity or ~~marginal efficiency~~ marginal efficiency of capital. Decreased propensity to ~~save~~ save means increased propensity to consume. If, therefore, propensity to consume rises indicating thereby a corresponding fall in propensity to save, marginal efficiency of capital will rise. This will induce the entrepreneurs to pay a higher rate of interest than before. If the demand for loans actually increases, the rate of interest also will rise. In this sense the traditional theory is correct in attributing the change in the rate of interest to the marginal productivity of capital. But whether the rate of interest ~~will~~ will change at all, or will remain steady at the new higher level if it rises to that level, will depend upon the elasticity of demand for liquidity. If this demand is highly elastic to the changes in the rate of interest a slight rise in the rate will release cash from private hoards and, as a result, the rate of interest may not be able to stick to the new higher lever. Here, there is a vital difference between the traditional theory and the theory of Keynes. For, according to the former, the rate of interest will definitely rise due to the discrepancy between the supply of savings

and demand for them.In the opposite case of a fall in the propensity to consume and rise in the propensity to save, the marginal efficiency of capital will fall. There would be, therefore, a decreased demand for and increased supply of savings. According to the classical theory, in this case, the rate of interest will fall. But the rate of interest may not fall if the liquidity preference increases corresponding to the fall in the marginal efficiency of capital.

It is some-times argued that the theory of the rate of interest based on demand and supply of savings does not differ in substance from that of liquidity-preference approach . Mr.Oscar Lange has stated that 'the traditional statements that the rate of interest rises together with the marginal net productivity of capital and vise-versa and that it moves in the opposite direction to the propensity to save' can be shown to hold good even under the liquidity-preference approach to the rate of interest.[1] Mr.Lange's contention rests on a special condition that liquidity preference is determined by the level of income rather than by the rate of interest. His argument runs some what as follows: When the propensity to save increases the marginal efficiency of capital is adversely affected. As a result investment will fall followed by a fall in the level of income. The latter is enhanced by a fall in the expenditure on consumption. This would cause a fall in the liquidity preference on income account . Thus reduced demand for liquid capital (i.e. money) due to a fall in investment and increased supply of money due to a fall in the liquidity preference on income account, both together exercise a downward pressure on the rate of interest. The same result follows even according to the traditional theory when the marginal productivity falls and savings increase. This argument of Mr.Lange may be correct so far as his special condition goes. But one cannot stop only here in tracing the effect of the fall in the liquidity

1. O.Lange.'The Rate of Interest and Optimum Propensity to consume' in Readings in the Theory of business cycle A.E.A.1944,p.175.

preference

preference on income account. One should also take into consideration the interest-elasticity of the demand for liquidity. For, according to Keynes, it is the interest-elasticity of the demand for liquidity rather than its income-elasticity that is important in the determination of the rate of interest. If we taken into consideration interest-elasticity of demand for liquidity, the similarity between Keynesian approach and the traditional theory can be drawn only conditionally as Prof. Haberler has shown. When propensity to save increases, the rate of interest will fall only if the people direct the money (not used for consumption) simultaneously to the purchase of securitiies.[1] Or, to put it in other words, the effect of increased saving on the rate of interest will be just according to the classical representation if the interest elasticity of the demand for liquidity is less than unity. It may be assumed that, so long as the rate of interest does not come down to an abnormaly low level (e.g. well above zero) , increase in savings will be used to purchase interest-bearing assets and this will bring down the rate of interest. This is because beyond the point of convenience and security, it will not be worthwhile to hold current saving in the form of cash. For, the moment an individual has effected saving, he has to think of the loss that would be caused to him if he keeps the balance idle with him, when the marginal rate of satisfaction in the form of convenience and security derived from holding money is less than the current rate of interest.[2] Thus, it may be concluded that absence of any fall in the rate of interest, despite increased propensity to save, will be realised only under the special conditions of infinite interest elasticity of the demand for liquidity . Infinite elasticity of the demand for liquidity will be possible only at a very low level of interest. Keynes's liquidity-preference theory of the rate of interest, ascribing infinite elasticity of demand for liquidity is, therefore, only a

1. G.Haberler & 'Prosperity and Depression'Op.Cit.,p.216.
2. J.R.Hicks. 'Mr.Keynes and the Classics' in Readings in the Theory of income distribution. A.E.A.1946, p.467.

'limiting case'[1] or a 'special theory' and not a 'general theory' of interest.[2]

But, even if we may think for a while that Keynes's theory is only a limiting case, the idea that the rate of interest may not rise despite increase in the marginal efficiency of capital and fall in the propensity to consume or may not fall at all in the opposite situation 'is original and is of considerable theoritical interest'[3]. Even if we accept the view that the effects of changes in savings and marginal effeiciency of capital on the rate of interest are generally similar both under the Keynesian theory and the classical formulation except in under the special case of infinite-interest elasticity of demand for money, Keynes's theory provides a better explanation of the rate of interest. This is because Keynes's theory is not surrounded by unnecessary provisos and conditions. Keynes has clearly pointed out that 'what matters is not the absolute level of the rate of interest but the degree of its ~~divergence~~ divergence from what is considered a fairly safe level of it, having regard to those calculations of probability which are being relied on'[4]. The first such calculation of probability will be about the stability of interest-rate policy of the monetary authority. If the monetary authority declares its will to stabilise the long-term rate of interest for a fairly long period to come, the next calculation will be as regards the ability of the monetary authority to maintain its declared policy in view of certain economic forces working in the opposite direction. Here, a number of factors will influence the ~~behaviour~~ behaviour of the holders of money such as the movement of the short-term rate, the trade activity in general, the trends in the balance of payments, the relative movements in the yields on equities and bonds

1. O.Lange.Op.Cit.,pp.176-177.
2. J.R.Hicks. Op.Cit., p.468.
3. G.Haberler. Op.Cit., p.219.
4. General Theory. p.,201.

etc., including Government policy in general. Amidst all these influences, if the rate of interest falls as a result of a rise in the propensity to save and a fall in the marginal efficiency of capital, it would be more correct to say that the holders of liquidity have thought the new lower level of the rate of interest fairly safe taking all the calculations of probability into consideration and, therefore, they parted with liquidity. Though, here, the classical theory can as well provide an explanation for the fall in the rate of interest, it can do so only so long as the holders of liquidity consider the new level fairly safe.

Given the quantity of money the psychological reactions of the liquidity holders to a change in the rate of interest under different economic situations are very important in the determination of the rate of interest at least in a short period during which technoligical changes etc., are not intervening. It cannot be denied that Keynes made a distinct contribution by pointing out that in the determination of the rate of interest out of the two types of decisions as to how much to consume and how much to save out of a given income and again out of the amount saved, how much to hold in the form of cash and how much in the form of securities, it is the latter type of decision that needs emphasis and not the first.[1] In practice, though, some time, it may be that all savings may be converted into interest-bearing securities, the theoritical explanation of this can be given better in terms of the liquidity-preference theory rather than in terms of saving and investment theory (i.e the classical theory).

Demand and Supply of Credit and The Rate of Interest.

The second alternative to the liquidity-preference theory of the rate of interest as mentioned before, is the theory of demand and supply applied to credit or loans. This theory describes the rate of interest as the price which results out of the inter-action of these fources

1. L.R.Klein 'The Keynesian Revolution' London, 1950, p.123.

of supply and demand. In a sense, the action of extending loans or credits does involve parting with liquidity. But this explanation of the rate of interest carries us to a special type of market, namely, the credit market. When we take into consideration the transactions of credit market, we are tempted to ask certain questions such as : Why do people supply credit ? - Clearly because they get a price as the seller of any goods gets a price for supplying it. But why is there a demand for credit or loans and an offer of higher or lower price for them ? There is a demand for loans because those who borrow expect a return from the use of the proceeds of the loan . If they expect a higher marginal return from the use of the loans, they would be ready to pay a slightly higher price or interest for these loans. In the opposite case they would borrow at a lower rate of interest. If the marginal rate of return that is to result from the use of the loan is expected to rise, the demand for loans would increase. This rise in the demand for loans, other things remaining the same, would raise the rate of interest. But if the supply of loans increases corresponding to the rise in the demand for them, the rate of interest may not rise and may perhaps even fall. The above description provides a simple explanation of what happens in the market of funds which are currently to be loaned out and currently to be borrowed.

It is worthwhile to consider this loanable funds theory or the 'market supply and demand method' of the explanation of the rate of interest especially from two points of view. Firstly, it is worthwhile to consider whether there is any fundamental difference between the two rival approaches namely the Keynesian theory and the loanable funds theory, and on this account, whether both can be reconciled. Secondly, it should be clarified whether two formulations provide an explanation of the same level of the rate of interest or the different levels.

It is contended that the fundamental distinction between the two theories is that the liquidity-preference theory essentially deals with stocks (i.e. stocks of money and stocks of claims) while its rival theory deals with flows (i.e. flow of mmmmm new credit and flow of new claims)[1]. This contention is not correct looking to the way in which the expositors of the loanable funds theory have described the demand and supply of loanable funds. Prof.Robertson, one of the famous expositors of the theory, has described the supply of loanable funds 'which people are willing to put on the market' so as to include not only bank loans but also the supply of funds from stocks of savings or net dishoardings along with the flow of current savings. Similarly, the demand for loanable funds is constituted by the demand not only for new capital investments but also for funds to be placed in stores.[2] Bertin Ohlin, another loanable funds theorist, has taken into consideration the demand and supply of both new and old claims which he calls gross demand and supply of claims.[3] Thus, the exponents of the theory have taken into consideration 'flows' of new claims supplied and demanded along with the changes in the stocks of the old claims. According to these theorists the rate of interest is the result of the interaction of demand and supply of claims. Demand and supply of cash is part and parcel of this market of claims and the rate of interest that results out of the complex working of the market forces is naturally influenced to a certain extent by the demand and supply of cash. This is well brought out by Ohlin. Thus he writes: "It goes without saying that the interest rates existing at any given moment fulfil the condition that they make people willing to hold as cash, the total amount outstanding. But the same is true of all other claims and assets .... The market for cash has no key position in relation to the other markets.... It is simpler

1. L.R.Klein, Op.Cit., p.121.
2. D.H.Robertson. Essays in Monetary Theory. London, 1940, p.3.
3. B.Ohlin, 'Some notes on the Stockholm Theory of Savings and Investment in Readings in Business Cycle Theory. Op.Cit., p.112.

and ~~clear~~ clearer to ask directly what sums people want to hold in form A (i.e. cash) rather than in B (or bonds) in a certain price situation and with certain expectations; e.g., with a certain constellation of interest rates, share prices etc."[1]

This sort of description of the demand and supply of loanable funds ~~and~~ envisages the same level of rate of interest which determines the price of loans or credit and also the price which is to be paid for parting with liquidity or cash, both at a time. The difference between the two approaches is one of emphasis. Which-ever way we may choose we are led to the explnation of the same level of the rate of interest. The loanable funds theorists especially point out to the forces of productivity (i.e. real forces) that work behind the demand for loanable funds while the liquidity-preference thearists draw our attention aspecially to the pschological motives for the demand for cash. Both the methods may be called perfectly legitimate. The choice between them is purely a matter of convenience.[2]

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1. Ibid p.113. Mr. A.P.Lerner has presented a similar formulation which takes into consideration both the stocks and flows of money and securities. The demand for money for liquidity purposes is added to the demand for funds for investment purposes. The supply of savings is added to the supply of bank loans. The aggregate demand for credit (Investment plus liquidity-preference) and the aggregate supply of credit (Saving plus new money by bank loans) are equated at a single level of the rate of interest. A.P.Lerner 'Alternative Formulations of the Theory of Interest'. In New Economics Ed. S.E.Harris,1952. London p.637.

2. J.R.Hicks. Value and Capital, p.161. Prof.Hicks has approached the problem in a different way. He has taken a system of certain number of prices wherein each one of them is determined by the equality between the demands and supply of respective commodities The demand and supply of loans and the demand and supply of cash are also included in the total number of equations of demand and supply which determine the prices of different commodities. Now, according to Hicks, if any of these equations is unknown, it can be very easily derived from the rest that are given. If we include the equation of supply and demand of loans as given, the equation of supply and demand fof cash would automatically follow along with the price i.e. the rate of interest. Similarly, the rate of interest would equate the demand and supply

The Banking System and the Rate of Interest.

Both the theories may be accepted as correct but what is important is that they tell us only half the story. None of them thoroughly explains how the rate of interest is actually determi -ned looking to the interactions of different forces. For the pu -rpose of monetary management, it is relevant to note who actuall -y determines the rate or rates of interest. The liquidity-prefe -rence theorists would say that it is determined by the holders of cash. But it may be further asked as to who are these holders of cash. There are institutional as well as individual ho -lders of cash and securities. Among these, it is most relevant to assign the actual leading role in the determination of the ra -te of interest.

In the present financial system, banks occupy a strategi -c and important position. The behaviour of the banking system as the holder of cash and securities differs from that of other holders of cash and securities. For explaining the determination of the rate of interest in actual practice, it is necessary to exa -mine the correlation between the behaviour of the banking system and that of non-bank holders of securities as a reaction to an initial change in the rate of interest. A bank has with it at any

(Foot-note 2 p. 39 contd.)

of loans when the demand and supply of cash are given. The defect of this general equilibrium approach of Hicks is that the rate of interest cannot be explained if some third equation other than those of cash and loans is unknown. According to Hicks's represen -tation, either the equation of cash or that of loans should only be eliminated in order to explain the rate of interest as a price which equates both the demand and supply of cash and the demand and supply of loans simultaneously. However, Hicks's approach comes very near to Ohlin's, for, both point out that taking either the demand and supply of loans or those of cash the rate of inter -est that results is the same and, therefore, it is immaterial which particular way is chosen for explaining the rate of interest.

time assets bearing different interest yields and also cash some of which forms the legal reserve requirements against its deposit liabilities. A banker arranges his assets of varying degrees of risks and maturity in such a way that the marginal rates of return on different investments are equal. This ordering of the assets-structure of the banker is not a sort of permanent arrangement. Shuffling in the bank's assets is taking place from time to time for, the banker always tried to secure the most advantageous position by bringing about necessary changes in the quality and quantity of his assets in response to changes in the economic situation. This sort of behaviour is displayed by even individuals who have to exercise a choice between cash and securities under changing expectations or probability calculations. But a banker's position differs from that of an ordinary individual, for, a banker has not to make a choice between cash and securities as such but between one type of securities and the other. This will be clear from the following representation.

It is worthwhile to ask as a loanable funds theorist would do, as to why a bank reshuffles its assets from time to time. This is because some investments seem more advantageous than others. This relative attractiveness of some assets is made possible by the rise in the demand for the type of credit that creates such assets. As for example, when the demand for short-term credit increases, the short rate of interest would go up. This rise in the demand for short term loans and consequent rise in the short term rate of interest is brought about by an increase in the marginal productivity of loans. This is the position that is taken by the loanable funds theorist.[1] The effect of the increased demand for loans due to rise in marginal productivity on the rate of interest cannot be

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1. D.H.Robertson, Op.Cit., p.11.

denied even by a liquidity theorist liquidity preference theorist. But the loanable funds theorist should not stop with this primary effect only. He should exaine the secondary effects soo as the liqui-dity preference theorist insists upon. It is here that the behaviour of the banks emerges as the most important factor in the determination of the rate of interest. The drawback of Keynesian theory lies in the fact that it does not properly distinguish between the two different sets of holders of cash and securities, namely, the banks and the non-bank public. Clearly, the first impact of the rise in the demand for loans and consequent rise in the short term rate of interest falls upon the banking system. Banks are essentially short term lenders and the banking system as a whole constitutes a special market in which the effect of the inrease in the demand for loans is first felt. The non-bank lenders upto this stage are generally out of the picture. When the short-term rate of interest rises, the banks may not part with cash as such (e.g. they may be fully loaned up and they may not have extra cash with them to fall upon) but they may liquidate other long-term investments in preference for short term loans.[1] As a result, the prices of long-term Government securities would fall or the long term rate of interest would rise. Now the speculative holders of cash will forthcome and purchase the securities unloaded by banks. These are the transactions largely in stocks rather than in flows but they have been initiated by changes in the flows of demand and supply of loanable funds. If the holders of cash go on purchasing securities as the banks sell them off, the long term rate of interest may not rise and as some liquidity preference thearists would argue, it may even fall if the holders of cash at once try to unload large amounts of cash with them for purchasing securities. This,

1. This is well illustrated by the post-war experience. Thus in India the banks liquidated Govt. securities when the short term rate rose due to a rise in the demand for bank advances for speulative building of inventories in 1950-51.

however, cannot happen. For, if the prices of securities do not fall, there cannot be any incentive for buying securities. This is because the aggregate demand for money to satisfy the speculative motive usually shows a continuous response to gradual changes in the rate of interest. The banking system can purchase or sell bonds in exchange for cash only by bidding the prices of bonds up or down in the market by modest amounts.[1] The banks would sell securities at lower prices until the long term rate of interest rises above the short term rate so as to compensate for the risk involved in long term investment. The banks will stop selling securities as soon as the margin between short and long rates becomes acceptable to them. At this new higher level of the long term rate there would be no more purchases and sales of securities. One can now ask the question: How has the long term rate been increased ? The loanable funds theorist would say that it has been raised due to an increase in the demand for loans while the liquidity-preference theorist would say that the long term rate rose because of the changes in the liquidity-preference of the holders of cash. In fact, it is better to say that the new levels of short term and long term rates are the results of the preferences of the banking system. In the case of banking system, it is both flows and stocks that are important. The banking system strikes a balance between the influences of flows and stocks.

Thus, the rate of interest is determined by the preferences of the banking system. These preferences are not essentially those for securities against cash or vice-versa, but for one type of assets against other types. At no time the rate of interest can be explained without taking into consideration separately and independently the behaviour of the banking system. This is well borne out by the experience in several countries in the post-war period.

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1. General Theory p. 197.

As for example, in the U.S., when the short term rate of interest rose, banks' preferences for short term assets increased and they began to unload Government securities the yield rate on which would have risen but for the Government policy to maintain the prices of Government securities.

This is a theoritical explanation as to how the rate of interest is determined in the present financial context. In actual practice at a particular time, there may be innumerable other factors which would influence the behaviour of the bankers and other holders of securities, but at all times, the influence of the activities of the bankers would be dominating. Again, there are innumerable types of assets with varying degrees of yield and it is difficult to provide a precisely theoritical explanation for the fluctuations in them.

Prof.D.H.Robertson has pointed out the importance of banks as 'performing the primary function of banking i.e. lending money to the people who want to make productive use of it'[1]. But it is necessary to examine the effects of the lending operations of banks on their assets-structure. In this respect Prof.Ohlin's approach is sounder, for, he has given importance to the supply and demand for assets. Again, as Mr.A.P.Lerner has well pointed out, the emphasis on the asset side also diminishes the danger, (which is quite considerable if, like Keynes, we look only on the money side) of overlooking the effect of changes in the total value of other assets, on the rate of interest. Prof. Ohlin seems to have just struck the relevant note when he writes: "That the theory of interest should take into consideration the 'analysis of the markets for claims and other assets, where their prices and thus, the rates of interest are determined. This includes the phenomena of credit

1. D.H.Robertson Op.Cit.,p.12 and p.34. Prof.Robertson has referred to the strategic role of the banking system in influencing complex of interest rates in this 'Banking Policy and Price Level'. Thus, he

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of credit policy by banks e.g. open market operations.[1] But he has not clearly brought out the significant role of the banking system as a strategic factor in the determination of the rate of interest. Banking system has been enumerated by him as one among several other factors that affect the demand andsupply ~~of~~ and price of bonds.[2]

There are especially two reasons why the banking system should be ascribed a determining role. Firstly, as stated before, the demand for short term credit is directed to the banking system and hence it is the banking system which is required to weigh the advantages of holding one type of assets against others. The impulsesthat ~~are~~ are thus released by the banking system spread out to the other parts of the finantial market wherein each one of the individual may be taken as a sort of banker. Secondly, the significance of liquidity is not the same for the banks and other liquidity-holders. In the case of banks, the choice is not always to be exercised between cash and non-cash assets , as it is generally true in the case of individuals. A bank in a given situation has ~~not~~ to choose between alternatives of holding less or more liquid assets. This would be very clearly understood if we take into consideration the whole logic of monetory management as based on the changes in the bank reserves. When the Central Bank brings about an increase in bank reserves the banks have to lose interest on the idle cash which is in excess of what is ~~demand~~ deemed a safe level of reserves. The banks will not wait till the rate of interest rises as it can be generally expected in the case of private individuals . They would readily purchase securities, especially short

(Foot-note 1 page 44 contd.)

maintains that a change in short-rate causes chages in the long-rate also and thus a new balance is brought about between the two mainly by the banking system. (Banking Policy and Price Level , P.S. King & Son London, 1926 ,p.9).

1. B.Ohlin Op.Cit., p.113.
2. Ibid p.111.

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-term, and would bring down the short-term rate of interest. Thus, the purpose of increasing the bank reserves would be realized. If the banks do not exchange their increased cash resources for interest-bearing assets until the rate of interest has risen, the policy of the central bank would have no effect.

Keynes has referred, in his Treatise on Money, though indirectly, to the importance of the banking system in the determination of the rate of interest. He writes: 'The price-level of investments as a whole and hence of new investments is that price-level at which the desire of the public to hold saving-deposits is equal to the amount of savings-deposits which the banking system is willing and able to create'.[1] But elsewhere after the publication of his General Theory he has recognised categorically that it is the banking system and not the public that plays a strategic role in the determination of the rate of interest. Thus he writes: " The banks hold the key position in the transition from the lower to the higher scale of activity. If they refuse to relax, the growing congestion in 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 proposes to be out of their future income."[2] In his General Theory, too, he has expressed the view that 'the complex of the rates of interest would simply be an expression of the terms on which the banking system is prepared to acquire or part with debts'.[3] But while developing his General Theory of Interest and Money, he has not taken into consideration the dominating role of the banking system. This may be because, Keynes in his General Theory essentially explains the 'nature' of interest and its relation to money as against the 'determination' of the rate of

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1. Treatise Vol.I, p.143.
2. J.M.Keynes 'Ex-Ante Theory of the Rate of Interest' E.J.Dec.1937 p.668.
3. General Theory p. 205.

interest. But it is one thing to explain the nature of a phenomenon and it is quite another thing to show how it comes into actual being. Our preference for liquid balances tells us about the basic nature of interest and the psychology underlying it but it tells us very little about the determination of the rate of interest in a real market for loanable funds and still less about the complex of rates under dynamic conditions. Keynes's theory is perfectly logical as a theory of the nature of interest but it is not certainly a theory of the determination of the rate of interest.[1] For explaining how the rate of interest is determined in actual practice, one has to draw his attention to the preferences of the banking system. No one would deny that in the context of present financial organisation in any individualist society, where a substantial part of total stock of money and other assets is control by the banking system, it is the behaviour of the banking system that dominates any other individual behaviour in the case of financial transactions.

Money and its Management.

The decision of the public as to in what form it would hold its liquid monetary resources at its command is very germane to monetary management. If the public decides to hold them in the form of cash, the rate of interest will rise which would have adverse effects on marginal efficiency of capital. Investment may shrink as a consequence and the level of employment also may go down. If the public decides to be less liquid and purchases more securities, the rate of interest would go down which would improve prospects of borrowing and investment. Rise in investment would raise the level of employment and general economic activity. Thus, the liquidity preference of the people has got important bearing on employment and general economic activity through changes in the rate of interest.

1. Bhabatosh Datt. 'Interest and Complex of Preferences'. I.J.E. Vol.XIX 1938-39, p.499.

The most important factor that influences the decision of the public to be more or less liquid is the expectations of the public as to the future course of interest rates. If the rate of interest is stabilized by the monetary authority for a long period to come, expected fluctuations in the rate of interest will no longer be able to induce changes in the liquidity preferences of the people. The monetary authority or the central bank of a country can do this by influencing the preferences of the banking system. As for example, if the demand for liquidity on the part of the public increases and the rate of interest rises in consequence, the central bank can counteract this rise, by putting more cash at the disposal of the banking system. As the banks are prone not to keep more than necessary cash with them, they would be at once induced to purchase securities that the public is not ready to hold. As a result, the prices of securities would not fall or the rate of interest will not rise. But it is contended that if the level at which the monetary authority desires to stabilize the stabilize the rate of interest is not considered to be a safe level by the public, the preference for cash will still continue and as a result the policy of the monetary authority may become ineffective.[1]

This cannot be the impasse if the central bank is determined to maintain the rate of interest at a lower level at any cost. For, then, the speculative holders of cash cannot expect a higher return on their investments. In this context, whatever rate of interest they would earn by purchasing securities would be a sort of rent, for, otherwise, idle cash would be yielding no income at all. If there is no reversal of the policy of the central bank, the psychological resistence to low interest rates cannot persist.[2]

Despite this, there is the possibility of fluctuations in the

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1. J.M.Keynes, General Theory, p.203.
2. H.S.Ellis 'Monetary Policy and Investment'- Readings in Business Cycle Theory, Op.Cit., p.415.

liquidity-preference of people. For, though the monetary authority may become successful in stabilizing the rate of interest (i.e. the yield on any one representative security, e.g.,Government bonds), it is difficult for it to stabilize the rates of interest or the relative yields on different sets of securities including equities. It may be that the monetary authority may be able to stabilize even relative yields in the case of a large number of assets by 'dealing, both ways on specified terms, in debts of all maturities! Such a policy has been described by Keynes as'the most important practical improvement which can be made in the technique of monetary management.[1]

No doubt such a policy would directly influence the complex of rates of interest and the cash-holders, after having once settled down to a particular preferntial position,would have fewer opportunities for securing a better one. The relationship between the complex of rates of interest and the quantity of money would be direct.[2]

However, one cannot subscribe unscrupulously to the probable efficacy of such a policy in the light of recent experience. In the post was period, monetary policy has been especially directed towards the stabilization of the prices of Government securities in several countries. Such a policy no doubt directly influences the long term rate of interest at least on gilt-edgeds and it is not left to be influenced by the belated and imperfect reactions from the price of short-term debts which was once objected to by Keynes.[3] But this policy has raised more problems for monetary management than it can be said to have solved.

When the monetary authority attempts to stabilize the prices of debts of various maturities and risks, the difference between money as such and non-money assets at once vanishes. The holders of all assets would be as liquid as they would be if they held money alone.

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1. General Theory, p.206.
2. Ibid ,p.205.
3. Ibid, p.206.

It is true that this policy will remove from the public all possible speculative inducements to hold cash but it is equally true that the public will not be ~~kix~~ deterred from converting its non-cash assets into cash whenever it liked to do so. The people may liquidate their interest-bearing securities and use the proceeds for purchasing real assets or consumers' goods. The effects of such a behaviour of the people are likely to prove inflationary in a period when incomes are rising or are at a high level. In such a period, it is extremely necessary to control the quantity of money as the first measure to check inflation. But if the monetary authority follows the policy of stabilizing the prices of ~~xxxxx~~ debts of different maturities, it would lose all possible control on the quantity of money. The most practical illustration of the consequences of such a policy can be provided from the post-war experience in several countries. In the post-war period the holders of Government securities were able to readily monetise them, thanks to the monetary policy of stabilizing the prices of Govt. bonds. This policy contributed to a large extent to the inflationary pressure in the post-war period. Again, it is not possible and even desirable for the monetary authority to stabilize the prices of all types of financial assets. Prices of equities at least cannot be stabilized with any degree of success by way of dealing in different equities.[1] In that case it would be easy for the banks and other holders of securities to ~~xxxx~~ sell off their interest-bearing assets without any loss and use the proceeds for purchasing assets with higher yields or the yields on which are expected to rise. The policy, as recommended by Keynes, is likely to facilitate speculation more than it would reduce it. The working of the economic system is likely to be rendered more unstable. Further, the policy of stabilization of the prices of debts of various maturities makes the payment of interest

1. It may be noted that the monetary authority may be able to control equity prices by direct controls but it cannot control them by dealing in various equities.

on long term assets meaningless and illogical, for, the differences in the rate of interest carried by assets of different maturities explain partly the differences in the degree of 'moneyness' contained in various assets. When, therefore, the holders of securities are paid interest without any loss in their liquidity, a high rate of interest paid to them is as good as that paid on money or, at the most, on bank deposits.

The characteristic which distinguishes money from all other assets, real as well as financial, is that it is the most liquid of all assets. This difference between the relative liquidity of money and other assets is essential for the purpose of monetary management. The recent experience in several countries has clearly pointed out the significance of the difference between money and other assets to those who are concerned with the management of money. If monetary management is to be relied upon along with fiscal management to control the level of activity in a free market economy, the quantity of money must have dimensions. The gap between money and other things should be made as wide as possible. The wider the gap, the more effective can be the control over the quantity of money.[1]

Monetary Management through Bank Reserves.

For managing the quantity of money, the monetary authority can more successfully influence the preferences of the banks, than it can do those of the public. This is because of especially two reasons. Firstly, as observed before, the rate of interest is dominated by the preferences of the banking system. The monetary authority can influence the rate of interest by bringing about the changes in the preferences of the banks. This power to bring about the changes in the liquidity of banks is vested in the central bank which is the

1. E.C.Simmons, 'The Relative Liquidity of Money and other things' In Readings in Monetary Theory. A.E.A.1952, p.33.

source of money or cash as a generally acceptable medium of exchange. But in the present context of monetary exchange economies, as money payments are made in large volume through the banking system, the banks have come to occupy a position of great importance in the monetary system of a country. A banker's promise to pay up his debt is not at all called in question and payments made through the banker's debts are as good as those made in terms of legal tender. In modern economies therefore bulk of the quantity of money is constituted by the debts of bankers. This is the second and most important reason why monetary management should be addressed to influencing the preferences of the banking system.

As the banker's debts are not expected to be paid up all at a time, a banker is in a happy position not to maintain cent. percent. cash with him in order to meet the demand of his creditors. By experience, he is able to know what percentage of his debts he should maintain with him in cash at any time so as to successfully redeem his debts on demand. The changes in these cash reserves bring about corresponding changes in the capacity or the desire of the banker to create more or less debts or bank money. The monetary authority or a central bank can bring about desired changes in the quantity of money by influencing the basic sources of bank money i.e. bank-cash reserves. The methods of affecting bank reserves, their relative efficacy and effects etc., therefore, form an important subject matter of monetary management.

In actual practice, as the importance of bank money increased, management of the quantity of money has been based on the policy of central bank to directly influence the cash reserves of banks. Rises and falls in these reserves induce the banker to part with his liquidity at a lower or higher rate of interest. As a lower rate of interest induces more borrowing from the banks for productive use

and a higher rate of interest is calculated to do the opposite, monetary management through influencing the terms on which banks are ready to lend bears a significant relation to the fluctuations in the economic activity in general. How far this logic of monetary management is realised in practice, and what difficulties are faced in the practical realisation of it constitute important problems of monetary management. In the following pages an attempt has been made to examine these problems of monetary management along with the examination of the methods uptil now used to tackle them.