

# Liquidity in the Economy and in the Banking System

by

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## I. *Liquidity as Hoarding* - II. *The Liquidity of the Economic System* - III. *The Liquidity of the Banking System*

1. — The need for liquidity, though a fundamental necessity for banks singly and consequently for the banking system as a whole, cannot be said to be exclusively limited to the latter. Indeed it is a need which exists — although in a different manner and in smaller degree — for all individuals receiving income, whether they be viewed as consumers or as savers, as well as for all firms in all branches of business and therefore, in short, for the economic system taken as a whole, no matter by what kind of regime it is « ruled ».

In this sense the need for liquidity must not only be considered in connection with the necessity of providing for exchanges and transactions in general, that is to say with the necessity of having « means of exchange » or of « payment ». It must also and above all be considered in connection with the necessity of keeping a « store of value » to provide for the uncertainties of the future — uncertainties the impact of which is bound to be felt not only by the economy as a whole, but also by single persons and firms, owing to the continued adjustments which are necessary in the course of economic activity.

In the case of private persons and firms this necessity is met not only by holding a supply of « liquid assets », typically represented by money, but also by arranging for liquid receipts to fall due in the future at a rate in keeping with the anticipated future requirements. Consequently, in their case the need for liquidity, one way or another, implies a limit-

ation on « outlay » (*i.e.* on expenditures for consumption and investment purposes), limitation which must refer both to the « volume » of outlay in relation to the « volume » of available funds, and to the « length » of investments as compared with the « length » of the latter.

2. — It has always been a « point of honour » among cautious businessmen, and to an even greater extent among respectable bankers, to insist firmly on this limitation, namely to be foresighted and prudent enough to limit not only the rate of consumption, but also the expansion of investment, adjusting them to a reliable supply of liquid funds, both present and prospective.

And this is due not only to the high moral value usually attached to the far from easy virtue of foresight and the great prestige generally enjoyed by those who succeed in practising it; it is due also to the real advantages that accrue to individuals and to firms which succeed, even when times are bad, in maintaining a solid liquidity position.

Liquidity in fact — as far as its essential task of making it possible to face the uncertainties of the future is concerned — serves both « precautionary » and « speculative » purposes: it acts as a protection against all unfavourable events, at the same time giving the possibility of making the most of all favourable opportunities. Consequently, in adverse economic circumstances, it may be not only an essential

condition for survival, but also an instrument for getting ahead of competitors and so laying the foundations for future success.

It is hardly necessary to stress the supreme importance of this both for banks taken singly and for the banking system as a whole, to which in the last resort, the public has recourse in its efforts to obtain cash through normal channels, particularly at times when the uncertainties of the future are most strongly felt. For this reason the presence or absence of a high degree of liquidity, and above all the greater or smaller capacity to face liquidity crises of a cyclical type, is quite a different matter and of far greater importance for the banking sector than for any other.

3. — Obviously the benefits which individuals and firms hope to reap as a result of their liquidity position imply a « cost » entailed by the limiting of outlay. It is a direct and immediate cost, an opportunity-cost, which consists of renouncing the profits that could be obtained from more extensive or longer term investments of their resources. And it is just because of this cost that liquidity becomes a « problem » for individuals and firms, in the same way as all economic problems arise from the contrast between needs on the one hand and the costs of satisfying them on the other.

The problem of liquidity, moreover, does not only concern individuals. As we have seen, it also and especially concerns the banking system and even the economy as a whole.

This means that besides considering the above-mentioned direct and immediate « cost » which has to be borne by individuals or firms, it is also necessary to consider the indirect « cost » incurred by the community as a whole as a result of the efforts made by its members

## I. - LIQUIDITY AS HOARDING

1. — From the very beginning of economic theory, it has been recognized that the effort of the individual to obtain greater liquidity was likely to affect the trend of general economic activity, in so far as liquidity takes the

to satisfy their liquidity needs. And this indirect cost must be conceived in a much broader sense than for individuals; it must be considered in terms of the whole complex of effects which the individuals' striving for liquidity is likely to have on the economy.

These effects may again be reduced to the two essential aspects of the limitation of investments in relation to available funds. In regard to the first aspect, the limitation of the « volume », of investments, what is most important are the effects on the level of general economic activity: *i.e.* the flow of production, and therefore of income and savings, which results, given the structure of the productive system, from the investment of available resources. In regard to the second aspect, the limitation on the « length » of investments, the main effects are on the structure of the productive system resulting from a more or less « intensive » investment of the available capital. From both points of view, the effects of striving for greater liquidity are mainly reflected in cyclical movements: one way or another, the effort to secure liquidity, although it is not the predominant (and certainly not the only) cause of cyclical fluctuations, is undoubtedly the factor which contributes most to accentuating them and making them « critical ».

It is obvious that in this sense also — or perhaps we should say especially in this sense — the behaviour of banks has a wider and more intensive effect than that of non-banking enterprises. It is for this reason that the liquidity problem of the banking system can never be separated from the liquidity problem of the economy, *i.e.* from the effect that the behaviour of the banking system is likely to have on the level and structure of production, and on the inter-actions significant for cyclical fluctuations.

form of hoarding, *i.e.* of a demand for cash as a « store of value » with which to face the uncertainties of the future.

It may even be said that as far back the fable of Midas, there has always been a vague

feeling of aversion towards the hoarding of money, a tendency to regard the *auri sacra fames* as contrary to the general interest. Little by little, as economic doctrine developed, hoarding came to be looked upon as a hindrance to economic progress, as bound to slow down economic activity and consequently to involve a « cost » for the community. This view, though expressed in various forms, was considered so obvious that it was not thought necessary to insist upon it; it was thought sufficient to point to the fall in effective demand following on hoarding, since all the harmful effects attributed to hoarding were considered direct results of this fall. Anyone who cares to open COQUELIN'S once famous *Dictionnaire* may read in the article by COURCELLE SENEUIL under the heading « *trésor* », that hoarding « *appauvrit la nation ou se manifeste* » inasmuch as « *le travail est moins demandé, la somme des valeurs produites s'amointrit* » (1).

We may therefore say that the classics already considered hoarding as a « thorn » in the « economic harmonies ». In fact the admission that hoarding led to the impoverishment of the nation invalidated ADAM SMITH'S fundamental point which was assumed valid also for the case of « parsimony », namely that « every individual ... by pursuing his own interest ... promotes that of the society more effectually than when he really intends to promote it » (2).

In the same way STUART MILL, stressing in his « third proposition on capital » that what is saved is also spent, expressly warns that « if merely laid by for future use, it is said to be hoarded; and while hoarded, is not consumed at all », implying that savings instead of being beneficial are detrimental to the community. Hoarding was thus admitted to contradict « Say's Law » (« supply creates its own demand ») upon which in the last analysis the optimistic concept of economic liberty was based.

This « thorn », however, evoked little interest and still less concern. Hoarding in fact was looked upon as something exceptional and abnormal and even SAY, while in effect ad-

mitting himself that hoarding might invalidate his theory, did not give it overmuch importance, his view being that everybody is anxious not only to sell his product, but also « to dispose of the money he may get for it, for the value of money is also perishable » (in the *Traité* of 1803).

Afterwards, as banking and the credit system expanded, interest in hoarding and its consequences dwindled until it almost disappeared. The essential task of banks was in fact considered to be that of turning sterile money hoarding to the benefit of the community. In lending out for productive purposes the money deposited with them, even by money-hoarders, the banks were preventing the « detestable lust » for hoarding from actually causing an « impoverishment of the nation ».

2. — It was only in 1936 that the « revolution » caused by KEYNES'S *General Theory* upset this point of view and brought hoarding into the limelight once more as one of the factors exerting the greatest influence on general economic activity — on the level of employment and consequently on the formation of income and savings.

It was Keynes who identified the « propensity to hoard » — which he recognized in the particular form of « liquidity preference » based on the « speculative » motive (connected with the future trend of the interest rate) — as the cause of the permanent deficiency of effective demand. He considered this deficiency to be characteristic of the present stage of capitalist economy, not only as the immediate result of temporary conditions, but also in the long run. Consequently — always according to Keynes's *General Theory* — it is hoarding that is responsible for that perpetual tendency towards stagnation which hangs over the capitalist system, threatening it with destruction.

It is for this reason that the most vigorous passages of the *General Theory* are precisely those in which he aims at upsetting the usual concept of liquidity which, to use his words, is apt to become a « fetish ». To quote Prof. L. EINAUDI (3), liquidity preference « ap-

(1) CH. COQUELIN, *Dictionnaire*, 1854, II, p. 848.

(2) A. SMITH, *The Wealth of Nations*, Ed. Cannan, 1930, I, p. 421.

(3) In « *Rivista di Storia Economica* », 1939, p. 155.

pears in Keynes's books as the *deus ex machina* of the present day economic system... as responsible « for all that is evil: crises, bankruptcies, unemployment, bottlenecks in international trade, rivalry between States ».

This aversion towards liquidity leads Keynes to oppose financial « prudence » and « sound » or « orthodox » finance. Referring to the general tendency to provide ample sinking funds, for instance, the *General Theory* contends that « sinking funds, etc., are apt to withdraw spending power from the consumer long before the demand for expenditure on replacements (which such provisions are anticipating) comes into play; *i. e.* they diminish the current effective demand and only increase it in the year in which the replacement is actually made. If the effect of this is aggravated by "financial prudence", *i. e.* by its being thought advisable to "write off" the initial cost *more* rapidly than the equipment actually wears out, the cumulative result may be very serious indeed » (p. 100), so that « financial prudence will be liable to diminish aggregate demand and thus impair well-being ». (p. 105). This judgment is repeated and insisted upon in the following chapters of the *General Theory* and financial « prudence » (p. 109, 131), « sound » finance (p. 101, 130) and financial « conservatism » (p. 126), particularly in the form of « the penny-wisdom of Gladstonian finance » (p. 362) are constantly derided. In the same way, referring to the general tendency to invest funds in liquid assets, the *General Theory* states that « of the maxims of orthodox finance none, surely, is more anti-social than the fetish of liquidity, the doctrine that it is a positive virtue on the part of investment institutions to concentrate their resources upon the holding of "liquid" securities » (p. 155).

3. — This deep-rooted aversion for liquidity considered as hoarding naturally links up with the basic features of the Keynesian system and especially with the prominence given in the « new economics » to the changes in income inherent in every process of adjustment of the various economic quantities which must, axiomatically, balance as a whole (demand and

supply, for instance, investment and saving, etc.).

The changes in income resulting from the changes in effective demand would be particularly important in the process of adjustment between investment and saving as a consequence of hoarding. Because of hoarding, the increase in monetary saving would not be accompanied by a decline in the rate of interest — also considered in its monetary expression — (to quote Keynes, as « a reward for parting with liquidity ») — sufficient to induce a corresponding increase in investment. In this case, while monetary saving would on the one hand involve a fall in the expenditure for consumption, it would not on the other hand imply a corresponding increase in the expenditure for investment. Hence the possibility of effective demand as a whole being deficient, with the consequence that the portion of income not spent by the individuals and hoarded in monetary form, would, so to speak, be swallowed up by the economic system, since it would result in a reduction in the aggregate income of the community; and such a reduction might continue uninterruptedly. Money would then be « a bottomless sink for purchasing power » (p. 231). This would lead, through unemployment, to constant cuts in total income — cuts which would in actual fact be the cost paid by the community for the individual efforts to satisfy liquidity needs.

4. — It is superfluous to enter again into the complicated discussions to which the theoretical aspects of this Keynesian thesis gave rise, particularly as concerns the attempt to reject traditional doctrines, as Keynes deliberately set out to do, for instance, for the theory of interest (described by him « a nonsense theory », p. 179).

Let it suffice to say that recent critics have shown that Keynes's « monetary » theory of the rate of interest can be reconciled with other monetary theories and, what is still more important, with the classical theory referring to « real » elements. If on the one hand this has deprived the Keynesian interest theory of that character of radical innovation to which Keynes himself attached so much importance,

it has on the other hand led to the recognition of the significance of his approach to the process of adjustment between investment and saving, placing in the foreground the changes in aggregate income resulting from individual saving and investment.

Indeed, from this standpoint better than from any other it is possible to see how hoarding, if it is not accompanied by a proportionate increase in the quantity of money, is likely to cause reductions in aggregate income that may be extremely serious, since they are apt to lead to « cumulative » processes downwards. This may, however, be expressed in elementary terms, *i. e.* with direct reference to the decline in the effective demand resulting from hoarding, as was the case with earliest theories mentioned above, without resorting to the process of adjustment between investment and saving and consequently without referring to interest rate changes.

5. — In this connection, it is sufficient to consider that any individual — let us call him A — who is hoarding money as a « store of value », is bound to reduce the use of the money which is either already in, or will come into, his possession. On the one hand, receipts remaining the same, this leads to a reduction in the velocity of circulation of money; on the other hand it leads to a reduction in A's expenditure and consequently in his effective demand.

This decline in A's effective demand means that someone else — let us call him B — will find that he is selling less. Taken by itself, this drop in sales would not have any serious consequences if B were ready to « dishoard » to the same extent as A is « hoarding ». In that case, in fact, there would be no « hoarding » so far as the community as a whole is concerned: there would merely be a reduction in the quantities and in the prices of the goods normally sold (and produced) by B, who would in effect be making a stand against A's hoarding by resigning himself to having his own income reduced without in turn reducing his own purchases. This, however, is an improbable case and it would obviously be more in keeping with reality, and also with the mo-

dern analysis of the « consumption function », to suppose that the reduction in B's income will cause him to cut down his expenditure. And so the movement — always assuming the total quantity of money in existence to remain constant — would spread from one member of the community to another, leading to a cumulative shrinkage in individual incomes until, according to an old saying, an « equilibrium by subtraction » was reached.

Undoubtedly single individuals can draw money one from another; but they cannot in this way satisfy the tendency to hoard on the part of the economic system as a whole. This tendency would be unsatisfied in an *absolute* sense, and would be satisfied (if this is the right word) only in a *relative* sense, in relation that is to the reduced aggregate income. The shrinkage in income would in fact gradually lower each individual's demand for money until the original tendency to accumulate larger cash-balances was extinguished. In other words, the involutory process of income reduction would have to continue until the liquidity preference of individuals taken altogether (the total *encaisse désirée*) was brought into equilibrium (by subtraction) with the quantity of money in existence.

Consequently, *as long as the supply of money is assumed fixed*, there is no denying that whenever the community as a whole increases its demand for money to hoard as a « store of value », a process of downward adjustment of employment and income necessarily ensues.

6. — This translation of Keynes's reasoning into elementary terms may make it easier to understand those aspects of his liquidity-preference theory which are really useful. At the same time, it helps bring to light an « error » in the Keynesian argument which deprives it of that « general » validity on which Keynes placed so much emphasis.

On the one hand the simple model used above shows that the savings of individuals, if hoarded, may be not only « sterile » but even « abortive » for the community as a whole; not only may they fail to bring about capital formation and thus to augment productivity in the future, but they may reduce the current

income received by the community from its existing resources. And the deflationary tendencies, while they may appear at any moment and in every phase of the trade cycle as the result of a general increase in the propensity to hoard, may also themselves exert a strong influence on the course of the cycle.

All this is quite clearly shown by the elementary model in which A is set against the «rest of the world», even if we abstract from changes in the rate of interest. In fact, downward movements of income may occur no matter what the rate of interest is, and therefore not only in countries in which the rate has fallen so low as to exclude any further fall, but also in countries like Italy where the rate is still high.

7. — On the other hand, our elementary model also makes it possible to identify the error which, in our opinion, is contained in Keynes's argument. This error consists in not making allowance for the fact that, *in periods of normal development of economic activity*, banks are induced by the hoarding of individuals to expand the credit they grant to the public, thus creating a corrective to hoarding that offsets its depressive influence on income and employment. Indirectly the public, with its commonsense, realizes this when it considers the essential function of the banks to be that of causing the sterile hoards of individuals to bear fruit for the community.

In short, hoarding causes deflationary processes to develop only in so far as, in face of the greater demand for money arising therefrom, the quantity of money remains unchanged. Obviously this contrast would cease, and with it the deflationary process, if an increase in the demand were countered with a proportionate increase in the supply. But Keynes deliberately and insistently excludes the possibility of such a thing being feasible under the present circumstances. Money, in his opinion, has «both in the long and in the short period, a zero, or at any rate a very small, elasticity of production, so far as the power of private enterprise is concerned, as distinct from the monetary authority» (p. 230). Just for this reason, he concludes in his usual brilliant style that

«unemployment develops, that is to say, because people want the moon; — men cannot be employed when the object of desire (*i. e.* money) is something which cannot be produced and the demand for which cannot be readily choked off» (p. 235).

But here is precisely the error which deprives the Keynesian conclusions of that «general» validity assumed by the author. Under the conditions in which we live today money, just like any other commodity, can be and is «produced» according to the demand. As a matter of fact the characteristic features of the money of our times are exactly the opposite of those considered by Keynes; it has a high elasticity of production and substitution. Indeed the process through which bank money is created is characterized by the fact that, as we shall see, the «production» and consequently the supply of money depends on the demand for it (or in other words, on the propensity to hoard and, in general, on liquidity-preference).

8. — In truth Keynes himself admitted that the supply of money was not fixed under the gold-standard, though he limited this consideration to countries amply provided with gold mines. One of his sharpest gibes at «sound finance» was made precisely when pointing out that «digging holes in the ground» in order to extract precious metals (or, paradoxically, buried bottles full of banknotes) had been in the past and might still be today a valuable remedy for unemployment and an appropriate means of increasing the real income of the community (p. 130, 221). This has been further confirmed by DILLARD (4), one of the most faithful champions of the *General Theory*: «In so far as gold is still a part of the money supply, there is some mitigation of unemployment. In depression when prices fall and the value of money, including gold, rises, gold mining tends to employ more labor than in prosperity. In gold-mining countries, this may be of some practical significance in offsetting unemployment in other industries».

Therefore, returning to our preceding model, we may consider that, under a regime of

(4) In his book *The Economics of J. M. Keynes*, 1949, p. 201.

metallic currency, the increased demand for money caused by the individual we called A, while resulting on the one hand in a corresponding cut in the effective demand for goods in general, would on the other hand cause a proportionately larger demand for the particular commodity (gold or silver) used as money. In this case the individual B, whose sales were reduced owing to A's lower demand — and whom we must always assume to be unwilling to resign himself to this reduction — would have not one but two modes of reaction open to him; *i. e.* he could not only reduce his own expenditure but he could also set about producing the money demanded by A.

Moreover, and this is most important, there would be no need for the gold and silver really to be produced directly by the country concerned. They could also be produced indirectly through international trade. And so B would be able to react to A's reduced demand by exporting the goods no longer requested by the latter, and thus reconstituting his holdings of money without resorting in his turn to that secondary lowering of effective demand which would lead to a downward process.

Thus in one way or another, an increased propensity to hoard (or, more generally, an increased liquidity-preference) led eventually, under the gold-standard, to a greater supply of money, coming not only from the domestic market, as in the case of gold-mining countries, but also from abroad as a result of the interplay of price levels and international monetary flows. And this occurred regardless of the motives for the increased liquidity-preference.

9. — The Keynesian assumption of the inelasticity of the money supply therefore signifies that with the passage from a gold-standard currency to an inconvertible managed currency, a radical change in the possibility of satisfying the demand for money must have occurred.

Indeed, according to Keynes, under the present bank-money system the total quantity of money in existence is «fixed», in the sense that its supply may indeed be «deliberately» increased by the monetary authorities (p. 230) but not by the public (p. 174). This applies not only to legal tender money (bank-notes), but also to bank-money (both sight and time deposits).

An increased demand for money may therefore be met by a correspondingly increased supply, but only as the result of «deliberate» action on the part of the monetary authorities.

This point of view, which is basic to the Keynesian system, and accepted also by non-Keynesian economists, is connected with a particular explanation of the complicated question of the «creation» of bank deposits given by Prof. ROBERTSON as far back as 1928 (5) and reformulated in the following terms by Keynes in his *Treatise on Money* (6): «The volume of cash-balances depends on the decisions of the bankers and is "created" by them. The volume of real-balances depends on the decisions of the depositors and is "created" by them».

In other words, the public could not affect the «quantity» of money (inclusive of deposits) expressed in terms of monetary units; it could only affect the «value» of those monetary units relative to goods, through the more or less intensive use made of them, *i. e.* through the velocity of circulation given to money. Thus an increasing liquidity-preference, by entailing a reduction in the velocity of circulation of money, would cause its «value» to vary but have no effect on its «quantity».

10. — Although Robertson's way of interpreting the creation of bank deposits has made it possible to introduce decisive innovations in several points of monetary theory, it must be considered invalid as regards the point which is of most importance for Keynes's theory.

These fundamental innovations have indeed served to call attention to the great importance of banking policy for the creation of bank-money (the banks are not only the «distributors» of the deposits they collect, but they also «create» them). We should, however, be going to the opposite extreme of the traditional theory, and should therefore be accepting an error opposite to that which it contained, if we failed to recognise that the preferences shown by the public also play a part in the formation of bank deposits. In point of fact, the creation of bank-money does not depend — as Robert-

(5) In the third of his «propositions» on *Theories of Banking Policy* reprinted in his *Essays of 1940*, p. 42.

(6) Vol. I, p. 224.

son, and following him Keynes, claimed — only on the action of the banks; it is also the result of decisions on the part of the public, as debtors and above all as creditors of the banking system.

Thus, if in order for new bank-money to be created it is necessary on the one hand that there should be an increase in the total volume of credits granted by the banking system, it is on the other hand no less necessary that the public as a whole should be prepared to increase its holdings of liquid resources; *i.e.*, there must be an increase in liquidity-preference even though it is in the form of a propensity to hoard.

11. — This point is not made adequately clear as long as legal-tender money and bank-money are treated as one. It is the distinction between the two that allows us to identify the limits to which the creation of deposits is subject; *i.e.* to show that as deposits are liable to be withdrawn and converted into bank-notes, just as bank-notes were at one time liable to be exchanged for coins, so the «state of confidence» of the public influences today the quantity — not only the value — of deposits just as it once affected the volume of bank-notes.

In other words, if we consider bank-money separately, it always remains apparent that its quantity is connected with, or «depends» on the policy adopted by the monetary authorities: or, more precisely, by the Central Bank (which determines the volume of bank-notes issued), and by the commercial banks (which determine the volume of credit granted to the public in relation to the «cover» or cash held in the form of bank-notes). This ratio (between «cover» and credit granted) runs parallel to the so-called liquidity ratio (cash to deposits), by regulating which the monetary authorities can place limits on the discretionary powers of the commercial banks, just as in former times the discretionary powers of the Central Bank were limited by regulating the ratio of the cover in metallic money.

But at the same time if we consider bank-money separately, it becomes clear that its volume «depends» also on the behaviour of the public, who through their right to draw on

deposits, are always in a position to satisfy their preferences as between the Central Bank (bank-notes) and the commercial banks (deposits). It is indeed the behaviour of the public that determines what part of the bank-notes issued by the Central Bank, instead of being held in the pockets of the individuals, is left with the banks, who use it as cover for deposits. In this way not only does the liquidity-preference of the public, in the general sense of the demand for money of all kind, come into play, but so does also a particular type of liquidity-preference: the choice the public is exercising between bank-notes and deposits.

11 bis. — Perhaps it may be advisable to make this point, which seems to us of special importance, still more clear by using some elementary formulae.

The Central Bank exercises its influence directly on the total quantity of bank-notes issued ( $B$ ), of which part goes into the tills of the banks ( $B_b$ ), and part remains in the hands of the public ( $B_p$ ).

We thus have

$$B = B_b + B_p \quad (1)$$

The influence exercised by the commercial banks (within whatever limits may be laid down by the monetary authorities) is expressed in the «degree of liquidity» ( $K_b$ ) which they (the banks) maintain. That is to say the ratio between deposits ( $D$ ) and cash (which, obviously, represents also reserves held with the Central Bank) depends on the action of the commercial banks. Hence

$$D = K_b \cdot B_b \quad (2)$$

The influence exercised by the public is shown by the «degree of preference» ( $K_p$ ) it shows in its choice between bank-notes and deposits: that is to say the ratio that arises between deposits and bank-notes held by the public depends on the behaviour of the public. Hence

$$D = K_p \cdot B_p \quad (3)$$

At the end of 1949 the situation in Italy was as follows (in millions of lire):

$$(1) 1,033,319 = 40,299 + 993,020$$

$$(2) 1,532,822 = 38.04 \times 40,299$$

$$(3) 1,532,822 = 1.54 \times 993,020$$

Those who take it for granted that even bank deposits, and therefore the whole volume of bank-money, depend exclusively on the decisions of the monetary authorities fail to take into account the «degree of preference» shown by the public. This, in turn, precludes the possibility of a correct interpretation of monetary developments when the «de-

gree of preference» undergoes marked variations in different directions, as, for instance, happened in Italy during the last few years.

«Degree of preference» shown by the Italian public for deposits as compared to banknotes ( $K_p$ )

End of Year	End of Month (for 1947)
1938 2.03	January 1.45
1939 1.80	February 1.47
1940 1.74	March 1.48
1941 1.44	April 1.49
1942 1.23	May 1.52
1943 0.71	June 1.48
1944 0.82	July 1.44
1945 1.11	August 1.38
1946 1.48	September 1.33
1947 1.16	October 1.31
1948 1.36	November 1.26
1949 1.54	December 1.16

12. — These rectifications show that liquidity-preference is not «inoperative» or «neutral» in regard to the creation of deposits. Quite otherwise. Liquidity-preference is one of the two, or rather three factors that help to determine the supply of bank-money. In the last analysis, it indicates the willingness on the part of the public to hold credits on the banking system; it represents, to use an up-to-date expression, the «third force» which is essential for the creation of bank-money.

This influence of the demand on the supply of bank-money prevails, just as under a gold-standard, whatever may be the motives responsible for changes in the liquidity-preference (transactions, or precautionary, or speculative motives). And it prevails even if the precautionary or speculative motives depend not only on uncertainty about the future trend of interest rates, but also on the more general uncertainty that surrounds future events.

Of course, the creation of bank-money is associated with time-lags and various difficulties which are of a much more serious and complicated nature than those connected with the creation of metallic money. But, keeping to the main lines of the Keynesian argument, we may note that liquidity-preference does not play in business life today the «general» rôle assigned it by Keynes, a rôle which breaks the link between savings and investment assumed by the traditional theory, so that savings disap-

pear into the banking system and are lost to investment.

Increased liquidity-preference on the part of individuals does not under all circumstances entail a «cost» for the community, which makes itself felt in a persistent curtailment of employment and income. More precisely, the danger of such a «cost» disappears if and in so far as the volume of money in circulation is increased in a measure that offsets the greater demand for it, entailed by the increased liquidity-preference. To return to the optimistic views of former times, it may be said that through the increase in the quantity of money in existence, the *vis medicatrix naturae* would provide a corrective to hoarding so as to remove any tendency towards a depressive influence on economic activity.

13. — But what are the circumstances under which such a corrective comes into play?

Without tarrying over the complexities of the process of creating bank-money, a distinction should be drawn between what happens in periods of normal development and expansion of economic activity, and what happens in periods of stagnation and depression.

In periods of normal development, and still more in periods of economic expansion, more money is needed not only as a means of exchange, but also as a store of value, not only for the transactions motive but also for precautionary and speculative motives. These should be understood, as we have noted, not only in the Keynesian sense but also in the general sense of hoarding with a view to facing the uncertainties of the future, to provide both a safeguard against unfavourable events and the means of taking advantage of favourable opportunities. Hoarding of this description is additional to the demand for money for the transactions motive. It is attributable, for the most part, to income expansion. In such circumstances people hoard not because the uncertainties of the future are more threatening than usual, but because they have better opportunities of satisfying the need for securing themselves against those uncertainties. In fact, the public is in a position to satisfy its increased liquidity-preference thanks both to the larger income at

its disposal and to the greater « confidence », characteristic of periods of expansion, which allows an extension of the chain of credit creation even outside the banks. At the same time, the other factors which contribute to the creation of bank-money also become more favourable. For, not only does the public turn more frequently to the banks for credit, but the banks themselves are ready to increase the amount of credit outstanding.

Under these circumstances it is not possible to speak of a fixed money supply. The lack of elasticity of production and substitution of bank-money assumed by Keynes does not exist. The fact is that in times of expansion the supply of money can be extremely elastic. Indeed the banks can be « induced » to expand their credit facilities to an extent which, in the long run, comes to outrun the rate of savings and above all to outrun the rate at which the public is willing to make deposits with the banks.

14. — The situation that arises in the downward phase of the trade cycle is of course very different.

At such times, hoarding to meet future uncertainties does not make itself felt as an addition to the demand for money for the transactions motive. Indeed, the heavier demand to satisfy the first motive may merely be the reflection of the decline of the demand to satisfy the second motive. In any case, while there is an increase in liquidity-preference and correspondingly in the willingness of the public to grant credit to the banks, the other factors that are essential to the creation of bank-money are not present; namely, the demand for bank loans to finance new investments is likely to be reduced no less than the willingness of the banks to make new loans. Thus, the credits granted by the banks may shrink, or at least may increase less than the willingness of the public to grant credit to the banking system.

It may therefore be said that the pessimistic expectations that accompany periods of depression are not propitious to the creation of the larger quantities of bank-money which would be necessary to meet the greater propensity to hoard. Indeed, in such times the volume of bank money may remain stationary or even

shrink. Even in this case, we cannot say that the money supply is inelastic; only it is elastic in the opposite direction to that indicated in par. 13, for it tends to shrink and not to expand. It is then that the contrast between the amount of money which the individuals strive to acquire and the amount which, taken altogether, they can actually have, asserts itself in all its crudity. An inevitable process of deflation of employment and income sets in, so that a slight initial depressive tendency may develop into persistent stagnation.

We thus return, by a different path, to the same eventualities as Keynes envisaged. This, however, holds good only in so far as we are referring not to periods of normal economic growth and still less of uninterrupted expansion, but to periods or moments of depression and stagnation, which, let it be repeated, may also occur within a phase of normal long-run development in the form of temporary arrests, or occasional declines in the level of economic activity.

15. — To sum up our argument we might be tempted to paraphrase Keynes and say (similarly to what he said of the « classics » in his preface to the *General Theory*) that the greatest difficulty in treating the problem of liquidity, as represented by hoarding, is due to the necessity of escaping from some of the Keynesian modes of thought and expression. We need to escape from the idea that today, under a system of bank-money, individuals' desire for liquidity entails, through a persistent deficiency in effective demand, a collective cost much heavier than it entailed under a gold-currency system, in the shape of unemployment and poverty in the midst of plenty.

The real fact is that with the transition from gold currency to a bank currency, it has become possible to satisfy the individuals' demand for liquidity without entailing any cost for the community in the sense defined. Owing to the creation of credit money through the banks, we repeat, the sterile hoards of the individuals are made fruitful for the community. And this, in periods of normal development, has been achieved by « natural » market forces, without the need for any « deliberate » action on the

part of the monetary authorities. Here, common sense traditional theory still provides a better key to the explanation of the functions fulfilled by the banks; *i.e.* it makes clear that the banks, by granting credit to their debtor customers in correlation with the credit granted them by their creditor customers, have made it possible to satisfy the liquidity needs of individuals and firms without a deflation of employment and income.

Thus, in the last analysis, there is good reason for believing that modern monetary and credit systems have been formed for satisfying in the best way, and therefore at the lowest cost, both to the community and to the individual, the modern need for liquidity.

16. — The cost to the community as a whole of the liquidity-preference exercised by the individuals must be sought elsewhere. It is to be found in the instability, the « seesawing » which is characteristic of the creation of bank-money. The alternations of expansion and contraction, as we have seen, are in inverse

direction to what would be needed to exercise a stabilising effect on economic activity.

The liquidity which bank-money allows the individual members of the economic system to secure, does indeed possess an amplitude and an elasticity much superior to that obtained by the creation of metallic money; but it is precisely this greater elasticity that makes the aggregate income of the system subject to fluctuations increasing *pari passu* with the growth of liquidity. And it is for this reason that the desire for liquidity on the part of the individuals and the satisfaction of this desire through bank-money, though not the main, and still less the only cause of economic fluctuations, is undoubtedly the principal factor accentuating them and making them « critical ».

And it is just in such critical periods that the cost of liquidity may assume the degree and character, affecting social conditions, to which Keynes and his followers have given such importance, especially as regards unemployment. This, however, is not the case as long as general economic activity is expanding uninterruptedly.

## II. - THE LIQUIDITY OF THE ECONOMIC SYSTEM

1. — So far we have analysed the cost of liquidity from the first of the two standpoints considered, *i.e.* the limitation of the « volume » of outlay as compared with the volume of available resources. We must now consider this cost from the second standpoint, *i.e.* the limitation of the « length » of investments as compared with the « length » of the available funds. This leads us to examine as a preliminary step the way in which the liquidity of the economic system as a whole should be considered.

One may indeed speak of greater or lesser liquidity of the economic system taken as a whole also with regard to the « volume » of the money supply (7). But for present purposes

(7) Thus, according to HANSEN (*Monetary Theory and Fiscal Policy*, 1949, p. 4) the total volume of legal tender and bank-money in the United States of America increased during the last century ten times more than income, and even in the first thirty years of the present century the ratio between currency and income doubled. It is likewise interesting to learn from A. BRILLÉ and V. PEDERSON (*Liquid Claims and National*

it is more important to determine how the liquidity of the economic system should be considered in relation to the « length » of investments in real goods. And these investments should be studied in real terms, regardless of whether they belong to one individual or another and regardless, consequently, of possible transfers from one to another; and of whether they are financed with bank-money or with privately owned funds.

Substantially, the first thing to consider is the liquidity of the whole economic system in its essential terms, as though we were dealing with a collectivised, or more precisely with the *simple economy* described by HAYEK (8).

*Wealth*, 1934, p. 111), that, again in the United States of America, the ratio between liquid resources in their several forms (exclusive of legal tender but inclusive of deposits, bonds, etc.) and national wealth in real terms also doubled in the first 30 years of this century.

(8) In *The Pure Theory of Capital*, 1941, p. 99.

2. — The problem of the liquidity of an economic system is one of how to face future uncertainties, in view of the ceaseless adjustments required by general long-run economic development and by the upward and downward movements of the trade cycle.

To meet the need for liquidity due to these uncertainties one cannot rely only on goods already available for consumption, but must also and above all be able to rely on the « instrumental goods »; and both are to be regarded not as stocks held in reserve, but rather as part of a continuous stream of production.

This makes it necessary to examine the structure of the economic system; to study the ratio in which capital goods are distributed in relation to various maturity dates; the prevalence of either circulating or fixed capital; and also the measure in which the one exceeds the other. In its turn, this capital structure determines the way in which production is distributed over time and the lengths of the various processes of which the productive system is composed.

3. — The period of time in which an investment matures differs, naturally, for the different kinds of capital goods, whether they be considered separately or in certain complexes of equipment and plants. Wheat will take more time to mature in the shape of bread than will flour, and so likewise yarn takes more time to mature in the shape of clothes than does cloth, to say nothing of the time taken by a hydro-electric power station or by a land reclamation work to express themselves in consumption goods. The duration also varies widely according to the different uses to which the same capital goods are put: coal matures more rapidly in the domestic fireplace than in a steam operated electric power-station.

But the length of time capital goods take to mature is not determined only by technical factors. It depends also on economic conditions, and above all on price and cost levels, interest rates and returns on capital. In respect of these technical and economic factors, we may speak of a « normal » maturity period for different forms of capital goods and for the productive system as a whole. Under a free market economy the « normal » period is that which, through the interplay of the aforesaid factors

(prices, costs, interest rates, returns on capital), yields « normal » business profits.

It may however happen that capital goods need to be « mobilised » so as to mature in a shorter than normal time; or made immediately liquid so as to enter at once into the field of consumption. This « anticipated » or « forced » liquidation gives a smaller yield than would be obtained at the normal maturity period; it entails a loss that may be described as a « liquidation cost ».

Obviously, this cost also depends on the technical and economic conditions to which we have referred, and more especially on the degree to which the goods considered are capable of satisfying either immediate consumption needs, or other needs, thus leaving open the alternative of being used mainly as « present » rather than as « future » goods. In any case, the « liquidation cost » — a hypothetical cost — varies in inverse ratio to the length of the period within which the forced liquidation has to be made. And it is also higher the longer is the normal duration which has to be cut short by advance liquidation.

4. — A first way of gauging the degree of liquidity of the economic system is to assume that it may not be possible to wait for the normal maturing of the capital goods, and that they may therefore have to be realized in advance, and the relevant cost of liquidation incurred. As this cost will be heavier the larger is the proportion of slowly maturing capital goods, the degree of liquidity of the economic system will be higher the shorter is the length of the normal productive process, or, in other words, the smaller is the ratio of fixed to circulating capital, and therefore the smaller the amount of capital per head.

Liquidity may, however, be considered from a different angle: which is, to some extent, the opposite of the above. Instead of starting from the assumption of an anticipated liquidation of capital goods, we may start from the assumption that the liquidation will be « normal ».

It is then obvious, on the one hand, that liquidity will be greater the greater is the flow of goods in process, and the greater is the income obtained from a given supply of primary resources. For, the larger the income, the larger

will be the part that can be allocated to meeting future contingencies.

On the other hand, it is obvious that the flow of goods in process will be larger, the greater is the productivity of the economic system. In its turn, the level of productivity is connected with the length of the productive process. It is indeed well-known that other things (especially technical knowledge) being equal, the longer the period of production (*i.e.* the larger is capital investment in general, and investment in instrumental goods in particular) the greater will be the flow of production. Therefore, from this point of view the greater liquidity resulting from higher productivity would link up with a longer and not a shorter process of production: *i.e.* with a larger capital endowment per head.

5. — We are thus faced by two conflicting ways of conceiving the liquidity of the economic system as a whole, so far as the length of investments is concerned. And correspondingly we have two conflicting ways of seeing the connection between liquidity and productivity. Seen from the first point of view, liquidity could only be increased at the expenses of productivity; but seen from the second point of view, increased liquidity would be based on increased capital per head.

Both the first and the second principle can, of course, be appealed to according to circumstances; that is to say circumstances will determine whether the hypothetical « liquidation cost » becomes actual or not.

It should be remembered in this connection that if we consider the economic system as a whole, the lengthening of the process of production must necessarily be accompanied, in the period when new capital is being formed, by the formation of new savings, and therefore by a limitation of consumption in relation to the net product. Moreover, if that lengthening of the productive process is to be maintained, it always entails the conservation of previous savings through the reinvestment of the amortisation quotas and therefore the limitation of consumption in relation to the gross product. But we may have for the economic system as a whole (likewise as for the individual firms) an excess of investment in comparison with

what would be in keeping with the rate of consumption. Under such circumstances, there may occur a « freezing » of the whole economic system entailing the anticipated liquidation of the excessive investments, with a more or less high « liquidation cost ».

But as long as the rate of new capital formation is in keeping with the rate at which consumption is limited, the situation will be quite different. Under these conditions the necessary adjustments required to face uncertainties may be made by using the flow of goods in process, which mature normally from existing investments. In such cases the larger volume of capital investments and the higher ratio of fixed capital, instead of representing « frozen assets », provide a basis for the greater efficiency of the productive system and for greater liquidity also. And so the contrast between liquidity and productivity, that is to say economic progress, ceases.

6. — Are these conclusions valid also for our present economic systems? Indeed, the existing system (of a « market » or « capitalistic » or « mixed » economy) in spite of many restrictions, leaves individuals and firms free to decide not only on the volume of their savings but also on the duration of the « waiting » inherent in the savings themselves; *i.e.* to decide on the length of time during which they want to defer the consumption of current income or of pre-existing assets. We may then enquire whether the individuals' desire for liquidity, by affecting the length of their investments, may not be an obstacle to that lengthening of the productive process on which the efficiency of the economic system depends. Such an obstacle would represent that indirect cost to the community as a whole, whose existence or non-existence we set out to ascertain at the beginning of this paper.

7. — For the purpose of this enquiry it must be remembered that each of us, looking forward into the future, forms a plan, even if not deliberately, as to the duration of the period for which he is disposed to « wait », *i.e.* to defer his consumption. Thus we have for each individual case — in conformity with the ratios

in which the people propose to distribute their income (and their wealth) between the several future maturity dates — a special pattern of « planned waitings » and a corresponding duration of the investments.

Now, liquidity needs are just one of the many subjective and objective factors that help to determine the length and the structure of the « planned waitings », and therefore of the investments of the individuals who make up the economic system. It is the liquidity needs that abbreviate the duration of planned waitings and the corresponding individual investments as compared with the length of time that each individual would be willing to accept in the absence of that need. It is indeed quite natural that the more the need for liquidity is felt as a means of preserving freedom of choice in the future, the less the investor is willing to prolong the postponements of consumption, and to undertake long-term investments.

Liquidity needs thus exercise a shortening influence on investments, seen from the standpoint of the individuals. These needs lead investors to pledge themselves for periods which are shorter than those for which their investments actually last. In fact, while liquidity needs entail a shortening of « planned (*ex ante*) waitings », they exercise no such shortening influence on the « actual (*ex post*) waitings ». For they, though felt more or less keenly at different times, persist indefinitely through time and therefore, in order to satisfy them, consumption needs are indefinitely postponed.

This leads to a discrepancy (all the more marked when liquidity needs make themselves more keenly felt) between « planned waitings » and « actual waitings » and therefore between the planned length of investments, as seen by individual investors, and the actual length of the « waiting period » which they themselves end by accepting. As a matter of fact, the actual (*ex post*) length of the waiting period is always found to be longer than the planned (*ex ante*) length of the investments.

Seen in the light of individual choices and preferences as regards liquidity needs, people seem to be more anxious to spend their incomes and less persevering in investments than they really are.

8. — Were the structure of the productive system to reflect the decisions of the individuals in respect of the length of their investments, the length of the productive process would, as a whole, be shortened and the capital endowment would be smaller, leading correspondingly to a reduced efficiency of production and seriously hindering economic progress.

In this connection we need only reflect that in recent times liquidity needs have been more widely and keenly felt. This trend has undoubtedly been intensified, at least in the last decades, by greater uncertainty about the future in a world which lives in the fear and the reality of world wars. But it has its roots also in strictly economic motives. Among these is the decreased willingness to tie up property in business enterprises even if the investor is the owner and is responsible for the management. Thus liquidity needs have pervaded the economic system not as an occasional factor, but as a persistent and prominent feature of this period: the period of the « mature » market economy based on credit.

In fact, however, the liquidity needs of the individual (with the consequent shortening of the investment period from the individual standpoint), may be, and are, satisfied without a corresponding shortening of the investment period from the standpoint of the economic system as a whole. That is to say, it is possible to create for individuals a so-called « artificial » liquidity which is not matched by the « natural » liquidity of the economic system represented by the maturing of the goods that emerge in the final stage of production. In other words, it is possible to render liquid for the individual what is not liquid for the community. For instance, investments in industrial shares or in Government securities may be liquid, or at least « short dated » for the individual, even though the investments are in long-dated real estate or hydro-electric securities or in funded debts or in perpetual annuities.

This creation of « artificial » liquidity, this conversion of non-liquid into liquid assets is due, as is well known, to the special characteristics of our economic organization, namely to the possibility of purchase and sale in the capital market and to the credit facilities. These opportunities allow transfers of investments from

one person to another to come into play to meet the liquidity needs of individuals, transfers which of course do not take place for the community as a whole.

Thus every entrepreneur who embodies his available resources in long term investments knows that he can liquidate or mobilize them even if at the cost of a « liquidation discount », within a shorter period than that at which the investment matures. And the same may be said for each saver who, when loaning his available funds to an entrepreneur, knows that he can liquidate or mobilize the loan he has made even before the date of maturity, by shifting his asset to another saver or using it as collateral security for borrowing, in his turn, from others. Hence the investment process offers both the saver and the entrepreneur greater liquidity than that which the economic system as a whole possesses.

9. — In all this, credit plays an important part, closely bound as it is to buying and selling operations. This is particularly true of the more advanced forms of operation on the financial market, such as those in securities which are so closely connected with banking activity.

But not only does credit contribute to the creation of « artificial » liquidity by supporting transfers of « waitings » from one person to another. As we have seen, in the course of time the disparity between « planned waitings » and « actual waitings » on the part of individuals is a persistent feature; and this disparity is itself usually covered by a prolongment *de facto* of the credits granted at call or for short periods.

Of course, what holds good in this regard for credits in general is especially true for bank credits, and makes itself felt more particularly in the creation of bank-money. In that process we have, substantially, a counterpart between credits granted by the public to the banks (the Central Bank included) and the credits granted by the banks to the public. While the former are for the most part « sight » or « short dated » credits, and so represent for the individuals the typical form of liquidity, this is certainly not the case for bank loans considered from the point of view of the economic system as a whole.

Thus, considered from the standpoint of the economic system, the real form of investments ends up by being, so to say, disconnected from the decisions taken by individuals as to the length of the waiting period inherent in the postponement of consumption. And thus, thanks to the continual improvements introduced into the basic institutions of the market and credit economy, it has been found possible to reconcile « artificially » what seemed « naturally » irreconcilable. That is to say, a means has been found for satisfying the increased individual needs without renouncing the ever growing need for long term investments.

This fact calls attention to the vast institutional opportunities that exist for the creation of liquidity. It also points to the necessity for determining in what manner and to what extent it is advisable to encourage the creation of such liquidity by following a suitable monetary and credit policy.

10. — To sum up, what we have been saying about liquidity viewed from the standpoint of the « length » of the investment, matches what we had already said about liquidity viewed from the standpoint of the « volume » of investments.

From both points of view, liquidity-preference entails for the individuals the need of securing a « liquidity margin »; in one case by not investing part of their available savings, and in the other case by reducing the length of the investments. But while this margin is necessary for single individuals and single firms, which must take precautions against the uncertainties of the future, it does not have to be, and indeed cannot be secured, for the economic system as a whole. Thus there is a fundamental contrast between the tendency for individuals to establish a margin of liquidity, and the impossibility of providing such a margin for the economic system.

To this fundamental contrast must be imputed the indirect cost to which the community is exposed as a result of the liquidity needs of its individual members. This cost, as we have seen, might be immense considered from the point of view of the « volume » of liquid funds demanded for satisfying the « propensity to hoard ». For, as a result of hoarding, a down-



ward movement in income and employment would result. But the cost might be no less heavy if viewed from the standpoint of the « length » of the investments, through the impact on the factors that determine the efficiency and productivity of the economic system and hence the economic progress.

Nevertheless, this contrast is far from being incurable. In the case of the « volume » of liquid funds, the creation of bank-money may allow individual liquidity needs to be satisfied without entailing any cost to the community, since even individual sterile hoards may become profitable in the hands of the banks. The same may be said of the « length » of the investments. The special structure of our social organization allows the savings of individuals to be made more fruitful for the community, by making it possible for the real duration of the investments to be longer than what the various investors would have been willing to accept. And here again the part played by the banks is of primary importance.

All this confirms the view that the modern monetary and banking systems provide the most efficient instrument for satisfying the liquidity

### III. - THE LIQUIDITY OF THE BANKING SYSTEM

1. — This explains the anxiety felt by those who see in the steady growth of individual liquidity needs a threat to the free market economy based on credit, if not indeed to the whole capitalistic system. Even if we do not share this anxiety, we cannot doubt that great importance should be attached to liquidity needs, and therefore to banking and credit policy as regards the ways of, and the limits to offsetting the dangers involved in liquidity-preference. On that policy, indeed, depends the possibility of satisfying liquidity-preference suitably and within adequate limits, and therefore the possibility of avoiding, or at least attenuating, the serious consequences to which it may give rise.

The importance banking policy thus acquires as a means of satisfying the liquidity needs of individuals, leads us to modify a hitherto widely

needs of our times. But it also means that the economic system is exposed to greater instability. The same ups and downs as occur in the volume of bank-money, occur also in the length of the investments. Here again the changes and inversions in the length of the « waitings » on the part of the public, and the inadequacy or lack of stabilising reactions on the part of the institutions through which artificial liquidity is created, may act in such a way that the creation of artificial liquidity helps to accentuate the cyclical fluctuations to a degree which makes them « critical ».

Thus in the field of liquidity, as in any other sector of economic life, institutional or « artificial » creations entail a « cost » for the community. Indeed, it is possible to reconcile what at first sight seemed irreconcilable: to meet the increased demand for liquidity of the individuals, a means has been found not only of creating a greater « volume » of liquid funds, but also of lengthening the investment process as required by the developments of the productive system. But this is done at the cost of more marked fluctuations in the level of economic activity.

accepted explanation of the functions of the banking system. Seen from this angle the banking system besides providing the means of payment required by trade, besides transferring capital from lenders to borrowers, also and above all serves to satisfy the liquidity needs of the economic system and of the individuals composing it. In other words, we should identify the essential function of credit institutions as that of satisfying liquidity needs. Therefore, on the one hand, the banks should provide the requisite degree of liquidity both as regards the volume of liquid funds and as regards the length of investments; on the other hand they should act in such a way as to avoid cyclical fluctuations, or at least to reduce their amplitude.

But the banks do not only « create » liquidity for others; they also demand liquidity themselves. That is to say, they also have liquidity

needs which are those not only of the individual banks but of the banking system as a whole. As we have pointed out at the beginning of this paper these needs are of primary importance to the banks. Therefore we must now enquire — and this is *the* liquidity problem of the banks — if and within what limits the banks can provide for the liquidity needs of others while satisfying their own; and, it should be added, while at the same time meeting the other requirements of banking policy.

2. — The nature of this problem differs, of course, according as we consider the needs of the individual banks, or those of the banking system as a whole including the Central Bank. Nevertheless, as is well known, this problem was solved for more than a century, both for individual banks and for the system as a whole, by the adoption of a single simple principle, the rule of « self-liquidating paper ».

This principle was supposed to hold good both for individual banks and for the system as a whole, and to guarantee bank liquidity as regards both the volume and the term of bank loans.

In fact, the banks, by restricting themselves to short-term commercial credit, would automatically regulate the volume of their outstanding loans, and consequently, the volume of bank-money. This consideration had great weight in the discussions of the question of « free banking »; for it seemed to make superfluous any kind of « quantitative » control. In this way the banks were supposed to be able to secure a « sound » activity and to provide adequately for the liquidity of their customers within the limits of their own liquidity.

But the economic literature of the XIX century had already called attention (let us remember BAGEHOT) to the fact that it is useless for the banking system as a whole to attempt to secure liquidity on the assumption of the « self-liquidation » of production in the downward phase of the trade cycle. And we have had first-hand proof, more especially during the tragic experience of the great depression of 1931-1933, that under such circumstances bank policy based on the principle of « self-liquidation » can only accentuate the price slump, leading, to use HICKS's expression, « to the

explosion of the monetary mine » (9). It is thus evident that the banking system as a whole can only satisfy its own liquidity in so far as it succeeds in satisfying the liquidity of the economic system as a whole by creating a larger volume of liquid funds. Otherwise, as the depression develops and the unsatisfied liquidity-preference of the public makes itself more keenly felt, the situation may give rise to a real « liquidity crisis » affecting the whole banking system and involving even its soundest units. Such a policy, were it to be driven to its ultimate consequences, might even lead to the collapse of the banking system with inevitable reactions on monetary stability.

3. — It is therefore easily understandable that in the last few decades the theory of « self-liquidation » has been gradually set aside and replaced by the « shiftability theory », which considers bank credits as more or less liquid according to the degree to which they can be transferred either on the open market or from one bank to another or, in the last resort, to the Central Bank, regardless of whether they are granted to public or private concerns, whether their purpose is to finance consumption or production, circulating or fixed capital. Thus, substantially, the liquidity of the banking system comes to be based exclusively on the « artificial » liquidity of the economic system, for it is due above all to the special arrangements that allow banking assets to be shifted.

It should, however, be borne in mind that these principles do not have the value of eternal truths, but are only contingent rules of thumb, adapted to the changing requirements of economic life, as it develops from one period to another; nor should it be thought that we can completely neglect the « natural » liquidity of the economic system, or discard entirely the « self-liquidation » principle.

Indeed, we have already stressed the fact that the lengthy investment processes required to attain greater efficiency of the productive system should always be so contained as to keep the normal maturity rate of the production flow in step with the rate of consumption. That is

(9) In *Trade Cycle*, 1950, p. 160.

to say, we have stressed the need for avoiding excessive investments which may occur for the community as a whole no less than for its individual members. The principle of self-liquidation, as we have seen, cannot in itself suffice to avoid such excesses. It may however attenuate them. In fact, it may be highly important that the banking system should not lose sight of the degree of maturity of the goods in the productive process, as seen through the self-liquidation of bank loans. And from this point of view, just as it might be fatal to insist on basing liquidity on the principle of «self-liquidation» in the downward phase of trade cycle, so it might be a mistake not to take that principle into consideration in periods of normal development and still more in periods of economic expansion. By so doing one would be setting aside a precious and perhaps irreplaceable stabilising factor in the economic system, which contains so many elements of instability.

4. — One cannot therefore claim to solve the problem of the liquidity of the banking system by setting up now one now the other principle as a dogma. The problem, let us repeat, consists in seeing if and how and within what limits the banks can provide for the liquidity needs of the market while satisfying their own, without forgetting the other goals of a sound banking policy. To solve the problem satisfactorily, we must gather together the different aspects of banking policy so far considered. And in this framework we must consider the ways in which banks «create liquidity», as regards both the «volume» of liquid funds and the «length» of investments.

In so far as the «volume» of liquid funds is concerned, we must first of all go back to what the commercial banks can really do through the creation of deposits. In considering — in Section I — the problem of deposit creation, we referred to: (a) the part played by the banks themselves through their lending policy (*i.e.* through their willingness to reduce their own degree of liquidity); (b) the part played by the public (through their degree of preference for bank deposits rather than for bank-notes); (c) the part played by the Central Bank (through its action in fixing the total quantity of bank-notes issued). It will be clear that if we are to

graduate the importance attributable to each of these three factors in the formation of bank deposits, primary importance must be given to the Central Bank.

It is therefore within these limits that we must study what the commercial banks can really do. Above all they can enlarge or restrict the contribution they make to the formation of deposits by restricting or enlarging their own «degree of liquidity». In the final analysis it may be said that they can best provide for their own liquidity needs and those of others by respecting the golden rule handed down from the past which requires that the banks should be prudent in granting credit in periods of boom, so as to be able to assist their customers more generously in periods of depression.

The possibilities and responsibilities of the Central Bank are, we repeat, much greater. One point of fundamental importance emerges here, *i.e.* that the Central Bank, whatever may be the ultimate aims of its policy (ranging from some form of monetary «neutrality» to some form of economic «stability») must take account of the liquidity needs of the public originating in the «propensity to hoard», just as it takes account of the liquidity needs originating in production and exchange. These two needs may, according to circumstances, either replace or be superimposed on one another. If we consider liquidity needs from the standpoint of the «propensity to hoard», we are better able to understand their significance, and the consequences for income and savings of satisfying or failing to satisfy them. We are made aware that, should the growth in the volume of liquid funds be proportionate only to the growth of trade and production, the requirements arising from the «natural» growth of liquidity needs might not be satisfied, leading to depressive effects on income and savings. The figures we have quoted showing the progressive growth in the United States of the ratio between liquid funds and income (a ratio that neutralises the changes in the purchasing power of money) give an idea of the importance of this aspect of the liquidity problem.

Another point of fundamental importance to which we have already referred relates to the formation of deposits. In this connection the need for cooperative action on the part of the

Central Bank must be recognised, since the minimum of bank-notes needed as cover for deposits has to be provided by the Bank of Issue. If this fact is not taken into account one may be led to ascribe any falling off in the growth of bank deposits to an insufficient accumulation of savings (seen in «real» terms beneath the monetary «veil»); a falling off which may instead be caused by excessive restriction of the amount of currency in circulation.

In order to secure an adequate supply of liquid funds it is therefore necessary that the policy of the Central Bank should be sufficiently flexible. This means that the process of converting savings into monetary form should be continuously assured, and suitably sustained when there is the slightest tendency for the level of economic activity to fall. The need for a sufficiently elastic monetary policy should, however, be understood as subject to the limits that Central Bank must respect — as we shall note — whatever be the monetary system under which they work.

5. — What we have said about the «volume» of liquid funds holds good, fundamentally, also for the «length» of investments.

Here again the influence of the commercial banks may make itself felt. As we have stated, the banks can contribute and always have contributed to the creation of «artificial» liquidity, matching the short-term credits granted to them by the public with investments which in reality are of much longer duration. Undoubtedly, an increasingly wide acceptance of the principle of «shiftability» may help to extend more and more the creation of artificial liquidity by the commercial banks. This does not imply that the banks should finance industry directly (either in exceptional cases, or, still less, as a regular practice), for that would mean converting «commercial» banks of the English type, into «mixed» banks of the German type.

The problem here discussed, indeed, is not one which involves commercial banks only; it involves the several categories of credit institutions and also the Central Bank, which must have sufficient powers to regulate the working of the whole banking system. And in the last resort, it is the Central Bank which does or does not create that amount of «artificial»

liquidity needed to make individual savings more fruitful for the community as a whole, through their employment in the long-term investments which are required in the modern economy.

In this connexion it is perhaps not superfluous to note that just as it would be incorrect to assume that the savings of individuals determine by themselves the total *volume* of liquid funds, so likewise it would be incorrect to assume that the decisions of the various individuals as to the length of their respective «waitings» can by themselves determine the *length* of the investments, from the standpoint of the economic system as a whole. In both these cases the action of the Central Bank cannot but have a considerable — indeed a decisive — influence. This action cannot, of course, be limited to preventing abuses, or to restricting the investment activities of the commercial banks to short-term loans. When once this has been done, it is essential that the needs not met by the commercial banks in the process of strengthening the productive structure be satisfied; it is essential to provide in some other way for functions that are essential to the life of a free market economy based on credit. For this purpose, new systems must be devised for an adequate and practical solution of the problem arising from the lengthening of the productive process. These solutions have already been foreshadowed as new forms of lending which, while excluding a return to the system of the «mixed» bank, will permit the indirect investment in long-term industrial loans of an adequate share of the available resource of the banks, safeguarded by the necessary margins of security and shiftability.

6. — Of course, in all this there are limits to the activity of the Central Bank also. These limits were indeed more obvious under the gold standard system, but they subsist whatever be the monetary system in force.

Above all, the experience acquired in the last few decades has made the Central Banks aware of the important influence of monetary and credit policies on the balance of international payments. It has shown that an «excessive» acceleration in the creation of liquid funds, or an excessive lengthening of the invest-

ment process tends to express itself in a persistent deficit in the balance of payments. This, in its turn, cannot but give rise, even if only in the long run, to devaluation of the currency.

What these limits are in so far as they are connected with the problem of liquidity, we have already indicated. We have pointed out that, on the one hand, in the case of the creation of immediate liquid funds, lending by the banking system as a whole must keep pace with the rate of savings, and with the rate at which the public lends to the banks. On the other hand, in the case of a lengthening of the investment process, long-term investments must also be contained within limits which allow the normal maturing of the flow of production to keep pace with the consumption rate. These limitations are, in effect, merely two aspects of one and the same necessity; the rate of investment must not exceed the rate of saving. This is a necessity which must always be respected

if the economic system as a whole is to be assured of an adequate degree of liquidity and is to avoid having to «liquidate» in advance excessive investments, and having to meet the consequent cost.

This explains why the liquidity position of the economic system, and still more of the banking system, varies greatly as between various countries, in accordance with the flow of income and savings in relation to the growth of population and the increase in capital per head. That is to say it explains why it is that in countries that can normally count only on a comparatively small volume of savings, the liquidity problem is more keenly felt. And this is, we think, reflected also in the way in which the problem itself is understood, and in the greater attention paid to the limits of an economic nature within which each country may create for itself the liquidity margins that it needs.