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5

Economic Consequences of Instalment Credit Fluctuations

ANALYSIS of the consequences following upon changes in consumer instalment credit will be concerned chiefly with the contribution of this type of credit to aggregate effective demand. But in various places possible repercussions from the impact of new credits on particular industries will also be considered.

It is again convenient to distinguish between the long-run growth and the cyclical fluctuations of instalment credit. We shall discuss, first, the effects of a rapid introduction of credit and of its spread from one field to another. Second, we shall consider the possible effects that may be brought about by the cessation, or conceivably by the mere slowing down, of the rate of growth of instalment credit. And finally we shall assume that the institutional development has come to an end, at least for the time being, and investigate the purely cyclical forces still in operation.

The greater part of the analysis will have to be qualitative and the conclusions must necessarily be rather tentative. This is due not only to the inadequacy of our statistical information about vital aspects of instalment credit itself, but to other factors as well. Even if we had absolutely complete and reliable figures on outstandings and new credits (also for the period before 1929), and if we were certain that changes in the amount of credit outstanding translate themselves completely into changes in consumer expenditure—or, more generally, if we knew precisely to what extent new credits and repayments are substitutes for other forms of dissaving and saving—there would still remain questions about

the indirect effects of changes in instalment credit which cannot be answered definitely, because their satisfactory clarification must await the solution of major problems of business cycles and of the theory of economic dynamics in general.

EFFECTS OF A STRUCTURAL EXPANSION

There can be no doubt that a rapid introduction of instalment credit, facilitated by the perfection of lending machinery and by the opening of the sluices between the money market and this particular credit field, must have a stimulating effect on the economy as a whole.[1] Such a development took place in the years between 1920 and 1929. It is not clear whether the minor depressions of 1924 and 1927 were marked by an appreciable contraction in outstanding instalment credit as a whole; automobile credit shrank in 1927, although furniture and department store credit did not. Probably the depression of 1927 showed itself in a temporary decline in the rate of advance rather than in an absolute fall in the amount of outstanding instalment credit. Lack of information makes it impossible to discuss the depression of 1924. It is certain, however, that in neither year did anything happen comparable to the contraction that occurred between 1929 and 1933.[2]

But how should the stimulating effect connected with the first introduction and rapid growth of instalment credit be expected to influence economic stability? Should this development be regarded as favorable or unfavorable for the at-

[1] This statement needs qualification only in cases where the supply of loanable funds is completely inelastic and where credit is therefore of the pure transfer type. This will hardly ever be the case, even at the top of the boom, but the stimulating force of a given expansion of credit will be the weaker the closer credit approaches the transfer type, or the more inelastic the supply of funds. Moreover, in a situation of complete employment a credit expansion could lead only to a price rise and not to a rise in output.

[2] This conclusion is corroborated by Rolf Nugent's (admittedly rough) annual estimates of consumer credit outstandings for the period from 1923 on. Both the recession of 1924 and that of 1927 indicate only a retardation of the rate of growth. See his *Consumer Credit and Economic Stability* (1939) pp. 124, 125.

tainment and maintenance of full employment and maximum output?

The answer to such questions will depend on a writer's general attitude toward credit expansion, and will vary according to his diagnosis of the economic situation during the period when consumer instalment credit was introduced and developed. We shall not attempt here to give a definitive answer to these preliminary questions—either to the theoretical ones concerning the effects of credit expansions in general or to those concerning the diagnosis of a particular period. The following pages will explore the implications for the present problem of certain views which are widely held by economists and which influence the general public.

During a cyclical depression, with growing unemployment and excess capacity, with the volume of aggregate demand contracting and prices tending to fall, with the spirit of enterprise failing in an atmosphere of pessimism, and with investment shrinking, most writers would regard the introduction or development of consumer instalment credit as a desirable antidote to contraction.[3] Furthermore, most economists would contend that the situation is not materially changed when an acute contraction has come to an end and the economic system either "bumps along the bottom" of the depression or starts gradually on a new expansion. So long as there are idle productive resources an expansion of consumer demand brought about by the introduction and development of instalment credit will be regarded as a desirable factor. It will either lift the system out of the agony of the depression or, if it has already started on an upward movement, hasten the upswing and the reemployment of resources.[4]

[3] Unfortunately, however, instalment credit is not likely to make great strides during an acute depression, though the expansion of FHA loans in 1938 would seem to suggest possibilities to the contrary.

[4] There is general agreement, however, that great care must be exercised in diagnosing the existence of underutilized productive resources. The mere existence, on the statistical record, of large numbers of unemployed persons does not imply that output can be easily expanded in every direction at constant or only slightly rising costs. The statistically recorded unemployed

The farther the economic system gets away from the trough of a depression, and the closer it approaches a state of full employment, the sharper becomes the divergence of opinion among different writers with respect both to their diagnosis of concrete situations and to their general theory (if they have any) about the factors that are likely to bring about a downturn, and consequently about the policies or developments best calculated to avoid, postpone or mitigate the collapse of the upswing.

There is, on the one hand, the large group of "oversaving" or "underconsumption" theorists who believe that the greatest threat to a smooth economic development and full utilization of resources is excessive saving, that is, saving in excess of available investment opportunities. This theory is widely held at present, and is strongly supported by such influential writers as J. M. Keynes and Alvin H. Hansen and their followers. It can be briefly summarized as follows. At any income level people will save a certain part of their income; in general when income rises the amount saved will also rise.[5] If any existing level of income is to be maintained the money which the savers fail to spend on consumption must be spent on investment goods, either by the savers themselves or by somebody else who borrows from them directly or indirectly. The writers mentioned above see a growing danger that not all savings will find an outlet in investment. They believe that a chronic dearth of investment opportunities is to be expected in the future. Reasons for this chronic dearth are thought to be the reduction or cessation of population growth, the impossibility of discovering

[5] It is generally agreed that not only the amount of saving but also the proportion of income saved will increase. But for the purpose in hand the weaker assumption that the amount increases is sufficient.

do not represent a pool of homogeneous labor on which every industry can draw. In view of the notorious lack of mobility of labor much depends on the composition of this pool. If its occupational and geographical distribution is not favorable for an expansion of output in a particular direction, more or less serious bottlenecks will make their appearance and the expansion will exhaust itself in a rise of costs and prices with a relatively small increase in output.

new territories of the kind that absorbed large quantities of capital in the past, impediments to international lending. The result is that saving has tended, and will increasingly tend, to exceed investment.[6] Such an excess of current saving over current investment means deflation; the flow of money cannot be maintained, demand falls off, prices sag and output shrinks.

On the basis of such views one must come to the conclusion that anything which tends to decrease savings or increase investment will relieve the situation and raise output and employment. The introduction and development of consumer instalment credit is certainly a powerful factor of this kind.[7] In the Keynesian terminology its effect can be construed either as a rise in the marginal efficiency of capital (if the acquisition of durable consumer goods is regarded as an investment) or as a rise in the marginal propensity to consume (if "soft" goods are bought or if the purchase of durable goods is counted as consumption).[8] In both cases the result is an increase in the volume of output and employment.

The writers of this school do not hesitate to apply this reasoning to interpreting the economic development of the twenties. According to A. H. Hansen the rise in the output of durable consumer goods, the investment in "consumer capital," of which the automobile was the most important item, and the way in which this rise was financed, constituted one of the factors responsible for the boom of the 1920's. "The prosperity of the postwar decade rested heavily upon: (1) residential building; (2) public construction, financed heavily by government deficits—witness the ten billion dollar increase in state and local government debt; (3) a large export surplus, financed by foreign loans; (4) the rise to full maturity of the great automobile industry; and (5) the grow-

[6] A good statement of this view will be found in G. Colm and F. Lehmann, *Economic Consequences of Recent American Tax Policy*, Part I (Supplement I of *Social Research*, 1938).

[7] We have seen, however, that the long-run influence on saving is not so clear.

[8] The terminology depends on the choice between the broader and narrower definition of saving, distinguished in Chapter 2 and Appendix A.

ing importance of durable consumers' goods, financed in large part by a billion dollar annual growth in instalment credit."[9] Hansen then asks how the "new era" would have fared without these factors. "Had these [factors][10] been missing, would business capital outlays have filled the gap? Is there not a high probability that with these stimuli removed business capital expenditures would have been made on a more restricted scale, leaving the economy stagnant if not depressed?"[11]

The precisely opposite view is held by writers such as F. A. Hayek, L. Mises, A. Spiethoff. They do not believe that a lack of investment opportunities compared with the flow of saving is the typical obstacle to the continuation of an upswing and the maintenance of business activity on a high level. On the contrary, according to their opinion, prosperity periods are interrupted by a scarcity of capital for productive purposes, that is, by excessive consumption (undersaving) rather than by oversaving (underconsumption). Hayek and Mises, moreover, believe that a scarcity of capital is necessarily brought about by a credit expansion and that any expansion of credit must sooner or later lead to a crisis and depression.

Although these writers have not specifically dealt with the problem of consumer instalment credit, it clearly follows from their theory that they must regard the introduction and development of such credit as a dangerous and destabilizing factor, operating to bring about or to intensify an "unhealthy" boom and to make the inevitable reaction all the more serious and violent.[12]

[9] A. H. Hansen, *Full Recovery or Stagnation?* (1938) p. 298.

[10] He here mentions only three of the factors enumerated above: "the accumulated backlog of housing requirements . . . , the rapid capital expenditures of state and local bodies, and the rather reckless foreign lending." The same question, however, applies just as well to the other two items in the list, although they are perhaps of smaller quantitative import.

[11] *Ibid.*, p. 298.

[12] Theoretical analysis along such lines has been applied by many writers to the boom of the 1920's and its collapse in 1929. It may be sufficient to mention but two such works: L. Robbins, *The Great Depression* (London 1935); and C. A. Phillips, T. F. McManus and R. W. Nelson, *Banking and*

Between these two diametrically opposite groups there are other writers like D. H. Robertson who refuse to generalize, and hold that a boom may be brought to an end by different forces—by oversaving (insufficiency of consumer demand) in some cases, by undersaving (scarcity of capital) in others and by still other types of maladjustments and disturbances.[13] From these views it would follow that a development which stimulates consumption, like the introduction of consumer instalment credit on a considerable scale, may sometimes be conducive, and at other times detrimental, to economic stability.

In short, then, there can be little doubt or disagreement about the immediate effects of the introduction and development of consumer instalment credit: it is clearly of a stimulating character. But judgment concerning its bearing on economic stability as a whole must depend on one's theoretical views about the cycle and one's diagnosis of the concrete situation.

EFFECTS OF A CESSATION OR CURTAILMENT OF STRUCTURAL GROWTH

It goes without saying that an institutional contraction of instalment credit would be a depressing factor. If, for example, instalment selling were abolished, the effect would be highly deflationary.[14] There can hardly be disagreement

[13] See Robertson's *Essays in Monetary Theory* (London 1940), especially "Industrial Fluctuations and the Natural Rate of Interest" (pp. 83 ff.) and "A Survey of Modern Monetary Controversy" (pp. 133 ff.). See also Gottfried Haberler, *Prosperity and Depression* (editions of 1939 and later) pp. 127-33 and 364-76.

[14] Such a decline could be brought about, for example, by government measures designed to close or narrow the passage between the money market and the consumer credit field. In this country, until recently, the tendency was in the opposite direction; governments and monetary authorities tried to remove impediments to the flow of funds into consumer credit. The Federal Housing Administration and the Electric Home and Farm Authority,

the Business Cycle, A Study of the Great Depression in the United States (1937). Neither of these works mentions the rise of instalment credit specifically; but there can be no doubt that it fits perfectly well into both books' analysis of credit expansion.

on this point. Even those who feel critical and apprehensive of what they would call the "artificial" stimulation afforded by the initial introduction and development of consumer instalment credit, would admit that its subsequent contraction must have a depressing influence. The evil effects of a credit inflation cannot be undone by a subsequent deflation.

It seems plausible, however, that, even if there is no actual contraction, a sudden cessation of growth or perhaps only a marked slowing down of the rate of progress will have a depressing effect. And it is very likely that after a period of structural expansion, during which the financial machinery has been perfected to meet the new demands and instalment credit has gradually spread over the whole area that can be handled under the existing institutional framework and procedures, there will occur at least a temporary cessation or a considerable slowing down of the rate of advance.

Such a temporary resting point seems to have been reached in 1929; certainly the advance from the peak in 1929 to the next one in 1937 was insignificant as compared with the expansion that occurred in the 1920's. But although there are good reasons (as we shall see immediately) to believe that such a break in the trend will have unfavorable repercussions on the economy as a whole, it is not possible to evaluate concretely the contribution of this factor to the collapse of the boom of 1929. Too many different factors were involved to permit the separation of the effects of a

through their operating policies, have tried to encourage liberal credit standards and to familiarize private institutions with the consumer instalment credit business. But government measures of an opposite kind are also familiar. In Nazi Germany, even long before the outbreak of the war, the authorities strongly discouraged or even stifled consumer credit. This action is quite in line with the general objectives of German economic policy in recent years; the problem there has been not to stimulate business but to prevent government spending from leading to outright inflation, and hence any method that keeps down private expenditure, both on consumption and on investment, must be welcome. This country, after a long period of underutilization of resources, has found itself in a similar situation since defense expenditure has threatened to lead to inflation. In such a situation a policy of contracting or abolishing consumer credit must find a place in the armory of restrictive (anti-inflationary) weapons. This subject is discussed in Chapter 6.

single one.[15] Moreover, it is very difficult, if not impossible, to separate in a concrete instance the cyclical from the secular factor. The outstanding feature of the charts presented in Chapter 3 is the cyclical drop that occurred in all credit series after 1929. This would have had serious consequences even if the next peak of 1937 had been so much higher than the peak of 1929 that one could hardly speak of a 1929 break in the secular trend, even a temporary one.

Those who believe in the dangers of a chronic tendency of saving to outrun the existing investment opportunities, and who see in the development of instalment credit a welcome outlet or offset for savings, will naturally conclude that a cessation or a mere decrease in the growth of such credit will automatically increase the deflationary pressure. But even if one does not accept this theory of vanishing investment opportunities there are reasons to believe that a break in the upward trend of instalment credit may cause a temporary disturbance.

There is, first, a danger that in a new field of business which still lacks the guidance of a well-established tradition, mistakes will be made,[16] unsound practices will develop and rapid growth will overshoot the mark and necessitate a retrenchment. The critics of the instalment system in the 1920's who denounced it as a destabilizing factor were concerned mainly with these dangers. But the instalment credit business seems to have avoided these perils to a remarkable degree.

Let us now abstract from such a development. Assume that outstanding credit ceases to grow, new credits becoming

[15] It should be noted that we are not here concerned with the deflationary pull exerted by the contraction of instalment credit which occurred after the breakdown of the boom in 1929 and continued until 1933. This contraction must be explained mainly as a result of (and as an intensifying factor in) the cyclical depression, which would have occurred in substantially the same degree even if the 1929 break in the upward trend of instalment credit had not contributed to the interruption of the upswing in that year.

[16] Mistakes, that is, in a pure credit sense, a poor selection of credit risks leading to avoidable delinquencies and losses.

roughly equal to repayments. There is not yet an actual contraction, only a cessation of expansion. The purchasing power of consumers is not actually reduced, as it would be if repayments exceeded new loans; there is thus no deflationary effect, but the stimulating effect has ceased. The existing amount of outstanding credit is maintained as a revolving fund but it no longer grows. In considering the unfavorable reactions that are likely to result from such a change we shall for the present ignore possible influences on industries whose products are closely connected with the expansion of instalment credit. The first problem is the general effect on the economy as a whole.

As long as consumer instalment credit was expanding, expenditure on consumption was increasing and consumption goods industries experienced a rise in sales and perhaps also in prices.[17] When the rise in demand and prices comes to an end, producers, if they have become accustomed to the rise in prices and have been led to expect it to continue, will suffer losses and will react by reducing output. But even if prices had not risen in the consumption industries, and no rise had been expected by producers in these trades, disturbances would be likely to occur in other industries. The mere fact that demand for a number of consumer goods was rising for a while and then stopped rising (without as yet actually falling) would probably bring about an absolute contraction of demand for, and hence output of, certain types of goods—producer goods used in production of consumer goods.

The reason for this is that consumption industries, as long as they are expanding output (at rising or constant prices), are adding to their equipment. When they stop increasing production, or perhaps even when they reduce the rate of increase too quickly (without reducing absolutely the volume of output), they will reduce or cease their purchases

[17] The following reasoning would apply also if the demand for, or the prices of, consumption goods did not rise but was prevented by instalment credit from falling or from falling faster.

of equipment. Thus there may occur disturbances in certain producer goods industries, even if no troubles arise in the consumption industries immediately concerned; the latter may effect the transition from an expanding to a stationary state quite smoothly.

All this is merely an application of a well-known theorem of business cycle theory, the principle of "acceleration and magnification of derived demand." According to this principle changes in rate of increase in demand for the product of any industry tend to be transmitted with increasing violence to the so-called "higher stages of production"—those industries which supply machines and other means of production to the industry in which the original change in demand occurred.

It is true that a complete and adequate statement of this theory would necessitate a number of qualifications, relating mainly to the existence of excess capacity, changes in the methods of production, the state of expectations, and fluctuations in the replacement of existing equipment. It is even conceivable that the transition from an expanding to a stationary state of affairs could be achieved quite smoothly; this might be the case if replacement demand rose in proportion to the decline in demand for new equipment, or, to put it the other way around, if the decline in demand for new equipment were offset by a gradual rise in replacement demand. But such a smooth development would imply a particular timing and a unique quantitative relationship of the various processes which can hardly be expected to exist in practice.[18]

[18] For a discussion in greater detail see Haberler, *op. cit.*, pp. 54, 55, 112. Hayek is of the opinion that this type of maladjustment can be avoided, and that a smooth transition from an expansion to a stationary state (or from a rapid to a slower expansion) will be effected in all cases by the automatic working of the price mechanism, unless the expansion in output of durable goods is "artificially" stimulated and financed by an inflationary credit expansion. No proof has been forthcoming, however, that would show the necessity or even the probability of such a smooth development (see F. A. Hayek, *Prices and Production,* revised edition, London 1935).

EFFECTS OF STRUCTURAL CREDIT EXPANSION ON PARTICULAR INDUSTRIES

If we assume that the direct effect of instalment credit is not widely diffused over the whole field of consumer goods, but is highly concentrated on particular products, we can apply analyses similar to those used in the preceding sections in order to trace the repercussions on particular industries of the introduction and rapid institutional growth of instalment credit, and of a break in its trend. If the industries so affected are important enough, the cyclical movement of the economy as a whole may be affected. It should be noted that this effect is independent of cyclical fluctuations of instalment credit itself; such fluctuations will be discussed in the following section.

Among the industries directly affected by an expansion of instalment credit it is those producing durable goods rather than those producing perishable goods that are exposed to the most significant repercussions. The reason for this may be shown by an analysis of a much simplified hypothetical example. Let us assume that a new non-durable good, say grapefruit, is introduced to consumers. Consumption and sales rise rapidly and reach a saturation point;[19] thereafter consumption per unit of time no longer rises, but stays at the maximum level that has been reached. Production will also reach a maximum at that level, and stay there, for there is no reason for it to fall below that level. It is possible, of course, that production may overshoot the mark and run ahead of consumption, necessitating a downward adjustment of output. Producers may expect a continued rise in demand and expand production beyond what turns out to be the maximum level set by the saturation of consumer demand. Other possibilities are that demand may be subject to spontaneous changes or that a speculative accumulation of stocks may cause trouble. But all these sources of maladjustment

[19] Instead of in terms of a saturation point the argument could be put in terms of a reduction in the speed of progress.

between production and consumption, supply and demand, are present also in the field of durable goods.

In durable goods, however, there is an additional possibility of maladjustment that is not present in the case of non-durable goods. If the new commodity introduced to the consumer was a durable one, say the automobile, here too sales to the ultimate consumer will rise and somewhere a saturation point for the services of automobiles may be reached.[20] Now the factor of durability becomes important. If the automobile has been introduced so rapidly that the saturation point for its services is reached before the first automobile sold is replaced, then the demand for new automobiles will fall to zero, although the consumption of automobile services has not declined at all, but has simply ceased to rise.[21]

Here we have, reduced to the simplest possible terms, the difference between the behavior of demand for durable and for perishable goods. A durable good is a bundle of services that become available, successively, over a certain period of time. It follows that the consumption of these services can continue for a long time almost unimpaired, without any additions being made to the stock of durable goods that provide the services—how long depending, of course, upon the durability and the age distribution of the durable goods in use. This means that if the current consumption of services is to be raised (assuming that there are no unutilized goods in the hands of consumers) it can be done only by providing services for a certain period ahead as well as for

[20] The saturation may be a temporary one. When it is reached and how long it lasts will depend upon many factors—the wealth of the community, the price of automobiles, their technological progress and obsolescence, operating expenses, the carrying capacity of highways, and the like. When the underlying situation changes, a new wave may start and lift the saturation point to a higher level. Here again the argument could be presented in terms of a slowing down of progress rather than in terms of an absolute (permanent or temporary) saturation. This would be much more realistic, but it would not throw into such high relief the relationship we are interested in.

[21] It might be instructive to consider the case of an infinitely durable good, that is, one that does not require replacement. Railway embankments may be a case in point. In this case production would cease altogether if the required stock were once constructed.

the present: current services can be supplied only by durable goods that contain not only current but also future services.[22]

This is again an application of the acceleration principle of derived demand. Again all sorts of qualifications must be made, and certain situations are conceivable in which the transition from a rising to a stationary level of demand for the final product (services) can be made smoothly, without fluctuations in the demand for the good itself. Again the possibility of a smooth transition depends on a particular relation between new demand and replacement demand. For example, in order to attain smoothly the maximum demand for automobiles which may be maintained indefinitely at remunerative prices, this demand must be satisfied gradually in a particular way, so that replacement demand will gradually take the place of new demand. Otherwise there will be a drop in demand for, and thus in production of, automobiles, because new demand will fall off before replacement demand has sufficiently developed to take up the slack. Therefore a too rapid expansion of a durable goods industry is likely to lead to a more or less serious setback. Moreover, this drop in demand for the durable good may easily show a tendency to recur at certain intervals, without any fresh disturbances having occurred; such a wavelike movement is the so-called "replacement cycle."[23]

The idea of a reinvestment or replacement cycle is fairly simple. Such a cycle occurs if a stock of durable goods (say of automobiles) has been built up "too quickly," production having been more or less concentrated within a few years. If we assume that the durability or service life of different cars is, if not the same, at least not too different, then it is clear that the cars built in the same year will come up for scrapping and replacement at around the same point of time.

It would be easy to make rigid, simplifying assumptions

[22] In technical terms we might say that present and future services are in joint supply.

[23] See especially J. Einarsen, *Reinvestment Cycles and Their Manifestation in the Norwegian Shipping Industry* (Oslo 1938).

and deduce from them a perfectly regular replacement cycle. It is clear, however, that we should not expect to find a regular cycle of this sort in reality. Of the numerous reasons that make such regularity unlikely, a few may be briefly indicated. First, durability is not the same for all automobiles, but varies according to model, make and individual circumstances such as operating conditions, care in maintenance, accidents and the like. Second, as was pointed out before, the age at which a car will be scrapped is by no means determined only by technological considerations but may be advanced or postponed (within very wide limits) according to the economic situation (in periods of depression scrapping is delayed, in prosperity periods it is hastened, to a much greater degree than might be expected). And third, the total demand for automobiles does not remain unchanged, nor does it grow in a regular fashion; rather it fluctuates under the influence of numerous factors such as the level of income, price of automobiles, condition of highways, operating cost and the like. Taking all these factors into consideration we should expect not a regular replacement cycle but fluctuations in replacements.

The foregoing analysis would lead us to conclude, then, that a structural expansion of instalment credit may contribute to the emergence of fluctuations in particular durable goods industries if it too greatly accelerates their development, and that if a temporary saturation is reached in the demand for a particular durable good there may be not only a drop in demand but also a tendency toward recurrent disturbances because of fluctuations in replacements.

Before proceeding to another subject it may be pointed out that the relationships just discussed have another consequence. Durable goods, besides being an active source of disturbances making for changes in output and national income, are likely to impair stability by reacting strongly to changes in income caused by other factors.

Suppose there is a general depression attended by a fall in aggregate effective demand, however brought about. Con-

sumers are forced to cut down their expenditure all around. If their outlay for a non-durable good is reduced by, say, 25 percent, and if prices and costs are rigid, production need not fall by more than 25 percent. The instantaneous reaction may be stronger, for example because stocks may be reduced; but stocks can be reduced quickly, and thus it can be assumed that production will soon settle down at a new level 25 percent below the old one.[24]

On the other hand, if demand for automobile transportation services falls by 25 percent the chances are that the output of automobiles will temporarily drop very sharply, possibly to zero. The reason is, of course, the durability of the instrument. The greater the durability the larger the stock of services stored up, as it were, in the durable goods. When the demand for these services falls, the excess stock must be used up before new goods will be produced.[25] Hence the immediate relation of the output of durable goods to a given fall in effective demand is likely to be stronger than in the case of perishable goods. Also, this immediate reaction will be stronger than the permanent reaction. If the demand for automobile services falls by 25 percent and then stays at the new level, in the long run automobile production need not fall by more than 25 percent. It is very likely, however, that temporarily it will fall much more sharply, and that the new level will be reached only after a considerable delay.

Naturally such a sharp reaction of durable goods production to a fall in demand will affect employment and income. Workers in the durable goods industries will be thrown out of work and be forced to cut down outlay. This adds to the

[24] Stocks, in a sense, introduce in themselves an element of durability and give rise to acceleration in a manner analogous to the operation of durable equipment. See Haberler, *op. cit.*, p. 94.

[25] The "stocks of services" stored in durable instruments have the further peculiarity that they can be used only successively in time, while stocks of perishable goods, say of food, can be used up quickly. Hence by a price cut stocks of non-durable goods can be cleared quickly and forced into consumption, but in the case of durable goods there are serious limitations (unless the price falls to the scrapping level). For further details see *ibid.*, p. 341.

cumulative force of depression processes.[26] This is the reason why it was said that instalment credit makes for instability when it induces people in the long run to devote a larger percentage of their income and resources to the production and use of durable as compared with non-durable goods.

EFFECTS OF CYCLICAL FLUCTUATIONS

Let us now assume that the system of consumer instalment credit has reached a mature age—that the institutional and legal setting has been effectively developed and that the attitude of the public in general does not undergo any further change, at least for the time being. We may assume also that the transition from a steeply rising trend to a stationary situation (or an only slightly rising trend) has been made smoothly, or that the disturbances set up by the transition have subsided.

It might be thought, and has actually been said, that in these circumstances instalment credit ceases to be an independent factor influencing economic fluctuations.[27] In this argument it is granted that when there is a cyclical movement of business activity in general, and of sales to consumers in particular, we should expect also instalment credit sales, and consequently the volume of outstanding credit, to move in cycles; but these fluctuations are interpreted as a mere reflex of the ups and downs in the volume of retail sales, and not as an independent factor.

In a certain sense this argument is correct, but in another, more important sense, it is not. It is correct in the sense that cycles in general business, and particularly in the volume of retail sales, can be regarded as the cause, and cycles in instalment credit as the effect. Even this is not a logical necessity, for instalment credit could conceivably exhibit cycles

[26] For further elaborations see J. M. Clark, *Strategic Factors in Business Cycles* (National Bureau of Economic Research, 1934) *passim*, and Haberler, *op. cit.*, pp. 34-44.

[27] The argument in the following pages was largely prompted by discussion and correspondence with Professors J. A. Schumpeter and J. Viner and with Mr. Emile Depres of the Federal Reserve Board.

of its own, causally independent of the general business cycle:[28] the mere fact that the instalment credit cycle moves parallel to the business cycle is not in itself a sufficient reason for taking the latter as the cause and the former as the effect. But this parallelism of credit cycle and business cycle, in conjunction with certain other facts, seems to warrant the conclusion that the business cycle may be regarded as substantially independent of, and responsible for, the cycle in instalment credit: there were business cycles long before instalment credit reached its present level of development, there are business cycles in countries where instalment credit is little developed, and even in the United States the contribution of instalment credit to total consumer expenditure, although not negligible, is not very great as compared with other factors. The dog wags the tail and not the tail the dog.

From this it does not follow, however, that fluctuations in instalment credit will not influence general business.[29] Although the dog wags the tail, the wagging tail (if it is big enough) will affect the swings of the dog; the same muscular exertion will produce larger and longer swings in a dog with a big tail than in one with a small tail.

Let us assume that instalment credit depends in the most direct and mechanical fashion upon the ups and downs of general business; this would mean that the time series of instalment sales is similar in amplitude and timing to the series of total sales, in other words, that a constant proportion of total sales is made on credit. Even in this most straightforward case in which credit could be called a mere reflex of business cycles,[30] instalment credit will exert an influence

[28] The first introduction and institutional development must be regarded as a factor that is independent of the business cycle. But we are here concerned with the fluctuations of credit after the institutional framework has reached a stable position.

[29] In the fact that it draws this conclusion lies the weakness of the argument that instalment credit ceases to be an independent factor after the upward trend has come to an end.

[30] It has been suggested that we could speak of an independent influence of credit only if one of two conditions were fulfilled: first, if the amplitude of the fluctuations of credit sales were greater than that of the fluctuations of cash sales; or second, if the curve of credit showed a lead at the turning

on business cycles in general and on the cycle of total retail sales—one of the most important manifestations of business cycles—in particular. For, as we have seen, such a cycle in new credits will, under the usual repayment conditions, produce a similar cycle in the volume of outstanding credit, though the latter will show a slight lag at the turning points, a lag whose length will depend on the factors indicated in Chapter 3. Such cyclical fluctuations of credit outstandings cannot be regarded as a neutral or irrelevant phenomenon for business cycles. On the contrary, as will be shown in subsequent pages, we are forced to conclude from them that credit is an intensifying factor in business cycles—accentuating booms and deepening depressions. In other words, it operates as a resonator or amplifier of fluctuations set up by other forces. Presumably, however, it influences not only the amplitude but also the timing of business cycles, that is, it tends to shift the turning points, although it is not immediately clear in which direction.[31]

This reciprocal stimulation of different factors, implying as it does that the same factor may play the dual role of cause and effect, is not a peculiarity of instalment credit; it is a very frequent phenomenon not only in the cycle mechanism but in economic relationships in general.

If the argument in earlier chapters is valid it seems to follow from the cyclical fluctuations of outstandings that instalment credit has an intensifying influence on the business

[31] It would be rash, for example, to conclude without further proof that every factor tending to widen the amplitude of the cycle will tend also to increase its length. Such a factor may conceivably shorten it; or its influence on the length of the cycle may be different in different circumstances.

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points in comparison with the curve of cash sales. It is not easy to say definitely whether either of these conditions is actually fulfilled. There is little evidence to show that amplitude is notably greater in the case of credit than of cash sales (see Chart XII, below; this chart is based on annual data, because the statistical methods of deriving monthly series relating to commodity credit render it unsafe to draw rigid conclusions regarding the deviations of intra-year fluctuations in cash and credit sales, as was emphasized on p. 63 above). As to the second condition, the annual figures do not show credit sales leading or lagging behind cash sales at the turning points, and it is not believed that there is a systematic lead or lag of any importance.

cycle. During cyclical upswings consumer expenditures are inflated; during cyclical downswings they are deflated. If there were no instalment credit available in periods of general expansion, people who have no salable assets could not increase their expenditure by more than the current increment in their income. There might even be a lag between the increase in income and the increase in their expenditure, if they decided to devote the whole or part of their increment in income to the acquisition of expensive durable goods and began to accumulate the necessary cash. It is true that people of wealth could sell some of their salable assets, and this dissaving might have a stimulating effect similar to that of consumer borrowing. But as was pointed out in Chapter 2, it is unlikely that the public as a whole would do this to an extent comparable to their credit purchases when credit is easily available.

Similarly, in periods of general contraction people would probably spend more on consumption if they were not compelled to use a part of their current income for repaying debts that they had contracted in the past upswing. Here again it might be that some would choose to save a part of the funds which they actually need for the service and redemption of their debts, and this saving would in most circumstances have a depressive effect equal or nearly equal to the liquidation of the debt. But is it not very likely that they would use for consumption expenditure at least a part of the money otherwise needed for the debt service?

In the field of producer credit there is a perfect analogy to this intensifying effect of consumer instalment credit. Suppose, for example, that when incomes rise, people spend for housing instead of for automobiles (or rather, for transportation services); then the demand for dwelling space rises and private entrepreneurs seize the opportunity and build houses.[32] They finance their investment through producer credit channels, and producer credit, instead of consumer

[32] Mortgage credit on family houses offers, of course, an equally good analogy.

credit, will expand. Or it may be that the demand for other commodities rises and the respective producers are induced to increase their productive capacity. For this to happen a necessary condition is, of course, that producers expect the increased demand for their products to last long enough to make the investment profitable.[33] If this condition is fulfilled producer credit operates in such a way as to intensify the cumulative force of economic expansions and contractions. Credit, or more precisely the existence of an elastic credit supply, is then one of the factors responsible for the self-reinforcing nature of booms and depressions. This view is generally accepted by students of business cycles, although the distribution of emphasis between credit and other factors varies a great deal from writer to writer.[34]

Consumer instalment credit is no exception to the rule; it tends to operate in exactly the same way as credit in general has always been supposed to operate. Its introduction on a large scale, and its spread to larger and larger groups of the population and to more and more commodities, extend the economic sphere which is subject to the destabilizing influence of credit.

It will be observed that the foregoing argument rests on the assumption, well established statistically, that outstanding credit moves parallel with the cycle. We need not assume that the amplitude of cyclical fluctuations in credit sales is greater than the amplitude in cash sales. Even if it were smaller (if, in other words, the percentage of credit sales in total sales were smaller in peak years than in trough years of a business cycle) our argument would hold. On the other hand, if the amplitude of cyclical fluctuations in credit sales is greater than that of cash sales, the effect of credit will be

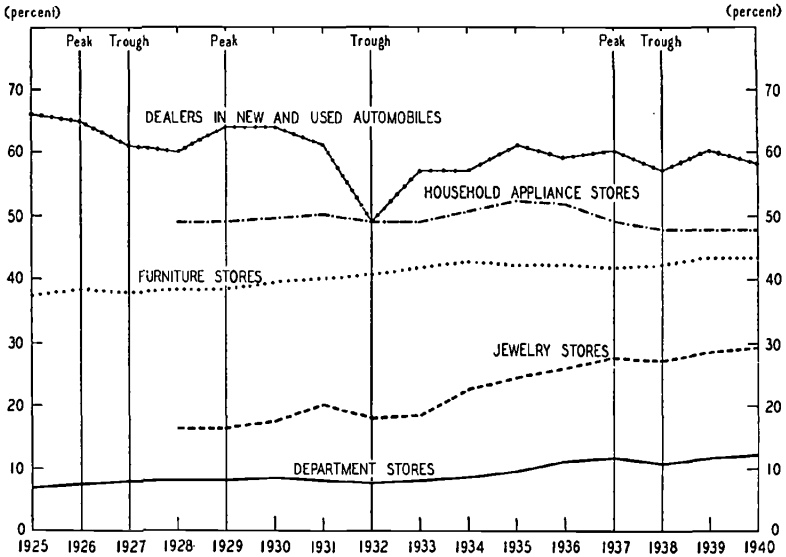
[33] Analogously, as we have seen above, a consumer whose income has risen must expect that his higher income will last for a certain time; otherwise he is not likely to be induced by the rise in income to buy durable consumer goods on credit.

[34] The point can be couched in very different words. In Keynes' terminology, for example, it finds expression in the proposition that an increase in the marginal efficiency of capital could not lead to a rise in output and employment if the liquidity preference schedule were quite inelastic.

stronger. It has already been mentioned, however, that there is not much evidence that credit sales fluctuate more violently than cash sales. As can be seen from Chart XI, the

CHART XI

ANNUAL INSTALMENT SALES IN PERCENT OF ANNUAL TOTAL SALES OF EACH OF FIVE TYPES OF RETAIL ESTABLISHMENTS, 1925–40[a]



[a] Data for 1925-38 from National Bureau of Economic Research (Financial Research Program), *The Volume of Consumer Instalment Credit, 1929-38,* by Duncan McC. Holthausen, in collaboration with Malcolm L. Merriam and Rolf Nugent (1940) p. 47. Automobile data for 1939-40 from National Automobile Dealers Association; other 1939-40 data from U. S. Department of Commerce, Bureau of Foreign and Domestic Commerce, Current Business Analysis Unit. Data on household appliance and jewelry stores available only from 1928. For automobile dealers the percentage figures apply to units of passenger cars sold; for other groups they apply to volume of sales. The vertical lines indicate general business cycle turning points (calendar-year dates), as determined by W. C. Mitchell and A. F. Burns of the National Bureau of Economic Research.

relationship of various retailers' credit sales to their total sales shows traces of a systematic cyclical behavior only in the case of automobile dealers, and even there the cyclical pattern is not very pronounced. In the case of the other retail establishments there is hardly a trace of cyclical change.

It is impossible to construct series of cash and instalment sales for single commodities[35] except in the case of new automobiles. In that case, as Chart XII shows, there is evidence that the amplitude of fluctuations in credit sales is slightly greater than that in cash sales.[36]

Our conclusion that consumer instalment credit tends to intensify the business cycle is meant in the same sense in which it is frequently said that government finance tends to intensify cyclical swings if there are deficits in prosperity years and surpluses in depression years. In the same sense it is frequently urged that the government, in order to mitigate fluctuations in business, should manage its finances in such a way (by shifting postponable expenditures, changing taxes and the like) as to create deficits in depression years and surpluses in prosperity years.

It was shown, however, in Chapter 3, that the characterization of a factor as stimulating or depressing may be different if, in addition to its direct effects, all its indirect effects over a period of time are taken into consideration. To these indirect effects we must now give some thought.

Suppose we are at the beginning of a cyclical upswing. Incomes rise, thus inducing a number of people to buy durable goods on the instalment plan. They increase their expenditure by more than the increment in their income. These additional consumer expenditures will stimulate production and raise the income of producers (wages, salaries and profits) in the durable goods industries and the industries

[35] It has been pointed out by David Durand that if we took as a measure for instalment sales the new credits series relating to department stores, for example, and compared it with total department store sales, we could not be sure that we were comparing identical commodities: it is probable that department store instalment sales comprise goods of a more durable and more expensive nature than do department store cash sales. It follows that a comparison of the two may show the effects of durability and high unit cost rather than the effects of credit.

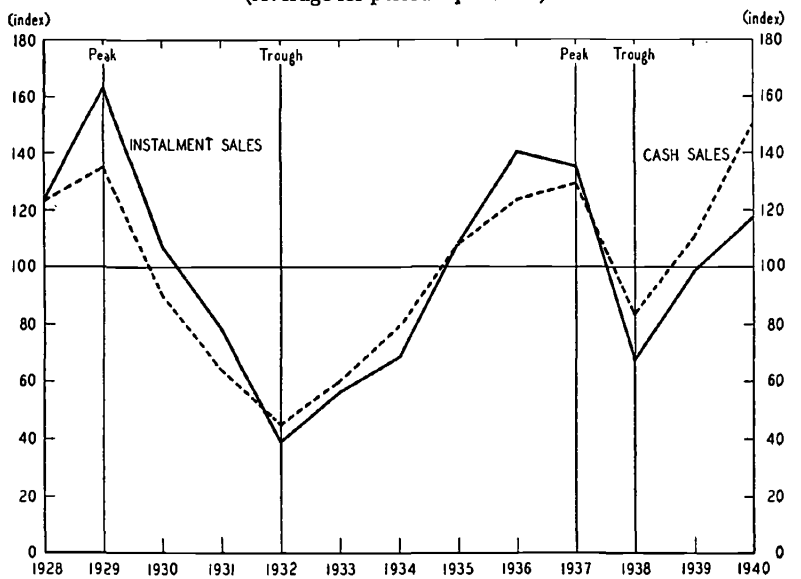
[36] It should be mentioned that some authorities—Rolf Nugent, for example—are of the opinion that credit sales do, in general, exhibit a larger amplitude in their cyclical fluctuations than do cash sales. We can afford, however, to be cautious in this matter. Our argument is not seriously affected if there is a greater amplitude in credit sales, although this fact would enhance the cyclical importance of credit.

that supply them with equipment and material. These people in turn will spend at least a part of their higher income;

CHART XII

INDICES OF ANNUAL INSTALMENT AND CASH SALES OF NEW PASSENGER AUTOMOBILES, 1928–40[a]

(Average for period equals 100)



[a] Indices computed from annual figures on number of cars sold on instalment and number sold for cash; these figures obtained from two sets of data, as follows. Data on total number of cars sold: for 1928-38 taken from National Bureau of Economic Research (Financial Research Program), *The Volume of Consumer Instalment Credit, 1929-38,* by Duncan McC. Holthausen, in collaboration with Malcolm L. Merriam and Rolf Nugent (1940) p. 112; for 1939-40 obtained from Automobile Manufacturers Association. Data on percent of cars sold on instalment: for 1928-33 taken from Automobile Manufacturers Association, *Automobile Facts and Figures* (1934) p. 73; for 1934-37 from National Association of Sales Finance Companies, *Composite Experience of Sales Finance Companies and Automobile Dealers, 1938*; for 1938-40 from National Automobile Dealers Association. The vertical lines indicate general business cycle turning points (calendar-year dates), as determined by W. C. Mitchell and A. F. Burns of the National Bureau of Economic Research.

some will be induced to spend more than their increment in income by making use of instalment credit. There will be other types of repercussions which have been called

tertiary effects: when demand rises all around, producers in various fields may be induced to invest in equipment and working capital. Existing equipment, underutilized when the upswing started, will gradually be drawn into employment, and sooner or later new installations will become necessary. Producers become more optimistic when sales rise and some of them will be induced to increase their expenditures by more than the increment in demand that they have experienced. These new investments[37] will be financed by bank credit, by new issues or by idle balances at the disposal of the investing firms; this will again create incomes, and so on in an indefinite chain. Each act of expenditure will draw a whole series of other expenditures in its wake. This reciprocal stimulation of consumption and investment, of consumer spending and producer spending, is well known in business cycle theory and has been styled by some economists the interaction of "multiplier" and "acceleration" principles.

Unfortunately, in the present state of our knowledge, we are not able to trace this process in detail quantitatively. Even for qualitative analysis, that is to say, for an analysis which confines itself to indicating the direction of such a process (and does not try to ascertain speed and magnitude) the limitations are severe. This is true for a microscopic analysis of particular elements in the situation (for example, the role of instalment credit) as well as for a macroscopic analysis of the economic process as a whole. It is possible, of course, to make specific assumptions about "multiplier" and "acceleration coefficient" (and other magnitudes), and

[37] In so far as these investments serve to compensate, at the beginning of a cyclical upswing, for the disinvestment that occurred during the depression (when replacements were neglected and capital stock was allowed to decrease), and thus to bring capital stock back to the level of the last business peak, we may speak of reinvestment instead of new investment. It has frequently been overlooked that the same act of production may be regarded either as new investment or as reinvestment, according to the standard of reference: it is reinvestment from the point of view of the capital stock existing at the previous peak (in a historical sense), but it is new investment from the point of view of the depression low of the capital stock.

to figure out what will be, under these assumptions, the series of secondary and tertiary expenditures emanating from a series of primary expenditures. But the results vary widely, quantitatively and qualitatively, according to the numerical magnitudes attached to the assumed facts. Under one set of assumptions an initial act of expenditure will set up a series of expenditures that gradually dwindles and disappears. Under another set the series approaches some upper limit that will then be maintained indefinitely. Under still other assumptions there is first a movement in one direction, which is then followed by a movement in the opposite direction, which again reverses itself, and so on; these oscillations may go on indefinitely ("undamped" oscillations), they may grow in intensity ("anti-damped" or "explosive" oscillations) or they may flatten out and subside more or less rapidly like the waves created by a stone falling into a pond ("damped" oscillations).[38]

It follows that we are not in a position to know the sum total of all indirect effects of a series of increases in instalment credit outstandings. It is not impossible that they become negative, in other words, that instalment credit tends to exert a downward pull on consumer expenditure *before* outstanding credit has reached its cyclical maximum. An important, but unfortunately negative, conclusion is thus to be drawn: even though the curve of total instalment credit

[38] Numerous "sequence models" of this kind have been worked out by various theorists. See, for example, P. A. Samuelson, "Interactions Between the Multiplier Analysis and the Principle of Acceleration" in *Review of Economic Statistics*, vol. 21 (May 1939), and the more complicated models constructed by Eric Lundberg, *Studies in the Theory of Economic Expansion* (London 1937) Chapter 9. Tinbergen has tried to construct such dynamic schemes empirically for certain periods and countries by determining lags and coefficients from statistical data; see his *Statistical Testing of Business Cycle Theories*, 2 vols. (Geneva 1939), *An Econometric Approach to Business Cycle Problems* (Paris 1937), *Les fondements mathématiques de la stabilisation du mouvement des affaires* (Paris 1938). These researches, however, have not yet reached a stage that would allow an application to our problem. It is for this reason that it has been decided here to characterize instalment credit as stimulating or depressing according to its direct contribution to consumer expenditure and not according to the sum of its indirect effects.

outstandings does not precede (but rather tends to lag a little behind) the turn in general business cycles, it is not possible to say definitely that instalment credit has not been an active force in bringing about the turn in business.[39] It was shown in Chapter 3 that it cannot be said, except under one particular and unrealistic set of assumptions, that the cumulative direct and indirect effects of an increasing series of outstandings will begin to become negative precisely at the point where the curve of net credit change begins to decline (in other words, when the rate of increase in outstandings reaches its maximum), although it is at this point that the direct contribution of credit to consumer expenditure reaches its maximum. The critical point comes probably later.

It should be observed that our conclusion to the effect that instalment credit has operated in such a way as to intensify business upswings and downswings would not need to be modified if we were to accept current net credit change (rather than outstandings) as the indicator of stimulating or depressing influence. For, as we have seen in Chapter 3, current net credit change too has tended to rise and fall with the cycle. It is true that in 1937, and probably also in 1929, the curve of current net credit change culminated before the turn in general business, and that it reached its low point in 1932 before the upturn in general business which occurred in 1933. But even if we were to subscribe to the argument resulting in the acceptance of this curve as indicator of the stimulating or retarding effect of credit on total sales, the conclusion that credit intensifies the cycle need not be modified, for the lead of the turning points in the curve of net credit change as compared with the turns in the general business cycle ("reference cycle") is not very great. (Because of the irregularity of the curve of net credit change its turning points cannot be located with absolute

[39] In view of its relatively small magnitude, however, instalment credit cannot have been a very important factor, compared with other factors such as government finance, in bringing about any one of the last four turns in business.

precision.) If we relax the rigid assumption of 100 percent leakage, which underlies the theory that current net credit change indicates the sum total of stimulating effects, and assume a leakage of substantially less than 100 percent, the critical point at which retarding forces begin to prevail will come after (according to the assumptions, long after) the curve of net credit change has reached its cyclical peak.

Our conclusion, then, is this: the fact that the turning points in the curve of net credit change precede the turns in general business may perhaps indicate that instalment credit helped to precipitate the downturns of the business cycle in 1929 and 1937 and to start the upturn in 1933; it does not impair the conclusion that instalment credit tended to accentuate booms and depressions.

It should be noted, however, that the conclusion that instalment credit tends to accentuate economic fluctuations does not settle the question whether it tends to raise or to lower the long-run level of output and employment. This question cannot be answered with a high degree of confidence, for reasons pointed out at the beginning of the chapter: the answer depends not only upon certain facts relating to instalment credit, on which our information is scanty (such as its long-run influence on saving), but also upon one's attitude concerning business cycles in general, the role of money and credit in the cycle mechanism and the diagnosis of concrete situations. Since this is not the place to attempt a solution of these problems, a few remarks must suffice.

In Chapter 2 it was pointed out that in the long run instalment credit may tend to weaken the borrowers' propensity to save.[40] Those economists who attribute economic

[40] It will be recalled that this is the case if new credits entail an increase in consumer outlay (are not a mere substitute for dissaving in other forms) while repayments are made at the expense of saving rather than consumption expenditure (are a substitute for other forms of saving). What has been deemed probable is, however, merely an approximate realization of this situation, that is to say, that repayments are to a higher degree a substitute for saving than new credits are a substitute for dissaving, in other words, that consumer expenditures are reduced less by repayments than they are augmented by new credits.

stagnation and unemployment in modern communities to a chronic tendency of saving to outrun available investment opportunities, will conclude that instalment credit, by reducing the propensity to save, tends to raise the long-run level of output and employment. They need not deny that it accentuates cyclical fluctuations; they could admit that in the absence of this type of credit cyclical swings would be milder. But they will argue that the average level of output over the whole cycle would be lower. Prosperity peaks would be lower; depression troughs, however, need not be less deep, at least not sufficiently to prevent the long-run level of economic activity from being lower.

A different attitude will be adopted by those who believe that economic progress, as measured by the rise in national income and production, depends, among other things, on the accumulation of capital and the willingness to save. They will say that inasmuch as instalment credit is likely, in the long run, to reduce the propensity to save, it tends to retard to some extent economic progress.

No choice between these two attitudes will here be attempted. It can be said with confidence, however, that the issue is not an important one. We do not know precisely how saving is actually affected in the long run by the operation of instalment credit. But it is safe to say that the influence is not a very big one, that the change in saving which is possibly brought about by instalment credit does not amount to more than a fraction of the net change in this type of credit. Moreover, net change in consumer instalment credit itself is only a small fraction of total national income, or even of the income of the groups in which such credit is largely concentrated. Hence only a small fraction of aggregate saving can be involved, a fraction that can hardly influence the situation to an appreciable extent.[41]

[41] A. G. Hart stresses the fact that consumer instalment credit, by diverting consumer demand, "destroys investment opportunities in street railways and (if one considers the alternatives to spending money on automobile operation) probably in housing." See his review of Nugent's *Consumer Credit and Economic Stability* in *Journal of Political Economy*, vol.

COMPARATIVE QUANTITATIVE IMPORTANCE

The question arises now of the magnitude of instalment credit's influence on the economic system as compared with that of other factors. Is instalment credit a negligible factor, an important one or one of overwhelming weight? Several writers, in explaining the ups and downs of business cycles during the period between the two world wars, have assigned a more or less important role to changes in consumer credit. A. H. Hansen has been mentioned already. J. M. Clark[42] and S. H. Slichter[43] sketch the cycle-accentuating force of consumer credit in much the same way as was done in the foregoing pages. At the time of the appearance of these books, however, no reliable data were available on the volume of consumer credit and its changes over the cycle. Nugent's book contains the first comprehensive attempt at a quantitative appraisal of the role of consumer credit in recent cycle phases.[44]

What standard is to be used in appraising the economic importance of instalment credit? It has been emphasized that changes in outstandings measure the contribution of instalment credit to consumer expenditure. When these changes are positive, that is, so long as outstandings grow, credit adds to consumer expenditure and stimulates business; when they are negative and outstandings fall, credit reduces expenditure and exerts a depressing influence on economic activity. The procedure indicated by this reasoning is to compare changes in outstandings, that is, net credit change, with national income and consumer expenditure, and with certain factors—such as income-creating expenditure of the federal government and changes in mortgage credit, farm and urban—which affect national income and consumer ex-

[42] In *Strategic Factors in Business Cycles* (1934) *passim.*
[43] In *Towards Stability* (1934) p. 29.
[44] Nugent, *op. cit.*, Chapter 8. Nugent, however, does not confine himself to instalment credit.

49 (1941) p. 130. This consideration further detracts from the importance of the long-run influence of consumer credit on consumer saving. See also footnote 17, pp. 46-47 above.

TABLE 6

ANNUAL NET CHANGE IN CONSUMER INSTALMENT CREDIT IN RELATION TO OTHER MAGNITUDES, 1929–40

Year	*Annual Net Change in Instalment Credit*[a]	*National Income Paid Out*[b]	*Net Cred. Change in % of National Income Paid Out*[c]	*Consumer Expenditure*[d]	*Net Cred. Change in % of Consumer Expenditure*[e]	*Income Received by $5000-and-Under Income Groups*[e]	*Net Cred. Change in % of Inc. Rec. by $5000-and-Under Groups*[e]
1929	$479.4	$81,869	.59%	$77,100	.62%	$57,265	.84%
1930	−473.2	74,073	− .64	73,100	− .65	52,121	− .91
1931	−504.0	61,887	− .81	60,200	− .84	44,745	−1.13
1932	−711.2	48,223	−1.47	47,200	−1.51	35,408	−2.01
1933	99.3	45,679	.22	45,900	.22	33,352	.30
1934	212.8	52,699	.40	52,200	.41	38,298	.56
1935	557.1	57,152	.97	53,700	1.04	41,605	1.34
1936	772.7	65,873	1.17	57,600	1.34	45,717	1.69
1937	464.1	72,177	.64	64,100	.72	50,445	.92
1938	−474.7	66,113	− .72	62,500	− .76	46,298[f]	−1.03
1939	578.0[g]	70,607	.82	[h]	[h]	49,200[f]	1.17
1940	889.3[g]	75,285	1.18	[h]	[h]	52,200[f]	1.70

(continued on next page)

TABLE 6 (*concluded*)

Year	*Net Income-Creating Government Expenditure*[i]	*Net Cred. Change in % of Income-Creating Govt. Expenditure*[o]	*Annual Net Change in Farm-Mortgage Outstandings*[j]	*Net Cred. Change in % of Net Change in Farm-Mort. Outstdgs.*[o]	*Annual Net Chge. in Private Non-Farm Home-Mortgage Outstdgs.*[k]	*Net Cred. Change in % of Net Chge. in Non-Farm Home-Mort. Outstdgs.*[o]
1929	$ [h]	[h] %	$ −126	−380.5%	$1,474	32.5%
1930	251	−188.5	−173	273.5	282	−167.8
1931	1,748	− 28.8	−244	206.6	− 561	89.8
1932	1,797	− 39.6	−576	123.5	−1,430	49.7
1933	1,809	5.5	−751	− 13.2	−1,532	− 6.5
1934	3,460	6.2	−101	−210.7	− 329	− 64.7
1935	3,568	15.6	−147	−379.0	− 305	−182.7
1936	4,374	17.7	−249	−310.3	− 335	−230.7
1937	1,114	41.7	−176	−263.7	55	843.8
1938	2,225	− 21.3	−143	332.0	317	−149.7
1939	3,581	16.1	−161	−359.0	694	83.3
1940	3,984	22.3	− 89	−999.2	[h]	[h]

(*footnotes on next page*)

FOOTNOTES TO TABLE 6

[a] In millions of dollars. Minus sign indicates a negative change (with repayments exceeding new credits); otherwise a positive change (with new credits exceeding repayments) is to be understood. Figures refer to commodity credit and cash loans combined. For 1929-38 data on commodity credit pertain to dealers in new and used automobiles, department stores, furniture stores, household appliance stores, jewelry stores and "all other stores"; for 1939-40 data are unavailable on "all other stores," a comprehensive category accounting for only a small fraction of net credit change. For the entire period data on cash loans pertain to commercial banks' personal loan departments, credit unions, industrial banking companies and personal finance companies, and are exclusive of unregulated lenders and insured FHA (Title I) loans. All data for 1929-38 from National Bureau of Economic Research (Financial Research Program), *The Volume of Consumer Instalment Credit, 1929-38*, by Duncan McC. Holthausen, in collaboration with Malcolm L. Merriam and Rolf Nugent (1940) p. 99. Data for 1939-40 supplied by U. S. Department of Commerce, Bureau of Foreign and Domestic Commerce, Current Business Analysis Unit.

[b] In millions of dollars. Data from U. S. Department of Commerce, *Survey of Current Business* (June 1941) Table 8, p. 17.

[c] Minus sign indicates that one of the two magnitudes is negative.

[d] In millions of dollars. Figures refer to the net flow of all durable and non-durable consumer goods (and services), exclusive of residential building. Data from National Bureau of Economic Research, Occasional Paper No. 2, *National Income 1919-1938*, by Simon Kuznets (1941) p. 7.

[e] In millions of dollars. The groups reporting incomes of $5000 a year or less are estimated to contain 97 percent of those indebted for instalment credit; their income is computed as exclusive of work relief wages, dividends and interest. Data for 1929-37 developed by U. S. Department of Commerce, Bureau of Foreign and Domestic Commerce, National Income Division. Data for 1938-40 are estimated from total income payments by comparing earlier total income payments and earlier income payments to the $5000-and-under group.

[f] Estimated. See footnote e above.

[g] Does not include "all other stores"; see footnote a above.

[h] Data unavailable.

[i] In millions of dollars. Figures refer to expenditure of the federal government. Data for 1929 are available only for the second half of the year, and are negative. Data for 1930-31, calculated by H. H. Villard, are from A. D. Gayer, "Fiscal Policies," in *American Economic Review*, vol. 28, no. 1, Supplement (March 1938) p. 99. Data for 1932-40 from Board of Governors of the Federal Reserve System, "Revised Estimates of Federal Net Contribution," mimeographed release (May 1941).

[j] In millions of dollars. Minus sign indicates a negative change. Data for 1929-38 from Donald C. Horton, "Fluctuations in Outstanding Farm-Mortgage Debt, 1910-1939" in *Agricultural Finance Review* (November 1939) p. 14. Data for 1939-40 from *Agricultural Finance Review* (May 1941) p. 56.

[k] In millions of dollars. Minus sign indicates a negative change; otherwise a positive change is to be understood. Figures refer to mortgage loans outstanding on 1-to-4 family non-farm homes. Data from *Federal Home-Loan Bank Review*, vol. 6 (September 1940) p. 412.

penditure in much the same way as changes in instalment credit do. Such comparisons are presented in Table 6.[45]

A study of the figures in this table, especially those showing net credit change in relation to national income, to consumer expenditure and to the income received by those classes that represent the bulk of instalment borrowers, suggests that the cyclical importance of instalment credit during the period 1929-40, while not negligible, was not very great: instalment credit tended to accentuate the cycle but cannot well be regarded as a major factor in the cyclical fluctuations of general economic activity in these years. It is hardly possible, for example, to attribute the great violence of cyclical fluctuations during these years to the influence of consumer instalment credit. On the other hand, in the years before 1929, when instalment credit outstandings were

[45] It will perhaps be objected that a comparison should be made not between annual net credit change and national income but between annual net credit change and annual change in national income. Such a comparison would of course yield much higher percentages, as can be seen from the following figures:

Net Credit Change in % of Annual Change in National Income

1929	*1930*	*1931*	*1932*	*1933*	*1934*	*1935*	*1936*	*1937*	*1938*	*1939*	*1940*
9.6	6.1	4.1	5.2	—3.9	3.0	12.5	8.9	7.4	7.8	12.9	19.0

(The minus sign in 1933 indicates that the change in credit was positive in that year, while the change in national income was still negative: national income still fell, but credit expanded, for the first time after the depression.)

But what is the rationale of this comparison? If these proportions were consistently very high—say several hundred percent, as they conceivably could be—ought we to say that credit is an extremely important factor even though in percent of the national income as such it might be very small? In my opinion such a conclusion would be entirely unjustified, except in very special cases which are never realized. There are many factors affecting national income much more powerfully than instalment credit. Hence if in certain periods net credit change is large as compared with the change in national income, the reason will most likely be that in these periods the influences of other factors happen to cancel out to a considerable extent, not that credit is an important factor, either absolutely or in comparison with other forces influencing national income. We may therefore conclude that the more significant comparison is with national income as such, and not with the change in income.

It may be contended too that the smallness of net credit change as compared with national income is misleading, because the former is subject to the operation of the "multiplier." This aspect of the problem is discussed in the following pages.

built up to the 1929 peak, the importance of credit was probably greater.

This conclusion is strengthened by the consideration that net credit change probably somewhat overstates the direct contribution of instalment credit to consumer expenditure and to national income. The reasons for this have been discussed at length in earlier parts of the present study: in some cases instalment credit is merely a substitute for other forms of dissaving; to some (unknown) extent it merely induces a temporary advancement of expenditure, that is, the instalment buyer would have bought anyway, but a little later; an increase in consumer expenditure may lead merely to a decline in inventories rather than to an increase in output (national income); sometimes consumer instalment credit may be merely a substitute for producer credit, as A. G. Hart suggests;[46] to some extent it may be transfer credit, that is to say, changes in consumer instalment credit may affect the supply of credit for other purposes. This last factor, however, was probably of only minor importance during the period under consideration, except perhaps in the first two or three years (1929-31).

On the other hand it must not be forgotten that net credit change is subject to the "multiplier" effect: its total influence, direct plus indirect, through successive reexpenditure of the sums involved, will be greater, possibly several times greater, than the original magnitude. It is unfortunately impossible to assign with any confidence a concrete figure to the multiplier. But let us try with all reservations the figure which is usually mentioned by authorities such as J. M. Clark and J. M. Keynes, who assume for the United States a multiplier of somewhere between 2.5 and 3. If we multiplied the percentage figures in Table 1 by 2.5 or 3 the highest ratios we would obtain for net credit change in per-

[46] That is to say, an expansion in consumer credit may reduce demand for producer credit, when, for example, private automobiles take the place of taxis, buses and streetcars.

cent of national income would be + 3.5, this in 1940, and − 4.4, this in 1932.

The complication concerning the multiplier does not arise when we compare net credit change with some of the other factors that affect national income similarly. The reason is that these other factors are presumably subject to the operation of the same multiplier.

The net income-creating expenditure of the federal government[47]—which in the field of government finance can be regarded as the measure of cyclical importance corresponding to net credit change in the field of consumer instalment credit—was positive throughout the period under consideration. During the three years, 1930, 1931 and 1932, when net credit change was negative and instalment credit tended to accentuate the depression, government finance exerted a stimulating effect.[48] As for the comparative magnitudes[49] of instalment credit and government finance, it can be seen from the column showing net credit change in percent of income-creating government expenditure that except in 1930[50] the financial operations of the federal government were a much more powerful factor than instalment credit.

[47] This magnitude can be described as a slightly corrected cash deficit. But the result of the comparison would not be materially changed if the cash deficit figures as currently published by the Treasury were substituted for those used here. The term net income-creating expenditure has been criticized by A. W. Marget and H. H. Villard (in papers presented at a meeting of the Conference on Research in Fiscal Policy, National Bureau of Economic Research, May 30-31, 1941; see also H. H. Villard, *Deficit Spending and the National Income,* 1941), on the ground that the series measures not the direct contribution of government finance to national income but rather its contribution to buying power or perhaps expenditure. This fact, however, does not impair the comparability of this series and net credit change, for the latter is subject to the same limitation. It measures the direct contribution of credit to consumer expenditure. The direct contribution to national income, or output, may be less than that, for a change in consumer expenditure may lead to a change in inventories rather than in current output.

[48] It goes without saying that only its direct, "mechanical" effect is here under consideration. Psychological effects may have been negative.

[49] The absolute magnitudes, disregarding the fact that in some years net credit change was negative.

[50] And probably also 1929; data on net income-creating expenditure are available only for the second half of that year, and are negative.

The two types of mortgage credit for which comparable series are available—farm-mortgage loans and mortgage loans on 1-to-4 family non-farm homes[51]—exhibit a cyclical pattern different from that of consumer instalment credit. From the columns showing the percentage relationship of net change in instalment credit to changes in these two types of mortgage credit it can be seen that the relative importance of instalment and mortgage credit[52] changed greatly from year to year, but on the whole the two types of mortgage credit and instalment credit were of a similar order of magnitude.

For a few years there exist estimates of total outstandings on urban real estate indebtedness (including home mortgage debt on 1-to-4 family homes). The estimates (in millions of dollars) are as follows, in comparison with total instalment credit outstandings (including both commodity credit and cash loans):[53]

Year-End	*Mortgage Credit*	*Instalment Credit*
1930	$37,234	$2,708
1934	30,845	1,805
1935	29,854	2,362
1936	29,109	3,135
1937	28,508	3,599

Not only are the totals on real estate indebtedness much larger than instalment credit outstandings, but the pattern

[51] In the field of urban mortgage finance this is the only continuous series of debt figures available, but of all types of mortgage credit it is probably the most closely related to consumer instalment credit since the majority of the mortgaged non-farm 1-to-4 family homes are owner-occupied.

[52] Disregarding the directional sign.

[53] For 1930 the figure on real estate indebtedness is from U. S. Department of Commerce, Bureau of Foreign and Domestic Commerce, *Long-Term Debts in the United States* (1937) p. 136; for 1934-37 the figures are from "Trend of Long-Term Debts in the United States, 1934 to 1937" in *Survey of Current Business* (January 1939) Table 1. Both of these sources give a figure for 1934, and the one used above is higher by 421 million dollars than the one not used; a footnote in the *Survey of Current Business* indicates, however, that the figure cited there has been revised upward 405 million dollars from earlier estimates. On instalment credit outstandings see footnote a to Table 6 above.

of their change is quite different: they exhibit a downward movement over the whole period under consideration, and their changes are proportionately much smaller. It may be remarked that since they include debt on apartment houses and commercial structures they contain a large measure of what would be called producer credit.

It may be objected that the adoption of net credit change as the basis for the above comparisons has the effect of understating the economic importance of instalment credit. In 1933, for example, when net credit change, at its lowest level of about 100 million dollars, was unquestionably negligible—about two-tenths of one percent of the national income, about 5 percent of the income-creating expenditure of the federal government—new credits amounted to over 2 billion dollars, of which, as was shown in Chapter 2, from 70 to 80 percent was spent on durable consumer goods. More than half of all automobiles, to take but one example, were sold on credit. Can a factor which accounts for the sales of about 1.5 billion dollars of durable goods and for more than 50 percent of all automobile sales be characterized as negligible or unimportant?[54]

These objections are not without interest but they can be resolved by a careful consideration of what net credit change does and what it does not signify. Two points must be distinguished. The first one is this: net credit change is a measure for the total direct contribution made during the year to consumer expenditure by new credits and repayments. (This contribution could be offset by an equal increase or decrease of another expenditure item; it is for this reason that the comparison with net income-creating expenditure is pertinent.) The actually reported net credit change does not, however, measure the importance of the effect that would have resulted from a drastic curtailment of new credits. If in any one of the years from 1929 through 1938 instalment

[54] The same argument could be raised against taking income-creating expenditure as a measure for the cyclical importance of government finance. Income-creating expenditure is usually small in comparison with total government expenditure (which we may regard as corresponding to new credits).

credit had been abolished, that is, if the granting of new credits had ceased, though repayments on outstanding credits continued, the effect on total consumer demand would, of course, have been much greater in that year than is indicated by the *actual* figures of changes in outstanding credit. In the extreme case, with no new credits being granted and the outstanding credits being completely liquidated by repayments during the year, net credit change would become equal to the amount of outstandings at the beginning of the year, which is certainly not a negligible quantity.

It may be said, then, that net credit change provides a measure of the *actual* direct contribution of instalment credit to consumer demand, but not of the *potential* influence which it may exert. This potential negative contribution is quite substantial and could well be sufficient to precipitate a sharp decline in business activity, if it came at an inopportune moment, when the economic system was not under the influence of offsetting stimulating factors. In its long-run effects, however, such a liquidation or curtailment of credit would be much less depressing, for after repayments had ceased the drain on consumer purchasing power and expenditure would come to an end.[55]

The second point to be kept in mind is that net credit change measures the importance of instalment credit for total consumer expenditure, but not for particular industries. On this latter aspect a few observations may be added now. The broad facts on which to base a judgment of this matter are these: large proportions of all sales of durable consumer goods are made on the instalment basis (data on various types of goods were presented in Chapter 2);[56] these proportions are especially high for automobile sales (between one-half and two-thirds); in most cases year-to-year changes in the

[55] But because of the tendency of economic depressions to spread out cumulatively, it is not likely that the decline would come to an end at precisely the moment when the force by which it was engendered ceased to operate, that is to say, when instalment credit was liquidated (or, in a less extreme case, when the curve of outstandings leveled out after a sharp drop).

[56] For more detailed information see Holthausen et al., *op. cit.*, p. 47.

proportions are not very great, and show no pronounced cyclical pattern.[57] Hence new credits move closely parallel with total sales, and since sales to consumers go fairly parallel with production, new credits fluctuate in close conformity with production. This is shown clearly in Chart XIII for the automobile and furniture industries.

What conclusions can we draw from this parallelism? Certainly not the conclusion that there is a one-way causal relationship between the two series. We cannot, for example, conclude that the drop of production from 1929 to 1933, the rise from 1933 to 1937 and the drop in 1937 to 1938 were caused by credit contraction and expansion.[58] In Chapter 4 it was shown that the cyclical swings in instalment credit are produced mainly by cyclical fluctuations in demand for credit, and that changes in supply conditions probably play a less important role.[59] It follows that the parallelism in the fluctuations of production and new credits is the effect of common underlying factors: the business cycle as reflected in cyclical fluctuations of consumer demand.

The conclusion seems warranted that a drastic curtailment of credit would in the short run strongly affect the durable consumer goods industries. It is certain that a sharp drop in

[57] In Chapter 2 it was estimated that between 70 percent and 80 percent of all consumer instalment credit is used for the purchase of durable goods. Let us assume that it was 75 percent. If for each year in the period 1929-38 we take 75 percent of the new credits granted, and express these magnitudes in percent of each year's total output of durable consumer goods, we obtain the following series:

1929	*1930*	*1931*	*1932*	*1933*	*1934*	*1935*	*1936*	*1937*	*1938*
40	43.2	44.5	40.9	41.9	42.8	45.1	47.9	50.3	57.9

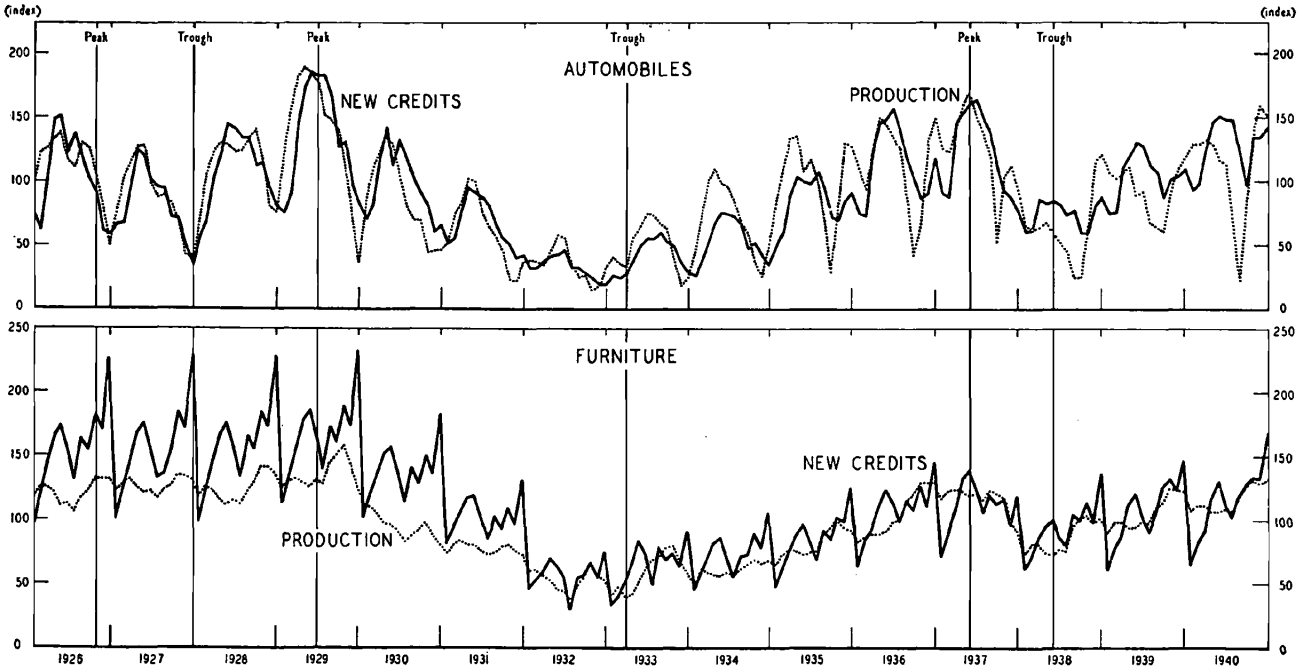
Thus we may say that roughly between 40 and 50 percent of durable consumer goods are sold on credit. (The figures used for the flow of durable consumer goods are Kuznets' estimate. See footnote d to Table 6, above. The definition of durable goods is "commodities that, without marked change and retaining their essential physical identity, are ordinarily employed in their ultimate uses more than three years." Residential buildings are, however, excluded.)

[58] In the automobile field Chart XIII suggests rather the opposite conclusion for the years 1934 and 1935, because production recovered more quickly from the depression trough than credit.

[59] During the years 1932-37 there was a substantial liberalization as to length of contract and down payment percentage that must have contributed somewhat to the rise of sales.

CHART XIII

INDICES OF MONTHLY AUTOMOBILE AND FURNITURE PRODUCTION (1935–39 average = 100) AND OF MONTHLY NEW CREDITS EXTENDED BY AUTOMOBILE AND FURNITURE DEALERS (1935–38 average = 100), 1926–40[a]



[a] Footnote on next page.

demand for durable goods such as automobiles would have far-reaching repercussions, irrespective of how outstandings behaved. It would upset production not only in the automobile industry but in all tributary industries, such as steel, rubber and the like. In view of the cumulative and self-reinforcing nature of economic depressions such an effect might make itself felt over a considerable period. But no such drastic restriction of the supply of instalment credit has yet occurred.

What the effect of such a curtailment of credit would be in the long run it is difficult to say. It would probably bring about some shift of consumer demand from durable to non-durable goods, but whether to a very significant degree cannot be determined with confidence. People might eventually shift to other forms of financing, such as accumulating money in advance and buying for cash.[60] This is simply the converse of the problem mentioned in Chapter 2 as to whether the phenomenal rise of, say, the automobile industry would have taken place in the absence of instalment credit, or would only have been temporarily slowed up.

[60] To some extent there might be a diversion to producer credit. If people could not buy automobiles and refrigerators on the instalment plan they might to some extent rent them. It is hardly convincing, however, to deny that consumer instalment credit presents any new problem on the ground that it is simply a substitute for producer credit (this position has been taken by G. L. Schwartz, "Instalment Finance, The Nature of Consumer Credit" in *Economica*, new series, vol. 3, 1936, pp. 182-95).

FOOTNOTE TO CHART XIII—Indices of production, 1926-39, from *Federal Reserve Bulletin* (August 1940) p. 830 (automobiles) and p. 836 (furniture); indices of production, 1940, from *Federal Reserve Bulletin* (March 1941) p. 246. Indices of new credits, 1926-38, computed from National Bureau of Economic Research (Financial Research Program), *The Volume of Consumer Instalment Credit, 1929-38,* by Duncan McC. Holthausen, in collaboration with Malcolm L. Merriam and Rolf Nugent (1940) pp. 49-53 (automobiles) and pp. 59-63 (furniture); indices of new credits, 1939-40, computed from provisional estimates made by the National Bureau, on the basis of data supplied by U. S. Department of Commerce, Bureau of Foreign and Domestic Commerce, Current Business Analysis Unit. No adjustment has been made for seasonal variations. The vertical lines indicate general business cycle turning points (monthly dates), as determined by W. C. Mitchell and A. F. Burns of the National Bureau of Economic Research.