THEORIES OF INFLATION AND CONSUMER
INSTALMENT CREDIT

DISSERTATION

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By

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CHAPTER I

INTRODUCTION

Critical attention has been directed toward the fluctuations of instalment credit, as to whether the rapidly increasing volume of outstanding credit affects economic stability.

It is questioned whether this credit contributes specifically to inflation by accelerating and expanding expenditures for automobiles and other consumer durable goods. It is wondered also whether contraction of consumer credit adversely affects the economy. Concern is expressed that disorder in the financial mechanism and weakness in market demand for automobiles and other durable goods might result from repayment of credit out of declining income. In addition to such possible direct effects of instalment credit, apprehension is expressed also for some indirect effects transmitted to other sectors of the economy.

Achievement of sound economic growth is regarded by some people as a function of the regulation of consumer instalment credit. Confidence in such control is based on the assumption of a relationship between consumer instalment credit and economic instability and on a belief that through the regulation of this type of credit some degree of control may be exercised over economic fluctuations. It is true that large investment expenditures are required in the growth

of our economy. As long as growth required these outlays, the economy seemed to be subject to cyclical fluctuations. By making certain structural adjustments (for example, wage, price, and output adjustments or credit control), economists believe that fluctuations will be less violent. Structural balance in the economy is important. But economic fluctuations seem to be inherent in the nature of a modern dynamic economy, and to stabilize them requires something more than structural adjustment, possibly a deliberate and positive anti-cyclical program.¹

With regard to economic fluctuations, for some time we have been primarily interested in that part of the business cycle which contains the elements of inflation. To be sure, not all upward movements of the business cycle necessarily result in inflationary developments; but, as the productive forces push toward full employment, certain actions by consumers, businessmen, and the government may have undesirable effects upon the economy. As this increasing economic activity enters the boom phase of the business cycle, prices may rise to rather high levels, resulting in distortions in the value of commodities. As prices rise, the purchasing power of liquid savings, pensions, social security benefits, and life insurance proceeds is reduced, and in extreme cases where hyper-inflation develops, the purchasing power may be wiped out entirely. Distrust of money and money contracts results.

¹Alvin H. Hansen, Business Cycles and National Income (New York: W. W. Norton and Company, Inc., 1951), pp. 3-16, 489-498.

This study deals primarily with the possible inflationary characteristics of consumer instalment credit. Previous studies of instalment credit have related it to economic fluctuations in general. This is limited to the study of instalment credit particularly as it relates to the inflationary phase of the business cycle. While inflation is the primary problem, much of the analysis presented in the subsequent chapters is equally applicable to other types of economic fluctuation.

Historical Review of Instalment Credit Theories

Credit of all types has ever been of interest to economists. Consumer instalment credit, specifically, first received attention in the early part of the century as a result of the operations and effects of illegal lenders. Soon thereafter the relation of consumer instalment credit to the economy became of interest to the public and economists. The first instalment credit theories were developed during the 1920's, when substantial growth in consumer instalment credit took place. A second phase of credit investigation began after the depression of the 1930's to determine the effects of instalment credit on borrowers as well as on the economy. A third interest in instalment credit developed with the inauguration of special wartime regulation of consumer credit. The regulation lasted through World War II, a postwar period in 1948, and the Korean conflict. A fourth phase of credit investigation began at the request of the President of the United States. This was contained in the 1956 Economic Report

of the President and was made in the interests of the business and financial community, the general public, officials in various governmental agencies, and members of Congress.

Research into consumer credit in the United States was first stimulated by the increased extension of small loans to wage earners. At the turn of the century, the increased use of credit and the growth of illegal lenders resulted in the development of many abuses in credit granting and collecting. The Russell Sage Foundation, a philanthropic agency, worked to improve social conditions and to promote better standards in the lending of small sums. Their efforts resulted in the proposal of the Uniform Small Loan Law in 1916, which has been accepted as a model law for most of the states. The Foundation's investigation, however, was concerned primarily with the financial problems of individuals in low income groups and did not bear directly upon the problem of the relationship of credit to economic stability.

During the 1920's the rapid expansion of consumer financial institutions, products requiring financing, and instalment credit caused economists to become interested in the economic effects of instalment credit. Although a great deal of literature appeared in the area of instalment credit, only those studies that have a direct bearing on the relationship of instalment credit to economic progress are referred to here.

In 1927, E. R. A. Seligman published in two volumes the first elaborate investigation into the economics of instalment credit.² He viewed instalment credit as having a desirable effect on production and income. Seligman found that instalment credit may tend to intensify business cycles; the peaks were somewhat higher and the troughs of the cycle deeper as a result of the use of this credit. He found, however, that instalment selling affected bank credit less than some other factors did. Seligman also found that fluctuations in producers' credit produced much more effect on the business cycle than instalment credit. He states:

. . . if instalment selling is largely dependent upon payment from current income of the consumers, we must inquire what effect the business crisis exerts upon wages as compared to profits. That profits virtually disappear during a business crisis is certain, that unemployment grows is equally sure. But the unemployment is only partial, not total; and the aggregate amount of wages or salaries that continue to be paid even during the period of depression is still substantial. Profits stop; wages and salaries do not stop. While repayments of business loans may at [sic] a pinch be made out of other funds, the conversion of business profits into losses seriously reduces the chance of repayment.

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The inference is that, from this point of view, instalment credit, extended as it is largely to recipients of wages and salaries, is likely to produce less effect on the business cycle than producers credit, resting upon profits.³

²E. R. A. Seligman, The Economics of Instalment Selling (New York: Harper and Brothers, 1927), Vol. I.

³Ibid., pp. 324-325.

He concluded that instalment credit was not any more dangerous than other forms of credit and that it had helped not only to enlarge but also to steady industrial production and distribution to consumers.

Another study which appeared in 1927 advanced the theory that consumer durable goods were part of the stock of wealth which represented the savings of the public. In it Plummer stated that savings had taken place at any time when the period of payment was shorter than the life of the goods.⁴ As to the relationship of instalment credit to economic stability, he found that there was no difference between this type of credit and other types. Plummer maintained that, if the Federal Reserve can control the general credit area, instalment credit, which is an element included in general credit, could be controlled in exactly the same manner. He found that the only difference between instalment credit and other kinds of producers' credit in so far as they affect the price level, production, and business booms is one of mere quantity rather than one of a difference in kind. An expansion of instalment credit would therefore have the same effects as an expansion of producers' credit in a period of prosperity and business boom, when the supply of labor, capital equipment, and resources is being fully utilized.

Although a rapid expansion of credit, credit institutions, and production occurred during the 1920's, instalment credit received

⁴Wilbur C. Plummer, "Social and Economic Consequences of Buying on the Instalment Plan," Annals of the American Academy of Political and Social Science, Vol. CXXIX (Jan., 1927).

little special attention as the boom of the 1920's neared its end and the depression of the 1930's developed.

During the depression many of the specialized financial institutions suffered losses; but, on the whole, instalment credit troubles were not an outstanding feature of the economic collapse. The continuation of the depression induced many economists to examine all parts of the economic system to find the causes of the depression and the means which might promote recovery. Even though instalment credit troubles were not to the forefront during the depression, the effects of this type of credit were examined.

In 1934, J. M. Clark, a leading economist, strongly expressed the desire for some type of control over consumer credit.⁵ Since he found no difference as to the economic effects in the financing of producers' goods and the financing of consumers' goods through instalment credit, he believed that instalment credit did affect business fluctuations by intensifying them. He did not believe, however, that this type of credit was an active and initiating force. In his analysis of business cycles Clark expressed doubt as to the effects of the general monetary measures in controlling business fluctuations caused by consumer instalment credit. He suggested that stronger and more positive means could be devised to control this type of credit but did not mention specifically what measures to use.

⁵John Maurice Clark, Strategic Factors in Business Cycles (New York: National Bureau of Economic Research, Inc., 1934), pp. 190-210.

During the depression the National Recovery Administration was formed to aid in the recovery of industrial activity in the United States through an effort to raise wages and shorten work hours.⁶ Before this Administration was declared unconstitutional and dissolved, its Consumers Advisory Board appointed a committee in 1934 to investigate and study the effects that the depression had on the income of instalment debtors and delinquent debtors and the effects that delinquent debts may have on retail merchants' working capital. The investigation by this committee led to an intensive study of consumer credit in relation to economic stability. The study, which emerged in 1939, was conducted by Rolf Nugent of the Russell Sage Foundation.⁷

Before the Nugent study appeared, C. O. Hardy observed in his writings in 1938 that consumer credit did not fluctuate as much as producers' credit.⁸ Hardy argued that the liquidation of debt, regardless of whether it was consumer or producer, would have a deflationary influence. In addition, he argued that, if a credit contraction caused a depression at all, then it was producers' credit and

⁶For an analysis of the National Recovery Administration and its economic effects, see L. S. Lyon et al., The National Recovery Administration: An Analysis and Appraisal (Washington, D. C.: Brookings Institution, 1935); see also Charles F. Roos, N R A Economic Planning (Bloomington, Ind.: Principia Press, 1937).

⁷Rolf Nugent, Consumer Credit and Economic Stability (New York: Russell Sage Foundation, 1939).

⁸Charles O. Hardy (ed.), Consumer Credit and Its Uses (New York: Prentice-Hall, Inc., 1938), pp. 143-156.

not consumer credit that caused it. His reference here was to the quantitative importance of the various types of credit.

Rolf Nugent's study,⁹ which was published in 1939, was one of the most significant pieces of work done to that time on the relationship of consumer credit to economic stability. Nugent divided the theories on the effect of consumer credit on the economy into three classes: the classical, 19th century socialists', and the savings-investment. In regard to the classical interpretation, he found that this type of credit would hamper formation of producers' capital. Instalment credit would increase demand for consumer goods and cause a subsequent decline in producers' goods and industries. The classical school emphasized that the rate of production depended upon availability of capital and that, if instalment credit caused an increase in consumption, economic progress would be slowed down or halted. In regard to the 19th century socialists or underconsumption theorists, he found that they supplied some necessary analysis of consumer credit under conditions of incomplete utilization of the factors of production and that they did not explain the expansion and contraction of credit in relation to economic progress.

Nugent utilized the dynamic analysis of the savings-investment theory and undertook to apply it specifically to consumer credit. He found that consumer durable goods were much the same as producers' goods and that any expenditures which increased outlays in relation

⁹Nugent, op. cit., p. 22.

to receipts expanded the income stream and therefore represented a stimulating factor. An injection of idle money or credit into the income circulation tends to produce a multiple expansion of effective demand. A stimulating effect is achieved when consumers borrow. The fluctuations in consumer credit measure the stimulating outlays and depressing withdrawals. The longer the period of amortization in consumer credit, the greater the stimulating effect and the more gradual the subsequent liquidation. Nugent concluded his analysis by saying that an expansion of consumer credit injects additional funds into the income circulation, thereby resulting in additional investment.

Concerning the credit and income expansion of the prosperous 1920's, Nugent stated that consumer credit expansion was a minor though certainly not a negligible force. As to the contraction of consumer credit during the depression, consumer credit was a consequence rather than a cause of the decline in income payments. During the years of recovery from the depression, 1934 to 1937, the expansion of consumer credit was to a considerable extent a result of increasing incomes. Again, in the recession of 1937 and 1938, the decline in the rate of expansion of consumer credit appears to have been a consequence rather than a cause of the diminishing rate of increase in income payments.

Nugent strongly advocated control of consumer credit on the basis that there should be maintenance of some degree of stability in outstanding credit amounts and that manipulation might help general

economic objectives. To provide stability and to influence outstanding credit, he suggested control in the form of required legal down payments and maturities. Although Nugent found that control would be desirable, he concluded by saying that stability of income is most important.

From 1937 to 1941 the National Bureau of Economic Research conducted one of the most comprehensive investigations of consumer instalment credit.¹⁰ The study was presented in a ten-volume series

¹⁰ Studies in Consumer Instalment Financing (New York: National Bureau of Economic Research).

Blanche Bernstein, The Pattern of Consumer Debt, 1935-1936 (1940).

John M. Chapman and associates, Commercial Banks and Consumer Instalment Credit (1940).

Joseph D. Coppock, Government Agencies of Consumer Instalment Credit (1940).

Ernst A. Dauer, Comparative Operating Experience of Consumer Instalment Financing Agencies and Commercial Banks, 1929-1941 (1944).

David Durand, Risk Elements in Consumer Instalment Financing (1941).

Gottfried Haberler, Consumer Instalment Credit and Economic Fluctuations (1942).

Duncan McC. Holthausen, Malcolm L. Merriam, and Rolf Nugent, The Volume of Consumer Instalment Credit, 1929-1938 (1940).

Wilbur C. Plummer and Ralph A. Young, Sales Finance Companies and Their Credit Practices (1940).

Raymond J. Saulnier, Industrial Banking Companies and Their Credit Practices (1940).

Ralph A. Young and associates, Personal Finance Companies and Their Credit Practices (1940).

and represented the work of many statisticians and theoretical analysts. One of the most important works for purposes of this analysis was the volume by Gottfried Haberler, which was devoted to the relationship between instalment credit and economic fluctuations. This volume represented the studies of the National Bureau, Haberler's own work, and the work of previous writers. He supplied the most complete theoretical and statistical exploration of instalment credit that has appeared.

Haberler regarded consumer credit from the viewpoint of the classical economic theorists; that is, as credit used for consumption purposes. In his analysis, he divided the causes of instalment credit fluctuations into the long-run effects and the short-run effects. In the long run, fluctuations in instalment credit were due to the rise in durable consumer goods and the institutional growth of the lending machinery. In the short run, fluctuations in credit appeared to have been due to shifts in demand rather than to shifts in the supply of credit.

He believed that expansion of consumer instalment credit had a stimulating effect on the economy in that it led to an increase in consumer demand. But whether the expansion of consumer credit is good or bad depends on how one views the business cycle. For those who hold to the oversavings or underconsumption school, expansion of consumer credit is an aid to economic stability because it is an

outlet for the excess savings. For those who hold to the overinvestment or undersavings concept, an expansion of credit is dangerous because it increases consumption and diverts funds from productive sources.

Haberler believed that an introduction of instalment credit was a stimulating factor but that, after its legal and institutional setting had been fully developed and its long-run growth had temporarily or permanently come to an end, the fluctuations in credit were the result rather than the cause of cycles in general business activity. Also, even though credit movements were the result of business cycles, fluctuations in instalment credit reacted on the economic system as a whole.

As to the quantitative importance of instalment credit from 1929 to 1940, Haberler stated that, while not negligible, the amount of credit extended was not a very important factor. Inasmuch as credit of this type operated to accentuate fluctuations in economic activity, he concluded that control of this area would be desirable.¹¹

During the Second World War Wallace P. Mors presented an integration and summary of consumer credit theories.¹² His analysis drew heavily on the works of Nugent and Haberler. He found that, theoretically, consumer credit increased effective demand in the up-swing and that a contraction decreased effective demand in the

¹¹Haberler, op. cit., pp. 158-175.

¹²Wallace P. Mors, "Consumer-Credit Theories: A Historical and Critical Analysis," The Journal of Business (Chicago: University of Chicago Press, 1944), Vol. XVII, No. 2, Part 2, pp. 58-65.

downswing. Although credit of this type may be an initiating influence on cyclical fluctuations, an expansion of consumer credit is rather unlikely to cause a business upturn, since an increase in consumer credit is usually itself a product of the recovery. He concluded that the actual importance of consumer credit movements on cycles of the past several decades is a matter of controversy but is probably small.

In the work which Reavis Cox published in 1948, he argued that fluctuations in the aggregate of instalment buying must reflect fluctuations in general business rather than initiate them.¹³ Instalment credit does not occupy a position of relatively great importance in business movements even though this type of credit is much the same as other types. Cox also believed that control of credit at the consumer level was not a sensible procedure since it was too far removed from the actual production of goods. He concluded by saying that instalment credit is not a form of magic which enables its users to spend more than they receive, but that instalment credit moves consumption forward in time.

An important work by Avram Kisselgoff appeared in 1952 on the forces affecting demand for instalment credit.¹⁴ Kisselgoff arrived

¹³ Reavis Cox, The Economics of Instalment Buying (New York: Ronald Press Company, 1948).

¹⁴ Avram Kisselgoff, Factors Affecting the Demand for Consumer Instalment Sales Credit (New York: National Bureau of Economic Research, 1952), Technical Paper No. 7, pp. 4-20; and his "The Qualitative Analysis of the Demand for Instalment Sales Credit," Proceedings of the Consumer Credit Conference (Urbana, Ill.: University of Illinois Bulletin, June, 1951), Vol. XLVIII, No. 76, pp. 141-151.

at the conclusion that instalment credit depends on consumer income and that cyclical changes in income produce more than a proportionate change in the demand for consumer durable goods and instalment credit. Although little statistical verification could be found to show that the supply of consumer durable goods in the hands of the public affects demand, it could logically be assumed that the existing stock of these goods does affect the total demand for durable goods. The size of the monthly instalment payments is more important than the total price of the article, and changes in interest rates would have little effect on the demand for credit. Changes in down payments and maturities have not been a significant cause of cyclical fluctuations in credit demand. Even though a drastic tightening of credit terms can force a contraction of credit volume, a relaxation cannot force an expansion of credit. While instalment credit tends to accentuate economic fluctuations, it is in this respect like any other kind of credit.

This brief historical review of consumer instalment credit theories has been presented not only to show what economists have written in regard to this type of credit but also to show that these writers have not provided a crystallization of principles nor have they reached any general agreement on these theories. It must be noted that the theories on the relationship between consumer instalment credit and economic stability have been developed primarily in the specialized literature concerned with this type of credit. General studies, which investigate the nature and causes of economic

instability, have given little attention to the subject of consumer instalment credit. This brief attention by economic and monetary theorists not only may reflect the view that this type of credit is relatively unimportant but also may reflect the lag in recognition of the part which consumer credit has come to play in consumer financing in the recent decades.

Purpose of the Investigation

The primary purpose of this study is to determine the inflationary characteristics of consumer instalment credit. To do this, the process of inflation must be clearly explained, and the role of credit in the economy must be established. At all times economic theory must be relied upon to provide an acceptable analysis of the inflationary process and to establish the relationship of credit to economic activity. After the explanation of inflation and instalment credit, a theoretical investigation can be made to determine whether the availability and actual use of instalment credit may contribute to inflation.

The basic rationale for this investigation into the possible inflationary effects of instalment credit is that past writers have failed to take into consideration all of the circumstances involved with instalment credit. For example, they have felt that, just because instalment credit increased individual demand, it also increased aggregate demand. There is also the question of whether consumers buy more with instalment credit than without it. Declines in

the relative importance of some industries together with the rise of complementary industries using instalment credit have been very noticeable. Also, every increase in outstanding instalment credit does not necessarily mean that total spending has increased. For example, a reduction in down payments and longer maturities, as well as shifts from cash to credit purchases and the transfer of funds from one individual to another, may increase the total amount of credit, but this does not mean that consumers as a whole are purchasing any more goods and services than they otherwise would have purchased. Although the decision to purchase may sometimes rest upon credit, this does not mean that, by increasing the supply or relaxing the terms, more will be purchased. Detailed analysis will be made to determine whether or not instalment credit, its availability and use, is inflationary.

Scope of the Investigation

The scope of this study includes the broad aspects of consumer instalment credit and its relationship to the process of inflation. An analysis of instalment credit in broad perspective is necessary in order to determine its role in the economy and to determine what particular part this type of credit plays in the consumer and economic financial picture. The nature and meaning of instalment credit, as well as the demand and supply situations, are analyzed. On the demand side, credit is analyzed as to the purpose for which it is granted; on the supply side, credit is analyzed as to the source of

funds which are available and as to the institutions supplying the credit. Also, instalment credit statistics are analyzed in relation to economic aggregates and the over-all debt structure.

After the economic investigation into inflation and credit, an analysis of the effects that instalment credit has on inflation is necessary. Statistical data will be presented in connection with the theoretical analysis to prove or disprove the theoretical findings on the relationship of instalment credit to inflation.

Method of Investigation

The method of investigation used in this study consists of a combination of analytical economic principles and empirical data. The analytical investigation deals with the explanation of the nature and causes of inflation, the role that instalment credit plays in the economy, and the economic principles of inflation specifically applicable to instalment credit. This analysis attempts to explain what effect instalment credit may have upon the economy. Empirical data are used to produce an inductive study of the actual conditions existing between the use of instalment credit and inflation. Here statistics of economic activity, which are assumed to reflect the primary effects of inflation, are presented.

CHAPTER II

INFLATION

Inflation is one of the most talked about subjects of our time. The reason for this is that the impact of inflation has been felt by everyone: individuals, institutions, business concerns, and the government. Nearly everyone hopes to find a hedge against inflation to shield himself from its consequences. Yet one man's way of protecting himself from the hardships of inflation may be the basis of another man's difficulties, and there is no hedge against inflation that will protect the community as a whole. The concern over inflation at the present is very great since inflation may be intensified as a result of certain economic activity, whether such activity arises from the actions of individuals, of businesses, or of the government. In this study a special field of economic activity, consumer instalment credit, is investigated in order to determine whether or not this particular type of activity results in or contributes to inflation. In other words, does the widespread use of consumer instalment credit today bring about a rise in prices which makes for a depreciated dollar?

Why We Are Concerned with Inflation

We are concerned with inflation because of its effects on the value of money; i.e., its purchasing power or its power or capacity to command goods and services in the market place.¹ The terms "value of money" and "purchasing power of money" are thus equivalent expressions. The value of money is reflected in the prices that are quoted for commodities and goods exchanged for money. As prices go up, the purchasing power of money goes down.

Inflation is important to all of us because it has resulted in a depreciated dollar. Measured in terms of commodities, the dollar of today does not buy the same quantity of goods that the dollar bought in 1939 or in 1949. On the basis of average prices from 1947 to 1949 equal to 100, the Consumer Price Index stood at 59.4 in 1939 and at 101.8 by 1949. In 1958, the index reached a level of 123.5. The increase in the price index for the period 1939 to 1949 from 59.4 to 101.8 resulted in a decline in the value of the dollar by \$.417. For the period 1939 to 1958 the dollar declined in value by \$.519, or the 1939 dollar purchased only \$.481 worth of goods and services in terms of 1958 prices. From 1949 to 1958 the value of the dollar dropped \$.176.²

¹Ludwig von Mises, The Theory of Money and Credit, trans. H. E. Batson (New Haven: Yale University Press, 1953), pp. 97-146.

²U. S., Department of Commerce, Office of Business Economics, Business Statistics, 1957 Edition: A Supplement to the Survey of Current Business (Washington, D. C.: Government Printing Office, 1957), p. 26; U. S., Bureau of Labor Statistics, Monthly Labor Review, Vol. LXXXII (April, 1959), p. 471. The purchasing power

Inflation has varying effects on different individuals and groups in society. Very few citizens are immune to its consequences, and there are some who benefit from it. A discussion of the effects of inflation on different individuals and groups points out the consequences of inflation.³ Generally speaking, those who can vary their income according to the decline in purchasing power can keep pace with inflation, whereas those who have fixed incomes suffer.

Large numbers of wage earners are highly organized and are paid according to the terms of frequently revised collective contracts, some of which contain escalator clauses. As a result, the current living standard of organized labor is not seriously affected. Union members can, through periodic wage increases, keep up with inflation. Although large numbers of workers are not unionized and have not received sufficient wage increases to keep pace with inflation, they have received substantial increases. School teachers, government workers, nonprofit institutional workers, and domestic workers are groups that generally lose when inflation is under way. Their incomes are relatively fixed and are not adjusted to rising prices. No matter

of the dollar is computed by dividing the base period index by the index of the year in which the value of the dollar is to be determined. For 1939-1949, $59.4 \div 101.8 = \$.583$, or a drop in the value of the dollar by \$.417, ($\$1.00 - \$.583 = \$.417$). For 1939-1958, $59.4 \div 123.5 = \$.481$, or a drop in the value of the dollar by \$.519, ($\$1.00 - \$.481 = \$.519$). For 1949-1958, $101.8 \div 123.5 = \$.824$, or a drop in the value of the dollar of \$.176, ($\$1.00 - \$.824 = \$.176$).

³For a more complete discussion of the effects of inflation on various individuals and groups than those presented here see Edwin W. Kemmerer, The A B C of Inflation (New York: McGraw-Hill Book Company, 1942), pp. 42-59, 77-94.

how much one group of individuals may or may not be able to vary its income, it must not be forgotten that the purchasing power of past fixed-dollar savings will decline as prices rise.

Individuals who depend on pensions and social security benefits for an income or individuals who receive monthly settlements from life insurance policies and annuities are practically defenseless against inflation. The income received from these sources cannot be adjusted to meet the rising costs of living because (1) the income is fixed according to the life insurance, annuity, or pension contract; (2) even if the income could theoretically be changed, the funds which provide the income are invested in the form of bonds and mortgages, and the returns from these obligations are themselves inflexible and relatively unvarying regardless of advancing inflation. The recipients of pensions, annuities, and life insurance settlements are among the hardest hit groups, not only because of the fixed amount received but also because they are usually older people.

The bondholder's position is similar to that of the pensioner's. He receives his interest and ultimate repayment of his principal in a long-term contract which cannot be reopened or renegotiated to meet the decline in the value of money. Inflation cuts the bondholder's real income and investment in about the same proportion as the rise in the price level. It affects the stockholder in the opposite way. The stockholder's income and investment, in contrast to the bondholder's, tends to rise. It may rise fast enough to catch up with the cost of living, and sometimes it may rise faster. Of

course, not all stockholders fare the same, but those whose funds are invested in prosperous industries and companies are much better off than bondholders.

The income and investment of the owners of small businesses does not differ essentially during an inflationary period from those of the stockholder's. In other words, as with a large corporation, the small firm's market position protects it to a greater or lesser degree. The costs of business operations rise, but so do the prices it can charge its customers.

Within the group of small businessmen we may include doctors, dentists, lawyers, and other professional practitioners and--with some qualifications--farmers and landlords of residential property. As with other types of business operation, the net income of professional men is the difference between their gross receipts and total expenses. Provided that they can raise their gross receipts percentage wise as rapidly as expenses increase, their net income increases by the same percentage. Thus they can, in a large measure, protect themselves against the impact of inflation. This, of course, may not always be possible.

We may note here, as elsewhere, that the small business owner, or any one, for that matter, who uses borrowed funds during a period of inflation may be in an advantageous position. For example, an individual borrows a certain sum of money which purchases an equivalent amount of goods; but, if the individual pays the loan back after a certain amount of inflation occurs, he is paying back the same number of dollars, but the purchasing power of each dollar is less.

The same considerations which apply to businessmen apply to farmers. The farmer is protected against inflation by the amount that farm prices rise. The price of farm products is likely to rise along with the price of other products.

Landlords of residential property also are businessmen, and the same considerations would apply, except that in the past the government has imposed rent controls in some inflationary periods. Without these controls the landlords' net income would rise as rapidly as commodity prices. Real estate investments either in land, business property, or residential property generally react to inflation in the same way as stockholders' investments; that is, they increase in value and may rise faster than the rise in prices.

Up to this point we have spoken as if wage earners, stockholders, pensioners, and others were entirely separate and distinct sets of people. Obviously, this is not true. Wage earners may own insurance policies as well as stocks and bonds. Professional men may work partly for a salary and partly on their own account. Any combination is possible, and a receiver of a fixed income may also be a receiver of a variable income. The impact of inflation upon the fortunes of the individual who belongs to more than one group--and there are many--is therefore likely to be quite complex. Although this condition exists, there are many people who belong predominantly in one group or another and are mainly benefited or placed at a disadvantage in the manner indicated by the broad classifications used above.

The foregoing discussion tells only partly the story of the terrific burden that inflation places on many institutions. Inflation hampers the operations of private hospitals, private colleges, and endowed research foundations because the income of these institutions is relatively fixed and does not change as the value of money drops. Continued inflation may lead increasingly to the transfer of hospital facilities and facilities for education and research from private endowments to the state and to federal agencies that can cover increased costs from enhanced tax revenues.

In summary, then, the effect of the inflationary process transfers income from one group to another. Pensioners and holders of bonds and insurance policies suffer a cut in the real value of their incomes proportionate to the fall in the purchasing power of money. The money income of other groups, while not fixed, increases less rapidly than the level of prices so that their real incomes are cut. These groups include such people as unorganized labor and white-collar wage and salary earners. Well-organized workers can apparently insist upon regular increments in their money wages that will approximately offset the decline in the purchasing power of money. The fortunes of stockholders and of business and professional men working on their own account show great diversity; but, on the whole, such groups are able to protect themselves somewhat against the consequences of inflation.

Not only may some individuals protect themselves from inflation by being able to vary their incomes but they may use corporate

stocks and real estate (plus such other things as rare stamps, coins, jewelry, antiques, etc.) to help provide a hedge against inflation. These investments, on the whole, tend to rise in value as the purchasing power of the dollar declines. In many cases, though, most individuals are too late to protect themselves by trying to hedge against inflation through the use of corporate common stocks, real estate, and other such investments. In other words, their timing in purchasing is wrong, and they buy when the prices of stocks and real estate are relatively high. As a consequence, they lose more than they would otherwise have done.

Not only may individuals suffer from inflation but privately endowed institutions will also suffer the consequences of inflation. Since the income of such institutions is relatively fixed, the institutions may be forced, as prices rise, to defer or reduce operations. Thus, not only to the individual but to society as a whole the costs of inflation may be great.

Although we have just said that inflation may involve great costs for certain individuals and for some groups, this does not necessarily mean that inflation is economically undesirable for the economy as a whole. If, for example, a gradual rise in prices from year to year generates the amount of business and consumer optimism necessary to keep the economy running at full or near-full capacity, then to this extent inflation would have to be considered desirable. Here reference is made to the choice between inflation and deflation. A stable level of prices is probably most desirable, but it is the

opinion of many that a little inflation is better than deflation which results in unemployment, lower capital formation, and smaller total output. For example, as prices rise, employment continues until nearly everyone in the labor force is employed, and output and capital formation continue; whereas, when prices decline, unemployment increases, and output and capital formation are reduced. In other words, inflation is better than deflation as far as aggregate production and employment are concerned, but inflation is worse than deflation as far as the distribution of wealth, savings, and income are concerned.⁴

Definition of Inflation

Defining inflation is important; not everyone has the same idea in mind when using the term. Whether or not it is possible to get agreement on any single definition, we must have clearly in mind the leading concepts of what inflation is and how it operates in the economy.⁵

⁴For a more complete discussion on creeping inflation as the least of several evils and on the advantages and disadvantages of inflation see Sumner H. Slichter and Heinz Luedicke, Creeping Inflation--Curse or Cure? (New York: reprinted from Journal of Commerce, 1957), pp. 3-32. See also Sumner H. Slichter, "Thinking Ahead--on the Side of Inflation," Harvard Business Review (Sept.-Oct., 1957), p. 15; also P. A. Samuelson, "Everybody Talks about Inflation, but--," New York Times Magazine (Aug. 15, 1948), p. 13; and William S. Vickrey, "Stability through Inflation," Post-Keynesian Economics, ed. Kenneth K. Kurihara (New Brunswick, N. J.: Rutgers University Press, 1954), pp. 89-122.

⁵David M. Wright, The Creation of Purchasing Power (Cambridge: Harvard University Press, 1942), p. 60. Wright lists

As commonly defined, inflation is an upward movement of the general price level. Although a general upward tendency of prices is almost always characteristic of inflationary periods, a number of difficulties are involved in this definition. For example, it is not always clear what price level is being referred to. Sometimes special emphasis is placed on movements in the cost of living; at other times reference is made to a particular item in the cost of living or to wholesale prices rather than retail prices. Some may be concerned with the rises in steel prices or wages; others may refer to prices of securities or of real estate. In this study, prices refer to the general over-all level of commodity prices in the economy. An over-all level of prices must be used because all prices do not move in the same direction. As some individual prices are falling, others are rising. To single out an individual commodity would not give an adequate or true picture of what is happening to prices in general. The Wholesale Price Index and the Consumer Price Index published by the U. S. Department of Labor meet the requirements of a general over-all level of prices, since they are computed on the basis of weighted averages of a representative group of commodity prices. An explanation and justification of the use of these indexes appear in a later section.

It is not always clear how rapidly or how far prices must rise before one would be justified in calling the movement inflationary,

thirteen definitions to show the confusion that exists not only on the definition of inflation but also of the inflationary processes.

or whether a price increase that does no more than restore a former level of prices is as inflationary as one that carries prices to a new level. The rapidity and distance of price rises are a matter of degree. One would have to be arbitrary in the selection of the rate and distance that prices should rise. In an extremely short period of time prices generally fluctuate up and down; therefore it is generally only during a much longer period of time that we may know whether or not inflation has taken place. Under theoretical conditions any rise in prices which has achieved a new level and has remained at that level would be considered inflationary. Whether a current price rise has to go higher than a former level of prices depends on how other factors in the economy adjust; that is, it depends upon the adjustment of costs, wages, and income. The rapidity, distance, and restoration of a former level of prices will be further explained in the section on the distinguishing attributes of inflation.

Implicit in the definition of inflation is also a question of whether all price advances are inflationary. In other words, an increase in the general level of prices may have some beneficial effects on the economy by expanding output and real income. An expansion of the physical volume of goods and services may take place as long as there are unemployed labor, unused plants and equipment, and unused natural resources existing in the economy. If a price increase is associated with an increase in employment and output, then this price rise would not be considered as detrimental to

the economy. Once full employment has been attained, no further increase in employment and output is possible, by definition, and any increase in prices becomes truly inflationary. Therefore, the definition of inflation used in this study comprehends a rise in the over-all level of prices after the economy reaches full employment when output cannot expand.⁶

Distinguishing Attributes of Inflation

In the past, inflationary pressures have been manifested in many different ways and in different degrees. Discussion of these enables us to point out that there are not one but several types of inflation and that they all have certain features in common as well as certain distinguishing characteristics. Of course, the most common feature is a rise in prices, whether it is a general upward rise or a disproportionate increase. Generally, the characteristic that distinguishes one form of inflation from another is the peculiar course which that particular type of inflation follows. The various distinguishing attributes of inflation are discussed in the following paragraphs.

Open Inflation.--Open inflation occurs when inflationary pressures freely exert themselves upon the economy and prices rise

⁶Dudley Dillard, The Economics of John Maynard Keynes (New York: Prentice-Hall, Inc., 1948), pp. 223-239 and 277.

according to the extent of the pressure.⁷ The government or other central authority usually is the only agency that can control such inflation. If this authoritative body decides on a hands-off policy and relies primarily on the price mechanism to ration and distribute goods and services, there is open inflation. The adoption of a policy of open inflation means that prices will be allowed to ration the excess demand for goods and services and for the factors of production. Prices here fulfill their historic function of rationing the short supply of goods and distributing those goods according to the ability to pay of those bidding for them in the open market. In other words, the essential characteristic of open inflation lies in the operation of the price system as the sole rationing agent.

Repressed Inflation.--Repressed inflation is a situation in which inflationary forces are at work but in which the government interferes directly with the workings of the rationing and the distributive functions of the price system through controls.⁸ Repressed inflation, or, as some authors have called it, "suppressed or controlled inflation," was the type that operated in the United States during the Second World War. This type of inflation seeks to prevent rationing by price increases and to substitute instead a distribution system based partially on legal controls. A fundamental characteristic of this type of inflation is that prices become only one of the

⁷Harold K. Charlesworth, The Economics of Repressed Inflation (New York: Macmillan Company, 1956), pp. 13-14.

⁸Ibid., p. 14.

rationing agents. Ration coupons, government priorities, or allocations must accompany money if the goods or services are to be obtained. In order to purchase commodities, consumers need both money and ration coupons; when they run out of the latter, their money becomes legally immobilized. Generally, when consumers have more money than ration coupons, a number of transactions take place at prices above the legal ceilings. Black markets occur, as well as evasion of price and rationing regulations. Other situations appear, such as the following: certain goods disappear from the market altogether, either because they are bought up quickly by the lucky or favored few or because it is no longer profitable to produce them; many goods which continue to be available tend to deteriorate in quality or shrink in respect to the quantity sold at a fixed price. Both of these factors constitute a fall in the value of the consumer dollar and are as inflationary as if prices had actually increased.

"Latent inflation," which may be associated with repressed inflation, may be described as a vast accumulation of savings in the form of currency holdings, deposit accounts, security holdings, and other forms of savings or near-money items which consumers and producers have ready for expenditures on goods and services.⁹ This type of inflation is characteristic of the savings which were accumulated

⁹E. M. Bernstein, "Latent Inflation: Problems and Policies," International Monetary Fund Staff Papers, Vol. I, No. 1 (Feb., 1950), pp. 1-16.

during the Second World War. It is a type of latent purchasing power and is distinct from repressed inflation, which caused the savings. When this latent purchasing power is finally released, it may act only to push prices upward. Under some circumstances this type of inflation may be the necessary element in facilitating the economy's transition from a war production to a full civilian production basis. Therefore, price rises may be justified on this basis.

Hyper-inflation.--Hyper-inflation, many times referred to as galloping or run-away inflation, differs from inflation of the ordinary sort in the degree of price rise. This type of inflation is a fantastic increase in prices and is accompanied by an increase of the same proportion in the money supply and its velocity. An example of hyper-inflation can be found in the post-First World War history of Germany.¹⁰ Because of an unstable government and heavy war reparations, the German economy exploded in one of the great price convulsions of history. Based on 1913 as 100, wholesale prices rose to around 300 by June, 1919; the following June the index stood at 1,380; and in June, 1922, the index stood at 7,000. The level of wholesale prices continued to rise with accelerated speed, and by June, 1923, the index stood at 126,160,000,000,000--roughly 400 billion times its 1919 price level. To be sure, the price increases were accompanied by an increase in the money supply. The German

¹⁰Frank D. Graham, Exchange, Prices, and Production in Hyper-Inflation: Germany, 1920-1923, p. 14, cited by Edwin W. Kemmerer, The A B C of Inflation (New York: McGraw-Hill Book Company, 1942), p. 93.

hyper-inflation was fueled largely as a result of governmental deficits. Notes to cover the deficits were issued by the central bank and increased from 30 billion marks in June, 1919 to 496,507 million billions in December, 1923. Demand deposits of the central bank underwent a similar expansion, rising from 14 billion marks in June, 1919 to 548,024 million billions by the end of 1923.¹¹ This fantastic increase in the money supply and money velocity was termed a "flight from cash." Everyone lost confidence in money and sought to exchange it for real goods before its purchasing power was further reduced. An inflation of these proportions staggers the imagination.

Reflation.--There can be no doubt regarding the inflationary character of the economic conditions that have been designated as hyper-inflation and as open, repressed, and latent inflation. Many people hesitate to classify some other types of economic conditions in the same way, despite the fact that certain inflationary characteristics appear. Consider a situation in which prices rise, possibly very rapidly, from a depression low. This type of price increase is sometimes called "reflation."¹² An outstanding recent example of reflation is found in the price recovery which took place in the 1930's following the sharp price deflation after 1929. Many distortions result from such price movements so that we must not

¹¹The Americana Annual: An Encyclopedia of Current Events (New York: Encyclopedia of Americana Corp., 1923), pp. 347-348 and (1924), pp. 350-352.

¹²Kemmerer, op. cit., pp. 11-14. Also Elmer Clark Bratt, Business Cycles and Forecasting (4th ed.; Homewood, Ill.: Richard D. Irwin, Inc., 1953), p. 314.

jump to the conclusion that a reflation of prices merely corrects price distortions caused by the previous deflations. Therefore, prices which rise from a depression low could be called reflationary.

Creeping Inflation.--Creeping inflation may be distinguished from other types in that it is a condition in which there is a relatively moderate but persistent tendency for prices to increase over a fairly long period of time.¹³ Because of the economic policy in the United States, we may now be in a period of creeping inflation. Government policy has focused its attention on maintaining a high degree of labor employment plus military preparedness. This policy, coupled with union bargaining strength in getting periodic wage increases greater than productivity gains, could produce a slow creeping inflation. This type of inflation with all its consequences may be a necessary element in providing full or near-full capacity in a capitalistic economy such as the United States.¹⁴

Wage-price Spiral Inflation.--This type of inflation occurs through the combined actions of labor and management. Labor, for various reasons, may demand periodic wage increases and because of the monopoly characteristics of some unions may succeed in getting them. Management, in turn, not wishing to accept reduced profits or unable to increase productivity, may pass the price increases on to

¹³Alvin H. Hansen, Monetary Theory and Fiscal Policy (New York: McGraw-Hill Book Company, 1949), p. 129.

¹⁴For a good discussion of the "economic gains" that seem to be beyond our reach unless we accept a limited amount of creeping inflation, see Slichter, "Thinking Ahead--on the Side of Inflation."

its customers and ultimately to consumers. The process, wage increases followed by price increases, is referred to as a wage-price spiral.¹⁵

We have been discussing the distinguishing attributes of inflation as if they were entirely separate and distinct. This is not necessarily true. For example, open inflation may also be either hyper-inflation or creeping inflation, or a wage-price spiral. Repressed inflation may also turn out to be a creeping inflation or a wage-price spiral.

It will be noted that the distinguishing attributes of inflation discussed in the preceding paragraphs all have a common feature, a rise in the general price level. Although inflation may manifest itself in many ways, it is still necessary to explain the causes or reasons for inflation; that is, the conditions which force the general price level to rise.

Theoretical Explanation of Inflation

Although economists recognize the usefulness of an approach in the analysis of economic activity in terms of money and prices, they have suggested in recent years that a more fruitful approach is to be found in a study of income and expenditure flows and the relationship between savings and investment. To appreciate the workings of the economy, an understanding of the role of money expenditures is necessary since these expenditures flow through the economic system.

¹⁵Charlesworth, op. cit., p. 59.

Expenditures and income relationships are more clearly revealed if we picture the volume of money expenditures as a flow running through the economic system. Here the producers of investment and consumption goods pay out wages and salaries, interest, rents, and profits to those engaged in the productive process. The income recipients, in turn, use their income for investment purposes or, in the case of consumers, for consumption, consumer durable goods, and savings, thus returning to the stream funds necessary to continue production and to pay out income.

Chart 1 shows various economic relationships that exist in the economy. Money income is received by individuals for their labor. Taxes out of income are transferred to the government. Income is disposed of in the form of expenditures and savings. The supply of funds for the money market is derived from savings of individuals, bank funds, and governmental loan agencies. The government, businesses, and individuals demand funds. Money is borrowed by the government for public services, public work projects, and military purposes. Businesses demand money for outlays on factories, machines, and houses. Savings are extended in the form of credit to individuals for the purchase of automobiles, washing machines, refrigerators, etc., thus returning the income received to the productive process.

This preview of the role of expenditures and money in our economic system is intended to show the importance of the flow of money expenditures as a determinant of price levels, income, and output.

CHART 1.--Income Flows and the Money Market

Source: Milton L. Stokes and Carl T. Arlt, Money, Banking, and the Financial System (New York: Ronald Press Company, 1955), p. 20. Used by permission of the Ronald Press Company, New York.

The foregoing analysis is, of course, incomplete. In the interest of simplicity, questions of terminology, emphasis, and qualification were ignored. The factors that directly and indirectly affect prices will be examined in detail in the sections that follow.

There are two general approaches to an explanation of the inflationary process. The first, the monetary approach, assumes that changes in the quantity of money are the primary cause. In other words, Chart 1 may be explained wholly on the basis of the quantity of money and its velocity and how these affect income, output, and prices. The monetary approach is not widely accepted by modern economists; nevertheless, it will be examined as a possible explanation of the process in which we are interested. The second approach explains inflation in terms of the volume of expenditures. Chart 1, for example, may be wholly explained on the basis of the volume of expenditures and how this total volume affects income, output, and prices. This is the most generally accepted explanation of inflation.

Monetary Approach to Inflation

The monetary approach to the explanation of general price level changes, which is the quantity theory of money, emphasizes changes in the quantity of money as the primary cause of price-level changes.¹⁶ The price level, in this theory, was thought to be a

¹⁶The quantity theory of money was stated as early as 1752 by David Hume in his essay "Of Money," (Political Discourses). Although there are many refined versions of the quantity theory of money, it held that prices varied in direct proportion to the money

function of the quantity of money. If this theory were correct, then the quantity of money would be highly important for government policy decisions in the determination of income, employment, and output. The monetary authority could readily control the price level by changing the quantity of money. A control of the quantity of money would be a sufficient condition for the control of prices, output, and income. Before proceeding to the explanation of the effects that changes in the quantity of money may have on prices, it is necessary to define and explain briefly the money supply and its velocity.

The accepted definition of the money supply, the one used in this study, refers to currency outside the banks, plus demand deposits adjusted for treasury deposits, interbank accounts, uncollected items, and government balances.¹⁷ Currency outside the banks consists of money held by the public in the form of coins and paper money issued by the Federal Treasury and bank notes issued by the Federal Reserve

supply. For a more complete analysis of the many qualifications and refinements, see Irving Fisher, The Purchasing Power of Money (New York: The Macmillan Company, 1926).

An alternative approach to this explanation, called the "cash balance approach," developed by Alfred Marshall and refined by D. H. Robertson and others, uses the equation $M = kPO$, in which M is the supply of money, k , the fraction of money income which persons wish to hold as cash balances, P , the average price, and O , the volume of physical output. Sudden changes in cash balances, reflected by a change in k , may produce changes in the level of prices. Although changes in k may change prices, the cash balance approach still suffers from the same defects as the quantity theory. The defects of the quantity theory are noted later. For an extended analysis, see A. H. Hansen, op. cit., pp. 49-53.

¹⁷Hansen, op. cit., p. 15. See also Lauchlin B. Currie, The Supply and Control of Money in the United States (2d ed.; Cambridge: Harvard University Press, 1935), pp. 10-24.

Banks. Demand deposits are checking accounts of individuals and business firms.

Currency outside the banks is determined by the action of the Treasury and the Federal Reserve Banks in response to the needs of the public. This is of only minor importance, since it has been estimated that coin and currency are used in only 10 to 15 per cent of the total dollar transactions and that checks or demand deposits are used for the remaining 85 to 90 per cent.

The most significant factor involved in the determination of the money supply is the banking mechanism of changing demand deposits. This component of the money supply can be increased or decreased by the combined action of the Federal Reserve System, the banking system, and the public. In general, the supply of money and credit in the banking system is increased when loans and investments are made to the public, and the supply is reduced when these loans and investments are paid back to the bank.¹⁸

Two factors govern the change in demand deposits. First, the banks are required to hold only a fraction of their deposits as reserves. As the reserves increase, they can make more loans and investments; and, as the reserves decrease, they have to contract their lending operations. The second factor governing the expansion of the money supply is the depositing and redepositing of funds by the public in the various banks. When a customer receives a loan from the bank, he does not obtain cash; instead, a credit is made to his checking

¹⁸Hansen, op. cit., pp. 28-41.

account. As the checks are written and redeposited in another bank, the reserves of the second bank will increase, and then this bank can loan or invest part of the funds, which may be deposited in a third bank; the third bank has an increase in reserves and can lend part of the funds, and so on; and, as the funds are invested and loaned out through the banking system as a whole, they generate deposits on a multiple basis. These checking accounts are demand deposits and thus become additions to the money supply in our economy. When the funds are paid back, the reverse procedure occurs; the loan is canceled, the demand deposit is canceled, the reserves are reduced, and there is a reduction in the money supply.

On the banking side, changes in demand deposits are brought about through changes in the reserve balances. These reserve balances may be affected (1) by the buying and selling of gold, (2) by a change in the currency outside the banks, and (3) by deliberate action of the Federal Reserve.

When the Federal Treasury buys gold, an increase in bank reserve balances occurs; therefore, the money supply is increased. When the Federal Treasury sells gold, the reverse occurs; reserve dollars are taken out of the banking system and the money supply is reduced.

When currency in the hands of the public is deposited in the banks, the banks redeposit it in the Federal Reserve for credit to their reserve accounts. An increase in the reserve account causes an increase in the money supply. If the public increases its holdings of coin and currency, the reserve balances are reduced, and so is the money supply.

Changes in gold and currency have little effect on changes in the reserve balances since they are of relatively minor importance. The most significant factor influencing the reserve balances lies in the action of the Federal Reserve Bank in the form of (1) discount operations, (2) open market operations, and (3) the changes in the reserve requirements.¹⁹

Any member bank of the Federal Reserve System may obtain additional reserves and increase the money supply by borrowing from the Federal Reserve Banks. This borrowing procedure is referred to as the discount operation, and the interest charge the Federal Reserve makes for the loan to a member bank is known as the discount rate. By increasing the rate of interest charged, the Federal Reserve can make borrowing more expensive and thus can discourage some of the banks from borrowing. If the rate is lowered, the reverse procedure occurs.

Open market operations refer to the purchase and the sale in the open market of certain assets by the Federal Reserve Banks. The principal types are bankers' acceptances, bills of exchange, and, more significantly, the obligations of the Federal Government. When the Federal Reserve buys government securities, it increases the money supply because member banks' reserve balances increase. The reserves are increased because the securities are paid for by a check drawn on the Reserve Bank. The check is deposited with a member bank which

¹⁹Board of Governors of the Federal Reserve System, The Federal Reserve System: Purposes and Functions (Washington, D. C., 1954), pp. 31-55.

in turn deposits it with a Federal Reserve Bank. In this way the member banks' reserve balances are increased. If the Federal Reserve decides to reduce the money supply, it can do so by selling government securities, and the reverse occurs.

Changes in the reserve requirements affect the reserve balances. When the reserve requirement is increased, more reserves are required; this change reduces the money supply. When the reserve requirement is reduced, the money supply is increased.

The velocity of money may be defined as the number of times that money passes from hand to hand in purchasing the output of the nation. Money velocity is the quotient between a measure of business done and a measure of the amount of money required. For example, if \$100,000 represents the value of the output of goods and services and it takes \$25,000 in money to purchase the output, the velocity or turnover of money is 4, which is determined by dividing the output (\$100,000) by the quantity of money (\$25,000).

Although the velocity is defined as the number of times that money passes from hand to hand in purchasing the output of the nation, the real determinant of velocity must actually be sought in those factors that explain why or how rapidly producers and consumers will part with cash in order to make expenditures. In other words, the volume of money expenditures in a given period of time reflects the struggle between the desire for immediate acquisition of goods and services and the preference for holding cash balances. The main reasons for holding money may be classified as (1) the transactions

motive, (2) the precautionary motive, and (3) the asset motive. The transactions motive refers to money balances held in order to finance the daily transactions in the purchase of goods and services. The precautionary motive for holding cash is to enable the holders to meet unforeseen contingencies--the possibility of unexpected expenditures or losses. The asset motive refers to money balances that are held to take advantage of a bargain in the event that market prices of commodities, securities, or other assets decline.²⁰

Explanation of the Monetary Approach to Inflation.---In the monetary approach to inflation, changes in the quantity of money are used to explain changes in the general level of prices. Prices are determined by the relationship of the quantity of money and its velocity to output; $P = \frac{MV}{O}$, in which P is the general level of prices, M , the quantity of money, V , the velocity of the quantity of money, and O , the physical volume of goods and services. When M increases, then P increases. For example, if M is \$25, V is 4, and O is at 100 units, the general level of prices is \$1. If M rises to \$50, V remains at 4, and O remains at 100, the general level of prices must rise to \$2, $(\frac{\$50 \times 4}{100})$. Thus when M rises, then P , the general level of prices, must rise. If, on the other hand, M decreases, then P may be expected to fall. For example, if P is \$2, as stated above, and M drops from \$50 to \$25, then P would be \$1, $(\frac{\$25 \times 4}{100})$. Therefore

²⁰Edward S. Shaw, Money, Income, and Monetary Policy (Chicago: Richard D. Irwin, Inc., 1950), pp. 349-352 and Albert G. Hart, Money, Debt and Economic Activity (2d ed.; New York: Prentice-Hall, Inc., 1953), pp. 151-204.

prices, under the monetary approach to inflation, are determined by the relationship of the quantity of money multiplied by a constant money velocity in relation to a fixed output; $P = \frac{MV}{O}$.

The assumptions upon which the quantity theory of money is based are (1) that the velocity of money is stable or constant and (2) that the volume of goods and services to be bought with money remains constant.²¹

The monetary theorists hold that prices can be raised by increasing the quantity of money. If this is true, then employment and output can be increased by increasing the quantity of money. At low income levels, large numbers of unemployed people and idle factories, machines, and resources exist. By pumping more money into the stream, prices should rise, according to the theory. As these prices rise, someone in the economy is receiving more income. As income rises, unemployed people and owners of idle factories and resources would see others receiving more income. Then unemployment would be reduced, and these unused plants would begin to produce because each person and factory owner would seek to get his share of the increased income. The reduction in unemployment and the use of idle plants would result in greater income and a greater physical volume of output. Thus, according to the quantity theory of money, the monetary authorities can control the price level and by so doing control the level of income and output, merely by changing the

²¹Ludwig von Mises, The Theory of Money and Credit, trans. H. E. Batson (New Haven: Yale University Press, 1953), pp. 124-145.

quantity of money. But the public may not react in the manner suggested. The public receiving the new or extra money may not spend it on goods and services but may hold it instead for future use. In this event no increase in output would come about. Income, employment, and prices would remain at the same level at which they were prior to the increase in the money supply. The reason that the public may hold the new or extra cash is to meet the so-called asset demand for cash as described in the section on the determinants of the velocity of money.

When full employment is reached and an increase in the supply of money occurs, the quantity theory may give a fairly accurate picture of how prices react to this increase in the supply of money. Under full employment conditions it is assumed that output cannot expand because all available labor is employed and all available plants and factories are being used. If new money is injected into the system and if the public tries to spend the new money, prices will rise. If money and its velocity stand at 100 ($\$25 \times 4$) and output is at 100 prior to the increase in the quantity of money and if, after the increase, MV stands at 200 ($\$50 \times 4$), then prices have doubled. It must be remembered that, even at full employment, an injection of new or extra cash may not necessarily be spent. Instead of spending all of the extra money, the public may hold a large portion of it; thus prices will remain virtually the same.

In the previous paragraphs we have been talking about an injection of new money into the economy and the way such new money

may affect prices, income, and output. An injection of new money may affect prices, or it may not. Aside from these effects, the velocity of money is assumed to be constant. This assumption is not valid since the velocity of money may change.

Even if the money supply is held constant, people may decide to hold cash balances to buy securities and other assets when their prices fall. If that is done, then prices will fall because the velocity has decreased; if people begin to buy securities and other assets, then the velocity of money will increase, and so will prices.

Under conditions of full employment, if the public spends the increased money, the quantity theory cannot be questioned. The full employment assumption in the theory restricts its applicability, since it cannot be used to explain price changes at nonfull employment levels. But, more seriously, the assumption of a relatively constant velocity of money is of doubtful applicability. The motives for holding cash described under the determinants of the velocity of money are complex. A person's relative desires for holding wealth in monetary or security form vary with changes in expectations about future conditions and with the rate of interest on securities. An increase in the amount of money will have little or no effect on the price level if the money is simply added to idle balances. Also, an increase in the money supply may be offset by a decrease in velocity, or with a given supply of money an increase in velocity will raise prices.

The quantity theory of money, which assumes constant output and constant velocity and assumes that all changes in the money supply

cause changes in prices and income, does not provide an acceptable explanation of inflation. The expenditures approach, which will be explained later, does provide an adequate explanation of inflation.

Even though economists have pushed the quantity theory of money into a dark corner, most of them will have to admit that, in order for the economy to operate properly, a flexible money supply is needed. Even if the quantity of money is not a significant determinant of income and expenditures, increases in total outlays and income may encounter restraining obstacles to further expansion, unless the money supply is increased. No doubt a point will be reached at which further income-generating expenditures will become wholly ineffective, unless an increase in the quantity of money occurs. Thus, in general, we may set down the proposition that the national income cannot be raised effectively and in the most advantageous manner without some increase in the money supply. But, even though an adequate supply of money is necessary, it is not a sufficient condition for economic expansion.

Although it has been shown that the monetary approach to inflation may not be very sound, one should examine the factors involved in the quantity theory in relation to instalment credit so as to provide a complete analysis of the possible inflationary characteristics of instalment credit.

Expenditures Approach to Inflation

In the expenditures approach we must look to the economics of John Maynard Keynes as a starting point for an explanation of the inflationary process. Keynes' theory is primarily concerned with the explanation of the determination of total income and spending. In the Keynesian theory, price changes are considered secondary to changes in income and spending, but the phenomenon of price is easily incorporated into the theoretical structure. Keynes' explanation of the inflationary process is as follows:

When full employment is reached, any attempt to increase investment [investment expenditures] still further will set up a tendency in money prices to rise without limit, irrespective of the marginal propensity to consume; i.e. we shall have reached a state of true inflation. Up to this point, however, rising prices will be associated with an increasing aggregate real income.²²

For one to understand the Keynesian inflationary process, it is necessary to explain the following: various types of expenditures, the causes of these expenditures, and the effect that these expenditures have on prices. These various topics will be discussed in the following sections.

Types and Determinants of Expenditures.--Economic activity is contained in a stream of income to individuals and then flows back in the form of expenditures to the stream, from which it is paid out again as income. According to the proponents of the theory of income

²²John M. Keynes, The General Theory of Employment, Interest and Money (New York: Harcourt, Brace and Company, 1936), pp. 118-119. The words "investment expenditures" are the author's own words.

and expenditures, the level of output depends on the amount of spending that is being made for the total output. There are two general types of expenditures that can be made in our economy, those used for consumption and those used for investment.

Consumption expenditures are made for the purchase of goods and services that are actually used up during a certain period of time. Such things as food, beverages, tobacco, toilet articles, and services of the barber or beauty parlor are commonly called items of consumption. Once the items or services have been received, they are consumed. The amount that consumers spend on consumption is determined by the amount of income that the consumer receives. Empirical data indicate that, as income rises, consumption rises also, but at a slower rate. At low income levels all income is consumed; at high levels a considerable proportion of it is saved. Consumption may be determined by an individual's assets, since an individual may increase or decrease his consumption, depending upon maintenance or replacement of his fixed assets. Also consumption may be determined by the rate of interest, causing consumers to save more at high rates and to save less at low rates of interest.²³

Even though consumption is a larger component of total spending than investment, it is in the main a passive factor in influencing and stimulating changes in income. In other words, outlays for consumption do not produce substantial shifts in total income, but other forces which will produce a much greater change are at work in the

²³Hansen, op. cit., pp. 60-61.

economy. Investment expenditures, on the other hand, have a powerful and dynamic influence on income.

Investment, as used in economic analysis, refers to the formation of new capital goods and is taken as a net addition to the existing value of capital equipment. This type of investment should not be confused with financial investment, which consists of the purchase of claims to capital goods; for example, the purchase of mortgage bonds or shares of stock in a corporation.

Investment affects the level of income because the initial expenditure is spent and respent. A rise in investment generates a more than proportionate rise in income because the impulse of the initial investment expenditure sets going a chain reaction of respending. This new investment brings additional income to labor and to the owners of capital and natural resources who produced the new capital facilities. In a short time secondary spending begins; part of this income is spent on consumption. This expenditure gives income to those engaged in making consumption goods. After a time these recipients of new income spend in turn a portion of it on further consumption goods, and so on. The primary expenditure on investment multiplies because of secondary spending and respending.

Investment may be described as either "autonomous" or "induced."²⁴ The former is independent of the level of income. In other words, the desire to make investment expenditures is insensitive

²⁴ Alvin H. Hansen, Business Cycles and National Income (New York: W. W. Norton and Company, Inc., 1951), pp. 190-195.

to income changes and is therefore independent in nature. Autonomous investment is characteristic of a war economy. Also, this type of investment is caused by new inventions, new discoveries, new products, and new processes. Fluctuations in autonomous investment have a tremendous impact on the economy because the expenditure is made in a large lump sum and it requires considerable capital per worker.

Induced investment refers to those expenditures which are the result of an increase in the final demand for goods and services, or the result of an increase in sales volume. An increase in final demand for goods and services is mainly the result of population growth. A change in the consumption patterns of the existing population, as well as replacement investment, can cause induced investment.

Since both types of investment expenditures fluctuate, they cause violent fluctuations in income and thus are primarily responsible for changes from one level of income to another.

Investment may be classified according to the various sectors of the general economy making the expenditures. The first sector embraces private domestic investment, which includes investment expenditures by both businesses and consumers. The second sector covers expenditures made by the government.

Private domestic investment consists of expenditures made for the formation of capital and includes expenditures by producers for plants, equipment, machines, tractors, and locomotives; residential construction; additions to inventories; and expenditures made by individuals for consumer durable goods, which include radios,

automobiles, washers, dryers, refrigerators, and television sets. Although outlays for consumer durable goods are not frequently considered as investment expenditures, they may be included in this category because they bear a very close resemblance to producers' equipment.²⁵ For example, they require an investment of funds because they are not immediately consumed. They are subject to obsolescence and depreciation, and their purchase can be postponed. Also, since residential construction includes consumer housing, little difference appears between housing and other consumer durable goods.

The volume of business investment is determined by the rate of interest and the rate of return or income produced from the investment.²⁶ The profit of an investment depends on two things: the rate of return on the capital investment and the rate of interest on borrowed money. If the rate of return on capital investment is 7 per cent and the rate of interest is 5 per cent, it will be profitable to make investment expenditures until the rate of return on capital declines to 5 per cent. Conversely, the interest rate may rise, and thus it will be profitable to make expenditures until the rate of interest reaches 7 per cent. As long as the rate of return on capital is in excess of the cost of capital, investment will be made. Investment may also be a function of income, since the volume of investment may be influenced by a change from one level of income to another.

²⁵Ibid., p. 78.

²⁶This refers to the marginal efficiency of capital. For an extended discussion see Ibid., p. 57.

Investment may also be determined by existing assets, since current period assets must be maintained or replaced.

Consumer investment may also be governed by the same factors that govern private investment. A high rate of interest may hamper consumer investment, and a low rate encourage it; changes in income will also affect the consumer outlay. An increase in income will encourage investment, and a decrease in income will discourage it. The replacement and maintenance of existing assets will also affect the consumer decision to invest. A change in consumer investment has the same effect that induced investment has on income. Although induced investment causes some changes in income, it does not cause as great a change in income as does autonomous investment of businesses and the government.

Government purchases refer to the goods and services that the government buys out of the total goods and services produced. The money output of the government, or the purchase by the government of goods and services, has a dynamic effect on income; it, therefore, falls into the category of investment expenditures.²⁷ Generally, outside of war and defense purchases, the services of the government are provided to consumers free of specific charge, and the funds to cover their cost are collected by means of taxation.

Government expenditures are generally autonomously determined. They are made without consideration as to their effect on income generation in the economy. In the past, government expenditures for

²⁷Ibid., p. 87.

large amounts have generally been used only in time of war or for military defense purposes when, as a matter of necessity, they have been made for military needs. In modern societies government expenditures for war have had a very significant influence on income generation, because purchasing power is placed in the hands of consumers, but the government purchases do not add to the stock of wealth in the country. This effect can be seen by the extent to which government expenditures generated income in the First World War, the period from 1933 to 1937, the Second World War, and the Korean conflict up to the present. In the last twenty years, increased emphasis has been placed upon fiscal policy, government expenditures, and revenue--factors which influence national income levels.

Explanation of the Expenditures Approach to Inflation.--In any period of time, the net value of the output (aggregate output) and the income (aggregate income) are necessarily equal. The expenditures for both consumption and investment determine the income. Prices are determined by the relationship of income-expenditures to output; $P = \frac{Y}{Q}$, in which P is the general level of prices, Y is money expenditures (which produce a flow of income), and Q is the physical volume of goods and services produced.

The flow of income is essentially a flow of dollars moving from producers to income recipients for services rendered and from the income recipients back to producers as a flow of expenditures for output. Every dollar of the value of goods and services produced must accrue to someone in the form of income; some of it is paid out as

wages and salaries, interest, or rent; and the remainder constitutes profits to the owners of business. This income may be used for either of two purposes: it may be consumed--that is, used for the purchase of consumption goods, or it may be saved--that is, the use of it may be postponed. For example, if a man receives \$100 income a week for services rendered and consumes \$80 of it in the form of food, clothing, and shelter, he will have \$20 left over. Thus, income is either consumed or it is saved.

As stated previously, the income received is equal to the net value of the output. The net value of the output consists of two parts, consumption (the value of the goods which are used up) and investment (that part of the output which is not used). The individual who received \$100 income also contributed \$100 to the output. He consumed \$80 of the output; the \$20 which was not consumed represents an investment in the output. Therefore it follows, as a matter of mathematics, that the total amount saved during the period (the excess of income over consumption) is equal to the total investment (net value of the output minus consumption). This relationship may be portrayed as follows:

$$\text{Output} = \text{Income}$$

$$\text{Income} = \text{Consumption} + \text{Savings}$$

$$\text{Output} = \text{Consumption} + \text{Investment}$$

$$\text{Savings} = \text{Investment}$$

It must be emphasized that this relationship holds true only for a past period of time; for example, the past year. This past

period of savings and investment is referred to as an ex post concept, and at the end of the period the investment and savings must of necessity be equal. The savings-investment relationship explained above must not be interpreted to mean that during a coming period of time individuals will plan to save the same amount that others will plan to invest; an equality of these two magnitudes is very unlikely because saving and investing are done by two different groups of people. In the expectation of a certain level of income, business firms, consumers, and the government may plan to make investment expenditures greater than the amount of current savings in the economy. An excess of investment may occur since investment expenditures are made by other people than those who save. The future period is referred to as an ex ante period, and the savings-investment relationship will probably not be equal because different people are planning to save and different people are planning to invest.²⁸

Although expenditures for both consumption and investment determine income, investment expenditures are the most important

²⁸There are two lines of development in the theory of savings and investment. The first has been based upon the work of Keynes, op. cit.; the second has been developed by such Swedish economists as B. Ohlin and D. H. Robertson, "Some Notes on the Stockholm Theory of Savings and Investment," Economic Journal, Vol. XLVII (March and June, 1937), pp. 53-69, 221-240.

The Keynesian approach stresses equilibrium, and therefore savings and investment are always equal. The second approach stresses the process of adjustment and the fact that savings and investment may not always be equal. See William Fellner, "Employment Theory and Business Cycles," A Survey of Contemporary Economics, ed. Howard S. Ellis (Philadelphia: Blakiston Company, 1948), pp. 53-59. For an analysis of both approaches see Hansen, Monetary Theory and Fiscal Policy, pp. 219-225.

factor since they are powerful and cause much greater changes in income than do consumption expenditures.

When the planned (ex ante) investment expenditures are in excess of planned (ex ante) savings, an inflationary pressure develops. Total planned expenditures--consumption plus investment--will exceed the value of the output, and inflation develops. Essentially what happens is that individuals, business firms, and the government are attempting to buy more goods than are available at existing prices; therefore prices rise. An example of this excess of planned investment over savings should clarify how an inflationary pressure develops. Assume that income stands at \$100, consumption at \$90, and savings or investment at \$10. Suppose that individuals making investment expenditures are optimistic about the future and therefore plan to make expenditures of more than \$10; let us say \$11. The other segment of the economy is planning to save only \$10. If these plans are carried through, income will rise to \$101 ($\$90 + 11 = \101). In other words, it is the relationship of investment to savings that is the most important and dynamic element in determining the inflationary pressure. The reason actual investment expenditures may exceed the previous period of savings is that the excess investment is financed from newly created bank funds or from idle cash balances.

In the oversimplified diagram, Chart 2 shows planned investment expenditures outrunning planned savings. In period 1 investment and savings are equal. In going from period 1 to period 2, planned

CHART 2.--Planned Investment Exceeding Planned Savings

Source: Hypothetical Data

investment exceeds planned savings. In other words, immediately prior to period 2, investment is \$11, and savings is at \$10. When the investment expenditures are complete in period 2, investment equals savings. This same process occurs in period 2, 3, 4, and so on. In each period planned investment expenditures exceed planned savings. Each time that this process occurs, income is pushed higher. Consumption, \$90, added to investment, \$10, in period 1 equals \$100; consumption added to investment in period 2 equals \$101 ($\$90 + 11$); consumption added to investment in period 3 equals \$102 ($\$90 + 12$) and so on. This rise of \$1 in each period will be either a rise in real income and output or a rise in prices.

Whether the inflationary pressure will result in price increases greater than an increase in output depends primarily upon the employment or availability of the factors of production; i.e., land, labor, capital, and management.

Inflationary Pressures under Conditions of Unemployment.--If there are unemployed labor, unused plant capacity, and sufficient natural resources, the inflationary pressure will lead to greater output and real income. There will be no price inflation in the sense that income exceeds output. Reference is made to Chart 2 and Table 1. Each time planned investment exceeds planned savings, income rises; as planned investment outruns planned savings (Chart 2), income rises (Table 1); as income rises, so does physical output. To illustrate this point, assume a rise in income or prices, and assume the supply of labor adjusts in the same manner as the supply of land and capital

TABLE 1.--Income and Physical Output When Planned Investment
Exceeds Planned Savings

Period	Consumption + Investment = Income				Physical Output
1	\$90	+	\$10	= \$100	100
2	90	+	11	= 101	101
3	90	+	12	= 102	102
4	90	+	13	= 103	103
5	90	+	14	= 104	104
6	90	+	15	= 105	105
7	90	+	16	= 105 + 1 ^a	105
8	90	+	17	= 105 + 2 ^a	105
9	90	+	18	= 105 + 3 ^a	105
10	90	+	19	= 105 + 4 ^a	105

(Unemployment)

(Full
Employment)

Source: Hypothetical data

a. Amount of detrimental inflation.

equipment. The rise in prices will bring about more production and real income if there is some degree of elasticity in the supply of labor; that is, if labor is not being fully employed. As income rises, the cost of labor also rises, since labor is receiving more income. When various labor groups and employers see that some particular income group is getting more income than they are, they will seek to get their share of the increase in income. To get their share of the increased income, more labor will be offered for employment, and employers will seek to employ more. With this increased employment more goods and services will be produced. This increased production results in greater real income and output.

However, prior to the attainment of full employment, there will be some tendency for the price level to rise. This tendency is due to the fact that bottlenecks develop in various industries and among various factors of production. The reason bottlenecks occur is that land, labor, capital, and management have different degrees of elasticity and that production requires various combinations of land, labor, capital, and management. These shortages of skilled labor, natural resources, or plant capacity will prevent output from rising, and thus price increases result. For example, if the steel industry reaches its maximum output, the expansion of other industries using steel may be checked for some time until steel producers can expand production. These shortages or bottlenecks in the various phases of production will cause some prices to rise.

Generally, bottlenecks will occur first in farm prices because farm products are sold in a competitive market, and output cannot be readily adjusted because of the full utilization of land even at low price levels. The increase in farm prices affects the general price level, because increased farm prices lead to increased costs; then other prices rise. As the bottleneck situation moves up the ladder, certain types of skilled labor become short in supply; shortages appear in basic transportation systems; and natural resources become more difficult to develop. As these shortages become apparent, an increase in expenditures must be made to secure the various products and services. The increase in expenditures results in some increase in income and prices. The labor force, in turn, will generally step in to get its share of the increased income. Unions, seeing unemployment drop and the cost of living go up, will generally succeed in getting wage increases.

As indicated above, expenditures cause changes in income; and, as income changes, some readjustments in wages will occur. The changes in wages will reinforce the initial effects of the changes in expenditures. Wages account for better than two-thirds of the national income; therefore, any change in the wage structure will change income and expenditures. But apart from the effect of expenditures on income, a general change in the wage level may occur from independent causes, such as increased strength of unionized labor. Usually industry will adjust wages upward, and the increased wage will no doubt allow for the same volume of output, despite the higher

prices. Industry does not necessarily have to pass all wage increases on to the consumer in the form of higher prices. Industry has two other alternatives: it can accept a reduction in profits, which probably will not happen, or it can increase productivity. Even if a basic industry increases the price of its products, individual manufacturers may increase productivity, and thus the price rise in the basic industry may never reach the consumer.

Although bottlenecks may develop before the attainment of full employment and cause some prices to rise, many things can be done to ease these unavoidable situations and even to ease full employment conditions. Importation of goods from other countries will allow the increase in income to be spent, and draining off income in this manner will prevent the bidding up of prices of our own products. Overtime employment will result in greater productive capacity, and the increased output will meet the demand. Drawing on the fringe of the population, which is not ordinarily in the labor force, will reduce employment and thus reduce inflationary pressure. Stockpiling of goods in slack seasons and then putting the goods on the market, when bottlenecks occur, will reduce inflationary pressures. Training courses for labor will help to provide an adequate supply of skilled labor whenever shortages appear.

Despite the forces tending to raise prices, the increased expenditures will result primarily in output increases as long as some unused land, labor, and capital remain. Thus a rise in prices at

less-than-full employment will be beneficial to the economy by increasing employment and providing greater productive output.

Inflationary Pressure under Conditions of Full Employment.--If full employment occurs--that is, if all labor, resources, and capital are being fully utilized--further increase in investment expenditures will solely affect prices. Reference is again made to Chart 2 and Table 1. Physical output cannot expand after period 6 because all labor, resources, and capital are being fully used. If planned investment exceeds planned savings (as in our illustration), income rises, but real income remains the same as physical output. The rise in income is a price rise, as can be demonstrated by dividing income by physical output, $\frac{106}{105}$, $\frac{107}{105}$, $\frac{108}{105}$, and so on. Total expenditures will be increasing beyond the figure of the net value of current output at present prices. Since output cannot rise because of full employment, the full effect of the expenditures rests upon prices. As long as investment expenditures outrun savings, prices will continue upward. Thus, under conditions of full employment an increase in prices will be detrimental to the economy, because the price rise cannot increase employment and provide greater output.

In summary, then, the theory of inflation may briefly be stated as follows: an inflationary pressure exists in the economy whenever the planned investment expenditures by businesses, individuals, and the government exceed planned savings. Investment expenditures may be either induced or autonomously determined. Although business investment expenditures may be induced, they are, like government

expenditures, more often autonomously determined. Individual investment expenditures in consumer durable goods are generally determined by induced factors. Autonomous investment causes much greater changes in the economy than does induced investment. The inflationary pressure from investment expenditures may be beneficial or detrimental to the economy depending on the degree of employment.

Anti-inflation Policies

Various avenues of approach may be utilized to control inflation in our economy. Because of the nature of our free economic system, anti-inflationary policies have to be used by a central authority in order to have any effect on reducing inflationary pressures.

No attempt will be made in this section to evaluate the means used to combat inflation. The chief cause of inflation is that planned investment expenditures by consumers, businessmen, and the government outrun planned savings. Therefore, to reduce inflationary pressures, investment expenditures must be controlled, and savings promoted. Under the monetary approach to inflation, we have stated that the quantity of money may not be a chief factor in causing inflation, but by controlling the money supply, we may be able to control investment expenditures.

Three general areas of action may be utilized to combat inflation. They are monetary control, fiscal policy, and direct or selective measures.

Monetary Control Measures

In the past years considerable reliance has been placed upon the possibility of checking inflationary tendencies by monetary policies, at least in nonwar periods. Since the primary cause of inflation is a tendency for planned investment to outrun planned savings, monetary policies, which reduce the money supply and raise the rate of interest, should tend to prevent a very large increase in prices. A reduction in the supply of money will prevent the making of some investment expenditures. An increase in the rate of interest will make borrowing more costly and will also prevent some expenditures from being made. The Federal Reserve System is empowered to regulate the flow of credit and money. Therefore, the monetary measures of an anti-inflationary program are a matter of central bank policy. The means by which the Federal Reserve can regulate or adjust the flow of credit and money lies in the power to change the discount rate, conduct open market operations, and change the reserve ratio.

In nonwar periods a reduction in the money supply and an increase in the interest rate to control inflation may be feasible unless inflation is very severe. In a period of war not only would this method of controlling inflation prove ineffective but it would add greatly to the cost of war because of the added interest burden. During a war governmental expenditures are likely to outrun savings;

in such a situation, even if the interest rate rose to a point at which private investment was zero, inflation would continue.²⁹

The Federal Reserve has been attempting in the last several years to preserve the economic balance by manipulating the supply of credit and interest rates to force home builders, industry, and municipalities to cut down on their expenditures. The monetary policy has been on the side of restraint during the latter part of 1955, all of 1956, and most of 1957. Open market operations have been designed to restrain undue growth in the money supply; and, as market rates rose, discount rates have been increased several times in order to maintain a deterrent to excessive borrowing by member banks.

It is not too surprising that prices have continued to rise in the face of restrictive monetary policy and plentiful supply of goods. First of all, there is no timetable on the effect of a tight-money policy. It operates gradually and influences some economic sectors more quickly than others. The effectiveness of this type of monetary policy depends a good deal on the psychology of the public and business community. There is also the question of whether you can keep unions from obtaining higher wages which push up prices by restricting or tightening credit. Many economists and monetary theorists have questioned whether credit policy can be applied strongly enough to counter the inflationary forces at work in the economy. In addition to the factors named above, a restrictive credit policy has

²⁹For a discussion of the limitations on the effectiveness of monetary policy see Shaw, op. cit., pp. 406-409.

little effect on large businesses since they do not feel the credit pinch as much as small businesses. The reason for this is that the large companies are usually in the national money markets, have nationwide credit connections with banks, and are generally the most profitable companies. High interest rates may not be a serious deterrent to many large and profitable corporations, since interest is deductible for income tax purposes. Also, an increase in the rate of interest from 5 to 6 per cent, for example, means only an effective increase of one-half per cent ($2\frac{1}{2}$ to 3) because of the high income tax rates applicable to most corporations.

The Federal Reserve has been criticized severely by practically all segments of the economy for its stringent credit policy of the last several years.³⁰ Small businesses have accused the money managers of showing favoritism to large corporations through the interest rate policy because an increase in the rate appears to have more effect on small businesses than on large businesses. Also, expenditures for expansion of schools, hospitals, municipal projects, and housing developments have been delayed because of the high cost of borrowing. This credit policy which has been maintained by the Federal Reserve has not only been criticized because of discrimination but has brought increased questioning by members of various governmental departments as to the effectiveness of monetary devices in controlling the forces that lead to inflation. The credit policy of

³⁰For an extended discussion of the implications of a stringent credit policy see Martin Packman, "Tight Credit," Editorial Research Reports, Vol. I (1957), pp. 3-21.

the Federal Reserve came under scrutiny when the Federal Reserve Board Chairman was called before the Subcommittee on Economic Stabilization of the Joint Economic Committee on December 10, 1956.³¹ On August 13, 1957, he appeared also before the Committee on Finance of the United States Senate.³²

Among the points that were brought out by these investigating committees was the fact that monetary policy has not been completely successful in halting the present inflation. In addition, the influence of money and credit on the economy should not be exaggerated since it cannot operate successfully without proper fiscal and debt management. There are many influences other than monetary policy and interest rates that affect the volume of consumption, investment and savings, and their relationships. Credit policy and monetary measures are indispensable to stable economic progress, but alone they cannot assure that progress.

³¹U. S., Congress, Joint Economic Committee, Monetary Policy: 1955-1956, Hearings before the Subcommittee on Economic Stabilization, 84th Cong., 2d Sess., Dec. 10, 11, 1956 (Washington, D. C.: Government Printing Office, 1957), pp. 71-162. Also, for a condensed discussion by William McChesney Martin, Chairman of the Federal Reserve, before the Joint Economic Committee of Congress see "Impact of General Credit Policy," Federal Reserve Bulletin, Feb., 1957, pp. 142-151.

³²U. S., Congress, Senate, Committee on Finance, Investigation of the Financial Condition of the United States, Hearings, 85th Cong., 1st Sess., Aug. 13-19, 1957, Part 3 (Washington, D. C.: Government Printing Office, 1957). Also, for a condensed discussion by the Chairman of the Federal Reserve see "Winning the Battle against Inflation," Federal Reserve Bulletin, Aug., 1957, pp. 866-877.

The Chairman of the Federal Reserve Board agreed with the committee that the Federal Government was perhaps the chief offender in bringing about inflation. Even though the Federal Reserve has taken on the partial responsibility of controlling inflation, it was felt that its action was not soon enough or strong enough.

This action of the Federal Reserve in the past several years seems to point to the conclusion that something stronger than monetary policy must be used to restrain inflation. The effectiveness of monetary policy cannot be assumed nor can monetary manipulation be completely relied upon to produce stable economic progress. Of course, these findings are generally in keeping with the accepted theory on the causes of inflation and the fact that inflation is not purely of a monetary nature.

Fiscal Policy

Fiscal policy refers to government spending, taxes, and debt management.³³ These fiscal measures have come to be recognized as potentially the most powerful instruments of economic stabilization. The recognition of fiscal policy as a stabilization instrument is due to the unsuccessful experience with monetary measures as a cure for economic ills. Restoration to fiscal measures indicates that something in addition to monetary measures is necessary to reduce violent

³³For a detailed discussion of the effects of government spending, taxation, and debt management, see Hansen, Monetary Theory and Fiscal Policy, pp. 157-166.

fluctuations in the business cycle and the price levels. Fiscal policy relies on political decisions and thus cannot at all times be relied upon to the exclusion of purely monetary measures for combating inflation.

Government Spending.--To absorb an inflationary pressure, the government should decrease its own spending. The reduction of these investment-type expenditures reduces inflationary pressures and achieves a government surplus. By reducing expenditures, additional funds are prevented from going into the income stream and causing inflation. Aggregate demand relative to the limited supply of goods and services during a period of full employment is reduced to the extent that the government cuts its own spending.

Many times it is difficult to control or decrease government expenditures because of international tension. Thus military preparedness results in an expanding federal budget. Barring political or military considerations, public spending may be a more manageable variable in controlling inflation. Public spending may be deliberately increased or decreased according to the over-all requirements of the economy as a whole. The government, by reducing its spending, can partly offset the inflationary pressures arising from private spending. Sometimes a reduction of government expenditures is not in itself sufficient to minimize the inflationary pressures. The government not only must reduce its spending but must tax away or even borrow a substantial portion of the aggregate monetary demand (spendable purchasing power) in the hands of the general public.

Taxes.--Proper adjustment of the tax structure is very important during an inflationary period. It is axiomatic that during rising prices the existing tax structure should be retained, that tax cuts should be resisted, and that new taxes should be adopted or tax rates increased, if possible, to reduce the amount of spendable money in the hands of the general public. Perhaps the most effective anti-inflationary tax is a personal income tax. Such a tax would reduce consumption and so minimize inflationary pressures. Also, a general regressive tax may help produce the desired results because it reduces consumption of lower income groups, but a heavy tax on these groups might reduce their consumption to a detrimental level. The general principle to be used should aim at reducing personal income which would otherwise be spent, with the over-all result of increasing prices.

One exception to maintained or increased taxation is import tariffs. In theory a reduction in tariffs may encourage foreign goods to flow into the market place, thereby increasing the available supply of goods and thus taking off some of the purchasing power. A reduction in tariffs will probably be met by considerable resistance from certain vested interests because any manufacturer whose product competes actively with similar imported goods, regardless of the supply and demand situation, may be expected to protest loudly the lowering of tariffs on such imported goods.

Debt Management.--Anti-inflation debt management refers to retirement of the public debt. If banks have large amounts of

government securities, they can always sell them on the open market or let them mature and thus acquire additional reserves for credit expansion. As long as commercial banks can get additional reserves in this way, Federal Reserve credit controls are rendered ineffective.

Adequate debt-management policies, such as retirement of bank-held government securities, reduce possible future credit expansion. Also, by refunding bank-held public debt by the sale of bonds to nonbank investors and making those bonds ineligible for purchase by banks, inflationary pressures are reduced. Here idle cash balances and current income are taken out of the hands of the public.

Direct or Selective Measures

Anti-inflationary policies of a direct or selective nature include (1) output adjustment, (2) wage policy, (3) price control and rationing, and (4) selective credit control.³⁴

These measures to control inflation are much less practical than monetary-fiscal measures because of psychological, institutional, and political factors. The reason that the measures are impractical is that they are direct or selective; too many individuals feel the pressures of one or all of these control methods. In a free economy where supply and demand rule and the market place allocates scarce resources to alternative uses, direct or selective methods of control

³⁴Kenneth K. Kurihara, Monetary Theory and Public Policy (New York: W. W. Norton and Company, Inc., 1950), pp. 64-101.

are difficult to enforce except in time of war, when patriotism rules. Let us briefly consider the direct control methods.

Output Adjustment.--Increased productivity is a basic solution to the inflationary pressure that exists, since the inflation arises partly from inadequate output. During a war period increased productivity is not an adequate defense against inflationary pressures because many goods produced are taken by the government. After a war reallocation of resources to industries, where finished output is in short supply, can reduce inflationary pressures. Output adjustments of goods which are in short supply may be increased by the system of priorities and regulated allocations.

In a period of full employment when inflationary pressures are very great, increased production may be difficult to accomplish. Increased productivity in the form of technical innovations may be achieved. These innovations are not only anti-inflationary; but, in the long run, they promote higher standards of living.

A proposal mentioned before which lies in the same area of output adjustments is that of importing inflation-sensitive goods. Importation of these goods not only reduces inflationary influences in the United States but also provides a market for foreign goods.

Wage Policy.--Governmental control of wages is very effective and even necessary during a war. Wage-control is effective to the extent that wage earners are not competing for more income, and the prevention of wage increases is necessary to keep the cost of war production within reasonable limits. During a war reliance can be

placed upon the patriotic willingness of organized labor to cooperate with the government, but this acquiescence dies soon after the war is over.

Wage policies may bring about increased productivity which would be deflationary in character. That is, wage increases may encourage greater productivity, resulting in lower unit cost. The net effect of this activity is a raising of real income. Wage incentive systems, bonus plans for meeting output quota systems, and piece rate systems all tend to increase productivity, thus reducing unit costs and increasing real income. On the other hand, wage increases which are greater than productivity increases add to the inflationary pressures. Popular cost-of-living wage increases generally add fuel to the fire.

The whole question of wage policy during inflation is further complicated by the fact that wages are income as well as cost; and, therefore, the basic fear is that a deflationary wage policy may precipitate a train of uncontrollable deflationary movements.

Price Control and Rationing.--The function of price control is to establish the legal upper limits beyond which the prices of particular goods may not rise. Price control has the political advantage of being popular during war, normally a period of profiteering and runaway inflation. Price control in peacetime contributes to many injustices of distribution. In a free economic system, prices serve as an allocating mechanism. Once price controls are established, consumers lose their free choice in allocating their

purchasing power among different consumer goods. Although price controls are anti-inflationary in nature, they function to the detriment of consumer freedom and welfare.

The main function of rationing is to divert consumption from those articles whose supply needs to be restricted for some special reason. In the absence of rationing the tendency is for the wealthy few to bid up prices of scarce consumer goods. Hence, moderate and low income classes cannot afford to buy. During a war the price system, which is used to allocate scarce resources to alternate uses, fails to function. Direct rationing, therefore, has the effect of limiting the variety and amount of goods available for consumption in a way conducive to consumer price stabilization and to distributor justice.

Selective Credit Control.--Three types of selective credit controls have been used by the Federal Reserve; namely, Regulations T and U, Regulation W, and Regulation X, relating to stock market credit, instalment credit, and real estate credit, respectively. The Voluntary Credit Restraint Program also constituted a kind of selective control.

Stock market margin requirements limit the amount of credit that may be extended on a security by prescribing a maximum loan value, which is a specified percentage of the security market value at the time of extension. Margin refers to the amount of customer equity (ownership) in the purchase of securities. This weapon is designed to prevent the typical boom-bust pattern attributed to such

a stock market collapse as occurred in 1929. The Securities Exchange Act of 1934 gave the Federal Reserve authorities a mandate to formulate initial margin requirement regulations applicable to all banks, brokers, and security dealers. These are known as Regulations T and U. Regulation T applies to credit extension by brokers and other security dealers. Regulation U applies to credit extension by banks. In brief, the advocacy of margin requirements is the diverting of investible funds from speculative to productive channels, preventing undue monetary expansion, reducing speculative profits upon the income-expenditures structure, and helping to insure economic stability by reducing excessive security prices resulting from speculative activity.

Consumer credit regulations have been labeled an anti-inflationary device because various individuals have referred to consumer credit as a cause of inflation. Regulation W, which effected control over consumer credit, operated by covering a list of specified commodities and by setting minimum down payments and maximum maturity requirements. This regulation was in effect for three periods: September 1, 1941 to November 1, 1947; September 20, 1948 to June 30, 1949; and September 8, 1950 to May 7, 1952. It was designed to check, among other things, inflationary credit expenditures on consumer durable goods and to minimize the possible danger of undue instalment credit expansion on future economic stability. Since it is the purpose of this study to investigate the inflationary effects of consumer credit, and more specifically consumer instalment

credit, Chapter V contains a discussion of its possible inflationary characteristics.

Real estate credit requirements were enforced following the outbreak of the Korean conflict when Congress, in the Defense Production Act of 1950, authorized the President to prescribe regulations governing the granting of credit for real estate construction purposes. The President was authorized to regulate the terms on certain real estate loans, insured or guaranteed by Federal Agencies, and credit not so insured or guaranteed, extended in connection with the construction or major improvement of real property.

The President delegated his authority on regulating this type of credit to the Board of Governors of the Federal Reserve System. Regulation of real estate credit was initiated by the Board in October, 1950 in the form of Regulation X. The regulation prescribed maximum loan values, maximum maturities, minimum down payments, and amortization terms. During the period of operation, the terms of Regulation X were changed, and coverage was extended to other types of residential and commercial property. The Board suspended regulation of this type of credit in mid-September, 1952.

The purpose of Regulation X was to reduce the competition between private interests and the government defense requirements for manpower and materials, to reduce pressure in the bidding up of real estate costs and prices, and to help reduce the general inflationary pressure throughout the economy.

It was felt by many that the experiment in the control of this type of credit was too brief to permit judgment and evaluation concerning the effects of such regulation. Although space limits adequate analysis of real estate credit, much of the economic reasoning in the following pages applies to this type of credit as well as to consumer instalment credit.

In connection with special control of real estate credit by the Federal Reserve, there are other measures which partially control real estate credit. These include requirements that must be met in extending credit for conventional home loans as well as for loans insured by the Federal Housing Administration and the Veterans Administration. Savings and loan associations, commercial banks, and other financial institutions are compelled to meet certain requirements before extending loans for real estate purposes. Although the specific requirements differ, such things as maximum loan values, maturities, interest rates, and amortization terms are prescribed for these lending institutions. The FHA and VA also set certain terms in mortgage lending which must be met. They do not grant loans but insure or guarantee the lending agency against loss if the borrower defaults on the payments. In extending this insurance, certain requirements must be met, and in this way a certain amount of credit control is exercised. The statutes and regulations governing the insurance requirements of the FHA and VA have been changed from time to time.

The Voluntary Credit Restraint Program, initiated in the early part of March, 1951, was in essence a program for selective credit control. The program, which was part of the Defense Production Act, authorized the President, who in turn delegated authority to the Federal Reserve Board, to encourage financial institutions to take voluntary action to restrain credit that might interfere with the defense program. At the request of the Board of Governors of the Federal Reserve System representatives of commercial banks, life insurance companies, investment bankers, mutual savings banks, and savings and loan associations met and issued a statement of principles. The statement set forth broad standards to be applied voluntarily by cooperating lenders in deciding whether, in the face of national defense requirements, a loan application or proposed security offering involved an essential or a nonessential use of funds. In effect, lenders were requested to screen loan applications on the basis of this purpose in addition to their customary tests of creditworthiness. The Board of Governors suspended the program in mid-May, 1952.

Measuring the Amount of Inflation

Inflation is not measured in terms of the price of a particular commodity but rather in terms of the prices of a broad group of commodities; more specifically, in terms of the average of these prices. It is possible, therefore, to think of the average of prices

remaining constant even though individual prices may be changing in either direction. The average price of these commodities is usually referred to as the price level.

For analytical purposes, price changes are treated in relative rather than absolute terms. In other words, the average of a given level of prices is not significant, but the relationship between the current price average and a price average of some particular base period tells us what is happening to the value of money in relative terms. A price index measures the extent that prices have changed and thus the amount of the inflation or deflation. Price indexes in existence today are not exact measurements of price changes. As with other statistical calculations, price indexes are subject to certain limitations. These limitations are classified into errors of sampling of commodities, the homogeneity of the products, and the method of computing the indexes.³⁵

Sampling errors occur because consumers and merchants do not give accurate answers on details of their business transactions. Also, errors occur because prices are not obtained every day. Some prices change very frequently, while others change infrequently; some prices fluctuate seasonally. Also, sampling errors occur because some goods are sold at prices different from those on the price tag; namely, consumer durable goods, such as automobiles, refrigerators, and television sets.

³⁵Bruce D. Mudgett, Index Numbers (New York: John Wiley and Sons, Inc., 1951), pp. 3-4, 45-57.

In reference to homogeneity errors, such things as quality changes, different products, and the introduction and deletion of products affect the price indexes.

Errors occurring in the method of computation are the result of various weights used in the calculation. Indexes are weighted to show the relative importance that each commodity has to consumers. As prices change, weights for individual items also change, but not all consumers react in the same way. Therefore, the computation will contain certain errors.

Although no ideal measure of general price level changes is in existence, some indicator of inflation must be accepted. Reliance is therefore placed on the price indexes published by the various branches of the government.

Price indexes covering various commodities in the form of "Retail Prices" and "Wholesale Prices" appear in published form. There are two generally accepted Retail Price Indexes which are (1) Retail Commodity Price Index, computed by the U. S. Department of Commerce, and (2) Consumer Price Index, computed by the U. S. Department of Labor. The Wholesale Price Index is computed by the U. S. Department of Labor.

The Retail Commodity Price Index is made up of eleven component indexes, one for each major group of retail stores.³⁶ The

³⁶U. S., Department of Commerce, Office of Business Economics, Business Statistics, 1957 Edition: A Supplement to the Survey of Current Business (Washington, D. C.: Government Printing Office, 1957), pp. 207-210.

individual indexes are based upon dollar sales for each group. The Retail Commodity Price Index is basically computed from the same commodity series used in the Consumer Price Index of the U. S. Department of Labor except for certain omissions and additions. The Retail Commodity Price Index omits rents and other service prices. Since it includes sales of retail stores, such things as building materials, farm machinery, and other nonconsumer goods are included.

The Consumer Price Index measures the effect of price changes in the living costs of families of city wage earners and clerical workers.³⁷ It is calculated on the basis of a market basket of goods and services purchased by this moderate income group. The retail prices, which make up the index, are divided into eight major groups: food, housing, apparel, transportation, medical care, personal care, reading and recreation, and other goods and services. Approximately 300 commodities and services which make up these groups were selected as being representative of the price trends of subgroups of related items. The quantity and quality of items contained in the market basket are held constant over the measurement period. Therefore the index reflects only changes in prices, and it tells nothing about changes in the kinds and amounts of goods and services that these moderate income families buy. The goods and services covered by the index are those customarily identified as consumption items.

³⁷U. S., Department of Labor, The Consumer Price Index (Washington, D. C.: Government Printing Office, 1953), Bulletin No. 1140.

The Wholesale Price Index is designed to show the general rate and direction of composite price movements in primary markets and the specific rates and direction of price movements for individual commodities or groups of commodities.³⁸ The commodities included in the index are classified into 15 major groups and 88 subgroups. The index includes approximately 2,000 commodities ranging from raw materials to finished goods. It is designed to measure real price changes between two periods of time. The index does not take into consideration changes in quality, quantity, or terms of sale. The term "wholesale," as used in this index, refers to sales in large lots, not to prices paid by or received by wholesalers, jobbers, or distributors.

The following table shows the three price indexes as they are reported by the U. S. Department of Commerce and the U. S. Department of Labor.

As indicated by Table 2, the Consumer Price Index moved from 73.3 per cent in 1929 to a low of 55.3 per cent in 1933. For the period 1933 to 1937 the index moved up from 55.3 to 61.4. After dropping back to 59.4 in 1939, the index moved continuously upward

³⁸U. S., Department of Commerce, Office of Business Economics, Business Statistics, 1957 Edition: A Supplement to the Survey of Current Business, op. cit.; also Edgar I. Eaton, "A Description of the Revised Wholesale Price Index," U. S., Bureau of Labor Statistics, Monthly Labor Review, Vol. LXXIV, Feb., 1952, pp. 180-187; "New B L S Economic Sector Indexes of Wholesale Prices," U. S., Bureau of Labor Statistics, Monthly Labor Review, Vol. LXXVIII, Dec., 1955, pp. 1448-1453; U. S., Department of Labor, Bureau of Labor Statistics, Techniques of Preparing Major B L S Statistical Series, Bulletin No. 1168, pp. 82-95.

TABLE 2.--Price indexes, monthly averages, 1929-1958

(1947-1949 = 100)

Year	Consumer Price Index U. S. Dept. of Labor	Retail Commodity Price Index ^a U. S. Dept. of Commerce	Wholesale Price Index U. S. Dept. of Labor
1929	73.3	64.7	61.9
1930	71.4	--	56.1
1931	65.0	--	47.4
1932	58.4	--	42.1
1933	55.3	46.3	42.8
1934	57.2	--	48.7
1935	58.7	52.2	52.0
1936	59.3	52.9	52.5
1937	61.4	55.4	56.1
1938	60.3	54.1	51.1
1939	59.4	53.0	50.1
1940	59.9	53.8	51.1
1941	62.9	58.0	56.8
1942	69.7	66.9	64.2
1943	74.0	71.7	67.0
1944	75.2	73.6	67.6
1945	76.9	75.7	68.8
1946	83.4	83.1	78.7
1947	95.5	96.4	96.4
1948	102.8	103.1	104.4
1949	101.8	100.5	99.2
1950	102.8	101.2	103.1
1951	111.0	110.7	114.8
1952	113.5	112.6	111.6
1953	114.4	111.9	110.1
1954	114.8	111.6	110.3
1955	114.5	111.3	110.7
1956	116.2	113.0	114.3
1957	120.2	115.1	117.6
1958	123.5	117.1	119.2

Source: U. S., Department of Commerce, Office of Business Economics, Business Statistics, 1957 Edition: A Supplement to the Survey of Current Business (Washington, D. C.: Government Printing Office, 1957), pp. 27-32; U. S., Bureau of Labor Statistics, Monthly Labor Review, Vol. LXXXII, April, 1959, p. 471 and May, 1959, p. 624.

a. The base period for the Retail Commodity Price Index, U. S., Department of Commerce, is 1935-1939. In order to make the index comparable to the other indexes, the base was changed to the 1947-1949 period. This was done by determining the 1947-1949 average of the index and then dividing each of the index numbers by the 1947-1949 average. Source: Frederick Croxton and Dudley Cowden, Practical Business Statistics (New York: Prentice-Hall, Inc., 1956), pp. 326-327.

until 1948, when it reached a point of 102.8. For the next two years it dropped slightly and then rose again. From 1950 to 1953 the index rose sharply from 102.8 to 114.4. For the period 1953 to 1956 the index remained relatively constant, but during 1956 the index began to rise and by 1958 reached a high of 123.5.

The Retail Commodity Price Index moved from 64.7 per cent in 1929 to a low of 46.3 per cent in 1933. It then moved up to 55.4 in 1937 and dropped back to 53.0 in 1939. The index rose steadily from 53.0 in 1939 to 103.1 in 1948. In the next two years it dropped slightly and then rose. For the period 1950 to 1952 the index rose very sharply from 101.2 to 112.6. From 1952 to 1955 the index dropped slightly but started to rise in 1956 and reached 117.1 in 1958.

The Wholesale Price Index, which is more sensitive than the other indexes, moved from 61.9 per cent in 1929 to 42.1 per cent in 1932. It then rose to 56.1 in 1937, turned sharply, and then dropped back to 50.1 in 1939. The index rose from 50.1 in 1939 to 104.4 in 1948. It dropped sharply and then rose to 114.8 in 1951. The index dropped sharply in 1952, remained steady from 1953 to 1955, and then rose to a high of 119.2 in 1958.

The turning points of all three indexes are approximately the same. They all dropped from 1929 to 1933 and then rose until the year 1937. They dropped slightly for the next two years. From 1939 they all advanced and reached a high point in 1948, dropped slightly in 1949, and then rose again. The indexes moved upward

until 1951. For the period 1951 to 1955 the Consumer Price Index moved up, and the Retail Commodity Price Index moved down. The Wholesale Price Index moved down sharply and then rose slightly. For the period 1955 to 1958 the indexes seem to be moving upward in the same general direction.

The amount of the increase of each index for the period 1929 to 1958 is as follows: The Consumer Price Index moved a total of 50.2 ($123.5 - 73.3 = 50.2$); the Retail Commodity Price Index moved a total of 52.4 ($117.1 - 64.7 = 52.4$); and the Wholesale Price Index moved 57.3 ($119.2 - 61.9 = 57.3$). Therefore the Wholesale Price Index registered more inflation than the other indexes for the period taken into consideration. Although it was not significant, the Consumer Price Index registered the least amount of inflation of the three indexes for the period.

Most individuals dealing with price index numbers recognize the possibility that there is no one satisfactory and acceptable index. As mentioned before, certain discrepancies are apparent in the derivation and computation of the indexes. In order to have a practical measure of inflation, one has to select an index to measure or show the inflation that the economy has had. Chart 3 has been prepared in order to show how the indexes move and to show their relationship to one another. The three indexes move in the same general direction. The Wholesale Index moves more quickly, and thus the turns are sharper than those in the other indexes; this occurs, no doubt, because it is more sensitive than the other indexes. The Wholesale

CHART 3.--Price Indexes, Monthly Averages, 1929-1958

Source: See Table 2.

Price Index is a satisfactory measure of inflation except that it does not register inflation at the consumer level but instead includes price movements of raw materials and prices in primary markets. The Retail Commodity Price Index of the Department of Commerce appears satisfactory to use as a measure of inflation except that it is not complete for a few past years; therefore, it will not be used in this study. The Consumer Price Index of the Department of Labor also moves in the same direction as the other indexes. Since the Consumer Price Index measures prices among moderate income families and is used extensively by labor, industry, and the government, it is felt that this index should be used as a measure of inflation.

Summary

The main purpose of this chapter is to define and to show the nature and causes of inflation. There are two general explanations of the inflationary process--the monetary approach and the expenditures approach. As pointed out, the expenditures theory, embracing total spending, is a much more readily accepted explanation of inflation than monetary causes. Under the expenditures approach an inflationary pressure develops in the economy whenever planned investment by businesses, individuals, and the government exceeds planned savings. If there is unemployment, the inflationary pressure will be

beneficial to the economy; but, if there is full employment, the inflationary pressure will be detrimental. Instalment credit must be examined from the viewpoint of both approaches in order to have a complete analysis of the possible inflationary characteristics of consumer instalment credit.

CHAPTER III

THE ROLE OF INSTALMENT CREDIT IN THE ECONOMY

The present chapter is devoted to a discussion of the part played by instalment credit in the economy. It will formulate the problems concerning credit that are to be subjected to further theoretical and factual analysis in subsequent chapters. The meaning and function of credit, as well as the demand for and supply of instalment credit, will be discussed. In the section on credit demand, statistics will be presented to show for what purposes credit is used. In the section on the supply of credit, the principal sources of funds and the institutions engaged in extending instalment credit will be examined.

Meaning and Function of Credit

There are many meanings of credit, and writers emphasize different aspects of it. Some present the lender's point of view; others look at it from the standpoint of the borrower. Some emphasize the ability, confidence, or futurity of the transaction. Credit involves all of these concepts, but for the purposes of this study no special emphasis will be placed on any particular aspect of credit. We are interested in the credit transaction.

The credit transaction consists of an exchange of present goods or money for the promise to pay back in the future the equivalent of the original transaction. Credit may be defined as the power or ability to secure present funds, goods, or services by giving a promise to pay back the same amount on demand, or at a specified or ascertainable time in the future.¹ There are of course two parties to a credit transaction: a lender, called a creditor, and a borrower, called a debtor. In a credit transaction, payment by the borrower is postponed until some time in the future. Under such a transaction, the borrower or buyer gets immediate physical possession of the funds or goods in question, and usually title, too, in return for a promise to make an appropriate payment at an agreed time in the future. The consideration for the present possession is a promise of future payment. In essence, then, the substance of the credit transaction consists of a transfer from one to another, an exchange.

One of the distinguishing characteristics of a credit transaction is the time element involved--the period which elapses between the obtaining of the goods or funds and the subsequent payment. Credit transactions always involve a deferred payment and create a legal obligation on the part of the buyer or debtor to repay. In this respect they differ from cash transactions.

Since the credit transaction involves an exchange between the lender and borrower, the essential function of credit then is to

¹Ludwig von Mises, The Theory of Money and Credit, trans. H. E. Batson (New Haven: Yale University Press, 1953), p. 264.

serve as a means of payment to facilitate the exchange of goods and services. There would be no purpose in having credit if it would not serve this function of exchange. By means of credit the financial system renders the twofold service of providing a system of exchange and a system of capital supply. The use of credit enables exchange transactions to be conducted with only a fraction of the money that would be required otherwise. The credit system substitutes for cash payments a variety of credit instruments, such as secured and unsecured promissory notes, bills of exchange, drafts, corporate notes, and bonds. Credit facilitates exchange by serving as a substitute for money. Credit does the work of money.²

History of Consumer Credit

Since consumer credit has received public recognition only in the past thirty years, it is sometimes considered that this type of credit is, generally speaking, of recent origin. This misconception has a variety of sources. The most prominent source is the notion that, since consumer credit has grown spectacularly in the last generation in connection with automobiles and other modern consumer durable goods, it must have been inconsequential previously. A second source for the misconception of its recent origin lies in the general acceptability of consumer credit and the willingness of individuals to incur debt. A third source deals with the recent

²Ibid., p. 266.

development of instalment credit institutions. Here one may point out that specialized institutions for granting consumer credit are comparative newcomers in the United States and that commercial banks have only recently entered the field on a significant scale. Outside the United States, consumer credit goes back for centuries and probably dates back to the beginning of time.³ In the United States consumer credit has been traced back to the early days of the Colonies.⁴

In the early days of life and commerce in the United States the merchant was the most important grantor of consumer credit. The merchant granted three basic types of credit: charge account credit (open book credit), term credit, and instalment credit. Charge account credit was extended to cover the period until income was produced by the purchaser. Most of the purchasers were individuals engaged in agricultural work, and credit was extended until income was produced from the farm products. In the cities and commercial areas it has been noted that there were increasing trends in the use of charge accounts from 1800 to 1860, although the origin of this type of credit dates back even further.⁵

³For a brief discussion on the development of consumer credit from early European history see W. C. Plummer, "Retail Credit," Encyclopaedia of the Social Sciences, ed. E. R. A. Seligman (New York: The Macmillan Company, 1934), Vol. XIII, pp. 342-346.

⁴For a detailed discussion on the development of consumer credit in the United States see Rolf Nugent, Consumer Credit and Economic Stability (New York: Russell Sage Foundation, 1939), pp. 42-64.

⁵Ibid., pp. 49-50, 60-61.

The period of credit extension was naturally longer in agricultural areas than in city and commercial areas. Credit was granted from crop to crop or season to season since many farm products were sold on an annual basis.⁶ The "general store" played an important part in the daily life of individuals who were engaged in agricultural work as well as in the life of those who lived in small communities. This general retail store not only supplied merchandise of every description but it also helped purchasers by extending credit to them. Long-term credit as well as short-term credit was used.

After the Civil War a decline in the relative importance of charge account credit appeared. This decline may be attributed to greater industrial activity between 1860 and 1870 as well as to such events as a movement to shorter credit periods in agricultural areas and an increasing proportion of cash sales in grocery, shoe, and drug lines. After 1880, the number of chain stores increased significantly, and more of them began to sell merchandise for cash instead of for credit.⁷ Although there tended to be a movement to a cash basis, a survey showed that a majority of grocery sales in nonchain stores were still conducted on a credit basis.⁸ We may note today

⁶Ibid., p. 83; see also Paul H. Nystrom, Economics of Retailing (3d ed.; New York: Ronald Press Company, 1930), Vol. I, p. 69.

⁷Nugent, op. cit., pp. 83-85.

⁸Nystrom, op. cit., Vol. II, p. 589.

that the rise of the modern supermarket and consequent decline of independent groceries have given the credit used for groceries a very sharp blow.

The predecessor to instalment credit appears to have been what credit grantors call term credit. This was credit granted in connection with the sale of relatively high-priced goods. Of course, the period of credit length differed, depending on where the individual lived and the particular type of goods that were purchased. Although credit used for farm equipment may be classified as business credit, an interesting and rather spectacular use of term credit common today in financing automobiles was used in the sale of McCormick reapers beginning in the late 1840's. When a farmer purchased a reaper or some other type of machinery, he did not have to pay for the item in one lump sum. He was allowed to make a down payment at the time of delivery and to pay the remainder at later intervals.⁹ Actually credit was granted on very liberal terms because of the competition among farm machinery manufacturers.

The first use of credit granted to individuals on an instalment basis has been attributed to the firm of Cowperthwaite and Sons, furniture dealers in New York.¹⁰ These dealers began business in 1807 and used this type of credit from the start. Although it is doubtful that instalment credit of this type and purpose sprang up

⁹William T. Hutchinson, Cyrus Hall McCormick (New York: The Century Company, 1930), Vol. I, p. 362.

¹⁰E. R. A. Seligman, The Economics of Instalment Selling (New York: Harper and Brothers, 1927), Vol. I, p. 14.

simultaneously, it appears more probable that the instalment principle developed rather gradually from other merchants using similar methods. Regardless of its point of origin, the instalment principle gave an answer to the acquisition of consumer durable goods produced by manufacturing, and Cowperthwaite and 1807 may be used as starting points for the instalment principle.¹¹

After the introduction of instalment credit in the sale of furniture, the instalment principle was used in the selling of clocks made by manufacturers in the New England states.¹² Shortly before and during the Civil War expensive household items such as stoves, organs, and pianos were sold on the instalment basis.¹³ During this same period of time the sewing machine was sold on this basis. The Singer Sewing Machine Company, one of the first major consumer household appliance producers, used this method of selling its machines.¹⁴

In respect to the quality of instalment credit extended by merchants during this period, evidence is found that the credit of this type was of unusually high quality because the goods had a high resale value, the down payments were substantial, the maturity was

¹¹Reavis Cox, The Economics of Instalment Buying (New York: Ronald Press Company, 1948), pp. 70-71. For a brief historical summary of the development of instalment buying, see also pp. 3, 62-64, 70-74.

¹²Ibid., p. 62.

¹³Nugent, op. cit., p. 55.

¹⁴Seligman, op. cit., p. 16.

very short, and credit was extended to those individuals who conducted their financial affairs with soundness.¹⁵

After the Civil War with the introduction and spread of large-scale manufacturing, instalment credit developed into the selling of clothing, books, watches, jewelry, and to almost any goods which had some degree of durability.¹⁶ As the manufacturing developed into mass-production techniques, instalment credit became widely used. Along with the widespread use of it came lowering of credit standards in an effort to sell more goods to the lower income groups.¹⁷

At the turn of the century organizations engaged in lending money began to use unfair and unethical methods in extending credit to individuals in the low income groups. The outgrowth of these abuses by credit grantors resulted in the establishment of charitable or semi-philanthropic loan societies to provide the necessary credit to deserving individuals. The Russell Sage Foundation, a philanthropic research and educational institution established to promote better standards in the lending of small sums, has been given deserved recognition for improving the credit conditions of borrowers as well as lenders.¹⁸

¹⁵Ibid., pp. 14-19.

¹⁶Cox, op. cit., p. 63; Nugent, op. cit., p. 67.

¹⁷Seligman, op. cit., pp. 19-22 and Nugent, op. cit., pp. 70-72.

¹⁸Louis N. Robinson and Rolf Nugent, Regulation of the Small Loan Business (New York: Russell Sage Foundation, 1935), pp. 85-87.

During this same period mail-order houses as well as automobile dealers began to use instalment credit in their sales.¹⁹ Not only did automobiles bring about an increase in the use of instalment credit, but with the discovery of electricity many consumer household items began to be developed. Phonographs, vacuum cleaners, washing machines, radios, refrigerators, and a host of many other new products brought about a greater acceptance and adoption of the use of instalment selling. The automobile no doubt has given more significance to the use of credit than any other item.

As new products were developed, specialized financial institutions were organized to meet the needs of individuals in acquiring the vast array of products.²⁰ The most significant specialized financial institutions were the sales finance companies, consumer finance companies, and Morris Plan Banks.

A significant characteristic that may be noted in the history of consumer credit is the method of changing and adopting various means to meet the needs of individuals in financing the goods or services that they desire. As will be pointed out in later sections, instalment credit is granted for almost any conceivable item that individuals wish to acquire, and it is granted not only for the purpose of selling goods or services but also to provide a convenient method of paying for those items.

¹⁹Cox, op. cit., p. 63.

²⁰For a review of the development of specialized consumer credit institutions, especially sales finance companies, see Clyde W. Phelps, The Role of the Sales Finance Companies in the American Economy (Baltimore: Commercial Credit Company, 1952), pp. 33, 50-56.

Although this has been a brief review of the historical development of consumer credit, one can see that this type of credit is a relatively old financial device. The use of consumer credit dates back to the beginning of the United States, and in various areas it is evident that the use of credit was more prominent than cash buying.²¹

Nature and Meaning of Instalment Credit

Instalment credit, like other forms of credit, is the power or ability to secure present goods, services, or money in exchange for a promise to pay back the equivalent sometime in the future. Consumer instalment credit, as the term is employed in this study, is characterized as follows: first, it signifies credit that is used by individuals to finance the purchase of various articles for personal use; second, it is repayable in fractional amounts instead of in a lump sum; third, the repayment of the credit is made over a relatively short or intermediate period of time; fourth, instalment credit carries a charge for the financing service rendered; and, fifth, the credit transaction is supported by a legal document setting forth the terms of the transaction.

When instalment credit is defined in this manner, two types of credit used by individuals are excluded from consideration in this study. The types of credit omitted are noninstalment credit

²¹Nystrom, op. cit., Vol. I, pp. 79-82 and Vol. II, p. 588; Cox, op. cit., p. 71.

and real estate or mortgage credit. Noninstalment credit consists of single-payment loans, charge accounts, and service credit. Single-payment loans are most often made to meet short-term needs of individuals for such things as the payment of personal taxes or life insurance premiums, although some loans of this type are made to purchase consumer goods. The charge account or open book credit has been given the name of convenience credit and is used to facilitate purchases and sales in retail stores. Service credit is credit owed to professional practitioners and service establishments. The largest segment of this type of credit consists of amounts owed to doctors, hospitals, and other practitioners. Other substantial amounts are owed to public utilities, cleaning and dyeing establishments, educational institutions, and owed for recreational purposes. Noninstalment credit is excluded because it is paid back in a lump sum and not in a series of repayments; the period of repayment is very short; there is no finance charge rendered; and there is no legal document or credit instrument.

Real estate or mortgage credit used to finance the construction and purchase of private homes meets the definition of consumer instalment credit in all respects except its long period of repayment. This type of credit is not only excluded because of the length of maturity but also because different credit institutions are involved, and the operation of this type of credit is under different sets of legal requirements. Although real estate credit and noninstalment credit are excluded from analysis, much of the economic

reasoning, which is present in this study, applies to this type of credit as well as to instalment credit.

To understand the nature and meaning of instalment credit more clearly it is necessary to point out at this time the distinction between the use of credit for producer or business purposes and the use of instalment credit by individuals. Also, the productivity of consumer goods which are bought through instalment credit will be discussed in relation to the productivity of producers' goods.

Classifying Consumer Durable Goods.--The first question is how should we classify the goods which are bought on instalment credit? The important issue is whether to regard the purchase of consumer durable goods as an act of consumption or to regard them as an act of investment which will give consumption services throughout their lifetime. Both views regarding the classification of consumer durable goods have been expounded in theoretical writings and are in current use in statistical concepts of collecting data. Some individuals consider the goods purchased by instalment credit as consumption goods.²² The proponents of this view hold that such items as automobiles, refrigerators, and washing machines are the same as such consumption items as food, beverages, and services. Others view the acquisition of consumer durable goods as an act of investment with

²²Gottfried Haberler, Consumer Instalment Credit and Economic Fluctuations (New York: National Bureau of Economic Research, 1942), pp. 47-48; Simon S. Kuznets, National Income: A Summary of Findings (New York: National Bureau of Economic Research, 1946), p. 18.

savings as its counterpart.²³ Here durable goods, as well as capital goods used by business and manufacturing firms, may be regarded as an item of capital, subject to depreciation and valuation.

The Department of Commerce, which collects aggregate income and expenditure figures, adheres to a concept which excludes consumer durable goods from the investment-savings category.²⁴ Although the Department of Commerce uses this concept in collecting and estimating national income, it is not consistent in classifying all consumer goods. Residential construction, which is mostly consumer housing, is included in the investment-savings concept, whereas consumer durable goods are consumption items. For statistical expediency, the department excludes consumer durables from the investment-savings concept because difficult problems of computing annual depreciation are avoided. It also believes that there is no substantial difference in the amount of consumption over a long period of time since durables depreciate in a relatively short period of time.

The Securities and Exchange Commission uses the alternate approach and includes consumer durable goods in its concept of total

²³Raymond W. Goldsmith, A Study of Saving in the United States (Princeton, N. J.: Princeton University Press, 1955), Vol. I, pp. 27-28; A. H. Hansen, Business Cycles and National Income (New York: W. W. Norton and Company, Inc., 1951), p. 78; Cox, op. cit., Chapter i; Nugent, op. cit., pp. 27-41, 179-182.

²⁴U. S., Department of Commerce, Office of Business Economics, National Income, 1954 Edition: A Supplement to the Survey of Current Business (Washington, D. C.: Government Printing Office, 1954), pp. 59-60.

gross savings.²⁵ There is a very strong case for including consumer durable goods in the aggregate investment-savings concept since the substitutability of consumer durable goods for producers' goods may be cited. There is no longer any clear-cut distinction between producer or business credit and instalment credit used by individuals. Classical economic theorists and other past writers have always maintained a distinction between producers' credit and instalment credit on the basis that all credit used to finance the purchases of individuals was wasteful and that producers' credit enabling more goods and services to be produced was productive.²⁶ In practically every stage of the extension of instalment credit to individuals, examples may be found to show that this type of credit may be substituted for producers' credit and that instalment credit may be just as productive.

If fewer consumer durable goods were available, there no doubt would be more commercial industries supplying like services. For example, the increase in automobiles has resulted in a decrease in the relative importance of railroad passenger trains, busses, trolleys, and taxicabs. The development of automatic washers, dryers, and mangle irons has been responsible for the decline in the importance of commercial laundries and cleaning establishments. The electric and gas refrigerator and home freezer have led to the

²⁵Volume and Composition of Individuals' Savings, 1955, Statistical Series Release No. 1379 (Washington, D. C.: Securities and Exchange Commission, May 21, 1956), p. 5.

²⁶Nugent, op. cit., p. 30.

decline of the commercial ice and freezing business. One of the most recent notable substitutes for business investment was the development of television and the subsequent decline of the motion picture industry. Truly, the modern home may be regarded as something of a miniature factory with machines facilitating sewing and mending, laundry service, machine dishwashing, mechanical garbage disposals, mechanical heating and air conditioning, and mechanized entertainment facilities. The home with these mechanical devices can be regarded as a factory, and all homes taken together may displace large-scale commercial facilities.

The purchase of consumer durable goods must be regarded as an investment since they may be substituted for commercial industries. If they are not regarded as an investment, a logical contradiction develops. For example, the central heating system that a house has is classified as a capital investment; but, if individual room heaters were purchased, the purchase would constitute consumption. Also, the purchase of an automobile by an auto-rental firm is an investment while the purchase of an identical automobile by an individual would be a consumption good. The same contradiction applies in the case of automatic clothes washers and dryers purchased by a "laundry-mat" and an identical washer or dryer purchased by an individual.

Not only may consumer durable goods be used in place of producers' goods but they may also give the same or even greater productivity. The sewing machine, automatic washer and dryer, vacuum

cleaner, and various household appliances may reduce expenses for laundry and domestic service, may hasten food preparation, and may release members of the family from household duties to enable them to earn more money. The additional money earned may in many cases cover the cost of buying much of the equipment and in some cases may leave a surplus as well. Heating and air-conditioning equipment may provide a healthier environment enabling more productive effort. Also, a cash loan extended for medical purposes, vacations, and educational purposes may improve earning power to the extent that there is income in excess of the amount of the loan.

Although consumer durable goods may be logically considered as substitutes for producers' goods, we may now consider the question of payment for the durable goods and payment for like services from businesses. In the acquisition of consumer durable goods the instalment payments may actually take the place of payments for like services to the businessman. For example, in the purchase of a refrigerator on the instalment plan the instalment payments may closely approximate the charge that the weekly iceman makes; also, the charge made to do the weekly laundry at the self-service laundry may be almost the same as the instalment payments on an automatic washer and dryer. Since consumer durable goods may be substituted for producers' goods, it follows that payment for consumer durable goods may closely approximate the service payments made for the use of producers' goods and services. Also, consider the difference between a home built in the country which requires instalment payments for a

water system (well, pump, sewer) and a home built in the city. First, the outlay for the water system is considered as a capital outlay. Second, and more important, the instalment payments to finance the water system may be approximately the same as the water bill in the city. The instalment payments for the water system in the country are financing a capital outlay while the same payments for water service in the city are considered consumption. Of course, one does not pay for the actual item of water; that is Mother Nature's gift. The payment is made for the equipment to supply the individual with water. This same analogy of instalment payments and payments for like services may also apply in the case of electricity, natural gas for heating and cooking, and telephone service. This may appear to be pushing the point, but it should clarify the actual meaning and use of instalment credit.

On theoretical grounds the concept which includes durable goods in the savings-investment category and which regards consumption as occurring throughout the life of the durable goods is not only superior but must be followed as a matter of logic. In addition, one may also point out that the demand for both is volatile, that the purchase of the goods may be postponed, that they both depreciate and are subject to obsolescence, that they require a relatively large outlay of funds, and that both types must be maintained.

Consumer durables may be a substitute for producers' goods and may provide as much or even greater productivity; also, the

instalment payments for consumer durable goods may closely approximate the payments for like services from business units.

Substitutes for Instalment Credit.--Even though little distinction can be found between instalment credit extended to individuals and credit extended to producers or businessmen, it is interesting to explore briefly the possibility of substituting the instalment credit device for other financial devices. Disregarding the substitution of consumer durable goods for producers' goods, would it have been possible to achieve large-scale mass production and distribution of consumer durable goods without the financial device of instalment credit and substitute for it the lease or rental device, and possibly the open-end mortgage?

The lease or rental device has been used to a great extent in financing various types of industries.²⁷ The device has been popular in railroads where most of the engines and cars (rolling stock) have been leased from trust companies or manufacturing companies. Many retail dry goods stores, as well as chain stores and grocery stores, lease their buildings. The most common type of lease arrangement known to individuals is that employed in the housing field where apartment houses and individual homes are rented. In recent years the lease device has become very popular in the automobile field for business use as well as for individual use. As far

²⁷For an extended discussion on the industries using the lease method see Harry G. Guthmann and Herbert E. Dougall, Corporate Financial Policy (3d ed.; New York: Prentice-Hall, Inc., 1955), pp. 132-134, 174, 266-269, 546-553.

as individuals are concerned, the lease device is generally used for temporary reasons and by those desiring freedom of movement.

The open-end mortgage is another possible substitute device. This type of mortgage is used in the financing of railroads, public utilities, and some manufacturing concerns.²⁸ An open-end mortgage is one in which the amount of debt outstanding may be increased from time to time. If this type of financing would be resorted to, it would probably be used to purchase the more expensive items such as automobiles and other high-priced durable goods. The use of the open-end mortgage might conceivably occur with a young family acquiring a new home, where the children are growing up demanding more services in the form of food preparation, laundry, recreation, and transportation, resulting in the continued acquisition of various durable goods, and where the breadwinner continues to earn more money each year. Financing through an open-end mortgage would probably not be used to purchase the medium- and low-priced goods except when a group or package of such items was purchased.

Although there is not much evidence of a trend toward the acceptance of devices other than instalment credit, we have mentioned here possible substitutes as an interesting side light.

²⁸Ibid., pp. 111-114; also Henry E. Hoagland, Corporation Finance (3d ed.; New York: McGraw-Hill Book Co., 1947), p. 185.

Demand for Instalment Credit

Instalment credit arises principally from the demand for various goods. Individuals associated on the demand side of instalment credit desire to satisfy certain human wants through the acquisition of various goods. These goods are moved from manufacturers to the distribution system, and through the financial mechanism of instalment credit they are distributed to the public. Acquisition of various goods is either the end desire or result. Instalment credit is only a means to an end; therefore, the demand for instalment credit is a derived demand.

Since instalment credit is derived from the demand for various goods, this credit demand (assuming a certain down payment and maturity) will change in more or less direct proportion to the change in demand for durable goods. As the demand for durable goods increases, so does the demand for instalment credit; and, as the demand decreases, so does instalment credit. Given a certain volume of durable goods, changes in the down payment and maturity will, of course, change the amount of credit extended. If the required down payment is decreased, the amount of credit used will increase because each new loan requires a larger dollar amount and because an additional number of loans will probably be made. Lengthening the maturity of the loan will increase the use of credit because of the longer period that these new loans will be on the books and because lengthening the maturity may induce more loans to be made. Shifts in the method of purchase may occur regardless of a change in the down

payment and maturities. As purchasers switch from cash to instalment plans, more credit will be used. The demand for credit may also be affected by random factors such as wars, labor strikes, and any disturbances that affect the flow of consumer goods that are normally financed by consumer instalment credit.

Analysis of Consumer Instalment Credit by Type of Credit

On the demand side, instalment credit may be analyzed as to the type of credit (purpose for which it was extended). There are four general types of credit. They are automobile credit, other consumer goods credit, repair and modernization loans, and personal loans.²⁹

Charts 4 and 5, which are plotted on a logarithmic vertical scale, show the relative importance and rate of change of each type of instalment credit from 1929 to 1958. Although the depression caused a sharp reduction in total outstanding credit, a period of rapid expansion began in 1934, which continued with only minor interruption until the end of 1941. In 1941 instalment credit outstanding amounted to more than \$6 billion and had almost doubled since the 1929 level. During the Second World War instalment credit declined drastically to a low of \$2 billion because of the many war restrictions imposed upon the economy. Since the end of the Second World

²⁹For a detailed discussion see Federal Reserve Bulletin, April, 1953, pp. 336-354.

CHART 4.--Consumer Instalment Credit Outstanding, 1929-1958

Source: See Table 3.

CHART 5.--Other Instalment Credit Outstanding, 1939-1958

Billion Dollars

Source: See Table 3.

War, total instalment credit outstanding has expanded sharply and continuously, although fluctuations occurred at various times within each type of credit. In 1958, instalment credit outstanding was estimated at \$34 billion or a little more than ten times its 1929 level.

Automobile Paper.--Automobile paper is defined as including all consumer instalment credit extended for the purpose of purchasing new or used automobiles. This type of credit is often extended and held by a retail dealer or is extended by a retail dealer and sold to a sales finance company, commercial bank, or other financial institution. The credit extended by a financial institution may be a direct loan to the individual for the express purpose of purchasing an automobile.

Automobile sales and automobile credit extended declined sharply in the depression of the early 1930's (Table 3). In 1929 automobile instalment credit was \$1.4 billion and represented 43.9 per cent of the total outstanding instalment credit. After reaching a low of \$.4 billion in 1932, this credit began to rise rather quickly. By the end of 1936 automobile credit had nearly returned to its predepression level of \$1.4 billion. The relative importance of automobile credit to total instalment credit in 1936 was 37.9 per cent, which represented a decline of 6 percentage points from 1929. During 1937, credit extended for automobiles continued to rise, only to suffer a slight decline in 1938. From 1938 to 1941 this type of credit rose very sharply, reaching a high of \$2.5 billion in 1941.

TABLE 3.--Instalment Credit Outstandings

End of Year	Total Instalment Credit	Automobile Credit		Total Other Instalment Credit	
		Amount (Millions)	Per Cent of Total	Amount (Millions)	Per Cent of Total
1929	\$ 3,151	\$ 1,384	43.9	\$ 1,767	56.1
1930	2,687	986	36.7	1,701	63.3
1931	2,207	684	31.0	1,523	69.0
1932	1,521	356	23.4	1,165	76.6
1933	1,588	493	31.0	1,095	69.0
1934	1,871	614	32.8	1,257	67.2
1935	2,694	992	36.8	1,702	63.2
1936	3,623	1,372	37.9	2,251	62.1
1937	4,015	1,494	37.2	2,521	62.8
1938	3,691	1,099	29.8	2,592	70.2
1939	4,503	1,497	33.2	3,006	66.8
1940	5,514	2,071	37.6	3,443	62.4
1941	6,085	2,458	40.4	3,627	59.6
1942	3,166	742	23.4	2,424	76.6
1943	2,136	355	16.6	1,781	83.4
1944	2,176	397	18.2	1,779	81.8
1945	2,462	455	18.5	2,007	81.5
1946	4,172	981	23.5	3,191	76.5
1947	6,695	1,924	28.7	4,771	71.3
1948	8,996	3,018	33.5	5,978	66.5
1949	11,590	4,555	39.3	7,035	60.7
1950	14,703	6,074	41.3	8,629	58.7
1951	15,294	5,972	39.0	9,322	61.0
1952	19,403	7,733	39.9	11,670	60.1
1953	23,005	9,835	42.8	13,170	57.2
1954	23,658	9,809	41.6	13,759	58.4
1955	28,958	13,472	46.5	15,486	53.5
1956	31,827	14,459	45.4	17,368	54.6
1957	34,095	15,409	45.2	18,686	54.8
1958	33,865	14,131	41.7	19,734	58.3
Per Cent of Increase 1939-1958		652.1	844.0	556.5	

Source: Federal Reserve Bulletin, April, 1953, pp. 336-354; June, pp. 1420-1422; Nov., 1958, pp. 1344-1345; March, 1959, p. 300.

a. Information unavailable for 1929-1938.

tanding by Type of Credit, 1929-1958

Other Instalment Credit					
Other Consumer Goods Credit ^a		Repair and Modernization Loans ^a		Personal Loans ^a	
Amount (Millions)	Per Cent of Total	Amount (Millions)	Per Cent of Total	Amount (Millions)	Per Cent of Total
--	--	--	--	--	--
--	--	--	--	--	--
--	--	--	--	--	--
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--	--	--	--	--	--
--	--	--	--	--	--
\$1,620	36.0	\$ 298	6.6	\$1,038	24.2
1,827	33.1	371	6.7	1,245	22.6
1,929	31.7	376	6.2	1,322	21.7
1,195	37.7	255	8.1	974	30.8
819	38.3	130	6.1	832	39.0
791	36.4	119	5.5	869	39.9
816	33.1	182	7.4	1,009	41.0
1,290	30.9	405	9.7	1,496	35.9
2,143	32.0	718	10.7	1,910	28.5
2,901	32.2	853	10.0	2,224	24.4
3,706	32.0	898	7.7	2,431	20.6
4,799	32.6	1,016	6.7	2,814	19.0
4,880	31.9	1,085	7.1	3,357	22.0
6,174	31.8	1,385	7.2	4,111	21.1
6,779	29.5	1,610	6.9	4,781	20.9
6,751	28.6	1,616	6.7	5,392	22.8
7,634	26.4	1,689	5.8	6,163	21.3
8,510	26.7	1,895	6.0	6,963	21.9
8,692	25.5	2,091	6.1	7,903	23.2
9,007	26.6	2,145	6.3	8,582	25.3
456.0		619.8		688.8	

Wartime restrictions in the nature of controls over production, prices, rationing, and credit imposed upon the economy in the early 1940's again reduced automobile credit. The low point was reached in 1943 when automobile credit stood at only \$.4 million. This corresponded to the depression low which occurred in 1932.

From World War II to the end of 1958 automobile instalment credit grew at a very rapid rate. During this period instalment credit for automobiles declined several times, once during the Korean conflict, again in 1954, and in 1958.

Automobile credit has been the largest factor in the growth of consumer instalment credit. At the end of 1958 the total amount outstanding for automobiles stood at \$14.1 billion or slightly more than ten times its 1929 level. The relative importance of automobile instalment credit has changed only slightly during the period. In 1929 it represented 43.9 per cent of the total and in the past eight years fluctuated between 39.0 per cent and 46.5 per cent, averaging 42.8 per cent.

Other Consumer Goods Paper.--Other consumer goods paper is similar to automobile paper in that it includes all instalment transactions allocable to consumer purchases of these goods. This form of credit is used most frequently for the purchase of major durable household goods, including furniture and household appliances. It is used also for nondurable goods, and lately it has been extended for the purchase of soft goods, such as clothing and jewelry, under the budget or revolving credit accounts.

Table 3 shows the amounts and relative importance of other consumer goods paper. Although data prior to 1939 are not available for the separate components of total other instalment credit, consumer goods paper, repair and modernization loans, and personal loans which are included in other instalment credit stood at \$1.8 billion in 1929 and represented 56.1 per cent of the total. This type of credit declined rather slowly during the depression years, reaching its lowest amount in 1933, one year after automobile credit reached its low point. In 1933 total other instalment credit represented 69.0 per cent of the total. One of the factors which probably contributed to the slow decline of this type of credit during the depression was the slow decline in personal loans. Individuals no doubt borrowed cash to tide themselves over until the next income period. Total other instalment credit expanded without interruption from the depression low in 1933 until 1941. It did not contract in 1938 as did automobile credit and total outstanding credit.

Instalment credit extended for other consumer goods declined, but not as sharply as automobile credit, because of wartime restrictions imposed on production and distribution. After reaching a low point in 1944, other consumer goods paper began to rise rapidly as consumer durable goods became available. The rise may be attributed not only to replacement of goods but also to the development of new products. Although credit restrictions were in effect in 1948 and during the Korean conflict, these restrictions did not reduce the

amount of credit outstanding. A slight decline occurred in the outstanding amount of other consumer goods paper in 1954.

Although credit extended for other consumer goods increased from \$1.6 billion in 1939 to \$9.0 billion in 1958, the relative importance of this type of credit has decreased. In 1939 other consumer goods paper represented 36.0 per cent of the total and, in 1958, represented only 26.6 per cent.

Repair and Modernization Loans.--Repair and modernization loans include both FHA-insured and noninsured loans made to finance the maintenance and improvement of owner-occupied dwellings. These loans may be used to finance the purchase and installation of equipment such as furnaces, hot-water heaters, storm windows, and kitchen equipment as well as to finance major alterations and repairs.

Although no available statistics exist for instalment credit extended for repairs and modernization prior to 1939, the program established by the Federal Housing Administration in 1934 encouraged home repairs and modernization by insuring this type of credit under FHA Title I.³⁰ At first, most of the loans for repairs and modernization were made by commercial banks, but participation by sales finance companies increased rapidly. By 1941 sales finance companies held \$201 million or 53 per cent of repair and modernization loans as compared to \$161 million or 43 per cent held by the commercial banks.

³⁰John M. Chapman and associates, Commercial Banks and Consumer Instalment Credit (New York: National Bureau of Economic Research, 1940), pp. 22-23.

Thereafter, the proportion held by sales finance companies declined gradually while the proportion held by commercial banks increased.

Data which begin in 1939 show that repair and modernization loans expanded until war restrictions were imposed in 1941 (Table 3). During the war this type of credit declined. From the low point reached in 1944 until 1958, this credit has continuously expanded. Despite restrictions of credit in 1948 and during the Korean conflict, repair and modernization loans continued to expand.

This type of credit has been a small part of the total outstanding credit. Prior to the Second World War, repair and modernization loans averaged 6.5 per cent of the total. In the post-Second World War period not only did an increase in the absolute amount occur but the relative importance increased to 10.7 per cent of the total outstanding instalment credit. Since 1948 the relative importance of this credit has declined and now is about 6.3 per cent of the total.

Personal Loans.--Personal loans are made directly to consumers by financial institutions and are used primarily for such purposes as consolidation of debts, payment of medical, educational, or travel expenses, and payment of personal taxes and insurance premiums. Some personal loans are used for the purpose of purchasing consumer durable goods. If the loans are secured by the item purchased, they are included under either automobile instalment credit, other consumer goods credit, or repair and modernization loans. If the loans are not secured, they are included in personal loans.

Expansion of personal loans during the 1920's was very rapid and received recognition because of the enactment of the small-loan laws. The growth in this credit accompanied the expansion of small-loan companies. Although data are not available on this type of credit prior to 1939, fluctuations in personal loans no doubt followed the general trend of the total outstanding credit, declining in the depression and rising and falling in the recession of 1938. Personal loans like the other types of credit declined during the war years (Table 3). In 1944 these loans began to rise and have continued to rise up to the present. Although the absolute amount of personal loans has increased from \$1 billion in 1939 to \$8.6 billion in 1958, the importance of this type of credit has been relatively stable, averaging about 25 per cent of the total outstanding instalment credit.

The demand for automobile instalment credit has been greater than the demand for any other component and has grown much faster than the total outstanding instalment credit. To compare the growth of all four components, one must use the period of 1939 to 1958 because data are lacking on some of the components prior to 1939. In this period automobile credit increased much more than the total and much more than the other three components. From 1939 to 1958 automobile loans increased 844.0 per cent; other consumer goods paper increased 456.0 per cent; repair and modernization loans increased 619.8 per cent; and personal loans increased 688.8 per cent.

Supply of Instalment Credit

The analysis with regard to the changes in the supply of funds is of the same order as the analysis made previously in the demand for funds. As the demand for funds increases, based on the changes in the demand of durable goods, or as the down payments decrease and length of maturities increases or as individuals switch from cash to credit purchases, the supply of funds also increases. As the supply of funds becomes scarce, the cost of those funds will go up. An increase in the cost of instalment credit may have little effect on the consumer's decision to buy a durable good because of the small amount involved, but the increase in cost of funds for instalment credit institutions may prevent the institutions from obtaining more funds.

The expansion and contraction of consumer instalment credit may have little effect on the total supply of funds in the money market because the supply of loanable funds is generally regarded as highly elastic. At least in the long run an increase in the demand for funds, such as consumer instalment credit, can be met without restricting the supply for business and other purposes. Generally, since 1929 the supply of funds has been elastic except during war periods³¹ and the recent period of high interest rates imposed by the Federal Reserve Board. In the short run, funds may become scarce as businessmen and consumers compete for the limited financial resources. Although funds may be scarce at various times, in the long

³¹Edward S. Shaw, Money, Income, and Monetary Policy (Chicago: Richard D. Irwin, Inc., 1950), pp. 424-475.

run an expansion of instalment credit does not necessarily result in a decrease in the supply of funds for other sectors. Therefore, throughout this study, except where noted, the discussion is based on the assumption that the supply of funds is generally elastic.

Sources of Funds for Instalment Credit

The supply of funds flowing into consumer instalment credit, like the funds flowing into the money market or business units, arises from two basic sources. The funds are derived chiefly from savings and bank credit.

Savings constitutes the primary source of funds used in the economy. Savings is generally thought of as individual savings and may be defined as the difference between income and consumption. Some individuals may save a considerable portion of their income while others may spend most of theirs. Also, as some individuals are saving, others may be investing or spending. Investors spend in a given period some of the savings accumulated in the past.

Although savings is the primary source of funds for instalment credit, it may take on several forms as it flows into instalment credit. The first and most obvious source of savings is the funds which are transferred directly to the consumer instalment loan market through one of the many agencies of instalment credit institutions. The instalment loan institutions must in themselves be financed, and this is done to a large extent through the sale of stocks and bonds to investors. These investors are transferring their savings to the

institution, which in turn lends them out. In other words, the means of payment is transferred from one individual to another.

Second, funds for instalment credit may be of the offset type. For example, an individual making a purchase through the instalment credit mechanism may have a savings account, own United States Government Savings Bonds, corporate stocks and bonds, public bonds, and other near-liquid savings actually to offset the purchase made with instalment credit. An individual purchasing an automobile or other consumer goods through instalment credit may have savings in the same amount as the instalment purchase; therefore, funds for instalment credit may be of the "offset" type.

A third source of funds for instalment credit may arise from the decline in various complementary industries. An industry associated with instalment credit may grow as another industry which provides the same type of services declines. This structural change requires less capital in the declining industry, and the existing stock of buildings, machines, and other equipment is allowed to wear out without replacement. The funds accumulated through depreciation are allowed to flow into the loan market. For example, the past savings used in the city rail systems, passenger train service, busses, and taxicabs may be employed to purchase automobiles. Funds used in the motion picture theater industry may now be used to purchase television receivers on instalment credit. The decline in the ice business may have given rise to instalment credit purchases of refrigerators and home freezers. Declines in the laundry and cleaning business may have

provided funds for use in buying automatic washers and dryers. Also, the funds used to pay household domestic workers may now be used to buy vacuum cleaners, garbage disposals, dishwashers, and sewing machines.

Not only may the savings in one industry be transferred to a complementary industry using instalment credit, but the funds spent for streetcar fare, railroad fare, motion picture admissions, and ice for refrigerators may also now be used to help pay the instalment payment for automobiles, television sets, and refrigerators. Thus one may say that the decline in one industry may have given rise to an industry in which instalment credit is used.

The banking system provides the second source of funds which are used in financing businesses as well as financing instalment credit purchases. Banks create credit funds and increase the quantity of money in a given period when they extend new loans or make investments. The loans are made or securities purchased by establishing checking accounts. These checking accounts are demand deposits and are additions to the money supply. By the reverse process of contracting their lending activities or by selling securities to individuals, banks can diminish the volume of funds available. As the loans are paid off and the securities sold, the checking accounts are reduced.

Banks may directly or indirectly supply funds to ultimate users of instalment credit. The direct means of supplying funds to an individual takes the normal course of a bank instalment loan.

Indirectly, banks supply funds to users of instalment credit by supplying one of the many agencies with funds. The agencies, in turn, lend the money to an individual.

To complete the discussion of the funds for instalment credit, it is necessary to describe the financing of the various institutions involved which make instalment loans to individuals. By so doing, we are, in effect, showing the source of funds, savings or bank funds, which are used in the instalment loan area. Although we are interested mainly in the sources of funds used in the instalment loan agencies, brief histories of each institution as well as the relative importance of each institution will be helpful to the reader.

Analysis of Instalment Credit by Holder

To meet the demand of consumers for means to finance the purchase of goods, various types of specialized lending institutions have been developed. Consumer instalment loan agencies may be classified into two broad categories: financial institutions and retail outlets. Financial institutions presently hold over 85 per cent of the outstanding consumer instalment credit. These institutions include commercial banks, sales finance companies, consumer finance companies, credit unions, and other financial institutions. Other financial institutions include industrial loan companies, savings and loan associations, and mutual savings banks; but, since separate data are lacking on these institutions, they will be discussed as

"Other Financial Institutions." Retail outlets include department stores, mail-order houses, furniture stores, household appliance stores, automobile dealers, and other retail outlets. Since the amount of instalment credit held by each retail dealer is relatively small, this topic will be discussed under the heading "Retail Outlets."

Although the history and relative importance of each instalment credit institution will be discussed, the main purpose is to show the various sources of funds (savings and bank credit) which are used in the instalment credit area.

Table 4 shows the absolute amounts and relative importance of each type of institution engaged in consumer instalment lending. In 1939 the relative importance of the institutions holding instalment credit was as follows: retail outlets held 32 per cent of the total or \$1,438 million; sales finance companies, 26 per cent or \$1,197 million; commercial banks, 24 per cent or \$1,079 million; other financial institutions including consumer finance companies, 15 per cent or \$657 million; and credit unions, 3 per cent or \$132 million. The Second World War brought about several changes in instalment credit holdings of the institutions, as the total outstanding instalment credit declined. Sales finance company holdings declined rapidly and were offset by the increase in holdings of other financial institutions and retail outlets. Sales finance companies hold large amounts of automobile credit, and the curtailment of automobile production during the war probably caused the decline in

TABLE 4.--Instalment Credit Out

End of Year	Total Instalment Credit Outstanding	Commercial Banks		Sales Finance Companies		Credit Unions
	Amount (Millions)	Amount (Millions)	Per Cent of Total	Amount (Millions)	Per Cent of Total	Amount (Millions)
1939	\$ 4,503	\$ 1,079	24	\$1,197	26	\$ 132
1940	5,514	1,452	26	1,575	29	171
1941	6,085	1,726	28	1,797	30	198
1942	3,166	862	27	588	19	128
1943	2,136	532	25	252	12	103
1944	2,176	574	26	262	12	99
1945	2,462	745	30	300	12	102
1946	4,172	1,567	38	677	16	151
1947	6,695	2,625	39	1,355	20	235
1948	8,996	3,529	39	2,011	22	334
1949	11,590	4,439	38	2,944	25	438
1950	14,703	5,798	39	3,711	25	590
1951	15,294	5,771	38	3,654	24	635
1952	19,403	7,524	39	4,711	24	837
1953	23,005	8,998	39	5,927	26	1,124
1954	23,568	8,796	37	6,144	26	1,342
1955	28,958	10,601	37	8,443	29	1,678
1956	31,827	11,707	37	9,100	28	2,014
1957	34,095	12,753	37	9,573	28	2,429
1958	33,865	12,730	38	8,740	26	2,664
<hr/>						
Per Cent of Increase 1939-1958	652.1	1079.8		630.2		1918.2

Source: Federal Reserve Bulletin, April, 1953, pp. 348-349; Oct.

a. From 1939 to 1949, Consumer Finance Companies were included :

Outstanding by Holder, 1939-1958

Lit ons)	Consumer Finance Companies ^a		Other Financial Institutions ^a		Retail Outlets	
	Per Cent of Total	Amount (Millions)	Per Cent of Total	Amount (Millions)	Per Cent of Total	Amount (Millions)
	3	--	--	\$ 657	15	\$1,438
	3	--	--	720	13	1,596
	3	--	--	759	13	1,605
	4	--	--	598	19	990
	5	--	--	526	24	723
	5	--	--	551	25	690
	4	--	--	629	26	686
	4	--	--	840	19	937
	4	--	--	1,040	16	1,440
	4	--	--	1,246	14	1,876
	4	--	--	1,436	13	2,333
	4	\$1,286	9	420	3	2,898
	4	1,555	10	509	3	3,170
	4	1,866	10	643	3	3,822
	5	2,137	9	777	3	4,042
	6	2,257	10	911	4	4,118
	6	2,656	9	1,072	4	4,508
	6	3,056	10	1,207	4	4,743
	7	3,333	10	1,339	4	4,668
	8	3,381	10	1,428	4	4,922
632.0				242.3		

st., 1956, pp. 1037-1038; March, 1959, p. 300.

1 in Other Financial Institutions.

the relative importance of these companies. Although consumer durable goods expenditures declined during the war, expenditures on nondurable goods and services increased. The increase in importance of retail outlets and other financial institutions partly reflects the increase in expenditures for nondurable goods and services.

Near the end of the war total outstanding instalment credit began to rise rapidly. Of course, changes in the importance of instalment credit institutions occurred as consumer durable goods flowed into the market. Commercial banks aggressively competed with sales finance companies, other financial institutions, and retail outlets to finance instalment purchases. By 1958 the relative importance of instalment institutions was as follows: commercial banks held 38 per cent of the total or \$12,730 million; sales finance companies, 26 per cent or \$8,740 million; retail outlets, 14 per cent or \$4,922 million; other financial institutions including consumer finance companies, 14 per cent or \$4,809 million; and credit unions, 8 per cent or \$2,664 million.

From 1939 to 1958 noticeable changes have occurred in the relative importance of instalment credit institutions. In 1939 retail outlets held the largest amounts of instalment credit, and commercial banks were the third largest holders. By 1958 this position had reversed, and commercial banks were the largest holders of instalment credit. Credit unions and sales finance companies have increased slightly in importance, except for 1958, and other

financial institutions, including consumer finance companies, have declined slightly.

In view of the fact that sales finance companies and consumer finance companies borrow from banks, the importance of commercial banks in the field of instalment credit is understated. In 1955 banks directly held \$10,601 million of instalment credit and made loans of \$3,530 million to sales finance companies and loans of \$860 million to consumer finance companies³² or financed \$14,991 million of instalment credit. Total instalment credit outstanding was \$28,958 million; therefore, banks financed 51.8 per cent of the total outstanding instalment credit ($\$14,991 \div \$28,958 = 51.8$).

The amount of direct and indirect bank financing of instalment credit may be objected to because there is an overstatement to the extent that sales finance companies and consumer finance companies are engaged in nonconsumer financing; but an offset appears in part, if consideration is given to bank loans made to retail dealers for instalment credit purposes.

In terms of absolute growth the direct holdings of instalment credit by the various institutions have increased as follows: commercial banks, 1079.8 per cent; sales finance companies, 630.2

³²Loans to sales finance companies and to consumer finance companies were obtained from Eli Shapiro and David Meiselman, "The Financing of Consumer Credit Institutions," Consumer Instalment Credit: Conference on Regulation (Washington, D. C.: National Bureau of Economic Research, Board of Governors of Federal Reserve System, Government Printing Office, 1957), Part II, Volume 1, p. 321.

per cent; credit unions, 1918.2 per cent; other financial institutions including consumer finance companies, 632.0 per cent; and retail outlets, 242.3 per cent. Total instalment credit outstanding increased 652.1 per cent.

Not only has the relative importance of each lending institution changed over the past several decades but also this changing importance can be detected in the different types of instalment credit extended by each institution. Table 5 shows the various percentages of automobile credit held by commercial banks, sales finance companies, other financial institutions, and retail outlets. Sales finance companies have been the dominant holders of automobile credit, but they are losing their competitive position to commercial banks. These two institutions account for about 85 per cent of all credit extended for the purpose of purchasing automobiles. For the most part, other financial institutions and retail outlets have held little automobile instalment credit. In the past six years other financial institutions and retail outlets have been holding an almost constant average of credit in the automobile field, respectively 6 per cent and 4 per cent.

Table 6 shows the various percentages of other consumer goods instalment credit held by the various institutions. As mentioned previously, other consumer goods credit includes instalment credit extended for a host of consumer durable goods and nondurable goods. In the past, retail outlets have held the greatest amounts of this type of instalment credit. For the most part, there have been a

TABLE 5.--Holders of Automobile Instalment Credit

End of Year	Automobile Instalment Credit ^a	Per Cent of Total Held by			
		Commercial Banks	Sales Finance Companies	Other Financial Institutions	Retail Dealers
1939	1,497	21	59	5	15
1940	2,071	30	57	5	8
1941	2,458	32	55	5	8
1942	742	25	46	9	20
1943	355	41	37	14	8
1944	397	40	38	13	9
1945	455	46	36	12	6
1946	981	49	38	8	5
1947	1,924	46	42	7	5
1948	3,018	44	44	7	5
1949	4,555	39	50	6	5
1950	6,074	41	49	6	4
1951	5,972	41	48	6	5
1952	7,733	42	47	6	5
1953	9,835	42	48	5	5
1954	9,809	40	50	5	5
1955	13,472	39	51	5	5
1956	14,459	40	50	7	3
1957	15,409	41	48	7	4
1958	14,131	43	45	8	4

Source: Federal Reserve Bulletin, 1939-1947 data, April, 1953, pp. 336-354; 1948-1955 data, October, 1956, pp. 1031-1042; 1956 data, April, 1957, pp. 452-453; 1957-1958 data, May, 1959, pp. 530-531.

a. Millions of Dollars

TABLE 6.-- Holders of Other Consumer Goods Instalment Credit

End of Year	Other Consumer Goods Credit ^a	Per Cent of Total Held by			
		Commercial Banks	Sales Finance Companies	Other Financial Institutions	Retail Dealers
1939	1,620	10	7	1	82
1940	1,827	13	8	2	77
1941	1,929	16	9	2	73
1942	1,195	13	7	2	78
1943	819	9	4	2	85
1944	791	10	4	2	84
1945	816	14	3	2	81
1946	1,290	23	5	3	69
1947	2,143	26	9	3	62
1948	2,901	27	10	4	59
1949	3,706	27	12	4	57
1950	4,799	30	11	4	55
1951	4,880	27	9	5	59
1952	6,174	28	11	5	56
1953	6,779	31	12	5	52
1954	6,751	28	12	6	54
1955	7,634	27	14	7	52
1956	8,510	29	15	8	48
1957	8,692	28	16	7	49
1958	9,007	26	17	7	50

Source: See source Table 5.

a. Millions of Dollars

steady decline in retail holdings and a steady increase in commercial bank holdings, sales finance company holdings, and other financial institution holdings since 1939.

Table 7 shows the relative importance of holdings by the various institutions of repair and modernization instalment credit. Definite trends can be gathered from this table as to the changing positions of the institutions. Commercial banks have had a steady increase in repair and modernization loans from 45 per cent of the total outstanding credit in 1939 to 82 per cent in 1953. Since then, bank holdings have declined and currently account for 75 per cent. There has also been a steady increase in this type of credit held by other financial institutions. The increase in holdings by commercial banks and other financial institutions has been offset by the steady decline in holdings of this type of credit by sales finance companies. As reported by the Federal Reserve Board, retail outlets do not hold credit extended for the purpose of home repair and modernization.

Table 8 shows the distribution of personal loans among the various institutions. Generally, the relative position of the institutions extending credit for this purpose has been relatively stable, although some increases and decreases can be noted. Commercial banks appear to have lost some holdings, mostly to sales finance companies and some to other financial institutions. Other financial institutions have always held the greatest amount of instalment credit, because consumer finance companies, which are included in the other financial institutions, make the greatest amount of personal loans.

TABLE 7.--Holders of Repair and Modernization Instalment Credit

End of Year	Repair and Moderniza- tion ^a	Per Cent of Total Held by			
		Commercial Banks	Sales Finance Companies	Other Financial Institutions	Retail Dealers
1939	298	45	50	5	--
1940	371	44	51	5	--
1941	376	43	53	4	--
1942	255	49	46	5	--
1943	130	59	32	9	--
1944	119	63	28	9	--
1945	182	60	32	8	--
1946	405	60	35	5	--
1947	718	61	34	5	--
1948	853	67	26	7	--
1949	898	80	10	10	--
1950	1,016	82	6	12	--
1951	1,085	82	6	12	--
1952	1,385	82	4	14	--
1953	1,610	82	3	15	--
1954	1,616	81	2	17	--
1955	1,689	79	2	19	--
1956	1,895	78	1	21	--
1957	2,091	76	1	23	--
1958	2,145	75	1	24	--

Source: See source Table 5.

a. Millions of dollars

TABLE 8.--Holders of Personal Loan Instalment Credit

End of Year	Personal Loan ^a	Per Cent of Total Held by			
		Commercial Banks	Sales Finance Companies	Other Financial Institutions	Retail Dealers
1939	1,088	33	5	62	--
1940	1,245	35	5	60	--
1941	1,322	36	5	59	--
1942	974	31	5	64	--
1943	832	28	5	67	--
1944	869	29	6	65	--
1945	1,009	31	5	64	--
1946	1,496	36	6	58	--
1947	1,910	39	7	54	--
1948	2,224	38	7	55	--
1949	2,431	38	6	56	--
1950	2,814	37	6	57	--
1951	3,357	33	8	59	--
1952	4,111	33	8	59	--
1953	4,781	32	8	60	--
1954	5,392	31	7	62	--
1955	6,163	31	8	61	--
1956	6,963	30	9	61	--
1957	7,903	30	8	62	--
1958	8,582	31	9	60	--

Source: See source Table 5.

a. Millions of Dollars

History and Financing of Consumer
Instalment Credit Institutions

Commercial Banks.--Commercial banks were very slow to enter into the field of consumer instalment credit. In 1929 they held only 5.49 per cent³³ of the total consumer instalment credit outstanding as compared to 24 per cent in 1939. The reasons advanced for the slow growth of consumer instalment loans in the banking field are due to various factors. First, operating costs per loan and per dollar loaned are considered too high as compared to mortgage and business credit because consumer instalment loans are characterized by small loan amounts; a large number of loans are accompanied by a large number of repayments; a large number of small loans require frequent as well as various investigation procedures; also, the bookkeeping and collection expenses are high for large numbers of small loans. A second important factor in the slow growth of instalment loans in the banking area was the failure to have the necessary personnel and organization to take care of the special characteristics of instalment credit as mentioned above. Instalment loans as a special field of credit require individuals with special skills and experiences and an organization which commercial banks did not have in the 1920's.³⁴

³³W. David Robbins and T. N. Beckman, Consumer Instalment Loans: An Analysis of Loans by Principal Types of Lending Institutions and by Types of Borrowers (Columbus: Bureau of Business Research, Ohio State University, 1955), p. 19.

³⁴Haberler, op. cit., p. 26.

During the depression and its subsequent recovery, commercial banks saw that instalment loan institutions had weathered the storm of the depression better than they did. The experience of specialized loan institutions associated with instalment credit has shown that consumer instalment lending could be a safe and profitable business.

In 1934 the National Housing Act gave additional impetus to commercial banks to extend credit to individuals. The Act insured loans made to individuals for the purposes of home repairs and modernization. These insured loans led to the desirability of a continuation and expansion of instalment lending by commercial banks to individuals.

Instalment credit extended to individuals by banks continued to grow after recovery from the recession. Since instalment lending on repairs and modernization became very successful, banks began to increase their activities to include other types of consumer instalment loans. By the late 1930's commercial banks entered practically every phase of instalment lending. Bankers gave the following reasons for their continued interest in instalment loans: first, they provide earning assets for idle bank funds; second, consumer instalment institutions outside the banking field had very good success in lending to consumers; third, instalment loans carry high interest rates, which provide a good source of profit; and, finally, FHA Title I insures instalment loans made for home repairs and modernization.³⁵

³⁵Chapman, op. cit., pp. 22-23.

Two general types of funds are used in the financing of commercial banks. The funds may be either deposit funds or equity funds. Deposits from the banks' point of view represent debts and are obligations of the bank to pay the depositor either on demand or after the lapse of a specified period of time. Deposits are of two types, demand deposits or time deposits. Demand deposits or checking accounts represent part of the money supply as explained previously. Demand deposits may increase when a bank customer establishes a checking account by depositing his savings, but the greater proportion of these accounts is created by the banking system in its lending and investment operations. Time deposits, although debts of the bank, are savings of individuals.

Equity funds are reflected in the capital account of the bank's statement of financial condition. The capital account, which includes the bank's capital stock, surplus, and undivided profits, represents the residual claims of the owners. Since the capital of the bank belongs to the owners, it is also savings.

Table 9 shows the financial condition of commercial banks, the division among assets, liabilities, and net worth, as well as the percentage of each item. Demand deposits, funds created by the banking system, represent over two-thirds of the funds available for financing bank assets, and time deposits represent almost one-fourth. The remaining funds are accounted for by capital and surplus. Although banks have directly accounted for 37 per cent of the total installment credit outstanding in 1955, it will be noted from the table

TABLE 9.--Balance Sheet of All Commercial Banks

(Millions of Dollars and Per Cent of Total)

<u>Assets</u>	1952		1953		1954		1955		Inc. (Dec.)
	Amount	Per Cent ^c	Amount	Per Cent ^c	Amount	Per Cent ^c	Amount	Per Cent ^c	
Cash	\$ 44,590	24	\$ 44,760	24	\$ 43,430	21	\$ 46,840	22	\$ 2,250
Federal, State, and Local Securities	74,940	40	75,570	38	82,900	41	76,110	36	1,170
Other Investments	2,020	1	1,920	1	1,700	1 ^a	1,440	1 ^a	(580)
Loans -									
Consumer Instalment Loans ^b	7,520	4	9,000	5	8,800	4	10,600	5	3,080
Automobile	3,260	2	4,080	2	3,940	2	5,300	3	2,040
Other Consumer Goods	1,750	1 ^a	2,080	1	1,880	1 ^a	2,040	1	290
Repair and Modernization	1,140	1 ^a	1,320	1 ^a	1,300	1 ^a	1,340	1 ^a	200
Personal	1,370	1 ^a	1,520	1 ^a	1,680	1 ^a	1,920	1 ^a	550
Consumer Single Payment Loans	1,840	1	1,900	1	2,080	2	2,390	1	550
Sales Finance Company	2,510	1	2,260	1	2,100	2	3,530	2	1,020
Personal Finance Company	640	1 ^a	700	1 ^a	720	1 ^a	860	1 ^a	220
Mortgage Loans	15,710	9	16,690	9	18,420	9	20,810	10	5,100
Other Loans	36,850	20	38,000	20	39,740	20	45,930	21	9,080
Total Loans	65,070	35	68,550	36	71,860	36	84,120	40	19,050
Less: Valuation Reserves	910	1 ^a	950	1 ^a	1,230	1 ^a	1,520	1 ^a	610
Net Loans	64,160	34	67,600	35	70,630	35	82,600	39	18,440
Miscellaneous Assets	2,890	1	3,160	2	3,720	2	3,740	2	850
Total Assets	<u>\$188,600</u>	<u>100</u>	<u>\$193,010</u>	<u>100</u>	<u>\$202,390</u>	<u>100</u>	<u>\$210,730</u>	<u>100</u>	<u>\$22,130</u>
<u>Liabilities and Net Worth</u>									
Demand Deposits	\$131,170	70	\$131,540	68	\$135,790	67	\$141,960	67	\$10,790
Time Deposits	41,760	22	45,160	24	48,970	24	50,300	24	8,540
Other Liabilities	2,780	1	2,750	1	3,050	2	3,170	2	390
Capital and Surplus	12,890	1	13,560	7	14,580	7	15,300	7	2,410
Total Liabilities and Net Worth	<u>\$188,600</u>	<u>100</u>	<u>\$193,010</u>	<u>100</u>	<u>\$202,390</u>	<u>100</u>	<u>\$210,730</u>	<u>100</u>	<u>\$22,130</u>

Source: Eli Shapiro and David Meiselman, "The Financing of Consumer Credit Institutions," Consumer Instalment Credit: Conference on Regulation (Washington, D. C.: National Bureau of Economic Research, Board of Governors of Federal Reserve System, Government Printing Office, 1957), Part II, Volume 1, p. 316-321.

a. Less than 1 per cent

b. Figures have been adjusted to reflect revised credit statistics.

c. The per cent column may not add up to 100 per cent due to rounding of figures.

that direct consumer instalment loans represent only about 5 per cent of the bank assets. Loans made to sales finance companies account for less than 3 per cent of bank assets. Thus, taken together, instalment loans to consumers directly and indirectly are less than 8 per cent of bank assets. Although there is no way to determine exactly how time deposits or demand deposits enter into the financing of instalment credit, instalment credit may cause some expansion of the money supply by expanding demand deposits. The expansion of the money supply by loans to consumers must not be very significant since these loans account for less than 8 per cent of the banking assets.

It is interesting to note from the balance sheet of commercial banks the increase in the various items. In the loan category, mortgage loans and other loans increased more than direct loans to consumers. Loans to sales finance companies and personal finance companies increased slightly.

Sales Finance Companies.--Sales finance companies differ significantly in their method of operation from banking and other lending institutions. Finance companies enter into consumer lending by purchasing instalment paper from others, usually retail dealers, rather than extending credit directly to consumers. Thus, one may say that sales finance companies are an outgrowth of the selling of goods rather than actual money lending.

Sales finance companies were first organized to make business loans to wholesalers and manufacturers.³⁶ The loans were secured by assignment of their accounts receivable. Shortly thereafter, the sales finance companies began to buy open book accounts of merchants, wholesalers, and manufacturers. These companies expanded their operations from the purchasing of open book accounts to the purchasing of retail charge accounts and retail instalment accounts. When the automobile was finally accepted as something other than a rich man's toy; that is, as a means of transportation for the general public, the growth of sales finance companies was greatly accelerated not only through existing companies but also through newly organized companies. By 1916 automobile manufacturers became interested in automobile financing as evidenced by their attempt to form one general finance company to handle their automobile sales.³⁷ The success in automobile financing encouraged the instalment financing of many new products that were coming on the market. From 1918 to 1923 sales finance companies began to extend their operations to include purchases of furniture, phonographs, vacuum cleaners, washing machines, and various other durable goods.³⁸ Because of increased automobile demands and the demand for other consumer goods the period from 1922 to 1925 was one of very rapid expansion in the sales finance field.

³⁶Wilbur C. Plummer and Ralph A. Young, Sales Finance Companies and Their Credit Practices (New York: National Bureau of Economic Research, 1940), pp. 33-48.

³⁷Seligman, op. cit., pp. 41-46.

³⁸Nugent, op. cit., p. 81.

The number of companies reached a peak of about 1700 in 1925.³⁹ After the 1925 high, the number of companies began to decline. Competition and the depression brought about this decline. Sales finance companies consisting of local, regional, and national companies currently hold \$8,740 billion or 26 per cent of the total instalment credit outstanding. A major portion of this amount is held by four national sales finance companies which are the General Motors Acceptance Corporation, the CIT Financial Corporation, the Commercial Credit Company, and the Associates Investment Company.

Sales finance companies acquire their funds from the same sources as do other corporations. Savings of individuals enter into the financing of these business units through the sale of capital stock or through either short-term or long-term debt. Bank credit, a second source of funds, enters into the financing through bank loans to these corporations. Table 10 shows the balance sheet and distribution of balance sheet items of sales finance companies. Here one may see how the funds arise which are used to finance the purchase of consumer items on the instalment plan. As seen from the balance sheet, consumer instalment loans represented 73 per cent of assets in 1955. In the same year business loans represented 21 per cent of total assets. Business loans are loans made to retail dealers to finance inventories. Financing of inventories, especially inventories of automobiles and other types of high-unit-value durable goods, is called "wholesaling" or "floor planning." Since automobile

³⁹Seligman, op. cit., p. 49.

TABLE 10.--Balance Sheet of Sales Finance Companies

(Millions of Dollars and Per Cent of Total)

<u>Assets</u>	1952		1953		1954		1955		Inc. (Dec.)
	Amount	Per Cent ^c	Amount	Per Cent ^c	Amount	Per Cent ^c	Amount	Per Cent ^c	
Cash and Market Securities	\$ 660	9	\$ 690	8	\$ 660	8	\$ 820	8	\$ 160
Loans:									
Consumer Instalment ^b	4,710	67	5,930	72	6,140	75	8,440	73	3,730
Automobile	3,630	51	4,690	57	4,870	60	6,920	60	3,290
Other Consumer Goods Credit	680	10	820	10	840	10	1,030	9	350
Repair and Modernization	60	1	50	1 ^a	30	1 ^a	30	1 ^a	(30)
Personal Loan	340	5	380	5	400	5	470	4	130
Business Loans	1,640	23	1,710	21	1,450	18	2,420	21	780
Loans, Gross	6,350	90	7,640	93	7,590	93	10,860	94	4,510
Less: Unearned Income and Loss Reserve	510	7	620	8	650	8	930	8	420
Loans, Net	5,840	83	7,020	85	6,940	85	9,930	86	4,090
Investments	460	7	480	6	530	6	620	5	160
Other Assets	90	1	100	1	100	1	140	1	50
Total Assets	\$7,050	100	\$8,290	100	\$8,230	100	\$11,510	100	\$4,460
<u>Liabilities and Net Worth</u>									
Short-term Bank Loans	\$2,370	34	\$2,010	24	\$1,820	22	\$ 3,140	27	\$ 770
Commercial Paper - Directly Placed	1,160	16	1,280	15	1,100	13	1,390	12	230
Dealer Placed	170	2	300	4	360	4	480	4	310
Other Short-term Liabilities	260	4	270	3	380	5	390	3	130
Long-term Bank Debt	140	2	250	3	270	3	390	3	250
Other Long-term Debt	860	12	1,740	21	1,770	22	2,640	23	1,780
Subordinated Debentures	370	5	540	7	620	8	830	8	460
Other Liabilities	490	7	530	6	500	6	620	6	130
Total Liabilities	5,820	82	6,920	83	6,820	83	7,880	86	4,060
<u>Net Worth</u>									
Preferred Stock	230	3	240	3	170	2	260	2	30
Common Stock	320	5	380	5	380	5	470	4	150
Surplus	680	10	750	9	860	10	900	8	220
Total Net Worth	1,230	18	1,370	17	1,410	17	1,630	14	400
Total Liabilities and Net Worth	\$7,050	100	\$8,290	100	\$8,230	100	\$11,510	100	\$4,460

Source: See source Table 9.

a. Less than 1 per cent

b. Figures have been adjusted to reflect revised credit statistics.

c. The per cent column may not add up to 100 per cent due to rounding of figures.

manufacturers normally ship automobiles immediately upon assembly, they expect the retail dealer to store and display the inventory until the automobiles are sold. A large part of this inventory is financed by sales finance companies. Consumer instalment loans and business loans represent the bulk of the assets of the sales finance companies. The other assets are composed of cash, marketable securities, small investments, office supplies and equipment, and some real estate.

Bank credit, one of the largest single sources of funds, enters into the financing of these sales finance companies in terms of either short-term bank loans or long-term bank loans. These loans accounted for 30 per cent of funds that sales finance companies used in 1955 (Table 10).

Commercial paper refers to short-term funds acquired through the sale of single-name paper to various institutions who have funds to lend. Commercial paper may be directly placed or dealer placed. Direct placement of commercial paper is the sale of paper (and acquisition of funds) directly to the ultimate holder or purchaser. It is a direct transaction, and no middleman is involved. Small amounts of commercial paper are dealer placed; that is, brokers act as middlemen and distribute the paper to various organizations. In 1955 directly placed commercial paper accounted for 12 per cent of the total funds used by sales finance companies while dealer-placed paper accounted for 4 per cent of the total funds.

The advantages and disadvantages of financing through commercial paper lie outside the scope of this study, but through past history these companies have enjoyed superior ratings on their commercial paper and also have obtained an interest rate close to the prime rate.

The long-term debt (other than long-term bank loans) of sales finance companies is usually defined as debt having maturity of a year or longer. A considerable portion of their total loanable funds, 23 per cent, was obtained in this manner in 1955. Subordinated debentures refer to long-term debt which is, in the event of default, dissolution, or bankruptcy, subordinated to the other forms of debt. These debentures were a relatively new type of credit instrument and represented only 8 per cent of the total funds used by these companies. Other liabilities included accounts payable, accruals, income tax, dealer reserves, etc., and accounted for 9 per cent of the total loanable funds. Net worth, composed of preferred stock, common stock, and surplus, accounted for 14 per cent of the funds used by sales finance companies.

Since sales finance companies hold a large segment of the instalment credit outstanding, it is interesting to note the fluctuations in the source of funds. Table 11 shows the source of funds available to four major finance companies from 1929 to 1955. The companies which are included in this group are the four largest sales finance companies: General Motors Acceptance Corporation, the CIT Financial Corporation, the Commercial Credit Company, and the

TABLE 11.--Sources of Funds Available to Four Major
Sales Finance Companies, 1929-1955

(Millions of Dollars)

End of Year	Total Funds	Short-term Debt	Long-term Debt	Capital
1929	890	417	135	246
1930	736	298	124	239
1931	630	244	98	218
1932	394	53	79	209
1933	494	180	38	206
1934	662	307	30	224
1935	900	463	43	251
1936	1,290	602	235	273
1937	1,519	798	270	281
1938	1,029	347	245	289
1939	1,183	534	197	285
1940	1,591	852	243	293
1941	1,863	1,040	273	297
1942	828	221	135	300
1943	552	8	111	289
1944	517	36	55	291
1945	584	117	20	304
1946	1,136	441	102	299
1947	1,771	893	187	312
1948	2,370	1,081	499	371
1949	3,112	1,366	696	427
1950	4,016	1,790	966	503
1951	4,128	1,889	1,015	519
1952	4,973	2,490	1,040	556
1953	6,098	2,319	2,175	611
1954	5,477	2,066	2,246	635
1955	8,626	3,361	3,184	751

Source: Information obtained through personal correspondence with Donald P. Jacobs. Jacobs is the author of "Sources and Costs of Funds of Large Sales Finance Companies," Consumer Instalment Credit: Conference on Regulation (Washington, D. C.: National Bureau of Economic Research, Board of Governors of Federal Reserve System, Government Printing Office, 1957), Part II, Volume 1, pp. 324-423.

Associates Investment Company. These companies account for around two-thirds of the consumer instalment credit held by all sales finance companies.

Total funds, as shown in Table 11, include short-term borrowing, long-term borrowing, and capital. Short-term borrowing consists of bank funds, commercial paper, and other short-term liabilities. Also included in short-term borrowing are some foreign funds. Although data are lacking on the amount of foreign funds, they are believed to be of negligible proportions. Long-term funds include bank debts, other long-term debts, and subordinated debentures. Equity or capital funds are the total common stock, preferred stock, and surplus.

Chart 6, which is plotted on a logarithmic scale, shows the relative importance of these four sources and their rate of change. Of noticeable importance is the changing need for funds due to cyclical and random forces. The total volume of usable funds shows a large measure of variability and growth. Short-term debt fluctuates more violently than either long-term debt or capital funds. Upon close examination it can be seen that long-term debt lags at the troughs. This lag indicates the relative stickiness of long-term funds and probably means that at various periods holdings were in excess of the amount of funds that were actually desired. As expected, capital funds show little fluctuation. Basically, the companies have done very little to increase their capital stock accounts of either preferred or common stock. Changes in surplus have also

CHART 6.--Sources of Funds Available to Four Major Sales Finance Companies, 1929-1955

Source: See Table 11.

been small. The data presented in regard to sales finance companies show that these companies rely on short-term debt to meet the cyclical needs of consumers in purchasing goods.

Credit Unions.--Credit unions differ significantly from other major types of lending institutions. Credit unions are cooperative associations organized to encourage thrift among their members and to make loans to members for provident and productive purposes at relatively low rates of interest. Credit unions, chartered under either state or Federal law, are organized to serve a group of individuals having a common bond of interest such as employment, church organization, fraternal orders, labor unions, or even residence in a neighborhood.

Thrift is promoted by providing members with convenient and safe facilities for saving small amounts of current earnings. The credit unions stimulate savings of those in low income groups by providing the necessary facilities for saving where such facilities are inadequate or lacking. At the same time a credit union provides a small instalment loan service to its members at a cost generally lower than that of other consumer loan organizations. Operating costs of credit unions are low because many employers donate office space and clerical help; in addition, members of the credit union donate their time and service; and credit investigation of loan applicants is less expensive because of the closely knit group.

The capital used in the lending operation of a credit union is obtained from membership savings. The members buy shares in the

organization by depositing part of their weekly or monthly wages. The shareholders own the credit union, manage its affairs, and divide the profits among themselves.

Although credit unions did not originate in the United States, the first laws in this country pertaining to these associations were passed by the State of Massachusetts in 1909. The passage of the Federal Credit Union Act of 1934 gave additional impetus to the movement.

Table 12 shows the financial condition of credit unions in the United States. Credit union assets are largely composed of loans to consumers, although they hold various amounts of cash, federal securities, business loans, mortgages, and miscellaneous assets. The largest source of funds for credit unions most naturally arises out of the savings of members and appears as owners' shares in the balance sheet.

Consumer Finance Companies.--Consumer finance companies are specialized financial institutions engaged in consumer instalment credit. These finance companies are sometimes referred to as small-loan companies or personal finance companies since they make small or personal loans to individuals. These institutions generally operate under state small-loan laws. The Federal Reserve Board defines a consumer finance company as any finance company that has more than half of its consumer instalment receivables in loans made under effective state small-loan laws.⁴⁰ The State Uniform Small

⁴⁰Federal Reserve Bulletin, October, 1956, p. 1033.

TABLE 12.--Balance Sheet of All United States Credit Unions
(Millions of Dollars and Per Cent of Total)

	1952		1953		1954		1955		Inc.
	Amount	Per Cent	Amount	Per Cent	Amount	Per Cent	Amount	Per Cent	(Dec.)
Assets									
Currency and Deposits	\$ 150	10	\$ 170	9	\$ 220	9	\$ 230	8	\$ 80
Federal Obligations	200	13	190	10	180	8	180	6	(20)
Loans: Consumer ^a	840	55	1,120	59	1,340	59	1,680	60	840
Business	30	2	30	2	40	2	50	2	20
Mortgage Loans	120	8	150	8	180	8	210	8	90
Miscellaneous Assets	180	12	240	12	320	14	450	16	210
Total Assets	<u>\$1,520</u>	<u>100</u>	<u>\$1,900</u>	<u>100</u>	<u>\$2,280</u>	<u>100</u>	<u>\$2,800</u>	<u>100</u>	<u>\$1,280</u>
Liabilities									
Accounts Payable; Reserves;									
Miscellaneous Liabilities	\$ 160	11	\$ 200	11	\$ 230	10	\$ 370	13	\$ 210
Undistributed Profits	50	3	60	3	70	3	100	4	50
Owners' Shares	1,310	86	1,640	86	1,980	87	2,330	83	1,020
Total Liabilities	<u>\$1,520</u>	<u>100</u>	<u>\$1,900</u>	<u>100</u>	<u>\$2,280</u>	<u>100</u>	<u>\$2,800</u>	<u>100</u>	<u>\$1,280</u>

Source: See source Table 9.

a. Figures have been adjusted to reflect revised credit statistics.

Loan Laws grew out of an investigation started in 1909 by the Russell Sage Foundation into the practices and abuses of loan sharks and illegal lenders. In 1916 the Foundation sponsored and adopted a model Uniform Small Loan Law to bring about various reforms in personal lending. Although the law has been redrafted many times by the various states, generally it requires that the lender must secure a license, post a bond, and submit to inspection and regulation by the banking department of the state in which the lender is operating. Although the State Uniform Small Loan Laws subject consumer finance companies to regulation, the cost of granting consumer instalment loans is greater than the cost of granting ordinary loans; therefore, the small-loan companies are permitted to charge higher rates than are permitted under general usury statutes.⁴¹

Consumer finance companies usually make loans on an unsecured or signature basis, although they may take a mortgage on a house or automobile as security. The maximum amount of the loans permitted under state laws ranges from \$300 to \$500 but in some instances may go as high as \$5,000. The maximum monthly loan charge that consumer finance companies may make ranges from 2 to $3\frac{1}{2}$ per cent. In some states lower rates are applied to the upper balances of the loans.

Consumer finance companies are financed in a manner similar to sales finance companies. The loan companies use large amounts of short-term bank loans and some long-term bank loans. (See Table 13).

⁴¹Ralph A. Young and associates, Personal Finance Companies and Their Credit Practices (New York: National Bureau of Economic Research, 1940), pp. 25-26, 30-32.

TABLE 13.--Balance Sheet of Consumer Finance Companies

(Millions of Dollars and Per Cent of Total)

	1952		1953		1954		1955		Inc.
	Amount	Per Cent	Amount	Per Cent	Amount	Per Cent	Amount	Per Cent	(Dec.)
<u>Assets</u>									
Cash and Market Securities	\$ 190	9	\$ 200	8	\$ 220	8	\$ 220	7	\$ 30
Consumer Instalment Loans ^a	1,870	84	2,137	85	2,260	84	2,660	89	790
Less: Reserves for Unearned Income and Losses	90	4	107	4	90	4	130	4	40
Net Loss	1,780	80	2,030	81	2,170	80	2,530	85	750
Investments	180	8	210	8	210	8	120	4	(60)
Other Assets	70	3	70	3	100	4	120	4	50
Total Assets	<u>\$2,220</u>	<u>100</u>	<u>\$2,510</u>	<u>100</u>	<u>\$2,700</u>	<u>100</u>	<u>\$2,990</u>	<u>100</u>	<u>\$770</u>
<u>Liabilities</u>									
Short-term Bank Loans	\$ 580	26	\$ 620	25	\$ 630	23	\$ 750	25	\$170
Commercial Paper and Other									
Short-term Notes	240	11	260	10	260	10	310	10	70
Long-term Bank Debt	60	2	80	3	90	3	110	4	50
Other Long-term Debt	390	18	500	20	580	21	650	21	260
Subordinated Debentures	110	5	130	5	180	7	200	7	90
Other Liabilities	140	6	140	6	150	6	140	5	0
Total Liabilities	1,520	68	730	69	1,890	70	2,160	72	640
<u>Net Worth</u>									
Preferred Stock	180	8	180	7	140	5	150	5	(30)
Common Stock	170	8	200	8	210	8	210	7	40
Surplus	350	16	400	16	460	17	470	16	120
Total Net Worth	700	32	780	31	810	30	830	28	130
Total Liabilities and Net Worth	<u>\$2,220</u>	<u>100</u>	<u>\$2,510</u>	<u>100</u>	<u>\$2,700</u>	<u>100</u>	<u>\$2,990</u>	<u>100</u>	<u>\$770</u>

Source: See source Table 9.

a. Figures have been adjusted to reflect revised consumer instalment credit statistics.

These amounts correspond to the loans of commercial banks to personal finance companies (Table 9). Short-term bank loans comprise the largest single source of funds for consumer finance companies. In 1955 these loans were 25 per cent of total liabilities and net worth. Long-term debt was the next largest source of funds and accounted for 21 per cent. Consumer finance companies obtain small amounts of funds through commercial paper, long-term bank loans, and subordinated debentures. These funds were respectively 10 per cent, 4 per cent, and 7 per cent of the total.

Capital funds are obtained through the usual sources of preferred stock, common stock, and surplus. Surplus is large in relation to either preferred stock or common stock, and much of the growth in capital funds is due to retained earnings.

One noticeable difference between the financing of consumer finance companies and sales finance companies is the difference in the amount of capital funds that is used. Sales finance companies obtained about 16 per cent of their funds from preferred stock, common stock, and surplus, while consumer finance companies obtained slightly less than 30 per cent of their funds from the same sources.

Other Financial Institutions.--In the Federal Reserve statistical estimates of consumer instalment credit, other financial institutions include industrial loan companies, savings and loan associations, and mutual savings banks.

Industrial loan companies operate under state industrial loan laws. They make cash loans directly to individuals on a collateral

basis, co-maker signature basis, and unsecured signature basis. These institutions also finance the purchase of durable goods by consumers and may purchase instalment credit contracts from retail stores.

Savings and loan associations, sometimes called building and loan associations because of their large operations in mortgage financing of residential construction, extend some instalment credit to individuals. These institutions are cooperative organizations chartered either by the state or the federal government. Savings and loan associations, aside from their mortgage lending, extend credit to consumers in the form of insured or noninsured repair and modernization loans and personal loans secured by the savers' own accounts. Generally speaking, these associations obtain their funds through the establishment of savings accounts for individuals.

Mutual savings banks are cooperative organizations operated by trustees for the benefit of the savers. Most states regulate these institutions in the form of "legal" lists of investments. In general these institutions invest a large part of their funds in real estate, United States Government obligations, corporate mortgages, and state and municipal bonds. They hold small amounts of repair and modernization loans as well as personal loans. The funds for investment in the various assets are obtained through savings accounts of the various members.

Retail Outlets.--Retail outlets include a various assortment of sales stores such as department stores, mail-order houses, furniture stores, household appliance stores, automobile dealers, and

other retail dealers. These stores originate most of the instalment credit extended to individuals for the purchase of consumer durable goods. Prior to the Second World War these stores were the largest holders of instalment credit, but now most retail dealers do not hold their instalment paper but sell or transfer it to a bank, sales finance company, or other instalment credit lending institution. Since the Second World War, there has been a steady decline in the holdings of instalment credit by retail outlets. In 1958 these stores accounted for only 15 per cent or \$4,922 million of instalment credit. The decline in retail holdings of instalment credit can be attributed to the rise and growth of specialized lending institutions, inadequate personnel and organization, and the need for funds which are tied up in instalment credit.

Although statistical data are lacking on the financing of retail outlets, generally the need for funds arises out of the importance of their investment in inventories or stock of goods. Funds are also needed to carry customers' accounts and instalment sales. Most retail stores need relatively little fixed capital because they have little fixed investment. Most stores lease their real estate.

Retail stores use the same source of funds as do other business units. Short-term funds are acquired from commercial banks, commercial paper, trade creditors, advances on contracts, and various finance companies. Long-term funds are in the nature of stocks rather than bonds. The sale of bonds requires generally more fixed investment than retail stores have.

Summary

Consumer credit has had a long history in the United States and dates back to the early days of the Colonies. Although instalment credit was first used in the early nineteenth century, it did not achieve significance until the development of the automobile and other durable goods. The role of instalment credit in the economy is analyzed on the basis of the demand-supply relationship. On the demand side, instalment credit is derived from the desire to acquire various goods and services. It is used basically for automobiles, other consumer goods, home repairs and modernization, and personal loans. On the supply side it is analyzed on the basis of the institutions lending it. Instalment credit is obtained chiefly from two basic sources--savings and bank credit. Various types of specialized lending institutions have been developed to supply consumers with funds to finance their purchases. The lending institutions may be classified as financial institutions and retail outlets. The financial institutions include commercial banks, sales finance companies, consumer finance companies, credit unions, industrial loan companies, savings and loan associations, and mutual savings banks. The retail outlets include department stores, automobile dealers, mail-order houses, furniture stores, household appliance stores, and miscellaneous retail dealers.

CHAPTER IV

THE GROWTH AND IMPORTANCE OF INSTALMENT CREDIT

The growth of consumer instalment credit is examined in relation to various components of aggregate economic activity and the over-all debt structure. Through this examination it is hoped that some light will be cast on the position of consumer instalment credit and economic growth so that the long-run behavior of instalment credit will be made clearer.

Instalment Credit and the Economy

Instalment credit and the relative importance of various economic measures and their rate of change are shown in Chart 7. The gross national product, a measure of total business activity, represents the value of all goods and services produced in the United States. Disposable personal income is the income that individuals have available to spend after payment of taxes. This income may be either saved or spent. Total spending of individuals is represented by personal consumption expenditures and is composed of durable goods, nondurable goods, and service expenditures. Since instalment credit is used to purchase consumer durable goods more often than any other

CHART 7.--Economic Aggregates and Instalment Credit, 1929-1958

Source: Survey of Current Business, July, 1958, pp. 4-7; Feb., 1959, pp. 12-13; and Table 3.

types of items, consumer expenditures for durable goods will be important as one of the economic measures for instalment credit.

The growth of instalment credit outstanding has been accompanied by dynamic changes and rapid growth of the whole economy. Substantial changes have occurred at all levels of economic activity, from the types of goods produced and sold to the methods of purchasing. The long-run growth of instalment credit has been large in relation to the over-all economic growth. Instalment credit has increased faster than the purchases of durable goods, personal consumption expenditures, disposable income, and the gross national product. While instalment credit shared in the depression declines of the early 1930's, it recovered its 1929 level much faster than did any of the economic aggregates. The turning points of the 1937 recession are clearly shown in all of the economic measures.

The next major interruption of instalment credit after the depression and recession occurred during the Second World War. Government war regulations, which were reflected in curtailed production of consumer durable goods and instalment credit regulations, and the rapidly rising financial liquidity of consumers were the main causes of this decline. Although instalment credit and consumer durable goods declined, the gross national product, disposable income, and total consumer expenditures continued to rise during the war. After the war instalment credit grew rapidly and reached its prewar height in 1947. Durable goods expenditures recovered more quickly and reached its prewar height by 1946. The increased durable goods

expenditures no doubt reflect the financial liquidity of consumers. In the over-all period, from the war to the present, instalment credit has grown much faster than any of the measures of economic growth. A large portion of the growth of instalment credit outstanding is due to a switch from cash to credit purchases and to smaller down payments and longer maturities.

These various measures of economic growth are shown in Chart 7 not only to give an over-all picture of the economy but also to familiarize the reader with some of the aggregates used to measure growth. In order to provide a more accurate measure of instalment credit in relation to the economy, analysis of the aggregates, which are directly associated with this type of credit, will be made. Before proceeding upon an analysis of this type of credit in relation to selected economic aggregates, it is necessary to explain the various measurements of instalment credit and to point out certain statistical qualifications and limitations.

Measures of Instalment Credit.--Three principal types of instalment credit series might be used to indicate the direction and the relation of consumer instalment credit to general economic activity. First, there is the volume of new credit extensions during the period which may reflect the demand for credit and its subsequent use. The second measure of instalment credit is the amount outstanding or the actual debt for each period, and it may show the long-run effects and the growth of instalment credit as an established financial practice. Some of the long-run effects of instalment credit

were described previously, but a more accurate analysis will be made later. The third measure of the effects of instalment credit is the repayment of this credit. The effects of paying back credit are reflected in the amount of current income which is available. The repayments may not only affect income but may have repercussions on the income used for necessary consumption items, such as food. Each of these measures has certain intrinsic merits and limitations.

In order to understand the three series of instalment credit the following facts must be kept in mind. Current new credit extensions refer to transactions that have occurred during one particular interval of time while outstanding instalment credit refers to the situation at a particular point of time produced by the transactions that have occurred during the preceding intervals. Outstanding credit is the accumulated amount of previous credit extensions. New credit extensions and outstanding credit are affected not only by transactions but also by the terms of the transactions; i.e., the amount of down payments and the length of the maturities. As the amount of the down payment increases, the credit extension and the total amount of credit outstanding decrease. The longer the maturity, the longer the loans are on the books, and this is reflected in the amount outstanding. Repayment of credit is the amortization of credit for a particular period of time. The terms of the transaction also affect the repayment series; i.e., the larger the down payment, the less that has to be repaid, and the longer the maturity, the less that has to be repaid at any one time.

Instalment Credit Statistical Qualifications.--Inherent in the various series of instalment credit are certain qualifications which impose limitations on the use of this credit to measure its importance and relation to economic growth. First, instalment credit statistics exclude some consumer loans to farmers because these loans are not segregated according to individual and business purposes, and the only practical solution was to exclude them entirely from instalment credit statistics. Second, small amounts of credit used for business purposes are included in the statistics because it was not practical to allocate between individual and business purposes credit obtained for such things as automobiles, which may be used both for business and individual use. Third, policy loans of life insurance companies are excluded from the instalment credit series because presently available information did not provide a basis for exclusion of the large proportion of policy loans known to be for business purposes. Fourth, loans extended by one individual to another and loans by businesses to employees were also excluded from the instalment credit series. Fifth, instalment credit contracts include finance and insurance charges and other service charges; therefore, the amount of credit extensions, outstanding credit, and repayments are overstated. Sixth, instalment credit extensions and outstanding credit include refinancing and consolidations of existing loans and may overstate the new amounts loaned and also their relation to current purchases.

Finally, repayments are overstated because charge-offs of bad debts are included in the repayments.¹

Instalment Credit in Relation to Economic Aggregates

The measures which might possibly be used to analyze instalment credit in relation to associated economic aggregates are various. To begin with instalment credit is used most frequently in the purchase of durable goods, and therefore some picture of the changing importance of consumer durable goods is required. This changing importance may be analyzed by relating expenditures on consumer durable goods to disposable income of individuals in an attempt to determine what proportion of income after taxes has been spent by individuals on durable goods, and by relating consumer durable goods to total expenditures to determine what proportion the expenditures on durable goods is to total expenditures.

The next task is to relate instalment credit to consumer expenditures. Here instalment credit extended is related to durable goods expenditures because of the importance of credit in the purchase of these items. Credit extensions are used here in the belief that the volume of extensions is an important element in the level of expenditures on durable goods. Although instalment credit is used mainly to purchase durable goods, the credit extensions cannot

¹For a more comprehensive discussion of these qualifications see Federal Reserve Bulletin, April, 1953, pp. 336-354 and January, 1954, pp. 9-16.

be related to durable goods alone. There has been a widening use of instalment credit for nondurable goods, such as credit sales of soft goods by department stores, apparel stores, and mail-order houses as well as instalment credit for services, such as travel credit or tuition credit for higher education. Also, many personal loans are made in order to buy nondurables as well as to pay for services. To account for the credit being used for nondurables and services as well as durable goods, credit extensions are related to the total purchases by all individuals.

The third step in the analysis of the relation of instalment credit to the economy deals with total instalment credit outstanding. Here the total outstanding credit is related to disposable personal income to give a picture of the change in the relative importance of consumer debt as a claim on income and to indicate to some degree the smooth continued flow of the machinery for distributing credit and collecting payments.

The fourth step in the analysis of instalment credit is the relationship of instalment repayments to income. This gives a picture of the amounts of instalment debt that have to be repaid out of current income, and the extent to which the repayments may affect current consumption.

The measures described above constitute the basic ones employed in determining the growth and relation of instalment credit to the economy. Although other measures may be just as important and may be substituted for the ones used in this study, the actual

measures employed here are dictated by the desire to show in a variety of ways the relationship of instalment credit to economic activity.

Relationship of Durable Goods Expenditures
to Disposable Personal Income and to
Total Expenditures

In relation to income, it appears that individuals are spending slightly more income now on durable goods than they did in the 1930's (Table 14 and Chart 8). Although in 1929 individuals were spending 11.1 per cent of disposable personal income on durable goods, during the 1930's this spending averaged a little more than 9 per cent. From 1947 to the present there has been some fluctuation in this series with individuals spending as high as 14.6 per cent of their income on durables in 1950 and as low as 11.8 per cent in 1958. The high ratios in 1950 were affected by the outbreak of the Korean conflict, and the subsequent low ratios were affected by the existing stock of durable goods. Even in 1955, a year of unusual business activity, the ratio of 14.4 per cent did not exceed the 1950 high.

On the basis of data presented here, one could predict that income spent on durable goods will probably fluctuate between 11 per cent and 14 per cent in the next few years.

Further evidence of the importance of consumer durable goods is found in the relationship of the purchase of durable goods to total expenditures (Table 14 and Chart 9). Here evidence is found indicating that durable goods purchases are increasing as a

TABLE 14.--Relation of Consumer Durable Goods Expenditures to Disposable Personal Income and Total Consumption Expenditures, 1929-1958

End of Year	Consumer Durable Goods Expenditures (Billions)	Disposable Personal Income (Billions)	Personal Consumption Expenditures (Billions)	Consumer Durable Goods as Per Cent of	
				Disposable Personal Income	Personal Consumption Expenditures
1929	\$ 9.2	\$ 83.1	\$ 79.0	11.1	11.6
1930	7.2	74.4	71.0	9.7	10.1
1931	5.5	63.8	61.3	8.6	9.0
1932	3.6	48.7	49.3	7.4	7.3
1933	3.5	45.7	46.4	7.7	7.5
1934	4.2	52.0	51.9	8.1	8.1
1935	5.1	58.3	56.3	8.7	9.1
1936	6.3	66.2	62.6	9.5	10.1
1937	6.9	71.0	67.3	9.7	10.3
1938	5.7	65.7	64.6	8.7	8.8
1939	6.7	70.4	67.6	9.5	9.9
1940	7.8	76.1	71.9	10.2	10.8
1941	9.7	93.0	81.9	10.4	11.8
1942	7.0	117.5	89.7	6.0	7.8
1943	6.6	133.5	100.5	4.9	6.6
1944	6.8	146.8	109.8	4.6	6.2
1945	8.1	150.4	121.7	5.4	6.7
1946	15.9	160.6	147.1	9.9	10.8
1947	20.6	170.1	165.4	12.1	12.5
1948	22.2	189.3	178.3	11.7	12.5
1949	24.6	189.7	181.2	13.0	13.6
1950	30.4	207.7	195.0	14.6	15.6
1951	29.5	227.5	209.8	13.0	14.1
1952	29.1	238.7	219.8	12.2	13.2
1953	32.9	252.5	232.6	13.0	14.1
1954	32.4	256.9	238.0	12.6	13.6
1955	39.6	274.4	256.9	14.4	15.4
1956	38.4	290.5	269.4	13.2	14.3
1957	39.9	305.1	284.4	13.1	14.0
1958	36.8	311.6	290.6	11.8	12.7

Source: Survey of Current Business, July, 1956, pp. 10-13; July, 1958, pp. 4-7; Feb., 1959, pp. 12-13.

CHART 8.--Consumer Durable Goods Expenditures as Per Cent of Disposable Personal Income, 1929-1958

Source: See Table 14.

**CHART 9.--Consumer Durable Goods Expenditures as Per Cent of
Personal Consumption Expenditures, 1929-1958**

Source: See Table 14.

percentage of the total expenditures. Durable goods expenditures prior to the Second World War accounted for an average of about 10 per cent of total expenditures. Following the Second World War, purchases of durable goods in relation to total expenditures have averaged better than 12 per cent and on occasion have gone as high as 15.6 per cent. There is also evidence that the more prosperous years account for a large number of expenditures for durable goods. From 1955 until the present, the ratio has declined steadily.

In the long run, increases in the purchases of durable goods have resulted in shifts in spending habits. Expenditures, which were made previously on nondurable goods and services, are now being made on durable goods. This, of course, is most logical since many durable goods provide the same type of satisfaction that nondurable goods and services offer. The replacement of business facilities with consumer durable goods, as well as replacement of service charges for instalment payments, were discussed previously.

Instalment Credit Extensions, Durable Goods Expenditures, and Total Consumer Expenditures

Now that we have seen the relationship between durable goods, income, and expenditures, the trends in instalment credit will be analyzed. Here instalment credit extensions are related to durable goods, the items which are most frequently purchased by means of credit (Table 15 and Chart 10). There is a strong upward movement as the ratio moved from approximately 63 per cent in 1929 to 105.1 per

TABLE 15.--Instalment Credit Extensions in Relation to Consumer Durable Goods Expenditures and Total Consumer Expenditures, 1929-1958

End of Year	Instalment Credit Extensions (Billions)	Consumer Durable Goods Expenditures (Billions)	Total Consumer Expenditures (Billions)	Instalment Credit Extensions as Per Cent of	
				Consumer Durable Goods Expenditures	Total Consumer Expenditures
1929	\$ 5.8	\$ 9.2	\$ 79.0	63.0	7.3
1930	4.8	7.2	71.0	66.7	6.8
1931	3.9	5.5	61.3	70.9	6.4
1932	2.4	3.6	49.3	66.7	4.9
1933	2.5	3.5	46.4	71.4	5.4
1934	3.1	4.2	51.9	73.8	6.0
1935	4.2	5.1	56.3	82.4	7.5
1936	5.6	6.3	62.6	88.9	8.9
1937	6.3	6.9	67.3	91.3	9.4
1938	5.4	5.7	64.6	94.7	8.4
1939	6.9	6.7	67.6	103.0	10.2
1940	8.2	7.8	71.9	105.1	11.4
1941	9.4	9.7	81.9	97.0	11.5
1942	5.2	7.0	89.7	74.3	5.8
1943	4.6	6.6	100.5	69.7	4.6
1944	4.9	6.8	109.8	72.1	4.5
1945	5.4	8.1	121.7	66.7	4.4
1946	8.5	15.9	147.1	53.5	5.8
1947	12.7	20.6	165.4	61.7	7.7
1948	15.6	22.2	178.3	70.3	8.7
1949	18.1	24.6	181.2	73.6	10.0
1950	21.6	30.4	195.0	71.1	11.1
1951	23.6	29.5	209.8	80.0	11.2
1952	29.5	29.1	219.8	101.4	13.4
1953	31.6	32.9	232.6	96.0	13.6
1954	31.1	32.4	238.0	96.0	13.1
1955	39.0	39.6	256.9	98.5	15.2
1956	40.1	38.4	269.4	104.4	14.9
1957	42.4	39.9	284.4	106.3	14.9
1958	40.5	36.8	290.6	110.1	13.9

Source: See Table 14; Federal Reserve Bulletin, Jan., 1954, p. 11; June, 1955, p. 634; April, 1957, p. 454; April, 1959, p. 424.

**CHART 10.--Instalment Credit Extended as Per Cent of Consumer
Durable Goods Expenditures, 1929-1958**

Source: See Table 15.

cent in 1940, and in the 1950's the ratio goes over its prewar high. Complete reliance cannot be placed upon this ratio because of the incomparability in the data which account for the ratio going over 100 per cent. Instalment credit statistics include the full amount of loans to purchase used automobiles, whereas only the dealer's gross margin is shown as consumer expenditures for used cars.² Also, a certain amount of instalment credit is used to buy items other than durable goods and to refund existing debts. The important point is the fact that there is a clear upward trend in the use of instalment credit for durable goods. Whether all instalment credit actually influences purchases of durable goods is open to question. This influence will be discussed in a subsequent chapter. The increase of instalment credit in relation to durable goods does indicate that the method of purchase has shifted from cash to credit and that lower down payments and longer maturities are being used.

The relationship of instalment credit extensions to total personal consumption expenditures on goods and services takes care of the incomparability of instalment credit being extended for purposes other than durable goods. Table 15 and Chart 11 show the relation of extensions to total expenditures. The trend in this series of ratios is much more definite and no doubt reflects the use of instalment credit in financing the purchase of nondurable

²U. S., Department of Commerce, Office of Business Economics, National Income, 1954 Edition: A Supplement to the Survey of Current Business (Washington, D. C.: Government Printing Office, 1954), pp. 103-117, especially p. 116.

CHART 11.--Instalment Credit Extended as Per Cent of
Consumer Expenditures, 1929-1958

Source: See Table 15.

goods and services. The ratio rose from 7.3 per cent in 1929 to 11.5 per cent immediately preceding the Second World War. Upon cessation of the war in 1945, the ratio again continued to rise until 1953. The reason that the rise in the ratio slowed up during the Korean conflict period is that it undoubtedly reflected the cut-back in durable goods production during that time. The importance of the use of instalment credit for durables, as well as for non-durable goods and services, can be seen by the increasing trend of credit for total consumer expenditures and the fact that the 1955 ratio is double the 1929 ratio. Since 1955 the ratio has declined.

Instalment Credit Outstanding and Disposable Income

This ratio of instalment credit outstanding as a percentage of disposable income reflects the growth of instalment debt and the claim that debt has on current income. It must be remembered that instalment credit outstanding refers to the situation at a particular point of time produced by the transactions that have occurred during the preceding intervals. Thus, instalment credit outstanding is cumulative.

In 1929 instalment credit outstanding was 3.9 per cent of disposable income (Table 16 and Chart 12). It dropped to 3.1 per cent in 1932 and continued to rise to 7.2 per cent in 1940. Of course, during the war period government restrictions and high incomes reduced the outstanding amount of instalment credit to

TABLE 16.--Instalment Credit Outstanding and Disposable
Personal Income, 1929-1958

End of Year	Instalment Credit Outstanding (Billions)	Disposable Personal Income (Billions)	Instalment Credit Outstanding as Per Cent of Disposable Personal Income
1929	\$ 3.2	\$ 83.1	3.9
1930	2.7	74.4	3.6
1931	2.2	63.8	3.4
1932	1.5	48.7	3.1
1933	1.6	45.7	3.5
1934	1.9	52.0	3.7
1935	2.7	58.3	4.6
1936	3.6	66.2	5.4
1937	4.0	71.0	5.6
1938	3.7	65.7	5.6
1939	4.5	70.4	6.4
1940	5.5	76.1	7.2
1941	6.1	93.0	6.6
1942	3.2	117.5	2.7
1943	2.1	133.5	1.6
1944	2.2	146.8	1.5
1945	2.5	150.4	1.7
1946	4.2	160.6	2.6
1947	6.7	170.1	3.9
1948	9.0	189.3	4.8
1949	11.6	189.7	6.1
1950	14.7	207.7	7.1
1951	15.3	227.5	6.7
1952	19.4	238.7	8.1
1953	23.0	252.5	9.1
1954	23.6	256.9	9.2
1955	29.0	274.4	10.6
1956	31.8	290.5	10.9
1957	34.1	305.1	11.2
1958	33.9	311.6	10.9

Source: See Table 3 and Table 14.

**CHART 12.--Instalment Credit Outstanding as Per Cent of
Disposable Personal Income, 1929-1958**

Source: See Table 16.

1.5 per cent in 1944. Immediately upon cessation of the war the ratios began to rise and except for small fluctuations reached a high of 11.2 per cent in 1957. In 1951 and 1958 the ratio dropped when incomes were rising. In the past few years, instalment credit outstanding in relation to income has been fairly steady, averaging about 11 per cent. With the growth of instalment credit there is of course a much more noticeable claim on income now than in the past. In 1929 instalment credit outstanding was 3.8 per cent of income, while currently the ratio is 10.9 per cent.

Instalment Credit Repayments and Income

The final step in the analysis of instalment credit in relation to economic aggregates is the repayment of instalment debt out of income. Table 17 and Chart 13 show the amount of instalment credit repaid as a percentage of disposable income. The data presented here indicate the actual amount of income which is used to repay instalment debt. The rise in the ratio when incomes were declining was attributed to the fact that the amount of credit repaid in 1930 was larger in relation to income than in 1929. Of course, it should be remembered that instalment credit is short term and can be liquidated completely in a short time. As income continued to decline in the depression, repayments were more than the credit extensions. With the upturn in income and credit extensions in 1934, repayments began to increase and reached a high of 9.6 per cent in 1941. As income increased and as outstanding credit dropped during the war

TABLE 17.--Instalment Credit Repaid and Disposable Personal Income, 1929-1958

End of Year	Instalment Credit Repaid (Billions)	Disposable Personal Income (Billions)	Instalment Credit Repaid as Per Cent of Disposable Personal Income
1929	\$ 5.4	\$ 83.1	6.5
1930	5.3	74.4	7.1
1931	4.3	63.8	6.7
1932	3.1	48.7	6.4
1933	2.4	45.7	5.3
1934	2.8	52.0	5.4
1935	3.4	58.3	5.8
1936	4.7	66.2	7.1
1937	5.9	71.0	8.3
1938	5.7	65.7	8.7
1939	6.1	70.4	8.7
1940	7.2	76.1	9.5
1941	8.9	93.0	9.6
1942	8.2	117.5	7.0
1943	5.6	133.5	4.2
1944	4.9	146.8	3.3
1945	5.1	150.4	3.4
1946	6.8	160.6	4.2
1947	10.2	170.1	6.0
1948	13.3	189.3	7.0
1949	15.6	189.7	8.2
1950	18.7	207.7	9.0
1951	23.0	227.5	10.1
1952	25.4	238.7	10.6
1953	28.0	252.5	11.1
1954	30.5	256.9	11.9
1955	33.6	274.4	12.2
1956	37.2	290.5	12.8
1957	40.2	305.5	13.2
1958	40.7	311.6	13.1

Source: See source Table 3 and Table 14.

**CHART 13.--Instalment Credit Repaid as Per Cent of Disposable
Personal Income, 1929-1958**

Source: See Table 17.

due to restrictions on production and credit, it was natural that the ratio should drop rather fast. By 1944 the ratio had dropped to 3.3 per cent, far below the depression low of 5.3 per cent reached in 1933. Since 1945 the ratio has increased steadily and in 1957 reached a high of 13.2 per cent.

Credit Purchases of Automobiles and Other Durable Goods

Table 18 shows the percentage of automobiles and other durable goods purchased by means of instalment credit. These data are from the results of the "Survey of Consumer Finances" conducted by the Board of Governors of the Federal Reserve System in cooperation with the Survey Research Center of the University of Michigan. The survey is based on interviews conducted in the 12 largest metropolitan areas and 54 additional sampling areas in order to represent a cross section of the population living in private households in the United States.³ Upon examination of the data from 1947 to 1957 one finds a definite change in the method of financing automobiles. In 1947, 29 per cent of the new automobiles bought were purchased by means of instalment credit, indicating individuals were using liquid assets accumulated from war earnings, while in 1957, 65 per cent of the automobiles purchased were acquired through instalment credit. Since 1952 there appears to be a leveling off in the percentage of

³For a more detailed description of the survey methods, see Federal Reserve Bulletin, July, 1950, pp. 795-809.

TABLE 18.--Credit Purchasers of Automobiles and Other Durable Goods
(Per Cent of Purchasers Using Credit)

Item	1957	1956	1955	1954	1953	1952	1951	1950	1949	1948	1947
Automobiles - New	65	63	60	61	59	57	47	46	43	33	29
Used	58	60	60	61	61	65	60	57	52	42	37
Furniture and Major Household Appliances ^a	54	48	52	54	56	--	52	49	54	--	--
Furniture	--	46	45	50	50	--	51	47	49	--	--
Television	--	49	56	57	55	--	48	44	47	--	--
Refrigerator	--	40	51	58	63	--	43	54	58	44	35
Washing Machine	--	46	55	55	58	--	45	42	57	--	--
Radio	--	--	--	--	--	--	45	32	42	42	34

Source: Federal Reserve Bulletin, July, 1951, p. 764; Aug., 1952, pp. 864 and 870; June, 1954, pp. 571 and 573; May, 1955, pp. 469 and 477; Aug., 1956, p. 819; June, 1957, p. 643; July, 1958, p. 770.

a. Includes items listed and other major appliances. Purchasers of two similar items, one for credit and one for cash, were classified as credit purchasers. Charge account purchasers are excluded.

purchasers using credit for automobiles; the average for this period is 61 per cent. Credit purchases of furniture and major household appliances have not changed in the same manner as credit purchases of automobiles. Since 1953 there has been a steady decline in the percentage of purchasers using instalment credit for furniture and major household appliances. From 1949 to 1957 the series has averaged 52 per cent.

The data on the credit purchases of automobiles and other durable goods have been presented to show the changing importance in the use of instalment credit as opposed to cash as a method of purchasing. The shift in the method of acquiring these goods, which is very noticeable in automobiles, has accounted for much of the increase in total instalment credit.

Instalment Credit in Relation to the Over-all Debt Structure

If one relates consumer instalment credit to the various components of the debt structure, further evidence of the growth and importance of consumer instalment credit emerges. Table 19 shows the amounts and relative importance of the components of the debt structure. The net public debt includes federal, state, and local obligations. The private debt sector includes corporation and non-corporation debt. Noncorporation debt includes individual mortgages, individual single-payment loans, and instalment credit.

TABLE 19.--Net Public and Private Debt and Consumer Instalment Credit, 1929-1958

End of Year	Net Public Debt		Net Private Debt				Total Net Public and Private Debt Amount (Billions)	Consumer Instalment Credit			
	Amount (Billions)	Per Cent of Public and Private Debt	Total		Corporate Debt Amount (Billions)	Non- corporate Debt Amount (Billions)		Total Amount (Billions)	Per Cent of Non- corporate Debt	Per Cent of Private Debt	Per Cent of Public and Private Debt
			Amount (Billions)	Per Cent of Public and Private Debt							
1929	\$ 29.7	15.6	\$161.2	84.4	\$ 88.9	\$ 72.3	\$190.9	\$ 3.2	4.4	2.0	1.7
1930	30.6	16.0	160.4	84.0	89.3	71.1	191.0	2.7	3.8	1.7	1.4
1931	34.0	18.7	147.9	81.3	83.5	64.4	181.9	2.2	3.4	1.5	1.2
1932	37.9	21.7	136.7	78.3	80.0	56.7	174.6	1.5	2.6	1.1	.9
1933	41.0	24.3	127.5	75.7	76.9	50.6	168.5	1.6	3.2	1.3	.9
1934	46.3	27.0	125.1	73.0	75.5	49.6	171.4	1.9	3.8	1.5	1.1
1935	50.5	28.9	124.2	71.1	74.8	49.4	174.7	2.7	5.5	2.2	1.5
1936	53.9	29.9	126.4	70.1	76.1	50.3	180.3	3.6	7.2	2.8	2.0
1937	55.3	30.4	126.7	69.6	75.8	50.9	182.0	4.0	7.9	3.2	2.2
1938	56.5	31.5	123.1	68.5	73.3	49.8	179.6	3.7	7.4	3.0	2.1
1939	58.9	32.2	124.3	67.8	73.5	50.8	183.2	4.5	8.9	3.6	2.5
1940	61.3	32.3	128.6	67.7	75.6	53.0	189.9	5.5	10.4	4.3	2.9
1941	72.6	34.3	139.0	65.7	83.4	55.6	211.6	6.1	11.0	4.4	2.9
1942	117.5	45.4	141.5	54.6	91.6	49.9	259.0	3.2	6.4	2.3	1.2
1943	169.3	54.0	144.3	46.0	95.5	48.8	313.6	2.1	4.3	1.5	.7
1944	226.0	60.9	144.8	39.1	94.1	50.7	370.8	2.2	4.3	1.5	.6
1945	266.4	65.6	139.9	34.4	85.3	54.6	406.3	2.5	4.6	1.8	.6
1946	243.3	61.2	154.1	38.8	93.5	60.6	397.4	4.2	6.9	2.7	1.1
1947	237.7	56.9	179.7	43.1	108.9	70.8	417.4	6.7	9.5	3.7	1.6
1948	232.7	53.7	200.9	46.3	117.8	83.1	433.6	9.0	10.8	4.5	2.1
1949	236.7	52.8	211.7	47.2	118.0	93.7	448.4	11.6	12.4	5.5	2.6
1950	239.4	48.8	250.9	51.2	142.1	108.8	490.3	14.7	13.5	5.9	3.0
1951	241.8	46.1	282.2	53.9	162.5	119.7	524.0	15.3	12.8	5.4	2.9
1952	248.7	44.8	306.5	55.2	171.0	135.5	555.2	19.4	14.3	6.3	3.5
1953	256.7	43.8	329.7	56.2	179.5	150.2	586.4	23.0	15.3	7.0	3.9
1954	263.6	43.1	348.2	56.9	182.8	165.4	611.8	23.6	14.3	6.8	3.9
1955	269.9	40.2	402.3	59.8	212.1	190.2	672.2	29.0	15.2	7.2	4.3
1956	268.1	38.3	439.1	61.7	231.7	207.3	707.2	31.8	15.3	7.2	4.5
1957	271.1	37.4	464.9	62.6	243.9	221.0	736.0	34.1	15.4	7.3	4.6
1958	283.5	36.8	486.6	63.2	246.9	239.7	770.2	33.9	14.1	7.0	4.4

Per Cent of
Increase 854.5
1929-1958

201.9

177.7

231.5

303.5

959.4

Chart 14 shows the various components of the debt structure and their rate of change. It demonstrates the changing need for funds due to cyclical and random forces. The most volatile of the group is the public debt and instalment credit. From 1929 until 1945 there has been a steady increase in the public debt. The increase is accounted for largely by the war financing which took on immense proportions starting in 1941. Immediately following the Second World War federal financing slowed up, but shortly thereafter international tensions developed which brought the federal debt much higher. The Korean conflict gave additional impetus to the total public debt.

Corporate debt has fluctuated to meet the demand of individuals and has been influenced by various factors. From 1929 until 1940 corporate debt declined; it rose to meet the war demand, dipped shortly after the war because of reconversion, and then proceeded upward.

Noncorporate debt suffered the greatest decline from the depression and did not reach its 1929 high until 1948. From the war period there has been a continued upward surge of this debt. Instalment credit appears to have had little influence on the noncorporate debt sector especially during the period 1932 until 1941. Since 1945 instalment credit has influenced the noncorporate debt sector more, because it is now a larger proportion than previously.

Definite increases of instalment credit can be seen if one measures this credit against total public and private debt, total

CHART 14.--Total Debt and Consumer Instalment Debt, 1929-1958

Source: See Table 19.

private debt, and noncorporate debt. Consumer instalment debt has risen from 1.7 per cent of net public and private debt in 1929 to 4.4 per cent in 1958. The increase of instalment credit is also reflected in the private debt component, as instalment credit increased from 2.0 per cent of the total in 1929 to 7.0 per cent in 1958 and in the noncorporate component of private debt, as instalment credit increased from 4.4 per cent in 1929 to 14.1 per cent in 1958.

Upon examination of the absolute amount of increase, net public debt has increased from \$29.7 billion to \$283.5 billion in 1958, an increase of 854.5 per cent. Instalment credit increased from \$3.2 billion in 1929 to \$33.9 billion in 1958, an increase of 959.4 per cent. Both public debt and consumer instalment debt increased faster than the total private and public debt, which increased 303.5 per cent.

The distribution of the various components of the debt structure is shown in Chart 15. This chart shows the relative importance of each component and the changes that they have gone through since 1929. Of course the public sector has shown violent movement and represents a considerable portion of the total debt. Corporate debt and some sectors in the noncorporate series have suffered relative declines. Instalment credit, which is part of the noncorporate series, has shown increases although its importance as to total debt in 1958 amounted to only 4.4 per cent.

CHART 15.--Type of Debt as Per Cent of Total Debt for Selected Years

Source: See Table 19.

Summary

The data presented here show a greatly increased role of consumer durables in the economy. Accompanying the increase in durable goods has been a more than proportionate rise in instalment credit. Undoubtedly, the upsurge in the use of instalment credit cannot be related to durable goods alone, especially with the expanding use of instalment credit for nondurable goods and some expensive services. Although instalment credit is used for a variety of purposes, its rate of growth for durable goods is much greater than that for total expenditures. Much of the increase in instalment credit may be attributed to the reduction in down payments, longer maturities, and shifts from cash to credit purchases.

Of course, the increased use of instalment credit means more income is needed now than in the past to repay this credit. Even though the repayment ratio has been growing, it does not appear to have too much effect on income and consumption since it is still relatively low. Instalment credit has been increasing with regard to the total private and public debt, but it is not as significant as other sectors in the total debt structure.

CHAPTER V

ANALYSIS OF INSTALMENT CREDIT AS AN INFLATIONARY FORCE

It is now possible to incorporate the accepted principles enumerated in the previous two chapters into a discussion of the economic effects of instalment credit on inflation. The concepts set forth earlier were intended to furnish a theoretical framework for an examination into the dynamic movements of the economy. Although economic analysis seeks to explain the general operation of the economy, a major task in the analysis of the economic system is the explanation of the factors that determine changes in the level of real income, employment, and output. From such an analysis the phenomena of changes in the general level of prices may be easily incorporated into the theoretical structure.

Consumer instalment credit has attained high proportions in the past few years, and orthodox monetary theory has held that the expansion of this credit has been a cause of inflation. Since rising prices mean diminishing purchasing power, the inflationary threat to man's well-being has appeared to be monetary, and one form of this threat, although a minor one, has been consumer instalment credit. The assumed inflationary effects of consumer instalment credit were further augmented by the fact that the national economy has been

going through a period of more or less continuously rising prices since 1940.

Fluctuations in consumer instalment credit are produced by various social and economic forces and, of course, are interrelated as far as cause and effect are concerned. The exact importance of these forces as causal factors in economic activity is extremely difficult to determine by empirical study. In like manner, the extensive fluctuations in employment, income, and production usually accepted as characteristic of business cycles are caused by many forces, and it is possible to examine the effects of fluctuations in consumer instalment credit on inflation only through theoretical analysis. The present chapter is devoted to a discussion of the possible influence that the availability and use of instalment credit may have on prices.

Forces Which Cause Inflation

A brief review of the forces which affect the circulation of income and cause a change in the general level of prices will furnish a better understanding of the principles involved. The circular flow of income may be described as an endless stream of funds moving from the producers of goods and services to the owners of the factors of production in the form of payments for salaries, wages, rents,

interest, and dividends and back to the producers in the form of receipts from the sale of products and services.¹

Expenditures.--The flow of income rarely remains at the same volume but will vary according to changes in spending for either consumption goods and services or investment goods. Although spending for consumption is a larger proportion of the total than investment, consumption is a passive factor in determining aggregate income and in stimulating changes in it. Expenditures for consumption change according to the shifts in income. Changes in income are accounted for to a large extent through changes in investment. Investment is an aggressive and dynamic determinant of income. This process of investment, resulting in the formation of real capital goods, expands the income stream because the flow of funds to the factors of production is greater. Saving from income reduces the stream, and this reduces the flow of funds to the factors of production.²

Savings and investment are the result of opposing forces. They may act independently; savings may grow faster than investment, or investment may outrun savings. Changes in income and prices are brought about when investment expenditures increase faster than savings because the factors of production have received more income.³ As long as there are idle productive factors in the form of natural

¹For a complete discussion see Chapter II, p. 37, of this study.

²Mandell M. Bober, Intermediate Price and Income Theory (New York: W. W. Norton and Company, Inc., 1955), pp. 458-481. Also see Chapter II, pp. 56-61, of this study.

³Ibid., pp. 475-481. Also see Chapter II of this study, p. 61.

resources, labor, and capital, an increase in investment expenditures will produce an expansion in income as well as an expansion in physical output. Once the factors of production are fully utilized, the growth in investment expenditures cannot change output, but the money income of the factors becomes larger. The bidding for resources by the producers of goods and services will drive up the prices of the individual factors of production. As the money income of each factor becomes greater, the price level will advance since the income must equal the output times price. If the output is fixed (and it will be relatively fixed at full employment), the price level must rise. Even prior to the attainment of full employment, bottlenecks will develop in some strategically important industries and will cause prices to rise. This condition is due to the relative immobility and inflexibility of the factors of production. It is most important to understand that inflation is caused primarily by an excess of investment expenditures at full or close-to-full employment.⁴

Even though investment expenditures are to a large extent responsible for changes in income and prices, wage increases brought about by growing union strength will push prices upward since wages are both a cost and an income item. As full employment is approached, high wages initiated by labor union pressure may become highly inflationary if the wages are in excess of productivity gains.⁵

⁴See Chapter II, p. 66, of this study for a complete discussion.

⁵Alvin H. Hansen, A Guide to Keynes (New York: McGraw-Hill Book Company, Inc., 1953), pp. 173-204. Also see Chapter II, p. 64, of this study.

The general level of prices may be held steady or even decline through greater efficiency in the production of total output. Increased unit output is brought about through mass-production techniques, technological developments, research aimed at developing and improving products, and the continuous process of cost-reducing improvements in the methods of production. An expansion in the number of units produced or a reduction in the cost of producing the existing number of units tends to reduce the price level.

Inflationary Factors Associated with Expenditures.--There are three factors which may be associated with the inflationary effects of investment expenditures. First, investment outruns savings; or, to phrase it another way, investment in the current period is greater than in the previous period; second, the new investment is financed in a manner that does not withdraw funds from other areas; and, third, the new investment results in some form of monetary expansion.⁶

Inflationary expenditures may occur in any one of several economic sectors. Capital outlays by businessmen and government spending may be financed by several methods; but, if the expenditures

⁶It will be noted that the last two conditions mentioned concerning the inflationary effects of total investment will be met as long as the first condition occurs. If investment outruns savings or is greater in the current period than in a preceding period, funds may be withdrawn from other areas; but total funds used will increase because the investment outlays must be financed by some form of monetary expansion. Actually these relationships are unnecessary when dealing with the effects of aggregate savings and investment on income and prices; but it is necessary to set up these conditions when an attempt is made to examine the contribution of a single phenomenon or of a specific segment of the economy to the expansion of incomes or inflationary forces.

are greater than savings and do not withdraw funds from other areas, then money expansion takes place, and inflation develops.

Consumer outlay for durable goods may appear similar to business spending for capital goods. Today's modern home appears similar to a small mechanized factory since it has machines to help do the family laundry, sewing, cleaning, dishwashing and to provide entertainment. Thus consumer investment may develop through accumulation of capital in the form of durable household goods. Expenditures for consumer durables will have a stimulating effect on the economy if the above-mentioned factors occur; that is, if investment exceeds savings, financing does not withdraw funds from other areas, and the expenditure produces an increase in the money supply, its velocity, or both. If consumers limit their expenditures to their incomes and treat their purchases of household durable goods as current outlays, the increase in consumer investment has little stimulating effect on economic activity. When a net increase in consumer investment is financed by instalment credit, which in turn results in a form of monetary expansion, it may be assumed that consumer investment has a stimulating effect upon economic activity. If there are idle plants, labor, and other unemployed factors of production, the effects of an expansion of consumer investment will increase income; and, if there is full or near-full employment, prices will rise.

Modern analysis holds that money and credit are passive factors in economic activity, i.e., they increase and decrease,

depending upon the requirements of the business world, consumers, and the government.

An increase in the flow of total expenditures on final goods and services (which becomes income to the factors) will indeed necessitate an increase either in M [money] or V [velocity] or both; so also if a man grows corpulent he will be compelled to wear a larger belt. But according to the quantity theory, if you first 'let out your belt' you will in consequence of this action necessarily grow fat!

Let us assume that businessmen decide to expand operations and so to make outlays on additional fixed and working capital. Partly they may invest their own funds, partly they may borrow from the capital market, and partly they may borrow from banks. Thus the quantity of money may be increased because they see opportunities for profitable investment. The increase in the money supply is a consequence of investment activity. The same analysis applies to an expansion of consumer credit. In these cases it is the decision to spend . . . that causes the money supply to grow.

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The banking system . . . is regarded as playing a passive role, increasing and decreasing the money supply in accordance with the requirements of private outlays and governmental expenditures.⁷

Viewed in this manner, increased instalment credit is shown to be the result of an expansion of consumer durable goods. In the following sections it will be argued that, first, instalment credit cannot be assumed to be stimulating and does not generate demand in and of itself, even though investment expenditures in the form of consumer durable goods are increased; second, that the use of

⁷By permission from Alvin H. Hansen, Monetary Theory and Fiscal Policy (New York: McGraw-Hill Book Company, 1949), pp. 85-86.

instalment credit is not an independent variable but is dependent on various psychological as well as economic factors; and, finally, that credit fluctuations are not significant as a measure of inflationary force in the economy.

Reconsideration of the Traditional Analysis of Instalment Credit

A discussion of the traditional analysis of the effects of instalment credit upon aggregate demand will point to some invalid assumptions and thus to the doubtful acceptability of the hypothesis that instalment credit and prices should be linked together.

Alleged Facts.--The relationship of consumer instalment credit to economic activity has been analyzed primarily in the specialized literature concerned with this particular form of credit, and it is usually concluded that instalment credit stimulates economic activity. The writers who have developed these theories contend that under conditions of less-than-full employment instalment credit increases production and income, while under full employment the effect of this type of credit exhausts itself in higher prices, leaving the real national income unchanged. One proponent of this belief has concluded:

. . . that so long as there remain unused and useful productive resources, properly distributed qualitatively and geographically, expansion of consumer credit will tend to induce a multiple expansion of incomes and production, while contraction of consumer credit will tend to induce a multiple contraction of income and production. When a condition of full employment is reached, however, accelerated expansion

of consumer credit will be reflected in an increase in prices and in a shift of production from producers' to consumers' goods.⁸

Another advocate has noted:

. . . so long as the supply of loanable funds is elastic, instalment credit has little or no direct effect on producer spending. And since consumer spending is probably increased by new credits and decreased by repayments, the effect of instalment credit on aggregate demand is stimulating when new credits outweigh repayments, depressing when repayments outweigh new credits.⁹

Still another analyst who arrived at basically the same conclusions as quoted above has said:

. . . given an elastic credit supply, aggregate demand is increased when new consumer credits outweigh repayments. The result may, as under full employment conditions, be merely to raise prices. A second possibility, given unused resources of the right type and conveniently available, is increased production, alone or in combination with a price rise.¹⁰

These writers hold that, when the credit supply is elastic, new credits add to consumer demand and that, when there are unused resources, greater production is encouraged. Under conditions of full employment the stimulating effect of an increase in instalment credit will raise prices. The point in question here is the

⁸Rolf Nugent, Consumer Credit and Economic Stability (New York: Russell Sage Foundation, 1939), p. 189.

⁹Gottfried Haberler, Consumer Instalment Credit and Economic Fluctuations (New York: National Bureau of Economic Research, 1942), pp. 46-47.

¹⁰Wallace P. Mors, "Consumer-Credit Theories: A Historical and Critical Analysis," The Journal of Business (Chicago: University of Chicago Press, 1944), Vol. XVII, No. 2, Part 2, pp. 58-59.

assumption made by all these writers that credit, in this case consumer instalment credit, is not merely a "vehicle of demand" but "inherently generates demand."¹¹

The concept that credit generates demand is a restatement of the purchasing power theory. The theory holds that any increase in the means of payment would automatically be spent. Thus the expansion of credit is, ipso facto, under full or near-full employment conditions, a cause of rising prices. But modern economic analysts dismiss the purchasing power theory, holding that demand may not always be sufficient to keep the economy running at a reasonably high level.¹² The solution was stated in terms of total expenditures and its determinants. Production is carried on for sales proceeds, but sales are made up of actual expenditures. Demand may not always be sufficient to take a given supply of commodities off the market for two reasons: (1) although income is the basic determinant of consumer demand,¹³ all of the income is not consumed because part of it is saved; (2) capital formation is determined by the marginal efficiency of capital and the rate of interest, as well as the size of total income and aggregate assets.¹⁴

¹¹Karl H. Niebyl, "Theories of Consumer Credit: A Reconsideration," Social Science, Vol. XXIX (Oct., 1954), pp. 218-230.

¹²Ibid. See also Thomas W. Rogers, "Consumer Credit No Inflation Cause," The Commercial and Financial Chronicle, Vol. CLXXV, No. 5104, (April 3, 1952), p. 1392. See also Hansen, A Guide to Keynes, pp. 25-35.

¹³Demand for consumer goods may also be a function of existing assets and the rate of interest. See Hansen, Monetary Theory and Fiscal Policy, pp. 60-61.

¹⁴Ibid., pp. 55-61.

Investment plus consumer demand may not always match the monetary value of the total output. Even though the economic system has sufficient funds available for use, demand for consumer goods as well as for investment goods may be small during depressed economic conditions. But, if the future looks favorable, even though existing funds are inadequate, demand can be financed in an economy which has an elastic monetary system.

Furthermore, the purchasing power concept may be questioned on the grounds that this theory does not offer an adequate explanation of the necessary conditions of production. Production is generally understood to mean any activity which adds utility to an object intended for exchange. Production involves the combining of various factors, such as natural resources, labor, capital, and entrepreneurship. An adequate supply of money and credit may be necessary, but it is not a sufficient condition for economic development. It is the economy as a whole, with its human and natural resources, that generates and creates the tools and means for the satisfaction of man. But with the development and increased production of consumer durable goods, there occurred not only a decline in the relative output of producers' capital but also a rapid growth in instalment credit. One is thus led to believe that it is instalment credit that is the cause of the increased production of durable goods and that not only does the production as well as the price level of these goods vary with credit but, of even greater significance, instalment credit influences the general level of prices.

Effects of Money and Credit.--The doubtful effects of changes in the quantity of money and credit on economic activity have been expressed by many writers in the field of economics. One has stated

. . . that the prices of commodities do not depend upon the quantity of money . . . but that, on the contrary, the amount of circulating medium is a consequence of prices.¹⁵

Another has noted that--

Abundance or scarcity of money and in particular the quantity of cash held by the banks is now imbued with a merely secondary importance.¹⁶

And a third has argued:

The quantity of money is a secondary factor compared with the volume of expenditures. The notion that the quantity of money is a causative factor in the state of business has given way to regarding it as a consequence. Changes in the level of prices are not the more important phenomenon of the economic system, and we hold today that it is a lack of spending, a lack of income rather than a lack of money, that produces a depression. The quantity of money, in short, is not a dominant cause of the fluctuations of prices and is a very imperfect guide to the causes of the trade cycle.¹⁷

¹⁵Thomas Tooke, An Inquiry into the Currency Principle (London, 1844), pp. 123-124; also cited by Hansen, Monetary Theory and Fiscal Policy, p. 87.

¹⁶Knut Wicksell, Interest and Prices (New York: The Macmillan Company, 1936), p. 127.

¹⁷G. Findlay Sharras, "Obituary, Irving Fisher, 1867-1947," The Economic Journal (Sept., 1947), pp. 393-398; also cited by Hansen, Monetary Theory and Fiscal Policy, p. 83.

A chief exponent of the Keynesian doctrines has emphasized that it is the change in the volume of expenditures, not money or credit, that is responsible for changes in income and prices.¹⁸

If the money supply, including instalment credit, reacted on production, as is often assumed, then it would follow that output and the price level could be readily controlled by changing the quantity of money and credit. Expenditures for consumer durable goods could be regulated by changing the supply of instalment credit. Each time the quantity was increased, it would be used to purchase durable goods. However, the fact is that this operation does not occur, as can be seen from observed conditions in the accumulation of inventories of manufacturers and retail dealers. In addition, prices may and do change independently of the factors associated with credit. There is no automatic relationship between an expansion of instalment credit and prices.

Instalment Credit a Nonindependent Variable

The relationship of consumer instalment credit to economic activity needs some further explanation. In addition to the contention that credit has a stimulating effect on economic activity, it

¹⁸Hansen, Monetary Theory and Fiscal Policy, pp. 83-98. For a similar view see James S. Duesenberry, Business Cycles and Economic Growth (New York: McGraw-Hill Book Company, 1958), p. 317.

is argued further that an actual expansion of consumer instalment credit is independent of other basic economic factors.¹⁹

There are, of course, several questions concerning the theory of treating instalment credit movements as independent forces. The first deals with the possible use of consumer instalment credit as a countercyclical device; the second refers to the sale of inventories in depressed conditions as a force which may possibly lead to prosperity and/or inflation; and the third deals with the factors which determine the amount of credit to be used.

Credit as a Countercyclical Factor

It has been generally accepted that instalment credit and, for that matter, credit in general cannot be used as an effective countercyclical device. Although tight money can cause a decline in business activity and may turn a recession into a depression, easy money by itself is not a sufficient remedy for a deep depression.²⁰ According to one leading writer the volume of instalment credit cannot be forced up against the wishes of the parties concerned by enforcing liberal terms:

¹⁹Mors, op. cit., p. 58.

²⁰For an extended discussion of the effects of monetary policy see Albert G. Hart et al., "The Problem of Economic Instability," American Economic Review (September, 1950), pp. 505-538. Howard S. Ellis, "The Rediscovery of Money," Money, Trade, and Economic Growth: In Honor of John Henry Williams (New York: The Macmillan Company, 1951), pp. 259-269. These articles are also reproduced in synopsis form in William D. Grampp and Emanuel T. Weiler (eds.), Economic Policy: Readings in Political Economy (rev. ed.; Homewood, Ill.: Richard D. Irwin, Inc., 1956), pp. 12-53.

Drastic tightening of credit terms can force a contraction of credit volume in periods of prosperity but relaxation of terms cannot force an expansion of credit in a recession.²¹

The fundamental reply to those individuals who insist that the introduction, development, and spread of instalment credit are desirable factors when other business activity is contracting is simply that instalment credit cannot generate production and demand in and of itself. An increase in the supply of instalment credit or a reduction in down payments and extension of maturities will probably have little effect upon business activity as an anti-cyclical aid.

Sale of Inventories

Even though the use of instalment credit may remove inventories, this does not necessarily mean that prosperity follows. There is no assurance that manufacturers will replace the inventories; and, even if they do, there is no certainty that credit again will be used to take the inventories from the market. Substantial sales have at various times reduced producers' and merchants' inventories, and they have not been replaced because of the possibility of declining prices of inventory supplies or of the producers' output. Thus, the uncertain effects of instalment credit on economic activity are such that

²¹Avram Kisselgoff, "The Qualitative Analysis of the Demand for Instalment Sales Credit," Proceedings of the Consumer Credit Conference (Urbana, Ill.: University of Illinois Bulletin, June, 1951), Vol. XLVIII, No. 76, pp. 141-151.

"an increase in consumer expenditures may lead merely to a decline in inventories rather than to an increase in output (national income)." ²²

Since instalment credit movements probably are not independent forces in the economy, it is important to examine the factors which are responsible for an expansion of instalment credit. The use of instalment credit depends upon certain consumer economic and psychological conditions.

Changing Attitude toward Debt

The psychological factors which affect consumer spending, saving, and the use of instalment credit have been changing significantly in the last fifty years. In the past, many have felt that the use of credit was not very frugal, and some individuals felt that it was an evil and should be shunned. Because banks at that time did not believe it was their purpose or responsibility to extend credit to consumers, other institutions were developed to satisfy consumer demands. As a result of inadequate laws in the credit field, malpractices developed, serving to strengthen the idea that consumer instalment credit was morally wrong. With the change in the attitudes toward debt, consumer credit developed and became an accepted method of purchasing many goods. In the meantime, banks and other high-grade financial institutions developed facilities

²²Haberler, op. cit., p. 150.

for the extension of credit on a sound competitive basis. Today the user of consumer instalment credit is treated with as much respect as the cash buyer.²³

Economic Factors

Income is usually the strongest basic economic force determining the expenditures of consumers and hence their demand for instalment credit.²⁴ Fluctuations in income account for cyclical shifts in

²³For an extended discussion see George Katona, Psychological Analysis of Economic Behavior (New York: McGraw-Hill Book Company, 1951), p. 158. Carl A. Dauten, "A Fresh Approach to the Place of Consumer Credit in Economic and Financial Thinking," The Journal of Finance, Vol. IX, No. 2 (May, 1954), pp. 111-123. George Katona, "Attitudes toward Saving and Borrowing," and John B. Lansing, E. Scott Maynes, and Mordechai Kreinin, "Factors Associated with the Use of Consumer Credit," Consumer Instalment Credit: Conference on Regulation (Washington, D. C.: National Bureau of Economic Research, Board of Governors of the Federal Reserve System, Government Printing Office, 1957), Part II, Volume 1, pp. 450-469 and 487-514.

²⁴There may be other factors besides income changes that cause cyclical changes in the demand for instalment credit. In various studies it has been shown that there is some correlation between the use of credit and marriages, births, migration, age, residential building, and liquid assets; but many of these factors are clearly reflections of income changes or are connected with income changes. For a discussion see George Katona, "Attitudes toward Saving and Borrowing"; John B. Lansing, E. Scott Maynes, and Mordechai Kreinin, "Factors Associated with the Use of Consumer Credit"; and James Tobin, "Consumer Debt and Spending: Some Evidence from Analysis of a Survey," Consumer Instalment Credit: Conference on Regulation (Washington, D. C.: National Bureau of Economic Research, Board of Governors of the Federal Reserve System, Government Printing Office, 1957), Part II, Volume 1, pp. 450-550. Homer Jones, "Some Aspects of Demand for Consumer Durable Goods," The Journal of Finance, Vol. IX, No. 2 (May, 1954), pp. 93-110. Dauten, op. cit. Avram Kisselgoff, Factors Affecting the Demand for Consumer Instalment Sales Credit (New York: National Bureau of Economic Research, 1952), Technical Paper No. 7, pp. 4-7 and 56-60.

the demand for instalment credit. The reason that consumers increase their indebtedness when their incomes have gone up is easy to understand. If a consumer earns more income or his expenses have been reduced and if he believes that this condition is likely to prevail for some time, he will probably spend more of his income for long-lasting durable goods. It should be noted that the level of income is important, since it is the income over and above the amount which is used for certain consumption items that can be spent for durable goods. Also, it is likely that, as income increases, there will be an increase in the demand for durable goods and hence an increase in instalment credit.²⁵ The attainment of a new level of income is more likely to persuade consumers to buy than the anticipation of a higher level in the future. Therefore, it is the level of income and the fact that income will remain at a certain level which are the important considerations when consumers wish to finance the purchase of durable goods.

The existing stock of durable goods in the hands of consumers is another significant economic factor that must be taken into account in determining the demand for instalment credit.²⁶ It has been indicated previously that income determines the demand for durable goods. As incomes rise from one level to another, the demand for the goods will increase; and, as that occurs, there will be a change in the amount of instalment credit necessary to finance their purchase.

²⁵Kisselgoff, op. cit.

²⁶Ibid.

Since consumer durable goods are wanted mainly for the beneficial services they provide, there exists a desired stock of goods for the whole economy. With sufficient demand, production is undertaken to supply consumers with the necessary stock of goods and then to maintain the stock at some specific level.

The stock of goods also exerts a cyclical influence on the demand for new goods and on the volume of instalment credit. Production is reduced when consumer demand has been satisfied and when the facilities are adequate to furnish the necessary services. Although production is slowed down, it need not be completely discontinued because there is still a replacement demand to be met as a result of rather uniform depreciation and miscellaneous destruction.

As long as the flow of services is small in relation to consumer requirements, there will be a strong demand for durable goods and instalment credit. But when a sufficient inventory of durables has been assembled to produce the desired services, there will be a reduction in demand for these goods and instalment credit to a level that will produce the necessary volume of services. If this argument, that the existing stock of durable goods in the hands of consumers regulates the demand for instalment credit, can be accepted, then, once consumers have an adequate supply of goods, an increased demand for these goods cannot be created simply by increasing the supply of instalment credit or by relaxing down payments and extending maturities. Therefore, such economic factors as income and existing stock of durable goods probably account for the major fluctuations in

the demand for new durable goods and hence also in the demand for instalment credit.

There appears to be little economic reasoning to support the contention that instalment credit is an independent force in the economy. A deliberate variation in instalment credit as a counter-cyclical weapon has been overexaggerated and is of doubtful significance. Further, the contribution of instalment credit to consumer expenditures may lead only to a reduction in inventories rather than to an increase in output (or real income). As mentioned above, instalment credit is dependent upon certain psychological as well as economic factors, those being chiefly the willingness to incur debt, changes in income, and the stock of goods in consumers' hands.

Instalment Credit Fluctuations an Insignificant Inflationary Force

In addition to the contention that instalment credit is an independent phenomenon, it is argued further that the difference between credit extensions and repayments directly measures the effects of credit on economic activity. A net increase in instalment credit is assumed to be an addition to the purchasing power of the economy and is a stimulating or inflationary force. The net change grossly overstates the stimulating force because consumer spending may be associated with offsetting forces in other sectors of the economy. For example, is it not possible that fluctuations in total consumer spending that have been attributed to instalment credit have been

caused by changes in consumer spending and saving, even without the existence of instalment credit facilities? If the credit facilities are used as a convenient substitute for consumer spending, then instalment credit movements are without significance, except as a reflection of the decisions of individuals to spend or save their incomes. It is reasonable to assume that consumers spend the same total amounts with or without the use of credit.

There appear to be two principal points of contact between consumer credit movements and other income-increasing phenomena. First, there is the relationship of instalment credit to business and individual savings, commonly referred to as transfer funds; and, second, there is the relationship of credit fluctuations to the income, spending, and saving habits of individual instalment debtors.

Transfer Funds

A large amount of transfer credit is used in the instalment credit market to finance consumer durable goods. This type of credit refers to savings passed from one sector of the economy to another. Although transfer credit may increase the demand for consumer durable goods, a decrease in demand occurs in other areas; therefore, it does not increase aggregate demand. This neutral effect on aggregate demand assumes that consumer durables are at least a satisfactory replacement for business equipment. The long-run effects of transfer funds depend on whether the productivity and the cost of distribution and operation of consumer durable goods are the same or greater than

that of business equipment. If the goods financed by instalment credit are more productive and/or less costly to operate, then less will actually be consumed and the nation's real income will rise; but, if the opposite is true, then less will be saved and more will be consumed. The shift that has taken place is from small quantities of expensive equipment to large quantities of lower-priced equipment, and, in view of this, it is reasonable to expect that the gains from the economics of large-scale production, research and development of new products, and the expansion of related durable goods industries have more than offset the decline in business equipment.

Transfer funds may arise from two sources: first, the increase in instalment credit may be merely the reflection of a substitute for the expansion of business credit and may thus be referred to as a direct transfer; and, second, the increase may be the result of the relative decline in business credit and thus an indirect transfer commonly referred to as a withdrawal of funds from one area and their use in another. Not only may automobile instalment credit be financed by a direct transfer of funds, but this type of credit also has to a large extent taken the place of equipment trust certificates, railroad and street railway bonds, and credit extended to bus and taxicab companies. Television credit has been financed by direct savings and has taken the place of credit extended to the motion picture industry. Instalment credit used to purchase automatic home laundry equipment has reduced the need for credit to finance commercial laundry and cleaning services. The relative shift to consumer

asset ownership of durable goods has been accomplished to a great extent through a substitution of business credit for instalment credit.²⁷

Transfer funds flow into instalment credit through loan institutions. These loan agencies are financed to a large extent through the sale of stocks and bonds to investors. The investors transfer their savings to the institutions, which in turn lend them out to consumers. In other words, the means of payment is transferred from one individual to another.

The simplest way to illustrate the amount of transfer funds involved in instalment credit is to determine the reciprocal of savings; i.e., bank credit.

It has been estimated that in 1929 commercial banks financed directly and indirectly about 40 per cent of the total outstanding instalment credit.²⁸ Following recovery from the depression, banks began to move strongly into direct lending while continuing their indirect activities. It was estimated that in 1937 commercial banks financed between 40 and 55 per cent of the outstanding credit.²⁹ By

²⁷Jones, op. cit., pp. 97-98. Also The Economics of Consumer Debt, Studies in Business Economics, No. 50 (New York: National Industrial Conference Board, Inc., 1955), p. 68.

²⁸Ervin Miller, "Consumer Credit and Economic Growth," Consumer Instalment Credit: Conference on Regulation (Washington, D. C.: National Bureau of Economic Research, Board of Governors of the Federal Reserve System, Government Printing Office, 1957), Part II, Volume 1, p. 227.

²⁹Rolf Nugent placed the estimate at 40 per cent. See Nugent, op. cit., p. 141. Reavis Cox corrects this and places the estimate at slightly over 50 per cent. The reason for this, as

1940, banks were engaged in nearly 60 per cent of instalment sales financing.³⁰ In 1947, bank financing of credit began to drop off, as direct and indirect instalment loans accounted for only slightly more than one-half of the total instalment credit outstanding.³¹

A recent estimate gives some basis of comparison with the past. At the end of December, 1955, commercial banks held about \$10,600 million in instalment paper directly and had loaned out about \$3,530 million to sales finance companies and \$860 million to personal finance companies, thus accounting for a total of \$14,990 million. Since total instalment credit outstanding at this time was estimated at \$28,958 million, it is apparent that direct and indirect financing of instalment credit by commercial banks was approximately 52 per cent. As stated above, the reciprocal of bank credit as a source of funds is, of course, savings; therefore, the amount of savings employed was about 48 per cent.

Although bank credit enters into the financing of consumer durable goods and accounts for slightly more than one-half of the funds, part of this financing reflects the shift to consumer ownership of durable goods. Bank credit extended to finance railroads, streetcar lines, theaters, commercial laundries, and other mortgage

mentioned above, is that banks extended their services to finance instalment purchases directly, plus the fact that the year was characterized by large sales on instalments at the peak of the business cycle. See Reavis Cox, The Economics of Instalment Buying (New York: Ronald Press Company, 1948), pp. 339-340.

³⁰Miller, op. cit., p. 228.

³¹Cox, op. cit., pp. 339-340.

activities has now been shifted to the financing of automobiles, television, automatic washers and dryers, and other such household equipment. There has been a shift not only in savings but also in bank assets from business concerns to instalment credit to finance durable goods.

If it can be accepted that slightly less than half of the funds used in the financing of consumer purchases through instalment credit is real savings either transferred directly or arising as a result of the relative decline in business credit and that there has been a major shift in bank assets from business purposes to consumer asset ownership, then the importance of consumer credit fluctuations on aggregate demand must be reduced by this amount since transfer funds do not increase demand. "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."³² Instalment credit is not inflationary to the extent that the credit growth and fluctuations are the result of an increase in transfer funds or the result of a substitution for business credit.

Instalment Debtors' Financial Position

Since transfer funds make up slightly less than one-half of the funds used in instalment credit, many consumers can increase their individual expenditures more than their income and still not

³²Haberler, op. cit., p. 117.

cause an increase in aggregate demand. Although the remaining funds (about one-half) are supplied through the banking system, thus permitting some elasticity in the supply of funds, might not there be other offsetting factors which still do not permit aggregate demand to be increased? The significance of the effect of credit fluctuations on aggregate demand must, in addition to transfer credit, be weighed in the light of the instalment debtors' income, spending, and saving habits.

There is no reason to accept without question the fact that the users of credit for automobiles, other consumer goods, and for home repair and modernization increase their expenditures by the full amount of their credit purchases or that individuals who receive personal loans increase their total spending by the full amount of the loans they receive.

Personal Loans.--In the first place, although instalment credit is used primarily for the purchase of durable goods, personal loans are not used entirely in this way. As shown by Table 20, consumer instalment credit in the form of personal loans is used largely for purposes other than the purchase of durable goods. It should be noted that, when these studies were made, personal loans in 1950, 1951, and 1954 accounted for 23.5 per cent, 21.1 per cent, and 22.8 per cent respectively, of the total outstanding instalment credit.

The reason most frequently stated for borrowing is for consolidation of overdue bills, refinancing, or paying off another loan.

TABLE 20.--Reasons for Borrowing from Consumer Finance Companies, Commercial Banks, and Credit Unions

Reason for Borrowing	Per Cent of Total			
	Consumer Finance Companies ^a	Consumer Finance Companies ^b	Commercial Banks ^b	Credit Unions ^b
	1954	1950-51	1950-51	1950-51
Consolidation of overdue bills	32.7	27.2	24.7	11.0
Pay a consumer finance company loan	--	.8	2.0	6.2
Refinance present note	--	3.4	2.7	2.6
Medical, dental, hospital, funeral	11.5	18.9	14.7	10.6
Automobile purchases and expenses	7.9	4.0	5.3	20.3
Clothing, fuel	8.5	--	--	--
Clothing, food, rent, fuel, moving	--	10.2	9.4	4.7
Travel and vacation	6.7	7.2	2.9	3.2
Repairs (home)	6.6	7.7	3.1	6.6
Home furnishings	4.7	2.7	6.8	8.9
Taxes, insurance	5.3	--	--	--
Taxes, mortgage, interest, insurance	--	5.8	3.5	2.3
Assist relatives	3.5	3.7	.2	.5
Money making opportunities	2.6	3.5	6.8	1.3
Real estate and mortgages	1.2	.1	.1	4.9
Miscellaneous	8.8	4.9	17.8	16.9
Total	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>

Source: a. The National Consumer Finance Association. Compiled from records of 1,791 operating offices, January 1, 1954. Quoted in Elvin F. Donaldson, Personal Finance (2d ed.; New York: Ronald Press Company, 1956), p. 53.

b. W. David Robbins and T. N. Beckman, Consumer Instalment Loans: An Analysis of Loans by Principal Types of Lending Institutions and by Types of Borrowers (Columbus: Bureau of Business Research, The Ohio State University, 1955), p. 87. Compiled from 14 consumer finance companies, 17 commercial banks, and 6 credit unions.

Credit extended for these purposes merely involves changes in book-keeping and as such has no effect on aggregate demand. Further, small amounts of instalment credit are used for business purposes and therefore should be excluded from consideration. Credit used for the purpose of paying dental, medical, hospital, and funeral expenses and also for clothing, travel, rent, and fuel is usually extended during an emergency when income has been temporarily discontinued or when liquid assets are not sufficient to cover the expenses. A consumer may want to borrow to maintain his current level of consumption or to increase it; but, when he must repay the debt at a later time, he will then have to reduce his consumption. Since this type of credit may be largely in the form of emergency or convenience credit, it generally behaves counter-cyclically and is relatively unimportant in relationship to aggregate income as income rises.³³ Credit extended for these purposes has a much shorter maturity than credit used for the purchase of durable goods. Since this type of credit is very short term and consumption has to be reduced during repayment of the loan, it can be assumed that this type of credit has little effect on aggregate demand.

Instalment Debtors' Income.--A second reason why instalment credit may not have the effect of increasing consumer purchasing power by the amount of new credits is that consumers probably spend

³³See Haberler, op. cit., pp. 106-110; Mors, op. cit., p. 58; and Dauten, op. cit., p. 120.

the same total amounts regardless of the existence of instalment credit, and, of course, a consumer can buy no more than his total income or financial assets will permit. Consumer expenditures would be increased by new credits only if instalment credit could enable consumers to spend more than they could without such credit.

The "Survey of Consumer Finances," conducted by the Board of Governors of the Federal Reserve System in cooperation with the Survey Research Center of the University of Michigan, revealed that the financial condition of consumers using instalment credit was adequate in relation to their debts. The Survey indicated that about 45 per cent of all spending units reported owing some debt payable in regular weekly or monthly instalments. This type of debt was reported with greatest frequency in the middle or moderately high income brackets.³⁴ Instalment debt was reported by more than one-half of all spending units with incomes between \$3,000 and \$7,500 but by only one-third of all spending units with incomes below \$3,000, while two-fifths of those with incomes of \$7,500 or more owed instalment debt. A somewhat more important measure of consumers' financial position is the relative distribution of instalment debtors among the various income groups. Almost two-thirds of the instalment debtors had incomes between \$3,000 and \$7,500, but only about one-fourth of the debtors had incomes below \$3,000, while less than

³⁴Federal Reserve Bulletin, July, 1956, pp. 690-706. For similar conditions in other years consult the following Bulletins: June, 1955, pp. 609-622; July, 1954, pp. 689-708; June, 1953, pp. 588-591; Sept., 1952, pp. 987-990; and Jan., 1950, pp. 643-654.

one-fifth of the debtors had incomes of \$7,500 or more. The reason for the low frequency of instalment debt and the relatively smaller number of debtors in the lower income brackets is explained in part by their limited ability to service debt. At the other extreme, spending units in the higher income brackets also use such debt less frequently, and the number of debtors is smaller than that in the middle income brackets because individuals in this group can purchase many types of goods from current income or by using cash or liquid assets.

Ultimately, a consumer can buy no more than his income will allow; thus, the consumer who buys through the instalment plan does save and pay for the article. There are individuals who save and those who do not. Given a certain level of income, the one who saves reduces his consumption of income just the same as the one who must meet instalment payments. The only difference is that one receives the enjoyment or use of the article immediately, while the other individual must wait. Although the complete transaction has no effect on aggregate expenditures, the timing of consumption may be affected somewhat because there is an increase in the volume of durable goods in use. The more such goods are used, the faster they tend to wear out. Thus, instalment credit, by hastening the acquisition of durable goods, may accelerate consumption to some extent, but it cannot change the total significantly because the debt contracted in one period must be repaid in another out of income that is on the whole hardly any larger than it would otherwise be.

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Instalment Debtors' Liquid Assets.--Another element to be considered in analyzing the financial position of instalment debtors is that there is an important group of instalment purchasers who have liquid assets. Individuals can, through instalment credit, obtain the necessary goods and still build up or maintain their financial assets, thus contributing to a sounder economy. Data from the "Survey of Consumer Finances" indicate that about one-third of all indebted spending units had more liquid savings than debt.³⁵ A little more than one-third held financial assets which were less than personal debt, while another one-third had no liquid assets at all. Of the individuals who owed instalment debt about one-fourth had no financial assets at all; slightly more than one-half had from \$1 to \$499 in liquid assets, and about one-fourth had \$500 or more in liquid savings. Liquid assets, as defined by the Survey, include all types of United States government bonds, checking accounts, saving accounts in banks, credit union balances, postal savings, and accounts in savings and loan associations. Liquid assets defined in this manner understate the total amount of salable assets available because corporate stocks and bonds, state and political subdivision bonds, cash value of life insurance, and currency may also be considered as forms of liquid assets. If these other forms of salable assets are taken into account, the figures on the whole suggest that the number of instalment debtors who possess liquid assets may exceed 50 per cent.

³⁵Ibid., and June, 1957, p. 644.

There is, of course, a good reason to believe that most of these assets would not be used if instalment credit did not exist. Although instalment credit is expensive and its costs far exceed the returns from savings deposits, stocks and bonds, and other liquid assets, individuals may still use it even when they have large balances of liquid assets. Since instalment credit is a short-term obligation, consumers may not consider it worth while to avoid a short-term indebtedness by liquidating a long-term financial asset. Also, it may be more expensive to dispose of certain liquid assets than to contract an instalment debt. For example, there are the immediate selling expense which must be paid on stocks and bonds and a significant capital gains tax which will be applicable if the market value exceeds the purchase price, plus the fact that abandonment of such assets may mean the loss of future capital gains. Thus, instalment financing may not be the most expensive method of acquiring goods. In addition, consumers may prefer to hold the assets as a reserve for unforeseen emergencies, or they may not have the will power to replenish their savings after having used them for the purchase of durable goods. In such instances instalment buying provides consumers with a means of acquiring the desired goods without dissipating their accumulated savings.

Instalment Payments May Be Substitute Payments.--Another reason to believe that instalment credit may not cause an increase in consumer expenditures is that in many cases consumer durable goods are perfect substitutes for producers' goods. Thus, the extension of

instalment credit results in additional expenditures on durable goods but at the expense of expenditures on other goods and services. This type of relationship may also be described by saying that instalment buying represents a partial step toward leasing or renting. As the buyer's equity is reduced, through a decrease in down payments and extension of maturities, instalment buying takes on the characteristics of renting. Even today, many buyers treat their payments as rent, since they never actually pay off the balance owed on their durable goods but instead continue to make monthly payments and acquire new durable goods every three or four years. If the owner's equity in the durable good completely disappears, instalment buying will be virtually the same as renting. In a near-perfect market, however, renting or instalment buying would be a matter of indifference to many consumers. One reason that renting is not popular in the area of consumer durable goods is that instalment credit has been used so extensively. But it should be noted that this trend of instalment buying may change slightly because of the rapidly expanding rental business, where automobiles and other goods are leased not only by businesses but also by individuals.

It is not too unreasonable to assume that the reasons given previously may be used to explain why consumers spend the same amounts with or without the use of instalment credit. To summarize, first, a large proportion of instalment users have incomes in the middle or moderately high income brackets, and they also have substantial liquid assets. Second, instalment payments may be considered as a partial

substitute for the payments to acquire like services from business enterprises. Therefore, it seems likely that many instalment debtors would spend the same amounts if credit was unavailable. If this reasoning can be accepted, it follows that the initial use of credit does not increase aggregate expenditures. The difference between the volume of new credits and the increase in consumer expenditures as it affects aggregate demand cannot be precisely determined, but it is highly probable that it is not great, if there is any difference at all.

The fundamental question at the basis of this discussion--whether consumer instalment credit fluctuations are significant as an inflationary force--can now be answered. Since most of the instalment debtors' income, savings, and spending habits may be the same regardless of the existence of instalment credit, it seems highly probable that the use of instalment credit and its resulting fluctuations may have little effect on inflation.

Beneficial Results of Instalment Credit Expansion

Mass Production Tends to Reduce Prices.--The influence of consumer instalment credit on the price level depends not only upon the effects on aggregate demand but also on aggregate supply. On the demand side credit growth may tend to raise prices, assuming that the expansion of credit is not financed by transfer funds or by displacement of credit in other areas. On the supply side credit expansion may bring about an increase in unit output through adaptation of

mass-production techniques, research aimed at developing and improving products, and a continuous process of cost-reducing improvements in the methods of production. An expansion in the units produced or a reduction in the cost of producing the existing number of units tends to reduce the price level.

The manufacturers producing consumer durable goods are well adapted to mass-production techniques.³⁶ Also, the goods are in themselves of such a type that standardization of the productive process is possible. The firms producing these goods must make large capital outlays for labor-saving machinery and equipment, and, in addition, they spend large sums of money for research and product development. The marketing of consumer durables in large volume demands an efficient selling organization that requires large advertising expenditures. Under these conditions, the manufacture and distribution of durable goods can be carried out only under large-scale operations. Of course, the greater the volume of output, the more economically the cost can be spread over production.

In addition, significant economies can be realized in large-scale operations through specialization of business operations and decentralization of production by means of multiplant operations. In certain consumer goods industries, such as the automobile and electrical appliance field, the producers try to outmode their products

³⁶Paul Einzig, The Economic Consequences of Automation (New York: W. W. Norton and Company, Inc., 1956), pp. 27-35 and 92-95. See also Edward L. Allen, Economics of American Manufacturing (New York: Henry Holt and Company, 1952), pp. 285-315 and 485-507.

every few years through modification, redesign, and improvement. It is only in these industries of large-scale production that the cost of special tools, dies, and related equipment can be distributed economically over production. Also, the manufacturer of one durable good usually has the facilities and skills common to other durable products, permitting diversification in such areas as electric ranges, refrigerators, and washing machines. All these industries are subject to decreasing costs; and, because of this, lower unit costs can be achieved from increased production in the industries most directly connected with consumer instalment credit. Thus, the techniques of mass production result in lower costs and prices to consumers.

The effects of efficient production in the output of consumer durables may be transferred to the industries supplying materials to the manufacturers of these durable goods. Reduced costs of materials may result from expansion of output in such industries as steel, aluminum, rubber, glass, and original equipment producers.³⁷ Also, as the volume of output of these consumer goods expands, more efficient production may be achieved in the petroleum industry since large quantities of gasoline and oil are used for automobiles and in the utility industry, where large quantities of gas and electricity are used for operation of household appliances.³⁸ Finally, this increased demand may be spread to other markets in the economy,

³⁷John G. Glover and Rudolph L. Lagai (eds.), The Development of American Industries (4th ed.; New York: Simmons-Boardman Publishing Corporation, 1959), pp. 213-248 and 394-445.

³⁸Ibid., pp. 488-514.

producing more efficient utilization of total output. For example, in the use of automobiles for nationwide travel, there are required among other things an adequate road system, restaurants, recreational facilities, and sleeping accommodations. Operation of these facilities on a large-scale volume as a result of the mass-produced automobile probably fosters reduced costs and lower prices.

Of course, lower prices may not reflect the effects of increased productivity achieved through mass production. Although firms producing durable goods may be subject to decreasing costs, replacement of more efficient productive equipment is generally made on a higher cost basis, and continued labor pressure for higher wages may not permit prices to be reduced. However, in the long run, it would appear reasonable to assume that prices to buyers should be lower when firms are operating on a decreasing cost basis than if the firms were operating under increasing costs.

Increased Real Income.--The use of instalment credit has brought about an increase in real income because of greater efficiency and productivity that can be achieved by the user of durable goods. Through acquisition of many durable goods income may be produced which is in excess of the purchase price. An automobile purchased on instalment credit may permit an individual to take a job which will produce more income. In addition, the purchase of many major electrical appliances on credit has reduced the time necessary to perform the family household duties and has permitted members of the family to take jobs and earn more money; this additional income

may be more than sufficient to cover the cost of the credit. The tendency for more married women to enter the labor force³⁹ may well be an indication of the acceptance of outside employment to satisfy the desire for consumer durable goods. It is also possible that consumer indebtedness induces consumers to produce more efficiently. The presence of appealing consumer durable goods available on convenient credit terms leads people to work harder to acquire them and thus raises society's aggregate income. Therefore, lower costs achieved through mass production and user productivity may counteract any increase in prices that the use of instalment credit might induce.

Summary

It appears from the analysis presented in this chapter that the availability and use of instalment credit does not have a very significant influence on the price level. The alleged stimulating effects of instalment credit are due to the elasticity of the credit supply. If credit were of the pure transfer type, there would be little total stimulating effect. Granted that credit may be elastic, other factors tend to support the contention that instalment credit is not stimulating; first, control of credit proves difficult as an anti-cyclical device; second, instalment credit may only remove inventories and not affect national income; third, little can be done

³⁹A. J. Jaffe and C. D. Stewart, Manpower Resources and Utilization: Principles of Working Force Analysis (New York: John Wiley and Sons, Inc., 1951), p. 172.

to encourage the consumer to make expenditures through increased availability of instalment credit or through a liberalization of terms; fourth, such factors as income and the stock of goods seem to be the most important conditions which govern the demand for instalment credit.

Fifth, consumer purchasing power is not increased through instalment credit because of the use of transfer funds; consumer income, spending, and saving relationships probably remain the same with or without instalment credit, and as evidenced by the financial position of instalment users a large proportion of debtors hold adequate liquid assets and have sufficient income to pay for their instalment purchases; instalment payments may correspond to payments to businesses for like services; it is very likely that renting or leasing would have developed if instalment credit had not; and, finally, although the demand may tend to raise prices, important economies are obtainable from an expansion of output in the firms most directly affected by instalment credit; thus, there is a tendency for prices to decline.

Although it would be incorrect to assume that the use of consumer instalment credit does not produce any effect on economic activity, the writer believes that its impact has been overstated. Extravagant claims pertaining to the influence of consumer instalment credit originate because many writers look only at the goods which are bought on credit or the industries that rely on credit for sales, instead of at the economy as a whole. Basically, instalment

credit developed because of the growth of consumer durables, and not the opposite. The vast output of the automobile industry and large-scale production of other consumer durable goods, which developed after the First World War, produced a strong incentive to market these goods on the instalment plan. But it has been held in the past by credit theorists and others that it is instalment credit that is the cause of the creation and production of durable goods and that not only does the production of these goods and their price level vary in accord with credit but that, even beyond this, instalment credit affects the general level of prices.

Consumer instalment credit is the result of the production of consumer durable goods, as commented on previously. It does not create production, nor does it make the consumer buy these goods. On the contrary, when consumers desire and want to purchase the products, then instalment credit is extended. If they do not want the goods or if their future economic position seems unfavorable, consumers cannot be encouraged to purchase durable goods, either by making more credit available or by lowering the down payments and extending the maturities.

Obviously, many forces have contributed to the changes in the volume of production, incomes, and prices over the past several decades; but, as will be demonstrated in the succeeding chapter, the absolute expansion and contraction of consumer instalment credit, although large, was not a highly important causal element.

CHAPTER VI

CAUSES OF INFLATION FROM 1929 TO 1958

In the preceding section an analysis of inflation and the economic effects of consumer instalment credit have been presented in terms of theoretical principles. It was concluded that under conditions of full employment an expansion of investment expenditures will result primarily in an increase in prices, while an expansion of the same type of expenditures under conditions of less-than-full employment will result mainly in an increase in income, employment, and output. It was argued that the development of instalment credit is the result of an expansion of production of durable goods but that, since the expenditures for these goods may be regarded as investment expenditures, then, to that extent, they may produce some inflationary effects.

In this section an attempt will be made to apply the analysis of the preceding sections to actual developments in the United States during the period 1929 to 1958. It must be realized that this problem involves numerous interrelated variables which hamper the efforts to trace the causal relationships in the economy. Isolation of changes in a certain phenomenon is extremely difficult, but it is believed that the data presented here will tend to support the conclusions arrived at previously.

Economic Growth and Inflation

To provide a setting for the examination into the actual inflationary developments, one should review the effects of inflation on economic growth. Although growth tends to suffer during periods of strong inflation, the economy is dynamic, and this ever-changing condition results in some increase in total output of goods and services.

Chart 16 shows the gross national product in current dollars and in deflated dollars, as well as the Consumer Price Index from 1929 to 1958. The gross national product is presented in current dollars and in deflated dollars so that one may see how and to what extent inflation has hampered the growth of the economy. During the period 1929 to 1933 the economy, of course, suffered drastically. The upturn occurred in 1933 when the gross national product and the Consumer Price Index started upward. From 1933 to 1942 the gross national product increased much faster than prices, indicating rather sound growth. Sometimes this period is not referred to as growth since the economy was recovering from the depression. Further, with regard to prices, this period is often called one of "reflation," since prices were rising from the depression and had not gone past their previous high reached in 1929. If this period of recovery is excluded, then growth did not begin until the late 1930's and early 1940's. Even so, the gross national product increased much faster than prices in the late 1930's.

CHART 16.--Gross National Product and Consumer Price Index, 1929-1958

Source: See Table 21.

TABLE 21.--Gross National Product and Consumer Price Index, 1929-1958

Gross National Product ^a					
Year	Current Dollars		Deflated Dollars, 1954		Consumer Price Index ^b (1947-49 = 100)
	Amount (Billions)	Index (1947-49 = 100)	Amount (Billions)	Index (1947-49 = 100)	
1929	\$104.4	41.7	\$181.8	62.8	73.3
1930	91.1	36.3	164.5	56.8	71.4
1931	76.3	30.4	153.0	52.9	65.0
1932	58.5	23.3	130.1	44.9	58.4
1933	56.0	22.3	126.6	43.7	55.3
1934	65.0	25.9	138.5	47.9	57.2
1935	72.5	28.9	152.9	52.8	58.7
1936	82.7	33.0	173.3	59.9	59.3
1937	90.8	36.2	183.5	63.4	61.4
1938	85.2	34.0	175.1	60.5	60.3
1939	91.1	36.3	189.3	65.4	59.4
1940	100.6	40.1	205.8	71.1	59.9
1941	125.8	50.2	238.1	82.3	62.9
1942	159.1	63.5	266.9	92.2	69.7
1943	192.5	76.8	296.7	102.5	74.0
1944	211.4	84.3	317.9	109.8	75.2
1945	213.6	85.2	314.0	108.5	76.9
1946	210.7	84.1	282.5	97.6	83.4
1947	234.3	93.5	282.3	97.5	95.5
1948	259.4	103.5	293.1	101.3	102.8
1949	258.1	103.0	292.7	101.1	101.8
1950	284.6	113.6	318.1	109.9	102.8
1951	329.0	131.3	341.8	118.1	111.0
1952	347.0	138.5	353.5	122.1	113.5
1953	365.4	145.8	369.0	127.5	114.4
1954	363.1	144.9	363.1	125.5	114.8
1955	397.5	158.6	392.7	135.7	114.5
1956	419.2	167.3	402.2	139.0	116.2
1957	440.3	175.7	407.0	140.6	120.2
1958	437.7	174.6	395.4	136.6	123.5

Source: a. Survey of Current Business, July, 1958, pp. 4-5, 10-11; Feb., 1959, pp. 12-13.

b. U. S., Department of Commerce, Office of Business Economics, Business Statistics, 1957 Edition: A Supplement to the Survey of Current Business (Washington, D. C.: Government Printing Office, 1957), pp. 27-32; U. S., Bureau of Labor Statistics, Monthly Labor Review, Vol. LXXXII, April, 1959, p. 471.

Although price controls, priorities, and rationing were imposed upon the economy in the early 1940's, the inflationary pressure was not retarded until 1943. The increase in the gross national product was largely the result of war production. Most civilian production, especially the production of new houses, automobiles, and other consumer durable goods, was halted during this period. In 1944, war production cutbacks began to show up as the government reduced its purchases of military goods. Except for the short period of reconversion from military to civilian production, the economy began to expand. Although there was some growth, inflation accounted for the largest part of the increase in the gross national product. The inflationary period from 1945 to 1948 was largely the result of the vast accumulation of liquid assets produced from governmental expenditures during the war.

From 1949 to 1958 the economy, which was subject to various intensities of inflation, increased in real terms. Prices were rather stable in 1949 and 1950, but the Korean conflict gave additional impetus to inflation in 1951 and early 1952. From 1952 until 1956 the increase in the gross national product was, for the most part, a real increase and not one that can be significantly attributed to price rises. Although prices slowly continued upward, it was a period in which many economists would classify the price increases as being beneficial rather than detrimental. By 1957 prices started upward and continued to rise until the middle of 1958. The gross national product increased, due mostly to price advances, but then suffered a decline by the end of 1958.

There has been considerable inflation in the economy since the early 1940's, but one may say without too much reservation that the economy has expanded as measured by the deflated gross national product. A significant point to remember is that even with inflationary pressures present the increase in the gross national product has been due to not only inflation but also real growth.

Investment Expenditures as the Primary Cause of Inflation

In assessing the effect of investment expenditures on inflation, reference is made to Chart 17. Total investment expenditures refer to expenditures by the government, by business firms, and by consumers for the purchase of durable goods.¹ The gross national

¹Statistical Qualifications: Investment expenditures used in this study refer to that part of the gross national product which represents outlays made by the government entitled Government Purchases of Goods and Services, by business firms entitled Gross Private Domestic Investment, and by consumers entitled Durable Goods. (Net Foreign Investment is excluded because it is of relatively small magnitude.) The income-increasing expenditures of the government, business firms, and consumers are overstated because the expenditures are stated in terms of "gross" and not "net" expenditures. To find the net income-increasing expenditures of the government, taxes and other transfer payments must be subtracted from the gross figure. To find the net income-increasing expenditures of business firms, a capital consumption allowance should be deducted from the gross figure. Likewise, to find the net income-increasing expenditures of consumer durable goods, a capital consumption allowance should be made. The reason that these adjustments have not been made is that the capital consumption allowance for consumer durable goods does not exist in suitable form for our needs. Fairly accurate estimates of the stock of durable goods in consumer hands would be required in order to measure the net income-increasing effects of consumer durable goods expenditures. Rough estimates for depreciation and other losses are published in Raymond W. Goldsmith, A Study of

CHART 17.--Total Investment Expenditures, Gross National Product, and Consumer Price Index, 1929-1958

Source: a. See Table 21.

b. See Table 24.

product is stated in deflated dollars and is used as a guide in determining the effect of investment expenditures on prices.

The effect of the decrease in total investment expenditures as an income-producing factor during the depression can be detected in the decline of the gross national product and in the decline in prices. The upturn of investment expenditures in 1933 halted the price drop, and prices began to rise along with the increase in the gross national product. Except for a slight decline in business activity in 1938, investment expenditures continued to increase very rapidly with only slight effects on the price level. As the Second World War got under way, increased expenditures by the government began slowly to push prices upward. Of course, governmental regulation in the form of price controls, rationing, priorities, and allocations prevented prices from rising very high. As the war came to an end, government expenditures were reduced, controls were lifted,

Saving in the United States (Princeton, N. J.: Princeton University Press, 1955), Vol. I, Tables Q-7, Q-15, pp. 683-693. An attempt was made to duplicate and extend the Goldsmith data, but the estimates were off by a considerable margin, probably because the data from the Department of Commerce on Consumer Durables have been revised and because the information was too complex to compute depreciation and loss on a multitude of consumer durables.

Even if the adjustments were made in all three types of expenditures, this does not completely solve the problem of determining the effects of the "net" income-increasing expenditures, because the collecting of taxes under a progressive tax system by the government and the subsequent spending of the taxes result in a redistribution of income. This redistribution of income may result in some inflationary effects.

It is the opinion of this author that little would be accomplished for the purposes of this study by making the adjustments, since the adjustments would merely reduce the level of the expenditures and not change their fluctuations. It is also believed that the relative importance of these goods would still remain the same.

and prices started to move upward rapidly. Prices increased at this time because consumers and business firms had large liquid assets and because many goods were in short supply. Demand for consumer durables was on an unprecedented scale during the postwar period because many of the products were not produced during the war and because many of the goods were worn out.

Total investment expenditures declined in 1949; and, as a result, prices were stable in 1949 and 1950. Shortly before the Korean conflict, prices began to rise. Although the government imposed some regulations during the Korean conflict, these were not as strict as they had been during the Second World War. Even though total investment expenditures did not rise as rapidly as they did during the Second World War, their effect can be seen by the fact that prices began to rise. Total investment expenditures continued to increase with only a minor effect on prices. In 1954, investment expenditures took a dip with little or no effect on prices. Apparently the reduction in investment had not been great enough, or the increase in these expenditures in 1955 was holding prices up. The increase in investment expenditures in 1955 probably set off the price rise during 1956 and most of 1957. A decline in investment at the end of 1956, which continued into 1957, has recently slowed the price advance down. The rise in prices in the last several years has received much publicity, but the increases have been very small compared to those in the period from 1941 to 1948 and from 1950 to 1952.

Employment

Before proceeding to investigate each type of investment expenditure and its effect on the price level, it is necessary to examine the employment situation. In the section on the theory of inflation, it was found that, when full employment was reached, inflationary pressures were very strong and generally exerted themselves on the economy. It was also found that, prior to the attainment of full employment, bottlenecks generally developed, which may have caused some price rise.

Chart 18 and Table 22 show the percentage of the labor force employed and concomitant movements in the price index. To distinguish full employment from less-than-full employment, we may say that the situation during the Second World War could be considered as one of full employment. From 1943 to 1945, an average of 98.3 per cent of the labor force was employed. Considering such things as seasonal employment, labor turnover, and labor-training programs, the area between full employment and less-than-full employment would be around 95 per cent. Any significant drop below 95 per cent could be considered as a situation of less-than-full employment, and any percentage higher than this would be considered as one approaching full employment. Of course, the area around 95 per cent employment would generally be regarded as a situation containing bottlenecks.

The employment situation portrays a very interesting pattern from 1929 to 1958. While unemployment was a problem during the depression, prices dropped; but, as soon as employment increased in

CHART 18.--Employment and Consumer Price Index, 1929-1958

Source: See Table 22.

TABLE 22.--Employment and Consumer Price Index, 1929-1958

Year	Employment			Consumer Price Index	
	Labor Force Civilian (Thousands)	Employed (Thousands)	Per Cent Employed	Index (1947-49 = 100)	Change
1929	49,180	47,630	96.8	73.3	
1930	49,820	45,480	91.3	71.4	-1.9
1931	50,420	42,400	84.1	65.0	-6.4
1932	51,000	38,940	76.4	58.4	-6.6
1933	51,590	38,760	75.1	55.3	-3.1
1934	52,230	40,890	78.3	57.2	+1.9
1935	52,870	42,260	79.9	58.7	+1.5
1936	53,440	44,410	83.1	59.3	+ .6
1937	54,000	46,300	85.7	61.4	+2.1
1938	54,610	44,220	81.0	60.3	-1.1
1939	55,230	45,750	82.8	59.4	- .9
1940	55,640	47,520	85.4	59.9	+ .5
1941	55,910	50,350	90.1	62.9	+3.0
1942	56,410	53,750	95.3	69.7	+6.8
1943	55,540	54,470	98.1	74.0	+4.3
1944	54,630	53,960	98.8	75.2	+1.2
1945	53,860	52,820	98.1	76.9	+1.7
1946	57,520	55,250	96.1	83.4	+6.5
1947	60,168	58,027	96.4	95.5	+12.1
1948	61,442	59,378	96.6	102.8	+7.3
1949	62,105	58,710	94.5	101.8	-1.0
1950	63,099	59,957	95.0	102.8	+1.0
1951	62,884	61,005	97.0	111.0	+8.2
1952	62,966	61,293	97.3	113.5	+2.5
1953	63,815	62,213	97.5	114.4	+ .9
1954	64,468	61,238	95.0	114.8	+ .4
1955	65,848	63,193	96.0	114.5	- .3
1956	67,530	64,979	96.2	116.2	+1.7
1957	67,946	65,011	95.7	120.2	+4.0
1958	68,647	63,966	93.2	123.5	+3.3

Source: U. S., Department of Commerce, Office of Business Economics, Business Statistics, 1957 Edition: A Supplement to the Survey of Current Business (Washington, D. C.: Government Printing Office, 1957), pp. 56 and 26; U. S., Bureau of Labor Statistics, Monthly Labor Review, Vol. LXXX, June, 1957, pp. 739-747 and Vol. LXXXII, May, 1959, p. 594.

1934, prices turned up. The rise in prices and employment continued until 1937, when both took a drop, employment decreasing much more than prices. As employment turned up in 1939, prices began to rise slowly. Employment increased much faster than prices, until the Second World War. This period prior to the Second World War is interesting since it demonstrates clearly the effects which investment expenditures can have on income, employment, and prices. In addition, bottleneck situations must have played a significant part in causing prices to rise. Although the Second World War was characterized by a period of full employment, government controls, extending even into the employment area, prevented prices from rising very far.

As the war ended, employment declined, but prices continued to advance as the result of the spending of large liquid balances built up during the war. Employment decreased because many women and older men dropped out of the labor force and military personnel returned to civilian life. In 1949, employment dropped to 94.5 per cent, followed by a slight price decline. Although employment and prices increased prior to the Korean conflict, by 1951 they took a significant climb. During 1952 and 1953, prices tended upward. The average employment during this period was 97.4 per cent, probably an ideal situation, since prices increased only slightly. In 1954, employment dropped to 95.0 per cent, then increased in 1955 and 1956. The increase in employment in 1955 and 1956 prevented the decline of prices in 1955 from going any further. A most unusual situation

occurred during the period 1956 to 1958; as employment declined, prices rose steadily.

The historical lesson of employment and prices from 1929 until 1956 seems very clear. The economic situation appears to follow the theoretical principles of inflation rather closely, as pointed out in Chapter II of this study. In a depression, an increase in investment expenditures will produce more income. This increase in income will bring about more employment and output. Once full employment is reached, the investment expenditures will cause inflation instead of an increase in output. Also, as the labor force approaches full employment, bottlenecks will develop and cause some prices to rise.

It is apparent that, as employment reaches and passes 95 per cent, there is a tendency for prices to rise. It seems that, once employment reaches 97 per cent or higher, prices will rise freely unless checked by direct controls.

Effect of Wages on Prices

In the examination into the causes of inflation it was found that, although investment expenditures were the primary cause of inflation, wage increases brought about by labor unions may exert enough pressure to push prices upward. In an analysis of wages and their effect on prices, it is generally assumed that productivity should be taken into consideration.

It is difficult to assess precisely the effects of wages on prices because accurate information is not available on the demands by labor unions for higher wages, labor unions vary their timing for wage increases, and wages do not reflect the many fringe benefits received from employers. However, there are some general clues which indicate that union pressure tends to raise prices; first, individual firms have raised their prices after wage increases were demanded by labor; second, escalator clauses are very popular not only with unionized labor but also among many unorganized workers; and, wage increases have been more significant following the Second World War than during or before the war.

Table 23 shows average hourly wages and output per man-hours from 1929 to 1958. Prior to the Second World War and especially during the period from 1929 to 1940, productivity increased much faster than wages. This increase in productivity may be attributed to several factors. First, efficiency increased because only the most productive workers were employed during this period of unemployment. Second, costs were reduced because industry continued development of mass-production techniques and replaced its facilities with more productive machines. In addition, labor unions were just being organized; and, because of unemployment, pressure for wage increases was felt very little. Unions were more interested in improving working conditions in general and not in receiving wage increases alone. From 1929 on, the index for average hourly wages

TABLE 23.--Average Hourly Wages and Output per Man-hours, 1929-1958

Year	Average Hourly Wages		Output per Man-hours Index ^a (1947 = 100)
	Wages	Index (1947 = 100)	
1929	.566	45.76	75.0
1930	.552	44.6	76.8
1931	.515	41.6	80.2
1932	.446	36.1	74.7
1933	.442	35.7	78.6
1934	.532	43.0	82.5
1935	.550	44.5	87.2
1936	.556	44.9	87.4
1937	.624	50.4	86.4
1938	.627	50.7	87.9
1939	.633	51.1	96.0
1940	.661	53.4	na
1941	.729	58.9	na
1942	.853	68.9	na
1943	.961	77.7	na
1944	1.019	82.4	na
1945	1.023	82.7	na
1946	1.086	87.8	na
1947	1.237	100.0	100.0
1948	1.350	109.1	na
1949	1.401	113.3	108.6
1950	1.465	118.4	117.7
1951	1.59	128.5	117.5
1952	1.67	135.0	119.1
1953	1.77	143.1	122.7
1954	1.81	146.3	na
1955	1.88	151.9	na
1956	1.98	160.1	134.1E
1957	2.07	167.3	137.9E
1958	2.19	177.0	140.0E

Source: U. S., Department of Commerce, Office of Business Economics, Business Statistics, 1957 Edition: A Supplement to the Survey of Current Business (Washington, D. C.: Government Printing Office, 1957), p. 74; U. S., Bureau of Labor Statistics, Monthly Labor Review, Vol. LXXIX, Jan., 1956, pp. 1-6 and Vol. LXXXII, April, 1959, p. 469; U. S., Department of Labor, Bureau of Labor Statistics, Handbook of Labor Statistics, 1950 Edition (Washington, D. C.: Government Printing Office, 1950), Bulletin 1016, p. 168; U. S., Bureau of Labor Statistics, Trends in Output per Man-hour and Man-hours per Unit of Output: Manufacturing, 1939-1953, Report No. 100, p. 28.

a. The Output per Man-hours Index for 1929-1939 has been converted to the 1947 base to agree with the latter series.

na. Not available

E. Estimated

increased only 5.3 percentage points, while the index for output per man-hour increased 21.0 percentage points.

During the period, 1940 to 1947, productivity as well as wages increased. In the early 1940's, especially during 1941 and 1942 when production was expanding rapidly, wage increases were mainly the result of manufacturers' wanting to get their share of the labor market by offering more money to workers. Wage restrictions were enforced during the war to prevent serious increases, but overtime hours permitted by many manufacturers caused average wages per hour to grow.

The wage increases in 1946 and 1947 were brought about largely by union pressure in the form of strikes, but management, not wishing to stop production for long, thereby losing a share of the market, granted higher wages. Although significant wage gains did not occur until 1949, they were offset in part that year by productivity gains. In the following year productivity increased more than wages, only to be cut short by the new wage grants in 1951. Union pressure was partly responsible for price rises during this period, but large government outlays had more effect on the price level. From 1951 until the present, wages have continually increased. After 1952 the price index did not rise significantly until 1956 and 1957, indicating that the wage increases had been offset to some degree by rising productivity.

From 1947 until 1958 wages increased 77.0 per cent while productivity rose only 40.0 per cent. This increase in wages has had

a significant effect on prices but has been offset in part by increasing productivity. It is very difficult to assess the actual effect of wages on prices since wage increases may be caused by either an expansion of investment expenditures or by pressure from labor unions. Although greater productivity has reduced the effect of increased wages on prices, we do know that labor unions have used terrific pressure during the last fourteen years to achieve higher wages. The advent of escalator clauses, which adjust wages in relation to prices, has exerted additional pressure on the price level.

Government Expenditures, Business
Investment, and Consumer Investment

Much more significance can be attached to the effects of investment outlays on inflation when one examines the component parts of these expenditures because certain aggravating or offsetting tendencies can be seen more clearly. (See Chart 19 and Table 24). During the depression the decline in total expenditures was the result mainly of a rapid decline in business investment and some decrease in production of consumer durable goods. Although government expenditures were increased, they had little effect on the economy, and these expenditures in turn began to decline. In 1934 the upturn in economic activity was largely the result of investment expenditures by business firms and the government, with consumer durables giving added stimulus. In 1937 government expenditures were reduced slightly, and this probably influenced business and consumers enough in that they in turn

CHART 19.--Total Investment Expenditures, Government Purchases of Goods and Services, Gross Private Domestic Investment, and Consumer Durable Goods Expenditures During Inflationary Periods, 1929-1958

Source: See Table 24.

Note: Shaded areas denote inflationary periods.

TABLE 24.--Investment Expendi

Investment Expenditures (Constant Dollars)					
Year	Total		Government Purchases Goods and Services		A (Billions)
	Amount (Billions)	Index (1947-49 = 100)	Amount (Billions)	Index (1947-49 = 100)	
1929	\$ 68.4	61.1	\$ 18.5	42.1	\$
1930	55.9	50.0	20.5	46.7	
1931	46.9	41.9	21.6	49.2	
1932	32.2	28.8	20.5	46.7	
1933	31.4	28.1	19.9	45.3	
1934	38.8	34.7	22.8	51.9	
1935	49.8	44.5	23.0	52.4	
1936	61.0	54.5	26.9	61.3	
1937	66.8	59.7	26.0	59.2	
1938	55.5	49.6	28.8	65.6	
1939	65.0	58.1	30.1	68.6	
1940	75.4	67.4	31.1	70.8	
1941	102.0	91.2	47.7	108.7	
1942	129.8	116.0	100.1	228.0	
1943	158.0	141.2	137.9	314.1	
1944	173.1	154.7	152.2	346.7	
1945	158.0	141.2	131.2	298.9	
1946	106.2	94.9	44.4	101.1	
1947	102.1	91.2	37.3	85.0	
1948	118.2	105.6	43.8	99.8	
1949	115.4	103.1	50.6	115.3	
1950	136.2	121.7	48.2	109.8	
1951	152.4	136.2	65.5	149.2	
1952	158.1	141.3	79.2	180.4	
1953	169.6	151.6	85.9	195.7	
1954	157.9	141.1	76.6	174.5	
1955	176.8	158.0	74.7	170.2	
1956	175.2	156.6	74.2	169.0	
1957	170.9	152.7	75.0	170.8	
1958	160.3	143.3	78.1	177.9	

Source: Survey of Current Business, July, 1958, pp. 10-11 and Economics, Business Statistics, 1957 Edition: A Supplement to the Survey (1957), p. 26; U. S., Bureau of Labor Statistics, Monthly Labor Review,

itures and Consumer Price Index, 1929-1958

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Gross Private Domestic Investment		Consumer Durable Goods		Consumer Price Index
Amount (Billions)	Index (1947-49 = 100)	Amount (Billions)	Index (1947-49 = 100)	(1947-49 = 100)
\$35.0	80.9	\$14.9	60.2	73.3
23.6	54.5	11.8	47.7	71.4
15.0	34.6	10.3	41.6	65.0
3.9	9.0	7.8	31.5	58.4
4.0	9.2	7.5	30.3	55.3
7.4	17.1	8.6	34.8	57.2
16.1	37.2	10.7	43.3	58.7
21.0	48.5	13.1	53.0	59.3
27.0	62.4	13.8	55.8	61.4
15.5	35.8	11.2	45.3	60.3
21.6	49.9	13.3	53.8	59.4
29.0	67.0	15.3	61.9	59.9
36.7	84.8	17.6	71.2	62.9
18.8	43.4	10.9	44.1	69.7
10.7	24.7	9.4	38.0	74.0
12.3	28.4	8.6	34.8	75.2
17.0	39.3	9.8	39.6	76.9
42.4	97.9	19.4	78.4	83.4
41.5	95.8	23.3	94.2	95.5
49.8	115.0	24.6	99.5	102.8
38.5	88.9	26.3	106.3	101.8
55.9	129.1	32.1	129.9	102.8
57.7	133.3	29.2	118.1	111.0
50.4	116.4	28.5	115.2	113.5
50.6	116.9	33.1	133.8	114.4
48.9	112.9	32.4	131.0	114.8
62.5	144.3	39.6	160.1	114.5
63.1	145.7	37.9	153.2	116.2
57.8	133.5	38.1	154.0	120.2
47.4	109.5	34.8	140.7	123.5

reduced their expenditures in the following year. In 1938, an increase in government expenditures brought increased business activity. Although prices were beginning to rise, the decline in business and consumer investment in 1938 caused prices to decline. The price declines in 1938 and 1939 were short-lived since investment expenditures made by all three sectors began to increase. From 1938 to 1940, business investment increased much faster than either consumer or government investment. Expenditures by all three segments continued to increase. During this period, as unemployment was reduced, bottleneck situations developed, causing prices to rise. Even though there was some inflation, the growth of the economy was sound since the gross national product was increasing much faster than were prices. It should be remembered that, although prices were going up, they had not yet reached their 1929 high. This peak was not reached until the early part of 1943.

The Second World War brought on an unrestrained increase in government expenditures, while at the same time business and consumer investment were restricted. Much of the business investment that did occur during the early part of the war was a result of conversion from civilian production to military production. The factors most responsible for easing the pinch of military demand were the rapid increase in productivity of standard-type equipment and the use of newer technical developments. Labor contributed its share by working harder and by spending many overtime hours turning out material.

Government controls during this period held in check any great price increase that might have resulted from large government expenditures. Small price increases did occur, largely as the result of the imperfections of the government controls. As the war neared its end, government expenditures were drastically cut, while business investment and consumer investment began to increase. The fluctuation in business investment and the decline in government expenditures during this period affected prices, but the increases were largely the result of liquid balances accumulated during the war. By 1948 political action called forth an increase in government expenditures as well as in business investment. In 1949 the inflationary pressures had temporarily worked themselves out of the system, and prices became stable. Although consumer expenditures continued to rise, business expenditures fluctuated in such a manner that they offset fluctuations in government expenditures, thus keeping the price level stable.

The increase in business expenditures and consumer expenditures in 1950 probably caused prices to rise, but the rapid increase in government expenditures gave a significant push to the price level. Consumer investment was down in 1951 and 1952, followed by a decline in business investment. This decrease in expenditures was partly offset by the rapid increase in government expenditures. By 1953 a reduction in total investment expenditures was brought about largely by decreased government and business expenditures. Consumer investment increased in 1953 but leveled off in 1954. During this period prices were fairly stable because of the decline in government

expenditures was counteracted by an increase in business and consumer investment. In 1955 business expenditures and consumer durable expenditures expanded. Consumer durable expenditures declined in 1956, but business investment continued to increase. As the result of these expenditures by business firms in 1955 and 1956 and by consumer durables in 1955, prices began to rise. From 1956 until 1958 both types of expenditures have declined significantly.

The most significant causes of inflation from 1929 to 1958 were large government expenditures made during the Second World War and during the Korean conflict and wage increases in excess of productivity gains. Although business investment and consumer expenditures fluctuated, causing some price increases, they had less impact on inflation than did government outlays.

With regard to fluctuations, an important deduction can be made from the data presented here. Government spending changes more radically than either business or consumer outlays. Government expenditures are much larger and of course fluctuate by a much greater amount than either business or consumer expenditures. Business investment fluctuates much more rapidly; that is, there are more advances and declines than in either government or consumer outlays. Consumer expenditures fluctuate, but not as drastically as either government or business, nor as often as business expenditures. In other words, consumer investment appears to be more stable than either government or business expenditures.

Consumer Durable Goods, Instalment
Credit, and Prices

Consumer durable goods expenditures, instalment credit outstanding, and the price index are shown in Chart 20 and Table 25. Generally from 1929 to 1948, instalment credit has followed the same pattern as consumer durable goods. From 1948 to 1958, instalment credit has taken a different course from that taken by consumer durable goods. This change is due to an alteration in financing terms, such as a decline in down payments and extending maturities or the use of instalment credit for purposes other than to purchase durable goods. It will be noted from this chart that consumer durables and instalment credit outstanding increased much faster and achieved a much greater height than did the Consumer Price Index. This indicates again that there must be subtle influences at work to cause prices to change. Actually, the significance of consumer credit and durable goods for the purpose of measuring their influence on prices lies in the fluctuations and not necessarily in the amount of outstanding instalment credit at any one time. Consequently, in order to appraise the importance of consumer durable goods and instalment credit as an inflationary force, it is necessary to compare their fluctuations with fluctuations in the price level.

Fluctuations in Instalment Credit, Durable Goods, and the Price Level.--Chart 21 shows the changes in instalment credit, consumer durable goods, and the price index. In each series the net change from one year to another was found and plotted. These are

CHART 20.--Consumer Durable Goods, Instalment Credit, and Prices, 1929-1958

Source: See Table 25.

TABLE 25.--Consumer Durable Goods Expenditures, Instalment Credit, and Consumer Price Index, 1929-1958

Year	Consumer Durable Goods			Instalment Credit Outstanding			Consumer Price Index (1947-49 = 100)	
	Amount (Billions)	Dollar Change	Index (1947-49 = 100)	Amount (Billions)	Dollar Change	Index (1947-49 = 100)	Index	Change
1929	\$ 9.2		40.7	\$ 3.2		35.2	73.3	
1930	7.2	-2.0	31.8	2.7	- .5	29.7	71.4	-1.9
1931	5.5	-1.7	24.3	2.2	- .5	24.2	65.0	-6.4
1932	3.6	-1.9	15.9	1.5	- .7	16.5	58.4	-6.6
1933	3.5	- .1	15.5	1.6	+ .1	17.6	55.3	-3.1
1934	4.2	+ .7	18.6	1.9	+ .3	20.9	57.2	+1.9
1935	5.1	+ .9	22.5	2.7	+ .8	29.7	58.7	+1.5
1936	6.3	+1.2	27.8	3.6	+ .9	39.6	59.3	+ .6
1937	6.9	+ .6	30.5	4.0	+ .4	44.0	61.4	+2.1
1938	5.7	-1.2	25.2	3.7	- .3	40.7	60.3	-1.1
1939	6.7	+1.0	29.6	4.5	+ .8	49.5	59.4	- .9
1940	7.8	+1.1	34.5	5.5	+1.0	60.4	59.9	+ .5
1941	9.7	+1.9	42.9	6.1	+ .6	67.0	62.9	+3.0
1942	7.0	-2.7	30.9	3.2	-2.9	35.2	69.7	+6.8
1943	6.6	- .4	29.2	2.1	-1.1	23.1	74.0	+4.3
1944	6.8	+ .2	30.1	2.2	+ .1	24.2	75.2	+1.2
1945	8.1	+1.3	35.8	2.5	+ .3	27.5	76.9	+1.7
1946	15.9	+7.8	70.3	4.2	+1.7	46.2	83.4	+6.5
1947	20.6	+4.7	91.0	6.7	+2.5	73.6	95.5	+12.1
1948	22.7	+2.1	100.3	9.0	+2.3	98.9	102.8	+7.3
1949	24.6	+1.9	108.7	11.6	+2.6	127.5	101.8	-1.0
1950	30.4	+5.8	134.4	14.7	+3.1	161.5	102.8	+1.0
1951	29.5	- .9	130.4	15.3	+ .6	168.1	111.0	+8.2
1952	29.1	- .4	128.6	19.4	+4.1	213.2	113.5	+2.5
1953	32.9	+3.8	145.4	23.0	+3.6	252.7	114.4	+ .9
1954	32.4	- .5	143.2	23.6	+ .6	259.3	114.8	+ .4
1955	39.6	+7.2	175.0	29.0	+5.4	318.7	114.5	- .3
1956	38.4	-1.2	169.7	31.8	+2.8	349.5	116.2	+1.7
1957	39.9	+1.5	176.4	34.1	+2.3	374.7	120.2	+4.0
1958	36.8	-3.1	162.7	33.9	- .2	372.5	123.5	+3.3

Source: Survey of Current Business, July, 1958, pp. 4-7; Feb., 1959, pp. 12-13; Federal Reserve Bulletin, April, 1953, pp. 336-354; June, 1955, p. 638; October, 1956, pp. 1035-1042; April, 1957, p. 452; Dec., 1957, pp. 1420-1422; Nov., 1958, pp. 1344-1345; March, 1959, p. 300; U. S., Department of Commerce, Office of Business Economics, Business Statistics, 1957 Edition: A Supplement to the Survey of Current Business (Washington, D. C.: Government Printing Office, 1957), p. 26; U. S., Bureau of Labor Statistics, Monthly Labor Review, Vol. LXXII, April, 1959, p. 471.

CHART 21.--Changes in Consumer Price Index, Consumer Durable Goods,
and Instalment Credit, 1929-1958

Source: See Table 25.

actual dollar changes in instalment credit and durable goods, while the change in prices is the change in the index from one year to the next.²

During the period from 1929 to 1939, there was, of course, little inflation since much of the activity was a recovery from the depression. Even in the late 1930's and early 1940's, excess unemployment resulted in few price increases. If the expansion of durable goods produced an income-increasing effect during this period, then an expansion of these goods was very desirable. It is questionable that a forced expansion of durable goods would have had much effect on the economy because of the relative unimportance that these goods had to the total economy.

In 1941, there was a rapid expansion of durable goods, while the net credit change decreased. This rapid expansion may have contributed to some inflationary influence at that time, but the greater part of the price rise is attributed to government expenditures and those of businesses. Governmental restrictions on production reduced the output of consumer durables in the latter months of 1941, and production was discontinued for all practical purposes in the early part of 1942.

²The net change in instalment credit grossly overstates the influence that this type of credit has on economic activity, but it is used here because it is the only practical means available to measure its cyclical importance. See Chapter V, p. 211, of this study.

It was not until the middle of 1946 that full-scale production of durable goods was achieved. Even though liquid savings were used largely for the purchase of durable goods at this time, instalment credit began to rise, although not as rapidly as did expenditures for durable goods. Although inflation is largely accounted for through the use of liquid assets and the short supply of goods, it should not be forgotten that business and consumer durable expenditures made their contribution to part of this price rise or at least to the length of time during which prices continued to rise. Inflation was inevitable at this time, but expenditures for consumer durables and business investment prolonged the inflationary period. There was a slight reduction in the demand for consumer durable goods in 1948 and 1949, while instalment credit continued to expand. It is probable that at this time instalment credit was being rapidly channeled into other marketing areas besides that of consumer durable goods. Strong competitive conditions in department stores, small businesses, and other soft goods firms probably influenced the use of instalment credit for other purposes than for durable goods at this time. In 1950, consumer durable goods expanded very rapidly, for consumers were afraid of being caught short of goods as they had been in 1942. Consumer durables may have caused some inflationary pressure in 1950, but again it was relatively small as government expenditures and business expenditures played a much more predominant part in that inflationary period. After 1952 the price level was relatively stable, rising very little until 1956. There was, of course, a sharp rise

in instalment credit and consumer durables in 1955, mainly in automobiles. Consumer durables may have contributed to this inflationary pressure, but it must be realized that such factors as increased business expenditures and wage increases were present to help boost the inflationary pressure. Since 1955 the net change in instalment credit has been positive but declining and was negative in 1958.

The most significant factor that can be observed from Chart 21 is that from 1948 to the present there have been some wide movements in the changes in outstanding amounts of instalment credit and durable goods, with only minor movements in the Consumer Price Index. Even discounting the fact that large amounts of credit may be used for other things than durable goods, the fluctuations in credit compared to the price index are distinct and appear to have little connection with actual price rises. The wide oscillation in credit in relation to small price rises is especially true of the period following the Korean conflict.

Further evidence of the magnitude of instalment credit's influence on the economy is presented in Table 26. Although the net change in instalment credit overstates the contribution of instalment credit to consumer expenditures, it is related to several basic economic aggregates. By comparing this magnitude with national income, disposable personal income, and total investment expenditures, one may form an opinion about the relative quantitative importance of fluctuations in instalment credit.

TABLE 26.--Relation of Net Instalment Credit Change to National Income, Disposable Personal Income, and Total Investment Expenditures, 1929-1958

Year	Net Change Instalment Credit ^a (Billions)	National Income (Billions)	Net Change as Per Cent of National Income	Disposable Personal Income ^b (Billions)	Net Change as Per Cent of Dispos- able Income	Total Government, Business, Consumer Durables ^b (Billions)	Net Change as Per Cent of Total
1929		\$ 87.8		\$ 83.1		\$ 33.9	
1930	\$- .5	75.7	- .66	74.4	- .67	26.7	-1.87
1931	- .5	59.7	- .84	63.8	- .78	20.2	-2.48
1932	- .7	42.5	-1.65	48.7	-1.44	12.6	-5.56
1933	.1	40.2	.25	45.7	.22	12.9	.78
1934	.3	49.0	.61	52.0	.58	16.9	1.78
1935	.8	57.1	1.40	58.3	1.37	21.4	3.74
1936	.9	64.9	1.39	66.2	1.36	26.5	3.40
1937	.4	73.6	.54	71.0	.56	30.3	1.32
1938	- .3	67.6	- .44	65.7	- .46	25.2	-1.19
1939	.8	72.8	1.10	70.4	1.14	29.3	2.73
1940	1.0	81.6	1.23	76.1	1.31	35.1	2.85
1941	.6	104.7	.57	93.0	.65	52.6	1.14
1942	-2.9	137.7	-2.11	117.5	-2.47	76.6	-3.79
1943	-1.1	170.3	- .65	133.5	- .82	100.8	-1.09
1944	.1	182.6	.55	146.8	.07	110.4	.09
1945	.3	181.2	.17	150.4	.20	101.4	.30
1946	1.7	180.9	.94	160.6	1.06	74.8	2.27
1947	2.5	198.2	1.26	170.1	1.47	80.6	3.10
1948	2.3	223.5	1.03	189.3	1.22	101.9	2.26
1949	2.6	217.7	1.19	189.7	1.37	101.0	2.57
1950	3.1	241.9	1.28	207.7	1.49	122.2	2.54
1951	.6	279.3	.21	227.5	.26	148.4	.40
1952	4.1	292.2	1.40	238.7	1.72	156.5	2.62
1953	3.6	305.6	1.18	252.5	1.43	167.6	2.15
1954	.6	301.8	.20	256.9	.23	157.9	.38
1955	5.4	330.2	1.64	274.4	1.97	180.5	2.99
1956	2.8	349.4	.80	290.5	.96	186.9	1.50
1957	2.3	364.0	.63	305.1	.75	192.3	1.20
1958	- .2	360.5	- .06	311.6	- .06	182.4	- .11

Source: a. See Table 25.

b. Survey of Current Business, 1929-1956 data, July, 1958, pp. 4-7; 1957-58 data, Feb., 1959, pp. 12-13.

A study of the data presented in the table suggests that the influence of instalment credit during the period under observation, although not negligible, was not a very potent force. The net change was never more than 1.6 per cent of national income in any of the years from 1929 to 1958, except for the sharp decline during the depression and early war years. Since 1946 it has averaged less than 1 per cent, and in 1955, a year of unusual business activity, it was below 1.7 per cent. A comparison with disposable personal income and total investment expenditures yields, of course, somewhat higher percentages, but it can be said with reasonable certainty that instalment credit and consumer durable goods have caused little or no inflation. Of course, this must be qualified to the extent that consumer durable goods do cause some increases in income which cannot be detected from the data.

Relative Importance of Each Type of Investment Expenditure

In the analysis of the effects of consumer durables on the economy it has been found that these goods may have caused some inflation but that their influence has been overshadowed by other factors in the national balance sheet. Prior to the Second World War (1935-1940), government expenditures averaged about 44.4 per cent of the total investment expenditures, while business expenditures averaged 34.8 per cent, and consumer durables averaged 20.7 per cent. During the Second World War (1942-1945), government expenditures

averaged 84.2 per cent of the total, while business expenditures averaged 9.5 per cent, and consumer durables averaged 6.3 per cent. From 1946 to 1958, government expenditures averaged 43.9 per cent, business expenditures averaged 35.1 per cent, and consumer durable expenditures averaged 21.0 per cent.³

On the basis of the relative importance of various types of investment expenditures, it is easy to see that government expenditures have been largely responsible for the inflationary pressures. These expenditures have held significant positions in each period of inflation.

Summary

A study of the figures in the preceding sections, especially those dealing with the relation of consumer durable goods to installment credit, suggests that the importance of these factors during the period 1929 to 1958, while not negligible, was not very great. Expenditures of government and business tend to lead other expenditures and are, therefore, the primary cause in bringing about changes in national income and prices. The income-generating expenditures of the government were positive throughout many of the periods. During the 1945 to 1948 period, government expenditures were negative, but it is generally concluded that the liquid balances accumulated from government war expenditures were the main cause of the continued

³The data used to make the computations are found in Table 24, p. 251, of this study.

inflationary movement. Even the expansion of business expenditures and consumer investment during this time does not detract from the main conclusion that government policy was mainly responsible for inflation.

Again in 1951 and 1952, the drastic increase in prices placed responsibility on the government as the main violator of a stable price level. Even though business investment and consumer investment expanded in 1950, rising prices were largely the result of government expenditures required to wage the Korean conflict. Although government controls were in operation, these were neither universally applied to the economy nor were they strict enough.

Two important factors, which may be to some degree independent of investment expenditures, should be considered before placing complete blame on any sector as the cause of inflation. These are (1) a policy aimed at carrying out a full employment program and (2) union pressure in raising costs and prices through wage increases. These have been especially important since 1946.

Conclusions based on the data presented here show that installment credit and durable goods cannot be regarded as major factors in causing fluctuations in the general level of prices during the period under observation. It is hardly possible, for example, to attribute the price rises of 1941 to 1948, 1950 to 1951, and 1957 to 1958 to fluctuations of installment credit and consumer durable goods.

CHAPTER VII

SUMMARY AND CONCLUSIONS

With the rapid increase in instalment credit and expansion of consumer durable goods since the end of the Second World War and especially during 1955, it has been thought that this type of credit contributes to economic instability. Whether an expansion of instalment credit is a force which may cause prices to rise unless checked by selective regulation or whether it is a desirable and necessary part of America's rising standard of living is an issue which divides many people. The concern over the possible inflationary effects of instalment credit is stimulated by an interest in the nation's economic health and is worthy of consideration. Credit of all types has been of interest to economists since the first economic theories were developed, but it was not until the substantial growth of consumer instalment credit during the 1920's that it became of interest to the public as well as to economists. A brief historical review of consumer credit theories shows that economists have not provided a crystallization of principles nor have they reached any general agreement on these theories. Added to the confusion of credit theories is the fact that economists are not in complete agreement as to the nature and causes of inflation.

Economic Problem of Inflation

Inflation has been described as one of the most pressing internal economic problems that the United States must face in the next decade. Economists, businessmen, and consumers, as well as government officials, are concerned over inflation because of its effects on the value of money, i.e., its purchasing power. The purchasing power of money varies inversely with the general price level. When the price level increases, the purchasing power of the dollar declines.

The real importance of inflation lies in the fact that it does not affect every one equally. Generally speaking, if the money income of individuals and institutions remains fixed or rises less rapidly than the price level, they will lose purchasing power and real income. If their money income rises more rapidly than the price level, they will gain in terms of purchasing power. As measured by the Consumer Price Index, a widely used government-composed index, the dollar has declined in value by \$.52 from 1939 to 1958, and from 1949 until the present the value has declined by \$.18, based on average prices during 1947-1949.

The most central problem then is what causes the general price level to rise. Economic theory suggests two approaches to an explanation of inflation. The first, the monetary approach, assumes that a change in the quantity of money is the primary cause of inflation. The value of money is taken to be a function of its quantity, and the general level of prices tends to vary directly and

proportionately with the supply of money. If it is to be concluded that the general price level varies directly with the quantity of money, it must be assumed that the volume of trade and velocity of money are constant. But since these factors could vary in many possible combinations and thus bring about a change in the general price level, the validity of the quantity theory is subject to serious criticism.

The second approach to inflation stresses changes in the total volume of spending for consumption and investment rather than simply changes in the quantity of money as an explanation of increases in the price level. The effects of increased spending vary according to whether the economy is running at full or less-than-full employment. Under conditions of less-than-full employment, with large numbers of workers, plants, and resources idle, an increase in spending causes a greater increase in production than in prices. Under full employment further increases in physical production are impossible; so the increased spending will react solely on prices. Also, apart from the effect of spending on prices, wage gains in excess of productivity will push prices up.

A relatively stable price level is generally regarded as being conducive to sound economic growth. Control of prices must be a many-sided program because of the complexities of inflation. A budgetary surplus for the government, sufficient tax programs, monetary restraint, and resistance to wage adjustments are necessary to control inflation in normal times. Moreover, the control of

instalment credit has been and is being proposed to prevent inflation and at least to reduce, if not to cure, the cyclical fluctuations in the quantity of consumer durable goods, as well as in the business cycle.

Role of Instalment Credit in the Economy

Instalment credit, as defined in this study, is characterized as credit used for personal needs, extended for a short or intermediate period of time, and repayable in a number of periodic payments. Charge account credit and real estate mortgage credit are excluded from the definition of consumer instalment credit. In broad perspective, consumer instalment credit, like any other type of credit, is a means by which some of the wealth of society is placed at the disposal of those who find it advantageous to go into debt to acquire command over wealth. The need to use instalment credit is derived principally from the demand for high unit-value goods and services.

About three-fourths of the total instalment credit arises out of the sale of commodities, and the remainder is extended in the form of cash loans. Credit extended for purchasing automobiles is the most important and currently accounts for over one-half of the total instalment sales credit. Approximately one-third of the sales credit is used for the purpose of acquiring major durable household goods and appliances as well as for semidurable and the more costly nondurable goods. The remaining sales credit is

extended for the purpose of financing home maintenance and improvements. Personal or cash loans are extended for the purpose of consolidating debts, payments of medical, education, and travel expenses, and for taxes and insurance, or for any other worthy purpose.

The supply of instalment credit comes from the funds flowing into the consumer loan institutions. The basic sources of funds are savings and bank credit. Credit agencies, both financial institutions and retail outlets, have developed in this country to meet a variety of consumer needs.

Much of the instalment credit extended for the purchase of goods originates at the retail level, but many of the instalment contracts are sold to financial institutions, usually banks or sales finance companies. As a result, retail dealers hold less than 20 per cent of the outstanding credit.

Of the financial institutions, commercial banks are the most important suppliers of instalment credit. They extend directly to consumers about 44 per cent of the total credit and about 8 per cent indirectly through the other loan institutions, thus accounting for slightly more than 50 per cent of the total consumer instalment credit. Sales finance companies, engaged in extending credit for the purchase of automobiles and other durable goods, hold about one-third of the total instalment credit supplied by financial institutions. Consumer finance companies, dominant in the field of cash loans, hold about 12 per cent of the instalment credit. Credit unions hold only 10 per cent of the total credit but are significant

in the field of consumer finance in that they have had a remarkable growth in the last twenty years. Included in the remaining consumer financial institutions are savings and loan associations, industrial loan companies, and mutual savings banks, which extend only small amounts of instalment credit.

Growth and Importance of Instalment Credit

The absolute volume of consumer instalment credit has increased very rapidly since the middle 1920's. Its growth and importance have been accompanied by dynamic change and rapid expansion of the whole economy. Instalment credit has increased faster than consumer durable goods, but it cannot be related to that alone since it has been used increasingly for nondurable goods and services. However, the rate of growth of expenditures for durable goods has increased more than the rate of expenditures for total goods and services. One measure of the importance of total outstanding instalment credit is to relate it to disposable personal income. In 1929, it was 3.9 per cent of disposable personal income, but it increased to 10.9 per cent in 1956. Further evidence of the relative increase of instalment credit is indicated by a comparison with the total public and private debt. Instalment debt rose from 1.7 per cent of the total debt in 1929 to 4.4 per cent in 1958.

Relation of Instalment Credit to Inflation

Inflation, whether caused by actions on the part of the government, business, or consumers, is one of the most important and striking aspects of economic instability. Because rising prices are associated with diminishing purchasing power of the dollar, inflation has been attributed mainly to monetary factors. Since instalment credit is part of the monetary system, it was thought, therefore, that an expansion of this type of credit posed a serious threat to stable prices.

Modern students of business conditions believe that anything is to be regarded as a cause of inflation which contributes to an excess of effective demand over effective supply. If demand consists of actual expenditures, then inflation can be traced to the economic sector making the expenditures. Implicit in this total spending analysis is the concept that at any given time there is some level of spending at which the economy would be relatively fully employed, with no tendency for prices to change. If spending were above the ideal level of economic stability, there would be a tendency toward inflation. The question which is of major concern in this study is whether instalment credit contributes to total spending which may go above the ideal level and thus be a cause of inflation. The impact of instalment credit is on the spending-income relationships of consumers and in turn on aggregate demand.

In stating the effects of instalment credit on economic activity, it is traditionally reasoned that, if the credit supply is elastic, new credits add to consumer demand. Under conditions of unused resources, this expansion of credit has a favorable effect on production; under conditions of full employment, the increase in credit causes prices to rise. If instalment credit induces borrowers to spend increased proportions of their income, then aggregate demand would be higher than without such credit.

Here it is assumed that instalment credit not only transfers goods and services but also generates demand. But modern economic analysis holds that money and credit are passive factors in economic activity and that they are employed depending on the requirements of the users. An inquiry into the reasons why instalment credit expands is explained by changes in the attitude toward debt, in consumer income, in the inventory of durable goods in hands of consumers, and, also, in the development of new products. These are the most important psychological and economic factors which account for the use of durable goods and fluctuations in the demand for them and hence for the changes in the use of instalment credit.

Further support concerning the question of whether instalment credit adds to consumer demand and influences aggregate demand is found in an analysis of the funds supplied to the loan agencies. A large portion of instalment credit expenditures is financed through the use of transfer funds; and, although consumer expenditures are increased, demand is reduced elsewhere. Also, an expansion of

instalment credit has little effect on aggregate demand if the borrower has savings to offset the transaction or if the instalment purchases are made at the expense of other goods and services. Any expenditure financed by instalment credit, which is not a transfer of funds or offset by the above factors, may tend to be inflationary.

Although the demand for durable goods and instalment credit may affect prices, an increase in credit and production of durable goods may actually have beneficial results. The industries most closely associated with instalment credit are subject to decreasing costs, and important economies are obtainable from an expansion of their output. The production and use of these durable goods may also influence related and satellite industries in such a way that reduced costs and prices result. Also, the use of instalment credit has brought about an increase in real income because of the shift in demand to durable goods, which increases the efficiency and productivity of their users.

Inflationary Developments Since 1929

To support the economic reasoning that instalment credit does not contribute to price increases, an investigation was made into the actual inflationary developments in the United States during the period 1929 to 1958. This investigation revealed that the most important causes of rising prices were large government outlays made during

the Second World War and the Korean conflict and wage increases granted in excess of productivity gains.

The absolute importance of consumer durable goods and instalment credit as an inflationary force lies in the fluctuations of the variables. Although the net change in outstanding instalment credit grossly overstates the influence of this credit, it is the only practical means to measure the effect of it on economic activity. A comparison of changes in the Consumer Price Index reveals that there have been wide movements in outstanding instalment credit and durables with only minor movements in the price index. Conversely, there have been substantial price changes without significant movements in instalment credit. The fluctuations in credit appear to be unrelated to changes in prices.

A comparison of the net change in instalment credit to national income supplies additional information on the relative quantitative importance of fluctuations in instalment credit. Since 1946 the positive dollar net change has averaged less than 1 per cent of national income. Even during the unusual business activity of 1955, the net change was only 1.6 per cent of national income, and, except for some sharp declines, it has never exceeded that amount from 1929 to the present.

Conclusions

The purpose of this study has been to bring together information of significance in the American economy on consumer instalment

credit, with the hope of contributing to a wider understanding of its role in the distribution of consumer durable goods and its bearing on the problems of economic stability and progress. The major conclusions reached are as follows:

1. The influence of instalment credit on the price level depends upon its effects not only on aggregate demand but also on aggregate supply. Judging from the past behavior of instalment credit and the nature of the goods for which it is mainly used, the forces associated with instalment credit on the supply side, through the advantages of mass production and distribution, have resulted in lower prices.

2. Aside from lowering prices, the use of instalment credit has changed the structure of consumer demand. Since credit permits greater flexibility in the consumer expenditure pattern, the consumer, instead of making small frequent purchases, can buy relatively high-priced durable goods. The changing structure of consumer demand is evidenced by the relative growth in demand for automobiles and major household durable goods. In addition, the use of consumer durables has stimulated the demand for products and services which are used in connection with the goods; for example, gasoline, oil, electricity, and repair services. The shift to durable goods, on the other hand, has dampened the demand and need for products and services that are in direct competition with durable goods, such as commercial refrigeration, laundry facilities, public transportation,

movie theaters and other entertainment, and domestic services. Thus the increased use and availability of consumer instalment credit has stimulated the relative rate of growth of durable goods and other products and as a result has contributed to significant changes in the whole consumption pattern of the American consumer.

3. Instalment credit has contributed to a higher standard of living. The use and extension of instalment credit is a necessary condition for economic welfare in that it permits the immediate acquisition of tangible goods with more long-lasting satisfaction. If instalment credit were not available, many consumers could not purchase these goods without saving in advance. In addition, it is used to finance special expenditures, to meet temporary deficits, and to take care of emergency expenditures resulting from accidents or ill health. For the economy as a whole, more extensive use of instalment credit will most likely result in an even higher standard of living.

4. Instalment credit is used by some individuals as a convenient method of payment and by others as the only possible way to acquire high-priced goods without increasing total consumer purchasing power. For those individuals who do not have the total purchase price at time of purchase but are creditworthy, the instalment mechanism provides the necessary discipline to acquire high-value durable goods, instead of purchasing items giving only temporary satisfaction. For those who have savings accounts and other liquid assets, instalment credit is more convenient because

it is a short-term commitment; it may be the least expensive method of purchase, and the debtors may want to retain their savings for unforeseen emergencies, or they may lack the will power to replace their savings.

5. Since instalment credit aids in economic development, there is little reason to be concerned over the quantity if the quality remains sound. Instalment credit fluctuates, but increases should not be viewed with alarm as long as the credit is extended on commonly accepted credit principles. The growth and development of this type of credit are based upon certain economic as well as psychological factors and will fluctuate according to changes in these basic factors.

6. The analysis of instalment credit and the economics of inflation, as presented in this study, indicates that instalment credit cannot be regarded as a major cause of inflation; therefore, rigid control is not necessary. The imposition of instalment credit regulation, such as minimum down payments and maximum maturities, would disrupt the allocation of resources, deter economic growth, and restrict the development of competitive practices among lending agencies. Socially, it would interfere with the individual's freedom. In addition, it is believed that the quantity of consumer credit is regulated sufficiently by general credit and monetary controls. As far as control is concerned, it appears that regulation, in order to protect the debtor, should be strengthened.

This points principally to the kind of regulation which protects the consumer from false information, hidden costs, dishonest or unfair contract terms and which tries to obtain for the consumer the benefit of competition among finance agencies.

Instalment credit has been a source of strength and growth in the development of a high level of economic activity without posing a serious threat to economic stability. However, there are threats to a stable price level which are always present in an economy where the price system allocates scarce resources among alternative uses, where government expenditures make up a large proportion of total expenditures, where oligopolist or monopolistic producers dominate major markets, and where powerful labor unions can exert enough pressure to achieve wage increases in excess of productivity gains. Full employment programs, which the government is now pledged to maintain, are also burdened with inflationary dangers. All these dangers must be recognized so that inflation can be prevented.

The economic goal for the American economy should be a high degree of employment without inflation and may be achieved by a concerted action on the part of the general public, businesses, and the government. If a relatively full employment policy is to succeed and prices are to be kept fairly stable, continuous emphasis must be placed on increased production and a higher standard of living. Instalment credit extended on the basis of sound and well-developed credit principles will help reach this objective by aiding in the distribution of goods and services to those who need and can use

them to best advantage. The use of this credit has become common in the wide range of consumer markets where manufacturers and distributors of durable goods rely heavily on its use to facilitate the movement of goods to consumers.

Whatever the actual growth may prove to be, it is reasonable to expect that instalment credit will continue to grow. The expanding use of goods that have had closest connection with instalment credit in the past, particularly the automobile and major household appliances, is likely to continue to be the dominant factor in the future expansion of such credit. A faster or slower rate in the distribution of these goods could significantly alter the rate of instalment credit growth. Technological innovations, common in our economy, could precipitate a faster development of credit. Also, recent years have witnessed innovations in the use of revolving credit plans by mail-order houses, department stores, and banking institutions, which will tend to encourage a more rapid growth of outstanding instalment credit. Even electrical and gas suppliers, as well as petroleum companies, will permit their bills to be paid on an even monthly payment regardless of the amount of electricity, gas, or petroleum products consumed during the particular month. Although this type of credit is usually not referred to as instalment credit, its mention here serves to point out some of the innovations continually going on in the credit field. Despite the present advanced stage of the development and consumer acceptance of

instalment credit, there still appear to be frontiers ahead with respect to both the extension and the intensity of its use.

This study, it is believed, provides an improved insight into the serviceable role that instalment credit plays in the economy. Although general economic theory supplies only partial analysis of instalment credit, the acceptance of this theory has helped to frame the significance and importance of this type of credit. Instalment credit has made it possible for consumers and producers to accept the ever-changing social, economic, and technological advancements of our society. Instalment credit has transformed the consumer into an owner of capital goods which allow him the personal enjoyment of their possession. The use of instalment credit is the result of beneficial economic activity and has become deeply embedded in the habits and customs of American consumers and businessmen.

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AUTOBIOGRAPHY

I, John Raymond Kreidle, was born in Grove City, Pennsylvania, November 19, 1929. I received my secondary education in the public school system of that city. My undergraduate training was obtained at Grove City College, Grove City, Pennsylvania, which granted me the Bachelor of Science in Commerce degree in 1951. I received the Master of Business Administration degree from Miami University (Ohio) in 1953. While in residence there, I was a teaching assistant during the year 1951-1952. Upon completion of military service in the United States Army Finance Corps, I attended The Ohio State University from 1954-1957 at which time I completed most of the requirements for the degree of Doctor of Philosophy, specializing in the field of finance. During the school year 1958-1959 I held a position as Assistant Professor of Finance at the University of Arkansas at Fayetteville, Arkansas.