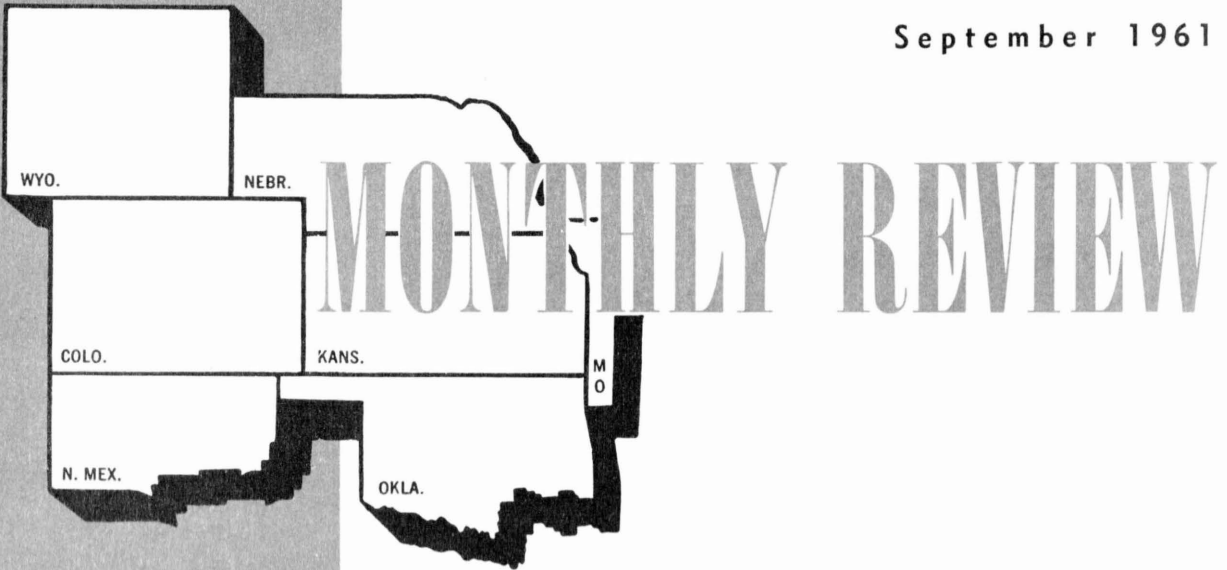


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FEDERAL RESERVE BANK
OF KANSAS CITY

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Profits on Commercial Bank Time Deposits

Some Basic Considerations

WIDE DISAGREEMENT exists among bankers, bank analysts, and public officials as to the profits to be gained by commercial banks on their time and savings deposits. Some members of the banking community urge that the maximum permissible rates paid by banks be raised or that the authority to regulate them be rescinded, while others argue that such a policy would weaken the banking system by inducing severe competition. One group of bank analysts argues, on the basis of statistical studies and deductive analyses, that these deposits have been unprofitable for banks and that they cannot be profitable. Another group exhorts the banking community to greater efforts to expand time deposits, presumably because such actions would be beneficial both for banks as a group and the economy as a whole. This kind of fundamental disagreement indicates a need for continued study of the profitability of time deposits at commercial banks.

Although important insights into some aspects of the problem may be gained by the use of statistical studies of deposit profitability at individual banks, it is necessary to employ deductive analysis to determine whether the existence of interest-bearing time deposits can enhance the profitability of the banking system as a whole. The following analysis suggests that the banking system may indeed profit from the existence of time deposits. It also seeks to enunciate the principles that govern the relation between rates paid on time accounts and profits of the banking system. It should be emphasized that the discussion is directed toward

the profitability of attracting time deposits for the banking system as a whole, but does not seek to establish principles which would guide an individual bank in determining its own policies with respect to attracting time deposits.

A FRAMEWORK FOR DEDUCTIVE ANALYSIS

An analysis of the profitability of time deposits for the commercial banking system intentionally ignores shifts of deposits between banks which may result in gains for some and losses for others. It seeks instead to determine whether it is possible for the banking system as a whole to obtain net profits by attracting time deposits, reserving judgment on the question of what the analysis implies for individual banks.

The character of such a deductive analysis may be made clear by outlining a simplified approach that commonly is applied. Students of this question often start by noting that banks are required by law to hold cash assets equal to specified percentages of demand and time deposits. In addition, banks find it necessary to hold cash reserves for operating purposes. Analyses of banking data show that these two types of requirements lead banks to hold about 18 per cent in cash reserves against demand accounts and 6 per cent against time deposits.

With these percentages, the banking system would obtain \$12 of excess reserves if bank depositors transferred \$100 from their demand to their time accounts. As banks invested these excess reserves, their earning assets and their deposit liabilities would increase, and as the latter occurred, their required reserves would

grow until their excess reserves fell to zero. In case the growth of liabilities occurred in demand accounts, the \$12 of reserves would support $12 \div 0.18$ or \$66.67 of demand deposits. Banks would gain a like amount of earning assets. At the end of the expansion process, the consolidated balance sheet of all commercial banks would show \$100 of additional time deposits along with a reduction of \$33.33 in demand deposits and an increase of \$66.67 in earning assets. If banks paid 3 per cent on time deposits, meeting that cost would require earnings of 4.5 per cent on the new assets, net of the cost of acquiring and administering the new assets, and of servicing the deposits. If the growth of bank liabilities should occur in time deposits, earning assets would increase by $12 \div 0.06$ or \$200 while time deposits would increase by \$300. As in the previous case, banks would have to earn 4.5 per cent net of other costs on the additional assets to equal a 3 per cent rate on time deposits.

This approach further states that if demand deposits were transferred to savings and loan associations in return for share capital, the associations might hold a reserve of about 5 per cent of share capital and invest the remainder. These investments would have to earn only 3.16 per cent on \$95 of new assets in order to cover a payment of 3 per cent on share capital, plus whatever additional costs are incurred in acquiring and managing the new assets. It has been argued that banks do not lose assets by these transfers since the demand deposits transferred to the associations do not leave the banking system, but are turned over to builders as mortgages are purchased and then move on to workers, building material suppliers, and sellers of land.

A Broader Framework

While the analysis described above is commonly employed, it has the deficiency of assuming implicitly that the supply of bank reserves is fixed. Since the volume of bank reserves is controlled by the actions of the central

bank, this assumption implies that the growth or lack of growth of commercial bank time deposits does not affect any of the variables which are significant in the formulation of central bank policy. Such a view is not acceptable, because the central bank scarcely would be indifferent to the marked variations in credit market conditions—changes in interest rates and credit availability—that might accompany shifts by the public between time deposits and other forms of assets, given a constant volume of bank reserves. For example, if inactive demand deposits were transferred to time accounts, and bank reserves were held constant, the banking system could increase its loans and investments, tending to lower interest rates and increase credit availability to private borrowers.

The assumption that bank reserves remained unchanged in the face of shifts between demand and time deposits thus implies that the central bank does not consider the cost of credit in formulating its policies. A more logical analysis can be developed by beginning with the assumption that the economy is operating at full employment with stable prices. The central bank then shapes its policies so that the existing level of interest rates is maintained, in order that the stability of employment and prices will not be disrupted. Under such circumstances, the central bank is concerned with changes in the composition of financial assets held by the public only when these changes affect market rates of interest.

In applying this analytical frame of reference, the present discussion will consider commercial bank time deposits as originating from three sources—transfers from demand deposits, shifts of securities from the public to banks, and transfers of claims from nonbank financial institutions, such as mutual savings banks and savings and loan associations. Additions to time deposits resulting from increased current savings of the public are omitted from this classification since there is no known relationship between the aggregate volume of saving and the

rate of interest paid on time deposits. Thus, attention is focused on the distribution of the public's holdings of financial assets between time deposits and alternative financial claims.

Each of the major forms in which the public may choose to hold financial assets has attributes which distinguish it from other forms. These attributes consist of differences in rate of return, safety, liquidity, type of insurance protection, usefulness in making immediate payments, and—in the case of securities—fluctuations in market prices. These differences are appraised by the public in ways that, given the rate of return on each type, determine the proportion of each that the public chooses to hold. If rates of return on one type are raised while rates on others are unchanged, the public will modify the composition of their financial assets by increasing their holdings of the higher-yielding assets and reducing their holdings of lower-yielding assets. These shifts may be large or small, depending upon how effectively the public considers one type of financial asset to substitute for others.

If banks are to earn profits from time deposits, two conditions must be met. First, a growth of time deposits must lead to an increase in bank assets. Second, the additional assets must add more to bank revenues than interest payments and the administration of the new assets and deposits add to bank costs.

BANK ASSET GROWTH THROUGH TIME DEPOSITS

If banks gain time deposits by raising the rates paid, the increase in time accounts comes from transfers of demand balances, shifts from securities, and transfers from claims on nonbank financial institutions. The effect which each will have on total bank assets may be discussed in terms of the reaction of central bank policy with regard to the volume of bank reserves. Under the rule previously outlined, central bank policy will be geared to maintaining a given level of interest rates.

Transfers from Demand Balances

A transfer of \$100 in deposits from demand to time account, when reserves on demand and time deposits are 18 per cent and 6 per cent, respectively, produces excess reserves of \$12. The transfer indicates that the public desires \$100 less of demand deposits, \$100 more of time deposits, and unchanged amounts of securities and claims on nonbank financial institutions. If interest rates are to remain unchanged, banks must be prevented from bidding for securities with their excess reserves. Under the rule outlined, therefore, the central bank would sell \$12 of securities, meeting the demands of the banks and eliminating their excess reserves. Bank earning assets would increase \$12 for each \$100 growth of time deposits.

Transfers from Securities

Time deposit growth through transfers of open-market securities from the public to banks makes possible a much greater growth of bank assets. For each \$100 of time deposit growth, banks would need \$6 of additional reserves. The existing level of interest rates would be maintained if the \$100 of securities sold by the public were absorbed by \$6 of central bank purchases and \$94 of commercial bank purchases. Banks would acquire \$94 of earning assets and \$6 of reserves for each \$100 of time deposit growth. If the public chose to reverse this process, banks would lose \$94 of earning assets and \$6 of reserves.

Transfers of Claims on Nonbank Financial Institutions

The third source of time deposits is through public shifts from claims on nonbank financial institutions. A transfer of \$100 would force these institutions to release \$5 of demand deposits and \$95 of earning assets, assuming that the institutions in question hold cash reserves of 5 per cent. Bank time deposits would increase by \$100 and demand deposits would fall by \$5. These changes would cause a bank reserve deficiency of \$5.10. These reserves could be provided by central bank purchases of \$5.10

of financial assets and banks could acquire earning assets in the amount of \$89.90. The increased ownership of loans and investments by the central bank and commercial banks combined then would just equal the amount of earning assets liquidated by nonbank financial institutions. If the process were reversed, banks would lose \$89.90 of earning assets and \$5.10 of reserves and the central bank would sell \$5.10 of assets. Thus, banks would lose deposits—a finding that is contrary to the simplified analysis outlined above.

In summary, for each \$100 of time deposit growth, banks gain \$12 in earning assets if the source is inactive demand deposits, \$94 if the source is securities, and \$89.90 if the source is claims on nonbank financial institutions. This is the result that would be obtained if the central bank responded to a redistribution of public financial asset holdings in the manner indicated earlier. If the banking system should advance the rate paid on time deposits compared with the rates on alternative financial assets, the gain in deposits would originate from all of these sources, the proportion represented by each source being determined by how effectively time deposits substitute for each in the financial asset holdings of the public.

COSTS OF TIME DEPOSITS AND REVENUES GAINED

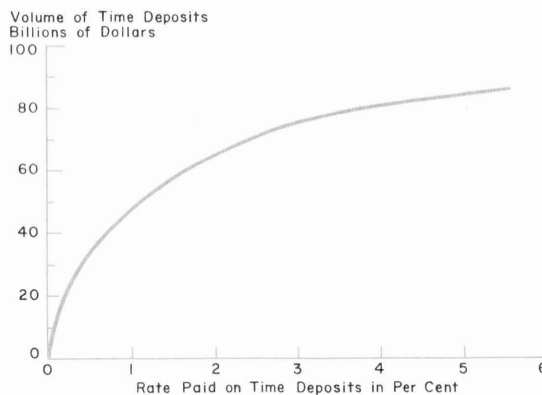
It has been shown that bank assets will increase as time deposits expand, regardless of the source of the deposit. But in order to form a judgment as to whether the additional assets increase total revenues more than the higher time balances raise total costs, it is essential to consider the probable relationships of revenues and costs to various levels of bank rates of interest on time deposits. This can be done only on the basis of inferences drawn from reasonable assumptions as to the conditions which influence costs and revenues.

Total interest costs on time deposits are the product of the rate paid on these deposits and

their amount. If banks paid no interest on time deposits, there would be no economic reason for people to hold them. But if rates were raised from zero to 0.2 per cent, for example, it is possible that a substantial amount of time deposits would be gained by banks. Individuals who had strong preferences for this type of asset at any positive rate of interest would shift from other forms of asset holdings. Further increases in rates offered might, for a time, produce proportionate increases in deposits, but it is logical to expect that at some rate of interest the responses diminish, because the public would become less willing to substitute time deposits for other financial assets as their holdings of time deposits increased.

Chart 1 is drawn on the basis of these assumptions. It shows that, given rates of interest paid on other financial assets, time deposits would rise rapidly when rates on these accounts were raised above zero, but the amount of gain

Chart 1
HYPOTHETICAL RELATIONSHIP BETWEEN
TIME DEPOSITS AND RATES PAID



NOTE: The shape of the response curve of time deposits to rates paid shown above does not purport to be a precise representation of the way in which time deposits would change with varying rates of interest on time accounts. It is designed only to illustrate the point that while the interest-sensitivity of time deposit volume may be fairly high at low rates of interest, it must be relatively low at some high rate of interest due to the increasing reluctance of holders of financial assets to substitute time deposits for other financial assets as their holdings of the latter decline. Between these extremes, there is a possibility of an inflection in the response curve, as rates on time deposits move from low levels through levels at which time deposits become strongly competitive with such other financial assets as savings and loan shares.

would diminish as further increases in these rates took place.

The second consideration which establishes the relationship between interest rates paid and bank costs is that each increase in rates is applicable not only to the increment in deposits which accompanies the rise in rates but to previously existing deposits as well. This fact—in conjunction with the presumption that gains in time deposits would become smaller as bank rates were advanced—leads to the inference that while bank costs on time deposits advance slowly as rates are first raised above zero, they rise quite rapidly after some point is reached.

For example, suppose that the banking system would hold \$20 billion of time deposits if it paid 0.2 per cent on deposits and its interest costs would be \$40 million. If the rate were raised to 0.4 per cent, and deposits rose to \$30 billion, interest costs then would be \$120 million. The increase of \$10 billion in time deposits therefore would cost \$80 million and the rate paid to gain the \$10 billion increment would be 0.8 per cent per dollar of deposits. If a further rise in rates to 0.6 per cent pro-

duced an increase to \$35 billion, the cost of the \$5 billion increment would be 1.8 per cent per dollar of deposits.

This general relationship is illustrated in Chart 2, which shows the way in which interest payments on time accounts would rise with an increasing volume of time deposits, given the response of time deposits to rates paid as shown in Chart 1. A circumstance that would modify the relation between total costs and the volume of time deposits, however, is that banks might become more efficient in the administration of their assets as the size of banks increases. These economies of larger-scale operations may offset somewhat the rise in interest costs.

Revenues and Time Deposits

The two principal factors determining the relationship between bank revenues and interest rates are the volume of earning assets obtained through growth of time deposits and the rates earned on assets. As was shown earlier, the gain in bank earning assets is always less than proportionate to the increase in time deposits, the exact amount of the increase being dependent upon the source of the time accounts. The higher is the rate of return on bank assets, of course, the larger will be the increment to bank revenues accompanying a given growth of bank assets.

Chart 3 is drawn on the assumption that banks earn 4.5 per cent on the earning assets they acquire when time deposits increase, figured net of the costs of acquiring and administering the new assets. The bottom line of the chart shows the relationship that would exist between the volume of time deposits and the net revenues from earning assets if time deposits were derived entirely by transfers from demand deposits. The top line is the relationship that would exist if time deposits grew entirely through transfers from securities. Since time deposits are in some measure substitutes for all other types of financial assets, the true relationship lies somewhere between these extremes, as suggested by the dotted line in the chart.

Chart 2
HYPOTHETICAL RELATIONSHIP BETWEEN
VOLUME OF TIME DEPOSITS AND
INTEREST PAYMENTS ON
TIME ACCOUNTS

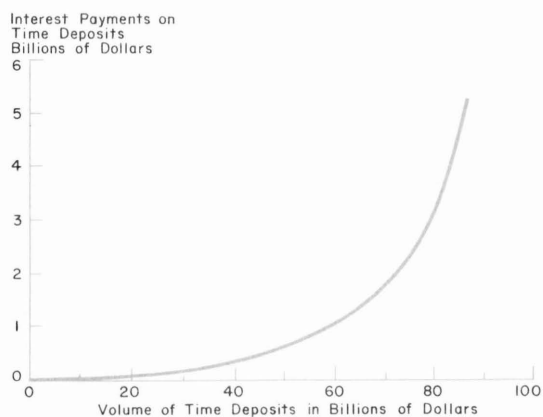
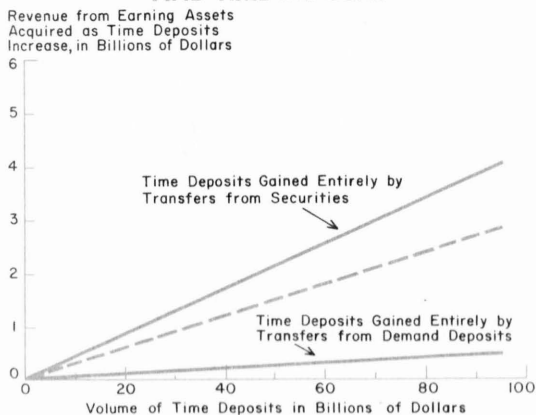


Chart 3
**HYPOTHETICAL RELATIONSHIP BETWEEN
 REVENUES FROM EARNING ASSETS
 AND TIME DEPOSITS**



NOTE: Linearity of the time deposit-revenue function, as shown above, would imply perfect substitutability between bank earning assets and earning assets held by nonbank investors. Since this is presumably not the case, a more accurate representation would show a function concave to the horizontal axis. For the sake of simplicity, this refinement is ignored in the chart and the accompanying textual exposition.

Are Time Deposits Profitable for the Banking System?

From a purely logical standpoint, it is quite easy to specify the interest rate on time deposits which provides maximum profits for the banking system as a whole. It is that rate at which the addition to bank costs is just equal to the addition to bank revenues. (Starting from the bottom of the cost curve shown in Chart 2 and moving upward along the curve, it is the point at which the slope or steepness of the curve is just equal to the steepness of the dotted revenue line of Chart 3.) At any lower interest rate, banks would add more to revenues than to costs if the rate were increased; increasing the rate beyond this point would add more to costs than to revenues.

It is perhaps clear to everyone that banks could not indefinitely increase their profits by raising rates paid on time deposits, even if banking regulations permitted them to do so. As higher rate levels were reached, the additions to bank costs from further rate increases would become extremely large. But it is equally as

reasonable to contend that at very low rates of interest on time deposits, an increase in rates would produce only a small increase in costs—one that would be more than counterbalanced by the growth of bank revenues.

Suppose, for example, that the banking system could attract \$45 billion in time deposits by paying 1 per cent interest on time accounts and \$55 billion by paying 1.5 per cent. If 60 per cent of the additions to time deposits were accounted for by transfers from nonbank financial institutions, while 30 per cent represented transfers from securities and 10 per cent transfers from demand balances, stable conditions in the credit markets would be maintained if the central bank permitted commercial bank earning assets to rise by about \$8.3 billion. Banks would cover the additional \$375 million in interest payments in this case if the net return on bank earning assets were at least 4.5 per cent.

The required net return on bank earning assets in this example, it will be noted, is considerably higher than the rate that was assumed to be paid on time deposits. The margin of difference is not, however, a fixed magnitude. Generally speaking, the margin between rates earned and rates paid must be large if time deposits register a minimum response to an increase in rates and if the growth in time deposit volume originates mainly in transfers from demand balances. When time deposits respond greatly to an increase in rates paid and originate mainly in transfers from securities or claims against nonbank financial institutions, the necessary margin is correspondingly less.

The precise rate on time deposits that would yield maximum profits for the banking system as a whole cannot, of course, be determined by logical analysis alone. It is necessary to know both the size of the increase in time deposits and the source of the gain in time accounts when bank rates on time deposits are raised. This information is required not merely for one change in time deposit rates, but for changes

from all possible levels of these rates. No empirical study ever has sought to determine this information, and it may not be possible to ascertain it through statistical methods. It is scarcely surprising, then, that conflicting views exist on the question of whether the banking system profits by attracting time deposits.

CONCLUDING COMMENT

The preceding analysis sought to provide a broader framework for study of the profits on time deposits than has emerged from recent discussions. Too often these treatments have focused on a single facet of the question, which, on the basis of implicit assumptions, provided

automatic answers. The foregoing discussion implies that neither of the extremes of the debate on this issue represent positions which the banking system can accept. To discontinue the acceptance of time deposits seems very likely to be inadvisable, but to pursue them at all costs may be equally unwise. The findings of this study do not conflict with existing statistical studies, for those studies have been pointed toward the question of whether banks *do* in fact make profits on their time deposit business. On the other hand, those studies do not contradict the above analysis, since they do not establish that banks cannot make profits from time deposits.



CONSUMER FOOD DOLLARS—

Where Do They Go?

CONSUMER EXPENDITURES for goods and services—in both dollar and real terms—have expanded remarkably since 1947. Personal consumption expenditures in 1960 were a record \$329 billion, of which approximately \$70 billion was spent for food products. However, consumers have not increased their food expenditures in proportion to their increases in personal income. As a result, spending for food accounted for only 21 per cent of total consumer expenditures in 1960 as compared with 27 per cent in 1947. Although consumers have changed the proportions of the different foods they buy, the total quantity of food products purchased for consumption since 1947 has increased at only a slightly faster rate than population growth.

Despite the smaller proportion of total income spent on food products in recent years, the production and marketing of these products still constitutes an important segment of our economy. In addition to the farmers who produce our food supply, many firms are engaged in the vital roles of transporting, processing, packaging, wholesaling, and retailing of food products. Since consumer expenditures for food include both payments to farmers and to agencies that assemble, process, and market

these products, it will be of interest to examine trends in the allocation of consumers' food dollars to these components in recent years.

Two sources available for determining payments to farmers and marketing agencies for food products are the consumer food expenditure series and the market basket series of the U. S. Department of Agriculture. These two series will be used in analyzing consumer expenditures for food products from 1947 to 1960.

THE CONSUMER FOOD EXPENDITURE SERIES

The consumer food expenditure series evaluates both the total retail cost and the equivalent farm value of domestically produced food products bought by civilian consumers. The retail cost is measured at the retail store level and, therefore, does not include the costs of services in restaurants and other eating establishments.

The services performed by the agencies that assemble, process, and distribute these food products are referred to as marketing services, and payments for these services make up the marketing bill. The marketing bill tends to reflect variations in total food marketed, variations in unit marketing charges, and changes in marketing services consumers are buying with

food products. Excluded from the series are payments for food products not produced domestically, food consumed on farms where produced, and foods not sold to civilian consumers in this country. Values for individual food items are combined into six commodity groups—meat, dairy products, poultry and eggs, bakery and cereal products, fruits and vegetables, and other food products such as vegetable oils and sugar.

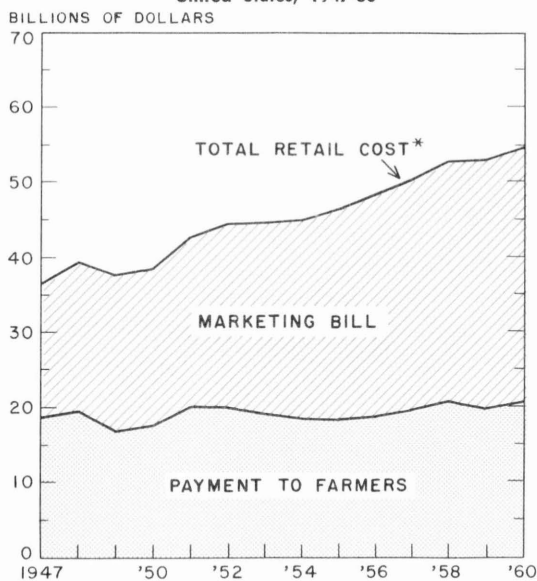
Based on data from the consumer food expenditure series, total retail cost of items included in the six commodity groups moved upward from approximately \$37 billion in 1947 to \$55 billion in 1960—a 49 per cent increase. Approximately 29 per cent of total expenditures for food products in 1960 went for meat products, 22 per cent for fruits and vegetables, 18 per cent for dairy products, 14 per cent for bakery and cereal products, 9 per cent for poultry and eggs, and 8 per cent for miscel-

laneous food products. The proportion of each food group in relation to total food expenditures was approximately the same in 1960 as in 1947, with the exception of two commodity groups. A slightly smaller percentage of food expenditures was spent for poultry and eggs, but a slightly larger percentage was spent for miscellaneous food products.

Despite the substantial increase in retail cost of food products since 1947, dollar payments to farmers for equivalent food products remained relatively stable during this period—ranging from \$18.7 billion in 1947 to \$20.7 billion in 1960. Payments to farmers for the individual commodity groups also shared approximately the same stable relationship during this period as for all food products as a whole. Payments fluctuated slightly from year to year for individual commodity groups but in general remained unchanged over the years. Farmers' receipts from the sale of food products in recent years have remained near earlier levels, primarily because lower farm prices have been offset by a substantially larger volume of farm products sold. Meat products accounted for the largest proportion of farm value in 1960—40 per cent of the total. Dairy products accounted for 21 per cent; fruits and vegetables, 15 per cent; poultry and eggs, 14 per cent; and bakery and cereal products, 6 per cent. Other food products accounted for approximately 4 per cent of the total. The importance of the various commodity groups relative to farmers' cash receipts has varied only slightly since 1947. Bakery and cereal products, however, have tended to contribute a slightly smaller percentage of total receipts in recent years, while other commodity groups have tended to contribute a slightly greater proportion of the total.

As might be expected from the upward trend in retail cost and the relative stability of payments to farmers since 1947, the largest proportion of the increase in the retail cost of food was due primarily to an increase in the cost of marketing. The food marketing bill rose from

Chart 1
CONSUMER FOOD EXPENDITURES
United States, 1947-60



*Excluded from the total retail cost is the extra cost of serving food in eating establishments. These costs would have added approximately 10 per cent to total retail cost of food products.
SOURCE: U. S. Department of Agriculture.

\$18 billion in 1947 to \$34 billion in 1960—an 89 per cent increase. The substantial increase in the marketing bill not only reflects increases in the volume of food products handled, but also increases in per-unit marketing charges since 1947. Although each factor responsible for the increase in the marketing bill cannot be determined precisely, it is estimated that one half of the increase was due to a rise in the cost levels associated with each unit marketed, one fourth to increased volume, and one fourth to added marketing services. Marketing costs for individual commodity groups of the consumer food expenditure series trended upward as they did for all food products as a whole during this period.

The proportions contributed by each commodity group to the total marketing bill in 1960 were approximately 26 per cent for fruits and vegetables, 22 per cent for meat products, 19 per cent for bakery and cereal products, 17 per cent for dairy products, 5 per cent for poultry and eggs, and 11 per cent for other food products.

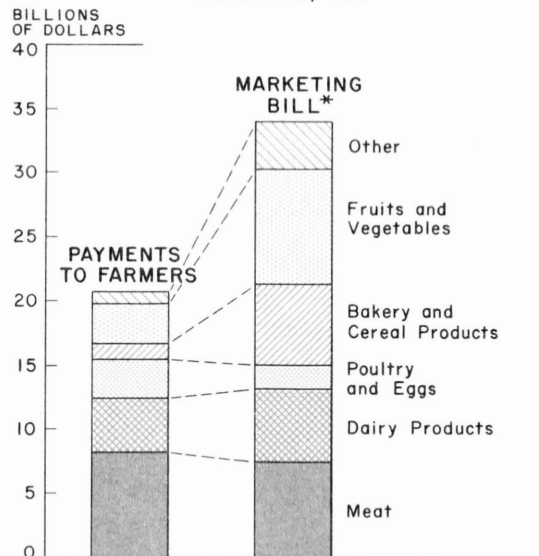
In connection with the marketing bill and payments received by farmers for food products, it is of interest to note the absolute and relative contribution of the various commodity groups to the total of each of the two components. Payment to farmers for meat products, for example, was \$8.3 billion in 1960 and accounted for 40 per cent of total farm payments. The marketing bill for meat products at \$7.5 billion, however, was only slightly less than the farm payments, but accounted for only 22 per cent of the total marketing bill.

The consumer food expenditure series also indicates the relative importance of the major cost components of the marketing bill. Direct labor costs made up approximately 48 per cent of the total marketing bill for food products in 1960; intercity rail and truck transportation, approximately 12 per cent; corporate profits before taxes, 6 per cent; and other costs and profits of unincorporated marketing firms, ap-

proximately 34 per cent. All cost components increased from 1947 to 1960. Direct labor costs were 104 per cent higher in 1960 than in 1947; intercity rail and truck transportation costs were 105 per cent higher; corporate profits before taxes were 40 per cent higher; and other costs and profits of unincorporated firms were 77 per cent higher.

Labor costs have increased since 1947 primarily because of rises in wages, salaries, and fringe benefits to employees. The number of workers employed in marketing food products was only slightly higher in 1960 than in 1947, but hourly earnings of employees were 94 per cent higher and labor costs per unit of output were 47 per cent greater over this same period. Improvements in output per man-hour have kept labor costs per unit of product from rising as fast as average hourly earnings of workers. Extensive technological innovations in the food

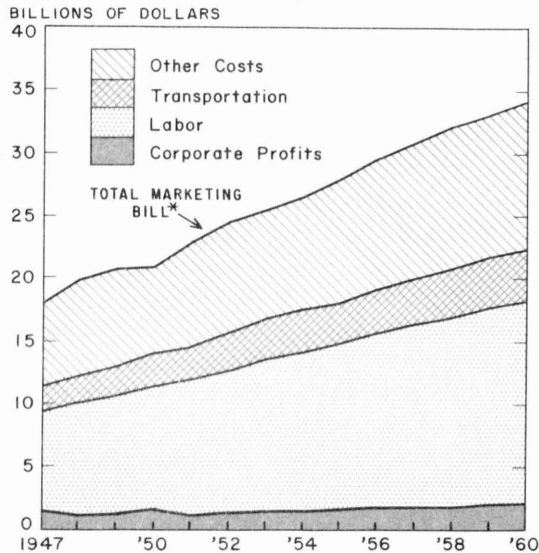
Chart 2
DISTRIBUTION OF CONSUMER FOOD
EXPENDITURES
United States, 1960



*Excluded from the marketing bill is the extra cost of serving food in eating establishments. Although approximately \$5 billion would have been added to the marketing bill in 1960, the relationship between payments to farmers for individual commodity groups and the marketing bill would remain approximately the same.

SOURCE: U. S. Department of Agriculture.

Chart 3
**COMPONENTS OF FARM FOOD
 MARKETING BILL**
 United States, 1947-60



*For domestic farm foods bought by U. S. civilian consumers.
 SOURCE: U. S. Department of Agriculture.

marketing industry during recent years also have resulted in increased employment of more highly skilled personnel.

Increased transportation costs since 1947 reflect a larger volume of products handled during this period and a general rise in rates for agricultural products. Although rail rates in recent years have had a tendency to stabilize somewhat on most agricultural commodities, they increased from 1947 to 1959 by 78 per cent for livestock, 45 per cent for meat products, 25 per cent for fruits and vegetables, and 63 per cent for wheat. Although similar data for truck rates are not available, the competitive nature between rail and truck carriers and increases in costs of truckers would suggest a similar upward trend in truck rates since 1947.

Corporate profits before taxes have tended to rise since 1947, but at a somewhat lesser rate than the increase in the total marketing bill. Corporate profits after taxes in 1960 were unchanged from 1947 levels. Profits after

taxes were \$1 billion in 1947, declined to \$600 million in 1951 and 1952, and have gradually risen since then to \$1 billion in 1960.

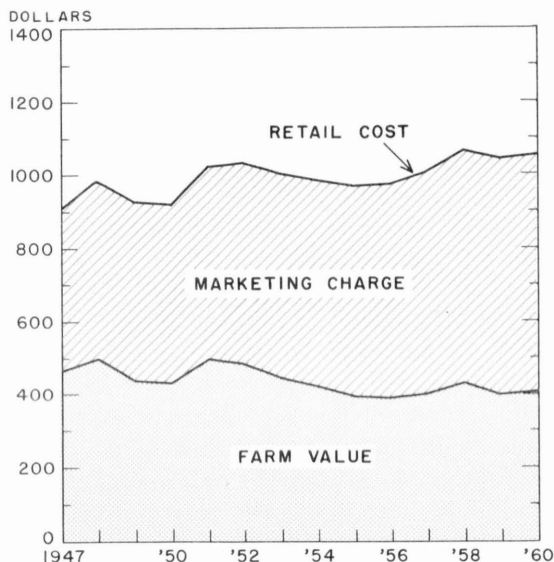
Other costs and noncorporate profits — the residual component of the marketing bill — increased somewhat less than labor and transportation costs from 1947 to 1960. Included in other costs are fuel, electric power, containers, depreciation, transportation other than rail and truck, rents, interest on borrowed capital, taxes other than on income, and similar costs.

THE MARKET BASKET SERIES

The market basket series also reflects the retail cost and equivalent farm value of domestically produced food products, but only for a fixed quantity of specified commodities. Commodities within the "basket" are those that were considered as average food purchases of urban families in 1952. The market basket is primarily concerned with measuring changes in farm and retail prices and farm-retail spreads for a fixed quantity of food commodities. It differs somewhat from the consumer food expenditure series in that it makes no allowance for changes in the composition of farm marketing and for changes in the services performed by the marketing system. However, the trend in the farm-retail spread likely will reflect some of the changes in services provided by the marketing system. The farm-retail spread is often referred to as the marketing margin, or marketing charge, and is generally expressed as a per cent of the retail cost of the food basket. The equivalent farm value of the food basket often is expressed as an estimate of the farmer's share of the consumer's food dollar. Values for individual food items are combined into six commodity groups corresponding generally to those in the consumer food expenditure series.

Data from the market basket series also indicate an increase in the retail cost of food products since 1947. The retail cost of the market basket was \$1,052 in 1960 after trending upward from \$911 in 1947—a 15 per cent in-

Chart 4
THE FARM FOOD MARKET BASKET
 United States, 1947-60



SOURCE: U. S. Department of Agriculture.

crease. Retail costs for individual commodity groups trended upward from 1947 to 1960 for meat products, dairy products, bakery and cereal products, fruits and vegetables, and miscellaneous food products, but trended downward for poultry and eggs and fats and oils.

Payments to farmers for the equivalent food products in the market basket trended downward during this period. Farm value in 1947 was \$467 compared with \$408 in 1960—a 13 per cent decrease. Generally lower farm prices since 1951 were primarily responsible for the decrease in farm value and have tended to mitigate the rise in retail costs in recent years. Farm values for individual commodity groups generally were lower for all groups except fruits and vegetables and miscellaneous food products. These two groups trended slightly upward in value during this period.

The marketing charge increased from \$444 in 1947 to \$644 in 1960—a 45 per cent increase. Marketing charges for individual com-

modity groups were up substantially for all groups except poultry and eggs and fats and oils.

DIVIDING THE FOOD DOLLAR

The market basket series often is used to show the proportion of the consumer's retail dollar received by farmers and the various elements of the marketing system. In 1960, the farmer's share of the consumer's food dollar was 39 per cent and, consequently, the share going to marketing firms was 61 per cent. The farmer's share of the food dollar declined gradually from a record 53 per cent in 1945 to 38 per cent in 1959 and increased for the first time during the postwar era in 1960. The percentage of the consumer's dollar received by farmers, however, varied widely among different food products, generally depending upon the amount of transportation, processing, packaging, and handling required in making the raw farm product into a form demanded by consumers. During the period from 1956 to 1960, the farmer's share for poultry and eggs averaged 61 per cent; for meat products, 54 per cent; for dairy products, 46 per cent; for fruits and vegetables, 29 per cent; for fats and oils, 29 per cent; for bakery and cereal products, 19 per cent; and for miscellaneous products, 17 per cent.

By individual food groups, the percentage of the consumer's food dollar going to farmers may vary considerably from one period to another. For example, the farmer's percentage of the consumer's food dollar for pork varies with the cyclical as well as the seasonal pattern of hog production. From 1956 through 1960, the farmer's share of the consumer's dollar for pork ranged from a cyclical high of 60 per cent during the April-June quarter of 1958 to a low of 43 per cent during the October-December quarter in 1959. During each of the years from 1956 to 1960, the farmer's share of the consumer's dollar for pork generally was seasonally higher in the April-June quarter and lower

in the January-March quarter. Since marketing charges tend to be relatively stable, a decline in farm prices caused by seasonally heavy marketings usually will reduce the farmer's percentage of the consumer's food dollar.

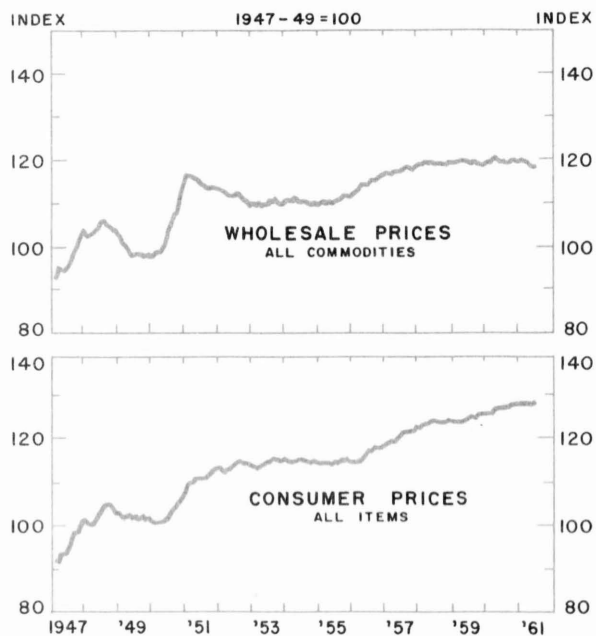
The percentage of the consumer's dollar received by farmers is not necessarily an indication of the farmer's financial well-being. Farmers could, and in many cases do, get all of the retail food dollar by selling directly to the consumer. However, it is likely that in many instances additional nonfarm processing, while resulting in a lower share of the retail price to farmers, may mean expanded consumer mar-

kets and a larger return to farmers than might otherwise be possible.

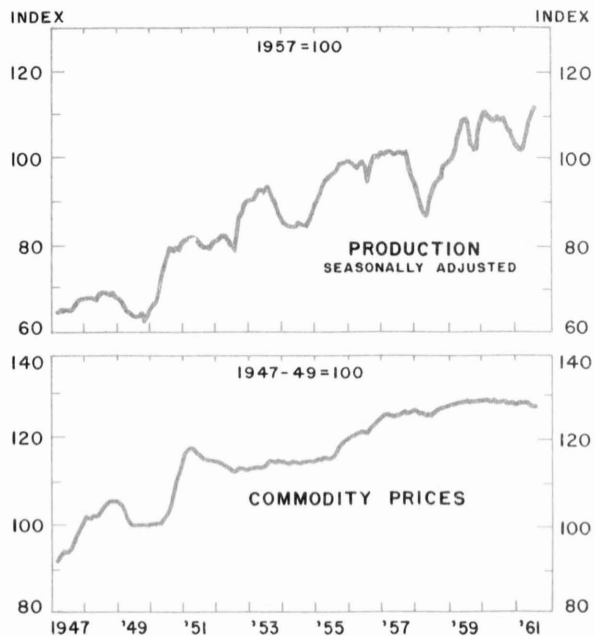
In conclusion, the retail cost of food products increased from 1947 to 1960 primarily because of increased costs associated with processing and marketing food products. A smaller proportion of food dollars now goes to farmers, with a larger proportion going to agencies that process and market food products. Despite the general rise in food costs since 1947, prices of food products have risen less than consumer incomes. Thus, the percentage of consumer expenditures for food products has declined substantially since 1947.



CONSUMER AND WHOLESALE PRICES



INDUSTRIAL PRODUCTION AND INDUSTRIAL PRICES



BANKING IN THE TENTH DISTRICT

District and States	Loans				Deposits			
	Reserve City Member Banks		Country Member Banks		Reserve City Member Banks		Country Member Banks	
	July 1961 Percentage Change From							
	June 1961	July 1960	June 1961	July 1960	June 1961	July 1960	June 1961	July 1960
Tenth F. R. Dist.	+2	+5	+1	+10	+3	+6	+2	+7
Colorado	+3	+5	†	+10	+5	+9	+3	+8
Kansas	-2	†	+6	+13	+5	+4	+5	+9
Missouri*	+1	+9	-1	+1	+2	+4	+3	+7
Nebraska	†	+4	†	+13	+5	+7	+3	+9
New Mexico*	**	**	+6	+8	**	**	†	-2
Oklahoma*	+4	+4	-2	+10	†	+8	-1	+8
Wyoming	**	**	-1	+7	**	**	+1	+5

*Tenth District portion only.
†Less than 0.5 per cent.

**No reserve cities in this state.

PRICE INDEXES, UNITED STATES

Index	July 1961	June 1961	July 1960
Consumer Price Index (1947-49=100)	128.1	127.6	126.6
Wholesale Price Index (1947-49=100)	118.6	118.2	119.7
Prices Rec'd by Farmers (1910-14=100)	237	234	236 r
Prices Paid by Farmers (1910-14=100)	300	300	298

r Revised.

TENTH DISTRICT BUSINESS INDICATORS

District and Principal Metropolitan Areas	Value of Check Payments		Value of Department Store Sales	
	Percentage change—1961 from 1960			
	July	Year to date	July	Year to date
Tenth F. R. District	+8	+7	+4	+4
Denver	+14	+13	+8	+7
Wichita	+8	+3	-1	-3
Kansas City	+7	+5	0	+1
Omaha	+8	+5	+20	+21
Oklahoma City	+16	+11	-11	-10
Tulsa	+1	+2	-6	-4