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FEDERAL RESERVE BANK  
OF KANSAS CITY

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# Postwar Growth and Distribution Of District Bank Deposits

**S**TRIKING CHANGES have occurred since the end of World War II in the magnitude and distribution of deposits at member banks in the Tenth Federal Reserve District. Following the immediate postwar contraction experienced by banks across the Nation, aggregate deposits at District member banks began a prolonged expansion. At the close of 1961, total deposits neared the \$9  $\frac{3}{4}$  billion mark, and the December average level last year was 57 per cent higher than the comparable figure in 1947. Although the pace of this expansion has been quite irregular, 1955 was the only year in which the December average deposit level was below the year-earlier figure.

For some banks and regions within the District's boundaries, fate has been exceedingly kind. Member banks in New Mexico, for example, enjoyed a growth of deposits between 1947 and 1961 exceeding 180 per cent. For other sections of the region, the road to higher deposit levels has proved rocky. Total deposits at Nebraska member banks on the four condition report dates of 1961 averaged less than 25 per cent higher than the level of 1947. The dispersion of growth rates among individual banks has been even wider — some have witnessed deposit losses over the postwar years while others have experienced a growth rate vastly greater than the average for all District members.

This review of District deposit expansion will be concerned particularly with the pattern of growth by class of bank (reserve city or country), by state, and by major metropolitan area

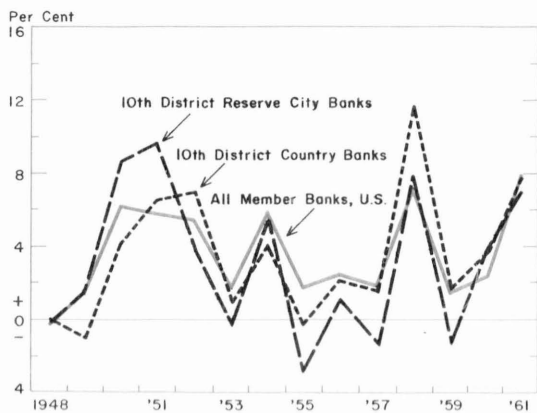
as it has unfolded during the postwar years. Over a period as long as this, patterns of deposit growth are shaped heavily by underlying differences in the rate of advance in population and in income. Such influences are visible in District bank deposit data. The correlation between bank deposits and these economic and demographic factors is far from perfect, however, even over a comparatively protracted span of years. This fact, too, is evident in the record of deposit expansion among District banks.

A second feature of considerable interest in the record of deposit increases over the postwar years is the sharp variation in annual rates of growth. The observed variations follow quite closely the developments at all member banks in the United States and appear to be associated with developments of nationwide influence in the financial markets.

## THE PATTERN OF GROWTH BY YEARS

The expansion of District bank deposits since 1947 certainly could not be characterized as a steady upward trend. The annual percentage change in deposit balances at all District members has varied from minus 1.7 per cent in 1955 to 9.7 per cent in 1958. An attempt to explain the instability in annual rates of deposit expansion at District banks in terms of specific factors influencing regional business activity would be largely fruitless. The dominant influence has not emanated from within the District, but from forces determining the rate of bank deposit expansion in the Nation as a whole.

### ANNUAL PERCENTAGE CHANGES IN TOTAL DEPOSITS



NOTE: Percentage changes are based on daily average deposit levels in December. District reserve city and country figures are adjusted for reclassification of banks from reserve city to country status.

This may be seen from an inspection of the accompanying chart, which shows annual rates of change in total deposits at District reserve city and country members and at all member banks in the United States. There are, to be sure, significant differences in the percentage growth of deposits at these banks from one year to the next, but the broad pattern of variation in growth rates is remarkably similar. This general conformance of annual rates of change scarcely can be accidental, and it is instructive to consider why it exists.

The rate of growth of deposits at all member banks in the United States is governed primarily by Federal Reserve policies determining the total reserve position of the banking system. When bank reserves are increased rapidly — as they were in 1950, 1951, 1954, 1958, and 1961 — the capacity of the banking system to expand its holdings of earning assets and thereby increase its deposit liabilities is enlarged. Conversely, constraining the growth of bank reserves retards the rate at which bank credit and deposits can expand.

For the most part, rapid deposit expansion has occurred during recessions in business ac-

tivity which called for expansionary Federal Reserve policies. During such periods, market interest rates have tended to fall and remain at relatively low levels both because of rising bank reserves and because of reduced demands for credit. In years when open-market rates were low or declining — such as 1954, 1958, 1960, and 1961 — investors found bank deposits, especially time deposits, increasingly attractive in comparison with market investments. Thus, bank deposits increased rapidly. When rates on Treasury and other marketable securities rose or remained at relatively high levels, as in 1953, in 1955 through 1957, and again in 1959, the growth rate of bank deposits was sharply attenuated.

Annual rates of change in District bank deposits could be expected to conform closely with the national pattern only if depositors of District banks, like those of banks in other regions, reapportioned their financial assets among bank deposits, Treasury securities, and other types of assets when financial developments altered relative rates of return. The general similarity between District and national deposit growth rates shown in Chart 1 indicates that this is indeed the case. It is notable that the District's country member banks are not immune from this influence on the growth of their deposits; changes in market rates of interest have a pervasive effect on deposit behavior that extends even to comparatively small banks.

#### GROWTH BY TYPE OF DEPOSIT

The sensitivity of investors to yield differences on competing financial assets also has been a dominant factor in the changing structure of bank deposits between demand and time accounts, both in the District and across the Nation. In 1947, time deposits accounted for about 11½ per cent of total District member bank deposits; by the close of 1961 this fraction had increased to 23½ per cent. The more rapid advance of time deposits dates from

Table 1  
**DISTRIBUTION OF TOTAL DEPOSITS AMONG  
 DEMAND AND TIME ACCOUNTS**

All Tenth District Member Banks Selected Dates			
Year	Demand Deposits (In millions of dollars)	Time Deposits	Ratio of Time to Total Deposits
			(Per Cent)
1947	5,157	670	11.5
1951	5,955	778	11.6
1954	6,390	1,067	14.3
1957	6,162	1,297	17.4
1961	6,991	2,143	23.5
Per cent increase			
1947-51	15.5	16.1	—
1951-61	17.4	175.4	—

NOTE: Data are based on daily average deposit levels in December.

around 1951—the year in which Federal Reserve policies were reoriented from “pegging” interest rates on Treasury securities to operating as a stabilizing force on economic activity. Since then, interest rates have trended upward on virtually every class of financial asset except demand deposits, on which banks are not allowed to pay interest, and the relative attractiveness of holding money balances has steadily decreased. Effective rates paid by banks on time deposits, meanwhile, have risen, reflecting both the interest of banks themselves in maintaining their competitive position in the markets for savings and the actions of the supervisory authorities in lifting maximum legal rates.

As shown in Table 1, the resulting effect on the structure of District bank deposits between demand and time accounts has been substantial. Demand deposits advanced 17 per cent in the decade ended in 1961 while time deposits increased 175 per cent.

#### DEPOSITS BY CLASS OF BANK

The generally similar pattern of annual rates of deposit growth at the District's reserve city and country members revealed in the chart tends to conceal longer-run trends in the growth rates of the two classes of banks. As noted earlier, it is over relatively longer periods that economic and demographic factors begin

to weigh more heavily as determinants of bank deposit growth.

A close inspection of the chart discloses that country member banks in the District have enjoyed a somewhat more rapid rate of expansion than District reserve city banks since about 1952. The data in Table 2 show this even more clearly. From 1952 through 1961, District country members increased their total deposit liabilities by 38 per cent, a gain almost twice as large as that occurring at reserve city banks.

These differences in growth rates since 1952 are not, of course, attributable to developments in agriculture. That industry has experienced generally adverse conditions for more than a decade, and banks heavily dependent — either directly or indirectly — upon farming as a primary source of deposits have felt the impact. At a sample of 105 small rural banks in the District, for example, individual and business deposits during the 11 years ended in 1961 increased about 25 per cent, which is less than half the growth in those balances at all Tenth District members.

The more favorable deposit experience of country members can be ascribed, in part, to the continuing movement of the population to the suburbs in major metropolitan areas. Member banks established in the suburbs since the end of World War II are all in the country bank classification. An additional factor promoting country bank deposits has been the rapid increase in population and income in such cities as Albuquerque, Colorado Springs, and Bartles-

Table 2  
**CHANGES IN DEPOSITS BY CLASS OF BANK**

All Tenth District Member Banks						
Period	Reserve City Banks			Country Banks		
	Demand Deposits	Time Deposits	Total Deposits	Demand Deposits	Time Deposits	Total Deposits
	(Per Cent Increase)			(Per Cent Increase)		
1947-52	26	21	25	15	39	18
1952-61	9	117	21	16	170	38
1947-61	38	162	51	34	275	63

NOTE: Data are based on daily average deposit levels in December, adjusted for reclassification of banks from reserve city to country status.

Table 3  
**PERCENTAGE INCREASE IN TOTAL DEPOSITS,  
 SIX METROPOLITAN AREAS**  
 June 30, 1952 to June 15, 1960

Metropolitan Area	All Commercial Banks	Reserve City Banks	Country Member and Nonmember Banks
Denver	55.1	34.4	150.5
Tulsa	31.5	22.5	90.6
Oklahoma City	24.0	10.5	77.8
Kansas City, Mo.-Kans.	19.2	5.8	65.3
Omaha-Council Bluffs	14.0	5.6	57.8
Wichita	12.3	-2.2	148.7

NOTE: Data are adjusted for reclassification of banks from reserve city to country status.

ville, to name a few, in which member banks are in the country bank classification for purposes of calculating reserve requirements.

#### DEPOSITS IN MAJOR DISTRICT CITIES

Further insight into the disparate growth rates of country and reserve city member bank deposits since 1952 can be gained by observing the performance of deposits at banks in the District's six major metropolitan areas, where the bulk of District reserve city bank deposits are lodged. To assess the influence of suburbanization and other factors on deposits of reserve city banks in these cities, it is useful to include data for nonmember as well as member banks in the metropolitan area totals. This is the basis on which Table 3 was constructed. It shows the percentage increase in total deposits between June 30, 1952, and June 15, 1960, at all commercial banks in the metropolitan areas of Kansas City, Mo.-Kans., Tulsa, Oklahoma City, Denver, Wichita, and Omaha-Council Bluffs. June 15, 1960, is the latest condition report date for which bank data for these metropolitan areas have been tabulated. The table also indicates the percentage increase in total deposits between these two dates for reserve city banks in the six cities and for country member and nonmember banks.

In all six metropolitan areas, deposit growth rates at reserve city banks since 1952 have been far below the pace of expansion at country

member and nonmember banks. The redistribution of banking resources away from downtown banks and in favor of suburban banks has been quite substantial. But it is evident from the data in Table 3 that differences among the six cities in deposit growth rates at reserve city banks cannot be explained by differences in the rate at which deposit balances have shifted from downtown to outlying banks, since the cities showing the lowest gains in reserve city bank deposits also display low growth rates for all commercial banks. Instead, they are explained by differences in the growth of total deposits at all banks in the various metropolitan areas.

Denver enjoyed a striking expansion in deposit totals from 1952 to 1960; the 55 per cent gain shown in the table compares with an increase of 32 per cent in total deposits at all commercial banks in the United States during the same period. The Tulsa and Oklahoma City metropolitan areas, meanwhile, experienced a growth in banking resources roughly in line with the national rate of gain. The increase at Tulsa was somewhat larger than at Oklahoma City between June 1952 and June 1960, but that relationship would be reversed if slightly different dates were employed for measurement purposes.

In the Kansas City, Wichita, and Omaha metropolitan areas, deposit expansion has been quite moderate since 1952. This is evident from the figures in Table 3, and reference to other data indicates that this is not an erratic result which depends upon the specific dates used for computing growth rates shown in that table. In Kansas City and Wichita, an explanation for the tempered growth rate of bank deposits may lie in the effect that altered defense programs have had on the metropolitan economies. Both cities were important centers for production of military hardgoods during the Korean conflict, and subsequently they have experienced major readjustments in their regional economies as a consequence of changing mili-

tary procurement programs. The cutback at Kansas City came very shortly after the end of the Korean war. More recently — since 1957 — Wichita's employment statistics have recorded a sharp decline due principally to the reduction in output of a major producer of military aircraft. These readjustments have left an indelible imprint on the financial statistics of both cities.

The relatively slow rate of expansion in deposits at Omaha, on the other hand, cannot readily be explained by reference to such factors. Omaha's economy has been influenced much less by changes in military procurement programs, and the rate of gain in nonagricultural employment in the Omaha metropolitan area since 1952 has kept pace with the national trend. One contributing factor to the moderated growth rate of deposits was the decline in time deposits at reserve city banks in Omaha from 1953 through 1958, which apparently reflects the relatively low rates of interest paid on time accounts in that city during those years. Another factor is the rather high proportion of demand balances consisting of interbank accounts at city banks in Omaha. Both there and elsewhere in the District, correspondent balances have shown less growth than other types of demand deposits since 1952. But in addition, demand balances of individuals and businesses have displayed a comparatively slow growth rate at Omaha banks since 1952, a fact for which no obvious explanation is apparent in general statistics relating to banking and to the performance of the Omaha economy.

#### DISTRICT SHARE OF ALL MEMBER BANK DEPOSITS

It seems evident, then, that the unequal rates of deposit expansion at District reserve city and country member banks since 1952 are related importantly to factors affecting total banking resources in three of the major metropolitan areas of the Tenth District. It is also interesting to note that since 1952 the District's share

Table 4  
DISTRIBUTION OF TOTAL BANK DEPOSITS  
BY STATES

All Tenth District Member Banks, 1947-61  
Millions of Dollars

	1947	Per Cent of Total	1961	Per Cent of Total	Percentage Increase, 1947-61
Colorado	968	16.9	1,733	19.6	79.0
Kansas	997	17.4	1,516	17.1	52.1
Nebraska	964	16.9	1,197	13.5	24.2
New Mexico*	126	2.2	358	4.0	184.1
Oklahoma*	1,269	22.2	2,183	24.6	72.0
Wyoming	178	3.1	357	4.0	100.6
Missouri*	1,215	21.3	1,538	17.3	26.6
District Total	5,717	100.0	8,882	100.0	55.4

\*Tenth District portion only.

NOTE: Annual data are based on an average of all call report figures for the year.

of all member bank deposits in the United States has declined.

In 1947, member bank deposits in the Tenth District comprised 4.84 per cent of the total for all member banks in the United States, based on daily average deposit levels in December. In subsequent years, the share rose, reaching a level of 4.91 per cent in December 1952. Then a decline set in which reduced the District's proportion of total member bank deposits to 4.61 per cent by December 1961. Stated in terms of percentage points, this decline in the District's share of total member bank deposits may seem unimpressively small, but in absolute terms it represents about \$600 million in bank deposits.

#### DISTRIBUTION OF BANK DEPOSITS BY STATES

One might presume from the data in Table 3—which shows bank deposits in Denver expanding at a rapid pace—that the state of Colorado must have experienced a substantial expansion in banking resources over the post-war period. This is indeed the case, as indicated in Table 4. However, the table also shows that the percentage increase in member bank deposits from 1947 to 1961 was almost as large in Oklahoma as in Colorado, and that the sharpest percentage increases were recorded in New Mexico and Wyoming. Kansas experi-



Table 5  
**INCREASES IN MEMBER BANK DEPOSITS,  
 POPULATION, AND PERSONAL INCOME**

Six District States, 1947-61

	Member Bank Deposits (Millions of Dollars)	Total Personal Income (Millions of Dollars)	Population (Thousands)	Per Capita Personal Income (Dollars)
Oklahoma	914	2,268	227	864
Colorado	765	2,707	545	1,111
Kansas	519	2,345	343	868
Nebraska	233	1,511	165	913
New Mexico	232	1,215	401	833
Wyoming	179	418	82	876

NOTE: Bank deposit data are for all Tenth District member banks, with increases computed from an average of all call report figures for the year. Population and personal income figures are for the entire state. Population statistics are Census Bureau data; personal income statistics are from the U. S. Department of Commerce.

enced what might be termed a moderate growth rate of member bank deposits, while Nebraska and the western portion of Missouri included in the Tenth District witnessed a significantly slower rate of expansion.

Changes in the distribution of deposits by states shown in Table 4 understandably have been influenced importantly by comparative rates of expansion in population and economic activity levels. Table 5 is designed to bring out these influences. It displays increases between 1947 and 1961 in Tenth District member bank deposits, population, and personal income in the six states for which all or a major portion of the state is included in the District.

These figures indicate that 1947-61 gains in deposits among the six states were, in a broad sense, a reflection of growth in total personal income. States experiencing the largest increases in total personal income generally were those in which bank deposits rose the most. The association between changes in population and bank deposits, and between changes in per capita income and bank deposits, is much weaker. This is not surprising, of course. One would not expect increments to bank deposits in the various states to mirror population gains unless per capita income was increasing at nearly the same rate in every state. Similarly, bank deposit growth could not be expected to

parallel gains in per capita income unless population increases were nearly equivalent among the states.

The figures also indicate, however, that the association between bank deposit growth and total personal income is far from perfect. The largest absolute increment in deposits was in Oklahoma, even though the rise in total personal income in that state was well below that of Colorado, and slightly less than in Kansas. The increase in bank deposits in Nebraska, on the other hand, was unusually small, given the increase in total personal income. Thus, the rise in total personal income in Nebraska was 3½ times that of Wyoming, but deposits in Nebraska rose just 30 per cent more than in Wyoming.

#### CONCLUDING REMARKS

This imperfect association between deposit gains and growth in personal income among District states from 1947 to 1961 demonstrates a point that is worth emphasizing. Our regional banking community is but a portion of a nationwide network that permits rapid transfers of funds from one end of the country to the other for reasons that may have little to do with the economic health of the region. A large portion of the transfers are purely financial in nature—that is, they result from switches by individuals or businesses from bank deposits to fixed-income securities to equities and back again in search of financial assets that provide the highest expected yield. As interest rates on fixed-income securities have risen over the postwar years, transfers of this kind have become more volatile and, as noted earlier, they play a vital role in explaining annual rates of change in District bank deposits. The District is no longer a region in which bank deposit behavior depends mainly on the fortunes of agriculture. It is a part of a developed complex of financial institutions in a highly industrialized economy, and its deposit performance must be evaluated in these terms.



# Seasonal Patterns of Cattle Prices

**I**N MAKING decisions about future operations, cattle producers may respond to any of a number of factors — including current and past prices. To make the best possible decisions, producers need to interpret correctly a vast quantity of information, including prices of different kinds and grades of cattle, prices in different markets and at different times, and prices of alternative resources and products.

Faced with these decisions, cattle producers need to distinguish clearly among the several movements which may occur simultaneously in each price series. It has been found useful to distinguish and isolate trends, cycles, seasonal variations, and irregular fluctuations. Trends usually are not troublesome in decision making because they extend over long periods of time, while irregular fluctuations are largely irrelevant to decision making because they frequently are unpredictable. Cyclical and seasonal variations would be of less concern if their timing and amplitudes were constant, but they are not entirely regular and this necessitates some concern over their variability. Since cyclical changes in cattle prices and inventories were discussed in the April 1961 *Monthly Review*, this article is chiefly concerned with seasonal variations.

## CATTLE PRICE MOVEMENTS

Cattle prices respond to many stimuli such as the periodic buildup and liquidation of cattle inventories, changes in consumer tastes and incomes, population growth, variations in prices of other products, and seasonal fluctuations in breeding rates and feed costs. The movements

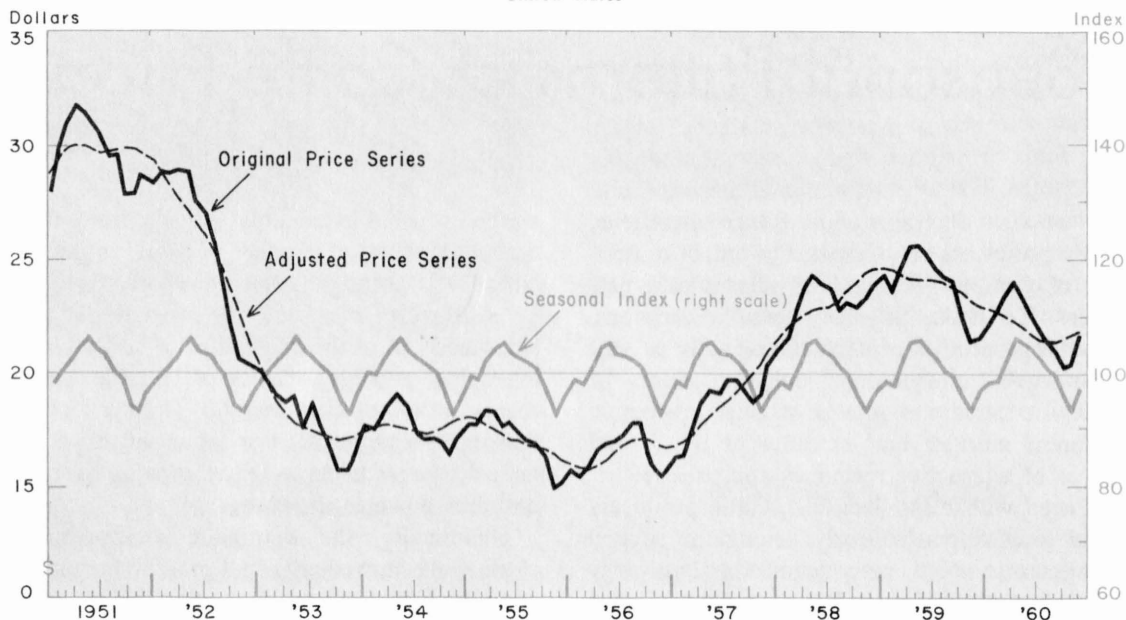
which occurred in monthly average prices of all cattle slaughtered under Federal inspection from 1951 through 1960 are shown in Chart 1. Although many of the variations were smoothed out of the original price series by the averaging process, clearly detectable movements of various types remain. The cyclical and seasonal movements were separated by a statistical process using weighted moving averages and are shown in the chart.

Historically, the dominant component of cattle price movements in terms of magnitude of fluctuation has been the cycle. The adjusted price series line in Chart 1 shows the magnitude of the cyclical movement. The major influence on the price cycle appears to be the beef production cycle which is caused by the periodic buildups and liquidations in cattle inventories. Producers who can successfully predict these cyclical changes may be able to adjust their operations to a countercyclical basis to some advantage.

The other major component of the cattle price movement is the seasonal index shown in Chart 1. Note that the seasonal index is above 100 when the original price series is above the adjusted price series, and below 100 when the opposite relationship exists. The seasonal variations in prices are closely but negatively related to the seasonal changes in beef production, which are in turn related to the seasonality of climatic variations, feed production, and reproduction.

The remaining element in the price movements is the irregular fluctuation. This element is random in timing and amplitude and may be

Chart 1  
**ORIGINAL, ADJUSTED, AND SEASONAL CHANGES IN AVERAGE PRICES  
 OF ALL CATTLE SLAUGHTERED UNDER FEDERAL INSPECTION  
 United States**



SOURCE AND METHOD: The original data for the charts which appear in this article were obtained from U. S. Department of Agriculture publications. The price movements were computed by the use of the Shiskin method for seasonal analysis.

due to any of a number of causes. The statistical procedures used in these analyses largely eliminate the irregular component from the adjusted price series and the seasonal indexes.

#### SEASONAL VARIATIONS IN SLAUGHTER CATTLE PRICES

In recent years, there has been some concern over changes in the patterns of seasonal fluctuations, especially those of steer prices. Questions have been raised concerning the magnitudes and causes of these changes and whether they are temporary or permanent. While it is not possible to give positive answers to all of these questions, analyses of some of the factors involved should be useful for planning purposes.

The seasonal index for all cattle slaughtered under Federal inspection has changed little since 1925. Chart 2 shows seasonal patterns for selected recent years. The only notable change

was the shift in the seasonal high from May to April. Otherwise, the pattern for 1960 was very similar to 1950 and 1955. This uniformity is somewhat deceptive in that it does not reflect offsetting shifts in component series. The influence of any particular kind, grade, or market tends to be minimized by the process of averaging in the all-cattle figures.

In contrast to the general movement, the seasonal patterns of slaughter steer prices have been reversed in recent years. Chicago choice slaughter steer prices appear to be fairly representative of these changes and the extent of the reversal of their seasonal variation is shown in Chart 3. The seasonal highs occurred during the fall months from 1945 up to 1957. The pattern shifted in 1957, and since then the seasonal highs have occurred during the spring.

The seasonal pattern for prime slaughter steers in the Chicago market has changed also. In this case, the seasonal highs shifted from

Chart 2  
**SEASONAL INDEXES OF AVERAGE PRICES OF ALL CATTLE SLAUGHTERED UNDER FEDERAL INSPECTION**  
 United States

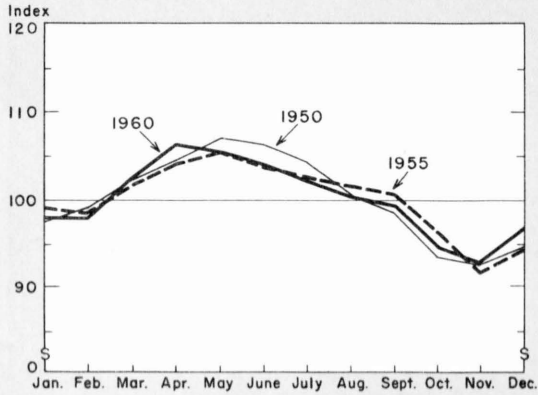


Chart 3  
**SEASONAL INDEXES OF AVERAGE PRICES OF CHOICE SLAUGHTER STEERS**  
 Chicago

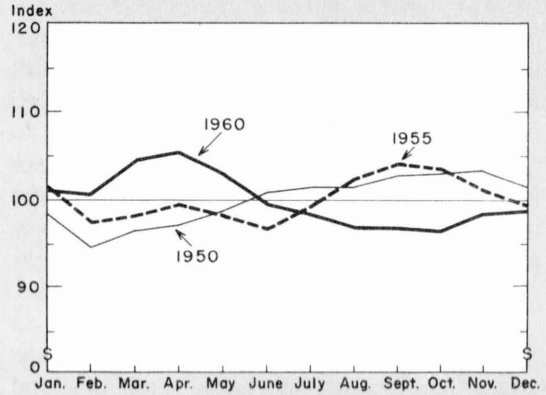


Chart 4  
**SEASONAL INDEXES OF AVERAGE PRICES OF COMMERCIAL COWS**  
 Chicago

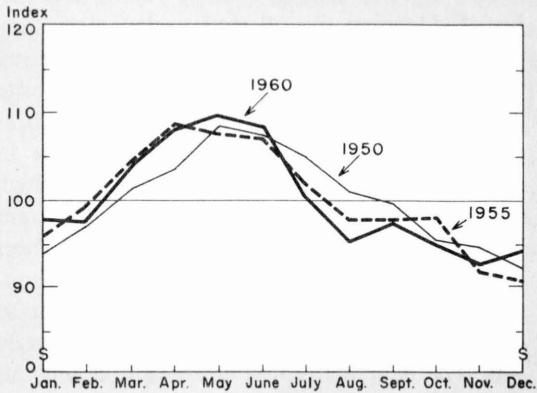
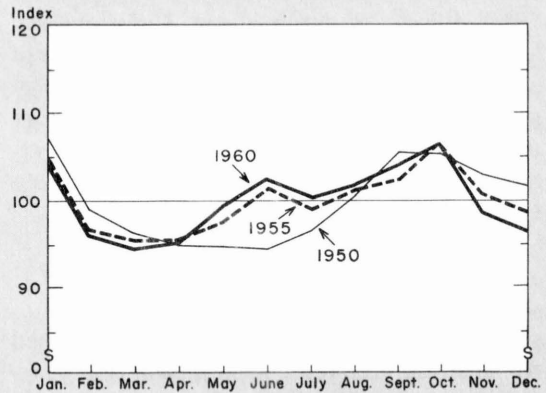


Chart 5  
**SEASONAL INDEXES OF BEEF PRODUCED UNDER FEDERAL INSPECTION**  
 United States



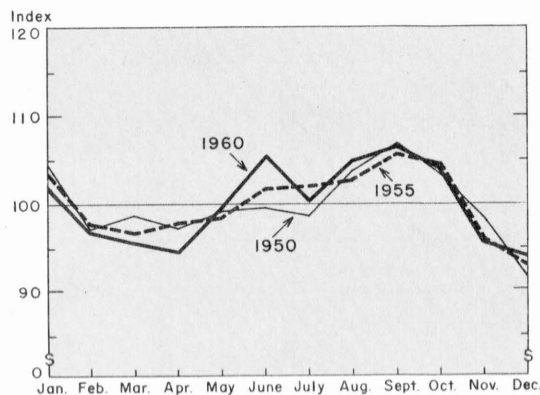
late fall to early winter about 1951, then to early spring about 1956. In addition, the magnitude of seasonal variation for prime steers has increased and it has been almost double that of choice steers at Chicago in recent years. However, prices of other grades of steers apparently have more closely followed the pattern of choice steer prices. The seasonal index for the average prices of all steers at Chicago is similar to that for choice grade, both in timing and in magnitude. The seasonal indexes for the average prices of all grades of steers in the Omaha and Sioux City markets closely parallel the Chicago index. This implies a general shift in the seasonal pattern of steer prices.

It is somewhat surprising that the change in steer prices had so little effect on the average prices for all cattle slaughtered under Federal inspection. The most obvious explanation would be a comparable countershift among other kinds of slaughter cattle. However, information on cow prices shows no such change. The seasonal indexes for commercial cow prices in the Chicago market, depicted in Chart 4, indicate very little change from 1955 to 1960, although there was a moderate shift from 1950 to 1955. The pattern for utility cows is quite similar except that the 1950 and 1960 indexes are much closer. Unfortunately, a comparable series on heifer prices was not available for this analysis. Available data suggest that a counterseasonal shift in heifer prices accounts for the lack of change in average prices of all cattle in the face of the change in steer prices.

#### SEASONAL VARIATIONS IN BEEF OUTPUT AND CONSUMPTION

Changes in cattle prices are closely related to changes in beef production and consumption. Since beef is quite perishable and cold storage costs are high relative to beef prices, changes in consumption tend to follow closely changes in production. Thus, increases in the rate of production tend to depress beef

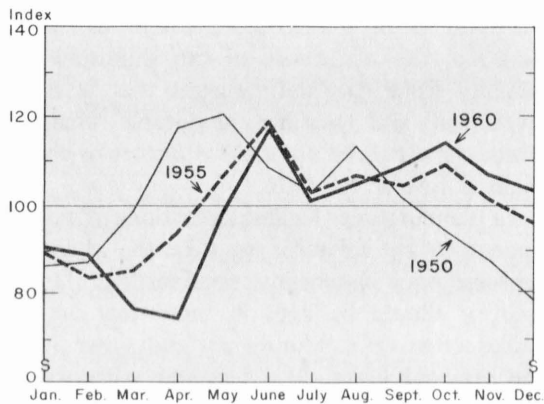
Chart 6  
SEASONAL INDEXES OF CIVILIAN  
BEEF CONSUMPTION  
United States



prices, which stimulates consumption and prevents excessive cold storage holdings. Beef price reductions are reflected back to cattle producers with a fairly short lag.

Statistical analysis of data on beef production for the period 1955-60 indicates that there was little change in seasonal variation during this period. However, there was considerable change from 1950 to 1955, especially for the month of June and, to a lesser extent, December. By lagging the all-cattle price series one month, a comparison of Charts 2 and 5 shows that the index tends to move in the opposite direction and at the same magnitude as the beef production index. The primary exception to this is the June to July dip in production which is not reflected in cattle prices. An apparent explanation of this is the similar dip in beef consumption. As indicated in Chart 6, consumption usually rises from early spring to June, declines in July, then rises again to early fall. The summer dip in consumption may be due to the ending of the school term, vacations, and other changes in living habits occasioned by the onset of hot weather and it may be only coincident with the dip in beef production occurring at the same time. Whatever the cause

Chart 7  
SEASONAL INDEX OF NUMBERS OF  
CHOICE SLAUGHTER STEERS SOLD  
OUT OF FIRST HANDS  
Chicago

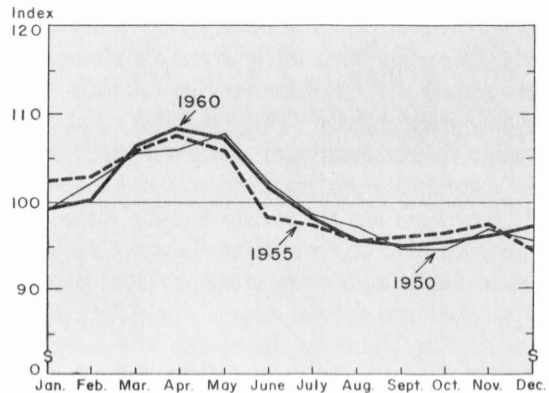


NOTE: Units of scale have been doubled relative to previous charts.

for this coincidence, it seems to have little effect on the seasonal pattern of cattle prices.

Beef production and consumption figures are not available by grades and kinds. However, numbers of slaughter cattle sold are available in certain categories and these provide a rough indicator of production by grades and kinds. Chart 7 shows seasonal indexes of numbers of choice slaughter steers sold out of first hands in the Chicago market. The magnitude of these seasonal variations is considerably greater than those of beef production and consumption. The most significant change in this seasonal pattern is not the timing of highs and lows but the shift in sales from spring to fall. In terms of purely seasonal changes, the proportion sold in the first half of the year declined from 55.8 per cent in 1946 to 45.7 per cent in 1960. While the change was more marked earlier in the period, it continued throughout the entire period. The comparable decline for all slaughter steer sales at Chicago was from 55.5 per cent in 1946 to 48.7 per cent in 1960, but there was no appreciable change after 1952.

Chart 8  
SEASONAL INDEXES OF AVERAGE PRICES  
OF STOCKER AND FEEDER STEERS  
Kansas City



Comparison of the seasonal indexes for total beef production and sales of slaughter steers in Chicago suggests that sales of other kinds of cattle have shifted in a different manner. Beef production has shifted somewhat from late fall to late spring and early summer, while Chicago slaughter steer sales have tended to shift from spring to fall. These counteractions provide some explanation for the different seasonal price behavior for steers and other kinds of slaughter cattle.

Changes in timing of cattle sales probably are due largely to recent changes in cattle feeding operations. The development of the year-round feedlot enterprise would tend to reduce seasonal variations in sales of fed cattle. If the trend continues toward year-round specialized feedlots and away from seasonally operated farm feedlots, the shift in seasonality of sales may continue. Thus, the continuation of the new seasonal pattern of steer prices may depend in large part on the degree of success of year-round feedlot operations.

#### SEASONAL VARIATIONS IN FEEDER CATTLE PRICES

The close relationship between slaughter and feeder cattle markets suggests that their sea-

sonal patterns would be closely related. The seasonal indexes of stocker and feeder steer prices in Kansas City are shown in Chart 8. Despite the changes which have occurred in slaughter steer prices in other Midwestern markets, there has been no appreciable change in the seasonality of Kansas City stocker and feeder steer prices. This suggests that the change in seasonality of slaughter steer sales has resulted largely from changes in the length of time steers are fed and in feeding methods.

Feeder steer calf prices at Kansas City have continued to follow the same seasonal pattern as stocker and feeder steers. The 1960 index was slightly higher in the spring and lower in the fall than the 1950 and 1955 indexes, but the timing of the seasonal pattern remained about the same. This also suggests that a change has occurred in the length of the feeding period.

#### CONCLUDING REMARKS

One of the more notable aspects of the shift in the seasonal pattern of slaughter steer prices is that it was the only one of the seasonal price indexes analyzed here which did not peak in

the spring before 1957, but since that year it also has peaked in the spring. A second notable aspect is that this change has had no apparent effect on any of the other available price indexes. While this might suggest to some that the shift is of minor consequence or short duration, the magnitude of the shift and its stability since the shift suggest that it is a significant and possibly a durable change. There appear to be no obvious factors in operation to reverse the shift.

In planning steer feeding operations, it would appear to be advisable to take the changed seasonal price pattern into consideration. However, it should be kept in mind that actual prices often do not move up and down with the seasonal index. The seasonal influence is likely to be overcome by the cyclical influence during the increasing and decreasing phases of the cycle. The decision maker needs to consider both factors in planning his operations. It should be recognized also that irregular factors often dominate the price movement and, while these are largely unpredictable, they can be allowed for in calculating the risks of alternative courses of action.



## BANKING IN THE TENTH DISTRICT

District and States	Loans				Deposits				Loans				Deposits			
	Reserve City Member Banks		Country Member Banks		Reserve City Member Banks		Country Member Banks		Reserve City Member Banks		Country Member Banks		Reserve City Member Banks		Country Member Banks	
	April 1962 Percentage Change From								March 1962 Percentage Change From							
	Mar. 1962	Apr. 1961	Mar. 1962	Apr. 1961	Mar. 1962	Apr. 1961	Mar. 1962	Apr. 1961	Feb. 1962	Mar. 1961	Feb. 1962	Mar. 1961	Feb. 1962	Mar. 1961	Feb. 1962	Mar. 1961
Tenth F. R. Dist.	+2	+8	+2	+10	+1	+8	+1	+9	+2	+8	+1	+9	†	+9	+1	+10
Colorado	+2	+8	+7	+17	†	+10	+2	+13	+2	+10	-1	+11	-1	+14	+3	+13
Kansas	+8	+17	-1	+5	+7	+9	-2	+6	+2	+9	†	+5	†	+6	†	+8
Missouri*	+1	+5	+3	+6	+2	+6	+1	+9	+2	+5	+2	+5	-3	+5	+2	+10
Nebraska	+3	+9	+3	+9	-1	+7	+2	+10	-1	+4	†	+8	-1	+8	+1	+10
New Mexico*	**	**	+3	+14	**	**	+3	+5	**	**	+1	+10	**	**	+1	+6
Oklahoma*	-1	+8	-1	+10	†	+8	†	+9	+3	+10	+2	+13	+3	+9	+1	+10
Wyoming	**	**	+2	+13	**	**	†	+7	**	**	+1	+14	**	**	-1	+9

\* Tenth District portion only.    \*\* No reserve cities in this state.

† Less than 0.5 per cent.

## PRICE INDEXES, UNITED STATES

Index	Apr. 1962	Mar. 1962	Feb. 1962	Apr. 1961	Mar. 1961
Consumer Price Index (1957-59=100).....	105.2	105.0	104.8	103.9	103.9
Wholesale Price Index (1957-59=100).....	100.4	100.7	100.7 <sup>r</sup>	100.5	101.0
Prices Received by Farmers (1910-14=100)....	242	244	243	239	243
Prices Paid by Farmers (1910-14=100).....	306	305	305	302	302

<sup>r</sup> Revised.

## TENTH DISTRICT BUSINESS INDICATORS

District and Principal Metropolitan Areas	Value of Check Payments			Value of Department Store Sales		
	Percentage change from previous year					
	Apr. 1962	Mar. 1962	Four Months 1962	Apr. 1962*	Mar. 1962*	Four Months 1962
Tenth Federal Reserve District.....	+13	+4	+9	+8	+1	+3
Denver.....	+14	+4	+11	+8	+2	+3
Wichita.....	+14	+13	+11	+4	+3	+2
Kansas City.....	+13	+3	+7	+11	+5	+5
Omaha.....	+16	-1	+8	+14	-3	+1
Oklahoma City.....	+16	+10	+12	+5	+4	+5
Tulsa.....	+8	+7	+9	+1	+1	+1

\* During April and March, changes from a year ago reflect in part the fact that Easter this year fell on April 22, while last year it was three weeks earlier on April 2.



