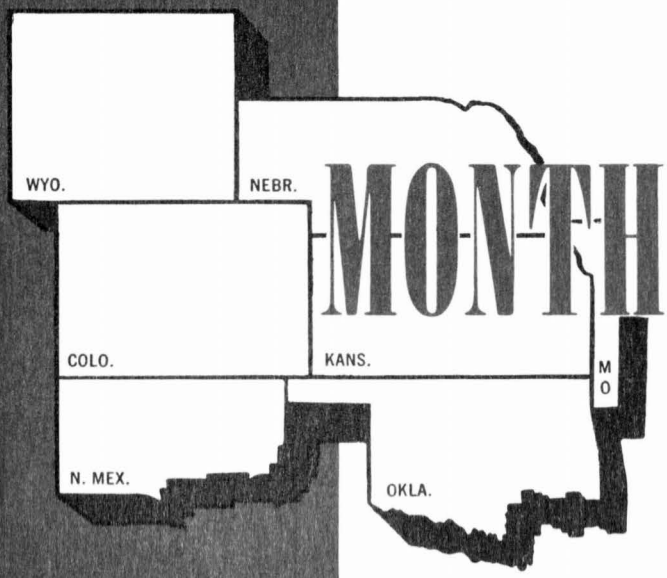

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The Changing Structure of Rural Banking

By Raymond J. Doll

DEVELOPMENTS within both the commercial banking and agricultural industries during the past 15 years have had a sharp impact on rural banks. During and immediately after World War II, commercial bank investment portfolios were highly liquid. Loans generally were relatively low and investments in Government securities were high. Beginning in the early 1950's, a number of developments have brought about significant changes in the financial sector of the economy, including the Treasury-Federal Reserve Accord, changes in rates commercial banks were permitted to pay on time and savings deposits, abandonment of the "bills only" policy, and, until recently, use of a generally stimulative credit policy to encourage a fully employed and stable economy.

In addition to experiencing the developments within the financial sector of the economy, rural banks also felt the impact of sharp adjustment problems that occurred in rural areas. The agricultural industry literally passed through a technological revolution—with the number of farms declining at an average annual rate of about 3 per cent—during the period that the financial developments mentioned above took place. This revolution is continuing unabatedly. Total capital requirements of the industry have about doubled—making capital requirements per farm currently about 3½ times as large as requirements 15 years ago.

These changes have caused the average amount of credit used per farmer to increase roughly 5 times in this period. Demands for farm credit have increased sharply, and since rural banks are a major source of this credit, the impact of these activities has been reflected in rural bank portfolios. This situation is particularly important since such banks are heavily dependent on farm income for their deposits, and farm income increased only at a modest rate during this period. The result is that the structure of most enterprising rural banks is substantially different now as compared with 1950. This article will show some of the changes that have occurred, evaluate these changes, and show the wide variability that prevails from bank to bank for rural banks in the Tenth Federal Reserve District.

Before proceeding with the analysis, it is appropriate to define a rural bank and briefly discuss the relative importance of such banks. A rural bank is defined as any bank that had 50 per cent or more of its total loan volume in agricultural loans on both December 31, 1950, and December 31, 1965—the beginning and end of the period being evaluated. There were

231 member and 329 nonmember banks in the Tenth District that met this definition, so 560 banks, or about 30 per cent of all commercial banks in the Tenth District, were rural banks. Not included in the definition of a rural bank were 227 banks that had 50 per cent or more of their total loan volume in agricultural loans in 1950, but dropped below the figure in 1965, and 329 banks that were above this figure in 1965, but were below it in 1950. It is interesting to note that a substantially larger number of banks had 50 per cent or more of their loan volume in agricultural loans in 1965 than in 1950.

In the subsequent analysis, the evaluations will be based upon changes occurring between the beginning and end of the 15-year period. Major reasons for using this comparative method are: (1) Many of the factors responsible for major changes in bank assets and liabilities during the period were discontinuous in nature. (2) In evaluating credit problems, such as those facing commercial banks and the agricultural industry today, there are good reasons for using the most recent data rather than projecting from time series regression curves. Such estimates are influenced by information from some banks that, for various reasons, may not be making an effort to provide for the credit requirements of their communities. (3) The general trends influencing capital and credit requirements in agriculture were persistently in the same direction and occurred at rapid, even though not consistently stable, rates.

Chart 1
DEPOSIT GROWTH OF MEMBER BANKS
Tenth District

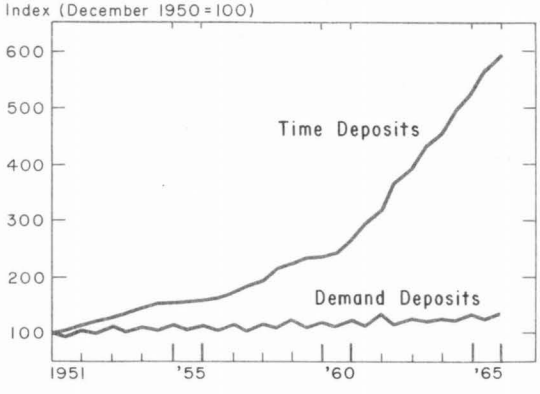
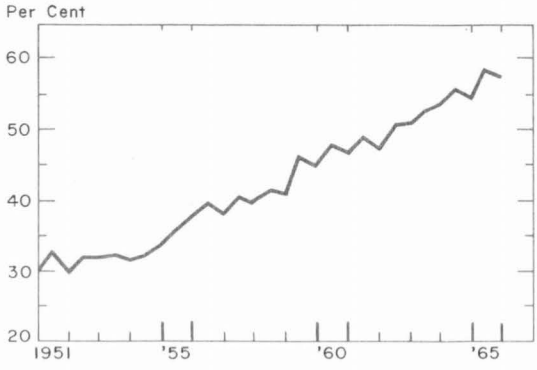


Chart 2
LOAN-TO-DEPOSIT RATIO
OF MEMBER BANKS
Tenth District



Before proceeding with an analysis of the 1950-65 change for rural banks, it is of interest to compare year-to-year changes for several broad classifications of data for all member banks. Because bank deposits are influenced by such factors as changes in rates commercial banks are permitted to pay on time and savings deposits, open market operations, and variability of economic conditions among the different areas, it is important to have some idea of year-to-year changes in deposits for the banking system in the District. Member bank data only are used, since they are more readily available, account for a large proportion of all deposits in the District, and indirectly influence nonmember bank deposits. It is of interest to note in Chart 1 that demand deposits of these banks increased at a persistent, but slow, rate throughout most of the period. Time and savings deposits, on the other hand, increased rather slowly at first but, with the increasing demand for credit and the

Table 1
STATISTICAL DATA ON RURAL BANKS
Tenth Federal Reserve District

	Member Banks			Nonmember Banks			All Banks		
	Dec. 31 1950	Dec. 31 1965	Per Cent Change	Dec. 31 1950	Dec. 31 1965	Per Cent Change	Dec. 31 1950	Dec. 31 1965	Per Cent Change
	(Millions of dollars)			(Millions of dollars)			(Millions of dollars)		
Total Deposits	493	840	+70	385	674	+75	878	1,514	+72
Demand deposits	388	445	+15	313	386	+23	701	831	+19
Time deposits	44	274	+523	26	192	+638	69	465	+574
Other deposits*	62	121	+95	46	96	+109	108	217	+101
Total Loans	162	466	+188	131	355	+171	293	821	+180
Agricultural loans	133	323	+186	92	245	+166	205	568	+177
Cash, balances with other banks, and cash items in process of collection	143	157	+10	104	116	+11	247	273	+10
U. S. Government securities	199	219	+10	163	218	+34	362	437	+21
Obligations of states and political subdivisions	22	73	+232	15	53	+253	37	126	+240

*Deposits of U. S. Government, states and political subdivisions, and of other banks.

NOTE: Member and Nonmember Bank figures may not add to All Bank figure because of rounding.

changes in rates commercial banks were permitted to pay on them, these deposits commenced to increase at an accelerating rate in the late 1950's and were roughly 6 times as large in 1965 as in 1951.

The average loan-to-deposit ratio of all member banks in Chart 2 shows that this ratio has increased rather persistently throughout the period, indicating that total loans made by District member banks have trended upward throughout the period at a more rapid rate than have deposits. The ratio almost doubled, increasing from 30 in December 1950 to 57 in December 1965.

RURAL BANKS

General statistical data for rural banks included in Table 1 show total deposits of these banks increased 72 per cent during the period being evaluated. This growth compares with an increase of 45 per cent in cash receipts from farm marketings and Government payments to farmers in Tenth District states during the same period. Even though deposits of these banks grew at a noticeably more rapid rate than farm income, two observations are pertinent. (1) Deposit growth in the rural banks was not as large as for all member banks in the Tenth District. (2) Changes in rates banks were permitted to pay on time and savings deposits probably had a substantial impact on deposit growth, since the higher rates enabled aggressively managed banks to pull funds in from outside the area and from other financial institutions. Changes in these rates did have an impact on deposits of rural banks as is shown by the impressive 574 per cent increase in time deposits versus the 19 per cent increase in demand deposits. Without the change in rates banks were permitted to pay, these banks might have had a difficult time maintaining a rate of deposit growth equivalent to that of gross farm income.

There was wide variation in the increase of total deposits and deposits by type among banks. In many of the rural banks, time deposits increased from a relatively minor part of total deposits at the beginning of the period to where they were more important than demand deposits by the end of the period. At the other extreme, a significant number of banks either had no time deposits or suffered substantial declines in time deposits between the beginning and end of the period. More

Table 2

CHANGES IN DEPOSITS OF RURAL BANKS FROM 1950-65 CLASSIFIED BY LOAN/DEPOSIT RATIO IN 1965

Tenth Federal Reserve District

Loan/ Deposit Ratios (Per Cent)	Number of Banks	Demand			Time and Savings			Other			Total		
		Dec. 31 1950	Dec. 31 1965	Per Cent Change	Dec. 31 1950	Dec. 31 1965	Per Cent Change	Dec. 31 1950	Dec. 31 1965	Per Cent Change	Dec. 31 1950	Dec. 31 1965	Per Cent Change
		(Millions of dollars)			(Millions of dollars)			(Millions of dollars)			(Millions of dollars)		
						All Banks							
Up to 40	98	116	133	14.6	10	62	520.0	17	33	94.1	144	229	59.0
40-49	117	139	164	17.9	14	83	492.8	22	43	95.4	175	290	65.7
50-59	159	209	259	23.9	19	143	652.6	34	68	100.0	261	469	79.6
60-69	121	160	184	15.0	20	125	525.9	24	52	116.6	204	362	77.4
70 and up	65	76	90	18.4	7	52	642.8	11	22	100.0	94	164	74.4
Total	560	701	831	18.5	69	465	573.9	108	217	100.9	878	1,514	72.4
						Member Banks							
Up to 40	33	59	64	8.4	7	38	442.8	9	17	88.8	75	118	57.3
40-49	41	63	73	15.8	6	39	550.0	11	20	81.8	80	131	63.7
50-59	75	116	143	23.2	11	84	663.6	21	40	90.4	149	149	79.1
60-69	53	104	117	12.5	14	82	485.7	15	34	126.6	133	232	74.4
70 and up	29	46	49	6.5	5	31	520.0	6	11	83.3	56	92	64.2
Total	231	388	445	14.6	44	274	522.7	62	121	95.1	493	840	70.3
						Nonmember Banks							
Up to 40	65	58	70	20.6	4	25	525.0	8	16	100.0	70	111	58.5
40-49	76	76	92	21.0	7	45	542.8	12	23	91.5	95	159	67.3
50-59	84	93	116	24.7	7	58	728.5	13	28	115.3	113	202	78.7
60-69	68	57	68	19.2	6	43	616.6	9	18	100.0	71	130	83.0
70 and up	36	30	41	36.6	2	21	950.0	5	10	100.0	37	72	94.5
Total	329	313	386	23.3	26	192	638.4	46	96	108.6	385	674	75.0

NOTE: Member and Nonmember Bank figures may not add to All Bank figure because of rounding.

than a fourth of the member banks and a fifth of the nonmember rural banks suffered declines in demand deposits ranging up to 49 per cent. Increases in demand deposits ranged upward to 147 per cent for member banks and 191 per cent for nonmember banks.

There was considerably more variability in deposit change from December 1950-65 among nonmember banks than among member banks. Five per cent of the nonmember banks lost deposits during this period and, almost without exception, these banks were small. On the other hand, 4 per cent of the nonmember banks more than tripled their deposits during the period—with one bank increasing total deposits 5½ times. Only 1 per cent of the member banks lost deposits, but less than 1 per cent tripled total deposits during the period; the largest increase in total deposits of a member bank was about 3⅓ times. Even though a larger proportion of nonmember banks lost deposits, a larger proportion of nonmember banks also showed greater rates of deposit growth. The larger average size of member banks, plus the fact that more member banks had only moderate rates of growth, combined to cause the rate of growth in total deposits of member banks to be somewhat lower than for nonmember banks.

Data in Table 2 indicate that there was substantial variability among rural banks in their loan-to-deposit ratios. There were more banks, with a larger dollar volume of deposits, with ratios of up to 40 per cent, than there were banks with ratios of 70 per cent and up. The ratios varied from 21 to 83 per cent for member banks and from 9 to 93 per cent for nonmember banks. In checking through the data by individual banks, it is interesting to note that, with four exceptions, all member banks with loan-to-deposit ratios of up to 40 in December 1965 also had ratios of less than

40 in December 1950. Three of the four exceptions dropped from ratios of slightly above 40 to slightly below 40, and one bank's ratio dropped from 60 to 39 during the period. The same general situation prevailed for nonmember banks. Banks with high ratios at the end of 1965 varied widely in their changes from December 1950, but generally, banks with high ratios in December 1965 also had relatively high ratios at the end of 1950. The latter point can be verified by noting that the banks with loan-to-deposit ratios of 70 and up in December 1965 had total deposits of $94 million in December 1950 and total loans of $42 million, making an aggregate ratio of 45 in 1950. The banks with ratios of up to 40 at the end of 1965 had total deposits of $144 million at the end of 1950 and total loans of $37 million. Thus, their aggregate ratio in 1950 was only 26.

Rural banks with loan-to-deposit ratios of up to 40 per cent in December 1965 had a slower rate of growth in total deposits than did any other group. For nonmember banks, the rate of growth in total deposits tended to increase directly with loan-to-deposit ratio, while for member banks, the rate of deposit growth was the highest for the group of banks with loan-to-deposit ratios from 50-59. A comparison of all rural banks shows that total deposits tended to grow with increase in loan-to-deposit grouping until the 50-59 group was reached and did not change significantly beyond that point.

Comparing growth rates by loan-to-deposit ratio grouping by type of deposit, illustrates the general tendency for the growth rates of member banks with both relatively low and high ratios to be below average for demand deposits, with the greatest rate of growth for the intermediate-ratio range. Growth rates for demand deposits for nonmember banks did not vary significantly with change in ratio grouping, except for the 70 and up group, which showed a substantially greater rate of growth than did the other groupings. Growth rates in time deposits from December 1950-65 tended to be positively correlated with loan-to-deposit ratios at the end of 1965 for nonmember banks, but were erratic for member banks. For deposits of various types of Government units and interbank deposits, growth rates were relatively stable for banks in the different ratio groupings.

Total loans of rural banks increased 180 per cent and agricultural loans 177 per cent, as compared with the 72 per cent increase in deposits. Agricultural loans accounted for 69 per cent of the total loans outstanding at these banks at the end of 1965. Despite their relative importance at these banks, farm loans increased at approximately the same rate as total loans. It also should be pointed out that farm loan growth at these rural banks did not match the 204 per cent increase in farm loans held by all commercial banks in the United States. This difference indicates that the portion of the agricultural industry financed by the rural banks relied increasingly on other banks and other sources of credit for financing during this period. Agriculture probably relied heavily on other banks because of the slow rate of deposit growth in rural banks and current correspondent banking mechanisms, which tend to funnel a substantial volume of funds out of agricultural areas and return part or all of them through such devices as participation loans. Correspondent banks probably are returning a larger proportion of country bank deposits in the form of overlines and purchase of country bank notes today than 15 years ago.

In the case of both total loans and agricultural loans, there was substantial variability among banks in the changes that occurred from December 1950-65. Changes in total loans varied from a −49 per cent to a +889 per cent. Nine member and 36 nonmember banks either had decreases or increases of 50 per cent or less, while 36 member and 37 nonmember banks had increases of 300 per cent

Table 3

LOANS OF RURAL BANKS BY PER CENT CHANGE FROM 1950-65

Tenth Federal Reserve District

	Member Banks				Nonmember Banks				All Banks			
	Number	Dec. 31 1950	Dec. 31 1965	Per Cent Change	Number	Dec. 31 1950	Dec. 31 1965	Per Cent Change	Number	Dec. 31 1950	Dec. 31 1965	Per Cent Change
		(Millions of dollars)				(Millions of dollars)				(Millions of dollars)		
						Total						
Up to 50	9	6	7	16.6	36	16	20	25.0	45	21	27	28.5
50-99	26	23	38	65.2	52	24	42	75.0	78	46	80	73.9
100-149	51	41	92	124.3	68	28	62	121.4	119	68	154	126.4
150-199	46	35	97	177.1	54	25	67	168.0	100	59	164	177.9
200-249	29	17	56	229.4	35	13	43	230.7	64	31	99	219.3
250-299	34	22	84	281.8	27	10	36	260.0	61	32	120	275.0
300 and up	36	18	92	411.1	57	16	83	418.7	93	34	175	414.7
Total	231	162	466	187.6	329	131	355	170.9	560	293	821	180.2
						Agricultural						
Up to 50	13	7	9	28.5	35	11	13	18.1	48	18	22	22.2
50-99	34	19	34	78.9	66	20	35	75.0	100	39	69	76.9
100-149	40	24	54	125.0	68	20	45	125.0	108	44	99	125.0
150-199	36	18	49	172.2	44	14	39	178.5	80	33	88	166.6
200-249	31	14	45	221.4	39	11	35	218.1	70	25	80	220.0
250-299	30	13	49	276.9	18	5	17	240.0	48	18	66	266.6
300 and up	47	17	83	388.2	59	12	61	408.3	106	28	144	414.2
Total	231	113	323	185.8	329	92	245	166.3	560	205	568	177.0

NOTE: Member and Nonmember Bank figures may not add to All Bank figure because of rounding.

or more. It also is of interest to note that the rise in dollar volume of total loans for the banks having 50 per cent increases or less was only $6 million, while for the banks with 300 per cent increases or more the growth in dollar volume of total loans was $141 million.

Some interesting evaluations can be made if the changing asset structure of rural banks is observed by loan-to-deposit groupings. By definition, loans should be relatively low in the low-ratio grouping, and it also would be expected that loan growth from December 1950-65 would tend to be positively related to loan-to-deposit groupings at the end of 1965. This relationship did prevail throughout all groupings for nonmember banks and for all groupings of member banks, except for the 70 and up group. Loans in the 70 and up group of member banks grew more slowly from December 1950-65 than loans in all other member bank groupings, except the up to 40 group. This slow growth is explained partly by the relatively slow rate of growth in deposits at this group of banks. Starting with a relatively high loan-to-deposit ratio at the end of 1950 and being confronted with the slower-than-average rate of growth in deposits, these banks were unable to maintain a rate of growth in loans comparable to that for most other groupings.

The second most important asset held by the rural banks was Government securities. An inverse relationship with loan-to-deposit grouping would be anticipated in change in Government securities investment from 1950-65. This relationship did prevail for all ratio groupings for both member and nonmember banks. For all banks, the largest change—an increase of 60.6 per cent—was in the up to 40 grouping, while the largest decrease—29 per cent—was in the 70 and up grouping. Changes in bank investments in Government securities tend to reflect a difference in the degree of conservatism and aggressiveness of bank management. Bank investment in Government securities became routine during the World War II period. Since the procedure for investing in these securities is well established and such investments are considered as good risks—particularly if held until maturity—a number of banks have more funds invested in Government securities than in loans.

Cash, balances with other banks, and cash items in process of collection were ranked third in importance as rural bank assets at the end of 1965. These asset items are held to service community needs or to obtain services from city correspondents, and are largely non-earning assets. Consequently, the growth in this category of assets would be expected to be held to a minimum regardless of loan-to-deposit ratio. The data in Table 4 indicate that growth in this category of asset items was relatively small during the 1950-65 period and fluctuated erratically among ratio groupings for both member and nonmember banks.

Finally, rural banks had a substantial dollar volume of their investments in obligations of states and other political subdivisions. Because of changes in rates banks were permitted to pay on time and savings deposits and tax considerations, investment in this category of assets increased rather sharply in recent years. There did not appear to be any significant variation in rate of growth in this category of assets by loan-to-deposit ratio grouping or by member and nonmember banks. The average rate of increase from 1950-65 was 240 per cent for all banks with an average rate of increase of 232 per cent for member banks and 253 per cent for nonmember banks.

SUMMARY AND CONCLUSIONS

The preceding analysis emphasizes that rural bank structure has changed substantially during the past 15 years. It also indicates that there was a high degree of variability in the kinds and degree of change from bank to bank, with some of the rural banks showing substantial decreases in the dollar volume of assets in loans, while others showed huge increases. The average increase in dollar volume of loans outstanding for the rural banks in the Tenth District was 180 per cent.

The fact that total farm debt outstanding increased 227 per cent from December 1950-

Table 4

MAJOR ASSETS OF RURAL BANKS BY LOAN/DEPOSIT RATIOS IN 1965

Tenth Federal Reserve District

Loan/Deposit Ratios	Cash, Balances with Other Banks, and Cash Items			Total Loans			Governments			States and Political Subdivisions		
	Dec. 31 1950	Dec. 31 1965	Per Cent Change	Dec. 31 1950	Dec. 31 1965	Per Cent Change	Dec. 31 1950	Dec. 31 1965	Per Cent Change	Dec. 31 1950	Dec. 31 1965	Per Cent Change
(Per Cent)	(Millions of dollars)			(Millions of dollars)			(Millions of dollars)			(Millions of dollars)		
	All Banks											
Up to 40	44	49	11.3	37	73	97.2	66	106	60.6	6	19	216.6
40-49	51	52	1.9	53	131	147.1	77	101	31.1	7	29	314.2
50-59	71	84	18.3	87	257	195.4	109	133	22.0	12	36	200.0
60-69	56	60	7.1	75	235	213.3	79	75	−5.0	8	30	275.0
70 and up	25	27	8.0	42	124	195.2	31	22	−29.0	4	11	175.0
Total	247	273	10.5	293	821	180.2	362	437	20.7	37	126	240.5
	Member Banks											
Up to 40	24	25	4.1	18	39	116.6	33	50	51.5	3	11	266.6
40-49	24	24	0	22	60	172.7	36	41	13.8	3	15	400.0
50-59	41	51	24.3	48	146	204.1	62	71	14.5	7	22	214.2
60-69	37	41	10.8	47	151	221.2	53	44	−16.9	5	19	280.0
70 and up	16	15	−6.2	26	70	169.2	16	12	−25.0	3	6	100.0
Total	143	157	9.7	162	466	187.6	199	218	9.5	22	73	231.8
	Nonmember Banks											
Up to 40	20	24	20.0	18	34	88.8	34	55	61.7	2	8	300.0
40-49	26	28	7.6	30	71	136.6	41	59	43.9	3	14	366.6
50-59	30	33	10.0	39	111	184.6	47	62	31.9	5	14	180.0
60-69	19	19	0	27	84	211.1	27	31	14.8	3	11	266.6
70 and up	9	12	33.3	16	54	237.5	15	10	−33.3	1	6	500.0
Total	104	116	11.5	131	355	170.9	163	218	33.7	15	53	253.3

NOTE: Member and Nonmember Bank figures may not add to All Bank figure because of rounding.

65, while rural banks with loan-to-deposit ratios of up to 40 per cent—more than one sixth of the banks—increased their loans only 97 per cent may indicate either conservative management or a relative lack of loan demand for these banks. If the rural banks are plotted by loan-to-deposit ratio by geographical area, no particular pattern is detected. Rural banks with high ratios and low ratios tend to be mixed and frequently one or more of each are found in the same town or rural community. Since the low ratio banks tend to have relatively high investments in Government securities, the analysis suggests that a significant number of rural bankers, for one reason or another, prefer to retain a large investment in Government securities. It also should be emphasized that large numbers of rural bankers are making an intensive effort to adapt to the changing structure both in the banking and agricultural industries. These rural banks are finding it increasingly difficult to adapt to the dynamic economic situation that prevails and are finding it necessary to innovate in their efforts to serve their communities. To be able to innovate within the prevailing institutional environment frequently requires a high degree of managerial ability and aggressiveness. To maintain this type of managerial ability in a large number of isolated, rural banks is a difficult bank-management task. Many rural banks have been able to meet the challenge reasonably well, as indicated by the changes that have just been evaluated. However, it appears that some rural banks are in need of additional managerial assistance if they are to do the most effective job of adapting to prevailing economic developments.

Measuring a Deficit or Surplus in the U.S. Balance of International Payments

By Thomas E. Davis

THE QUESTION of the best way to measure a deficit or surplus in the U. S. balance of payments has been the object of considerable discussion during recent years. Interest in this question has been due to the importance attached to the concept of a deficit or surplus as an indicator of our international economic position, and to the significant influence that the large U. S. balance of payments deficits have had on economic policy decisions since 1958. Last year, after careful review and study,[1] the U. S. Government decided to place primary emphasis on two measures of our balance of payments performance—the "liquidity" balance and the balance on "official reserve transactions." In view of this decision, it is important when speaking of a deficit or surplus in the U. S. balance of payments to have a clear understanding of the meaning, as well as the limitations, of the particular concept being used. To aid in this understanding, this article examines some of the problems associated with measuring a deficit or surplus in the balance of payments, and attempts to explain and compare the two concepts now being used to measure the U. S. international payments position.

PROBLEMS IN MEASURING A DEFICIT OR SURPLUS

A major source of difficulty in measuring a deficit or surplus in a country's balance of payments is that the balance of payments statement *as a whole* shows neither a deficit nor a surplus. The method of double entry accounting used in compiling the balance of payments statement implies—by definition—that total debit, or payment, entries must equal total credit, or receipt, entries. Therefore, to obtain a deficit or surplus it is necessary to strike a balance on certain selected transactions *within* the accounts. In other words, all the transactions in a country's balance of payments must be divided into two groups, with those transactions believed to give rise to a deficit or surplus placed in one group or "above the line," and the remaining transactions thought to be balancing, or settlement, items placed in the second group or "below the line." With all the transactions grouped in this manner, a deficit or surplus in the balance of payments is presumed to exist when the sum of the items above the line shows either a negative or positive balance and, in turn, is presumed to be balanced or settled by the sum of the transactions below the line.

[1] Review Committee for Balance of Payments Statistics, **The Balance of Payments Statistics of the United States —A Review and Appraisal** (Washington: U. S. Government Printing Office, 1965), and U. S., Congress, Joint Economic Committee, **The Balance of Payments Statistics,** 89th Cong., 1st Sess., 1965.

Since a deficit or surplus in a country's balance of payments is determined on the basis of selected transactions only, the crucial problem is deciding which transactions should be selected. Quite clearly, the transfer of one category of transactions from a position above the line to a position below the line, or vice versa, could significantly alter the size and possibly the nature of a deficit or surplus, even though the underlying data in the accounts remain the same. Unfortunately, this selection cannot be made simply on the basis of the data alone because the figures themselves never indicate whether a particular type of transaction should be entered above or below the line. Rather, the selection must depend upon an analytical interpretation of the data and upon an analysis of the relationships between the transactions. Any such analysis, however, is likely to vary with changing circumstances and with the particular problem being analyzed. Therefore, to better understand why certain transactions are selected to measure a deficit or surplus it is necessary to know the purpose for constructing such a measure.

Ideally, the purpose of determining a deficit or surplus in the balance of payments is to measure the extent of any real disequilibrium in a country's international economic position. And yet, there is general agreement that no measure of the balance of payments, however defined, can be relied upon for this purpose. Numerous adjustments of a qualitative and quantitative nature would have to be made to any such measure to take account of the economic conditions and policies in that country and abroad. For example, the relation between a country's level of employment and the level of its imports and exports would need to be considered. A country may be importing less and exporting more, but at a cost of experiencing a less-than-desired level of employment and economic growth. Consideration also would have to be given any special controls or restraints imposed on a country's international transactions tending to make them appear more favorable, or possibly more unfavorable, than they might otherwise be. Also, any random or special short-run fluctuations that have occurred in the accounts which do not of themselves reflect a lasting change in the country's external position would have to be sorted out. Only in this way can the international economic position of a country be determined satisfactorily.

The difficulty in constructing such a measure has forced analysts to fall back on second-best solutions, and thus it is not surprising that differences have occurred in the selection of transactions to be included as a measure of a deficit or surplus. The most general approach to the problem, however, has been to consider all international transactions as either "autonomous" or "compensatory." Autonomous transactions are regarded as those occurring independently of balance of payments considerations and are placed above the line, while compensating transactions are regarded as those undertaken to finance, or settle, the sum of the autonomous transactions and are placed below the line. Years ago, under the strict gold standard, it was a simple matter to distinguish between autonomous and compensatory transactions. All transactions except gold movements were considered autonomous, and so a deficit or surplus was measured by changes in a country's gold stock. Today, the distinction between the two is less precise because it is recognized that not only are some international transactions settled by capital flows as well as by gold flows, but that some capital flows are autonomous while others are compensatory. But deciding which capital flows should be considered as compensatory, or balancing, transactions has presented a problem.

One approach to the problem has been to focus on those transactions which respond to long-run economic forces. This measure, known as a balance on "basic" transactions,

places above the line all transactions on goods, services, transfer payments, and long-term capital movements. All other transactions, including short-term capital movements and changes in official holdings of international reserves, are placed below the line. The rationale for this approach is that it provides a measure of the underlying competitive economic relationships which a country must seek to balance over time if it wishes to maintain equilibrium in its external position. In spite of its apparent simplicity, the analytical usefulness of the basic balance has been questioned on the grounds that it is difficult to clearly distinguish transactions on the basis of their sensitivity to short-run or long-run economic forces. For example, capital movements nominally classified as long-term may, in fact, be of the short-term variety, while capital movements classified as short-term may be repeatedly renewed. Also, certain types of short-term capital movements are closely related to merchandise transactions which they finance, so it cannot be said that the two respond to different sets of economic forces. Hence, it is felt that while the basic balance concept might be a helpful partial measure in the context of a broad analysis of the balance of payments, it does not always serve as a reliable summary indicator of a country's current external position.

Another approach to the problem of how to treat capital flows has been to place below the line those transactions specifically undertaken by national monetary authorities to settle all other transactions arising in the balance of payments. This approach, which was employed by the International Monetary Fund in the early postwar years, is identified with the balance on "official compensatory finance." According to this approach, official financing includes changes in a country's gold and official foreign exchange position, its net position with the International Monetary Fund, and government grants or loans made for balance of payments reasons. In addition, changes in the foreign exchange holdings of a country's commercial banks are included to the extent that the authorities exercise control over these holdings. The problem with this approach is that when the principle of official compensatory financing is extended to various types of capital flows, it involves the impossible task of detecting the motive for capital flows from the data alone. As a result, the practical application of this approach has met with great difficulty.

The problems involved in treating capital flows have been further complicated by the close association of deficit and surplus determination with economic policy considerations. This association has increased in importance as governments have adopted policies to protect their domestic economies from fluctuations in international economic activity, and have agreed to maintain the external value of their currencies at relatively fixed rates of exchange. Consequently, governments have become vitally interested in having a measure of their countries' international transactions that can serve as a guideline for their economic policies. Such a measure, it is believed, should concentrate on the country's means of making international payments and, more specifically, on the government's ability to maintain the external value of its currency. In constructing such a measure, the problem is determining which funds should be considered available for this purpose. For most countries, however, this does not present a particularly difficult problem. Their official means of making international payments readily include their official holdings of gold and foreign exchange and their net position with the International Monetary Fund. In addition, to the extent that the foreign exchange holdings of their commercial banks are controlled by the government, any changes in these holdings also are included.

For the United States, which is a reserve currency country, special problems exist in de-

Table I

U. S. BALANCE OF PAYMENTS, 1965
(In Millions of Dollars)

Transactions	Balance of Payments		Type of Balance			
			Liquidity Basis		Official Reserve Transaction Basis	
	Receipts	Payments	Net Balance	Balancing Items	Net Balance	Balancing Items
Exports of goods and services—Total	38,993		38,993		38,993	
Imports of goods and services—Total		32,036	−32,036		−32,036	
Remittances and pensions		994	−994		−994	
U. S. Government grants and capital flow, net		3,375	−3,375		−3,375	
U. S. private capital flow, net:						
Direct investment		3,371	−3,371		−3,371	
Foreign securities		758	−758		−758	
Other long-term claims		322	−322		−322	
Short-term claims	761		761		761	
Errors and unrecorded transactions		429	−429		−429	
Foreign capital flow, net:						
Direct investment	71		71		71	
U. S. corporate securities		443	−443		−443	
Other U. S. nonliquid liabilities:						
To foreign official agencies	97		97			97
To all others	451		451		451	
Liquid U. S. liabilities to all foreigners:						
To foreign commercial banks	116			116	116	
To other private foreigners	34			34	34	
To foreign official agencies		17		−17		−17
U. S. official reserve assets; increase (−)	1,222			1,222		1,222
Total	41,745	41,745	−1,355	1,355	−1,302	1,302

SOURCE: U. S. Department of Commerce.

termining a measure which can serve as a guideline for its economic policies. As an international reserve currency, the U. S. dollar is used widely throughout the world in settling transactions, not only between the United States and the rest of the world but also between third-party countries. As a result, foreign official agencies hold U. S. dollars as part of their international reserves and foreign private parties have accumulated a substantial amount of U. S. dollars as a means of payment in world trade. Moreover, as part of its obligation to the International Monetary Fund to maintain the exchange rate of the dollar, the United States stands ready to convert dollars held by foreign official holders into gold for legitimate monetary purposes. Therefore, it is felt that in determining its international payments position the United States should not only consider its holdings of gold and other official international reserves but also should take into account the large volume of outstanding foreign dollar claims that may be exercised against these reserves. Which of these foreign dollar claims, or U. S. dollar liabilities, should be included as an offset to U. S. official reserves has been a matter of dispute. In recognition of the opposing views in this dispute, the United States recently adopted two measures of its international payments position—the "liquidity" balance, and the balance on "official reserve transactions."

THE LIQUIDITY BALANCE

The liquidity balance measures a deficit or surplus in the U. S. balance of payments by any changes in U. S. official reserve assets and in liquid U. S. liabilities to *all* foreigners (Table I). U. S. official reserve assets are defined to include U. S. official holdings of gold and convertible foreign exchange, plus the U. S. net position with the International Mone-

tary Fund.[2] Liquid U. S. liabilities include all short-term liabilities to foreigners and international nonmonetary institutions reported by U. S. banks, and all foreign holdings of marketable, and nonmarketable but convertible, U. S. Government securities. All other transactions recorded in the U. S. balance of payments are entered above the line and presumed to give rise to a change in the U. S. international liquidity position. Thus, according to the liquidity balance, a deficit in the U. S. balance of payments is measured by any decrease in U. S. official reserve assets plus any increase in U. S. liquid liabilities to foreigners.[3]

The rationale for the liquidity balance is that it serves the needs of policymakers who have the final responsibility for maintaining the exchange rate of the U. S. dollar. It does so, it is felt, by focusing on the liquid resources available to the authorities to defend the dollar, as measured by changes in U. S. official reserve assets, and by spotlighting the liquid claims which may be exercised against these reserves, as measured by changes in U. S. liquid liabilities to all foreigners. Such a measure, it is believed, provides the authorities with an indicator of their ability to maintain the external value of the dollar and to determine whether a given pattern of international transactions can be sustained over the long run.

While it is generally agreed that the external liquidity of the United States is important in assessing the U. S. payments position, the liquidity measure has not been free from criticism. A major objection to the liquidity measure is its asymmetric treatment of short-term private capital flows. According to this measure, changes in U. S. liquid liabilities to private foreigners are placed below the line, while changes in private U. S. capital claims on foreigners are placed above the line. This treatment is criticized because any inflow of short-term private foreign capital tends to worsen the U. S. liquidity position, but any inflow of short-term private U. S. capital does not. The justification given for this treatment is that U. S. liquid liabilities to private foreigners are considered a potential threat to the U. S. gold stock because they are readily transferable to foreign official holders to whom the United States is obligated to sell gold upon demand. Private U. S. capital claims on foreigners, on the other hand, are placed above the line because they are not considered readily available to the U. S. authorities for use in defending the U. S. dollar in foreign exchange markets. Only U. S. official reserves are regarded as available for this purpose. The asymmetric treatment of private short-term capital flows also is said to be justified because it corresponds to the asymmetries of the real world. Since the U. S. dollar serves as an international reserve currency throughout the world, unlike currencies of most other countries, the United States is felt to have a special obligation as banker to the world to weigh its official reserve assets against all its liquid liabilities, both official and private.

The view of the liquidity concept that foreign private dollar claims should be put on the same basis as foreign official claims has met with further criticism. This view, it is argued, gives inadequate recognition to the positive motives causing private foreigners to acquire dollar claims, and so underrates the advantages and attractiveness of the U. S. money market as a place for foreigners to invest liquid reserves and to hold working balances. It also is thought that a sizable portion of private foreign claims are linked closely to liabilities

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[2] The U. S. net position with the International Monetary Fund is measured by the U. S. "gold tranche" position. This position represents virtually automatic U. S. drawing rights from the Fund to the extent that the Fund's holdings of U. S. dollars are less than the U. S. quota.

[3] A variant of the liquidity balance, called the balance on "regular" transactions, appeared in official U. S. publications prior to 1965. This variant included below the line those items presently carried by the liquidity balance, plus any receipts from "special government transactions" undertaken mainly to finance a deficit, such as advance repayments on U. S. Government loans.

that foreigners have incurred to U. S. residents, and thus are essentially "locked into" dollars and not likely to be withdrawn. A common instance is when a U. S. bank lends money to a private foreigner and requires that the foreigner place on deposit at the bank certain compensatory balances—which in practice are foreign private dollar claims not subject to liquidation or withdrawal. Another instance is when a U. S. resident places funds in a foreign bank, say a Canadian bank, and these funds are then invested by the bank in liquid assets in the United States. These liquid dollar assets are not likely to be converted into foreign currencies in view of the foreign bank's outstanding liability to the U. S. resident. Hence, it is believed that the effect of treating foreign private capital flows as different from U. S. private capital flows, or as similar to foreign official capital flows, tends to exaggerate the threat to the U. S. gold stock and the deficit in the U. S. balance of payments.

Another objection to the liquidity approach is that it lacks precision because liquidity is a relative term. As such, any classification of foreign held dollar assets based on their degree of liquidity is susceptible to change, depending upon changing circumstances and changing points of view. In a larger sense, moreover, all U. S. dollar assets held either by foreigners or by U. S. residents, are in some degree liquid to the extent they are freely exchangeable into foreign currencies. In this sense the liquidity approach may underestimate the potential drain on U. S. official reserves and so provide a misleading picture of the ability of U. S. monetary authorities to maintain the value of the dollar.

THE BALANCE ON OFFICIAL RESERVE TRANSACTIONS

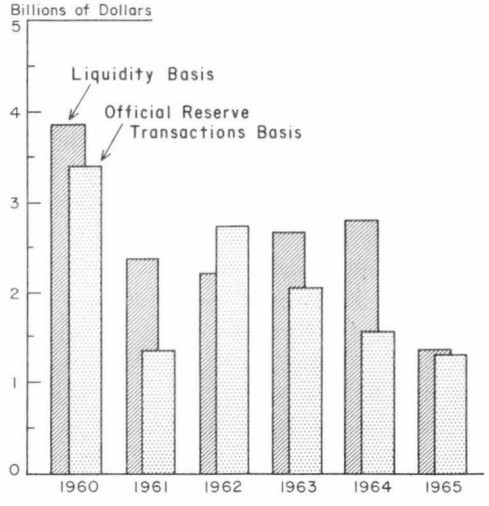
According to the balance on official reserve transactions, a deficit or surplus in the U. S. balance of payments is measured by any changes in U. S. official reserve assets and in liquid and certain nonliquid U. S. liabilities to *foreign official agencies* (Table I). This measure differs primarily from the liquidity balance by excluding U. S. liquid liabilities to foreign private holders and nonmonetary international organizations. A second difference, of less importance, is that changes in certain nonliquid U. S. liabilities to foreign official agencies are included in the official reserve transactions balance, but not in the liquidity balance. These nonliquid liabilities primarily consist of nonmarketable, nonconvertible U. S. Government securities held by foreign official monetary institutions.

The hypothesis underlying this approach is that the need for a summary indicator of the balance of payments arises from the nature of the present international monetary system in which the final responsibility for maintaining stable foreign exchange rates rests with national monetary authorities, i.e., central banks and treasuries. In carrying out this responsibility, monetary authorities act to settle the net deficits and surpluses that arise on all other international transactions by gaining or losing international reserve assets and by increasing or decreasing their liabilities to foreign monetary authorities. Therefore, the size of a monetary authority's transactions in international reserves is thought to provide the most useful measure of the market intervention necessary to maintain the exchange rate, and, hence, of any balance of payments disequilibrium.

A comparison of this approach with the liquidity approach, for the 6-year period 1960-65, shows that by either measure the United States has incurred balance of payments "deficits" in every year (Chart I). According to the liquidity approach, however, the annual deficit during these 6 years averaged $2,550 million, $490 million higher than the deficit measured on the basis of official reserve transactions. The primary reason for this differ-

Chart I

ALTERNATIVE MEASURES OF THE U. S. BALANCE OF PAYMENTS DEFICIT
(In Billions of Dollars)



ence is that the liquidity measure considers any rise in U. S. liquid liabilities to private foreigners, including foreign commercial banks, as adding to the deficit. During this period, U. S. liquid liabilities to foreign commercial banks alone averaged an increase of $440 million and accounted for nearly all of the average difference between the two measures. Thus, much of the debate between the advocates of these two measures has been on how to treat liquid liabilities to private foreigners.

The rationale for not including U. S. liquid liabilities to private foreigners in the official transactions measure is that these liabilities usually represent ordinary capital movements and so should be treated like private U. S. capital claims. This treatment, it is felt, recognizes the key distinction between transactions of monetary authorities and private parties, and also is consistent with the concept of a zero payments deficit since it takes into account the continued need for and the growth of U. S. dollar claims by private foreigners. Under the liquidity approach, however, which considers an increase in liquid U. S. liabilities to private foreigners as adding to the deficit, the concept of a zero deficit is not consistent with a rise in these liabilities unless simultaneously offset by a drop in U. S. official reserves.

A fundamental criticism of the official transactions measure is that changes in foreign private dollar claims are related closely to central bank policies and therefore should be treated like reserve-type transactions. This especially is true when a foreign central bank either owns the commercial banks in its country or is able to control the commercial banks' holdings of dollar claims through directives or exchange controls. It also is true when private foreigners have been induced by official exchange operations to alter the size of their dollar holdings. Such operations, mainly in the forward exchange market, frequently are conducted today by official agencies as part of the techniques of international financial cooperation, and, additionally, as part of the domestic monetary policies of foreign monetary authorities. For instance, a foreign central bank may induce its commercial banks to hold liquid dollar assets by agreeing to exchange local currency for dollars at some future date and at a more favorable rate than is available in the market. Since the effect of these operations is to shift dollar balances from foreign monetary institutions to foreign commercial banks, or vice versa, they tend to blur the distinction between these foreign dollar claims. Thus, it is argued that when these operations cause large short-run variations in foreign official and private dollar claims it is possible to misinterpret the U. S. payments position viewed according to the official transactions measure. The liquidity measure, it is pointed out, is not similarly affected by such variations because

it places changes in all liquid foreign dollar claims below the line.

Advocates of the official transactions measure readily acknowledge that short-run changes in foreign private dollar claims often are related closely to policy actions taken by national monetary authorities. However, they maintain that these changes, whether induced by official exchange operations or by changing credit conditions, serve to underscore the market responsiveness of what is essentially private capital. Moreover, they believe that these short-run changes in foreign dollar claims are not dominant enough to justify placing them below the line, even though occasional distortions in the data may require special analysis and explanation. They further maintain that even though national monetary authorities may influence foreign private dollar claims in the short run, they cannot do so in the long run. In support of this view, they cite the large buildup of foreign private dollar claims over the past 7 years, which is presumed to represent a genuine inflow of private capital related to the investment or financing needs of foreigners. For these reasons, the balance on official reserve transactions is thought by some observers to provide the most useful measure of the long-run market forces affecting the U. S. international payments position.

WHICH IS THE BEST MEASURE?

In view of the variety of concepts employed to measure a country's balance of payments, and the various arguments presented regarding the two current measures of the U. S. balance of payments, the inevitable question arises as to which measure is best. The answer is simply that there is no one best measure to describe a country's international payments position, any more than there is one best measure to describe the financial position of a government, bank, or corporation. Any one measure may be misleading or revealing depending upon the problem being analyzed and upon the interpretation given to the underlying data. Also, as indicated earlier, a useful analysis of a country's international position rarely is possible on the basis of balance of payments data alone; domestic economic conditions and policy objectives both in the country and abroad have to be taken into account. For the United States, the problem is particularly difficult because of the key currency status of the U. S. dollar in international trade and finance, and the diversity of U. S. transactions with the rest of the world. Indeed, it was due largely to these difficulties that the United States decided to adopt two measures of its balance of payments performance. Neither of these measures, however, can be said to be unequivocally superior to the other in revealing whether the United States is experiencing a fundamental disequilibrium in its international payments position. The value in having two measures, therefore, is that they may further public understanding of the complex nature of the balance of payments, and also encourage people not to evaluate the U. S. payments position on the basis of a single concept—a deficit or surplus.

"FOREIGN TRADE AND AMERICAN AGRICULTURE"

A special booklet, "Foreign Trade and American Agriculture," has been issued recently by the Research Department of the Federal Reserve Bank of Kansas City. The booklet provides a historical perspective of international agricultural trade, reviews the current status of this trade, and discusses the agricultural implications of current international trade negotiations. Copies may be obtained on request to the Research Department, Federal Reserve Bank of Kansas City, Kansas City, Missouri 64106.


FEDERAL RESERVE BANK OF KANSAS CITY
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INCORPORATED MAY 18, 1914