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APPENDIX A

The Commercial Bank Term Loan Sample and Estimates Made Therefrom

A

The Commercial Bank Term Loan Sample and Estimates Made Therefrom

DURING JUNE 1941 letters were addressed to each of 210 commercial banks, whose officers were members of the Association of Reserve City Bankers, requesting detailed information on each term loan held by them on or around June 30, 1941. Eighty-one banks subsequently returned completed schedules in time for tabulation,¹ and 18 additional banks reported that they did not hold a significant amount of term loans. Consequently, the sample consisted of 99 commercial banks, 82 percent of which held significant amounts of term credit at the middle of 1941.

The 81 commercial banks holding term loans in their portfolios returned schedules for 2,820 individual loans, of which 2,764 were complete enough to be included in the tabulations after editing. Of this latter number, 2,607 loans called for the disbursement and repayment of definite sums of money by the borrower in accordance with a pre-determined agreement, and 157 loans constituted "revolving" credits, with respect to which borrowers were granted credit "lines" within which their outstanding indebtedness could fluctuate. These two groups of loans were tabulated separately, the original amounts and unpaid balances at time of reporting being respectively as follows:

	<i>Number of Loans</i>	<i>Original Amount</i>	<i>Unpaid Balances About June 30, 1941</i>
"Regular" term loans	2,607	\$1,679,252,000	\$1,459,560,000
"Revolving" term loans	157	(not tabulated)	110,371,000
ALL LOANS	2,764		\$1,569,931,000

The average original amount of regular term loans was \$644,000, and the average unpaid balance of all loans was \$568,000.

In addition to providing detailed information concerning each term loan held on or around June 30, 1941, the 210 commercial banks were requested to state the total amounts of their term loans outstanding at the end of each year of the six-year period 1935 through 1940. Although 81 banks responded to this request, the returns of only 56 banks

¹ A total of 74 term loan schedules was received from 5 additional banks after September 1, 1941, too late for inclusion in the tabulations.

were complete enough to be used in constructing a time series on annual term loan credit outstanding.

Character of the Sample

The 99 commercial banks cooperating in the term loan study were all comparatively large institutions, only three banks having total assets at March 31, 1941 of less than \$30 million, and only one having total assets of less than \$10 million. Average total assets per bank were over \$300 million, in reflection of the fact that many of the largest American banks were included in the group. Certain salient relationships between the 99 cooperating banks, the approximately 400 weekly reporting member banks of the Federal Reserve System (typical of banks located in the large cities of the country), all Federal Reserve member banks, and all insured commercial banks, are shown in Table A-1. The 99 cooperating banks accounted for over 42 percent of the total assets and 34 percent of all the loans and discounts held by all insured commercial banks at the end of 1940. The ratio of loans and discounts to total assets of the cooperating banks was practically the same as that of the weekly reporting banks, which are almost all institutions of substantial size located in cities of medium and large population. Loans and discounts formed a larger fraction of the total assets of Federal Reserve member banks and all insured commercial banks, since these latter classes included many small institutions wherein personal loans and consumer instalment credits are relatively important. There

Table A-1—TOTAL ASSETS AND LOANS AND DISCOUNTS OF 99 BANKS COOPERATING IN THE TERM LOAN STUDY, AND OF WEEKLY REPORTING, FEDERAL RESERVE MEMBER, AND ALL INSURED COMMERCIAL BANKS IN THE UNITED STATES, AT DECEMBER 31, 1940 (dollar figures in millions)

<i>Class of Bank</i>	<i>Total Assets</i>	<i>Total Loans and Discounts</i>	<i>Ratio of Loans and Discounts to Assets</i>
99 cooperating banks ^a	\$30,676	\$6,537	21.3%
400 weekly reporting member banks ^b	43,441	9,390	21.6
6,486 Federal Reserve member banks ^c	62,658	15,321	24.5
13,491 insured commercial banks ^d	72,704	19,035	26.2
<i>Percent of Cooperating Banks to</i>			
Weekly reporting banks	70.6%	69.6%	
Federal Reserve member banks	49.0	42.7	
Insured commercial banks	42.2	34.3	

^a Compiled from National Bureau data and Polk's *Bankers Encyclopedia*.

^b Total assets figure supplied by the Board of Governors of the Federal Reserve System; total loans and discounts from *Federal Reserve Bulletin* (March 1941) pp. 232-33.

^c Federal Reserve System, *Annual Report of the Board of Governors, 1940*, pp. 48-49.

^d Federal Deposit Insurance Corporation, *Annual Report, 1940*, pp. 140-41.

is no reason for believing that, in the composition of their loans, the 99 cooperating banks differ materially from other large commercial banks. The composition of loans of smaller institutions probably changes materially as size diminishes.

*Estimate of Term Loans Outstanding
of All Commercial Banks During Recent Years*

An estimate of the aggregate outstanding term credit of all American commercial banks could be made with great assurance by sampling banks of different sizes and determining the ratio of term loans to all loans and discounts held by banks of different size classes at different dates. As this procedure was beyond the resources available to the authors, a cruder method of estimation was necessarily utilized. Interviews with many loan officers and bank examining officials, coupled with careful study of the statistical materials, lead to the conclusion that term lending is done most frequently by large banks. This information also indicates that the ratios of term loans to all loans and discounts are, in general, greater among the large than among the smaller banks which do engage in term lending. It is highly probable that the very large number of banks with deposits of \$1 million or less hold only negligible amounts of term loans. The statutory limitation upon the size of loans made by a national bank with \$1 million of deposits does not greatly exceed \$10,000. Term loans of this amount or less are likely to be very uncommon, because of the comparatively large fixed costs of credit investigation and loan administration.

In estimating outstanding term loans of all insured commercial banks at the end of 1940, it has therefore been deemed advisable to separate all banks into three major groups according to size in terms of total deposits. Total loans and discounts of the three classes of insured commercial banks examined were as follows:²

<i>Total Deposits</i>	<i>Number of Banks</i>	<i>Total Loans and Discounts Held During 1940</i>
(1) Less than \$1 million	8,723	\$1,820,000,000
(2) \$1 million to \$10 million	4,168	4,274,000,000
(3) \$10 million and over	546	10,943,000,000
TOTAL	13,437	\$17,037,000,000

With respect to the 546 banks in group (3) it has been assumed that

² See Federal Deposit Insurance Corporation, *Annual Report, 1940*, p. 171. While the FDIC data cover only insured commercial banks that were examined during 1940, non-insured banks and insured banks that were not examined were for the most part banks in the size class (1), omission of which is not believed to result in serious error in estimating term loans outstanding of all commercial banks.

82 percent of the number of banks were engaged in term lending, that term loans comprised 22 percent of the loans and discounts held by term lending banks, and that the average amount of loans and discounts held by term lending banks was equal to that of non-term lending banks. These assumptions rest on the fact that 82 percent of the 99 cooperating banks in the sample held term loans at mid-1941, and that 50 banks within this group reported that term loans comprised 22 percent of their loans and discounts at the end of 1940. Since it was found by the Board of Governors that 83.5 percent of the 400 weekly reporting member banks held some term loans in April 1939, there is some confirmation of the assumption regarding the frequency with which banks in large centers engage in term lending. With regard to the 4,168 banks in group (2), having deposits of \$1 million to \$10 million, it has been arbitrarily assumed that 40 percent were engaged in term lending, and that term loans constituted 11 percent (one-half as large a fraction as for the large banks) of loans and discounts. The assumption that 40 percent of the number of banks made term loans has some basis in the finding of the New York State Commissioner of Banking during April 1939 that 43 percent of all state banks outside New York City had made some term loans. The amount of term lending of banks in this size class appears to be generously estimated on these hypotheses, but even if there is a wide margin of error the total estimates of term loans are not greatly affected. The assumption with respect to the small banks in group (1) is that they held an insignificant amount of term loans and could be ignored in the calculation of the total.

The estimate of term loans held by all commercial banks at the end of 1940 is therefore:

Term loans held by commercial banks with deposits of \$10 million and over	\$1,974,000,000
Term loans held by commercial banks with deposits of \$1 million to \$10 million	188,000,000
TOTAL	\$2,162,000,000

While this estimate is subject to many qualifications, it probably does not err by more than about 5 percent.

In determining the amounts of outstanding term credit at the end of each recent year, recourse was had to the data on year-end outstanding term loans of 56 banks referred to previously. At the end of 1940, the 56 reporting banks held \$967.4 million of term loans, or about 45 percent of the estimated \$2,162 million held by all commercial banks. It has been assumed that at the end of each year of the period, loans held by the 56 reporting banks bore the same proportion to estimated loans of all commercial banks that they held at the end of 1940, upon which assumption the following series is reached:

Outstanding Term Loans Held

<i>Year Ending December 31</i>	<i>56 Reporting Banks—Actual</i>	<i>All Commercial Banks—Estimated</i>
1935	\$215,100,000	No estimate
1936	336,900,000	No estimate
1937	370,300,000	\$827,000,000
1938	484,700,000	1,083,000,000
1939	714,200,000	1,596,000,000
1940	967,400,000	2,162,000,000

Since it is likely that banks which entered the field of term lending at the earliest dates tended to have available and to report more accurate computations of term loans outstanding during preceding years, these banks probably were in fact relatively more important during earlier years than at the end of 1940. The assumption of constant proportionality consequently exaggerates to an unknown extent outstanding term credit of all commercial banks during the early years of the period. It was therefore deemed inadvisable to estimate outstandings prior to 1937, since the error for earlier years grows continually larger. The error is believed to be not so large as to make the estimates wholly unreliable for 1937 and subsequent years. It is worth noting that the \$1,100 million of term loans reported held at April 19, 1939 by weekly reporting member banks of the Federal Reserve System (which hold about 70 percent of all commercial loans of banks in the System) is not irreconcilable with the estimate of \$1,596 million for all banks at the end of 1939.

*Estimate of the Annual Volume of
Term Loans Made by Commercial Banks During Recent Years*

It is possible to make rough estimates of the amounts of term credit annually extended by all commercial banks by assuming that annual loan volume of all term lending banks varied in the same way during recent years as it did for the 99 large banks cooperating in the term loan study. Term loans of all commercial banks outstanding at the end of 1940 have been estimated at \$2,162 million. At the same date, it is estimated that outstanding loans of the 99 cooperating banks were \$1,175 million, or about 54 percent of the total.³ In other words, the loans outstanding of all commercial banks were 1.84 times those of the 99 cooperating banks. It may reasonably be assumed that the ratio of original amounts of loans of the 99 cooperating banks to the original

³ Outstandings of the 99 cooperating banks were \$1,570 million at June 30, 1941, from which may be deducted \$395 million of loans made and outstanding during 1941, leaving a balance of \$1,175 million. (This ignores repayments made during the first half of 1941 on loans made prior to 1941, which in any event are very unlikely to have exceeded \$40 or \$50 million.)

amounts of loans made by all commercial banks was the same as that of their respective outstanding term loans. The following tabulation therefore shows the original amounts of all loans made by the cooperating banks during 1938, 1939 and 1940 and held at June 30, 1941. The estimated loans made by all commercial banks during the same years have been arrived at by multiplying the loan volumes of the cooperating banks by the factor 1.84 for each year.

<i>Year</i>	<i>Original Amount of Regular Term Loans Made by 99 Cooperating Banks and Held at Mid-1941</i>	<i>Estimated Original Amount of Loans Made by All Commercial Banks</i>
1938	\$117,800,000	\$217,000,000
1939	449,600,000	827,000,000
1940	734,900,000	1,352,000,000
TOTAL	\$1,302,300,000	\$2,396,000,000

Since a significant proportion of all term loans made by commercial banks are paid off and disappear from the portfolios of the lenders after three and one-half years, it has not been deemed advisable to carry the estimates back past 1938. Even with this limitation, there is some underestimation of the volume of loans made during 1938, and to a lesser degree during 1939. The original amounts of loans with terms of less than 3½ years made in the former year, and with terms of less than 2½ years made in the latter year, are not included. These errors are believed not to be large.