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## **APPENDIX B**

### **The Sample of Securities Privately Purchased by Life Insurance Companies and Estimates Made Therefrom**



# B

## *The Sample of Securities Privately Purchased by Life Insurance Companies and Estimates Made Therefrom*

AS A RESULT OF PERSONAL REQUESTS made of their executive officers, five of the largest legal reserve life insurance companies furnished tabulations of privately purchased bonds and notes with terms of 15 years or less at time of issuance held by them at December 31, 1940. To preserve confidential relationships, the names of issuing concerns were not furnished, but information was given concerning the character of the lien (if any), coupon rate, maturity date, year of purchase, amount purchased, amount held at the end of 1940, effective rate at which purchases were made, issuer's main business and total assets at the end of 1940, and participations (if any) with other lending institutions in the credit transaction.

The schedules returned by the five companies listed 217 separate issues held at the end of 1940, with original aggregate amounts of \$824 million at time of acquisition, and outstanding balances of \$761 million at date of reporting. The average original amount of issues acquired was \$3.8 million, and the average outstanding balance was \$3.5 million. Since about half the number and amount of issues privately purchased by insurance companies involved transactions in which other lending agencies participated, and each company reported only the original amount and outstanding balances of its *own* holdings, the data should be interpreted as descriptions of a group of loans made by insurance companies rather than loans received by issuing business corporations. This difference is especially important in considering the size of loans effected through private placements of bonds or notes.

### *Character of the Sample*

The five cooperating companies have purchased and held a preponderance of all medium-term bonds and notes privately purchased by all life insurance companies during recent years; analysis of the characteristics of their holdings at the end of 1940 is therefore believed to be representative of all private placements of medium term (i.e., term of 15 years or less at time of issuance). The importance of the five companies among all life insurance companies active in the private

placement market is indicated by the following figures, showing private acquisitions of bonds of all terms from issuers by the 26 largest legal reserve life insurance companies and by the five cooperating companies, during each year of the period 1932-38.<sup>1</sup>

Year	26 Largest Legal Reserve Life Insurance Companies	5 Cooperating Companies	Percentage of 5 Cooperating to 26 Companies
1932	\$33,300,000	\$29,464,000	88.5
1933	16,788,000	15,855,000	94.4
1934	90,647,000	83,622,000	92.3
1935	351,378,000	318,415,000	90.6
1936	327,792,000	254,366,000	77.6
1937	371,353,000	322,430,000	86.8
1938	659,508,000	571,479,000	86.7
TOTAL	\$1,850,766,000	\$1,595,631,000	86.2

Life insurance companies are dominant in the private placement market. Recent studies of the Securities and Exchange Commission indicate that they purchased from 74 percent to 99 percent of total corporate bonds annually sold privately during the years 1934-39.<sup>2</sup> For this reason, and because the cooperating companies represent so large a fraction of the purchases of life insurance companies active in the field, it appears reasonable to conclude that the characteristics of the loans of the cooperating companies present a reasonably accurate view of private placement credit in general.

#### *Estimate of the Annual Volume of Medium-Term Issues Privately Purchased by Life Insurance Companies During Recent Years*

Although the SEC collected data from the 26 largest American legal reserve life insurance companies on their private acquisitions of bonds from issuing corporations during each year of the period 1928-38, no classification of these acquisitions was made according to term at time of issuance. The proportion of all private placements of bonds and notes with life insurance companies represented by medium-term issues must therefore be estimated. This may be done, on certain not unreasonable assumptions, by the following method:

1. The data furnished to the National Bureau on annual original amounts of medium-term issues purchased privately by the five cooperating companies and held at the end of 1940, were first broken

<sup>1</sup> Data collected by the Securities and Exchange Commission and printed in Temporary National Economic Committee, 76th Congress, 3d Session, *Hearings Pursuant to Public Resolution No. 113* (Washington, 1940) Part 10-A, p. 129.

<sup>2</sup> Data furnished to the National Bureau of Economic Research by a letter of the Securities and Exchange Commission, dated September 11, 1941.

down according to the original amounts of issues purchased during each year from 1935 onward. Since it is known that about 15 percent of the amount of all issues mature and disappear from portfolios within four years after acquisition, and about 10 percent of the amount of all acquisitions are paid off within two years, in order to estimate the original amounts of all medium-term securities of *all* maturities purchased during each year, the amounts of securities reported to have been acquired during 1935 and 1936 and *held at the end of 1940* were raised by 15 percent, and the amounts of acquisitions during 1937, 1938 and 1939 were raised by 10 percent. Acquisitions during 1940, held at the end of that year, were left unchanged. Since only 23 percent of the amount of medium-term issues acquired by life insurance companies have serial maturities (the remainder being repayable in single amounts), the error of ignoring serial payments is believed not to be large.

2. Utilizing the SEC data on *all* private purchases of the five cooperating companies during 1935 through 1938, ratios were found of the amounts of medium-term issues (as estimated in step 1) to all issues purchased during these years. During the four-year period, 1935-38, medium-term issues formed 26 percent of all securities privately acquired.

3. All issues privately acquired by the five companies during 1939 and 1940 were then estimated by assuming that the medium-term issues (estimated in step 1) were 26 percent (found in step 2) of the amount of all issues.

4. The series on all issues purchased privately by *all* life insurance companies was tabulated by the SEC for each year of the period 1935-38. Since the five cooperating companies purchased 86.2 percent of the amount of securities privately purchased by all companies during the ten-year period 1928-38, the amounts of all issues privately purchased by all companies during 1939 and 1940 were estimated by assuming that all issues acquired by the five cooperating companies in these years (found by step 3) continued to have the same relative importance in the total (i.e., 86.2 percent).

5. *Medium-term* issues privately purchased by *all* life insurance companies were then computed by assuming that the ratio of medium-term to all issues acquired by the five cooperating companies was, in each year, the same as the ratio of medium-term to all issues privately acquired by all companies.

In Table B-1 appear the results of these computations, including the amounts of *issues of all maturities* annually purchased by the five cooperating companies and by all companies, and estimated amounts of *medium-term issues* privately purchased by the two groups of companies during each year. On the assumptions, it appears that life insurance companies acquired privately from issuers during the six-year period

Table B-1—ESTIMATED AMOUNT OF MEDIUM-TERM SECURITIES ANNUALLY PURCHASED PRIVATELY BY LIFE INSURANCE COMPANIES, 1935-40 (dollar figures in millions)

Year	(1) <i>All Issues Purchased Privately by 5 cooperating Companies</i>	(2) <i>Medium-Term Issues Purchased Privately by 5 Cooperating Companies</i>	(3) <i>Ratio of (2) to (1)</i>	(4) <i>All Issues Purchased Privately by All Companies</i>	(5) <i>Estimated Medium-Term Issues Purchased Privately by All Cos. (4) x (3)</i>
1935	\$318.4 <sup>a</sup>	\$49.2 <sup>b</sup>	0.154	351.4 <sup>a</sup>	\$54.1
1936	254.4 <sup>a</sup>	62.1 <sup>b</sup>	0.244	327.8 <sup>a</sup>	80.0
1937	322.4 <sup>a</sup>	134.9 <sup>c</sup>	0.418	371.4 <sup>a</sup>	155.2
1938	571.5 <sup>a</sup>	135.3 <sup>c</sup>	0.237	659.5 <sup>a</sup>	156.3
1939	660.0 <sup>d</sup>	171.4 <sup>e</sup>	0.260 <sup>e</sup>	766.0 <sup>f</sup>	199.2
1940	1,240.0 <sup>d</sup>	323.1	0.261 <sup>e</sup>	1,440.0 <sup>f</sup>	375.8
TOTAL	\$3,366.7	\$876.0	0.260	\$3,916.1	\$1,020.6

<sup>a</sup> Securities and Exchange Commission data in Temporary National Economic Committee, 76th Congress, 3d Session, *Hearings Pursuant to Public Resolution No. 113* (Washington, 1940) Part 10-A.

<sup>b</sup> Estimated by adding 15 percent to the original amounts of securities which were purchased during this year, and held at end of 1940.

<sup>c</sup> Estimated by adding 10 percent to the original amounts of securities which were purchased during this year, and held at end of 1940.

<sup>d</sup> Estimated by assuming that medium-term issues purchased during the year were 26 percent of all issues (see footnote e).

<sup>e</sup> Weighted average percentage of all private placements purchased by 5 cooperating companies during 1935-38 that were of medium term.

<sup>f</sup> Estimated by assuming that the weighted average ratio of purchases of the 5 cooperating companies to all 26 companies during 1932-38 (namely 86.2 percent) obtained during 1939 and 1940.

about \$3.9 billion of securities, of which about \$1 billion represented medium-term credit.<sup>3</sup> The rate of growth of insurance company participation in the medium-term business credit market through private placement has exceeded even the rapid pace set by commercial bank term loans.

### *Estimate of Medium-Term Private Placement Credit of Life Insurance Companies Outstanding at the Ends of Recent Years*

The five cooperating life insurance companies held \$761 million of privately acquired medium-term bonds at the end of 1940. If the ratio

<sup>3</sup> This estimate is in general agreement with an estimate made by different methods that the total dollar amount of issues placed directly by issuers with all types of investors during the six-year period, 1935-40, was \$4,314 million. See House Committee on Interstate and Foreign Commerce, 77th Congress, 1st Session, *Hearings on H.R. 4344, H.R. 5065 and H.R. 5832* (Washington, 1941) Part II, p. 366.

of their outstanding credit of this type to that of all life insurance companies was the same as the ratio of their acquisitions to that of all companies (86.2 percent), then the amount of medium-term private placement credit of all companies outstanding at the end of 1940 was \$883 million. While this figure can be cited with some assurance, lack of precise knowledge of the rates of amortization of private placement debt makes precarious the estimation of outstanding credit at the ends of earlier years. Since only 9 percent of the original amounts of all issues held by the five cooperating companies at the end of 1940 had terms of less than five years at time of issuance, it would not seriously impair the validity of a very rough estimate simply to take outstandings at the end of 1940 and to deduct the original amounts of issues acquired during that year to obtain outstandings at the end of 1939; and so on, back to 1937. Proceeding by this method, outstanding medium-term private placement credit of all insurance companies may be estimated as follows:

<i>Year</i>	<i>Medium-Term Issues Privately Purchased During Year</i>	<i>Medium-Term Issues Privately Purchased and Held at End of Year</i>
1940	\$375,800,000	\$883,000,000
1939	199,200,000	507,200,000
1938	156,300,000	308,000,000
1937	155,200,000	151,700,000

These estimates are subject to such severe qualifications as to be precluded from any other use than as rough measures of the general position of insurance companies in the medium-term business credit market.



**APPENDIX C**

**Supplementary Tables**

