

Where

Rec_o is the indicator of receivables at the end of the given month,

n is the average number of full months given buyers to pay for credit purchases in the particular line of business, and

S is sales during the month.

A more concise expression of this formula is:

$$Rec_o = f \left(\frac{1}{n} \sum_{i=0}^n (n - i) S_{-i} \right)$$

where S_{-i} is sales in i^{th} month preceding period.

For example, if a dealer's instalment contracts averaged 5 months to maturity (assumed to be paid exactly on schedule), his receivables for any particular month would be composed of all of the most recent month's instalment credit granted, four-fifths of the amount for the previous month, three-fifths for the second previous month, and so forth. This suggests that, in this case, the most reasonable relationship between receivables and sales would be one that made the receivables of any given month a function of the previous 5 months' sales (the number of months equal to average

maturity of instalment contracts) weighted successively 5,4,3,2, and 1, beginning with the most recent month.

The values of n used for each line of business are those found empirically to minimize the error in movement of the indicator series from one benchmark to the next.

Sources for benchmark data prior to 1940 are the same as those for household appliance stores.

Extensions and repayments for these retailers have not been reported monthly to either the Bureau of the Census or the Federal Reserve. Census data for 1939 and 1948 permitted derivation of an average collection ratio for each component. A relationship of these ratios to the collection pattern shown by the Federal Reserve sample of department stores was established for each of the seven groups. These relationships, adjusted from time to time for differences in certain credit patterns, have been used with the currently reported department store data to estimate repayments relative to outstandings and to derive instalment extensions of the "all other retail" group.

ESTIMATES OF NONINSTALMENT CREDIT

Consumer noninstalment credit represents obligations of consumers scheduled to be retired in a single payment. This ordinarily takes the form of open-account transactions, with payment due upon billing.

Noninstalment credit is divided into three classes: single-payment loans, charge accounts, and service credit. Single-payment loans are held primarily by commercial banks, while charge accounts and service credit are owed to a variety of establishments and professional practitioners.

SINGLE-PAYMENT LOANS

Monthly estimates of single-payment loans at commercial banks are based on sample data

collected by the Federal Reserve Banks. As of June 1963 the sample included about 375 banks, accounting for approximately one-fourth of all single-payment loans held by commercial banks.

Monthly estimates of single-payment loans are adjusted to benchmark totals by the straight-line method. These benchmarks—like those for bank-held instalment credit—are obtained from the regular reports of condition made to supervisory agencies by all commercial banks.

According to a 1952 survey covering about 8,700 such loans in 180 commercial banks, about one-half of the volume of all single-payment loans made by commercial banks to individuals are for nonconsumer purposes.