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Volume Title: Consumer Credit Finance Charges: Rate Information and Quotation

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Volume Publisher: UMI

Volume ISBN: 0-870-14128-7

Volume URL: <http://www.nber.org/books/mors65-1>

Publication Date: 1965

Chapter Title: Appendix D. Prepayment, Refinancing, Extension, and Delinquency

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Chapter URL: <http://www.nber.org/chapters/c1627>

Chapter pages in book: (p. 109 - 125)

## Appendix D. Prepayment, Refinancing, Extension, and Delinquency

Many, if not most, consumer financing laws contain provisions governing the adjustments of charges on instalment contracts which are paid ahead of or behind schedule. The general nature of these provisions and the issues they raise are described in the first part of this appendix and the relation of these provisions to rate computation and quotation is discussed in the second part.

Contracts are paid ahead of schedule either through prepayment or refinancing. Prepayment may be full or partial. Prepayment in full is complete cash payment of an instalment contract before maturity. Partial prepayment is cash payment of one or several instalments before they are due. Refinancing is full payment of an instalment contract before maturity coincident with the signing of a new instalment contract with the same creditor, often in connection with a new instalment purchase.

Contracts which are not paid on schedule are technically in default or delinquency. In such cases and in cases in which the borrower anticipates that he may not be able to meet a scheduled payment, the borrower and lender may agree to extend the contract. Extension (deferment, renewal) consists in moving one or more instalment payments of an existing contract to a later point in time.

Available data on refinancing, extension, and delinquency indicate they are common practices. There is no available evidence on the extent of prepayment in full and prepayment in part.

*Frequency of Refinancing and Extension.* The data presented in Chapter 2 covering several states show that a high proportion (from 65 to 80 per cent) of consumer finance company loans are refinanced

or extended.<sup>1</sup> Data covering New York commercial banks for 1939 to 1944 indicate that renewal and refinanced personal loans varied from 23 to 30 per cent of total personal loans made in those years.<sup>2</sup> The corresponding figure is 27 per cent in a 1950-51 study covering banks in a number of states.<sup>3</sup> A 1941 study of New York industrial banks indicates that 34 per cent of their loans were renewed or refinanced.<sup>4</sup>

In the Federal Reserve survey of 1954-55 new-car buyers, 8 per cent of the 1954 instalment buyers and 4 per cent of the 1955 instalment buyers had "refinanced" their car debts by the middle of 1956.<sup>5</sup> As defined in the study, refinancing does not include the elimination of existing debt through trade-ins. When buyers traded in their cars, any outstanding debt was considered to have been paid off rather than refinanced. This is a narrower definition of refinancing than the usual one<sup>6</sup> and helps account for the much lower refinancing percentages in the Federal Reserve study than in the instalment cash lending studies cited in the above paragraphs.

The following evidence suggests that refinancing through trading in an existing car for a new car is not uncommon. First, of the new-car buyers in 1954 about 5 per cent had bought a new car within the preceding twelve months and about 17 per cent within the preceding twelve to twenty-three months. Corresponding percentages for the 1955 new-car buyers were 7 and around 20.<sup>7</sup> Some of these buyers probably refinanced, for approximately two-thirds of new cars are bought on credit and over 86 per cent of the 1954-55 new-car financing contracts had maturities longer than twenty-four months and over 53 per cent had maturities of thirty months or more.

<sup>1</sup> For a detailed breakdown by type of company, see John M. Chapman and Frederick W. Jones, *An Analysis of the Current Financial Status of Licensed Lenders in the State of New York*, Columbia University, New York, 1958, p. 55.

<sup>2</sup> "Analysis of Operations of Personal Loan Departments of Banks and Trust Companies, 1939-1944," New York State Banking Department, 1945, p. 8.

<sup>3</sup> W. David Robbins, *Consumer Instalment Loans*, Columbus, 1955, p. 82.

<sup>4</sup> *Spécial Report on Licensed Lenders*, New York State Banking Department, Albany, 1946, p. 9.

<sup>5</sup> *Consumer Instalment Credit, Part IV, Financing New Car Purchases*, Federal Reserve System, Washington, 1957, pp. 82-83.

<sup>6</sup> See *ibid.*, p. 143.

<sup>7</sup> *Ibid.*, p. 21.

Maturities were probably somewhat, though not appreciably, shorter in the years immediately before 1954.

Second, as of the middle of 1956, 11 per cent of those who bought new cars in 1954 and 1955 had already disposed of these cars, mostly while buying a new car.<sup>8</sup> In view of the high percentage of credit buyers and the prevalence of financing contracts of longer than twenty-four months, some of these buyers probably refinanced existing instalment contracts when they bought their new cars.

Third, 39 per cent of the 1954-55 new-car buyers still had debt on their 1954-55 purchases in the middle of 1956. Of this group, 11 per cent expected to buy a new car within twelve months, 26 per cent expected to buy a new car within thirteen to thirty months, and 26 per cent were uncertain.<sup>9</sup> Because over 53 per cent of the 1954-55 new-car finance contracts had maturities of thirty months or more, some of this group probably refinanced existing instalment contracts when they bought their new cars. Thus, we conclude that refinancing and extension are common practices in new-car financing, as well as in most segments of cash lending.

*Frequency of Delinquency or Default.* Over the postwar period until 1962, monthly delinquency rates among six types of bank instalment financing ranged from under .5 to over 3 per cent.<sup>10</sup> (The corresponding range of unweighted average delinquency rates of all six types of financing combined was roughly between .8 and 2.1 per cent.)

These data plus data on delinquency and repossession rates for various financing agencies for varying years from 1925 to 1956 suggest that all financing agencies have some delinquencies at any given time and that delinquencies vary through time for each

<sup>8</sup> *Ibid.*, p. 102.

<sup>9</sup> *Ibid.*

<sup>10</sup> *Delinquency Rates on Bank Instalment Loans*, a monthly report of the Instalment Credit Commission, American Bankers Association. The six types of instalment financing are auto direct, auto indirect, FHA Title I, home appliance, conventional property improvement, and personal. Delinquency rates for each type of financing are determined as follows: (1) for each bank, the percentage that the number of instalment contracts with an instalment past due for thirty days or more is of the total number of accounts outstanding on the same date; and (2) for the sample of banks as a whole, an unweighted average of the delinquency rates of the reporting banks.

agency.<sup>11</sup> The factors that influence the level of an agency's delinquency rate(s) at any time and changes in its delinquency rate(s) through time include the types of instalment financing in which it engages, income and other characteristics of its borrowers, its lending terms and standards, the extent of its efforts to reduce delinquencies, the general level and direction of employment and income, and area economic conditions including duration of depressed conditions in a distress area.<sup>12</sup> Our discussion indicates that delinquency is an ever-present problem for financing agencies.

### *Legislative Provisions*

In describing legislative provisions on prepayment, refinancing, extension, and delinquency, it is necessary to distinguish between advance-charge and post-charge laws. An advance-charge law is one which specifies a computational method under which finance charges are computed in advance, e.g., add-on, add-on plus, discount, discount plus, or precomputation. A post-charge law is one which specifies a computational method under which the finance charge is computed at the end of each payment period, i.e., per cent per month. The importance of the distinction will become clear from the discussion here.

#### ADVANCE-CHARGE LAWS

Provisions governing prepayment, refinancing, extension, and delinquency are common in advance-charge laws. They are found in most retail instalment financing laws, most of the small-loan laws which permit precomputation or annual add-on, and a growing number of instalment and industrial loan laws.

*Prepayment in Full and Refinancing.* Instalment credit users can prepay instalment contracts in full at any time. They are not legally entitled to any refund of prepaid finance charges, however, unless such refunds are specified in their contracts or are required

<sup>11</sup> For a detailed analysis of available delinquency and repossession data from 1925 to 1956, see Geoffrey H. Moore, Thomas R. Atkinson, and Philip A. Klein, "Changes in the Quality of Consumer Instalment Credit," *Consumer Instalment Credit*, Board of Governors of the Federal Reserve System, Washington, 1957, Part II, Vol. I, pp. 79-113.

<sup>12</sup> *Ibid.*

by law. Prepayment in full is at the borrower's initiative. Refinancing may be at the borrower's or creditor's initiative. Financing agencies and sellers often encourage refinancing in order to sell more credit or more goods.

The principle is now firmly established in legislation that financing agencies and sellers should refund some portion of finance charges paid in advance on instalment contracts which are paid in full or refinanced before maturity. Prepayment refunds are required in virtually all retail instalment financing laws, virtually all small-loan laws which permit advance charges, over half of the instalment loan laws, and over half of the industrial loan laws. Of the forty-three supervisors in the State Supervisor Survey, forty-two favored prepayment refunds and one expressed no opinion.

Determination of the Amount of Prepayment Refunds.—Most of the laws which require prepayment refunds specify that refunds are to be computed by the direct ratio formula, also known as the "sum of the digits" or "rule of 78" method. A few laws specify the annuity method, also called the pro-rata method, and a few do not specify any method. The "rule of 78" method is favored by most of the supervisors in the State Supervisor Survey and has wide industry acceptance. Of the forty-three supervisors in the survey, thirty-nine favored the "rule of 78" method, one favored the pro-rata method, one favored both, and two expressed no opinion.

The direct ratio or "rule of 78" method of computing refunds is usually stated in the following legal language: The purchaser shall receive a refund of charges which shall be at least as great a proportion of the total charges as the sum of the remaining monthly balance of the principal and interest combined scheduled to follow the date of prepayment is of the sum of all the monthly balances of principal and interest combined originally scheduled by the contract. The method may be illustrated as follows: Assume a twelve-month instalment contract in which the amount to be financed is \$2,400 and the finance charge is equal to an annual add-on rate of 8 per cent or \$192. The borrower's monthly payment is \$216 ( $\$2,592 \div 12$ ). Under the direct ratio method, the finance charge is assumed to be earned each month as follows:

Month	Balance of Principal Owed (dollars)	Ratio of Balance of Principal Owed to Cumulative Principal <sup>13</sup>	Fraction of Finance Charge Earned <sup>14</sup>	Ratio of Principal Owed and Finance Charge Earned to Total Principal and Total Finance Charge	Finance Charge Earned (dollars)
1	2,400	12/78	12/78	12/78	29.54
2	2,200	11/78	11/78	11/78	27.08
3	2,000	10/78	10/78	10/78	24.62
4	1,800	9/78	9/78	9/78	22.15
5	1,600	8/78	8/78	8/78	19.69
6	1,400	7/78	7/78	7/78	17.23
7	1,200	6/78	6/78	6/78	14.77
8	1,000	5/78	5/78	5/78	12.31
9	800	4/78	4/78	4/78	9.85
10	600	3/78	3/78	3/78	7.38
11	400	2/78	2/78	2/78	4.92
12	200	1/78	1/78	1/78	2.46
78	15,600				192.00

Suppose the instalment borrower pays the contract in full right after the fifth payment. Including the fifth payment, he has paid \$1,080. If no prepayment refund is made, he owes \$1,512 (\$2,592-\$1,080). If a prepayment refund is made by the direct ratio method, the borrower is entitled to a refund of 28/78 of the finance charge, or \$68.92, and must make a final payment of \$1,443.08 (\$2,592-\$1,080-\$68.92). The fraction 28/78 is the sum of the fractions from the sixth through the twelfth months.<sup>15</sup>

**Offsets Against Prepayment Refunds.**—Some state financing laws provide offsets against prepayment refunds. Provisions for determining these offsets often vary among laws in the same state; this

<sup>13</sup> The cumulative principal is \$15,600 in this example.

<sup>14</sup> The numerators of the fraction are the numbers of the months in the contract in reverse chronological order. The denominator is the sum of the months in the contract, i.e., numbers 1 through 12. The denominator is 21 for a six-month contract, 120 for a fifteen-month contract, 171 for an eighteen-month contract, and so on.

<sup>15</sup> Since the "rule of 78" method is so widespread and since it is generally regarded as being fair, no attempt is made here to compare it with the pro-rata method which is also equitable. For such a comparison, see Milan V. Ayres, *Instalment Mathematics*, New York, 1946, pp. 164-170.

is illustrated below by New York's consumer credit laws. (Our use of New York is in no way intended to reflect on the quality of its consumer financing laws. Many other states with consumer financing laws have problems similar to those illustrated here.)

New York's small-loan law specifies computing prepayment refunds by the "rule of 78." The refund would be \$68.92 in our example.

Its motor vehicle retail instalment law specifies computing prepayment refunds by the "rule of 78," subject to an acquisition cost deduction of \$15 and a provision that any amount under \$1 need not be refunded. With this variation, the refund would be \$63.56 in our example, i.e., finance charge (\$192) less acquisition cost (\$15) multiplied by the fraction of months remaining (28/78).

Its retail instalment sales law (excluding autos) specifies computing prepayment refunds by the "rule of 78," subject to a minimum finance charge of \$12 on contracts over eight months and \$10 on contracts of eight months or less and a provision that any amount under \$1 need not be refunded. In our example the prepayment refund would be \$68.92 because the finance charge earned through the fifth month exceeded \$12. If, however, a creditor has earned less than the specified minimum at the date of prepayment, he can deduct the difference between the minimum and whatever he has earned from the prepayment refund.

Its instalment loan law specifies computing prepayment refunds by the "rule of 78," subject to a minimum finance charge of \$10 and a provision that any amount under \$1 need not be refunded. This is similar to the retail instalment sales law (excluding autos) and the refund in our example would be \$68.92.

Its industrial loan law states that any prepayment refund shall be the unearned portion of the interest previously deducted on an instalment loan. Since no computation method is specified, we cannot work out what the refund would be in an example. The law does not specify any acquisition cost deduction or a minimum finance charge.

These differences in the laws of New York (and those of other states) raise several questions. New York's auto financing law has

an acquisition cost deduction but no minimum charge. Its other retail instalment financing law and its instalment loan law have a minimum charge but no acquisition cost deduction. Retail instalment financing laws in most other states have both. To illustrate, the auto instalment financing laws of Florida, Louisiana, and Maine specify minimum charges of \$25 and acquisition cost deductions of \$25. In contrast, many industrial, instalment, and small-loan laws have neither minimum charges nor acquisition cost deductions, and the rest have minimum charges but no acquisition cost deductions.

The purpose of a minimum charge and an acquisition cost deduction is the same, namely, to permit a creditor to cover some or all of the acquisition expenses involved in putting a credit transaction on the books. If they serve the same purpose, the question arises whether the inclusion of both is double counting of acquisition expense.

A second question concerns the level of minimum charges and acquisition cost deductions. Both vary widely within and between state laws which have provisions governing them. Minimum charges and acquisition cost deductions vary from \$10 to \$25 in automobile financing laws and from \$5 to \$20 in other retail instalment financing laws. Minimum charges vary from 25 cents to \$2 in small-loan laws and from \$1 to \$15 in industrial and instalment loan laws. Ideally, a minimum charge or acquisition cost deduction should be based on the cost situation of each creditor. This is not practical for legislative purposes due to the inherent difficulties in measuring costs by type of credit.

Table D-1 indicates that twenty-three of the forty-three state supervisors who responded to the State Supervisor Survey were opposed to any acquisition cost deduction on prepaid contracts and thirty-three were opposed on refinanced contracts. It also indicates that most of them favored a uniform method of computing refunds and uniform acquisition deductions for all financing agencies and sellers. The sixteen supervisors who favored an acquisition cost deduction on contracts prepaid in full suggested

the following amounts:

<i>Amount</i>	<i>Number of Replies</i>
\$5	2
\$10	3
\$10-\$15	2
\$15	2
\$5 on loans to \$500; \$10 on loans from \$501-\$1,000; and \$15 on loans over \$1,000	1
1 per cent with a \$1 minimum and a \$10 maximum	1
Greater of \$2 or 1 per cent of loan	1
Actual cost if prepayment occurs within six months	1
Amount calculated from usual table for refunds	1
Amount determined by each financing agency	1
No reply	1

The amounts in these replies are less than acquisition cost deduction allowances in most existing retail instalment financing laws and are greater than acquisition cost allowances in most existing instalment cash lending laws.

A third question is whether minimum charge and acquisition

**TABLE D-1**  
State Supervisor Survey Replies to Questions  
on Prepayment Refunds

Question	Yes	No	Don't Know	No Reply
Should an acquisition cost deduction be allowed in computing the refund on:				
Cash prepayment in full?	16	23 <sup>a</sup>	—	4
Refinancing?	3	33	—	7
Should refund method, deduction allowance, and date from which refund is computed be uniform throughout the country for:				
All types of financing agencies and sellers?	35	3	1	4
All types of retail instalment financing?	36	3	1	3
All types of instalment cash loans?	37	3	—	3

<sup>a</sup> Two replies were "no" subject to a nominal minimum charge.

cost deduction provisions should apply both to cash prepayment in full and refinancing or only to the former? As Table D-1 shows, a majority of state supervisors are opposed to both. Only three supervisors say that they favor an acquisition cost deduction on refinancing.

Several factors help explain these results. A creditor loses unearned finance charges on cash prepayment in full. He does not lose unearned finance charges on refinancing, however, since a new (and usually larger) instalment debt replaces a previously existing one. Acquisition cost on refinancing is less than on new financing, and any minimum charge is probably more than covered in the original and refinanced contracts combined. Second, creditors have little incentive to encourage cash prepayment in full and a strong incentive to encourage refinancing. Many financing agencies and sellers actively encourage refinancing through general advertising and through direct contact with existing borrowers.<sup>16</sup> A few laws attempt to discourage early refinancing by specifying that their minimum charge and acquisition cost deduction provisions shall not apply on instalment contracts which are refinanced within four months of the date of the original contract.

A fourth question concerns the date that should be chosen from which to compute the prepayment refund. The relevant possibilities and state supervisor preferences are:

<i>Suggested Date Used in Computing Prepayment Refunds</i>	<i>Distribution of Replies of Supervisors</i>
Date of prepayment	15
Instalment payment date following date of prepayment	13
Instalment payment date preceding date of prepayment	1
Nearest instalment payment date	12
No reply	2
Total	43

All of these possibilities are in existing laws. Table D-1 indicates that thirty-five, or over 80 per cent, of the forty-three supervisors favor a uniform date for all financing agencies and sellers.

A fifth question concerns minimum refund. Most retail instalment financing laws provide that any amount below \$1 need not

<sup>16</sup> See *Special Report on Licensed Lenders*, p. 20.

be refunded. Relatively few cash loan laws have a minimum. Those which do specify minimums go up to \$3, but for the most part range from 25 cents to \$1.

Financing agencies and sellers can make greater refunds than are specified in the law but cannot legally make smaller ones. No data are available on the extent to which financing agencies and sellers make only those refunds required by the laws under which they operate, on the refund practices of financing agencies and sellers whose refund practices are not controlled by law, or on the economic effects of varying refund practices.

*Partial Prepayment.* A few of the small-loan laws which permit advance charges require lenders to give prepayment refunds when borrowers prepay three or more instalments in full. They generally specify that such refunds shall be computed by the following application of the direct ratio (or "rule of 78") method. The refund which would be due for prepayment in full one month prior to the maturity date should be computed and multiplied by the number of full months the three or more instalments are prepaid. Lenders are permitted to compute and make the refunds at the end of the contract period.

On prepayment of three instalments, this procedure results in one-half of the lowest possible refund that could be obtained by using the application of the "rule of 78" described in the section above on prepayment in full. This can be illustrated by the example on pages 113-114. Under the procedure prescribed in present small-loan laws, the refund for prepayment of three instalment payments would be

$$3 \times \frac{1}{78} \times \$192, \text{ or } \frac{3}{78} \times \$192, \text{ or } \$7.38.$$

Under the procedure for full prepayment, it is necessary to make an assumption about which three instalment payments are to be considered prepaid for purposes of computing the prepayment refund. The lowest refund is obtained by assuming the last three instalment payments are being prepaid. Under this assumption, the refund in our example would be

$$\left( \frac{1}{78} + \frac{2}{78} + \frac{3}{78} \right) \times \$192, \text{ or } \frac{6}{78} \times \$192, \text{ or } \$14.76.$$

This figure is double the previous answer of \$7.38. The same relative results obtain in prepayment of three instalments on any contract length because the numerators of the refund fractions for the last three months are always 3, 2, and 1. Analogous differences on prepayments for four, five, and six instalments are as follows:

<i>Number of Instalments Prepaid</i>	<i>Refund Under Full Prepayment Procedure as a Multiple of Refund Under Procedure in Small-Loan Laws (per cent)</i>
4	250
5	300
6	350

*Extension (Deferment, Renewal).* Data cited in the section on refinancing indicate that refinancing and extension occur frequently in consumer instalment financing. Extension provisions are common in retail instalment financing laws and those small-loan laws which permit advance charges. They are less common in instalment and industrial loan laws.

Existing laws specify one of several general methods of computing extension charges. Under the method which is common in small-loan laws, the extension charge is computed at the rates which pertain to new contracts. Borrowers pay the same finance charge rates for extension as they do for original borrowing. A few laws accomplish essentially the same result by giving financing agencies the option of treating extensions as refinancing subject to the provision that no acquisition cost deduction be permitted in computing the prepayment refund.

Under a second method which is common in retail instalment financing laws, the extension charge is computed at a specified per cent per month rate (usually 1 per cent) on declining balances plus, in some cases, a flat charge, e.g., \$5. Under this method the extension charge is not computed in the same way as the original finance charge and may result in a higher or lower effective rate. The use of different methods to compute the original finance charge and the extension charge is due to the fact that the original credit

transaction comes under the time-price doctrine but the extension transaction does not. The extension is considered a loan of money and the charge is subject to ceilings in the usury or other relevant cash loan laws of the state rather than to the ceilings specified in the retail instalment financing law.

Under a third method found in a few laws, the extension charge is computed as a flat percentage, e.g., 5 per cent of the amount of the instalment which is being extended. Here, too, the effective extension charge rate may be higher or lower than the effective rate in the original contract.

Since an extension represents the granting of additional credit, some additional finance charge is justified. The first method of determining the charge assumes that a borrower's risk status has not changed between the time of the original borrowing and the extension, for it results in the same finance rate that the borrower would pay if he negotiated an equivalent new loan on the extension date. An effective extension rate above or below the original finance rate implicitly assumes a change in the borrower's credit standing between the time of the original credit and extension credit transactions. A possible additional justification of an effective extension rate below the original finance rate is to reduce the incentive of financing agencies to encourage borrowers to extend their credit contracts.

*Delinquency (Default).* Most of the retail instalment financing laws, most of the small-loan laws which permit advance charges, and approximately half of the instalment and industrial loan laws set maximum delinquency or default charges. Some of these laws also set grace periods.

The several approaches to setting maximum delinquency charges may be outlined as follows:

1. Most laws set a maximum which is independent of the length of the default period. The usual provision here is to set the maximum at either 5 per cent of the delinquent instalment payment or \$5, whichever is smaller. A few laws use other figures such as 4 per cent and \$4 and a few use the "rule of 78." Under the latter method, the default charge is equal to the prepayment refund

which would result if prepayment in full were made one month before maturity. This version of the "rule of 78" results in flat percentage rates which vary inversely with the original contract maturity as the following examples show:

<i>Contract Maturity in Months</i>	<i>Fraction for Computing Refund for Prepayment One Month Before Maturity</i>	<i>Percentage Rate</i>
3	1/6	16.67
6	1/21	4.76
12	1/78	1.28
18	1/171	.58
24	1/300	.33

2. Some laws set a maximum which varies with the length of the default period. The rates in these laws range from  $\frac{1}{2}$  to 2 per cent a month and are applied either on a daily basis or as a flat rate for stated time segments, e.g., 1 per cent for each twenty days or fraction thereof in the default period. A few laws use step rates, i.e., 50 cents from three to seven days overdue, \$1 from eight to twenty-four days overdue and \$1.50 over twenty-four days overdue.

Under existing laws, debtors in each state pay different default charges to different creditors. They do so not only because of different ways of determining maximum charges but also because of differences in grace periods. Grace periods vary from one to sixteen days, the most numerous being five and ten days.

Several justifications are given for default charges. One is to recompense the creditor for the loss of interest on his principal during the delinquency period and to recompense him for the extra costs involved in handling delinquent accounts. Another is to discourage debtors from being delinquent. The cost approach would lead to different default charges for different creditors. The discouragement approach would lead to uniform default charges, not because consumers all have the same discouragement level but rather because it is impossible to measure differences in discouragement levels. The two approaches could be combined to set different default charges for different creditors.

In addition to default charges, some laws set maximum attorney fees which creditors may charge debtors on delinquent contracts which are turned over to outside attorneys for collection.

## POST-CHARGE LAWS

The per cent per month or post-charge method of computing finance charges is contained in small-loan and credit union laws. Most of these laws permit borrowers to prepay loans in full or in part at any time without penalty charge. A few small-loan laws have minimum finance charges ranging from 25 cents to \$2.

Borrowers who prepay or refinance a loan are not entitled to any refund since they have not paid any finance charges in advance. The finance charge stops at the date of prepayment on contracts which are refinanced or prepaid in full.<sup>17</sup> Future finance charges are adjusted downward on contracts which are prepaid in part. They are adjusted to the level which would prevail on a new loan equal to the size of the partially prepaid contract immediately after the prepayment is made.

Credit union and small-loan laws permit extension and default charges, computed on a day-to-day basis for the period of extension or default at the finance rate(s) in the original contract. They usually provide that these "late" charges may not be compounded by being added to the principal owed.

*Relation of Legislative Provisions to Finance  
Charge Computation and Quotation*

## COMPUTATION

As the discussion has indicated, the method of computing finance charges often affects the size of prepayment refunds as well as the amounts of extension, delinquency, and default charges permitted in state laws. The nature of these relationships is summarized in this section and their pertinence to the issue of finance charge quotation is indicated in the section which follows.

The per cent per month or post-charge method of computing finance charges eliminates the problem of prepayment refunds since charges are not paid in advance. The advance-charge methods of computing finance charges influence the level of prepayment re-

<sup>17</sup> The effect of prepayment or refinancing is to lower the effective rate below that which would have obtained if the loan had been paid according to the original schedule.

funds because each refund is determined as a given percentage of the original finance charge. This is true whether the refund formula is the almost universally used direct ratio ("rule of 78") or the rarely used annuity (pro-rata) formula.

The relationship between advance-charge computational methods and refunds means that: (1) the higher the original finance charge, the higher is the prepayment refund at any given prepayment point in the contract; (2) the prepayment refund pattern throughout the life of a contract is independent of the method of computing the finance charge; and (3) for any given method of computing charges, the pattern of refunds at any proportional point in the contract (e.g., at one-third of the maturity) exhibits the same pattern as maturities lengthen as the maturity pattern of the original finance charges. Given these relationships, the discussion of prepayment refunds provides no significant arguments for (or against) uniformity in computing finance charges other than those discussed in Appendix A concerning the effect of maturity on finance charges.

Extension charges are affected directly by the method of computing finance charges in some laws, are indirectly affected in other laws, and are unaffected in still other laws. Default charges are not directly affected by the method of computing finance charges in most laws and are indirectly affected in some laws. Because of these varying relations, uniformity in computing finance charges would not, of itself, lead to a much greater uniformity in computing extension and default charges.

#### QUOTATION

The purpose of quoting methods of computing prepayment refunds and extension and default charges is to permit borrowers to become aware of the costs of deviating from the scheduled repayment of their indebtedness.

Methods of determining prepayment refunds and extension and default charges have no effect on *ex ante* effective rates or computational equivalents in dollars per hundred. For, as we have indicated in Chapter 4, an *ex ante* rate or computational equivalent is determined before the credit is granted on the assumption the credit will be repaid on schedule.

Methods of determining prepayment refunds and extension and default charges do not affect *ex post* effective rates or computational equivalents on those credit contracts which are paid on schedule but do affect *ex post* those on credit contracts not paid on schedule. In the latter contracts, the lower the prepayment refunds and the higher the extension and default charges, the higher will be the *ex post* effective rates or computational equivalents. The high frequency of refinancing, renewal, and extension provides a means for the lender to advertise a low *ex ante* rate but to obtain a considerably higher *ex post* rate.

More uniform methods of finance charge quotation would simplify information given borrowers. Uniformity would have an effect on prepayment refunds only through its effect on the size of finance charges or if there were a related shift from advance- to post-charge computational methods. It would have an effect on extension and default charges only if it resulted in different computational methods *and* if such charges were based on the computational rate or equivalent. Uniformity in determining prepayment refunds and extension and default charges would have no direct effect upon the issue of the method of finance charge quotation.