Graduate Student Theses, Dissertations, & Professional Papers

Graduate School

1932

Financing and accounting procedure of installment selling

Guy Stegner
The University of Montana

Recommended Citation

Stegner, Guy, "Financing and accounting procedure of installment selling" (1932). *Graduate Student Theses, Dissertations, & Professional Papers*. 2349.
https://scholarworks.umt.edu/etd/2349

THE FINANCING AND ACCOUNTING PROCEDURE

of

INSTALMENT SELLING

by

Guy Stegner

Presented in partial fulfillment of the
requirement for the degree of
Master of Arts.

State University of Montana

1952

Approved:

_____
Chairman of Examining Committee

_____
Chairman of Graduate Committee

UMI Number: EP35565

UMI®

Dissertation Publishing

UMI EP35565

ProQuest®

THE FINANCING and ACCOUNTING PROCEDURE of INSTALMENT SELLING.

Part I.

The Financing

Part II.

Accounting Procedure

Part III.

Tables showing (1) payments due

                (2) new volume per month

                (3) total volume for period (capital turnover)

Part I.
THE FINANCING

Instalment selling has been hailed as the remedy that will cure an ailing business. All that a merchant has to do to revive his business and make big profits is to turn to this aid. A small payment down and the balance in monthly instalments is the plan which will greatly increase the buying power of the public by tapping the source of future earning power. To a certain extent this has been true; buying has increased and on paper at least the profits of the merchant have also increased. Unfortunately something has gone wrong with this easy road to riches.

A great number of merchants have found after using this plan for some time that while they have increased their sales tremendously, their liquid assets have decreased. Month after month, in spite of increased sales, it becomes harder and harder to meet the running expenses, until finally the creditors are forced to take over the business. An examination of the books reveals that there is a large item of gross profit and a tremendous increase in the accounts receivable account. A closer examination shows that the accounts receivable consists of long contracts which have effectively frozen these assets and that many of them are delinquent. The gross profit account shows that it is com-

posed of earned and unearned profit, and expenses have not been adjusted to the earned profit but to the gross profit. A large stock of used products taken in trade is usually found.

The business man of today is confronted with a new set of problems as a result of instalment sales. Old accounting forms have proven inadequate since a multiplicity of small accounts in the customers ledger makes analysis as a routine an impossibility. The function of financing has been joined with merchandising and the time element has been introduced. Instead of a single item of accounts receivable due in 30 or 60 days, we have a group of monthly maturities in which a large item of unrealized profit appears. An increase in the old accounts receivable meant an increase in working capital but in instalment sales this is not true. An increase in the volume of business may simply freeze the liquid assets.

Briefly the problems are:

(A) Financial

      1 - With a known volume of business, how much capital is needed to finance it?

      2 - How much business can be done with the capital and discount lines in hand?

      3 - How much profit can be made and what will be the earned and unearned income?

(B)   The correct accounting procedure

The purpose of this paper is to answer these questions for the business man so that he can prepare a budget. In the past, approximate solutions have been used due to the mathematical difficulties involved. So far as possible, mathematical precision should take the place of approximations. After the budget is prepared the correct accounting procedure which will give a clear picture of his affairs must be had.

The business man may approach his problem from two different angles. He may know or have a close estimate of the volume of business and wish to know the amount of capital necessary to finance it, or he may wish to know how much business he can finance with the capital and discount lines in hand.

An analysis of the contracts made in instalment sales is necessary first of all. There are four kinds of contracts that may be made:

1. Equal instalments payable at equal intervals.(varying number)
2. Unequal instalments payable at equal intervals. (varying number)
3. Equal instalments payable at unequal intervals. (varying number)
4. Unequal instalments payable at unequal intervals. (varying number)

The last three are quite difficult to calculate but fortunately the first case is the one used almost entirely. Since

the other three form so small a percentage of the volume of instalment selling,[1] they will not be discussed in this paper. Contracts payable in equal instalments at equal intervals and with a varying number of instalments will be the only one taken up.

The simplest problem will be presented first, that of a merchant who knows that there is a certain steady volume of business monthly. Let us take a case of a steady volume of $6,000.00 per month sales, in six month deals, and find how much capital it will take to finance it. (Of course this does not consider refinancing, which will be taken up later.)

Month	Inst. Due	Monthly Investment required	Total Investment required
January		6/6	6/6
February	1/6	5/6	11/6
March	2/6	4/6	15/6
April	3/6	3/6	18/6
May	4/6	2/6	20/6
June	5/6	1/6	21/6
July	6/6	--	21/6

In January there are no instalments due and it will re-

1. Otto C. Lorenz and H. M. Mott-Smith, Financial Problems of Instalment Selling (New York, 1931), pp. 57-8.

quire 6/6 of investment or $6,000.00 during the month. In
February, 1/6 or $1,000.00 will be paid back and 5/6 or
$5,000.00 in addition will be required for the monthly vol-
ume. This 5/6 plus the 6/6 of the first month equals 11/6
or $11,000.00 for first two month period. In July, 6/6 or
$6,000.00 will be due and no additional capital will be re-
quired for the month. The total requirements for the period
or any time thereafter will be 21/6. In the example the
amount of capital needed to finance the $6,000.00 volume per
month will be 6,000 x 21/6 or $21,000.00.* In May, 4/6 of
6,000 or 4,000 will be the instalment due and 2/6 of 6,000
or 2,000 will be the extra capital needed to make up the
monthly volume. 20/6 x 6,000 or 20,000 equals volume
needed in the period up to this time.[2]

If a merchant has a steady volume of business to fi-
nance each month, the amount of capital needed to finance it
is thus quite simple to find. If, however, the volume can

---

2. Otto C. Lorenz, "Mathematics of Instalment Financing and
   Income Analyzed", American Accountant (July, 1930),
   Vol. 15, pp. 297-301.

*Note: The volume of sales for the period is $21,000. As
this includes his profit, he will not actually need
$21,000. Let us assume that his profit is 40% of the
sales price, then 21,000 x .60 = Cost of Goods Sold and
capital needed to finance the volume, or $12,600.
Profit is based on collections. Total collections equals
21/6 of 6,000 or 21,000. Multiplying this by 40% =
$8,400. This earned profit, we will assume, is not re-
invested.

be closely estimated but varies from month to month, a tabulation of the estimated volumes must be made. Care should be taken that the volume is properly classified and a tabulation made for each length of deal.

Month	1 Estimated volume	2 Sum of preceeding months vol.	3 1/12 of Col.2 Instalments due	4 Capital req. for month (1-3)	5 Capital required for period
1	2,400.00			2,400	2,400
2	3,600.00	2,400	200	3,400	5,800
3	4,800.00	6,000	500	4,300	10,100
4	6,000.00	10,800	900	5,100	15,200
5	7,200.00	16,800	1,400	5,800	21,000
6	6,000.00	24,000	2,000	4,000	25,000
7	4,800.00	30,000	2,500	1,300	26,300
8	3,600.00	34,800	2,900	700	27,000
9	3,600.00	38,400	3,200	400	27,400
10	2,400.00	42,000	3,500	900*	26,500
11	1,200.00	44,400	3,700	2,500*	24,000
12	2,400.00	45,600	3,800	1,400*	22,600**

The above is a tabulation for a known or closely estimated volume of monthly (12 months in length) deals. The first column gives the estimated volume of business, the sec-

---

* Credits.
** Profit not considered here, See P. 17.

ond the sum of the preceding months volume, and the third
is 1/12 of column two or the instalments due. By subtract-
ing the instalments due from the estimated volume for the
month, we arrive at the capital required for that month.
Notice in the tenth month that the collections are greater
than the estimated volume. Column five is the total capital
required for the period. The maximum amount required is in
the ninth month or $27,400.00.[3]

Knowing the volume, or being able to estimate it closely
as the result of experience, no great difficulty is presented
in calculating the capital required to finance it. A some-
what more difficult proposition is presented when we have a
fixed capital to invest and wish to know how much business
can be financed with it. Many methods of investing this
money may be suggested and three methods will be given.

Method #1

All the money is invested in the first month and the
collections are used from then on to finance more deals.
Example: A merchant has $6,000.00 more than he needs for
his ordinary business. He wishes to put this in the instal-
ment business in six month deals. In January he invests the
$6,000.00. In February he collects 1/6 of 6,000 or 1,000,

3. Otto C. Lorenz, "Capital Turnover Factors of Instalment
Deals Determined", American Accountant (October, 1930),
Vol. 15, pp. 447-51.

which he also invests. In March his collections are:

```
1/6 of 6,000 ------------- 1,000
1/6 of 1,000 ------------- 166.67
Total collections are  1,166.67  (also volume)
```

In April:

```
6,000 x 1/6 -------         1,000
1,000 x 1/6 -------          166.67
1,166.67 x 1/6 ---           194.45
Total collections (volume) 1,361.12  etc.
```

This problem becomes more and more complex and the probability of error greater. Therefore tables have been constructed with factors for instalments due and volume for period, for any number of instalments, in this method of investing. The above shows how the tables are constructed and below is an example of a table. The last pages of this paper contain the complete tables.

Method #1--Six Month Deals

Month	Instalment Due	Total Volume for Period
January		1.00000
February	0.16667	1.16667
March	0.19444	1.36111
April	0.22685	1.58796
May	0.26466	1.85262
June	0.30877	2.16139

Example of use of table:

April:

Instalment due and volume   6,000 x .22685 or 1,361.10

Total volume   6,000 x 1.58796 or 9,527.75

June:

Instalment due and volume   6,000 x .30877 or 1,860.62

Total volume for period   6,000 x 2.16139 or 12,968.34

    Instalment due and the volume for the month are the same, as the only investment is from this source. (These are capital turnover figures and do not consider profit. This will be taken up later.)

    A merchant, by using these tables for any length of deal, can find out how much volume he can finance in any period, the volume of business per month, and the collections per month. The collections for the period is the sum of the instalments due each month but may be found more easily by subtracting one from the volume factor for the period. As an example of this, the volume for the period in the sixth month is 2.16139; subtracting one from this gives 1.16139, or the total collections for the period.

Method #2

    Capital invested in equal amounts during the months of the period, and this investment plus the collections used to finance new deals.

Example: Let us assume that a merchant is willing to invest 1,000 per month in six month deals. Then in January his in-

vestment and volume is   1,000

February:	Investment	1,000.00	
	Collections-1,000 x 1/6	166.67	
	Total volume for month		1,166.67

	Total volume for period	1,000.00	
	plus	1,166.67	
			2,166.67

March:	Investment	1,000.00	
	Collections-1,000 x 1/6	166.67	
	1,166.67 x 1/6	194.45	
	Total volume for month		1,361.11

	Total volume for period	1,361.11	
	plus	2,166.67	
			3,527.78

Collections are the sum of 166.67 and 194.45 or 361.11.
This shows how a table is made and the following is an example of a table.

Table #2

Month	Payments Due	Month New Volume	Total Vol. for Period
1		1.00000	1.00000
2	0.16667	1.16667	2.16667
3	0.36111	1.36111	3.52778
4	0.58796	1.58796	5.11574
5	0.85262	1.85262	6.96837
6	1.16139	2.16139	9.12976

In the sixth month, the merchant by using the tables
will find that the instalments due are 1.16139 x 1,000 or
1,161.39; the new volume for the month, 2.16139 x 1,000 or
2,161.39; the total volume for the period, 9.12976 x 1,000

9,129.76. Note that the factors are not multiplied by the total capital but by the investment per month.

Method #3

The capital is invested in equal amounts in the first months of the period and the collections are used from then on to finance the volume.

Example: Three successive equal monthly investments in six month deals.

This table is made the same as in the second method but in the fourth month there is no additional capital invested.

Collections from Jan. 1/6 of 1.00000	0.16667
Collections from Feb. 1/6 of 1.16667	0.19445
Collections from Mar. 1/6 of 1.36111	0.22685
Total collections and volume	0.58797

Table #3

Month	Payments Due	Month New Volume	Total Vol. for Period
1		1.00000	1.00000
2	0.16667	1.16667	2.16667
3	0.36111	1.36111	3.52778
4	0.58796	0.58796	4.11574
5	0.68596	0.68596	4.80170
6	0.80028	0.80028	5.60198

If a merchant invested $2,000 per month for three successive months in instalment deals of six months in length and thereafter used the collections to finance new deals,

he will find by using the tables that:

Payments due and new volume (6th month)
$$2,000 \times 0.80028 \text{ or } 1,600.56$$

Total volume for the period $2,000 \times 5.60198$ or 11,203.96

In this case the factors are also multiplied by the invest-

ment per month, or 2,000.[4]

<div align="center">Summary</div>

Total volume - first method	$12,968.34
Total volume - second method	9,129.76
Total volume - third method	11,203.96

This demonstrates that the earlier in a period the capital
is invested, the greater is the turnover. From the tables
a means is provided for determining quickly and easily the
volume that can be financed with a given supply of capital,
either in a month or a period. It also shows what the col-
lections for each month should be.

The merchant is now in the position of knowing how much
capital is needed to finance his volume or how much volume
he can finance with his capital. If he needs more money he
must borrow it from a bank or a finance company. This brings
us to the subject of bank loans.

---

4. Lorenz, Mott-Smith, op. cit., pp. 68-74.
   Lorenz, "Mathematics of Instalment Financing and Income
      Analyzed", op. cit., pp. 297-301.
   Lorenz, "How Much Instalment Business Can I Do?", Business
      Week, (April, 1930), Vol. 57, pp. 320-2.
   Lorenz, "Capital Turnover Factors of Instalment Deals
      Determined", op. cit., pp. 447-51.

Bank Loans[5]

Methods of obtaining bank loans:

(1) The face of the paper less discount charges.

(2) The bank retains a reserve in addition to its discount.

(3) The bank retains a reserve plus its discount plus a compensating factor.

Volume obtainable from discounts:

In the first case the only limiting factor is the discount charge; however, a bank usually limits the percentage of an advance in some ratio of the amount advanced to the capital. Let A equal the percentage of advance, then; initial investment x $\dfrac{1}{1 - A}$ equals the maximum volume obtainable from capital and discounts (disregarding cost) and initial investment x $\dfrac{A}{1 - A}$ equals the maximum volume obtainable from the discounts.

Example: Initial investment equals 1,000, the reserve 10%, and the advance then equals 90%.

1,000 x $\dfrac{1}{1 - A}$ equals 1,000 x $\dfrac{1}{1 - .90}$ equals 10,000, the maximum volume obtainable from capital and discounts.

1,000 x $\dfrac{A}{1 - A}$ equals 1,000 x $\dfrac{.90}{1 - .90}$ equals 9,000, the maximum volume obtainable from discounts.

It can be readily seen that the total amount of reserve is equal to the initial investment.

---

5. Lorenz, Mott-Smith, _op. cit._, Chap. 10.
   Lorenz, "Capital Turnover Factors. . .",_op.cit._,pp.447-51.

Banks, quite often, limit the amount advanced to a part of the initial investment. If we let R equal the percentage of capital to be retained as a margin, then;

total volume equals the initial investment x plus R $\dfrac{A}{I-A}$

Example: Let R equal 50% and use same example as before;

$1,000 \text{ x } 1 + .50 \dfrac{.90}{I-.90}$ equals $1,000 \text{ x } 1 + \dfrac{.45}{.10}$ or 5,500, or the total volume.

Compensating Balance:

A bank sometimes requires a deposit known as a compensating factor. This factor bears a certain relation to the amount advanced and must be maintained during the life of the advance. Let B equal the percentage of compensating balance, then (1) $\dfrac{1}{I+A(B-I)}$ equals the ratio of total volume to total capital (disregarding the cost of the advance);

(2) $\dfrac{A}{I+A(B-I)}$ equals the ratio of total advances to total capital (disregarding the cost of advances).

Example: Compensating balance equals 20% and the advance, 60%. (1) $\dfrac{1}{I+.60(.20-I)}$ equals $\dfrac{1}{I+.60(-.80)}$ equals $\dfrac{1}{I+(-.48)}$ equals $\dfrac{1}{.52}$ equals 1.923 or ratio of total volume to capital. (2) $\dfrac{A}{I+A(B-I)}$ equals $\dfrac{A}{I+.60(-.80)}$ equals $\dfrac{.60}{.52}$ equals 1.154, or ratio of total advances to capital.

Example: A merchant has a capital of $6,000.00 invested in six month deals in the first method of investment and has arrangements with the bank for a 60% advance on his collateral with a 20% compensating balance. It has already been

shown that 1.923 is the ratio of total volume to capital and
that 1.154 is the ratio of total advances to capital.

6,000 x 1.923 equals $11,538--total volume (first month)

6,000 x 1.154 equals 6,924--total advances (at any one time)

20% of $6,924 equals $1,384.80, or the compensating balance
that must be maintained at all times.

In order to find the total volume during the six month
period, we take the volume factor from Table #1.

2,16139 x 1.923 x 6,000 equals $24,938.23--total volume (6 months)

2.16139 x 1.154 x 6,000 equals $14,965.46--total advances
during the six month period.

If no compensating balance had been required by the
bank $2.16139 \times 6,000 \times \dfrac{1}{I-A}$ equals $32,420.85 (A equals 60%),
total volume in six month period. The total advances in the
six months will be $2.16139 \times 6,000 \times \dfrac{A}{I-A}$, or $19,452.51.
If the bank had given a 60% advance but had limited it to
70% of the initial investment for a margin, we would multi-
ply by the formula 1 plus R $\dfrac{A}{I-A}$ instead of $\dfrac{A}{I-A}$.

Instalments due from advances:

In order to figure the amount of instalments due from
the advances, multiply the payments due factors in Table 1,
2, or 3 by $\dfrac{A}{I-A}$, or by R $\dfrac{A}{I-A}$, as the case may be.

Example: Method #1 of investment, twelve month deals, ini-
tial investment of $10,000, and reserve retained by the bank

of 20%. Then the total instalment due from the advances is $10,000 \times 1.41203^a \times \frac{A}{1 - A}$ equals 56,481.20 (A equals 80%) and $10,000 \times .18554^a \times \frac{A}{1 - A}$ equals 7,421.60, instalments due in the twelfth month.

If the bank permitted only 50% of the initial investment to be retained as a margin, then we would multiply by the formula $R \frac{A}{1 - A}$.

$10,000 \times 1.41203 \times .50 \frac{.80}{1-.80}$ equals 28,240.60, or total instalments due from advances.

$10,000 \times 0.18554 \times .50 \frac{.80}{1-.80}$ equals 3710.80, or instalments due in the twelfth month.

Income

There are several methods of computing income from instalments, but at this point the one accepted by the Federal Government will be the only one discussed. In brief this method distributes the gross profit over the instalments in such a way that the ratio of profit to principal in each instalment is the same. Example: If goods costing $100 are marked up 100% and sold for $200 on a contract calling for repayment in ten equal instalments, then the payment due each month is $20 and the gross profit each time is $10. Gross income is divided into earned and unearned income. Profit becomes earned only in proportion to the col-

---

a. See table for twelve month deals, Method #1, Instalment Due Factors.

lections made.[6]

From Tables 1, 2, and 3 the instalments due can be
calculated and multiplying this by the percentage of gross
profit, we arrive at the earned income. Care must be taken
to find if the mark-up is on cost or sales price. An
article costing $100 and selling for $200 is a mark-up on
cost of 100% but only 50% on the sales price. Methods 1,
2, and 3 of investing generally represent a turnover of cap-
ital and the mark-up is on cost. In the volume method, the
collections represent sales price and the profit is a per-
centage of the sales price.

If none of the profits are reinvested but are used to
pay expenses, establish reserves, etc., the rate of turn-
over of capital is not affected. It should be noted, how-
ever, that if $1,000 is invested in twelve month deals and
the percentage of mark-up on cost is 100%, that the collec-
tions (from Table #1) for the twelfth month are 0.18554 x
1,000 or $185.54. But since there is a 100% mark-up, that
the actual collections will be $371.08.

Formula for calculation of actual collections.
Payment due factor x capital x (1 + F) equals collections.
F equals the percentage of mark-up. Using the same example
as above: 0.18554 x 1,000 x (1 + 1.00) equals 371.08, the

---

6. Seymour Walton, School of Commerce, Federal Tax Course,
   (1930), Chap. 6.

actual collections.

Reinvestment of Profits

If profits are reinvested each month as earned, the rate of turnover of capital is materially affected. However, it is presumed in this paper that the profits are used to pay operating expenses and to establish reserves. Expenses are not fixed absolutely but vary from month to month, and to figure a fluctuating net income investment each month becomes so involved that the labor makes it impracticable.

Using the capital that we start with and disregarding the reinvestment of profits, we have a solid basis to work from. We know how much business we can finance with a given capital, how much our collections and profits will be, and expenses can be adjusted to this earning power. In the re-investment of profits there is an assumption that the volume will be so much greater because a net (hypothetical) profit will be made and reinvested. Collections will be greater and expenses proportionately larger. If expenses vary in a manner not calculated on, then net profits will be affected and the whole estimation is at fault. Of course if it is certain that a net profit can be made, tables can be worked out showing the capital turnover factors with this percentage added in. The whole subject becomes too involved for the average business man.

In the volume method of figuring capital requirements,

no great difficulty is encountered in including the profits. To do this we must know the cost of goods sold and know or have a very close estimate of the expenses of the business. Let us take for example a merchant who marks up his goods so that he makes 50% on the selling price. From long exper- ience he has a close estimate of his volume of business, which is in twelve month deals. His fixed expenses are $300 per month and his variable expenses for selling and collec- tions run 10% of his volume above $2400.

	1	2	3	4	5	6	7
Month	Estima- ted Vol. of Sales	Cost Goods Sold	Exp. per Month	Total Column 2 and 3	Collec- tions per Month	Capital re- quired (4-5)	Capital required for Period
1	2,400	1,200	300	1,500		1,500	1,500
2	3,600	1,800	420	2,220	200	2,020	3,520
3	4,800	2,400	540	2,940	500	2,440	5,960
4	6,000	3,000	660	3,660	900	2,760	8,720
5	7,200	3,600	780	4,380	1,400	2,980	11,700
6	6,000	3,000	660	3,660	2,000	1,660	13,360
7	4,800	2,400	540	2,940	2,500	440	13,800
8	3,600	1,800	420	2,220	2,900	680*	13,120
9	3,600	1,800	420	2,220	3,200	980*	12,140
10	2,400	1,200	300	1,500	3,500	2,000*	10,140
11	1,200	600	300	900	3,700	2,800*	7,340
12	2,400	1,200	300	1,500	3,800	2,300*	5,040

Marked (*) equals a credit.

Column 1 gives the estimated volume of sales per month.

Column 2 gives cost of goods sold.

Column 3 gives the expenses per month.

Column 4 is the total of Columns 2 and 3, or cost of goods sold plus expenses.

Column 5 is the collections per month, or 1/12 of the preceding month's volume.

Column 6 is the capital required per month or 4 minus 5.

Column 7 is the capital required for the period.[7]

The Cost of Borrowed Money[8]

Finance charges are quoted in two ways:

(1) Flat rate or a percentage which when multiplied by the face of the paper or by the amount of the advance equals the charge.

(2) Rate per annum--expressed as an interest rate and added to the charge on the advance or a discount rate on advance.

    (1) Flat rate

        (a) If on the face of the paper, we simply multiply by the rate. Example: 1,000 x .04 equals 40.00.

        (b) If on the face and the advance is less than 100%, then the rate must be converted into a flat rate on the advance. This is done by dividing the rate by the percentage of advance.

---

7. Lorenz and Mott-Smith, op. cit., pp. 88-91.
8. Ibid., Chap. 12.

Example: 4% is quoted on the face value of the paper and 90% is the advance, then $\frac{.04}{.90}$ equals 4.444%. On 1,000 equals 44.44.

(c) If the rate is quoted on the advance, we multiply the advance by the rate. Example: Four per cent is quoted on the advance which is 90% of the face of the paper; 1,000 x .90 equals 900 and multiply this by .04 equals 36.00.

(2) Per annum rate

The per annum rate must be converted into a flat rate on the amount advanced. To do this we must multiply by conversion factors which are found as follows: The average outstanding time is found by the formula $\frac{n+1}{2}$, where n equals the number of instalments. In the case of three month deals n equals 3 and $\frac{n+1}{2}$ equals $\frac{3+1}{2}$, or 2. This is equivalent to 2/12 of a year or a coefficient of 0.16667. If the rate is 6% per annum, then multiplying by 0.16667, we have .0100002, or a flat rate of 1%.

Conversion Factors
(to convert per annum rate to flat rate)

Month Deals	Factor
3	0.16667
4	0.20833
5	0.25000
6	0.29167
7	0.33333
8	0.37500
9	0.41667
10	0.45833
11	0.50000
12	0.54167

Example: The rate per annum is 7% and the deals ten months in length-- .07 x .45833 equals .0320831 or 3.208%.

If the per annum rate is quoted on the face of the paper and the advance is less than 100%, then find the flat rate, as in the example above, and divide it by the percentage of advance. If in the above example the advance was 60%, we would divide .0320831 by .60 or 5.347%.

Determination of Net Income

The following problem will serve as a review of some of the principles already given. Let us assume that a dealer in the furniture business has a capital of $10,000.00. His operating expenses are $600 per month and his mark-up is 40%. His contracts are in twelve month deals and he wishes to know the maximum amount of business that he can do and his net profit. Any method of investment may be taken by referring to Tables 1, 2, or 3. Method #1 will be used as an example.

10,000 x 2.41203[a] equals $24,120.30, total volume in period.

24,120.30 x .40 equals $9,648.12, anticipated gross profit.

10,000 x 1.41203[b] equals $14,120.30, total instalments due.

14,120.30 x .40 equals 5,648.12, total earned income.

600 x 12 equals   7,200.00, expenses for the period.

DEFICIT   1,551.88

---

a. Factor for 12 months volume, 1st method, 12 month deals.
b. Instalment due factor for total period obtained by adding monthly instalment due factors or subtracting one from volume factor of period.

It should be noted that the anticipated profit is $9,648.12 but that the earned income is only $5,648.12. Many merchants have failed because they did not realize that their expenses must be adjusted to their earned income and not to their anticipated profits. In the above illustration it is obvious he must either cut his expenses or obtain more volume, and as he felt he could not cut his expenses and maintain his organization, he interviewed his banker. The bank granted him a 60% advance on his collateral at a cost of 8% per annum on the face of the paper. He then made a second estimation.

$10,000 \times \dfrac{A}{1 - A} \times 2.41203^a$ equals 36,180.45, volume from discounts (A equals 60%)

$10,000 \times 2.41203^a$ equals $\underline{14,120.30}$, volume from capital

Total volume 50,300.75

$10,000 \times \dfrac{.60}{1-.60} \times 1.41203$ equals 21,180.45, instalments due from discounts

$10,000 \times 1.41203$ equals $\underline{14,120.30}$, instalments due from capital

Total instalments due 35,300.75

35,300.75 × .40 equals 14,120.38, earned income.

Expenses:

Cost of loans: 8% per annum rate must be converted into a flat rate. Conversion factor (see table) × .08, or .54167 × .08 equals .043336. But since there is only a 60% advance

---

a. Factor for 12 months volume, 1st method, 12 month deals.

and the rate is quoted on the face of the paper, we must divide .043336 by .60 or .072227 or 7.2227%. Multiplying the amount discounted (36,180.45) by .072227, we have the cost of discounting (2,604.99).

Earned income		14,120.38
Operating expense	7,200.00	
Cost of discounts	2,604.99	
Total expense		9,804.99
Net Profit		4,315.39

Minimum Amount of Business That Can be Done without Loss

In this problem we will use the same data as in the previous problem with an additional expense item for bad debts of 1/2 of 1% of the sales volume. Instalments due for period x mark-up equals gross profit per dollar from capital, and instalments due x $\frac{.60}{1-.60}$ x .40 equals gross profit per dollar from discounts.

Or:

1.41203 x .40 equals 0.564812, gross earned profit per dollar from capital

1.41203 x .40 x $\frac{.60}{1-.60}$ = .847218, gross earned profit per dollar from discounts

1.412030, total earned per dollar

The volume factor for the period x $\frac{.60}{1-.60}$ x the flat rate, or

2.41203 x $\frac{.60}{1-.60}$ x .072227[a] equals 0.2613205, cost of dis-

---

a. Flat rate of .072227 established on previous page.

counts. Volume factor for period x 1 plus $\frac{.60}{1-.60}$ equals

total volume from capital and discounts, x 1.40 equals sales

price, x .005 equals bad debts. Substituting values;

2.41203 x $\frac{.60}{1-.60}$ plus 1 x 1.40 x .005 equals 0.0422105, cost

of bad debts. Adding .0422105 plus .2613205 (cost of dis-

counts) equals .3035310 and subtracting this from the total

gross profit per dollar of 1.412030, we have a net earned

per dollar of 1.108499. Dividing the operating expenses

for the year of 7,200 by this:

$\frac{7,200}{1.108499}$ equals 6,495.27, the initial investment required to operate without a loss.

Proof

2.41203 x $\frac{.60}{1-.60}$ x 6,495.27 equals 23,500.18, volume from dis-
counts

2.41203 x 6,495.27 equals   15,666.79, volume from cap-
ital

Total volume   39,166.97

6,495.27 x 1.41203 x 1 plus $\frac{.60}{1-.60}$ equals 22,928.80, instal-
ments due from capital and discounts.

22,928.80 x .40 equals   9,171.52, earned profit.

Expenses:

23,500.18 x .072227 equals   1,697.35, cost of discounts.

39,166.97 x 1.40 x .005 equals   274.17, bad debts.

Operating expenses   7,200.00, operating expenses.

      9,171.52

Part II.

ACCOUNTING PROCEDURE

In general an instalment sale takes place when a contract is entered into between a buyer and a seller (a) permitting deferred payments, (b) passing title with a chattel mortgage or other lien as security for the contract or retaining title until a portion or all of the payments are made, and (c) giving the seller the right of repossession upon default of payment.[9]

There are three classes of instalment sales as defined by the 1928 income tax law:[10]

1. Sales of personal property; no limitation on amount paid down but persons or corporations must be in the business of instalment selling.

2. Casual sale of personal property for more than $1,000. The cash (and property, other than evidences of indebtedness) paid in during the taxable period must not exceed 40% of the sales price, if the instalment basis is to be followed.

3. Sales of real property subject to the same 40% limitation as in no. 2.

---

9. Eric Kohler, Federal Income Taxes 1927, (Chicago, 1927), pp. 72-77.
10. Walton, op. cit., L-6-3 to 6.

<u>Taking Up Profits</u>

Several methods of taking up profits have been devised but because of the danger of future collection losses and the cost of collecting, it is difficult to pick one that is both conservative and logical.[11] The methods are as follows:

1. Take all the profits in the period of sale and set up reserves for (a) bad debts and (b) collection expenses.

2. Profits taken up on the basis of collections.

   (a) The first collections considered profit and the last ones as a return of cost.

   (b) The first collections considered as a return of cost and the last ones as profit.

   (o) Profit divided equally among the instalments so that each collection is part profit and part a return of profit.

---

11. H. A. Finney, <u>Principles of Accounting</u> (2 vols., New York, 1927), Vol. 1, Ch. 11, pp. 1-3.
    Seymour Walton, School of Commerce, <u>Advanced Accounting</u>, (1922), Ch. 40.
    J. P. Friedman, "Instalment Accounts", <u>Journal of Accountancy</u>, Vol. 45, pp. 95-103, (1928).
    E. A. Saliers, "Methods of Instalment Sales Accounting", Am. As. of U. Instructors in Accounting, <u>Publications 1925</u>, (Ann Arbor, 1926), pp. 119-26.
    E. R. Sanford, <u>Applied Accounting Principles</u>, (New York, 1931), pp. 517-19.
    Roy B. Kester, <u>Accounting Theory and Practise</u> (2 Vols., 3rd Edition, New York, 1930), Vol. 2, pp. 419-420.
    Otto C. Lorenz, "Distribution of Income in Instalment Finance", <u>Technology Review</u>, (November, 1930), Vol. 33, pp. 74-6.

An Analysis of the Methods of Taking Up Profits

The first method is the one that is theoretically the most nearly correct. Profit is taken up in the period of sale which is a fundamental principle in accounting and the setting up of the reserves for bad debts and collection costs, charges the expenses to that same period. Practically, however, it is very difficult to estimate these two expense items and almost impossible without a record of long experience in the field. Even with this experience many things may cause violent fluctuations in both the collection costs and in the uncollectible amounts. For these reasons this method is not used as much as formerly.

The second method of taking up profits on the basis of collections has several variations.

(a) The first collections may be considered profit and the last ones a return of cost. This comes closer to giving the profits to the period in which the sale is made and in which the expenses were incurred. It is not considered conservative enough, however, as it is open to the same criticisms as the first method, that the reserves for bad debts and collection costs may not be estimated correctly.

(b) The next plan of considering all the first payments as a return of cost and the last ones as profit, is too conservative unless the goods cannot be recovered or are worthless if recovered.

(c).The third plan under this method is that a part of each collection is cost and a part profit.[12] This plan is the one most used today and was legalized by the Revenue Act of 1926. It has the advantage of being very simple and easy to understand. If sales of $200,000 are made with a gross profit of 25%, the amount returned as a profit will be 25% of the collections. Each collection then, consists of 75% cost and 25% profit. In case $60,000 were the collections, then 25% or $15,000 is the profit and $45,000 the cost. The deferred profit will be 25% of $140,000 or $35,000.

Scientifically this plan is objected to by many accountants in that the period of the sale does not get credit for the profit. It is possible that this period may even show a loss if there is a large selling expense incurred in the period. Practically it has the advantage of simplicity and of conforming to the income tax law and it teaches the merchant not to count profit as earned until collections are actually made.

A small reserve for doubtful accounts may be set up, but no reserve for collection cost is necessary since profit is deferred. If unusual collection costs or a

12. G. E. Bennett, Business Accounting (2 Vols., New York, 1923, Vol. 2, pp. 185-7.
    Sanford, op. cit., pp. 516-21.
    Kester, op. cit., Vol. 2, pp. 419-23.

large amount of bad debts is incurred, these costs are
taken out of the profits of the period as collections are
made.

Entries for Instalment Sales

Instalment accounts receivable are kept in a separate
account from other accounts receivable and the individual
accounts are kept in the instalment accounts receivable
ledger. Example: Goods costing $200 are sold to John
Marks for $400 on a contract calling for a down payment of
10% and the balance in nine equal instalments of $40.00
each. The down payment of $40.00 and three instalments were
paid when Marks defaulted his contract.[13]

1.

Instalment Accounts Receivable	400.00	
Cost of Goods Sold		200.00
Anticipated Gross Profit		200.00
to record sale		

2.

Cash	40.00	
Instalment Accounts Receivable		40.00
down payment of 10%		

---

13. Seymour Walton, School of Commerce, Federal Tax Course,
    (1930), L-6-3-6.
    G. E. Bennett, Advanced Accounting (1st Edition, New
    York, 1922), p. 50.
    W. A. Paton, Accounting (New York, 1924), pp. 575-80.
    Eric Kohler and Paul Morrison, Principles of Accounting,
    (Chicago, New York, 1926), pp. 291-4.
    Sanford, op. cit., 518-21.
    Kester, op. cit., Vol. 2, 420-2.

3.

```
Cash                                                120.00
      Instalment Accounts Receivable                         120.00
           to record payment of instalment
```

4.

```
Anticipated Gross Profit                            80.00
      Realized Gross Profit                                   80.00
           to record amount of profit realized
           from cash payments.
```

Several authorities use as the first and second entries the following: [14]

```
Instalment Accounts Receivable              400.00
      Instalment Sales                                       400.00
           to record sale at gross price
Instalment Sales                            400.00
      Cost of Goods Sold                                     200.00
      Anticipated Gross Profit                               200.00
           to close sales account
```

The purpose of these entries is to show clearly what the instalment sales for the period are. No serious objection to these entries can be made as they affect the final result in no way. However, Instalment Sales Accounts Receivable will show the total of instalment sales and it is therefore an unnecessary piece of labor.

The unearned gross profit is called unrealized, anticipated, or deferred gross profit by various authorities. The title of anticipated gross profit has been selected as

---

14. Paton, op. cit., pp. 575-80.
    Walton, Federal Tax Course, op. cit., L 6-4-6.

the one to be used in these entries.

On repossession of the goods the following entry is made:[15]

```
Repossessed Merchandise              120.00
Anticipated Gross Profit             120.00
    Instalments Accounts Receivable              240.00
    to close out the balance of the customer's
    account and the anticipated gross profit.
    Also to set up at actual cost the value
    of the repossessed goods.
```

Fifty per cent of the collections ($160.00) is cost (80.00) and the goods are put into inventory at actual cost or $200.00 the original cost less $80.00 or $120.00. Many authorities bring the repossessed goods on the books at an estimated valuation. Example: It is estimated that the goods are worth $155.00.[16]

```
Repossessed Merchandise              155.00
Anticipated Gross Profit             120.00
    Instalments Accounts Receivable              240.00
    Profit on Repossession                        35.00
```

This brings an estimated figure on our books of $155.00, which may or may not be the value of the repossessed goods. It also brings a profit of $35.00 on the repossession whereas there may be no profit. For these reasons it is thought better to bring the merchandise on

---

15. Kohler & Morrison, op. cit., pp. 291-4.
    Sanford, op. cit., p. 520.
16. Finney, op. cit., Vol. 1, Chap. 11, p. 4.
    Walton, Federal Tax Course, op. cit., L 6-6.
    Kester, op. cit., Vol. 2, p. 421.

the books at actual net cost (200 - 80). If, subsequently,
a loss or gain is made when the goods are sold, it is then
an actual loss or gain and not a theoretical loss or gain.

If it is quite apparent that the goods have been dam-
aged and that an actual loss will be sustained, then a re-
serve for loss on Repossessions may be set up. Example:
if it is estimated that the goods are worth but $100.00,
then:

```
Loss on Repossessions                          20.00
        Reserve for Loss on Repossessions              20.00
```

The loss is thus charged to the proper period and the
reserve is a valuation account to be read with Repossessed
Merchandise Account.

Since the gross profit may vary from year to year, the
proportion of profit to be taken will depend on the year
that the sale was made. Therefore, the instalment accounts
receivable must be separated by years. Each year a new
subsidiary instalment accounts receivable ledger must be
opened with a new control account. At the close of the
year the books are closed as usual and the profit credited
to Anticipated Gross Profit 193_. The rate of gross profit
on the year's sales is then computed.[17]

---

17. Finney, op. cit., Vol. 1, Ch. 11, pp. 3-4.
    Walton, Federal Tax Course, L 6 -3p4.
    Kester, op. cit., Vol. 2, pp. 422-3.

Year	Rate of Gross Profit	Collections made in 1932 on Sales of Three Years
1930	25%	20,000.00
1931	20%	15,000.00
1932	23%	10,000.00

Entries should be made as follows:

```
Anticipated Gross Profit (1930)   5,000.00
    Realized Gross Profit                       5,000.00
    to take up profits realized on 1930
    sales by collections in 1932.

Anticipated Gross Profit (1931)   3,000.00
    Realized Gross Profit                       3,000.00
    to take up profits realized on 1931
    sales by collections in 1932.

Anticipated Gross Profit (1932)   2,300.00
    Realized Gross Profit                       2,300.00
    to take up profits realized on 1932
    sales by collections in 1932.
```

Aging Accounts

The basis of transferring realized gross profit from anticipated (unrealized) gross profit is on the amount of collections made. This is a logical procedure but what happens if collections are not made? The average merchant is reluctant to charge these accounts off to bad debts and will show an increasing amount of instalment accounts receivable and collections due. The anticipated gross profit account also becomes larger and larger. This anticipated (unrealized) gross profit account contains two items, unrealized and unrealizable profit.

If the goods are repossessed, the entry is to debit

Repossessed Merchandise for its cost value and Anticipated
Gross Profit for the balance of the anticipated profit on
the deal, and credit Instalment Accounts Receivable. This
puts the repossessed goods on the books and removes the
instalment accounts receivable and anticipated gross profit.
If, however, the goods cannot be repossessed or the mer-
chant is reluctant to take them back, then the books show
an increase from period to period in the amount of instal-
ment accounts receivable and anticipated gross profit.
Some method of preventing this distortion of facts must be
had.[18]

The problem is answered by using a columnar book in
which each month's sales are spread horizontally over as
many columns as are necessary to cover their collection.
By footing the total of each column one can see at a glance
the amount due now, in 30, 60, 90 days, etc.

MATURITY RECORD

January sales											
	February sales										
		March sales									
			April sales								
				May sales							

18. Paul Musselman, "Instalment Accounts Receivable,"
Journal of Accountancy, Vol. 44, pp. 321-33.

By comparing this with the amount of collections, we can see the amount delinquent. This amount can be taken care of by the following entry:

    dr.   Bad Debts
          cr.   Reserve for Bad Debts

The reserve, thus, equals 100% of the delinquents. If this reserve grows it shows that the collection department is not doing its work well or does not know which accounts to write off.

If an account is finally written off, we will reverse the former entry and

    dr. Instalment Merchandise Lost (for actual cost)
        Anticipated Gross Profit (for amount of anticipated
            Profit)
        cr. Instalment Accounts Receivable

If the goods are later recovered:

    dr. Repossessed Merchandise (for cost value)
        cr. Instalment Merchandise Lost

This plan is objected to on the grounds that it takes too much labor. To spread the monthly sales in the column-ar Maturity Record should not take very long. This much will tell the amount delinquent, due now, in 30, 60, 90 days, etc., and will show the merchant the status of his instalment accounts receivable.

The making of the journal entries which will have to be reversed in case of repossession, loss, or resumption of payments, could be omitted. At the end of the month or

period, that amount, for example, which has been delinquent
for six months, could be written off. This would save labor
and prevent an indefinite enlargement of Instalment Accounts
Receivable and Anticipated Gross Profit.

CONCLUSIONS

All the foregoing data presumes the ideal conditions that collections will be made promptly when due and immediately reinvested in new deals. At once the objection will be made that this ideal state of affairs will never happen in a business. Granting that this is probably true, nevertheless it shows:

(1) the maximum volume of business that can be done with a given capital;

(2) the minimum amount of capital required to finance a known volume of business;

(3) the maximum earned profit that can be made (which is a basis on which to adjust expenses);

(4) the maximum amount of collections due during a month or period;

(5) the maximum amount of anticipated profit;

(6) the importance of a short contract and a large down payment to produce a more rapid turnover of capital;

(7) the minimum amount of business that may be done in order to avoid a loss;

(8) The amount of instalment business that can be done with the discount line and the cost of this borrowed money.

This information will serve as a standard of perfection and a guide to the executive. His estimations based

on this data must allow a margin of safety to meet actual
conditions. It will prevent many mistakes such as being
undercapitalized, of counting anticipated profits as
realized, of not adjusting expenses to realized profits,
etc., but it will not prevent the giving of bad credit
risks and the tieing up of the profits and capital in trade-
in goods, for these depend on the judgment of the executive.
Its greatest value lies in the fact that it is a guide to
the executive.

Accounting

There are many ways of accounting for instalment
sales but the one selected is simple and draws a clear pic-
ture of what has taken place. If the accounts are aged in
the Maturity Record, the instalment accounts receivable
are analyzed without difficulty. Then by writing off the
delinquent accounts, the greatest cause of failure (other
than undercapitalization) is removed.

BIBLIOGRAPHY

Bennett, G. E., Business Accounting (2 Vols., New York, 1925), Vol. 2, pp. 185-7.

Bennett, G. E., Advanced Accounting (1st Edition, New York, 1922), p. 50.

Bennett, G. E., Accounting Principles and Practise (2 Vols., New York, 1925) Vol. 2, p. 46.

Finney, H. A., Principles of Accounting (2 Vols., New York, 1927), Vol. I, Chap. 11, pp. 1-10.

Friedman, J. P., "Instalment Accounts", Journal of Accountancy, Vol. 45, pp. 95-103.

Kester, Roy B., Accounting Theory and Practise (2 Vols., 3rd Edition, New York, 1930), Vol. 2, pp. 419-423.

Kohler, Eric, Federal Income Taxes 1927, (Chicago, 1927), pp. 72-79.

Kohler, Eric, and Morrison, Paul, Principles of Accounting (Chicago, New York, 1926), pp. 291-4.

Lorenz, Otto C., and Mott-Smith, H. M., Financial Problems of Instalment Selling (New York, 1931), pp. 3-134, 244-72, 245-66.

Lorenz, Otto C., "How Much Instalment Business Can I Do?", Business Week, Vol. 57 (April, 1930), pp. 320-2.

Lorenz, Otto C., "Distribution of Income in Instalment Finance", Technology Review (November, 1930), Vol. 33, p. 74.

Lorenz, Otto C., "Capital Turnover Factors of Instalment Deals Determined", American Accountant (October, 1930), Vol. 15, pp. 447-51.

Lorenz, Otto C., "Mathematics of Instalment Financing and Income Analyzed", American Accountant (July, 1930), Vol. 15, pp. 297-301.

Lorenz, Otto C., "Instalment Finance and Efficient Use of Capital", Harvard Business Review (July, 1930), Vol. 8, pp. 451-9.

Musselman, Paul, "Instalment Accounts Receivable", *Journal of Accountancy*, Vol. 44, pp. 321-33.

Pace, Homer S., *American Accountant* (June, 1931), pp.177-9.

Paton, W. A., *Accounting* (New York, 1924), pp. 575-80.

Saliers, E. A., "Methods of Instalment Sales Accounting", American Association of University Instructors in Accounting, *Publications 1925*, (Ann Arbor, 1926), pp. 119-26.

Sanford, E. R., *Applied Accounting Principles* (New York, 1931), pp. 516-21.

Walton, Seymour, School of Commerce, *Advanced Accounting*, (1922), Chap. 40.

Walton, Seymour, School of Commerce, *Federal Tax Course*, (1930), Chap. 6.

Table 1

To be used with the first method of investment.

The available capital is invested in the first
month and the volume of each succeeding month
is such that it can be financed by means of the
collections.

Table I

Month (intervals) No.	3 month deals		4 month deals		5 month deals		6 month deals	
	Payments due month	Volume period	Payments due month	Volume period	Payments due month	Volume period	Payments due month	Volume period
1	......	1.00000	......	1.00000	......	1.00000	......	1.00000
2	0.33333	1.33333	0.25000	1.25000	0.20000	1.20000	0.16667	1.16667
3	0.44445	1.77778	0.51250	1.56250	0.24000	1.44000	0.19444	1.36111
4	0.59259	2.37037	0.39065	1.95315	0.28900	1.72900	0.22685	1.58796
5	0.45675	2.82716	0.48828	2.44141	0.34560	2.07360	0.26466	1.85262
6	0.49900	3.32510	0.36035	2.80176	0.41472	2.48832	0.30877	2.16139
7	0.51578	3.84088	0.38794	3.18970	0.29767	2.78599	0.36025	2.52163
8	0.49017	4.33105	0.40680	3.59650	0.31719	3.10518	0.25360	2.77525
9	0.50130	4.83234	0.41084	4.00734	0.33264	3.43582	0.28809	3.04335
10	0.50241	5.33476	0.39148	4.39882	0.34157	3.77739	0.28037	3.32370
11	0.49796	5.83272	0.39987	4.79809	0.34075	4.11814	0.29929	3.61298
12	0.50056	6.33327	0.40210	5.20019	0.32595	4.44409	0.29359	3.90658
13	0.50031	6.83358	0.40092	5.60111	0.33164	4.77573	0.29065	4.19721
14	0.49961	7.33319	0.39844	5.99955	0.33459	5.11032	0.27986	4.47647
15	0.50018	7.83335	0.40018	6.39974	0.33481	5.44513	0.28355	4.76001
16	0.50003	8.33337	0.40041	6.80015	0.33331	5.77844	0.28612	5.04613
17	0.49995	8.83330	0.39999	7.20014	0.33235	6.11079	0.28707	5.33320
18	0.50004	9.33334	0.39976	7.59989	0.33334	6.44413	0.28670	5.61990
19	0.50000	9.83334	0.40009	7.99998	0.33289	6.77702	0.28559	5.90549
20	0.50000	10.33333	0.40006	8.40004	0.33448	7.11150	0.28471	6.19020
21	0.50001	10.83334	0.39997	8.80001	0.33307	7.44457	0.28563	6.47583
22	0.50000	11.33333	0.39997	9.19998	0.33356	7.77772	0.28597	6.76179
23	0.50000	11.83333	0.40002	9.60000	0.33332	8.11104	0.28594	7.04773
24	0.50000	12.33333	0.40001	10.00001	0.33350	8.44454	0.28576	7.33349

Table I

Month No. (intervals)	7 month deals		8 month deals		9 month deals		10 month deals	
	Payments due month	Volume period	Payments due month	Volume period	Payments due month	Volume period	Payments due month	Volume period
1	....	1.00000	....	1.00000	....	1.00000	....	1.00000
2	0.14286	1.14286	0.12500	1.12500	0.11111	1.11111	0.10000	1.10000
3	0.16326	1.30612	0.14071	1.26574	0.12346	1.23457	0.11000	1.21000
4	0.18659	1.49271	0.15812	1.42383	0.13717	1.37174	0.12100	1.33100
5	0.21325	1.70596	0.17803	1.60186	0.15242	1.52416	0.13310	1.46410
6	0.24371	1.94967	0.20017	1.80203	0.16935	1.64351	0.14641	1.61051
7	0.27852	2.22819	0.22993	2.03196	0.18817	1.88168	0.16105	1.77156
8	0.31831	2.54650	0.24874	2.28070	0.20908	2.09075	0.17720	1.94876
9	0.20053	2.74703	0.28508	2.56578	0.23231	2.32306	0.19483	2.14359
10	0.25247	2.99950	0.19573	2.76151	0.25812	2.58118	0.21436	2.35795
11	0.24192	3.24142	0.20456	2.96607	0.17569	2.75686	0.23579	2.59374
12	0.24982	3.49124	0.21255	3.17862	0.18286	2.93972	0.15938	2.75312
13	0.26649	3.75773	0.21936	3.39798	0.18946	3.12918	0.16531	2.91843
14	0.24520	4.00293	0.22451	3.62249	0.19527	3.32446	0.17084	3.08927
15	0.25343	4.25636	0.22757	3.85006	0.20003	3.52449	0.17583	3.26510
16	0.24440	4.50076	0.22783	4.07789	0.20344	3.72793	0.18010	3.44520
17	0.24763	4.74839	0.22466	4.30255	0.20514	3.93307	0.18347	3.62867
18	0.24995	4.99834	0.21709	4.51964	0.20470	4.13777	0.18571	3.81438
19	0.25085	5.24919	0.21978	4.73942	0.20164	4.33941	0.18657	4.00095
20	0.25115	5.50034	0.22166	4.96108	0.19536	4.53477	0.18573	4.18668
21	0.22930	5.72964	0.22355	5.18463	0.19755	4.73231	0.18287	4.36955
22	0.27098	6.00062	0.22249	5.40712	0.19918	4.93149	0.17759	4.54714
23	0.24917	6.24979	0.22308	5.63020	0.20026	5.13174	0.18948	4.73662
24	0.24986	6.49965	0.22251	5.85271	0.20081	5.33255	0.17073	4.90735

Table I

Month (intervals) No.	11 month deals		12 month deals		15 month deals		18 month deals	
	Payments due month	Volume period	Payments due month	Volume period	Payments due month	Volume period	Payments due month	Volume period
1	......	1.00000	......	1.00000	......	1.00000	......	1.00000
2	0.09091	1.09091	0.08333	1.08333	0.06667	1.06667	0.05556	1.05556
3	0.09917	1.19008	0.09088	1.17361	0.07111	1.13778	0.05964	1.11420
4	0.10819	1.29827	0.09780	1.27141	0.07685	1.21565	0.06192	1.17610
5	0.11799	1.41626	0.10595	1.37736	0.08091	1.29454	0.06534	1.24144
6	0.12879	1.54505	0.11478	1.49214	0.08650	1.35034	0.06897	1.51041
7	0.14046	1.68551	0.12455	1.61649	0.09206	1.47290	0.07290	1.58321
8	0.15323	1.83874	0.13471	1.75120	0.09819	1.57109	0.07665	1.46005
9	0.16717	2.00591	0.14593	1.89713	0.10474	1.67583	0.08111	1.54116
10	0.18234	2.18825	0.15809	2.05522	0.11172	1.78755	0.08542	1.62678
11	0.19893	2.38718	0.17127	2.22649	0.11917	1.90672	0.09038	1.71716
12	0.21701	2.60419	0.18554	2.41203	0.18712	2.03584	0.09540	1.81256
13	0.14584	2.75003	0.20100	2.61303	0.15559	2.16943	0.10070	1.91326
14	0.15065	2.90068	0.13442	2.74745	0.14465	2.31408	0.10629	2.01955
15	0.15552	3.06658	0.15968	2.89613	0.15487	2.46895	0.11220	2.13175
16	0.15963	3.21621	0.14371	3.02984	0.16456	2.63299	0.11843	2.25018
17	0.16363	3.37984	0.14645	5.17589	0.10695	2.74174	0.12501	2.37519
18	0.16680	3.54664	0.14985	5.32518	0.11238	2.85412	0.13196	2.50714
19	0.16919	3.71583	0.15275	5.47787	0.11441	2.96853	0.13929	2.64643
20	0.17066	3.88648	0.15512	5.63298	0.11700	3.08553	0.09147	2.73790
21	0.17004	4.05652	0.15682	3.78980	0.11941	3.20493	0.08346	2.85136
22	0.17084	4.22736	0.15772	5.94758	0.12161	3.32654	0.09196	2.98533
23	0.16729	4.39465	0.15769	4.10521	0.123583	3.45012	0.09344	5.01678
24	0.16377	4.55742	0.15656	4.26177	0.12587	3.57539	0.09460	5.11155

Table I

Month (intervals) No.	21 month deals		24 month deals		30 month deals		36 month deals	
	Payments due month	Volume period	Payments due month	Volume period	Payments due month	Volume period	Payments due month	Volume period
1	......	1.00000	......	1.00000	......	1.00000	......	1.00000
2	0.04762	1.04762	0.04167	1.04167	0.03333	1.03333	0.02778	1.02778
3	0.04989	1.09761	0.04340	1.08507	0.03445	1.06778	0.02855	1.05655
4	0.05226	1.14977	0.04521	1.13028	0.03559	1.10337	0.02934	1.08567
5	0.05475	1.20452	0.04710	1.17738	0.03678	1.14015	0.03016	1.11583
6	0.05736	1.26188	0.04906	1.22645	0.03801	1.17815	0.03100	1.14683
7	0.06009	1.32197	0.05110	1.27754	0.03987	1.21745	0.03186	1.17843
8	0.06295	1.38492	0.05323	1.33077	0.04056	1.25801	0.03274	1.21142
9	0.06595	1.45086	0.05545	1.38681	0.04193	1.29994	0.03365	1.24507
10	0.06909	1.51995	0.05776	1.44597	0.04335	1.34327	0.03459	1.27966
11	0.07235	1.59233	0.06017	1.50414	0.04478	1.38805	0.03555	1.31520
12	0.07583	1.66816	0.06267	1.56681	0.04627	1.43432	0.03653	1.35174
13	0.07944	1.74759	0.06528	1.63210	0.04781	1.48213	0.03755	1.38928
14	0.08322	1.83081	0.06800	1.70010	0.04940	1.53153	0.03859	1.42787
15	0.08718	1.91799	0.07084	1.77094	0.05105	1.58258	0.03966	1.46754
16	0.09133	2.00933	0.07379	1.84473	0.05275	1.63535	0.04076	1.50830
17	0.09568	2.10501	0.07686	1.92159	0.05451	1.68985	0.04190	1.55020
18	0.10024	2.20525	0.08007	2.00166	0.05633	1.74617	0.04306	1.59326
19	0.10501	2.31026	0.08340	2.08506	0.05821	1.80438	0.04426	1.63752
20	0.11001	2.42027	0.08688	2.17194	0.06015	1.86453	0.04549	1.68300
21	0.11525	2.53552	0.09050	2.26245	0.06215	1.92668	0.04675	1.72975
22	0.12074	2.65626	0.09427	2.35670	0.06422	1.99090	0.04805	1.77780
23	0.07897	2.73513	0.09820	2.45490	0.06636	2.05726	0.04938	1.82719
24	0.08038	2.81551	0.10229	2.55718	0.06858	2.12584	0.05076	1.87794

Table 2

To be used in connection with the second
method of investment.

In addition to the capital introduced in the
same amount as the first are introduced in
each successive month of the period.

Table II

Month (interval) No.	3 month deals			4 month deals		
	Payments due month	New volume month	Total volume period	Payments due month	New volume month	Total volume period
1	....	1.00000	1.00000	....	1.00000	1.00000
2	0.33333	1.33333	2.33333	0.25000	1.25000	2.25000
3	0.77778	1.77778	4.11111	0.56250	1.56250	3.81250
4	1.37037	2.37037	6.48148	0.95313	1.95313	5.76563
5	1.82716	2.82716	9.30864	1.44141	2.44141	8.20705
6	2.32510	2.32510	12.63374	1.80176	2.80176	11.00879
7	2.84068	3.84068	16.47462	2.18970	3.18970	14.19849
8	3.33105	4.33105	20.80567	2.59650	3.59650	17.79498
9	3.83234	4.83234	25.63801	3.00734	4.00734	21.80232
10	4.33476	5.33476	30.97277	3.39882	4.39882	26.20114
11	4.83272	5.83272	36.80548	3.79809	4.79809	30.99123
12	5.33327	6.33327	43.13875	4.20019	5.20019	36.19942
13	5.83358	6.83358	49.97233	4.60111	5.60111	41.80053
14	6.33319	7.33319	57.30552	4.99955	5.99955	47.80008
15	6.83335	7.83335	65.13887	5.39974	6.39974	54.19982
16	7.33337	8.33337	73.47224	5.80015	6.80015	60.99997
17	7.83330	8.83330	82.30554	6.20014	7.20014	68.20010
18	8.33334	9.33334	91.63888	6.59989	7.59989	75.79999
19	8.83334	9.83334	101.47222	6.99998	7.99998	83.79997
20	9.33333	10.33333	111.80555	7.40004	8.40004	92.20001
21	9.83334	10.83334	122.63888	7.80001	8.80001	101.00002
22	10.33333	11.33333	133.97222	8.19998	9.19998	110.80000
23	10.83333	11.83333	145.80555	8.60000	9.60000	119.80001
24	11.33333	12.33333	158.13888	9.00001	10.00001	129.80002

Table II

Month (interval) No.	5 month deals			6 month deals		
	Payments due month	New volume month	Total volume period	Payments due month	New volume month	Total volume period
1	....	1.00000	1.00000	....	1.00000	1.00000
2	0.20000	1.20000	2.20000	0.16667	1.16667	2.16667
3	0.44000	1.44000	3.64000	0.36111	1.36111	3.52778
4	0.72800	1.72800	5.36800	0.58796	1.58796	5.11574
5	1.07360	2.07360	7.44160	0.85262	1.85262	6.96837
6	1.48832	2.48832	9.92992	1.16139	2.16139	9.12976
7	1.78599	2.78599	12.71591	1.52163	2.52163	11.65139
8	2.10318	3.10318	15.81909	1.77523	2.77523	14.42662
9	2.43582	3.43582	19.25491	2.04333	3.04333	17.46994
10	2.77739	3.77739	23.03230	2.32370	3.32370	20.79364
11	3.11814	4.11814	27.15044	2.61298	3.61298	24.40662
12	3.44409	4.44409	31.59453	2.90638	3.90638	28.31300
13	3.77573	4.77573	36.37026	3.19721	4.19721	32.51020
14	4.11032	5.11032	41.48058	3.47647	4.47647	36.98667
15	4.44513	5.44513	46.92571	3.76001	4.76001	41.74668
16	4.77844	5.77844	52.70415	4.04613	5.04613	46.79281
17	5.11079	6.11079	58.81494	4.33320	5.33320	52.12600
18	5.44413	6.44413	65.25907	4.61990	5.61990	57.74590
19	5.77702	6.77702	72.03609	4.90549	5.90549	63.65139
20	6.11130	7.11130	79.14739	5.19020	6.19020	69.84159
21	6.44437	7.44437	86.59176	5.47582	6.47582	76.31741
22	6.77772	7.77772	94.36948	5.76179	6.76179	83.07920
23	7.11104	8.11104	102.48052	6.04773	7.04773	90.12693
24	7.44454	8.44454	110.92506	6.33349	7.33349	97.46042

Table II

Month (interval) No.	7 month deals			8 month deals		
	Payments due month	New volume month	Total volume period	Payments due month	New volume month	Total volume period
1	....	1.00000	1.00000	....	1.00000	1.00000
2	0.14286	1.14286	2.14286	0.12500	1.12500	2.12500
3	0.30612	1.30612	3.44898	0.26571	1.26571	3.39071
4	0.49271	1.49271	4.94169	0.42383	1.42383	4.81454
5	0.70596	1.70596	6.64765	0.60186	1.60186	6.41640
6	0.94967	1.94967	8.59732	0.80203	1.80203	8.21843
7	1.22819	2.22819	10.82551	1.03196	2.03196	10.25039
8	1.54650	2.54650	13.37201	1.28070	2.28070	12.53109
9	1.74703	2.74703	16.11904	1.56578	2.56578	15.09687
10	1.99950	2.99950	19.11854	1.76151	2.76151	17.85838
11	2.24142	3.24142	22.35996	1.96607	2.96607	20.82445
12	2.49124	3.49124	25.85120	2.17862	3.17862	24.00307
13	2.75773	3.75773	29.60893	2.39798	3.39798	27.40105
14	3.00293	4.00293	33.61186	2.62249	3.62249	31.02354
15	3.25636	4.25636	37.86822	2.85006	3.85006	34.87360
16	3.50076	4.50076	42.36898	3.07789	4.07789	38.95149
17	3.74839	4.74839	47.11737	3.30255	4.30255	43.25404
18	3.99834	4.99834	52.11571	3.51964	4.51964	47.77368
19	4.24919	5.24919	57.36490	3.73942	4.73942	52.51310
20	4.50034	5.50034	62.86524	3.96108	4.96108	57.47418
21	4.72964	5.72964	68.59488	4.18463	5.18463	62.65881
22	5.00062	6.00062	74.59550	4.40712	5.40712	68.06593
23	5.24979	6.24979	80.84529	4.63020	5.63020	73.69613
24	5.49965	6.49965	87.34494	4.85271	5.85271	79.54884

Table II

Month No. (interval)	9 month deals			10 month deals		
	Payments due month	New volume month	Total volume period	Payments due month	New volume month	Total volume period
1	......	1.00000	1.00000	......	1.00000	1.00000
2	0.11111	1.11111	2.11111	0.10000	1.10000	2.10000
3	0.23457	1.23457	3.34568	0.21000	1.21000	3.31000
4	0.37174	1.37174	4.71742	0.33100	1.33100	4.64100
5	0.52416	1.52416	6.24158	0.46410	1.46410	6.10510
6	0.64351	1.64351	7.93509	0.61051	1.61051	7.71561
7	0.86168	1.86168	9.81676	0.77156	1.77156	9.48717
8	1.09075	2.09075	11.90752	0.94876	1.94876	11.43593
9	1.38306	2.38306	14.23057	1.14359	2.14359	13.57952
10	1.58118	2.58118	16.81175	1.35795	2.35795	15.93747
11	1.75696	2.75696	19.56861	1.59374	2.59374	18.53121
12	1.93972	2.93972	22.50855	1.75512	2.75512	21.28633
13	2.12918	3.12918	25.63752	1.91843	2.91843	24.20876
14	2.32446	3.32446	28.96197	2.08927	3.08927	27.29803
15	2.52449	3.52449	32.48646	2.26510	3.26510	30.56713
16	2.72793	3.72793	36.21439	2.44520	3.44520	34.00233
17	2.93307	3.93307	40.14746	2.62867	3.62867	37.63100
18	3.13777	4.13777	44.28523	2.81438	3.81438	41.44538
19	3.33941	4.33941	48.62463	3.00095	4.00095	45.44633
20	3.53477	4.53477	53.15940	3.18668	4.18668	49.63301
21	3.73251	4.73251	57.89171	3.36955	4.36955	54.00256
22	3.93149	4.93149	62.82520	3.54714	4.54714	58.54970
23	4.13174	5.13174	67.85694	3.73662	4.73662	63.28632
24	4.33255	5.33255	73.28749	3.90735	4.90735	68.19367

Table II

Month (interval) No.	11 month deals			12 month deals		
	Payments due month	New volume period	Total volume period	Payments due month	New volume month	Total volume period
1	....	1.00000	1.00000	....	1.00000	1.00000
2	0.09091	1.09091	2.09091	0.08333	1.08333	2.08333
3	0.19008	1.19008	3.28099	0.17361	1.17361	3.25694
4	0.29827	1.29827	4.57926	0.27141	1.27141	4.52836
5	0.41626	1.41626	5.99552	0.37736	1.37736	5.90572
6	0.54505	1.54505	7.54057	0.49214	1.49214	7.39786
7	0.68551	1.68551	9.22608	0.61649	1.61649	9.01435
8	0.83874	1.83874	11.06482	0.75120	1.75120	10.76555
9	1.00591	2.00591	13.07073	0.89713	1.89713	12.66267
10	1.18825	2.18825	15.25898	1.05522	2.05522	14.71790
11	1.38718	2.38718	17.64616	1.22649	2.22649	16.94439
12	1.60419	2.60419	20.25035	1.41203	2.41203	19.35642
13	1.75003	2.75003	23.00038	1.61303	2.61303	21.96945
14	1.90086	2.90086	25.90124	1.74745	2.74745	24.71691
15	2.05638	3.05638	28.95762	1.88613	2.88613	27.60304
16	2.21621	3.21621	32.17385	2.02884	3.02884	30.65186
17	2.37984	3.37984	35.55367	2.17529	3.17529	33.80717
18	2.54664	3.54664	39.10031	2.32512	3.32512	37.13239
19	2.71583	3.71583	42.81614	2.47787	3.47787	40.61015
20	2.88648	3.88648	46.70262	2.63298	3.63298	44.24314
21	3.05652	4.05652	50.75914	2.78980	3.78980	48.03293
22	3.22736	4.22736	54.98650	2.94752	3.94752	51.98045
23	3.39465	4.39465	59.38115	3.10521	4.10521	56.08566
24	3.55742	4.55742	63.93857	3.26177	4.26177	60.34743

Table II

Month (interval) No.	15 month deals			18 month deals		
	Payments due month	New volume month	Total volume period	Payments due month	New volume month	Total volume period
1	....	1.00000	1.00000	....	1.00000	1.00000
2	0.06667	1.06667	2.06667	0.05556	1.05556	2.05556
3	0.13778	1.13778	3.20445	0.11420	1.11420	3.16975
4	0.21363	1.21363	4.41808	0.17610	1.17610	4.34584
5	0.29454	1.29454	5.71261	0.24144	1.24144	5.58729
6	0.38084	1.38084	7.09345	0.31041	1.31041	6.89769
7	0.47290	1.47290	8.56635	0.38321	1.38321	8.28090
8	0.57109	1.57109	10.13744	0.46005	1.46005	9.74095
9	0.67583	1.67583	11.81327	0.54116	1.54116	11.28211
10	0.78755	1.78755	13.60082	0.62678	1.62678	12.90890
11	0.90672	1.90672	15.50755	0.71716	1.71716	14.62606
12	1.03384	2.03384	17.54138	0.81256	1.81256	16.43862
13	1.16943	2.16943	19.71081	0.91326	1.91326	18.35187
14	1.31405	2.31405	22.02486	1.01955	2.01955	20.37142
15	1.46833	2.46833	24.49319	1.13175	2.13175	22.50317
16	1.63288	2.63288	27.12607	1.25018	2.25018	24.75335
17	1.74174	2.74174	29.86781	1.37519	2.37519	27.12853
18	1.85412	2.85412	32.72192	1.50714	2.50714	29.63567
19	1.96853	2.96853	35.69045	1.64643	2.64643	32.28210
20	2.08552	3.08552	38.77597	1.73790	2.73790	35.02000
21	2.20493	3.20493	41.98091	1.83136	2.83136	37.85136
22	2.32654	3.32654	45.30745	1.92332	2.92332	40.77468
23	2.45012	3.45012	48.75757	2.01676	3.01676	43.79143
24	2.57539	3.57539	52.33296	2.11155	3.11155	46.90298

Table II

Month (interval) No.	21 month deals			24 month deals		
	Payments due month	New volume month	Total volume period	Payments due month	New volume month	Total volume period
1	....	1.00000	1.00000	....	1.00000	1.00000
2	0.04762	1.04762	2.04762	0.04167	1.04167	2.04167
3	0.09751	1.09751	3.14513	0.08507	1.08507	3.21674
4	0.14977	1.14977	4.29489	0.13028	1.13028	4.25702
5	0.20452	1.20452	5.49941	0.17738	1.17738	5.43439
6	0.26188	1.26188	6.76129	0.22643	1.22643	6.66083
7	0.32197	1.32197	8.08325	0.27754	1.27754	7.93836
8	0.38492	1.38492	9.46817	0.33077	1.33077	9.26913
9	0.45086	1.45086	10.91903	0.38621	1.38621	10.65534
10	0.51995	1.51995	12.43899	0.44397	1.44397	12.09932
11	0.59233	1.59233	14.03132	0.50414	1.50414	13.60345
12	0.66816	1.66816	15.69947	0.56681	1.56681	15.17027
13	0.74759	1.74759	17.44706	0.63210	1.63210	16.80236
14	0.83081	1.83081	19.27788	0.70010	1.70010	18.50246
15	0.91799	1.91799	21.19587	0.77094	1.77094	20.27340
16	1.00933	2.00933	23.20519	0.84473	1.84473	22.11812
17	1.10501	2.10501	25.31020	0.92159	1.92159	24.03971
18	1.20525	2.20525	27.51545	1.00166	2.00166	26.04136
19	1.31026	2.31026	29.82570	1.08506	2.08506	28.12642
20	1.42027	2.42027	32.24597	1.17194	2.17194	30.29836
21	1.53552	2.53552	34.78149	1.26243	2.26243	32.56079
22	1.65926	2.65926	37.44075	1.35670	2.35670	34.91749
23	1.73513	2.73513	40.17589	1.45490	2.45490	37.37289
24	1.81551	2.81551	42.99140	1.55718	2.55718	39.92957

Table 3

To be used in connection with the third
method of investment.

In addition to the capital introduced in
the first month additional sums of the same
amount as the first are introduced in each
successive month but such additional invest-
ments are continued for a limited number of
months only.

Table III

Month (interval) No.	6-month deals					
	3 successive investments			5 successive investments		
	Payments due month	New volume month	Total volume period	Payments due month	New volume month	Total volume period
1	....	1.00000	1.00000	1.00000	1.00000	1.00000
2	0.16667	1.16667	2.16667	0.16667	1.16667	2.16667
3	0.36111	1.36111	3.52778	0.36111	1.36111	3.52778
4	0.58796	0.58796	4.11574	0.58796	1.58796	5.11574
5	0.68596	0.68596	4.80170	0.85262	1.85262	6.96837
6	0.80028	0.80028	5.60198	1.16139	1.16139	8.12976
7	0.93367	0.93367	6.53565	1.35496	1.35496	9.48472
8	0.92260	0.92260	7.45825	1.41412	1.41412	10.89884
9	0.88193	0.88193	8.34018	1.45536	1.45536	12.35420
10	0.80207	0.80207	9.14225	1.47107	1.47107	13.82527
11	0.83775	0.83775	9.98000	1.45159	1.45159	15.27686
12	0.86306	0.86306	10.84306	1.38475	1.38475	16.66161
13	0.87350	0.87350	11.71656	1.42197	1.42197	18.08358
14	0.86349	0.86349	12.58005	1.43315	1.43315	19.51673
15	0.85363	0.85363	13.43368	1.43631	1.43631	20.95304
16	0.84893	0.84893	14.28261	1.43315	1.43315	22.38619
17	0.85672	0.85672	15.13933	1.42681	1.42681	23.81300
18	0.85989	0.85989	15.99922	1.42270	1.42270	25.23570
19	0.85936	0.85936	16.85858	1.42902	1.42902	26.66472
20	0.85701	0.85701	17.71559	1.43019	1.43019	28.09491
21	0.85592	0.85592	18.57151	1.42969	1.42969	29.52460
22	0.85630	0.85630	19.42781	1.42860	1.42860	30.95320
23	0.85753	0.85753	20.28534	1.42783	1.42783	32.38103
24	0.85767	0.85767	21.14301	1.42800	1.42800	33.80903

Table III

Month (interval) No.	10 month deals					
	3 successive investments			5 successive investments		
	Payments due month	New volume month	Total volume period	Payments due month	New volume month	Total volume period
1	....	1.00000	1.00000	....	1.00000	1.00000
2	0.10000	1.10000	2.10000	0.10000	1.10000	2.10000
3	0.21000	1.21000	3.31000	0.21000	1.21000	3.31000
4	0.33100	0.33100	3.64100	0.33100	1.33100	4.64100
5	0.36410	0.36410	4.00510	0.46410	1.46410	6.10510
6	0.40051	0.40051	4.40561	0.61051	0.61051	6.71561
7	0.44056	0.44056	4.84617	0.67156	0.67156	7.38717
8	0.48466	0.48466	5.33083	0.73876	0.73876	8.12593
9	0.53308	0.53308	5.86391	0.81259	0.81259	8.93852
10	0.58639	0.58639	6.45030	0.90000	0.90000	9.83237
11	0.64498	0.64498	7.09528	0.98323	0.98323	10.81560
12	0.60953	0.60953	7.70481	0.98156	0.98156	11.79716
13	0.56048	0.56048	8.26529	0.96967	0.96967	12.76683
14	0.49553	0.49553	8.76082	0.94568	0.94568	13.71251
15	0.51198	0.51198	9.27280	0.90715	0.90715	14.61966
16	0.52677	0.52677	9.79957	0.85146	0.85146	15.47112
17	0.53940	0.53940	10.33897	0.87555	0.87555	16.34667
18	0.54928	0.54928	10.88825	0.89595	0.89595	17.24262
19	0.55575	0.55575	11.44400	0.91168	0.91168	18.15430
20	0.55801	0.55801	12.00201	0.92158	0.92158	19.07588
21	0.55517	0.55517	12.55718	0.92435	0.92435	20.00023
22	0.54619	0.54619	13.10337	0.91847	0.91847	20.91870
23	0.54994	0.54994	13.65331	0.92224	0.92224	21.84094
24	0.53780	0.53780	14.19111	0.90640	0.90640	22.74734

Table III

	12 month deals					
Month (interval) No.	3 successive investments			5 successive investments		
	Payments due month	New volume month	Total volume period	Payments due month	New volume month	Total volume period
1	....	1.00000	1.00000	....	1.00000	1.00000
2	0.08333	1.08333	2.08333	0.08333	1.08333	2.08333
3	0.17361	1.17361	3.25694	0.17361	1.17361	3.25694
4	0.27142	0.27142	3.52836	0.27141	1.27141	4.52836
5	0.29403	0.29403	3.82239	0.37736	1.37736	5.90572
6	0.31853	0.31853	4.14092	0.49214	0.49214	6.39786
7	0.34507	0.34507	4.48599	0.53316	0.53316	6.93102
8	0.37384	0.37384	4.85983	0.57759	0.57759	7.50861
9	0.40498	0.40498	5.26481	0.62570	0.62570	8.13431
10	0.43874	0.43874	5.70355	0.67787	0.67787	8.81218
11	0.47529	0.47529	6.17884	0.73435	0.73435	9.54653
12	0.51492	0.51492	6.69376	0.79554	0.79554	10.34207
13	0.55779	0.55779	7.25155	0.86185	0.86185	11.20390
14	0.52097	0.52097	7.77252	0.85034	0.85034	12.05424
15	0.47410	0.47410	8.24662	0.83090	0.83090	12.88514
16	0.41581	0.41581	8.66243	0.80235	0.80235	13.68749
17	0.42783	0.42783	9.09026	0.76326	0.76326	14.45075
18	0.43899	0.43899	9.52925	0.71209	0.71209	15.16284
19	0.44902	0.44902	9.97827	0.73040	0.73040	15.89324
20	0.45770	0.45770	10.43597	0.74686	0.74686	16.64010
21	0.46467	0.46467	10.90064	0.76095	0.76095	17.40105
22	0.46966	0.46966	11.37030	0.77223	0.77223	18.17328
23	0.47222	0.47222	11.84252	0.78009	0.78009	18.95337
24	0.47198	0.47198	12.31450	0.78391	0.78391	19.73728

Table III

	18 month deals					
Month (interval) No.	3 successive investments			5 successive investments		
	Payments due month	New volume month	Total volume period	Payments due month	New volume month	Total volume period
1	....	1.00000	1.00000	....	1.00000	1.00000
2	0.05556	1.05556	2.05556	0.05556	1.05556	2.05556
3	0.11420	1.11420	3.16975	0.11420	1.11420	3.16975
4	0.17609	0.17609	3.34584	0.17610	1.17610	4.34584
5	0.18589	0.18589	3.53173	0.24144	1.24144	5.58729
6	0.19621	0.19621	3.72794	0.31040	0.31040	5.89769
7	0.20712	0.20712	3.93506	0.32765	0.32765	6.22534
8	0.21860	0.21860	4.15366	0.34586	0.34586	6.57120
9	0.23076	0.23076	4.38442	0.36507	0.36507	6.93627
10	0.24356	0.24356	4.62800	0.38534	0.38534	7.32161
11	0.25711	0.25711	4.88511	0.40676	0.40676	7.72837
12	0.27140	0.27140	5.15651	0.42935	0.42935	8.15772
13	0.28646	0.28646	5.44297	0.45320	0.45320	8.61092
14	0.30239	0.30239	5.74536	0.47839	0.47839	9.08931
15	0.31919	0.31919	6.06455	0.50496	0.50496	9.59427
16	0.33693	0.33693	6.40148	0.53302	0.53302	10.12729
17	0.35563	0.35563	6.75711	0.56272	0.56272	10.69001
18	0.37539	0.37539	7.13250	0.59379	0.59379	11.28380
19	0.39625	0.39625	7.52875	0.62688	0.62688	11.91068
20	0.36372	0.36372	7.89147	0.60615	0.60615	12.51683
21	0.32422	0.32422	8.21569	0.58118	0.58118	13.09801
22	0.27689	0.27689	8.49258	0.54814	0.54814	13.64615
23	0.27885	0.27885	8.77143	0.50961	0.50961	14.15576
24	0.28019	0.28019	9.05162	0.46512	0.46512	14.62088

Table III

24 month deals

Month (interval) No.	3 successive investments			5 successive investments		
	Payments due month	New volume month	Total volume period	Payments due month	New volume month	Total volume period
1	......	1.00000	1.00000	......	1.00000	1.00000
2	0.04167	1.04167	2.04167	0.04167	1.04167	2.04167
3	0.08507	1.08507	3.12674	0.08507	1.08507	3.12674
4	0.13028	0.13028	3.25702	0.13028	0.13028	4.25702
5	0.13570	0.13570	3.39272	0.17738	0.17738	3.43439
6	0.14137	0.14137	3.53409	0.23044	0.23044	5.66085
7	0.14725	0.14725	3.68134	0.25596	0.25596	5.90680
8	0.15340	0.15340	3.83474	0.24570	0.24570	6.14839
9	0.15977	0.15977	3.99451	0.25695	0.25695	6.39832
10	0.16645	0.16645	4.16096	0.26661	0.26661	6.64493
11	0.17336	0.17336	4.33432	0.27769	0.27769	6.94363
12	0.18061	0.18061	4.51493	0.28989	0.28989	7.23191
13	0.18811	0.18811	4.70304	0.30132	0.30132	7.55323
14	0.19597	0.19597	4.89901	0.31389	0.31389	7.84712
15	0.20413	0.20413	5.10315	0.32696	0.32696	8.17408
16	0.21263	0.21263	5.31576	0.34059	0.34059	8.51467
17	0.22149	0.22149	5.53725	0.35477	0.35477	8.86944
18	0.23071	0.23071	5.76796	0.36956	0.36956	9.23900
19	0.24034	0.24034	6.00830	0.39497	0.39497	9.63397
20	0.25035	0.25035	6.25865	0.40099	0.40099	10.03496
21	0.26078	0.26078	6.51943	0.41771	0.41771	10.45267
22	0.27164	0.27164	6.79104	0.43511	0.43511	10.87778
23	0.28346	0.28346	7.07458	0.45375	0.45375	11.33153
24	0.29425	0.29425	7.36978	0.47162	0.47162	11.80315