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Building and Loan Associations

By R. J. BENNETT

The building and loan association provides a safe means for the investment of small savings. The money thus obtained through monthly instalments is loaned to members on mortgage or stock security and the earnings therefrom distributed to the members. These associations are incorporated under state laws and are governed by the requirements thereof.

Philadelphia is the home of building and loan associations, the first in the United States having been organized here in 1831. This city alone with a population of two millions had early in 1923 over 2,400 associations with 850,000 stockholders and with assets exceeding \$402,000,000. The state of Pennsylvania leads all others with 1,251,000 shareholders and over \$624,000,000 in assets, and is followed closely by Ohio, New Jersey, Massachusetts, Illinois, New York and Indiana.

All associations make annual reports to the state and likewise reports to the members. Annual audits are required by committees of stockholders and frequently by certified public accountants. In addition to this, periodic audits are made by officers of the state banking department whose requirements are rigid and exacting.

The management of building associations is vested in boards of directors. As a rule the secretary and treasurer are the only officers who are compensated for their services; the directors in most cases serve without pay and consider it a privilege to do so because they realize that the association is a civic benefit. The prestige of these organizations is growing, and while they have a few sins to answer for they have a multitude of good deeds to their credit.

The Value of a Share

The value of a share depends upon the amount paid in, the time it has run, and the success of the association. The monthly payment is either \$1.00 per share with a maturity value of \$200, or 50 cents per share with a maturity value of \$100. Double-payment shares in either of these cases require double the amount of dues, causing the shares to mature in a shorter time. Share payments are sometimes around 60 cents or 70 cents per month, and have a maturity value of \$200; but this class of stock is used (in Pennsylvania) mostly by associations which carry the insurance feature in connection with the shares.

In each share there is the paid-in value, the book value, the withdrawal value and the par value. Par is really a misnomer, because when the share reaches par it has matured and is paid off. Sometimes the settlement value of a share is slightly above par, due to the satisfactory accumulation of profits and to the fact that the payment date was slightly delayed.

Fees and Fines

There is usually an entrance fee of so much per share, and a transfer fee, and sometimes a withdrawal fee on shares drawn out before maturity. A fine is nearly always levied on delinquent payments, the amount as a rule being 2 per cent. per month on the amount due. As to fees, fines, premiums, and so forth, each association is a law unto itself.

There are certain kinds or classes of shares, and membership thereunder varies to some degree. While most associations operate on the serial plan there are some states, such as Ohio, Massachusetts and others, which permit activities that more nearly approach the regular savings-bank principle. In Pennsylvania, associations are of a local nature and are therefore under close supervision by the officers and directors, which is not always possible when they are large or unwieldy.

The Serial Plan

Since the serial plan is most generally used it is selected as a basis for this article. Under this plan the stock is issued in series—that is, a new series begins yearly, half-yearly, quarterly, or monthly. New members may pay back to the beginning of the current series, or else wait for a new series to begin.

One may become a member in the quarterly series without having to make large back payments. The series are numbered in consecutive order, as first, second, third, and so on. Each series of stock differs in value from the others and of course matures at a different time; it dates from the time of its issue and runs its course independently of other series issued before or after. Each series is retired at maturity according to the amount stipulated, whether \$200 per share or less. The profits are apportioned annually or oftener among the shares in the different series according to the time the series has run and the number of shares therein. When the monthly instalments and the profits apportioned to the shares of any given series equal the par value, they are said to have matured. They are then paid off or perhaps may be turned into full-paid stock or else returned to the association in the form of a temporary loan.

Sources of Income

The various items of income are listed below but this does not mean that all would necessarily be found in any one association. The income should of course be represented by ledger accounts duly opened and classified, though in some cases the ledger is either omitted entirely or else partly represented by accounts opened on succeeding pages of the cash book. The income accounts are as follows:

- 1—Interest on loans
- 2—Interest on bank balances
- 3—Interest on investments
- 4—Entrance fees
- 5—Transfer fees
- 6—Withdrawal fees
- 7—Premium on money loaned
- 8—Fines from members
- 9—Profit on withdrawing shares
- 10—Rents received
- 11—Profit on sale of real estate

Without loans an association could not exist, since that is the chief source of income. All loans as a rule are made to members, all earnings come from members, all profits belong to members, and everything is owned by the members. Members who withdraw before the maturity of their share usually forfeit a portion of their profits to the association. Those who remain benefit thereby.

The Expense Accounts

The running expenses of an association are few and are paid out of the general income. Some associations require a fee of 10 or 25 cents per share from members once or twice a year to meet the running expenses; especially in associations which charge no premiums to borrowing members.

The following is a list of the usual operating expenses, though they may not all be found in any one case; and perhaps even other expense items might appear occasionally. Indeed in some of the larger associations operating in Massachusetts, Ohio and New York the list of accounts are fully as comprehensive. The usual expenditure accounts are as follows:

- 1—Expense of organizing
- 2—Salaries of officers
- 3—Printing and stationery
- 4—Advertising
- 5—Rent of office
- 6—Interest on borrowed money
- 7—Interest on withdrawals
- 8—Interest on matured stock
- 9—Interest on full-paid stock
- 10—Legal expenses
- 11—Insurance expenses
- 12—Taxes and water rents
- 13—Losses on real estate sold
- 14—Repairs to property
- 15—Sundry expenses

Assets and Liabilities

Building associations, like banks, deal entirely in cash. The receipts from monthly dues and other sources are paid out to the borrowing members. Therefore the assets of an association consist chiefly of loans on mortgages, stock loans, securities, real estate, cash, and so forth. The liabilities consist chiefly of instalment payments, full-paid stock, paid-up stock, accumulated profits, borrowed money, and miscellaneous liabilities. Many associations create contingent funds as a precaution against losses, the percentage usually being designated by law as a certain per cent. of the assets or of the capital or of the dues paid in.

The following is a balance-sheet of the John B. Stetson Building and Loan Association of Philadelphia, composed largely of employees of this well-known hat company. It is remarkable for its simplicity.

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Balance-sheet December 30, 1922

ASSETS	LIABILITIES					
Bond and mortgage loans \$1,593,925.00	1,470	shares	32	series,	132	months \$ 194,040.00
Stocks loans 159,850.00	1,222	"	33	"	120	" 146,640.00
Unpaid dues 4,683.00	1,332	"	34	"	108	" 143,856.00
Unpaid interest 1,989.67	939	"	35	"	96	" 90,144.00
Bal. in treasury 8,792.14	2,026	"	36	"	84	" 170,184.00
	1,699	"	37	"	72	" 122,328.00
	1,793	"	38	"	60	" 107,580.00
	2,181	"	39	"	48	" 104,688.00
	3,922	"	40	"	36	" 141,192.00
	2,802	"	41	"	24	" 67,248.00
	3,138	"	42	"	12	" 37,656.00
						Dues paid in advance 846.00
						Interest paid in advance 100.25
						Undivided profits 337,737.56
						Bills payable 105,000.00
\$1,769,239.81						\$1,769,239.81

Distribution of Profits

This is an interesting phase of building-association activities, particularly for the accountant, but unfortunately there seems to be a lack of uniformity in the methods of distribution. Several formulas for apportioning profits are in use, some of which are quite ingenious. Two or three of these are illustrated below.

Profits belong to members, and distribution thereof is made according to the age of the series and the number of shares invested therein. A new association with only one series outstanding may easily determine the profit per share by dividing the total profits by the number of shares; but if two or more series have been issued the apportionment becomes more complex.

The three general plans of recording profits on the books of associations are as follows:

- (a) All profits are credited to an account called "Profits" or "Undivided Profits," or some similar name, and the distribution thereof to series, is made entirely on report sheets. The report sheets are submitted annually to the state and printed copies distributed to the members. Each year all accumulated profits for all years are reapportioned to the several series, and of course to the shares.
- (b) Under this plan the profits and the dues are added together and credited to one controlling account, or to an account for each series. This account will at any time show the book value of all series or of each series as the case may be. For example, the series account contains credits for the several years' dues and profits and debits for the

withdrawals of dues and profits. The aggregate dues and profits of all outstanding series at the beginning of the year comprise the invested capital; but to this must be added the average instalments for the current year to get the capital investment for the year. This capital investment less drawings therefrom divided into the year's net profit will give the per cent. of profit.

- (c) The third plan is similar to the second, with the added advantage of individual accounts of members brought right up to date. Each year or oftener the members' book accounts and pass books are credited with their shares of the profits for the year. The general-ledger accounts may be kept the same as in plan two with the additional individual credits for earnings.

Under the first plan the yearly apportionment of profits includes the redistribution of all accumulated profits; under the second there is an apportionment of only the year's net profit, on the basis of the yearly capital investment; under the third, individual accounts are kept with the several members and both dues and profits included therein. In the first two, members' accounts contain only the dues paid, while the third records everything. The first plan prevails in most Pennsylvania associations and is the one used in this contribution.

Averaging Instalments and Interest

There are several methods of distributing profits, but in all of them the average investment period of the monthly instalments must be used. The application of two or three prevailing methods can best be illustrated by means of examples.

Example 1. If \$1 is paid monthly in advance for 12 months on a share of stock, what is the average time of investment? At 6 per cent., what is the amount of interest earned thereon?

Answer 1. The average time is $6\frac{1}{2}$ months, and the interest 39 cents. The average time can be determined by stating the number of months each dollar has been invested. For example, the first dollar has been invested for 12 months, the next for 11 months, the next for 10, and so on down to the last, which has been invested for one month. All of these added together give a total of 78 months ($12+11+10+9+8+7+6+5+4+3+2+1=78$), indicating an investment of one dollar for 78 months, or the equivalent of \$12 invested for an average of $6\frac{1}{2}$ months ($78\div 12=6\frac{1}{2}$). The sum of the two extremes (12 and $1=13$)

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divided by 2 gives the same result, $6\frac{1}{2}$ months. That is, the number of months for the oldest shares plus one for the youngest divided by two gives the average number of months invested. To reduce the average to a yearly basis divide it by 12, twelve months to a year.

The above method of averaging investments is applied to the distribution of profits in the next example.

Example 2. The tabulation shows an association having five yearly series with 100, 200, 300, 250 and 400 shares respectively, and a net profit of \$2,940 to be divided. The profits are divided according to the above plan.

(1) Series	(2) Paid in per share	(3) Total shares	(4) Paid in per series	(5) Average No. months	(6) Total for one month	(7) Profit for series
1	\$60	100	\$ 6,000	30.5	\$183,000	\$ 742.92
2	48	200	9,600	24.5	235,200	954.83
3	36	300	10,800	18.5	199,800	811.12
4	24	250	6,000	12.5	75,000	304.47
5	12	400	4,800	6.5	31,200	126.66
Total		1,250	\$37,200		\$724,200	\$2,940.00

Column 5 shows the average number of months for which the series have been invested, and column 4 the total dues paid in on each. Column 4 multiplied by column 5 gives the amounts in column 6 with a total of \$724,200, which indicates the number of dollars invested for one month. Then \$724,200 divided by 12 (the number of months in a year) gives \$59,550, the amount of invested capital for one year, which in turn divided into the profit ($\$2,940 \div 59,550$) gives 4.937 per cent. as the rate of profit for the shares. Now then, reduce each series to a yearly basis and apply the rate of earnings to obtain the amount per series—for example:

In the older series, \$6,000 has been invested for an average of $30\frac{1}{2}$ months or the equivalent of \$183,000 for one month, or the equivalent of \$15,250 ($\$183,000 \div 12$) for one year. Then, \$15,250 for one year at 4.937 per cent. gives \$742.92 for the series. Another column might be constructed between columns 6 and 7 showing the yearly investment per series, giving \$15,250, \$19,600, \$16,650, \$6,250 and \$2,600, each of which in turn multiplied by the 4.937 per cent. earning rate will give the result

shown in column 7. This plan will work regardless of whether the series are issued in even or uneven periods.

The same results can be obtained without reducing the series to yearly bases by using only the monthly products and the earnings. For example, \$724,200 divided into \$2,940 gives an earning ratio of 4.05965 per cent., and for the oldest series \$183,000 x 4.05965 gives \$742.92, as stated above. The other series treated in like manner will give the same results. The relation of each series to the total is of course shown in column

6. The profit for the first series is $\frac{183,000}{724,200}$ of \$2,940, or \$742.92;

for the next $\frac{235,200}{724,200}$ of \$2,940, or \$954.83, and so on. The plan

used above is known as the "compound-partnership plan."

Half-time Averages

For convenience the plan of averaging shown in example 1 is simplified by using an even half-time. For twelve monthly payments the average time is usually taken to be an even six months instead of six and one-half. This method holds good also in averaging payments over a term of years, using the months as a basis. Payments over a period of 60 months, for example, have an average of 30½ on the above plan, but 30 under this; for 48 months the average is 24, for 36 months it is 18, and so on.

Under this method of averaging the result in example 1 would be 36 cents instead of 39, and while the 39 is undoubtedly correct, experience has shown that in the end no hardship is incurred by using the simpler plan for averaging purposes. This principle and the use of earning powers are exemplified below.

Earning Powers Explained

Inasmuch as the series are uniform as to time, a basis of comparison for the various years is obtained, since there is an exact ratio maintained in the relation of one series to another. This uniform basis is used in apportioning the profits to the different series.

Referring to example 2, the \$12 representing the first year's instalments on the youngest series may be taken as the base. Give it an earning power of 1, the next series an earning power of 4 (twice the time and twice the number of payments, 2 x 2), the

next an earning power of 9 (thrice the time and thrice the payments, 3×3), and so on. Assuming that \$12 for the first series has an earning power of 1, then it follows that \$24 has an earning power of 4, \$36 an earning power of 9, \$48 an earning power of 16, and \$60 an earning power of 25, increasing in like progression as the years advance. The earning powers for the first ten years or annuity periods are 1, 4, 9, 16, 25, 36, 49, 64, 81 and 100.

General Principles

It is not possible in an article like this to give the several angles to the distribution of profits, but these are set forth in a book on building and loan associations that the writer has in preparation. The law of averages, however, applies in every case. Some associations issue yearly series, and others half-yearly or quarterly. Still others allow members to enter at any time without regard to series; this is known as the non-serial plan.

Like results are obtained under the "half-time" and the "earning powers" plans outlined above, as anyone will see who takes the time to investigate. Half-yearly series progress in the same ratio as yearly, except that there are twice as many earning powers, while quarterly series have four times the earning powers. For example, in an association that has run for two years, the earning powers on a yearly-series basis are 1 and 4; on a half-yearly they are 1, 4, 9, 16; on a quarterly they are 1, 4, 9, 16, 25, 36, 49, 64. The older series progress in like ratios.

Double-payment shares are treated the same as single, so that in apportioning profits they are reduced to a single-share basis. It is then an easy matter to restore them to their double value. The double-payment plan is becoming popular in Philadelphia, notwithstanding the fact that it is considered unfair to the single share members.

Yearly Basis of Dividing Profits

In the examples already illustrated the payments were all reduced to a monthly basis, and then divided by 12 to obtain the yearly investment basis. In the following example the averages are stated entirely on a yearly basis.

Example 3. The results tabulated below are from the second year's report, quarterly series, of an association recently audited by the writer. Half-time averages are used in explaining the investment period of each series, though stated in fractional parts of a year.

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(1)	(2)	(3)	(4)	(5)	(6)	(7)
<i>Series</i>	<i>Shares</i>	<i>Months</i>	<i>Series</i>	<i>Yearly average</i>	<i>Yearly product</i>	<i>Profit per series</i>
1	525	× 24	\$12,600.00	× 1	\$12,600.00	\$ 989.16
2	170	× 21	3,570.00	× $\frac{7}{8}$	3,123.75	245.23
3	419	× 18	7,442.00	× $\frac{3}{4}$	5,656.50	444.06
4	178½	× 15	2,677.50	× $\frac{5}{8}$	1,673.44	131.37
5	283	× 12	3,396.00	× $\frac{1}{2}$	1,698.00	133.30
6	81	× 9	729.00	× $\frac{3}{8}$	273.37	21.46
7	193½	× 6	1,161.00	× $\frac{1}{4}$	290.25	22.79
8	286	× 3	858.00	× $\frac{1}{8}$	107.25	8.42
	2,136		\$32,433.50		\$25,422.56	\$1,995.79
					Undivided profits	.03
					Total profits	\$1,995.82

The \$12,600 in the first series has been invested during the entire 24 months or for an average of one year; this reduced to a yearly basis gives \$12,600 as having been invested for one year. In the second, \$3,570 has been invested for an average of 7-8 of a year, or the equivalent of \$3,123.75 for a full year. In the third, the average time is $\frac{3}{4}$ of a year and the average investment equivalent to \$5,656.50 for one year; and so on down to the last which shows \$107.25 as the equivalent investment for one year.

The yearly basis is logical and easy to comprehend. Column 6 shows that \$25,422.56 has been invested for an average of one year, while the profits to be divided amount to \$1,995.82. Then \$1,995.82 divided by \$25,423 gives 7.85045 per cent. as the average rate of profit for the year.

The first series has \$12,600 invested for one year at 7.85045 per cent., giving a profit of \$989.16; the second has \$3,123.75 at 7.85045 per cent., or a profit of \$245.23; and so on. The last has an investment of \$107.25 and a net profit of \$8.42. The 3 cents remain undivided as a result of dropping decimal places.