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The Massachusetts System of Savings-Bank Life Insurance

By

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Preface

Long before the present depression, the uncertainty of the wage earner's income gave rise to movements designed to protect workers from economic insecurity. The modern trade-union movement with its emphasis upon increased wages and the attainment of job security, minimum-wage legislation designed to increase the incomes of the lowest paid workers, and programs of social insurance starting in Europe in the 1880's and spreading rapidly over the western world, were all attempts to meet the problem of the insecurity that continually threatens the wage earner.

At the present moment all but two American States have workmen's compensation laws to provide the worker with some means of support when he is unable to work because of industrial accidents. Systems of old-age pensions have been enacted in 35 States. Under the recently enacted social security bill, protection against old age will be assured to the vast majority of wage and salaried workers through old-age annuities. This legislation should lead also to the development of unemployment-insurance systems in the various States of the Union. Insurance designed to protect the wage earner from economic suffering due to illness has been adopted in various European countries, though as yet it is not required by law in the United States. Each of these forms of social insurance is receiving increasing attention from workers, industrialists, and legislators.

Although the ordinary person has some familiarity with life insurance and is likely to possess or to have possessed, at some time or other, some kind of insurance policy, this form of protection has not been related, in popular thinking, to the general problem of economic security. The fact that life insurance has generally been conducted as a private business, while other kinds of insurance designed to protect workers have required the initiative of governmental action or have been carried on as a public enterprise, may account in part for this attitude.

Life insurance is designed to protect the family of the insured against economic losses. It is often designed, as in the case of endowment and annuity policies, to provide an income during old age. In the case of industrial life insurance, purchased in great amounts by workers' families, the insurance is usually bought for the purpose of providing money to meet the expenses incurred in the last illness of the insured and in burying the deceased. To the extent that workers carry industrial insurance more than sufficient for these purposes, it is to enable the family to establish some security against further economic stress.

The relationship of life insurance to the economic security of wage earners has been given relatively little recognition by those concerned with the welfare of labor. This volume deals with the experience of

the State of Massachusetts in its attempt to provide low-cost life insurance to its residents under a system by which the mutual savings banks of the State are empowered to establish insurance departments, under public supervision. It depicts the growth of the Massachusetts system of savings-bank life insurance, its method of operation, and the service it renders to its policyholders.

The study, which is the work of Dr. Edward Berman, of the department of economics of the University of Illinois, is based on an investigation which began in 1934. In the preparation of this report Dr. Berman received assistance from many sources. He is indebted to the numerous persons who helped him, particularly for the assistance rendered him by Prof. Robert Riegel, director of the bureau of business and social research of the University of Buffalo; Prof. Frank Greene Dickinson, of the department of economics, University of Illinois; Mr. Gardner F. Knight, formerly assistant actuary, Division of Insurance of the Massachusetts Department of Banking and Insurance; Mr. Maurice H. Saval, of Boston; Dr. Maurice Taylor, director of the Jewish Family Welfare Association of Boston; Mr. David K. Niles, of Boston; Prof. George Washington Goble, of the College of Law, University of Illinois; and Prof. Clarence A. Berdahl, of the department of political science, University of Illinois. The author and the Bureau, however, are alone responsible for the presentation and conclusions of this report.

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Chapter 1.—Introduction

The close relationship of the life-insurance business to the problem of economic security is such as to justify much greater concern on the part of those interested in social well-being than the subject has heretofore received. The companies authorized to carry on business in the single State of Massachusetts underwrite all but a very small proportion of the life insurance carried in the United States. On December 31, 1932, these companies had in force in all countries an amount of life insurance totaling \$87,002,000,000. Of this sum, \$63,754,000,000 was ordinary insurance, carried by 47 companies;¹ \$14,837,000,000 was industrial insurance, carried by 7 companies; and \$8,411,000,000 was group life insurance, carried by 20 companies.² This amount of insurance was represented by 25,890,000 ordinary policies, 69,517,000 industrial policies, and 15,216 group policies representing as many industrial establishments. Even in the depression year 1932, though the amounts of insurance terminated exceeded the new amounts bought, there were issued 3,371,000 new ordinary policies, covering \$6,842,000,000 of insurance; 11,649,000 industrial policies, amounting to \$3,356,000,000; and 1,277 group policies to the amount of \$1,901,000,000.³ In the year 1932 these insurance companies (excluding the savings banks) received a total of \$2,027,024,000

¹ The mutual savings banks in Massachusetts are here counted as a single company.

² Ordinary insurance is that sold in amounts of \$1,000 or above, on which the premiums are paid by the insured himself to the office of the insurance company at quarterly, semiannual, or annual intervals (in some instances, provision is made for monthly payments), the insurance usually being issued only after the applicant passes a medical examination. Industrial insurance, on the other hand, is issued generally in amounts of less than \$500, is paid for in the form of weekly premiums of 5 cents or a multiple thereof, is collected at the homes of the insured by insurance agents, and is usually issued without medical examination. Some companies sell so-called "intermediate" insurance in amounts from \$500 to \$2,000. Group insurance is usually carried on the workers in a business establishment as a group. It is generally introduced at the initiative of the employer, paid for either by the employer, the workers, or both, and its gross premiums depend upon the ages of all the workers in the group. The premiums change accordingly from year to year, depending upon the ages of the individuals comprising the working group.

³ Annual Report of the Commissioner of Insurance of Massachusetts, for year ending Dec. 31, 1932, pt. 2, pp. 20-21.

in premium income,⁴ and possessed a combined surplus of \$873,913,000.⁵ The importance of any business which has received, even in the worst depression year to date, a premium income of over \$2,000,000,000 when the total national income produced is estimated to be \$39,365,000,000,⁶ is so obvious as to need no emphasizing.

It is not generally recognized that a considerable share of the industrial worker's income is spent for life insurance. One group of estimates shows a variation from about 1 percent of the wage earner's income for the decade 1910 to 1920 to about 6 percent in the depression year, 1932.⁷ President Stanley King, of Amherst College, who was chairman of the Massachusetts Employment Stabilization Commission, states that data uncovered by the commission show that an amount equal to 7.4 percent of the weekly pay rolls in manufacturing industries in Massachusetts was paid out by workers in industrial-insurance premiums in the year 1929. The proportion rose, partly because of the absolute decline in pay rolls, to 9.5 percent in 1930, and to 12.3 percent in 1931.⁸

At a time when the incomes of wage earners are very low and very precarious, the fact that an increasing proportion of their wages is being spent on life insurance is a matter of social importance. When one learns further that three recent studies disclose that the proportion of the amount of relief received by dependent families which is spent on insurance varies from 11.00 to 17.39 percent, the fact becomes even more significant in its implications.⁹

Basis of Life Insurance

Life insurance is based on the fact that it is possible to estimate, with some degree of accuracy, the number of deaths that will occur among a large group of individuals of the same age in a given period. Mortality tables, based upon recorded experience, show the ratios of the number of persons of a given age dying or surviving to the number attaining that age. From these data and from the rate of interest assumed to be earned on the invested assets, an estimate may be made of the annual cost of any desired insurance benefit. This estimate is called the "net premium." Net premiums include allowance for current death losses and contributions to the insurance reserves. To the net premium is added a "loading charge" to cover the expenses of the business, and the resulting total, or "gross premium", is the amount charged the insured.

Since, in general, the probability of dying increases with age; since, on the average, a young man taking out a policy may be expected to pay a larger number of premiums than one who buys a policy at a more advanced age; and since, finally, the accumulated interest over

⁴ Annual Report of the Commissioner of Insurance of Massachusetts, for year ending Dec. 31, 1932, pt. 2, pp. 8, 9.

⁵ *Idem*, pp. 6, 7.

⁶ United States Senate. Document No. 124 (73d Cong., 2d sess.): National Income, 1929-32. Washington, 1934, p. 10.

⁷ Taylor, Maurice. *Social Cost of Industrial Insurance*. New York, 1933, pp. 194, 195. The following are the proportions of workers' incomes spent on insurance as described in a series of important investigations: Booth's Study of the London Working Class, 1886-89, 3.5 percent; United States Commissioner of Labor, 1903, 2.53 percent; Massachusetts Commission on the Cost of Living, 1910, 2.5 percent and 2.7 percent; Scott Nearing, 1913, 2.2 to 2.6 percent; New York City Board of Estimate and Apportionment, 1917, 2.3 percent and 2.7 percent; Bureau of Municipal Research of Philadelphia, 1919, 3.2 percent; Bureau of Labor Statistics, Federal Employees, 1929, 5.0 percent for incomes under \$1,500 per year; Lynd, Middletown, 1929, 4 percent. For more complete data on these and other investigations, see Taylor, Maurice, *Social Cost of Industrial Insurance*, New York, 1933, pp. 395-414.

⁸ *Industry* (a weekly publication of the Associated Industries of Massachusetts), Sept. 24, 1932, p. 4.

⁹ Taylor, Maurice. *Social Cost of Industrial Insurance*. New York, 1933, pp. 249-253.

the longer period will be greater—it follows that a young man is charged a much smaller annual premium than an old man. For example, the annual premium charged for \$1,000 of straight life insurance in 1934 might be \$18.12 for a person insuring at age 25, and \$43.74 for one insuring at age 50.¹⁰ Because life insurance premiums for a given kind and amount of insurance usually vary in size with the age of the insured when the policy is taken out and remain unchanged throughout the premium-paying period, such insurance is often called “level-premium” insurance.

The charges set for ordinary insurance in the United States are for the most part based upon the American Experience Mortality Table, which was devised by Sheppard Homans in 1868.¹¹ Industrial-insurance premiums are based on the Standard Industrial Mortality Table, calculated from the mortality experience of an important insurance company with respect to working-class insured persons for the years 1898–1906.¹² It is important to point out that since 1868, when the American table was calculated, and even since 1906, the last year of the period upon the experience of which the standard table was calculated, there has been a great advance in the conquest of certain diseases, especially those of childhood. To this advance the progress of medical science and public health have both contributed. As a consequence, the tables used in calculating the size of insurance premiums lead to premium charges higher than those which would be required if the mortality experience of very recent years were used as a basis. Since the improvement in the conquest of diseases has been much more marked among diseases of children than among those of grown-ups, it is to be expected that in the premiums charged for the insurance of minors there is an even greater excess over what would be required if premiums were based on present mortality experience than in those paid by adults.

The premiums charged for insurance do not, however, represent a net cost to the insured. Practically all mutual life insurance companies (and some stock companies on “participating” policies) turn back to the insured what are called “dividends” after a certain short period has elapsed. These dividends should not be confused with the dividends to stockholders in business corporations, which are in the nature of interest returned on investment and profit in business enterprise. Insurance dividends are the return to policyholders of the excess in premiums charged over what has proved necessary by the experience of the operation of the preceding period, minus a sum put into surplus to provide against unforeseen contingencies.

As stated above, insurance premiums are made up of allowance for current death losses and contributions to the insurance reserves, i. e., net premiums, and the estimated expenses of carrying on the business, i. e., loading on premiums. The amount returned to policyholders in the form of dividends generally consists of three items: (1) The interest in excess of what was calculated to be earned by the invested reserves; (2) the amounts by which “actual mortality losses” are less

¹⁰ These were the premiums charged by the savings banks in that year.

¹¹ Huebner, S. S. *Principles of Life Insurance*. New York, 1925, p. 149.

¹² Taylor, Maurice. *Social Cost of Industrial Insurance*. New York, 1933, pp. 161-162.

than "expected mortality losses"; and (3) the amount by which actual expenses of operation are less than those estimated in advance.¹³

The importance of the life-insurance business and of its relation to the problem of economic security justifies a study of any important phase of the insurance system. If a single State has on its statute books a law designed to reduce the costs of life insurance and to eliminate its principal shortcomings, such a law is worthy of careful scrutiny. Since 1907 the State of Massachusetts has permitted its mutual savings banks to write life insurance under conditions which are intended to reduce its cost. Although only a small proportion of the total amount of insurance in force in Massachusetts is carried by the savings banks, the system has grown very rapidly. In 1908, there was a total of \$115,000 of life insurance in force in the banks. The amount had risen in 1913 to \$3,151,000; in 1918, to \$9,811,000; in 1923, to \$25,678,000; in 1928, to \$57,837,000; and in 1933, to \$93,187,000. Late in the year 1934 the amount of insurance in force with the savings banks was in excess of \$100,000,000.¹⁴

¹³ For extended discussion of the principles of life insurance see Huebner, S. S., *The Principles of Life Insurance*, New York, 1925; Ackerman, S. B., *Industrial Life Insurance*, New York, 1926; Taylor, Maurice, *Social Cost of Industrial Insurance*, New York, 1933; Maclean, J. B., *Life Insurance*, New York, 1932.

¹⁴ *Growth of Savings Bank Life Insurance* (a leaflet published by the Division of Savings Bank Life Insurance in 1934) and information from the division.

Chapter 2.—Origin and Growth of Savings-Bank Life Insurance

The idea of combining the functions of savings banking and life insurance was suggested in this country by Elizur Wright, an important actuary who became the first insurance commissioner of Massachusetts. Wright, in 1874, proposed the establishment of the "American family bank" as a stock company which should receive savings deposits and sell life insurance without employing insurance agents. Nothing, however, came of this proposal.

More than 30 years later the idea was again brought to public attention as a result of an investigation into the mismanagement of the life-insurance business. The waste of the funds of policyholders and the failure to protect their interests had become so great and so wide-spread by the turn of the century that the directors of the Equitable Life Assurance Society of New York considered it desirable, in April 1905, to appoint a committee to investigate the management and administration of the company. The situation in the Equitable and in other large insurance companies attracted so much attention that the Assembly of the State of New York appointed a committee, with Senator Armstrong as chairman, to investigate the affairs of the life-insurance companies operating in New York, and especially the operation of the "Big Three", i. e., the Equitable Life Assurance Society of New York, the Mutual Life Insurance Co. of New York, and the New York Life Insurance Co. The committee, which has come down in history as the Armstrong Committee, engaged Mr. Charles Evans Hughes, now Chief Justice of the United States Supreme Court, as its chief counsel. It began its hearings on September 5, 1905, concluded them on December 30, 1905, and 2 months later made a report to the assembly suggesting reforms designed to eliminate the evils which had grown up in the life-insurance business.¹

During the same month in which the directors of the Equitable appointed their investigating committee, the New England policyholders of the company organized themselves into a "Policyholders Protective Committee." The committee engaged as counsel Mr. Louis D. Brandeis, who began a study of the life-insurance business in general and that of the Equitable in particular. As a result of this study he called attention, in October 1905, to the abuses of life insurance, and suggested a series of remedies, many of which were similar to those offered later by the Armstrong Committee. In contrast to what he considered the wastefulness of the management of the insurance companies, he described the highly efficient

¹ New York State Assembly Document No. 41, 1906: Report of the "Armstrong Committee"; Graham William, *Romance of Life Insurance*, Chicago, 1919; Noyes, Alexander H., *Insurance Investigation*, Forum, vol. 37, pp. 343-352, January 1906; Casady, Clyde, *A Study of Savings Bank Life Insurance in Massachusetts* (an unpublished thesis submitted for the M. A. degree in economics in Tuft's College), 1931, pp. 1-18, and *Massachusetts Savings Bank Life Insurance*, Springfield, 1934. See also Wright, Elizur: *Politics and Mysteries of Life Insurance*, Boston, 1873, and *Elements of Life Insurance for the Use of Family Banks*, Boston, 1876.

and economical management of the mutual savings banks of Massachusetts.²

By the autumn of 1905 he had worked out tentative proposals for a system of life insurance to be sold by the mutual savings banks of Massachusetts. These proposals were submitted for criticism to an independent actuary, Mr. Walter C. Wright, who, interestingly enough, was the son of Elizur Wright. They were later incorporated in an article which was published under the title, "Wage Earner's Life Insurance", in *Collier's Weekly* of September 15, 1906. The philosophy behind the idea was expressed as follows:

[The] sacrifice incident to the present industrial insurance system [could] be avoided only by providing an institution for insurance which [would] recognize that its function is not to induce working people to take insurance regardless of whether they really want it or can afford to carry it, but rather to supply insurance upon proper terms to those who do want it and can carry it—an institution which [would] recognize that the best method of increasing the demand for life insurance is not eloquent, persistent persuasion, but, as in the case of other necessities of life, is to furnish a good article at a low price.

It was pointed out that "Massachusetts in its 189 savings banks, and the other States with savings banks similarly conducted, have institutions which, with a slight enlargement of their powers, can at a minimum of expense fill the great need of life insurance for workingmen."³

² See an address printed by the Policyholders Protective Committee entitled "Life Insurance: The Abuses and the Remedies." This also appeared in Brandeis, Louis D., *Business—a Profession*, Boston, 1914, 1932.

³ The following reasons were given for the belief that savings banks could well perform the functions required:

"First. The insurance department of savings banks would be managed by experienced trustees and officers who had been trained to recognize that the business of investing the savings of persons of small means is a quasi-public trust which should be conducted as a beneficent and not as a selfish money-making institution.

"Second. The insurance department of savings banks would be managed by trustees and officers who in their administration of the savings of persons of small means had already been trained to the practice of the strictest economy.

"Third. The insurance business of the savings banks, although kept entirely distinct as a matter of investment and accounting, would be conducted with the same plant and the same officials, without any large increase of clerical force or incidental expense, except such as would be required if the bank's deposits were increased. Until the insurance business attained considerable dimensions, probably the addition of even a single clerk might not be necessary. The business of life insurance could thus be established as an adjunct of a savings bank without incurring that heavy expense which has ordinarily proved such a burden in the establishment of a new insurance company. * * *

"Fourth. The insurance department of savings banks would open with an extensive and potent good will, and with the most favorable conditions for teaching, at slight expense, the value of life insurance. The safety of the institution would be unquestioned. For instance, in Massachusetts the holders of the 1,829,487 savings-bank accounts, a number equal to three-fifths of the whole population of the State, would at once become potential policyholders; and a small amount of advertising would soon suffice to secure a reasonably large business without solicitors.

"Fifth. With an insurance clientele composed largely of thrifty savings-bank depositors, house-to-house collection of premiums could be dispensed with. The more economical monthly payments of premiums could also probably be substituted for weekly payments.

"Sixth. A small initiation fee could be charged, as in assessment and fraternal associations, to cover necessary initial expenses of medical examination and issue of policy. This would serve both as a deterrent to the insured against allowing policies to lapse and a protection to persisting policyholders from unjust burdens which the lapse of policies casts upon them.

"Seventh. The safety of savings banks would, of course, be in no way imperilled by extending their functions to life insurance. Life insurance rests upon substantial certainty, differing in this respect radically from fire, accident, and other kinds of insurance. * * *

"The theoretical risk of a mortality loss in a single institution greater than that provided for in the insurance reserve could be absolutely guarded against, however, by providing a general guaranty fund, to which all savings-insurance banks within a State would make small pro rata contributions—a provision similar to that prevailing in other countries, where all banks of issue contribute to a common fund which guarantees all outstanding bank notes.

"Eighth. In other respects, also, cooperation between the several savings-insurance banks within a State would doubtless, under appropriate legislation, be adopted; for instance, by providing that each institution could act as an agent for the others to receive and forward premium payments.

"Ninth. The law authorizing the establishment of an insurance department in connection with savings banks should, obviously, be permissive merely. No savings bank should be required to extend its functions to industrial insurance until a majority of its trustees are convinced of the wisdom of so doing." (Brandeis, Louis D.: *Wage Earners' Life Insurance*, in *Collier's Weekly*, September 15, 1906. Reprinted by the Massachusetts Savings Insurance League in a pamphlet entitled "Massachusetts Savings Bank Insurance and Pension System", 1910; also reprinted in Brandeis, Louis D., *Business—a Profession*, Boston, 1914, 1932.)

Enactment of Savings-Bank Insurance Law

A joint special committee on insurance was appointed by the Massachusetts Legislature in 1906 and the Brandeis proposals were presented to it in September of that year. The opinion of the committee was at first overwhelmingly against them. Realizing the need for educating the public and the legislature concerning the advantages of the proposed legislation, its supporters organized, on November 26, 1906, the Massachusetts Savings Insurance League, with former Gov. W. L. Douglas as president.⁴

The league's first purpose was to win public support to the idea of savings-bank life insurance. It carried on a very active publicity campaign, which was doubtless partly responsible for the fact that the legislative committee, in its report to the legislature on January 9, 1907, heartily endorsed the plan.⁵ Six days earlier, Gov. Curtis Guild, Jr., in his address to the legislature, had urged the members to give the plan careful consideration.⁶ From then until June a bill incorporating these proposals was strenuously opposed by representatives of the insurance companies as well as by a group of 34 treasurers of mutual savings banks. It was as strenuously supported by the league, by its author, and by many other well-known citizens and organizations, among whom were the presidents of the Massachusetts State Federation of Labor, the Boston Central Labor Union, and other labor organizations, and also the Boston Chamber of Commerce and the Massachusetts Civic League.⁷ In May the bill received the approval of the house committees on insurance and on ways and means, and in June it passed both houses. On June 26, 1907, it received the signature of Governor Guild.

Growth of Savings-Bank Life Insurance

A month after the enactment of the law the governor appointed the board of seven unpaid trustees of the General Insurance Guaranty Fund, who were charged with the administration of the system.⁸

Although the law was on the statute books, there was much to be done before savings-bank life insurance was to become a reality. The savings banks, although now possessed of power to enter the life-insurance business, were very slow to take advantage of it. Due to the naturally conservative attitude of savings-bank trustees toward such an untried venture, and also perhaps to the influence of insurance agents and executives, often themselves members of the boards, it was fully a year before the pioneer institution, the small Whitman Savings Bank, opened its insurance department. The bank was enabled to do this because of the generosity of several important shoe manufacturers, with plants in Whitman, who advanced part of the guaranty funds necessary under the law before the bank could start

⁴ Among the early officers of the league were former Gov. John L. Bates, Bishop William Lawrence, Judge F. C. Lowell, Archbishop W. H. O'Connell, James J. Storrow, and Prof. F. W. Taussig. The complete list is given in an article entitled, "The Massachusetts Scheme of Savings Bank Insurance", by Shelby M. Harrison, in the Survey, May 7, 1910.

⁵ Massachusetts Legislature. House Document No. 1085: Report of the Joint Special Committee on Insurance, 1907.

⁶ *Idem*, Senate Document No. 1, p. 14: Governor's address to the legislature, January 3, 1907.

⁷ Harrison, Shelby M.: The Massachusetts Scheme of Savings Bank Insurance, in the Survey, May 7, 1910.

⁸ The president of the board was Judge Warren A. Reed, vice president of the People's Savings Bank of Brockton. The board appointed Mr. R. G. Hunter as the first State actuary. Dr. Horace D. Arnold was appointed the first State medical director.

selling insurance. In November 1908, with the aid of funds similarly advanced by ex-Governor Douglas, the People's Savings Bank of Brockton opened its insurance department. In August 1911 the Berkshire County Savings Bank of Pittsfield began operations as a savings-insurance bank and it was followed by the City Savings Bank of the same city in July 1912.⁹

The order in which the 23 banks now underwriting life insurance entered the system and the dates upon which they started insurance operations are given in table 1. References to the various banks hereafter in this report will usually be made by the numbers shown in the table.

TABLE 1.—Order in which savings banks entered the insurance system and dates of beginning of operations

No.	Name of bank	Location	Date
1	Whitman Savings Bank	Whitman	June 22, 1908
2	People's Savings Bank	Brockton	Nov. 2, 1908
3	Berkshire County Savings Bank	Pittsfield	Aug. 1, 1911
4	City Savings Bank	do	July 15, 1912
5	Lynn Five Cents Savings Bank	Lynn	Nov. 1, 1922
6	Lynn Institution for Savings	do	Do.
7	North Adams Savings Bank	North Adams	Feb. 29, 1924
8	Cambridgeport Savings Bank	Cambridge	Nov. 1, 1924
9	Massachusetts Savings Bank ¹	Boston	Nov. 1, 1925
10	Waltham Savings Bank	Waltham	Do.
11	Lowell Institution for Savings	Lowell	Nov. 1, 1929
12	Boston Five Cents Savings Bank	Boston	Do.
13	Grove Hall Savings Bank	do	Do.
14	Cambridge Savings Bank	Cambridge	Mar. 1, 1930
15	New Bedford Institution for Savings	New Bedford	July 15, 1930
16	Arlington Five Cents Savings Bank	Arlington	Nov. 1, 1930
17	Uxbridge Savings Bank	Uxbridge	Mar. 10, 1931
18	Beverly Savings Bank	Beverly	June 1, 1931
19	Wildley Savings Bank ²	Boston	Apr. 14, 1931
20	Leominster Savings Bank	Leominster	June 1, 1931
21	Fall River Five Cents Savings Bank	Fall River	Nov. 1, 1931
22	Canton Institution for Savings	Canton	Nov. 1, 1934
23	Plymouth Five Cents Savings Bank	Plymouth	Do.

¹ Called the North End Savings Bank until 1928.

² Although the Wildley Savings Bank commenced operations before the Beverly bank, they both established the departments at about the same time.

It will be observed that the first 4 banks entered the system between 1908 and 1912; that 6 more were added between the years 1922 and 1928; that from November 1, 1929, to November 1, 1931, 11 additional banks opened insurance departments; and that on November 1, 1934, 2 other banks joined the system.

During the early years, the amount of insurance sold by the banks grew very slowly, the total amount in force in 1918 being less than 10 million dollars. After that year the amount in force showed a marked increase, reaching the sum of more than 20 million dollars in 1922 and over 67½ million dollars in 1929. During the years of depression following, the growth of insurance in force was particularly great, rising to more than 93 million dollars in 1933 and to over

⁹ For further information regarding the enactment of the savings-bank insurance law and the early history of the system see Brandeis, Louis D., *Business—a Profession* (section on Successes of Savings Bank Insurance); Grady, Alice H., *the Romance and Development of Savings Bank Life Insurance in Massachusetts*, an address delivered on Nov. 29, 1932, published by the Savings Bank Life Insurance Division, Boston, and *Savings Bank Life Insurance and Old Age Annuities*, in *Savings Banks and Savings Department Management*, by W. G. Sutcliffe and L. A. Bond, New York, 1930; *Massachusetts Savings Bank Life Insurance Division, Brief Survey of the Massachusetts System of Savings Bank Life Insurance and Old Age Annuities*, Boston, 1934; Powers, James H., *Massachusetts' Great Insurance War*, in the *New Republic*, Jan. 8, 1930; Casady, Clyde S., *A Study in Savings Bank Life Insurance in Massachusetts* (an unpublished thesis submitted for M. A. degree in economics in Tufts College), 1931, ch. 1.

100 million dollars by the end of 1934. At the end of May 1935 savings-bank life insurance in force in Massachusetts amounted to more than \$106,500,000. (See table 2.)

TABLE 2.—Growth of savings-bank life insurance, 1908 to 1934¹

Year	Number of banks	Premium income received	Number of policies in force	Amount of insurance in force	Matured endowments and death claims paid	Total paid to policyholders	Admitted assets
1908	1	\$368.21	282	\$114,953	-----	-----	\$26,048.91
1909	2	25,377.29	2,521	992,761	\$500.00	\$878.06	82,137.17
1910	2	58,890.68	3,318	1,367,363	3,622.00	8,879.86	130,516.97
1911	3	76,348.92	5,063	1,956,038	3,638.00	12,149.74	223,130.83
1912	4	102,832.27	6,652	2,528,809	6,513.00	21,877.67	331,726.51
1913	4	124,205.08	8,054	3,150,806	10,679.00	28,796.99	430,428.89
1914	4	139,757.35	9,439	3,566,778	9,706.36	35,335.32	542,900.68
1915	4	164,058.96	10,892	4,341,205	12,477.01	56,790.27	666,750.00
1916	4	212,885.24	14,030	6,041,754	27,984.75	73,458.28	779,071.74
1917	4	261,562.27	17,850	8,161,144	24,385.65	72,870.00	990,844.55
1918	4	317,475.73	20,925	9,811,259	58,314.20	132,243.51	1,202,937.52
1919	4	352,104.12	28,148	12,373,090	97,100.91	176,331.81	1,418,642.71
1920	4	424,901.24	30,834	15,050,271	93,710.99	197,214.28	1,703,858.19
1921	4	468,792.59	31,705	16,670,103	57,712.00	212,635.56	2,000,393.19
1922	4	553,006.99	35,687	20,020,294	82,553.44	281,080.16	2,348,945.70
1923	6	714,773.56	41,283	25,677,730	112,385.40	347,569.98	2,833,605.04
1924	7	898,747.79	45,892	31,759,883	141,236.47	437,662.33	3,446,955.99
1925	8	1,148,267.07	50,953	38,105,250	167,672.85	523,062.98	4,246,265.34
1926	10	1,365,726.35	55,822	43,293,286	199,964.94	644,507.63	5,160,814.94
1927	10	1,583,746.25	61,543	49,171,745	238,213.40	770,873.45	6,221,049.09
1928	10	1,899,176.57	70,212	57,836,763	223,990.37	849,359.70	7,579,708.72
1929	10	2,369,176.34	81,440	67,588,398	495,977.98	1,304,982.34	9,074,805.35
1930	15	2,644,733.31	90,239	77,324,800	499,084.87	1,458,410.69	10,566,034.39
1931	20	3,695,271.43	101,002	90,960,522	626,426.75	1,756,711.49	12,313,623.34
1932	21	2,979,581.14	101,390	90,606,283	597,745.76	2,024,936.28	13,681,358.92
1933	21	3,256,410.37	103,763	93,186,980	608,277.85	2,057,691.77	15,171,273.58
1934	21	4,075,775.32	112,294	99,960,943	584,882.55	2,042,616.29	17,634,808.89

¹ From a leaflet entitled "Growth of Savings Bank Life Insurance", published by the Division of Savings Bank Life Insurance in 1935.

The average number of policies in force for each year in the period 1928 to 1932 was more than 11 times as great as the average for the first 10 years of the system's history. The amount of insurance increased to almost 24 times as much. By the year 1934 the increase over the average year of the first 10-year period was more than 13 times the number of policies outstanding and about 31 times the amount of insurance in force. (See table 3.)

TABLE 3.—Growth in number of policies and amount of insurance, 1908 to 1934

Period	Number of policies in force		Amount of insurance in force	
	Average number each year	Index	Average amount each year	Index
1908-17	7,810	100	\$3,222,161	100
1918-22	29,460	377	14,785,003	459
1923-27	51,099	654	37,601,579	1167
1928-32	88,857	1138	76,863,353	2385
1933	103,763	1329	93,186,980	2892
1934	112,294	1438	99,960,943	3102

It is only in recent years, however, that savings-bank insurance has represented an important share of all the life insurance in force in the State of Massachusetts. Table 4 shows the amounts of ordinary

savings-bank insurance, of ordinary company insurance, and of industrial insurance in force in the State in recent years.¹⁰

TABLE 4.—Amount of ordinary savings-bank insurance, ordinary company insurance, and industrial insurance in force in Massachusetts, 1920 to 1933

[In thousands of dollars]

Year	Savings-bank ordinary insurance	Ordinary insurance, excluding savings-bank insurance	Industrial insurance	Year	Savings-bank ordinary insurance	Ordinary insurance, excluding savings-bank insurance	Industrial insurance
1920	\$8,550	\$1,348,173	\$522,602	1927	\$38,243	\$2,587,804	\$1,012,500
1921	9,929	1,465,250	580,169	1928	46,308	2,789,615	1,063,085
1922	12,143	1,604,838	630,492	1929	55,228	3,099,360	1,136,174
1923	17,189	1,789,268	720,396	1930	64,940	3,143,245	1,153,724
1924	22,175	1,973,792	794,782	1931	75,354	3,230,105	1,171,951
1925	27,399	2,183,758	868,094	1932	80,173	3,142,200	1,109,754
1926	32,594	2,392,794	943,111	1933	83,017	3,038,566	1,091,128

The increasing importance of savings-bank life insurance is evident from the fact that whereas it ranked twenty-second in amount of insurance in force in Massachusetts among the 31 organizations selling life insurance in Massachusetts in 1923, it was thirteenth among 47 organizations in 1933. Furthermore, while the amount of both industrial insurance and of ordinary insurance sold by the companies which was in force in the State declined between 1931 and 1933, the amount of savings-bank insurance increased.

The data for ordinary insurance outstanding in the State in the depression years 1932 and 1933 show clearly how savings-bank insurance has grown in relative importance. Of the 11 companies chartered by the State of Massachusetts, all but 4 small companies showed losses of insurance in force between 1932 and 1933. Of the 36 companies chartered by other States, all but 11 reported declines in insurance outstanding in Massachusetts during that year. Of all the private companies operating in the State only 1 gained an amount of insurance approaching that gained by the savings banks. This company gained \$2,457,000, as compared with the savings banks' gain of \$2,844,000. In contrast, the 15 companies losing the largest amounts showed declines ranging from \$11,700,000 to \$2,849,000.

Although the banks had in force at the end of October 1934 a total of all kinds of insurance equal to about \$100,000,000, only \$89,500,000 was ordinary insurance. Nearly all of the remainder, or over \$10,-394,000, was group insurance.¹¹

Chart 1 shows at a glance the relative increase in the number of policies, the amount of all kinds of insurance in force, the premium income, and the total ledger assets of savings-bank insurance over a period of 25 years. It will be noted that while, especially in the later years, the last three items appear to increase in about the same proportions, the rate of increase in the number of policies in force is not so great, indicating that the average size of each policy has risen during the period.

¹⁰ The table does not include group insurance. Fraternal insurance, with which this report is not concerned, is also omitted.

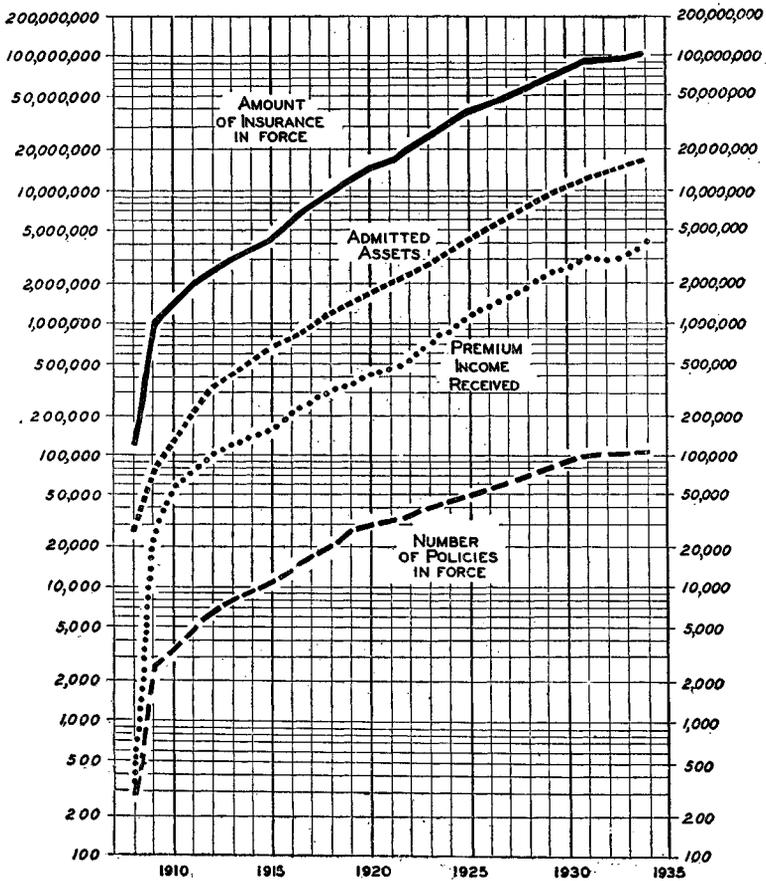
¹¹ See appendix A for a table showing the amounts of group insurance in force with the banks and the companies. Appendix K contains data on endowment insurance. Information for all years up to 1933 comes from the Annual Reports of the Massachusetts Commissioner of Insurance, part 2, table 1. It should be noted that while the fiscal year of the savings banks ends Oct. 31, that of the insurance companies ends Dec. 31. Official published data for the companies is not yet available for the year 1934.

CHART I

GROWTH OF MASSACHUSETTS SAVINGS BANK LIFE INSURANCE

1908-1934

YEARS ENDING OCT. 31



The rise in the average amount of each policy, which is secured by dividing the amount of insurance in force for each year by the number of policies, and the index numbers showing the proportionate increase in the size of each policy, using the first year as a base, are shown in table 5. Beginning with the year 1916, when the average amount of each policy was over 5 percent more than in 1908, there is a fairly steady increase until 1934, when the average size of each policy is more than twice as large as it was in 1908.

TABLE 5.—Average amount of insurance per policy, 1908 to 1934

Year	Average amount of insurance per policy	Index	Year	Average amount of insurance per policy	Index
1908.....	\$408	100	1922.....	\$561	137
1909.....	394	97	1923.....	622	152
1910.....	412	101	1924.....	692	170
1911.....	386	95	1925.....	748	183
1912.....	380	93	1926.....	776	190
1913.....	391	96	1927.....	799	196
1914.....	378	93	1928.....	824	202
1915.....	399	98	1929.....	830	203
1916.....	431	106	1930.....	857	210
1917.....	457	112	1931.....	901	221
1918.....	469	115	1932.....	894	219
1919.....	440	108	1933.....	898	220
1920.....	488	120	1934.....	890	218
1921.....	526	129			

During the first 26 years of its existence the savings-bank life insurance system received in premiums from policyholders over 29 million dollars. Its total income for the period was over 34½ million dollars. It paid out nearly 17½ millions, more than 15½ millions of which went to policyholders in the form of payments to settle claims, endowments, annuities, cash surrender values, and dividends, and slightly over 1¼ millions were paid out for the expenses of operating the system.

TABLE 6.—Income and disbursements of the savings-bank life insurance system 1908 to 1934

[Statement to Oct. 31, 1934]

Item	Amount	Item	Amount
<i>Income</i>		<i>Expenses</i>	
Premiums from policyholders.....	\$29,308,952.44	Salaries.....	\$720,490.79
Net income from investments.....	5,140,535.57	Advertising, postage, printing, telephone, and express.....	211,339.17
Special guaranty funds.....	185,000.00	Medical fees.....	204,786.61
Total income.....	34,634,488.01	Taxes.....	151,763.19
<i>Disbursements</i>		Collection fees.....	139,285.59
Death and disability claims.....	3,925,112.02	Rent.....	134,662.09
Matured endowments.....	1,059,644.48	Reimbursement to State.....	119,106.21
Payments to annuitants.....	1,392,625.06	Other expenses.....	95,652.98
Cash surrender values.....	2,500,407.92	Total expenses (6.06 percent of premium income).....	1,777,086.63
Dividends to policyholders.....	6,651,136.96		
Total paid policyholders.....	15,528,926.44		
Special guaranty funds retired.....	185,009.00		
Expenses (see details).....	1,777,086.63		
Total disbursements.....	17,491,013.07		
Income over disbursements.....	17,143,474.94		

Chapter 3.—Administration of the System

Savings-bank life insurance may be purchased by residents of Massachusetts or by persons who are regularly employed in the State.¹ The amount of insurance available to any individual at each bank is limited to \$1,000. The limit on the annual amount which may be paid by any one bank on an annuity contract is \$200. Since there are 23 banks writing insurance, the limits available to any one person are \$23,000 in insurance and \$4,600 in annuities.² The banks do not sell industrial insurance, their business being confined to ordinary and group insurance.

Policies Available and Their Terms

The savings-bank insurance law provides for the following types of policies: Whole (or "straight") life, limited-payment life, limited term, and endowment policies; annuity contracts; a combination of life insurance policies and deferred annuity contracts; "and such others as may from time to time in the opinion of the commissioner of insurance, be desirable".³ In addition to the types of policies named, there are also available infantile and group policies.

Whole life policies provide for the payment of premiums until the death of the insured, when the beneficiary receives the face value of the policy.

Policies for limited-payment life insurance protect the insured throughout his life, but the premiums are set at such a rate that after a certain period, for example, 20 years, no further premiums need be paid. Whether death occurs before or after the expiration of this period, the beneficiary is entitled to the face value of the policy.

Insurance may also be purchased for a limited term of 5 years. Such insurance protects the policyholder only during the period stated in the policy, and the premiums are payable, of course, only while the insurance is in force. The policy may be renewed once only—that is, at the end of the 5 years—the premium for the second 5 years being increased because of the more advanced age of the insured at the time of renewal.

The banks sell endowment policies. A \$1,000 20-year endowment policy is one on which premiums are payable for 20 years, and which entitles the beneficiary to \$1,000 in case the insured dies during the 20-year period, or entitles the insured to \$1,000 in cash if he survives the 20 years.

Children under age 10 may be insured under straight life, 20-payment life, 20-year endowment, or 15-year endowment policies. Such policies are payable at face value only if death occurs at age

¹ If policyholders leave the State permanently they may continue to carry their insurance in the savings banks, but not to buy additional insurance.

² Acts of 1915, ch. 32; Mass. Gen. Laws, ch. 178, sec. 10. Prior to 1915 the limits available to a single person in any 1 bank was \$500 of insurance and a \$100 annuity.

³ Mass. Gen. Laws, ch. 178, sec. 15.

10 or later. If death occurs at an earlier age, the amount of insurance paid, assuming a given face value, depends upon the age at which the policy was taken out and the length of time it has been in force.

The banks also sell group insurance, which does not require medical examinations. Such insurance is available only to groups of workers in plants inspected by the State medical director. Premiums are payable monthly by the employer, or by the employer and employees jointly. The size of the premium varies in accordance with the ages of the employees. The insurance is for a 1-year term only, being renewable each year at premiums determined on the basis of the ages of the workers. The bank issues a separate certificate of insurance for delivery to each employee by the employer. If in any case employment is terminated, the worker affected is entitled, without medical examination and upon payment of premiums for his then attained age, to a life or endowment insurance policy of the type he desires and for an amount equal to that for which he was insured under the group policy. If he desires an amount of insurance in excess of his original policy he must undergo a medical examination. Group insurance provides for total and permanent disability benefits.

The insurance banks sell four kinds of annuity contracts. Single-premium immediate annuity contracts provide an income for life, payable annually or at more frequent intervals, in return for a single lump-sum payment at the time the contract is made. These are intended especially for persons 50 years of age and over, though available to younger persons. If the contract provides that the payments of income cease in case of death of the annuitant, the rate is lower than for a contract with provision for a cash refund to the beneficiary. The cash-refund contract provides that if the annuitant dies before he has received an amount of income equal to what he paid in when purchasing his annuity, his beneficiary shall receive the difference between the purchase price and the total amount received by the annuitant.

Another type of annuity contract provides for an annuity to be paid beginning at a specified future age, the annuity being purchasable by the payment of a single premium. It is also available with or without the cash-refund provision.

A third type of contract provides for a single-premium joint and survivorship annuity. This may be bought by two or more persons—man and wife, for example—by the payment of a single premium. The annuity, which is payable so long as both or either of the two survive, may become payable immediately or at a specified future date.

The fourth and probably the most common type of annuity purchased is the annual premium deferred annuity. This may be paid for regularly, until the designated age at which an annuity for life commences; for example, age 60. If the purchaser dies or surrenders his contract before the annuity begins, the total amount of premiums paid in, with interest compounded at a guaranteed rate of 3½ percent, is refunded.

Premium payments on all policies and contracts may be made monthly, quarterly, semiannually, or annually, as the applicant may prefer, except in the case of group insurance.

The Division of Savings Bank Life Insurance has worked out a number of plans under which insurance and savings may be combined. If

the policyholder is a depositor in the bank, he may arrange that his deposits be used to pay premiums as they fall due. Such balance as is left in his account remains at interest, subject to withdrawal at will by the insured. If his deposit is sufficiently large, he may permit the interest on it to be used to pay premiums on his insurance.

Policyholders may elect to have annual dividends due them paid in cash on the anniversary date of their policies, to use them to reduce premiums due or to purchase additional paid-up insurance, or to leave them on deposit with the insurance department of the bank on interest at a minimum rate of 3½ percent.

On straight life, limited-payment life, and endowment policies, the insured is entitled to borrow money on his policy at 5 percent interest after his insurance has been in force for 1 year. He is also entitled to a cash surrender value equal to the reserve on his policy, less a small "surrender charge", during the first 2 years, if he should cease paying premiums and the policy has been in force at least 6 months. Instead of taking the cash surrender value, the insured may take a paid-up policy for an amount less than the original face value, the amount depending upon the net value of his policy, minus loans, if any, and minus the surrender charge referred to above; or he may take a policy for the full original face value for whatever term the net value of his policy would purchase (i.e., "paid-up term insurance").⁴ If the insured, having failed to pay premiums and having been notified by the bank, does not exercise his option respecting cash surrender, term insurance, or paid-up insurance, he automatically receives a policy of paid-up insurance.

The policyholder has a right to choose the method to be used in paying the insurance to his beneficiary. Among the options available are a single payment; payments of a given amount at regular intervals as long as the beneficiary lives; payments for 10 years or for 20 years to the beneficiary or the contingent beneficiary if the former should die; and payments to the beneficiary or the contingent beneficiary spread over a chosen number of years. Any other mode of settlement desired by the insured can usually be arranged.

The premiums charged by all the insurance banks are required by law to be uniform.⁵ The dividends differ according to the experience of the various banks.

In accordance with the insurance laws of the State, policies contain a statement of the amount which may be borrowed, of the cash values, of the amount of paid-up insurance, and of the duration of extended term insurance, which become available at the end of stated periods after the policies have come into force. They also contain a statement of the options respecting payments to beneficiaries.⁶

Administrative Organization

Ultimate responsibility for the administration of savings-bank life insurance is lodged in an incorporated body known as the General Insurance Guaranty Fund. This body consists of seven trustees, one of whom is appointed each year for a term of 7 years by the Governor of the State, acting with the advice and consent of the Governor's Council. The trustees must serve without compensation

⁴ Mass. Gen. Laws, ch. 178, sec. 11.

⁵ Idem, sec. 15.

⁶ Information respecting the nature of policies was obtained from leaflets published by the State Division of Savings Bank Life Insurance.

and must be chosen from persons who are trustees of mutual savings banks. The Governor designates one of the trustees of the General Insurance Guaranty Fund as the commissioner of savings bank life insurance for the length of his term as trustee. His appointment as commissioner (in which capacity he serves without pay) carries with it the duty of acting as president of the board of trustees, and of generally supervising and controlling the work of the Division of Savings Bank Life Insurance.⁷ The division is one of three sections of the Massachusetts Department of Banking and Insurance, the other two being the Division of Banks and the Division of Insurance.

The administration of the Division of Savings Bank Life Insurance is more immediately in charge of the deputy commissioner, a salaried official appointed by the trustees of the General Insurance Guaranty Fund, subject to the approval of the Governor and his council. Although the law does not specifically extend jurisdiction of the division over the insurance departments of the banks, the latter operate along with the Division of Savings Bank Life Insurance and the General Insurance Guaranty Fund as a unified insurance system, and the deputy commissioner of savings bank life insurance may properly be said to exercise actual supervision over this system.⁸

The trustees of the guaranty fund are authorized to appoint, with the approval of the Governor and council, a State actuary. Such clerks and assistants to the State actuary as may be required are also appointed, under civil-service rules.⁹

A State medical director, appointed by the trustees of the General Insurance Guaranty Fund with the consent of the Governor and council, is charged, subject to the supervision and control of the commissioner of insurance, with the duty of prescribing the rules relating to the "health or acceptability of the applicant for insurance." He acts as the supervising and advising physician of the savings-bank

⁷ Mass. Gen. Laws, ch. 178, sec. 14; Acts of 1919, ch. 26, sec. 9, 10. The trustees are authorized to elect, from among their number, a vice president of the board, a treasurer, and a clerk, for terms of 1 year.

⁸ The administration of the division was under the direction of Judge Warren A. Reed, of Brockton, who was appointed president of the guaranty fund by Governor Guild in July 1907, for a period of 13 years. Thereafter, Mr. George L. Barnes, of South Weymouth, was appointed president. He served in that capacity and as commissioner up to December 1934, when he resigned as commissioner, but continued as a trustee. Another trustee of the fund, Mr. Richard Bullock of Fitchburg, was then designated as commissioner. Miss Alice H. Grady, who had served as financial secretary of the Massachusetts Savings Insurance League since its origin, was appointed deputy commissioner in 1920 and acted in that capacity until her death on Apr. 17, 1934. Mr. Judd Dewey, who had acted without pay as counsel for the division for many years, was appointed to succeed her on Apr. 25, 1934. (Brief Survey of the Massachusetts System of Savings Bank Insurance and Old Age Annuities, 1934, pp. 3, 4. See an article on Miss Grady by Elizabeth Glendower Evans, one of a series entitled, "Interesting People I have Known", in Boston Jewish Advocate, June 15, 1934.)

⁹ The present State actuary is Eugene F. Caldwell. His duties may be summarized as follows: (1) To prepare standard forms of life-insurance policies and life-annuity contracts, which "shall be used as the uniform and exclusive forms of policies by all savings and insurance banks" (the term "savings and insurance banks" is the official designation of the banks authorized to underwrite insurance); (2) to prepare the forms or blanks for application for life-insurance policies and life-annuity contracts, for proof of loss, "and all other forms necessary for the efficient prosecution of the business, also books of record and of account, and all schedules and all reports, not otherwise provided for, required in the conduct of the business, all such forms to be used uniformly and exclusively by the savings and insurance banks"; (3) to furnish all blanks prepared by him to the banks and the General Insurance Guaranty Fund; (4) to determine and prepare, consistently with the law governing domestic legal reserve life-insurance companies, the table of premium rates for all kinds of life-insurance policies, the membership fees, the purchase rate for annuities, the surrender value and any proof of death charges, "and the premium rates for reinsurance, all such rates, fees, and charges to be uniformly and exclusively used in the system"; (5) to determine and prepare tables showing the amounts which may be loaned on insurance policies, and the guaranty charges to be made by the General Insurance Guaranty Fund; (6) to prepare or procure tables for computing the legal reserve to be held under insurance and annuity contracts; (7) to direct an annual valuation of all the policies of the banks, and of the condition of the General Insurance Guaranty Fund; (8) to determine for each year the ratio of actual to expected mortality claims for all the savings-insurance banks combined and for each one separately; (9) to determine how much each bank shall pay to or shall be paid from the General Insurance Guaranty Fund as the amounts due to or from it on account of the unification of mortality. (Acts of 1919, ch. 26, sec. 11; Mass. Gen. Laws, ch. 178, sec. 15.)

insurance system. The medical director is empowered to appoint such assistants as may be required.¹⁰

Every application for savings-bank life insurance goes to the office of the State medical director, where it is scrutinized by him or by the physician who assists him. In June 1935 there were 320 physicians, all graduates of class A medical schools, empowered by the State medical director to make the medical examination required of applicants for savings-bank life insurance. The office of the State medical director must approve every death claim before it is paid.¹¹

Although the law requires that the savings banks may not employ insurance "solicitors", the legislature in 1915 appropriated funds to enable the trustees of the General Insurance Guaranty Fund to make known "to those in need of industrial insurance, the advantages offered by the life-insurance departments of savings banks." As a consequence the Division of Savings Bank Life Insurance engaged two "instructors", whose efforts were directed to the purpose of educating workers in the State as to the advantages of savings-bank life insurance.¹² They confine their activities to visiting industrial establishments for the purpose of encouraging employees to buy savings-bank life insurance. On special occasions one of the actuarial clerks does similar work. It is important to note that these instructors are employed by and are responsible to the Division of Savings Bank Life Insurance, and that they have no direct connection with any of the savings-insurance banks.¹³

Operation of Insurance Banks and Their Agencies.

Any mutual savings bank, upon complying with the provisions of the savings-bank life-insurance law, may establish an insurance department if two-thirds of its board of trustees and a majority of its incorporators so decide. It must first secure, however, the approval of the commissioner of insurance and of the commissioner of banks. These officials are empowered to issue a joint certificate declaring an insurance department established when they are satisfied that a special expense guaranty fund and a special insurance guaranty fund, or a guaranty contract, have been provided.¹⁴

The special-expense guaranty fund consists of not less than \$5,000 in cash, advanced to and placed at the risk of a bank's insurance department and earning interest, if profits are sufficient, at the rate paid depositors, for the purpose of meeting such expenses as the department may not be able to meet from its income in the early

¹⁰ Acts of 1919, ch. 26, sec. 12; Mass. Gen. Laws, ch. 178, sec. 16. The present State medical director is Dr. Joseph H. Burnett.

¹¹ Interview with Dr. Joseph H. Burnett, July 27, 1934; letter from Division of Savings Bank Life Insurance, June 12, 1935.

¹² Acts of 1915, ch. 168.

¹³ In addition to the persons already mentioned, the office of the Division of Savings Bank Life Insurance in the Statehouse employed in July 1934, 1 principal actuarial clerk, 3 senior actuarial clerks, 1 senior clerk, 3 senior clerks and stenographers, and 3 junior clerks and stenographers. In the office of the State medical director there are employed an assistant medical director, 1 senior clerk and stenographer, and 1 junior clerk and stenographer.

¹⁴ Mass. Gen. Laws, ch. 178, secs. 2, 3.

years. The original amount of the expense guaranty fund is fixed by the trustees of the bank, with the approval of the State actuary.¹⁵

In order that a bank newly entering the insurance system may be able to meet any death losses which may arise before it has had time to accumulate sufficient reserves, a special-insurance guaranty fund is required. This consists of not less than \$20,000 in cash, "advanced to and placed at the risk of the insurance department, which [is] applicable to the payment and satisfaction of all losses or other obligations arising out of policies or annuity contracts if and whenever the liabilities of said department, including the insurance reserve, are in excess of its assets." The original amount of this fund is fixed by the trustees of the bank, with the approval of the State actuary.¹⁶ The advances to the special-insurance guaranty fund are exchanged for certificates of the par value of \$100, which, if profits are sufficient, yield interest at a rate equal to that paid the savings bank's depositors. The repayment of these advances may not be made until (1) the special-expense guaranty fund has been retired; (2) the insurance department has accumulated a surplus in excess of all its liabilities equal to the amount of the special-insurance guaranty fund; (3) the balance of the latter fund, including unpaid interest and surplus on hand, is not less than the amount of the original-insurance guaranty fund; and (4) the commissioner of insurance approves the retirement.

In addition to this obligation, every insurance department in the system may be required to pay monthly to the General Insurance Guaranty Fund an amount equal to 4 percent of all premiums and deposits for annuities received in the preceding month. These sums are held as a guaranty for the combined insurance and annuity obligations of all the banks. In the event that losses incurred by the insurance department of any bank are in excess of the reserve available for the purpose, such a bank may receive from the fund the amount necessary to meet its obligations. Amounts so received, with interest at 5 percent, must be repaid by the bank to the fund out of its insurance surplus as soon and so far as an adequate surplus exists. The trustees of the fund must invest it in the same classes of securities and in the same manner as the savings deposits of the banks are invested, but they may deposit in any savings bank whatever funds they cannot otherwise invest.¹⁷

For the purpose of sharing, among the banks as a whole, the especially favorable or unfavorable mortality losses of a particular bank, the law provides for the equalization of the ratio of mortality claims among all the banks. Thus the high death losses of a single insurance department, caused by the temporary fluctuations of chance, would

¹⁵ Mass. Gen. Laws, ch. 178, sec. 4. In exchange for the amounts advanced to the expense guaranty fund the lenders (generally the bank's trustees) receive certificates with a par value of \$100 each. The fund is retired when the net profits permit and when, in the opinion of the commissioner of banks and the commissioner of insurance, it is no longer needed. Interest on the advances is paid when and if the condition of the insurance department permits. By 1919 the first 4 banks entering the system had retired their expense guaranty funds. The 6 banks entering between 1922 and 1925 had retired theirs by 1929. Nine of the 11 banks entering the system between 1929 and 1931 had retired their expense funds by 1933. The other 2 banks, one established in April 1931 and the other in September 1931, retired their expense funds during the fiscal year 1934. All the banks apparently have paid interest regularly to those advancing the funds up to the time of retirement. (Reports of Commissioner of Insurance and Commissioner of Banks Relating to the Savings and Insurance Banks and General Insurance Guaranty Fund, 1914 to 1934.)

¹⁶ *Idem*, sec. 5.

¹⁷ The special guaranty funds are not to be considered liabilities in determining solvency. See appendix B for a further discussion of the insurance guaranty funds. Appendix C is devoted to a discussion of insurance reserves and surplus.

not impose a heavy burden and a possible consequent discontinuance of dividend payments to the policyholders of that department.¹⁸

Under the system of "unification of mortality" in use, the heavy losses of one bank are distributed proportionately among all the banks. Those banks with mortality experience more favorable than the average experience of all the banks pay to the General Insurance Guaranty Fund sums which, in the aggregate, are then distributed among those banks which have had less favorable mortality experience than the average. Under the law unification is not extended to matters other than mortality experience, because the other items are within the control of a particular bank, while the mortality experience is not.¹⁹

The law requires that the savings departments and the insurance departments of the savings and insurance banks shall be operated separately. The assets of one department of the bank are not liable for or applicable to the payment and satisfaction of the liabilities, obligations, and expenses of the other. The two departments must also keep their accounts and their investments separate. The law declares: "Expenses pertaining to the conduct of both the savings department and the insurance department, such as office rent and the salaries of general officers, shall be apportioned by the trustees equitably between the two departments."²⁰

Though only 23 savings and insurance banks have the power to underwrite insurance at present, the law authorizes the establishment of agencies and means for the receipt of applications for insurance and of premium payments upon such terms as the commissioner of banks and the commissioner of insurance may approve. Any savings bank in the State may be authorized to receive payments due on policies and annuity contracts, and savings and insurance banks may act as agents for each other.²¹ All except employers' agencies are permitted to deduct a transmission fee of 2 percent from the premiums which they forward to the underwriting banks.

In August 1934, there were 334 agencies from which insurance could be secured. Of these, 180 were employers' agencies, which dealt primarily with the workers employed in their particular establishments. Fourteen were agencies operated by credit unions for the benefit of their members. The remaining 140 dealt with the general public. These agencies were widely scattered throughout the State.

Table 7 shows the number of each kind of agency and the counties in which they were located. The accompanying map of Massachusetts shows the wide distribution of the agencies.

¹⁸ Sec. 15 of the act provides that the State actuary shall "for each year ending Oct. 31 determine the ratio of actual to expected mortality claims for all of the savings and insurance banks combined, and shall determine a similar ratio for each of the savings and insurance banks separately. Both calculations shall be based upon the mortality tables and the rate of interest used by the banks in the calculation of the premiums or upon such other bases as shall be approved by the commissioner of insurance. If the calculation of the ratio pertaining to any savings and insurance bank shows that the actual mortality experience is less than the mortality expected to be experienced by all of the banks combined, the State actuary shall send to such bank a certificate setting forth the amount of such difference, and thereupon such bank shall send to the General Insurance Guaranty Fund in cash the amount of such certificate. The State actuary shall also furnish to the trustees of the General Insurance Guaranty Fund a certificate in respect to any savings and insurance bank in which the ratio of the actual to the expected mortality has exceeded the ratio of the actual to the expected mortality for all of the banks combined, and thereupon the trustees of the General Insurance Guaranty Fund shall pay to such bank the amount of such excess as evidenced by such certificate." For an explanation of the ratio of actual to expected mortality claims (or losses) see the latter part of ch. 1.

¹⁹ See appendix D for an extended discussion of mortality ratios and the unification of mortality.

²⁰ Mass. Gen. Laws, ch. 178, sec. 8. The controversy as to the proper allocation of expenses between the 2 departments is dealt with in full in ch. 7.

²¹ Mass. Gen. Laws, ch. 178, sec. 13.

TABLE 7.—*Number and types of establishments at which applications for savings-bank life insurance might be made in August 1934*

County	Total in each county	Issuing banks or their branches	Agency banks or their branches	Public agencies ¹	Employers' agencies	Credit unions
Berkshire.....	14	3	1		10	
Franklin.....	6		4		2	
Hampshire.....	20		8		12	
Hampden.....	22		5		13	4
Worcester.....	50	3	8		36	3
Middlesex.....	69	8	29	2	29	1
Norfolk.....	25		13	1	10	1
Plymouth.....	16	2	8		5	1
Bristol.....	17	2	1	1	12	1
Essex.....	38	5	13	1	19	
Suffolk.....	54	7	10	2	32	3
Barnstable.....	3		3			
Duke's.....	0					
Nantucket.....	0					
Total.....	334	30	103	7	180	14

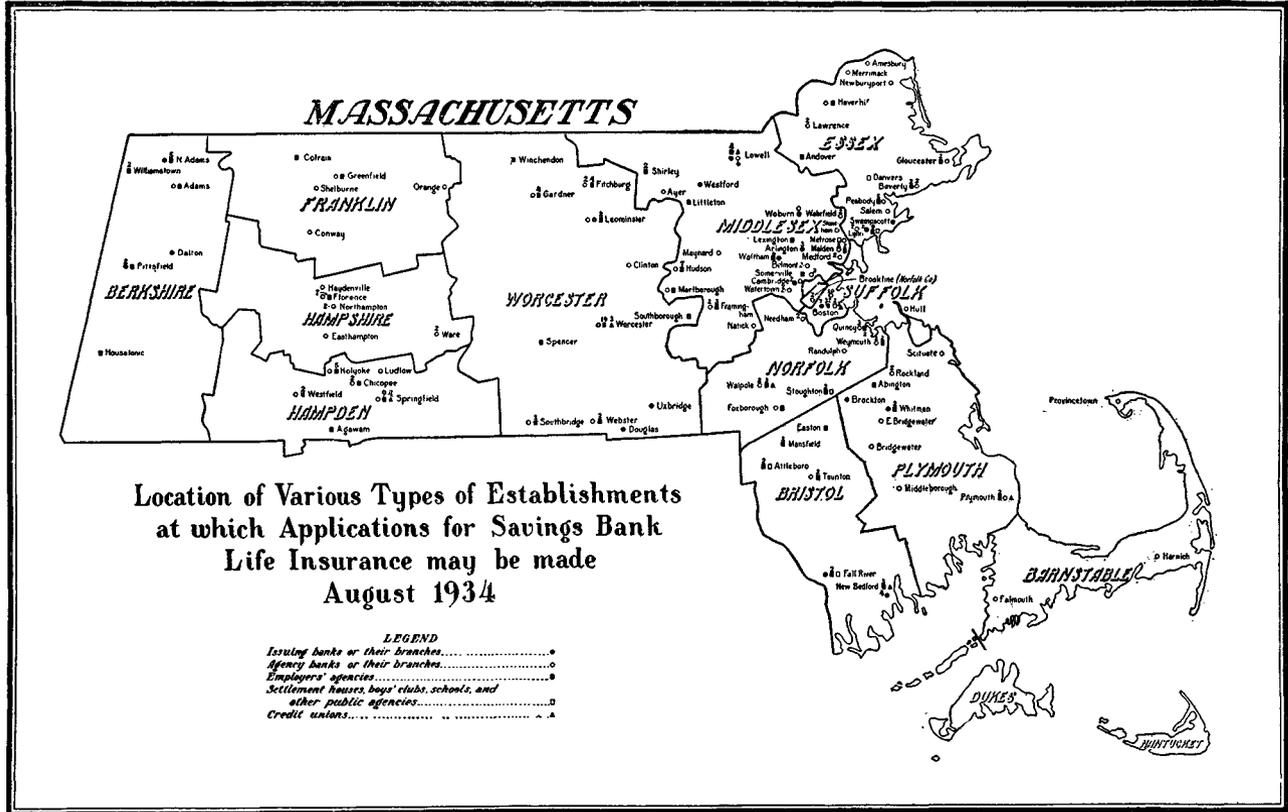
¹ The so-called "public agencies" include settlement houses, boys' clubs, schools, and private individuals.

A person applying for insurance at an underwriting bank is generally sold a policy carried by the bank in question. In case he wishes more insurance than the bank is permitted to sell him, he is asked to name the bank or banks from which he wishes to buy the additional amounts. If he has no preference, the bank official with whom he talks is likely to make suggestions. When application is made through other agencies and no preference as to bank is shown, the common practice is to refer the applicant to those banks which have the most favorable dividend record. Since dividends in 1935 were equally high in 17 out of 21 banks, suggestions to applicants might often be made for reasons of policy. Among such reasons might be the desire to build up a newly established insurance department, or to favor a bank with which the agency has some connection. The important fact, however, is that every applicant has the right to choose his insurance bank.

Publicity and Promotion Features of the System

The Division of Savings Bank Life Insurance carries on an active program of publicity designed to promote the growth of savings-bank life insurance. It publishes numerous pamphlets and leaflets giving information about the insurance. It employs two "instructors" whose purpose it is to promote the sale of savings-bank insurance among industrial workers. It carries on an active correspondence with persons who seek information about the system. The fact that the seal of the Commonwealth of Massachusetts is printed upon some of its publicity material, that its correspondence is written on stationery bearing the name of the State and of a department of the State government, and that there is general knowledge that its offices are in the Statehouse on Beacon Hill, help to advance the growth of savings-bank insurance.

The savings and insurance banks carry on various activities to promote the sale of insurance. As a rule they employ a clerk to whom a person seeking information is referred. Some of them have set up tables in the lobbies of the banks, at which attendants are



ready to furnish such information. The banks make considerable use of material published by the Division of Savings Bank Life Insurance. In some cases one bank or a group of banks has published pamphlets dealing with insurance. Placards are displayed frequently in prominent places. On occasion one bank or several acting together have published advertisements in the newspapers to promote the sale of insurance. The various collecting agencies described above have used similar methods in promoting the sale of savings-bank insurance.

The activities of the Massachusetts Savings Bank Life Insurance League and of the Associated Industries, as they relate to savings-bank insurance, are discussed fully in chapter 7. It is sufficient to say, at this point, that the league has been active since 1907; that in recent years it has published and distributed a number of pamphlets and leaflets; and that since 1930 the Associated Industries has employed a full-time secretary whose activities are devoted exclusively to promoting the sale of savings-bank insurance in the industrial establishments of the State.

Regulation

Savings-bank life insurance is subject to supervision by the commissioner of banks and the commissioner of insurance. The latter has authority to enforce the insurance laws of the State. This involves the enforcement of such laws as they apply to the insurance departments of the savings banks. If, in his opinion, the insurance departments are violating those sections of the insurance laws which apply to them, he has authority to report the facts to the law enforcement officers of the Commonwealth. He is authorized to require the books and records to be kept in such a way that the annual statements may be verified and so that it may be ascertained whether there is compliance with the laws. He is authorized to investigate charges that unwarranted and misleading statements and promises are being made with respect to insurance, and he may also investigate any complaint of a policyholder with respect to any claim under an insurance or annuity contract.²²

The commissioner of insurance also has certain regulatory duties imposed upon him by the savings-bank insurance law:

1. He issues licenses to write policies and make annuity contracts which are required before an insurance department may begin operations, and these licenses may be revoked by him at his discretion under certain conditions.
2. He must approve the retirement of the special insurance guaranty fund.
3. He has authority to ask the State actuary to prepare new forms of insurance policies and annuity contracts.
4. He is authorized to enforce the insurance laws with respect to the rates charged for insurance and annuities, etc.
5. He must approve the use by the State actuary of tables of mortality which may be thought more suitable than the American Experience Table for the business of the insurance departments of the banks.
6. He has authority to supervise and control the operation of the rules in use by the State medical director regarding the health and acceptability of the applicants.

The commissioner of banks, through his power to supervise and regulate the affairs of the savings banks, comes in contact with the insurance departments of those banks. He may take steps to have

²² Mass. Gen. Laws, ch. 175, secs. 3A, 4.

bank officers removed if they persist in carrying on improper practices. He may prescribe the manner and form in which the books and accounts shall be kept, the extent to which they shall be audited, and the manner of safeguarding their money and securities. He has power to take control of a savings bank which is conducting its business in an unsafe and unauthorized manner.²³

Further regulatory duties are imposed jointly upon both the commissioner of insurance and the commissioner of banks:

1. The decision of the trustees of a savings bank to establish an insurance department must be filed with both commissioners, and if they find the decision to be in conformity with law and are of the opinion that the special expense guaranty fund and either the special insurance guaranty fund or the guaranty contract has been provided, they may issue a joint certificate declaring the insurance department established.

2. The expense guaranty fund may not be retired without the approval of both commissioners.

3. They enforce the laws regulating the nature and the extent of the investments of the insurance departments.

4. They must approve the reinsurance of all outstanding policies and annuity contracts of such banks if the reinsurance is effected with any private life-insurance company.

5. They must examine, either personally or through their agents, the insurance department of each bank and the General Insurance Guaranty Fund, at least once every 3 years.

6. Reports of the financial condition of the insurance departments and of the General Insurance Guaranty Fund must be made annually to both commissioners. Other reports also may be required whenever the commissioners think it desirable.

7. The commissioners themselves are required to prepare annually a joint report on the condition of the insurance departments and the General Insurance Guaranty Fund and to submit this report to the General Court of Massachusetts (i. e., the legislature).

8. A vote to discontinue the insurance department of a bank must be filed with them.

9. If they believe the insurance department of a bank to be insolvent or if they think its continuance in business hazardous to the public or the policyholders, they may apply jointly to the Supreme Judicial Court of Massachusetts for an injunction to prevent the department from carrying on business.²⁴

²³ Mass. Gen. Laws, ch. 167, secs. 5, 6, 22.

²⁴ *Idem*, ch. 178.

Chapter 4.—Financial Operations of the System

The financial operations of the savings-bank life insurance system differ in some essential characteristics from those of private life insurance companies. Thus the dividends distributed depend partly upon the experience of the entire system and partly upon that of the insurance departments of the individual bank. Similarly, the expenses of operation of the system involve not only the expenses of the banks themselves but also those of the Division of Savings Bank Life Insurance. Furthermore, the insurance departments of the banks are taxed on a different basis than are the insurance companies. And, finally, the control over the investments of the insurance departments, instead of being the same as that over insurance-company investments, is similar to the control exercised over the investment of the deposits of the savings banks.

Dividends

After contributions to surplus have been set aside by the insurance departments of the banks, the balance of net profits which remains must be distributed equitably each year among the holders of policies and annuity contracts. The sums so distributed are called "dividends" and their size, as has been pointed out, is determined in general by three factors: (1) Ratio of actual to anticipated expenses (or "loading"); (2) ratio of actual to expected mortality losses; (3) the excess of actual over required earnings on funds invested. For example, in 1931 there were available total gains of \$1,006,456, which arose from the following sources: The anticipated ratio of expense to premium income, that is, the ratio of "loading", was 13.86 percent, while the ratio of actual expense to premium income was only 4.97 percent. This gave rise to a gain of \$275,051. The fact that the actual mortality losses of the system were only 39.43 percent of the expected losses resulted in a gain of \$536,469. The funds earned 5.12 percent in interest, resulting in a gain of \$194,936 above the 3½ percent (4 percent on annuities) required to maintain reserves. Of the total gain of \$1,006,456, part was put aside to surplus, and \$707,972 was paid out as dividends. The 1933 experience was as follows: Gain from loading, \$293,690; gain from mortality, \$594,637; gain from interest, \$189,864; total gains, \$1,078,191; paid out as dividends, \$709,644.¹

Organizations selling insurance do not generally make frequent changes in their scale of dividends. It is customary to construct dividend scales, as stable as possible, upon a consideration of past experience with respect to mortality ratios, rates earned on invested assets, and expense ratios. The dividend scale thus arrived at by the Division of Savings Bank Life Insurance is called "the basic scale." If

¹ Annual Reports of the Commissioner of Insurance of Massachusetts, 1931 and 1933, pt. 2, table M.

the particular experience of any single insurance department is such that it can afford to pay dividends on this scale, it is said to be paying 100 percent of the basic scale. If its experience is not sufficiently favorable, it may be compelled to reduce its dividends to less than 100 percent of the scale.

Mortality experience, as has been shown, is shared by all the banks through the operation of the system of unification of mortality. The principle underlying this sharing is that, since the acceptance of applicants for insurance is the responsibility of the Division of Savings Bank Life Insurance and not of any particular insurance department, the latter should not bear the entire burden of a heavy mortality loss among its own policyholders. Each bank, however, does have control within broad limits over its investments and its efficiency of operation. When a particular bank is unable to pay dividends at the 100 percent level, it is clear that its experience with investments and expenses of operation alone, and not with mortality, is the cause. The mortality experience of the system as a whole, however, enters into the establishment of the basic scale when it is formulated by the Division of Savings Bank Life Insurance.

In 1932, 100 percent of the basic scale was paid by 7 banks, 1 paid 80 percent of the scale, 6 paid 75 percent, 2 paid 70 percent, 2 paid 60 percent, and 2 paid 50 percent. In 1934, 100 percent of the basic scale was paid by 16 banks; 1 paid 90, 1 paid 70, 1 paid 60, and 2 paid 50 percent. A new basic scale was adopted in 1934. Of the 21 banks, 17 were paying dividends in 1935 at the rate of 100 percent of this new scale, 1 bank was paying 70 percent, and 3 were paying 60 percent.²

Expenses

The expenses of operating the savings-bank life insurance system may be considered under two heads: (1) The expenses of operating the State Division of Savings Bank Life Insurance and (2) the expenses of operating the insurance departments of the various banks.

From the beginning, in 1907, through the year 1926, the expenses of operating the State division were met from appropriations made annually by the legislature. In 1907 the sum of \$1,202 was spent for this purpose. From 1910 on, the expenses increased with considerable regularity until, in 1926, the operation of the division cost the State \$31,112. In 1927, the legislature, acting on the recommendation of the commissioner and the deputy commissioner of the division, passed a measure providing that the insurance banks should reimburse the State for the costs of the stationery furnished the banks by the division.³ In 1927 the State spent a total of \$32,818.50 on operating expenses of the division and, under the new law, \$2,313 of that amount was reimbursed to the State by the banks.

Again at the request of the commissioner and the deputy commissioner of the division, the legislature, in 1929, passed a measure providing for progressive reimbursement, year by year, until by 1934 all operating expenses of the division would be met by the banks. The law required that 25 percent of the State's expenditures should be reimbursed in 1929, 40 percent in 1930, 55 percent in 1931, 70 per-

² For further discussion of the basic dividend scale see ch. 7 and appendix E.

³ Acts of 1927, ch. 188.

cent in 1932, 85 percent in 1933, and 100 percent in each year thereafter.⁴ The largest expenditure by the division to date has been \$42,317 (in 1931) and \$23,318 of that amount was reimbursed to the State. In 1933 the expenditure was \$40,740, of which \$36,718 was reimbursed. Of the total expenditure in the latter year \$32,630 was for salaries.

Table 8 shows the actual expenditures of the Division of Savings Bank Life Insurance from 1907 to 1933 inclusive, the reimbursements to the State, and the net expenditures met by the State.

TABLE 8.—Disbursements of Division of Savings Bank Life Insurance, 1907 to 1933

Year	Actual expenditures	Reimbursement to State	Net expenditures of State	Year	Actual expenditures	Reimbursement to State	Net expenditures of State
1907	\$1,202.13		\$1,202.13	1922	\$28,082.42		\$28,082.42
1908	7,132.53		7,132.53	1923	32,128.89		32,128.89
1909	15,733.40		15,733.40	1924	32,615.97		32,615.97
1910	11,438.09		11,438.09	1925	32,475.24		32,475.24
1911	14,222.57		14,222.57	1926	31,111.93		31,111.93
1912	14,997.33		14,997.33	1927	32,818.50	\$2,312.80	30,505.70
1913	15,805.33		15,805.33	1928	35,122.61	3,722.32	31,400.29
1914	16,873.35		16,873.35	1929	37,359.98	9,339.54	28,020.44
1915	19,153.92		19,153.92	1930	38,290.41	15,279.94	23,010.47
1916	18,335.98		18,335.98	1931	42,316.98	23,317.75	18,999.23
1917	20,366.45		20,366.45	1932	41,189.69	28,412.20	12,777.49
1918	19,271.35		19,271.35	1933	40,740.39	36,717.66	4,022.73
1919	21,640.32		21,640.32				
1920	23,295.55		23,295.55	Total	670,248.43	119,102.21	551,146.22
1921	26,527.12		26,527.12				

The total expenses of \$670,248 of the division for the period 1907–33 is 2.66 percent of the total premium income of \$25,233,177 for the period. The actual cost of \$551,146 to the State was 2.18 percent of the total premium income.⁵ In the year 1934 the division expended \$44,096.97, all of which was paid by the banks.

The expenses common to the operation of both departments of the insurance and savings banks, as has been pointed out, must be apportioned equitably between the two departments. So much discussion has arisen as to whether such an equitable allocation has in fact been made that the matter will be dealt with fully in chapter 7.⁶

Taxation

Savings-bank life insurance funds and the General Insurance Guaranty Fund are taxed at the same rate, in the same manner, and to the same extent as are deposits in the savings banks. The insurance departments of the banks are exempt from any taxes or fees levied on life-insurance companies.

The savings banks are required to pay an annual tax of one-half of 1 percent of their average deposits, the tax to be levied twice a year

⁴ See sec. 17 of the savings-bank insurance law.

⁵ The measure providing for gradual reimbursement to the State prohibits the levying upon any insurance department of its share of the total reimbursement until the department shall have amassed a surplus of not less than \$20,000, or until it has been established 5 years, whichever event takes place first. Until such time the share of the exempted bank is to be paid to the State by the trustees of the General Insurance Guaranty Fund from interest income on the fund. In 1933, 11 of the banks were paying nothing in reimbursement. None of them were as much as 5 years old and at the end of the preceding year none of them had acquired a surplus of \$20,000 or more. (Annual reports of the Commissioner of Insurance and Commissioner of Banks, 1932 and 1933, pt. 2, table M.)

⁶ Expenses of operation are also discussed in ch. 5.

in such a way that the banks pay one-fourth of 1 percent on their average deposits of the preceding 6 months.⁷ The amount of the tax on savings-bank deposits is determined by averaging the deposits in the bank for each business day of the 6-month period. In calculating the amount of the tax to be levied on savings-bank life insurance it was not feasible to determine the average daily reserve and surplus. Before the year 1921 the tax was levied upon the reserve and surplus of each insurance department at the end of the year. This proved to be unfair for the new banks, the business of which had grown rapidly toward the end of the year, but which might have sold comparatively little insurance in the early part of the year. As a result of this consideration, the method was changed so that the reserves and surplus of the insurance departments were averaged at the beginning and at the end of each year and the result taken as the basis for taxation. Neither all of the deposits of the savings banks, nor all of the insurance funds of these insurance departments, however, are subject to taxation by the State.⁸ Mutual savings banks are exempt from taxation under the Federal income tax laws and this exemption extends also to their insurance departments.⁹

Investments

The funds of the insurance departments of the banks must be "invested in the same classes of securities and in the same manner in which the deposits of the savings departments are required by law to be invested, except that [they] may make loans upon any policy of insurance or annuity contract issued by [them]." Such investments are restricted to the following: (1) Mortgages of real estate in Massachusetts not exceeding 60 percent of its value and, if the real estate is unimproved or unproductive, 40 percent of its value; (2) the public bonds of the United States, or of any State in the Union which has not defaulted for the preceding 20 years in the payment of either the principal or interest of its legal debt, the bonds or notes of a county, city, or town in Massachusetts, the bonds or notes of an incorporated district of the State whose net indebtedness does not exceed 5 percent of the value of the property therein, or the bonds or notes of any city in other States of the Union, under certain conditions; (3) certain kinds of railway bonds; (4) certain kinds of street-railway bonds; (5) certain kinds of bonds of telephone companies and other public utilities; (6) bank stocks and bank deposits; (7) bankers'

⁷ General Laws Relating to Taxation, ch. 63, sec. 11.

⁸ Sec. 12 of ch. 63, General Laws, exempts from taxes such deposits as are invested in (1) real estate used for banking purposes; (2) loans secured by mortgage of real estate taxable in Massachusetts; (3) real estate on which the title has been acquired by foreclosure, for 5 years after the title thereof is vested in the bank; (4) bonds or certificates of indebtedness of the United States; (5) bonds or certificates of indebtedness of Massachusetts issued after Jan. 1, 1906; (6) bonds, notes, or certificates of indebtedness of any governmental unit in Massachusetts issued on or after May 1, 1908, and stating on their face that they are exempt from taxation in the State; (7) shares of stock of trust companies organized under the laws of Massachusetts; (8) (under ch. 362 of the Acts of 1934) bonds and certificates of indebtedness of the Home Owners' Loan Corporation if acquired in exchange for real estate under (3) above, or such bonds or certificates obtained through conversion of the securities so acquired pursuant to the Home Owners' Loan Corporation Act passed by Congress in 1933. Similar exceptions apply to the investment of the assets of the insurance departments of the banks.

⁹ For the year ending Nov. 30, 1930, the total amount taxable was \$2,788,413, upon which the insurance departments paid a tax of \$13,943. In 1931 the analogous amounts were \$3,184,247 and \$15,925; in 1932, \$3,869,247 and \$19,346; in 1933, \$4,483,730 and \$22,419. The data for the years 1930-32 are from the annual reports of the commissioner of corporations and taxation for those years. The data for 1933 and the information concerning the method of determining the tax base were obtained July 24, 1934, in an interview with Miss Florence Truffs, in charge of insurance taxation in the Massachusetts Department of Corporations and Taxation. The questions as to whether savings-bank life insurance bears a smaller burden of taxation than life-insurance companies will be dealt with in ch. 6.

acceptances; (8) personal notes secured by the endorsement of three citizens of the State or by proper collateral, and the notes of certain corporations, public utilities, and railroads; (9) farm loan bonds issued by the Federal Land Banks; (10) bank buildings; (11) real estate acquired by foreclosure; (12) securities acquired in settlement of an indebtedness, provided they be sold within 5 years after acquisition. The law also requires that no more than a certain proportion of the deposits of the savings banks shall be invested in some of the classes of securities specified above.

The ratio of the amounts invested in certain classes of property to the total admitted assets of the insurance departments in the year 1933 was as follows: (1) Mortgages, 47.83 percent; (2) bonds, 28.16 percent; (3) collateral loans, 2.33 percent; (4) stocks, 2.12 percent; and (5) real estate, 1.49 percent. In addition to these investments the insurance departments of the banks had advanced, in the form of loans on policies, an amount equal to 10.74 percent of their total admitted assets. Table 9 shows the proportion of investments of each type to the assets of the system as a whole.¹⁰

TABLE 9.—Percent of total admitted assets of the system invested in certain kinds of property, 1924 to 1933

Year	Mortgages	Bonds	Policy loans	Collateral loans	Stocks	Real estate	All others ¹
1924.....	59.10	20.96	6.86	4.56	0.91	0	7.61
1925.....	58.27	20.71	6.75	5.04	1.27	0	7.96
1926.....	59.22	20.59	7.18	4.59	1.56	0	6.86
1927.....	57.63	21.17	6.98	4.90	2.59	0	6.73
1928.....	56.85	21.06	7.07	4.79	3.52	0	6.71
1929.....	55.03	19.40	7.23	6.80	4.51	.19	7.84
1930.....	54.01	19.74	7.89	6.39	3.82	0	8.15
1931.....	52.66	22.81	9.01	4.21	3.67	.12	7.52
1932.....	49.82	26.08	10.60	2.10	3.28	.36	7.76
1933.....	47.03	28.16	10.74	2.33	2.12	1.49	8.13

¹ "All others" includes cash in office and banks, interest and rents due and accrued, deferred and uncollected premiums, and several minor miscellaneous items.

¹⁰ Annual Reports of the Commissioner of Insurance, pt. 2, table D. The ratio of investments in stocks is calculated on the basis of market values on the "convention basis." The ratio as to bonds is calculated on the basis of the amortized value. The ratios given above take into consideration the investments and assets of the General Insurance Guaranty Fund.

Chapter 5.—Savings-Bank Insurance and Company Insurance: Selling Methods, Policy Terms, and Policy Maintenance

Until recent years savings-bank insurance has represented only a small part of the total amount of insurance in force in Massachusetts. Its importance, however, is to be found in its characteristics, its potentialities, and in its recent rapid growth, rather than in its absolute size.

Administrative Organization

The administration of savings-bank insurance differs markedly from that of the private insurance companies. The executive direction of insurance companies is generally centered in a home office, which handles financial, actuarial, and other activities for the company as a whole. Fully as important as the work of the home office, however, is the work of the agents in the field, whose task it is to sell life insurance, and to collect premiums, especially in the case of industrial insurance. The field work of the companies may be organized in two ways—(1) under the general-agent plan, and (2) under the branch-office plan.

Ordinary insurance is usually sold under the general-agent plan. General agents are given charge of writing insurance policies within fairly large districts. They themselves engage subagents, with whom they make agreements as to commissions and similar matters. The subagents are responsible directly to the general agent, who in turn is responsible for the business of his district to the home office.

Under the branch-office plan districts are set up, at the head of each of which is a district manager or superintendent. Under him is a corps of assistant managers or "assistants" responsible to him. Each assistant is in turn responsible for the work of a number of agents. The salary arrangements under which the field force works under this plan are determined by the home office. Each agent is responsible to an assistant, each assistant to the superintendent or manager of the district, and the latter is responsible to the superintendent of agencies at the home office.

Industrial insurance is usually administered under the branch-office plan. There is very close supervision of the work from top to bottom. As a rule an assistant manager has under him as many as 8 or 9 agents. Each industrial agent is assigned a so-called "debit", which usually includes from 1,000 to 2,000 policies in a given closely restricted area. One agent may not cross area lines to do business in the territory assigned to another agent. Whereas in the case of ordinary insurance the principal work of an agent consists in selling insurance, industrial insurance agents must not only sell insurance but collect weekly premiums as well.¹

¹ The administrative organization of the savings-bank life insurance system has been discussed in ch. 3.

Payment of Insurance Agents

It has already been made clear that insurance solicitors and agents are not employed by the savings banks, although two persons are regularly employed on a salary basis by the Division of Savings Bank Life Insurance for the purpose of instructing industrial workers, upon request of their employers, respecting the advantages of this form of insurance. Except to the extent that the work of these instructors results in the buying of savings-bank insurance by industrial workers, the banks sell insurance across the counter or in response to applications by mail, without the solicitation of prospective policyholders by agents.² Much of the insurance ultimately purchased even by industrial workers is likely to be bought directly when they go to the savings banks for the purpose.

The only payment connected with savings-bank insurance which in any sense may be regarded as a commission is the 2 percent of premiums which in the past authorized agencies have been permitted to receive for collecting premiums and transmitting them to the underwriting banks. Employer agencies are no longer permitted to collect this fee but even when they had this privilege many of them did not take advantage of it. Collection fees paid in 1932 were only 0.89 percent of premium income.

Private insurance companies generally pay commissions to their agents for selling ordinary straight life insurance. These commissions equal at least 50 percent of the first year's premium and 5 percent of the annual premium for each of the next 9 years. In other words, the ordinary-insurance agent receives in commissions, during the first 10 years of the life of the policy, a sum equal to at least 95 percent of one annual premium. In addition to this, the general agent, under whom the agent works, usually receives what is called an "overriding" commission of 15 percent of the first year's premium, 10 percent of the second year's premium, and 2½ percent of all annual premiums thereafter. Thus in a period of 10 years the commissions of general agent and agent are likely to be equal to 140 percent of one annual premium (95 percent to the agent plus 15 percent plus 10 percent plus 8 times 2½ percent).

The compensation of agents selling industrial insurance for the private companies is divided into two parts—that received for selling new insurance and that received for collecting premiums. As a rule there is a minimum collecting salary, which in one of the largest companies is \$18 per week when weekly collections are from \$140 to \$150, and which increases as the collections rise. The commission for writing new business varies with the different companies. One pays the agent outright, at the time the policy is sold, a sum equal to 20 weeks' premium payments. Another pays 24 weeks' premiums. A third pays a commission equaling premium payments of 17 to 25 weeks, depending upon the length of service of the agent. In addition to these commission and collection payments, the income of the assistant managers depends upon the business done by their agents, and that of the managers depends upon the business which comes through their offices.

² It would be interesting to know what proportion of savings-bank life insurance has been bought because of the work of the instructors, but data on this point are not available. Since there are never more than three instructors, however, the proportion is probably small.

If an ordinary-insurance policy is lapsed, the incomes of the general agent and agent suffer only to the extent that they receive no further commissions. In the case of industrial insurance, however, the situation is very different. The collection of weekly premiums, except in one case,³ is regarded as the function of the industrial agent, and he is held responsible for lapses. He receives, for example, a commission of 24 weeks' premiums when he writes new insurance. When a policy is lapsed, however, he owes the company a sum equal to 24 weeks' premiums. Similarly the assistant managers and the manager also are penalized when a policy is lapsed. If the amount of insurance lapsed exactly equals the amount of new insurance written in a given month, and collections are maintained, the field staff neither loses nor gains in income.

If there is a constant growth in the amount of industrial insurance in force, as was usual over a period of many years preceding the depression which began in 1929, the field staff benefits by the receipt of commissions and by the increase in premium collections, and the lapses are not sufficient to offset the gains made. On the other hand, when the amount of insurance lapsed exceeds the amount of new insurance written, payments to agents for new insurance are offset by the lapses. This gives rise to debts owed to the companies by the agents. Moreover, since the salary of the agent varies with the amount collected in premiums, he suffers a further loss of income. At such a time the pressure upon the field staff becomes enormous. Agents, on finding their incomes falling off and their indebtedness to the companies increasing, are tempted to resort to "high pressure" methods to maintain insurance in force and to write new insurance. Frequently they pay premiums out of their own pockets, though company rules forbid it, rather than suffer the burden of the debt of 24 weeks' premiums which a lapsed policy would cause.⁴ The assistant manager, with his own income rapidly decreasing, finds himself similarly tempted and brings pressure upon the agents under him, for not only does his income suffer at such times, but he himself is the recipient of pressure from his manager. The latter, though his guaranteed minimum salary might be regarded as high, nevertheless is judged at the home office by his ability to "produce", and his own income is affected considerably by lapses in his district. The serious consequences of the situation prevailing as a result of such conditions constitute one of the major problems of industrial insurance. From all such problems the savings-bank insurance system appears to have been spared by the very nature of its method of operation.⁵

³ The Metropolitan Life Insurance Co. permits the holder of an industrial policy to transmit premiums directly to the home office or the district office and returns annually a rebate of 10 percent of the premiums so transmitted to the policyholder. In 1933 about 40 percent of the industrial premiums due on policies in New England were paid by policyholders in this way. This information was obtained from the New England office of the company.

⁴ It should be noted that the company pays an agent a minimum salary so long as he is employed despite the amount of his debt on account of lapse penalties.

⁵ For an excellent treatment of these problems see Taylor, Maurice, *The Social Cost of Industrial Insurance*, New York, 1933, pp. 119-124. The information in this and the preceding sections, concerning the administration of the insurance business and the method of paying commissions and salaries to agents for ordinary and industrial insurance, may be found in any good treatise on life insurance. Taylor, Maurice, *The Social Cost of Industrial Insurance*, New York, 1933, and Maclean, Joseph B., *Life Insurance*, New York, 1932, are recent and useful treatises.

Comparison of Policy Provisions

The provisions of savings-bank insurance policies are in some respects more advantageous to the policyholders than are those of ordinary policies issued by the insurance companies. Ordinary policies, whether sold by the banks or the companies, usually contain provisions respecting regular payment of dividends, obtaining of loans, automatic loans for the payment of premiums, cash surrender values, and other nonforfeiture privileges. In all of these matters the provisions of savings-bank ordinary policies are more liberal than those offered by the companies. Both the banks and the companies permit the assignment of ordinary policies for payment of debt and provide for the payment of insurance to the designated beneficiary or his heirs. In all of these respects the holders of industrial policies are at a disadvantage.

Industrial policyholders, however, have an advantage over the holders of ordinary policies issued by private companies in that provisions permitting the waiver of premiums in case of disability, clauses providing for benefit in case of disability, and those granting double indemnity in the event of accidental death are included without additional premium. The ordinary policies issued by the savings banks contain none of these provisions.

Dividends.—In view of the fact that the cost of insurance to the policyholder depends not only upon the amount he pays in premiums, but also upon what he receives in the form of dividends, those provisions in insurance policies which have to do with the payment of dividends are of importance. The holders of savings-bank policies and of ordinary participating policies issued by the insurance companies are entitled to annual payment of dividends, if earnings permit. Dividends are payable to policyholders of the banks after the insurance has been in force for 1 year. The companies usually pay their ordinary policyholders dividends after the policies have been in force for 1 or 2 years, though some of them require, as a condition to receiving these dividends, the payment of premiums for the second or third year.

In the case of industrial insurance, dividends are not payable until after 4 years. Even then they are rarely paid in cash. Only one industrial company provides for cash payment of dividends to industrial policyholders. A second company applies dividends to the reduction of premium payments, and this is the usual practice of the first company as well. A third company pays dividends neither in the form of cash nor as premium deductions, but credits the industrial policyholder with paid-up insurance purchasable by the dividends due him.

Loans.—The ability to borrow money on an insurance policy is often a valuable privilege. Savings-bank policyholders may obtain loans after their insurance premiums have been paid for 1 year. The holders of ordinary policies issued by the companies do not usually have this privilege until after 2 or 3 years. Industrial policies do not provide for the making of loans at any time.

Automatic premium loans.—A policyholder frequently finds himself in the position of having permitted his policy to terminate without intending to do so, merely because he has forgotten or has temporarily been unable to pay premiums. The savings banks provide against

such a contingency by making loans on policies in order to credit the insured with the payment of premiums when these are not received from the policyholders. Such loans are made by the banks after the policy has been in force 1 year, provided the insured so requests. The loans are made automatically, without waiting for directions from the insured. The holders of ordinary policies issued by the companies do not, as a rule, receive the privilege of automatic premium loans. Only 2 of the 15 most important companies selling ordinary insurance grant this privilege, and then only after the policy has been in force for 2 years. None of the companies selling industrial insurance permit automatic premium loans to their industrial policyholders.

Cash surrender.—The privilege of receiving cash for a policy instead of maintaining the insurance in force by the payment of premiums is also of great value to the policyholder. Holders of savings-bank policies may obtain a cash value if they do not desire or are unable to continue their insurance at any time after it has been in force for 6 months. The holders of ordinary policies issued by the private companies usually do not receive any cash for their policies unless they have been in force for 2 years, though some companies pay cash after 1 year. Industrial policyholders have not, as a rule, received cash value until their policies have been in force 10 years. The companies operating in Massachusetts, however, are now required to pay cash surrender value to industrial policyholders after 5 years.⁶

Since April 1931, the three largest industrial insurance companies have made exceptions to this practice. As a result of distress among numerous policyholders, they established the life insurance adjustment bureau, the function of which is to investigate cases of "dire need" and to give cash surrender values in such cases as are thought worthy before the end of the period usually required.

Paid-up and extended term insurance.—If the holder of an insurance policy discontinues the payment of premiums and does not desire to surrender the policy for its cash value, he is entitled to receive a paid-up insurance policy for a reduced amount of insurance, or a policy providing for the original benefit for a certain limited (i. e., extended) term. Savings-bank policyholders are entitled to these privileges, which, together with that of obtaining cash surrender values, are called "nonforfeiture privileges", after premiums have been paid for 6 months. Holders of ordinary policies with the private companies are entitled to them, for the most part, only after the insurance has been in force 3 years, though in some cases they are available after 1 or 2 years.⁷ Industrial policyholders are not entitled to paid-up or extended term insurance until after 3 years.

Assignment for debt.—The holder of a savings-bank policy, or of an ordinary policy carried with the insurance companies, has the privilege of assigning the proceeds of his policy as security for or in payment of a debt. No such privilege is available to the holder of an industrial policy.

⁶ The amount of cash obtainable when a company policy is surrendered is equal to its full reserve value, plus accrued dividends, and minus a surrender charge, which is limited by law to 2½ percent of the face value of the policy. Surrender charges are not made if the policy has been in force for a certain period, the length of which varies among the companies. The surrender charge made by the savings banks is limited to 1 percent of the face value of the policy. The banks pay cash value before 6 months have expired if the reserve on the policy exceeds \$2 per \$1,000 of insurance. In such a case the entire reserve in excess of this amount is paid.

⁷ It is common to make either paid-up or extended insurance "automatic." In other words, if the policyholder does not himself express a preference for one or the other, he receives either paid-up insurance or extended insurance, depending upon the terms of the policy.

Payment of benefits to named beneficiaries.—Holders of bank policies and of ordinary policies of the insurance companies are protected by a provision that settlement of the insurance on maturity shall be according to the terms contracted for in the policies. Payments are to be made only to named beneficiaries, or, in case of death of the latter, to the heirs of the insured, unless otherwise provided in the policy. It is quite otherwise, however, as regards industrial insurance. Industrial policies contain what is known as a "facility of payment" clause. The following is substantially the wording of such clauses in industrial policies:

The company may make any payment or grant any nonforfeiture privilege provided herein to the insured, husband or wife, or any relative by blood or connection by marriage of the insured, or to any other person appearing to said company to be equitably entitled to the same by reason of having incurred expense on behalf of the insured, or for his or her burial; and the production of a receipt signed by either of said persons, or of other proof of such payment or grant of such privilege to either of them, shall be conclusive evidence that all such claims under this policy have been satisfied.

The opportunities for abuses which may arise and have arisen because of this provision constitute a major shortcoming of industrial insurance. It gives rise to instances of payments to persons who should not receive the benefit of insurance payments. It assumes that though the beneficiary of an ordinary policy is entitled to the protection which the rigorous terms of the contract provide for him, the beneficiary of an industrial policy has his interests amply safeguarded if the company uses its own judgment as to who is entitled to receive benefits.⁸

Disability.—In recent years life-insurance policies containing so-called "disability" clauses have assumed importance. In 1896 one American company provided in its policies that in case the insured was totally disabled further payment of premiums was to be waived, and on maturity the beneficiary would be paid as though premium payments had been met continuously. By the year 1910 such a provision had become general in ordinary policies sold by the insurance companies. Thereafter, especially in the 1920's, in order to compete with those who had initiated a different disability provision, companies generally began to pay to the insured, in case of total and permanent disability, an income of \$10 a month for each \$1,000 of insurance. The waiver of premium payments was also included in the disability clause. The disability income provisions became increasingly burdensome to the companies, and in 1932, as a result of an agreement, 10 of the largest insurance companies, including the most important in the country, discontinued the issuance of policies containing provisions for the payment of disability incomes and confined their disability clauses to the waiver of premium payments. The companies generally charge a small extra premium for this privilege.

The usual industrial insurance policy contains a disability clause which provides for the waiver of premiums under certain limited conditions, without requiring extra premiums. Income payments at regular intervals to totally disabled persons are not made. Some companies not only waive further premiums when the insured becomes totally and permanently disabled, but pay one-half or all of the face

⁸ See Taylor, Maurice, *The Social Cost of Industrial Insurance*, New York, 1933, pp. 80-84, for a well-considered treatment of this problem, and for a statement of the companies' position on the matter

value of the policy at once. The companies, despite this previous payment, usually pay the whole face value on maturity.⁹

The savings-bank insurance policies contain no disability clauses of any kind.

More precise details as to the terms of ordinary policies sold by the banks and by seven of the most important mutual companies, and of the industrial policies sold by the three most important industrial companies, are presented in table 10.

⁹ Maclean, J. B., *Life Insurance*, New York, 1932, p. 365; Taylor, Maurice, *The Social Cost of Industrial Insurance*, New York, 1933, pp. 206-209.

TABLE 10.—Terms of policies issued by the savings banks, 7 of the insurance companies, and 3 industrial-insurance companies ¹

Companies	Dividends ²	Cash surrender	Surrender charge	Loans	Paid-up insurance	Extended-term insurance	Disability	Double indemnity for accidental death
Savings banks.....	First year (nc.)...	After 6 months....	To second year.	After first year (automatic premium loan on request).	Automatic after 6 months.	After 6 months....	None.....	None.
Ordinary companies:								
Company 1.....	Second year (nc.)...	After second year..	To tenth year.	After second year..	After second year..	Automatic after second year..	Premium waiver (extra premium).	Extra premium.
Company 2.....	Generally third year (nc.)...	.....do.....	To third year.	.....do.....	.....do.....	.....do.....	.....do.....	Do.
Company 3.....	First year (c.) (nc. thereafter).	After first year....	To second year.	After first year..	After first year..	Automatic after first year.	Premium waiver (\$10 per \$1,000 per month for men, \$5 per \$1,000 per month for women) (extra premium).	None.
Company 4.....	.....do.....	After second year..	.....do.....	After second year	Automatic after second year.	Automatic on request after second year.	Premium waiver (extra premium).	Extra premium.
Company 5.....	Second year (nc.)...	After third year on straight life; after second year on endowment.	To tenth year.	After third year on straight life; after second year on endowment.	After third year on straight life; after second year on endowment.	Automatic after third year on straight life; automatic after second year on endowment.	Premium waiver (extra premium) \$5 per \$1,000 per month (extra premium).	Do.
Company 6.....	First year (c.) (nc. thereafter).	After second year..	To ninth year.	After second year.	After second year.	Automatic after second year.	Premium waiver (extra premium).	None.
Company 7.....	Second year (nc.)...	After third year on straight life; after second year on endowment.	.....do.....	After third year on straight life; after second year on endowment.	After third year on straight life; after second year on endowment.	Automatic after third year on straight life; automatic after second year on endowment.	Premium waiver (no extra premium).	Extra premium.

Industrial companies:								
Company 1.....	After 5 years (deductions from premiums only).	After 10 years.....		None.....	Automatic after third year.	None.....	Premium waiver (payment of half face value of policy and payment of full face value on death).	Paid, no extra premium required.
Company 2.....	After 5 years (paid-up additional insurance only).	do.....		None.....	After third year.	Automatic after third year.	Premium waiver (payment of face value for half disability, payment of full face value for full disability, and payment of full face value at death).	Do.
Company 3.....	After 5 years (cash or deduction from premiums).	After 5 years.....		None.....	After fifth year.....	do.....	Premium waiver (payment half face value and payment full face value at death).	Do.

¹ The ordinary companies covered in this table include the 6 most important mutual insurance companies doing business in Massachusetts and a seventh company of very long standing chartered by the State. Details as to policy terms for the ordinary-insurance companies have been taken from the 1934 editions of the Flitcraft Compend and of the Spectator Co.'s "Handy Guide to Standard and Special Contracts."

² "c.", that is, "conditioned", indicates that dividends are paid only after renewal premiums are paid; "nc.", that is, "nonconditioned", indicates that dividends are paid whether or not renewal premiums are paid.

Maintenance of Insurance by Policyholder

The fundamental purpose of buying an insurance policy is to secure protection. It is a commonplace, however, that not all insurance is maintained in force by the policyholder until it is terminated by death, maturity, or expiry. Policies may lapse—that is, they may be terminated by the failure to pay premiums—and the insured receives in return for what he has paid in the past only the insurance protection which was his while the policy was in force. Policies may be surrendered for cash, and the insured gets in return for his past premiums the insurance protection received while the policy was in force and a sum in cash, in addition. It is clear that a policy which is terminated by death, maturity, or expiry fulfills completely the purpose for which it was bought, that a surrendered policy does so to a lesser extent, and that a policy which is lapsed serves the policyholder or his beneficiary least of all.

It might naturally be expected that if a policyholder is entitled to receive cash surrender value on his policy or to obtain a loan on it at a comparatively early date, he is unlikely to permit it to lapse. The amount he may receive as a loan is about as much as he may obtain in cash surrender value, except that in the first instance interest is deducted in advance from the reserve to which he is entitled, while in the second instance the surrender charge is deducted and the policy is canceled. If his insurance has been in force 1 year and he is unable to continue his premium payments, the fact that he may borrow on his policy or that he is entitled to surrender it for cash would have the effect of preventing a lapse. If he has to wait 3 years for these privileges, the probability of lapse would be greater.

The savings-bank policies may be surrendered for cash after 6 months, and often even earlier. Loans may be obtained on the policies after a year. These terms are more favorable than those offered by the insurance companies. It would be reasonable to expect, therefore, that the banks would have a smaller proportion of lapses. The data show this to be the case. The proportion of lapsed insurance to new insurance written for 27 ordinary companies, 4 industrial companies, and the savings banks, all operating in Massachusetts since 1908, at 4-year intervals from 1911 to 1931, is shown in table 11. The data is given separately for savings-bank ordinary, company ordinary, and industrial insurance.¹⁰

TABLE 11.—Proportion of lapsed insurance to new insurance written, at 4-year intervals, 1911 to 1931

Year	Savings-bank ordinary	Com-pany ordinary	Indus-trial	Year	Savings-bank ordinary	Com-pany ordinary	Indus-trial
	<i>Percent</i>	<i>Percent</i>	<i>Percent</i>		<i>Percent</i>	<i>Percent</i>	<i>Percent</i>
1911.....	14.4	15.4	57.5	1923.....	1.9	18.3	34.8
1915.....	4.1	16.8	56.4	1927.....	.9	24.3	57.5
1919.....	2.6	9.7	39.6	1931.....	1.2	33.3	61.8

¹⁰ The 27 ordinary insurance companies and the 4 industrial insurance companies here covered include all of the companies in the State which carried on business continuously in the period from 1908 to 1931. The data for these companies have been borrowed from an unpublished thesis by D. Bradford Damon, entitled "The Economic Value of Savings Bank Life Insurance" (Boston, 1933), p. 51. This thesis is available at the library of Northeastern University.

The table shows that the highest lapse ratio for the savings banks in the years represented was reached in 1911, when it stood at 14.4 percent. The lowest lapse ratio was that of 1927, when it was 0.9 percent. The highest ratio for ordinary insurance sold by the companies during the years covered was reached in 1931, when the figure was 33.3 percent. The lowest ratio was that of 1919, when it stood at 9.7 percent. The highest ratio for industrial insurance was that of 1931, when the figure was 61.8 percent, while the lowest ratio for the years covered in the table was 34.8 percent, reached in the year 1923. If one averages the experiences of all years during the entire period from 1908 to 1931, for the companies included in the table above and for the banks, the average proportion of lapsed insurance to new insurance written each year was 2.6 percent for savings-bank insurance, 21.0 percent for ordinary insurance, and 54.5 percent for industrial insurance.

If the experience of all the insurance organizations operating in Massachusetts is considered, it is found that the proportions of insurance lapsed to new insurance written were 2.6 percent for the savings banks, 49.7 percent for all company ordinary insurance, and 105.4 percent for industrial insurance in the year 1932, and 2.8, 46.3, and 52.8 percent, respectively, in the year 1933.¹¹ An analysis of the proportion of insurance lapsed to all insurance in force is likewise greatly to the advantage of the banks. Thus the rate of lapses in 1933 to insurance in force at the beginning of the year was 0.23 percent for the banks, 3.88 percent for ordinary insurance, and 12.89 percent for industrial insurance.

A comparison of the proportion of the number of policies lapsed, rather than of the amount of insurance lapsed, to new policies issued shows similar results. Table 12 shows the proportions for all insurance organizations for the years 1926 to 1933, inclusive.¹²

TABLE 12.—Ratio between number of policies lapsed and number of new policies written, 1926 to 1933

Year	Savings-bank ordinary	Company ordinary	Industrial	Year	Savings-bank ordinary	Company ordinary	Industrial
	<i>Percent</i>	<i>Percent</i>	<i>Percent</i>		<i>Percent</i>	<i>Percent</i>	<i>Percent</i>
1926.....	1.8	25.2	52.6	1930.....	1.2	32.6	74.9
1927.....	.9	27.5	58.3	1931.....	1.2	35.7	76.2
1928.....	1.0	25.1	59.6	1932.....	2.6	45.6	107.5
1929.....	1.3	26.2	56.3	1933.....	2.6	40.9	88.9

¹¹ If the analysis is based not on the proportion of new insurance written in each year but on the amount of insurance terminated, the experience of the years 1908 to 1931 indicates that on the average the proportion of insurance lapsed to the face value of all insurance terminated (by death, maturity, expiry, surrender and lapse combined) was 38.3 percent for ordinary, 73.5 percent for industrial and 12.9 percent for savings-bank insurance. (Damon, D. Bradford. *The Economic Value of Savings-Bank Life Insurance*. Boston, Northeastern University, 1933 (unpublished thesis), p. 51.)

¹² Information concerning the ratio between the amount of insurance lapsed and the sum of the amount of new insurance plus the amount of old insurance revived, yields similar results to that in the foregoing tables. The proportion of lapses for 1924 on this basis was 20.7 percent for company ordinary. The lapse ratio had risen to 46.6 percent by 1932. The lapse ratio for industrial insurance on this basis was 42.2 percent in 1924. By 1932 it had mounted to 79.8 percent. On the other hand, the lapse ratio for the banks was 3.1 percent in 1924. By 1932 it had fallen to 2.6 percent. (Annual Reports of the Commissioner of Insurance of Massachusetts, tables G and H.)

There are several reasons for this favorable lapse experience of the savings banks. One is to be found in the provisions of their policies as described above. Of particular importance is the fact that insurance carried with the banks can be surrendered for cash after it has been in force only 6 months and even earlier, as contrasted with the usual 2- or 3-year period on ordinary policies carried with the companies and with the usual 10-year period on industrial policies. Further factors are the nonforfeiture privileges, which are available after 6 months on savings-bank policies, as compared with 3 years on company policies, and the fact that loans are available at the end of a year in contrast to the usual 2- or 3-year limit on ordinary insurance and the absence of loan provisions in industrial policies. It is possible also that the rapid growth of the system has some effect which might be eliminated when the rate of growth declines. A final factor is that savings-bank insurance is not likely to be oversold, and is accordingly less likely to be given up by the policyholder.

The unusually small number of lapses of savings-bank policies might appear to be due to the fact that policyholders terminate their insurance by surrendering their policies for cash. The banks' experience with respect to cash surrender does not, however, disclose a very large proportion of surrendered insurance. Table 13 presents the proportion of cash surrender to new insurance written by the organizations operating in Massachusetts since 1908, at 4-year intervals from 1911 to 1931, for savings-bank ordinary, company ordinary, and industrial insurance.¹³

TABLE 13.—*Proportion of cash surrender to new insurance written, at 4-year intervals, 1911 to 1931*

Year	Savings-bank ordinary	Company ordinary	Industrial	Year	Savings-bank ordinary	Company ordinary	Industrial
	<i>Percent</i>	<i>Percent</i>	<i>Percent</i>		<i>Percent</i>	<i>Percent</i>	<i>Percent</i>
1911.....	16.6	13.3	2.9	1923.....	5.0	12.2	3.9
1915.....	17.9	15.4	5.0	1927.....	12.8	12.9	8.6
1919.....	16.7	6.1	3.8	1931.....	13.2	28.0	23.1

Savings-bank ordinary insurance experienced its lowest cash surrender ratio in the 6 years covered by the table in 1923, when the proportion of cash surrender values to new insurance written was 5 percent. The highest ratio was that of 1915, when it stood at 17.9 percent. Company ordinary insurance experienced the lowest ratio in 1919, when it stood at 6.1 percent. The highest ratio was that of 1931, when the proportion was 28 percent. The lowest proportion for industrial insurance in the years covered by the table was 2.9 percent in the year 1911, and the highest, 23.1 percent, in the year 1931. It should be noted that in 3 of the 6 years covered by the table—1911, 1915, and 1919—the cash surrender ratios of the banks exceeded those of the ordinary companies. The differences in favor of the latter during those 3 years were 3.3, 2.5, and 10.6 points, respectively. During the years 1923, 1927, and 1931 the cash surrender ratios of the ordinary insurance companies exceeded those of the banks. The differences in favor of the banks were 7.2, 0.1, and 14.8 points respectively. For the period 1908 to 1931 as a whole the

¹³ The companies included are the same as those covered in table 11 on p. 38.

ordinary companies show a higher cash surrender ratio than the banks. Thus the average proportion of cash surrender values to new insurance written each year of the period by the organizations covered in the foregoing table was 10.9 percent for savings-bank insurance, 13.6 percent for ordinary insurance, and 9.2 percent for industrial insurance.

During the years 1932 and 1933 the savings banks, in common with the insurance companies, experienced a large increase in cash surrender ratios. In 1932 the ratios were 33 percent for savings-bank ordinary insurance, 57.1 percent for the ordinary insurance of all companies operating in the State, and 34.9 percent for all industrial insurance. In 1933 the ratios had risen still further to 45.6, 68.4, and 48 percent, respectively.¹⁴

A policyholder who is under financial pressure but who desires to maintain insurance in force, rather than to surrender his policy for cash, may prefer to borrow on it. He can thus pay premiums from the proceeds of his loan and at the same time get financial relief. The savings banks extend policy loans after the insurance has been in force for 1 year. The insurance companies, on the other hand, do not as a rule lend on ordinary policies until after 2 or 3 years. They do not lend at all on industrial policies. Despite the fact that the savings-bank experience with cash surrender shows that fewer policyholders resort to it than do those of the companies, and despite the fact that the banks make loans on policies at an earlier date, savings-bank policyholders make less use of their borrowing privilege than company policyholders. Table 14 shows the percentage of all assets invested in policy loans by all insurance organizations doing business in Massachusetts and by the savings banks considered separately.¹⁵

TABLE 14.—Percent of assets invested in policy loans, 1920 to 1933

Year	All insurance, including savings-bank insurance	Savings-bank insurance	Year	All insurance, including savings-bank insurance	Savings-bank insurance
	Percent	Percent		Percent	Percent
1920	11.5	4.8	1927	11.4	7.0
1921	12.4	5.8	1928	11.5	7.1
1922	12.2	6.2	1929	12.6	7.2
1923	11.9	6.5	1930	13.7	7.9
1924	11.6	6.9	1931	15.4	9.0
1925	11.4	6.8	1932	17.0	10.6
1926	11.4	7.2	1933	16.6	10.7

The evidence demonstrates that the lowest percentage of assets invested in policy loans by all insurance organizations considered as a whole was reached in the years 1925 to 1927, when it stood at 11.4. The highest percentage was reached in 1932, when the figure was 17.

¹⁴ The data for ordinary-insurance surrender ratios prior to 1932 refer to the experiences of 27 ordinary companies and 4 industrial companies, and come from Damon, D. Bradford, *The Economic Value of Savings Bank Life Insurance*, Boston, Northeastern University, 1933 (unpublished thesis). Information upon which the percentages of cash surrender values to new insurance in 1932 and 1933 are based is for all companies and comes from the Annual Reports of the Commissioner of Insurance of Massachusetts, pt. 2, tables G and H.

¹⁵ Data on amounts and proportions invested in policy loans are contained in the Annual Reports of the Insurance Commissioner of Massachusetts, pt. 2, table D.

In the case of savings-bank insurance, the lowest proportion of assets invested in policy loans was that of 1920, when the ratio was 4.8 percent. The proportion rose with some degree of regularity until it reached its highest level of 10.7 percent in 1933.

Attention should be given to the fact that loans on insurance policies are to a large extent not repaid. Consequently, if the loan plus the accumulated interest exceeds the surrender value of the policy, the insurance is in effect canceled. The final result of borrowing on a policy may thus be the same as that of surrendering it for cash, and the proportion of assets invested in loans has a direct bearing upon the problem of maintaining insurance in force.

It is evident from the data on lapses, cash surrender, and policy loans that savings-bank policies are more likely to be kept in force than are those issued by the insurance companies. The terms of the savings-bank policies themselves, which facilitate cash surrender and borrowing, serve to explain in part why lapse ratios are unusually low. The relatively small amount of surrendered insurance and policy loans cannot, however, be explained to any great extent by the favorable terms of the policies. It is probable, however, that an important explanation of the relatively large number of surrendered policies and policy loans experienced by the insurance companies is the fact that the latter have outstanding a larger proportion of old policies than the banks have. As a consequence, the reserves on the company policies are likely to be larger, and the surrender and loan values being likewise greater, the policyholder is tempted to take advantage of them to a greater extent than he would be if the policy were relatively new and the amounts available small. How important this factor is can only be surmised. Though it is probably of some consequence, its importance will obviously diminish as the savings-bank insurance system grows older and its proportion of old policies increases.

The fact that savings-bank policies are more likely to be maintained in force than those of the insurance companies has another important explanation, however. In the absence of a system of agents' commissions, savings-bank insurance is not so often oversold and the persons who buy it are more likely to purchase only what they believe they can afford. They are thus not so likely to permit their policies to lapse, to surrender them, or to borrow on them as are persons who have been sold more insurance than they can afford to carry.¹⁶

¹⁶ See appendix F for a comparison of the surpluses of the companies and of the insurance departments of the banks.

The reserves required by law are the same for the insurance companies and the insurance departments of the banks, though the interest rate assumed is not always the same. The banks and many of the insurance companies assume that reserve funds on their ordinary insurance will earn interest at the rate of 3½ percent, and use the American Experience Table in calculating reserves. Many of the companies, however, assume earnings of only 3 percent. The industrial-insurance reserves of the companies are based on the Standard Industrial Mortality Table and an assumed interest rate of 3½ percent. This was also the case prior to 1924 with the monthly premium business of the insurance banks. Annuity reserves in the case of the companies and the banks are based on an interest rate of 4 percent, although some companies use a lower rate.

Chapter 6.—Savings-Bank Insurance and Company Insurance: Costs to Policyholder

We have seen that in general the terms of savings-bank life-insurance policies are more advantageous to the policyholders than are those of policies issued by the insurance companies, and that savings-bank insurance is more likely to be kept in force. These are matters of much importance to policyholders, but they are probably of no greater consequence than is the cost of carrying the insurance. Does it cost more or less to buy savings-bank insurance than it does to buy life insurance from the companies? If there is a considerable difference in cost, what is the reason?

Cost to the Policyholder

The most effective and the fairest method of comparing the costs of the insurance sold by different insurance organizations is to determine what a policyholder of a given age, carrying a given type of protection, would have actually paid out on the average for each year if he had carried his policy during a certain period and then surrendered it for cash. This amount would be made up of the premiums paid each year, the size of which would depend on his age on becoming insured as well as upon the amount and kind of insurance carried. The size of the annual premium would of course not change from year to year. At the end of each year the policyholder would usually receive a dividend, which would tend to be greater with each succeeding year as the reserves on his policy grew in size. If one adds the total premiums paid during a given number of years and subtracts from that sum the total amount received in dividends, the result is the net amount he has paid to keep the insurance in force during the period. If, however, a person surrenders his policy at the end of a given period, he gets a cash value. In order to find what it has cost to be protected during the period prior to surrendering the policy, it is necessary to deduct from the net amount paid what is received in cash surrender value. The result is the net cost for the period, and dividing it by the number of years in the period gives the average yearly net cost. (The net cost as thus computed does not take into account the interest earned on premiums.)

A simple example will make the method clearer. Suppose that the annual premium is \$25 per year and that the policy is maintained for 10 years. The sum of the 10 years' premiums is \$250. Assume that in 10 years dividends to the amount of \$50 have been returned to the policyholders. The net payments for 10 years are therefore \$200. Suppose, further, that when the policy is surrendered for cash the insured receives the sum of \$140. The net cost of carrying his insurance for the 10-year period is thus \$200 minus \$140, or \$60. Dividing this by 10 gives the average yearly net cost, or \$6.

In the comparisons of net cost that follow it is assumed that the insurance policy has a face value of \$1,000; that it was taken out in 1924; that the policyholder was then 35 years old; that the premiums were paid annually; that the dividends entering into the computation were those actually paid over the period 1925 to 1934; and that the policy was carried for 10 years and then surrendered for cash.¹ The policies to be considered are an ordinary straight life policy, an ordinary 20-payment life policy, and an ordinary 20-year endowment policy. The policies compared are those issued by 9 of the most important life-insurance companies in the country, and by the 7 savings banks operating in 1924, considered as a whole.

Table 15 compares the net costs of an ordinary straight life policy.

TABLE 15.—Annual net costs of a \$1,000 straight life policy issued in 1924, at age 35, based on actual dividends paid during following 10 years, and assuming policy was surrendered in 1934

Company or bank	Average yearly net cost	Company or bank	Average yearly net cost
Company:		Bank:	
No. 1.....	\$7.32	No. 1.....	\$1.72
No. 2.....	4.76	No. 2.....	2.55
No. 3.....	6.83	No. 3.....	2.05
No. 4.....	1 3.82	No. 4.....	2.73
No. 5.....	2 5.58	No. 5.....	2.03
No. 6.....	5.40	No. 6.....	1.85
No. 7.....	4.90	No. 7.....	3.09
No. 8.....	5.53	Average, 7 banks ³	2.29
No. 9.....	3.75		
Average, 9 companies.....	5.25		

¹ Company no. 4 issues a straight life policy only in amounts of \$5,000 or more, but its costs are shown for comparative purposes on a \$1,000 basis.

² Company no. 4 issues this policy in amounts of less than \$5,000 in the form of endowment at age 85.

³ 7 banks are here covered because only that number were operating in 1924.

As shown above, the annual net cost of policies issued by the companies averaged \$2.96, or 129 percent, more than the average annual net costs of policies issued by the banks. The average annual cost of the policy with the banks was \$5.03 less than the cost of the policy written by the company with the highest cost, and \$1.46 below that of the company with the lowest cost.²

The comparative average yearly net costs of a \$1,000 20-payment life policy issued at age 35 are shown in table 16.

¹ Tables presenting the data entering into the comparisons here made in more complete form may be found in appendix G, on comparative costs of insurance to the policyholders. The appendix also includes tables of comparative costs based on the assumption that dividends paid in 1934 would continue to be paid during the 10 years following.

² It should be noted that the amounts recorded in the tables in this section and in appendix G do not take into account the factor of compound interest. If costs recorded took this factor into account the results would be different in actual amounts, but the costs with the banks would still be lower.

TABLE 16.—Annual net costs of a \$1,000 ordinary 20-payment life policy issued in 1924, at age 35, based on actual dividends during following 10 years, and assuming policy was surrendered in 1934

Company or bank	Average yearly net cost ¹	Company or bank	Average yearly net cost ¹
Company:		Bank:	
No. 1.....	\$5.73	No. 1.....	² \$0.45
No. 2.....	2.52	No. 2.....	.58
No. 3.....	5.07	No. 3.....	1.04
No. 4.....	4.27	No. 4.....	.80
No. 5.....	2.86	No. 5.....	1.08
No. 6.....	3.09	No. 6.....	1.29
No. 7.....	2.64	No. 7.....	1.22
No. 8.....	3.23	Average, 7 banks.....	.25
No. 9.....	1.60		
Average, 9 companies.....	3.45		

¹ 4 of the banks actually returned a net gain to the policyholder.

² Gain.

In the case of 20-payment life-insurance policies, the annual net cost of those policies issued by the 9 companies averaged \$3.20 higher than the net costs charged on the average by the savings banks. The banks charged \$5.48 less than the company with the highest cost and \$1.35 less than that with the lowest cost. Four of the banks returned net gains above all costs, varying from 4 mills to 45 cents. In other words, the insured was not only protected during the 10 years by these banks without cost to himself other than the interest on his premiums, but he actually received, in dividends and cash-surrender value, a return in excess of all his premium payments.

The final comparison for ordinary insurance concerns the costs of a \$1,000 20-year endowment policy issued at age 35.

TABLE 17.—Annual net costs of a \$1,000 ordinary 20-year endowment policy issued in 1924, at age 35, based on actual dividends during following 10 years, and assuming policy was surrendered in 1934

Company or bank	Average yearly net cost ¹	Company or bank	Average yearly net cost ¹
Company:		Bank:	
No. 1.....	\$2.50	No. 1.....	² \$5.77
No. 2.....	2.71	No. 2.....	4.63
No. 3.....	1.98	No. 3.....	5.20
No. 4.....	1.42	No. 4.....	4.39
No. 5.....	2.84	No. 5.....	5.40
No. 6.....	.59	No. 6.....	5.60
No. 7.....	2.15	No. 7.....	4.02
No. 8.....	2.16	Average, 7 banks.....	5.00
No. 9.....	² 1.36		
Average, 9 companies.....	.33		

¹ 5 of the companies actually returned a net gain to the policyholder. This was also the case with the 7 banks.

² Gain.

The annual net cost of the 10 companies for this type of policy was 33 cents, while all the banks, considered as a whole, returned to the policyholders an average annual net gain of \$5. Five of the companies returned average annual net gains varying from 15 cents to \$1.36, or an average gain of 64 cents, while 4 charged net costs varying from 59 cents to \$2.50. The net gains of the 7 banks varied from \$4.02 to

\$5.77. Thus all the banks and five of the companies not only furnished the protection of the policies without cost, but returned to the policyholders a sum in dividends and cash surrender values which was greater than all the premiums paid.³

The comparative costs which are shown in the foregoing tables represent only what it would have actually cost to carry the policies in question with the different insurance organizations under the conditions assumed. If other conditions had been assumed, the actual costs to the policyholders would have been different. If a period of 5 or of 15 years, instead of a 10-year period, had been assumed, or if the assumed age had been other than 35, or if the dividends entering into the computation had been assumed throughout to be those paid in the year 1934, or if the policies were assumed to have been issued in 1925 instead of 1924 and the dividends payable in 1935 were therefore substituted for those paid in 1924, the results of the comparisons would also have differed. In general, however, the comparisons, whatever the basis upon which they might have been made, would have shown similar results, namely, that the cost of savings-bank ordinary insurance to the policyholders is in general considerably below the cost of ordinary insurance sold by the companies.⁴

A comparison of the cost of savings-bank insurance and of industrial insurance sold by the insurance companies is even more to the advantage of the banks. Before presenting such a comparison it should be pointed out, however, that savings-bank insurance and industrial insurance are not strictly comparable. Premiums on industrial insurance are collected weekly by insurance agents, while premiums on savings-bank insurance cannot be paid more frequently than once a month. The cost of collecting premiums every week is obviously greater than the cost of receiving them at the banks every month. Furthermore, industrial straight life policies are regarded as paid up at ages varying from 70 to 75, whereas straight life policies issued by the banks provide for regular payment of premiums until the policy is terminated. Finally, industrial policies of the straight life and endowment variety include provisions for disability payments and for double indemnity in case of accidental death which may prove to be especially valuable. No extra premiums are charged for these privileges. The banks do not include such provisions in their individual policies at all.

Two of the three important industrial insurance companies charge premiums of 20 cents per week (\$10.40 over a year's period) for an industrial straight life policy issued at age 35, with a face value of \$276.⁵ For the same amount of straight life insurance the savings banks would charge a monthly premium of 58 cents, or \$6.96 for a year. Table 18 shows the net costs of carrying these policies for 10 years and surrendering them at the end of the period.

³ The data on premiums, dividends, and cash surrender values for the companies upon which the foregoing tables are based come from the *Flitcraft Compend* for 1934. Data for the savings banks were obtained from the Division of Savings Bank Life Insurance, Statehouse, Boston.

⁴ Appendix G, on comparative costs to the policyholders, presents tables based on other assumptions than those used in the text.

⁵ The third important industrial company does not sell precisely the same amount of insurance for a weekly premium of 20 cents and for that reason is not included.

TABLE 18.—*Net costs of \$276 of straight life insurance policies issued in form of industrial policy by 2 companies, and in form of ordinary policy by savings banks, based on dividends paid in 1934*

Company or banks	10 years' premiums	10 years' dividends	10 years' payments	Cash value	10 years' net cost	Average annual net cost
Company no. 1.....	\$104.00	\$11.40	\$92.60	\$35.88	\$56.72	\$5.67
Company no. 2.....	104.00	10.60	93.40	35.88	57.52	5.72
Average of 21 banks ¹	69.60	21.40	48.20	37.47	10.73	1.07

¹ In 1934, 21 banks were operating, as compared with 7 in 1924. Since the dividends assumed were those paid in 1934, all these banks are included.

The average annual net costs are thus \$1.07 for the banks, as compared with \$5.67 and \$5.75, respectively, for the two private companies covered.

In view of the fact that a large proportion of industrial insurance is sold in the form of endowment policies, a comparison of their relative cost is pertinent. The two industrial companies compared above charge weekly premiums of 25 cents (\$13 over a year's period) for a 20-year endowment policy for \$200 issued at age 35. For an ordinary policy of a similar character the savings banks charge a monthly premium of 79 cents (\$9.48 for 12 months). The comparison of net costs is presented in table 19.

TABLE 19.—*Net costs of \$200 of 20-year endowment insurance issued at age 35 in form of industrial policy by 2 companies, and in form of ordinary policy by savings banks, based on dividends paid in 1934*

Company or bank	10 years' premiums	10 years' dividends	10 years' net payments	Cash value	10 years' net cost	Average annual net cost
Company no. 1.....	\$130.00	\$14.25	\$115.75	\$72.75	\$43.00	\$4.30
Company no. 2.....	130.00	13.25	116.75	72.75	44.00	4.40
Average of 21 banks.....	94.80	19.61	75.19	79.20	14.01	1.40

¹ Gain.

Whereas the banks returned a net average gain of 40 cents per year, assuming the policy was surrendered in 10 years, the companies charged net costs of \$4.30 and \$4.40.⁶ Here again the policyholder of the banks not only paid nothing for his protection (except the interest on his premiums) but received in dividends and cash value an average yearly sum of 40 cents above all premium payments.

If the policies considered were to be surrendered before the expiration of the 10-year period, the comparison of net costs would be still more favorable to the savings bank. Cash surrender values may not be obtained on most industrial policies before 10 years, although one of the industrial companies whose policies have been considered is chartered by the State of Massachusetts and is compelled by the laws of the State to pay cash surrender values after 5 years. The savings banks, as has been pointed out, pay cash surrender values after 6 months, and even earlier. A cost comparison with most in-

⁶ Data in the tables are from the 1934 edition of the Handy Guide to Standard and Special Contracts and from the Division of Savings Bank Life Insurance.

dustrial policies based upon periods of less than 10 years would accordingly be to the greater advantage of the banks.⁷

The reasons for these relatively low costs must be sought in the experience of the companies and of the insurance departments of the savings banks with respect to expenses, the nature of the return on their invested assets, and mortality losses.

Expenses of Operation

The expenses of the savings-bank insurance system are much lower than those of the private companies.⁸ The proportion of expenses to gross premiums for all the organizations operating in Massachusetts, and for the savings-insurance banks alone, for the years from 1920 to 1932, is shown in table 20.

TABLE 20.—*Percent total expenses are of premium income in savings-bank insurance, ordinary insurance, and industrial insurance, 1920 to 1933*

Year	Savings-bank ordinary insurance	All ordinary insurance	Industrial insurance	Year	Savings-bank ordinary insurance	All ordinary insurance	Industrial insurance
	<i>Percent</i>	<i>Percent</i>	<i>Percent</i>		<i>Percent</i>	<i>Percent</i>	<i>Percent</i>
1920	6.80	22.72	35.84	1927	4.55	18.82	27.64
1921	6.84	20.60	34.24	1928	4.53	18.13	26.30
1922	7.73	19.88	32.33	1929	4.63	18.32	26.34
1923	6.54	20.20	31.78	1930	4.73	17.96	24.45
1924	6.10	20.43	30.99	1931	4.97	16.19	22.92
1925	4.45	19.63	30.91	1932	5.18	15.44	22.02
1926	4.47	19.40	29.92	1933	5.00	14.14	22.77

The highest ratio of total expenses to premium income for the savings banks during the period 1920 to 1933 was recorded for the year 1922, when the figure was 7.73 percent. The lowest ratio during the period was reached in the year 1925, when it stood at 4.45 percent. The highest ratio for all ordinary insurance was 22.72 percent, which was the figure for 1920. The lowest ratio was that of 1933, when it stood at 14.14 percent. The year 1920 also saw the highest ratio of total expenses to premium income for industrial insurance—35.84 percent. The lowest ratio during the period was attained in 1932, when it was 22.02 percent.

Although the expense ratios for both ordinary and industrial insurance show a decrease in recent years, in 1933 the expense ratio for ordinary insurance was still nearly three times as high as that of the savings banks, and the industrial insurance ratio, despite the high original premiums for this insurance, was more than four and one-half times as high.⁹

It has frequently been asserted that the actual expenses of the insurance departments of the banks are larger than those represented in the published reports of the insurance commissioner, since the latter have not taken into account the expenditures by the State in main-

⁷ Cost comparisons of other types of policies than those considered in this section show somewhat similar results.

⁸ The question as to whether the savings-bank policyholder pays all the costs of his insurance is dealt with in ch. 8.

⁹ Annual Reports of the Commissioner of Insurance of Massachusetts, pt. 2, tables M and N. The banks' ratio in 1934 was 4.85 percent.

taining the Division of Savings Bank Life Insurance. In a preceding chapter it has been explained that prior to 1927 all the expenses of the division were paid by the State, but that beginning in that year the insurance banks have each year reimbursed the State for an increasing proportion of the expenses of the division, until, in 1934, all the expenses of the division were being met by the banks. To the extent, however, that the State has in the past incurred unreimbursed expenditures in maintaining the division, it is true that the reported ratios of expenses to premiums of the banks in that period have not taken all insurance expenses into account. During the earlier years of the system, the premium income of the banks was much lower and the expenditures of the State were proportionately greater than they have been in the past decade. It is therefore true that the expense ratios for the earlier years would, if the State's expenditures were taken into consideration, be in greater excess of the published ratios than they have been in the past decade.

Table 21 shows the expense ratios of the savings-bank insurance system as a whole, taking into account the unreimbursed expenditures of the State, for the years 1923, 1925, 1927, 1931, and 1933. It shows the insurance expenses of the banks, the expenditures not reimbursed to the State, the total expenses of the system, and the ratio of total expense to premium income.

TABLE 21.—*Savings-bank insurance expenses and ratios to premium income, including net expenditures by State*

[Amounts in thousands of dollars]

Year	Banks' expenditures	Net State expenditures	Total	Ratio of total to premium income
				<i>Percent</i>
1923.....	\$49.3	\$32.1	\$81.4	11.39
1925.....	51.1	32.5	83.6	7.28
1927.....	72.2	30.5	102.7	6.49
1929.....	109.5	28.0	137.5	5.85
1931.....	153.5	19.0	172.5	5.57
1933.....	162.8	4.0	166.8	5.12

Even if the unreimbursed expenditures of the State are taken into consideration in formulating the expense ratios of recent years, the expenses of the savings-bank insurance system are still proportionately much smaller than those of the private companies. It should also be noted that despite the fact that a larger part of the expenses of the Division of Savings Bank Life Insurance has been met by the banks, the expense ratio has been declining instead of increasing.

Probably the most important factors explaining the higher expense ratios of the companies are their method of paying commissions for writing insurance and the cost of collecting premiums. The proportion of total income paid by four mutual companies selling both ordinary and industrial insurance¹⁰ in salaries and commissions, and by the savings banks in salaries, for each of the years from 1915 to 1931 is shown in table 22.

¹⁰ These were the only four companies selling both kinds of insurance in the State during the entire period.

TABLE 22.—Ratio of salaries and commissions to total income of 4 insurance companies selling both ordinary and industrial insurance, compared with ratio of salaries to total income of savings banks, 1915 to 1931

Year	Savings-bank ordinary insurance	Company ordinary insurance	Industrial insurance	Year	Savings-bank ordinary insurance	Company ordinary insurance	Industrial insurance
	Percent	Percent	Percent		Percent	Percent	Percent
1915.....	5.12	11.68	23.98	1924.....	3.32	12.83	22.28
1916.....	5.01	12.11	23.72	1925.....	2.88	11.90	22.50
1917.....	4.06	11.40	23.00	1926.....	2.81	11.39	21.62
1918.....	3.47	10.98	22.10	1927.....	2.80	11.27	19.93
1919.....	3.26	13.40	23.15	1928.....	2.70	11.40	18.70
1920.....	3.07	15.37	25.78	1929.....	2.41	11.43	18.26
1921.....	3.74	13.53	24.80	1930.....	2.44	11.14	17.32
1922.....	4.16	13.02	23.12	1931.....	2.32	10.72	15.76
1923.....	3.74	13.26	22.62				

The table shows that the highest ratio of salaries to total incomes experienced by the insurance departments of the banks during the period 1915 to 1931 was that for the year 1915, when the figure was 5.12 percent. The lowest ratio for the period was attained in 1931, when it stood at 2.32 percent. The highest ratio of salaries and commissions to total income of the ordinary departments of the 4 companies during the period was that for the year 1920, when the figure was 15.37 percent. The lowest ratio, 10.72 percent, was reached in 1931. In the case of the industrial departments of the 4 companies, the highest ratio for the period was that for the year 1920, when the figure was 25.78 percent, and the lowest that of 1931, when it stood at 15.76 percent.

The average ratio of salaries to total income of the insurance departments of the banks during their entire history up to 1931 was 2.27 percent. The average ratio of the ordinary-insurance departments of the 4 companies for the period 1915 to 1931 was 11.88 percent. For their industrial departments it was, during the same period, 20.40 percent. Thus the ratio of salaries and commissions to total income over the period considered was on the average somewhat more than 5 times as high for ordinary insurance and about 9 times as high for industrial insurance as the ratio of salaries to total income of the insurance banks.

It has been pointed out that no commissions are paid in connection with savings-bank insurance. The salaries which are included in the above calculations are confined to those incurred directly by the insurance banks themselves, and do not include the salaries paid to the staff of the Division of Savings Bank Life Insurance.¹¹ The annual salaries paid to the whole staff in 1934, assuming them to be based on the salaries paid in July 1934, amounted to \$32,213.33.¹²

Over the period from 1908, when the system first came into existence, to 1933, the total amount paid by the insurance departments of the banks in salaries was \$632,992. This was 2.51 percent of the total

¹¹ It should be emphasized, however, that after 1933 all the expenses of the division, including the salaries, were reimbursed to the State by the banks.

¹² This amount included the salary of the deputy commissioner, the State medical director and his assistant, the State actuary and 4 actuarial clerks, 1 senior clerk and 8 clerks and stenographers, and 2 field workers.

premium income received. The ratios were 2.92 percent in 1932 and 2.11 percent in 1933.¹³

Taxation

The proportionately high expenses of operation of the insurance companies as compared with those of the banks may be explained to a slight extent by the fact that the companies bear a somewhat heavier burden of taxation. The basis upon which the savings-bank insurance system is taxed has been explained in chapter 4. The banks, it will be remembered, pay no Federal income taxes and no fees to the insurance department of the State.

The Commonwealth levies upon the insurance companies an annual excise tax of one-quarter of 1 percent of the net value of all policies in force on citizens of Massachusetts at the end of the preceding year. "Net value" is defined as being equal to the combined aggregate of the mean reserves of each policy or group of policies.¹⁴

The insurance companies are also required to pay Federal income taxes. Under the Federal Revenue Act of 1932 American insurance companies pay a tax of 13¾ percent of their net income. Foreign companies pay a like tax on their income from American sources. The taxable net income of the insurance companies is defined as their "gross income", which includes all income received from interest, dividends, and rent, minus certain items.¹⁵

¹³ Data on expense ratios may be found in the Annual Reports of the Commissioner of Insurance, pt. 2, tables M and N. Data on income, on which these ratios are based, are contained in table B. Salaries of principal officers of the companies in 1932 are contained in table N of the report for that year. Statistics of amounts paid in salaries are to be found in table C of the reports. Information with respect to total salaries and total premium income of the insurance departments of the banks may be found in the annual joint reports of the commissioner of banks and the commissioner of insurance on the condition of the savings-bank insurance system. The calculation of the ratios of salaries and commissions to total income has been taken from Damon, D. Bradford, *The Economic Value of Savings Bank Life Insurance* (unpublished thesis), Boston, Northeastern University, 1933, pp. 24 and 25. Damon's data concern the 4 companies which sell both ordinary and industrial insurance in the State and include the companies selling all but a very small part of the industrial insurance of the country.

¹⁴ The State also taxes foreign companies (i. e., those not incorporated in the State) on the same basis, except that if the jurisdictions in which those companies reside levy taxes on a higher basis than those levied by Massachusetts, the foreign companies must pay in addition a retaliatory tax which would bring their tax up to the level which Massachusetts companies would have to pay in the foreign jurisdictions. Massachusetts also taxes foreign companies 2 percent of the gross premiums collected on Massachusetts business, minus the dividends returned to policyholders, or enough more to raise the total to the amount which domestic companies are taxed in the home jurisdictions of foreign companies operating in Massachusetts. The courts have interpreted the provisions of the law taxing premiums in such a way that it is levied only to the extent necessary to bring the tax paid up to the level of the tax on net value of policies. If the gross premium tax on foreign companies results in a higher tax than would be levied on the net value basis, the foreign companies pay the former. In addition to the taxes already described, which are levied on insurance business proper, insurance companies are taxed at the rate of 1 percent of the premium income on annuity contracts, except where such taxes are already paid by the companies to other jurisdictions. (Mass. Gen. Laws Relating to Taxation, ch. 63, secs. 18, 20, 21, and 22.)

¹⁵ The exempted items include: (1) Interest received from the securities of any political jurisdiction within the United States or its territories, from Federal farm-loan securities, and from obligations of the United States itself or of its territories; (2) an amount equal to 4 percent of the legal insurance reserves, or, if the rate assumed in setting up such reserves is less than 4 percent, an amount equal to 3¾ percent of the reserves; (3) dividends received from corporations themselves subject to Federal income taxation; (4) 2 percent of the sum held as reserve for deferred dividends to policyholders; (5) investment expenses, provided that if such expenses are included in the general expenses the total deduction under this head should not exceed one-quarter of 1 percent of the book value of the mean invested assets; (6) taxes and other expenses paid on the real estate held by the companies, not including special assessments and expenditures for new buildings or permanent improvements; (7) a reasonable allowance for depreciation of property; and (8) interest paid or accrued on the companies' own debts. (United States Revenue Act of 1932, secs. 201, 202, 203, 22b; U. S. Treasury Department, Bureau of Internal Revenue, Regulation 77, Income Tax, Revenue Act of 1932, Washington, 1933, pp. 270-276.)

It should be noted that whereas there are a great variety of deductions permitted by the State laws taxing savings banks and their insurance departments when assets are invested in certain kinds of securities, the State taxes on insurance companies, being levied on net value of policies or on premium income, permit no deductions from the tax base in computing the tax. As regards the Federal income tax, however, the range of exemptions, as is clear from the foregoing discussion, is extensive. The only important difference in the exemptions permitted the savings banks by the State laws and those permitted the insurance companies under the Federal income tax law appears to be that, whereas income from mortgages held by the banks is deducted from the tax base, such exemption is not permitted the insurance companies by the Federal law.

In addition to the taxes described, the insurance companies are required to pay to the State department of insurance a wide variety of fees.¹⁶

It is possible, fortunately, to measure the difference in the burdens of taxes borne by the insurance companies and by the insurance departments of the banks with a considerable degree of accuracy. The reports of the Commissioner of Insurance of Massachusetts give data on the amounts paid annually by the insurance departments of the banks and by the insurance companies in the form of taxes and fees. In the case of the companies these data include all amounts so paid, whether to the State of Massachusetts, to other States, or to the Federal Government. The data for the years 1923 to 1932 are given in table 23.¹⁷ It shows the amounts paid in taxes and fees in each year and the premium income in the case of the savings-bank insurance system, the Massachusetts companies, and all insurance companies.

TABLE 23.—Total taxes and fees, and premium income, of savings-bank insurance system, Massachusetts companies, and all companies, each year 1923 to 1932

Year	Savings-banks life insurance		Massachusetts companies		All companies	
	Taxes	Premium income	Taxes and fees	Premium income	Taxes and fees	Premium income
1923.....	\$5,062	\$714,773	\$2,720,771	\$142,784,902	\$33,912,151	\$1,538,241,842
1924.....	3,733	898,788	3,612,253	155,484,570	39,650,187	1,719,757,262
1925.....	3,859	1,148,264	3,413,788	172,031,790	36,848,354	1,942,063,744
1926.....	3,972	1,365,726	3,719,307	189,839,843	47,719,481	2,175,685,038
1927.....	5,513	1,583,767	4,127,768	210,481,663	52,843,289	2,401,179,876
1928.....	7,485	1,899,167	4,442,931	234,667,411	56,262,269	2,656,870,858
1929.....	7,327	2,369,173	4,491,191	247,075,521	58,903,042	2,830,409,995
1930.....	15,162	2,644,733	4,762,571	259,334,881	60,383,185	2,997,098,775
1931.....	15,996	3,095,236	4,935,366	276,548,841	61,828,340	3,152,099,471
1932.....	17,217	2,979,423	5,330,247	268,129,665	62,725,045	3,027,024,051
Total.....	85,326	18,699,050	41,466,193	2,156,370,087	511,075,343	24,440,841,512

A comparison of the ratios of taxes and fees to premium income shows that during the entire period 1923 to 1932 the savings-bank insurance system paid 0.46 percent, the Massachusetts companies 1.92 percent, and all companies taken together 2.09 percent of premium income for the purpose. Over the whole period 1909 to 1934, the insurance departments of the banks paid in taxes a sum equal to 0.47 percent of their total premium income for the period.¹⁸

During the 4 years 1930 to 1933 the proportion of premium income paid to the State as taxes by the companies on their Massachusetts business was 1.19 percent, or about twice the ratio paid by the banks, which was 0.60 percent. The banks' ratio, which for their whole history was 0.47 percent, rose from 0.53 percent in 1930 to 0.69

¹⁶ Among others, these fees include the following: (1) \$50 for an examination prior to the granting of a license or certificate to do business in the State; (2) 2½ mills for each \$1,000 of insurance for the service of valuing the life policies of the domestic insurance companies; (3) \$20 required from each foreign company for filing the original financial statement necessary before it may do business in the State, and for each financial statement which must be filed annually thereafter; (4) \$2 annually, paid by the companies for the license of each insurance agent employed by them; and (5) \$2 for each certificate of the valuation of a company's policies, or of the examination, statement of the condition, or statement of the qualification of the companies. (Mass. Gen. Laws, ch. 175, sec. 14.)

¹⁷ Annual Reports of the Commissioner of Insurance of Massachusetts, pt. 2, table C.

¹⁸ See appendix A.

percent in 1933. The insurance companies' ratio rose during the same period from 1.13 percent to 1.24 percent.¹⁹

In view of the fact that the savings banks pay no Federal income taxes it is interesting to observe what is paid in this form by the insurance companies. The amounts paid as Federal income taxes by the Massachusetts companies to the United States Bureau of Internal Revenue are shown in table 24. The table also shows the premium income of these companies, and the proportion of premium income paid to the Federal Government.

TABLE 24.—*Federal income taxes paid by Massachusetts companies, their premium income, and ratio of Federal income taxes to premium income, 1926 to 1932*

Year	Amount of tax	Premium income	Ratio
			<i>Percent</i>
1926.....	\$1, 205, 447	\$189, 830, 843	0.64
1927.....	1, 178, 601	210, 481, 663	.56
1928.....	745, 821	234, 667, 411	.32
1929.....	929, 646	247, 075, 521	.38
1930.....	1, 052, 085	259, 334, 881	.41
1931.....	758, 667	276, 548, 841	.27
1932.....	735, 263	268, 129, 665	.27
Total.....	6, 605, 530	1, 686, 068, 825	.39

It will be observed that for the period as a whole the Massachusetts companies paid 0.39 percent of their premium income in the form of Federal income taxes.²⁰

The results of this analysis may be summarized as follows: (1) Over the whole period of their existence up to 1934 the savings-insurance banks paid 0.47 percent of their premium income in taxes; (2) this was also approximately the proportion they paid during the years 1923 to 1932, although during the years 1930 to 1933 the proportion had risen to 0.60 percent; (3) the private companies chartered in Massachusetts paid to all the jurisdictions taxing them or requiring the payment of fees during the period 1923 to 1932 an amount equal to 1.92 percent of their premium incomes; (4) the amount paid by all insurance companies operating within the State was 2.09 percent of premium income; (5) the Massachusetts companies paid 0.39 percent of their premium incomes during the period 1926 to 1932 in the form of Federal income taxes. It is not unreasonable to suppose that approximately the same proportion was paid to the Federal Government by all the insurance companies.

It may be concluded that the insurance companies pay roughly about 2 percent of their premium income in taxes and fees, as compared with about one-half of 1 percent, and in recent years somewhat more, paid by the insurance departments of the banks. The difference in tax burden is thus approximately 1½ percent of premium

¹⁹ Appendix H presents a table showing the amounts paid in taxes to the Commonwealth by the insurance departments of the banks and by the companies and their premium income during the period 1930 to 1933.

The data on taxes paid to the State are from the annual reports of the Massachusetts commissioner of corporations and taxation, 1930 (pp. 134-135), 1931 (p. 87), and 1932 (pp. 117 and 221). Data for 1933 were obtained from the records in the commissioner's office.

²⁰ Data on Federal income taxes were obtained from the U. S. Bureau of Internal Revenue. Data for the years preceding 1926 were not readily available.

income. It cannot, therefore, be held responsible in any significant degree for the difference in the cost of insurance to the policyholders.

Earnings on Invested Assets

The relatively low cost of savings-bank insurance is partly due to the fact that the insurance departments of the banks have usually earned a higher rate of return on their invested assets than have the insurance companies. The net rate of income earned by the savings-bank life-insurance system and by all insurance organizations during the period 1920 to 1933 is shown in table 25.

TABLE 25.—*Net rate of income earned on investments by banks and by all insurance organizations including banks, 1920 to 1933*

Year	Savings-bank insurance departments	All organizations, including banks	Year	Savings-bank insurance departments	All organizations, including banks
	<i>Percent</i>	<i>Percent</i>		<i>Percent</i>	<i>Percent</i>
1920.....	5.58	5.03	1927.....	5.25	5.02
1921.....	5.65	5.22	1928.....	5.18	5.04
1922.....	5.62	5.29	1929.....	5.39	5.02
1923.....	5.32	5.34	1930.....	5.14	5.02
1924.....	5.49	5.33	1931.....	5.12	4.91
1925.....	5.21	5.06	1932.....	5.02	4.65
1926.....	5.30	5.06	1933.....	4.67	4.25

The highest return during the period was earned by the banks in the year 1921, when the interest earned was 5.65 percent of invested assets. The lowest rate of return, 4.67 percent, was earned in 1933. The best year for all the insurance organizations as a whole was 1923, when their assets earned 5.34 percent. The lowest rate, 4.25 percent, was earned in 1933. In only 1 year of the 14-year period did the banks receive a smaller rate of return than the combined insurance organizations. In 1923 the latter earned 5.34 percent, as compared with 5.32 percent earned by the insurance departments of the banks.

The more favorable earnings of the banks may be credited in part to the difference in the types of investments which may be made by the companies and by the savings-bank insurance departments. As has been shown in chapter 4, investment of all the assets of the insurance departments of the banks is closely restricted. The insurance laws of Massachusetts and of some other States require that 100 percent of the paid-in capital of the companies and at least 75 percent of their reserve funds must be invested in the restricted range of securities open to the savings banks. The exceptions to this statement are as follows: (1) The companies may invest in the securities of any political jurisdiction in the Dominion of Canada, whereas the savings banks may not do this; (2) the companies may invest in real estate and mortgages on property anywhere in the United States, whereas the banks may invest only in such items within the State of Massachusetts; (3) the companies may not invest in bank stock, as the savings banks are permitted to do. All of the funds of insurance companies except the 75 percent of reserves and the capital, may be invested in the securities open to the companies as

stated above, and also in bank and trust-company stock, shares of cooperative banks, and deposits of savings banks and savings departments of trust companies in the State.

The fact that the banks may invest only in mortgages on real estate in Massachusetts, while insurance-company mortgages may represent property all over the country, is probably responsible in part for the larger investment return of the banks in recent years. Most of the bank mortgages are for small amounts and represent property in the community in which the bank operates. In the case of the mortgage investments of the insurance companies considerable funds have been invested in large buildings, and in western and southern farm lands, which have had an unfortunate earning experience in recent years.²¹

Mortality Experience

A further reason for the low costs of savings-bank life insurance is to be found in the comparatively low ratios of actual to expected mortality losses experienced by the banks. These ratios for the banks, for all ordinary insurance, and for industrial insurance, during the years from 1910 to 1933, are shown in table 26. The table indicates that mortality ratios are generally lowest in the case of savings-bank insurance and highest in the case of industrial insurance.²²

The lowest ratio during the period for savings-bank insurance was that of 1911, when the figure was 22.35 percent. The highest ratio was that of 1918, the year of the influenza epidemic, when it reached 77.90 percent. Ordinary insurance enjoyed its lowest ratio in 1913, when the figure was 35.96 percent, and its highest ratio in the epidemic year, 1918, when it stood at 96.69 percent. The highest ratio for industrial insurance, 142.78 percent, was experienced in the same year, while the best year was 1932, when the industrial mortality ratio was 55.72 percent. It should be noted that the mortality ratios for savings-bank life insurance were lower than those for all ordinary insurance and for industrial insurance in every year, and that in all but the last 4 years of the period the mortality ratios for ordinary insurance were lower than those for industrial insurance. It should also be observed that the mortality ratios of savings-bank life insurance have been lower during the last 4-year period as a whole than in any of the preceding 4-year periods except the first. The ratios for ordinary insurance show a fairly steady decline until 1925. Since that year they have risen. On the other hand, the mortality ratios for industrial insurance have shown a remarkable decline throughout the period.²³

²¹ Data on the net rate of income earned on investments may be found in the Annual Reports of the Commissioner of Insurance, pt. 2, tables M and N. The restrictions imposed by law on the insurance companies' investments are contained in the General Laws of Massachusetts, ch. 175, secs. 63-68. For percentage distribution of savings-bank insurance investments see ch. 4, table 9.

²² It should be noted that whereas savings-bank and, as a rule, ordinary ratios are based on the American Experience Table, industrial insurance ratios were based on the Standard Industrial Mortality Table, which assumes greater risks of mortality. If all ratios were based on the same table, the industrial ratios would, of course, be relatively greater than those shown in the table.

²³ Mortality ratios are published in the Annual Reports of the Commissioner of Insurance, pt. 2, tables M and N.

TABLE 26.—*Ratios of actual to expected mortality losses for savings-bank, all ordinary, and industrial insurance, 1910 to 1933*

Year	Savings-bank insurance	All ordinary insurance including savings-bank life insurance	Industrial insurance	Year	Savings-bank insurance	All ordinary insurance including savings-bank life insurance	Industrial insurance
	Percent	Percent	Percent		Percent	Percent	Percent
1910.....	30.84	70.63	104.49	1922.....	45.36	53.68	65.42
1911.....	22.35	70.78	100.17	1923.....	51.97	55.10	66.69
1912.....	24.64	70.57	97.69	1924.....	45.57	53.09	65.21
1913.....	35.42	35.96	98.76	1925.....	44.98	51.51	66.02
1914.....	28.32	66.58	96.52	1926.....	43.24	53.59	68.07
1915.....	34.94	68.35	92.31	1927.....	43.74	53.78	63.88
1916.....	53.05	68.43	95.10	1928.....	36.22	57.91	64.23
1917.....	30.19	63.05	93.96	1929.....	46.85	60.89	66.37
1918.....	77.90	96.69	142.78	1930.....	41.55	61.80	60.04
1919.....	63.57	66.40	83.25	1931.....	39.43	63.48	59.50
1920.....	57.90	60.29	76.13	1932.....	39.85	63.10	55.72
1921.....	32.12	51.88	63.52	1933.....	36.77	63.31	56.25

By and large, however, industrial mortality ratios have been considerably above those for ordinary insurance. There is in general a greater burden of mortality among wage earners than among the rest of the population. This should not, however, cause industrial insurance ratios to be higher, since the industrial companies base their calculations of expected mortality losses upon the Standard Industrial Mortality Table, which takes into account the higher mortality among wage earners. Even though this higher mortality does not affect the ratios of actual to expected mortality losses, it would account in part for relatively high industrial premiums, since larger reserves would be necessary to meet the greater likelihood of paying insurance benefits.

Generalizations based on mortality ratios must be used with great care, and are especially unsafe when they result in comparisons between different insurance organizations.²⁴ Though at first glance they appear to demonstrate that the mortality ratios of the banks are lower than those of the companies, they by no means prove conclusively that this is so for all ages and types of insurance. To do this it would be necessary to examine the ratios of the banks and of the companies at given ages and for similar policies. Official data on this point are not available in the published reports. To procure them from a sufficient number of companies has not seemed feasible. Under the circumstances, therefore, it seems desirable to consider savings-bank mortality ratios by making an analysis of the factors which are relevant to the question, and to refrain as much as possible from relying on data concerning average mortality ratios. It is pertinent to point out, however, that there is general agreement that savings-bank mortality ratios are relatively low.

Undoubtedly one important reason for the relatively high industrial mortality ratios is that no medical examinations are required of applicants for industrial insurance, as they usually are in ordinary insurance issued by the companies and of savings-bank insurance.

²⁴ On the dangers involved in making such comparisons see a paper by Edward W. Marshall entitled "The Interpretation of Mortality Statistics," printed in vol. 33 of the Transactions of the Actuarial Society of America, 1932 (pp. 74-91); and a memorandum by C. R. Fitzgerald, actuary of the State Mutual Life Assurance Society of Worcester, Mass., prepared in 1931.

Some of the ordinary companies sell group insurance, the mortality ratios for which, largely because medical examinations are not usually required, are much higher than for straight life insurance. These group-insurance ratios are included in the data for ordinary insurance. The savings-bank mortality ratios also include losses due to group insurance. Since the proportion between group insurance and ordinary insurance carried by the banks and all the companies are similar, the difference in ratios between the banks and the ordinary companies cannot be explained on this ground.²⁵

It has been commonly declared that, since savings-bank insurance is relatively new, it would naturally experience a lower mortality ratio than that of insurance companies which have operated over a long period of years. This statement is based on the fact that since a new insurance system is not so likely to have as many old people among its policyholders as an old system, the great improvement which has been made in the elimination of disease among younger persons and their consequent increase in longevity since the time when the American Experience Table was constructed result in a mortality ratio favorable to the insurance system with the greater proportion of young policyholders.²⁶ Another item operating in favor of a new insurance system is the fact that it is likely to have among its policyholders a greater proportion of very recent entrants, in whose case the effect of the preliminary medical examination has not yet been dissipated.²⁷ Since, as compared with long-established insurance companies, the insurance departments of the savings banks probably have a smaller proportion of aged policyholders, and since it is true that the system has grown very rapidly of late, the fact that savings-bank insurance is relatively new may properly be given some of the credit for the favorable mortality ratio which it enjoys.

Another factor which appears to be pertinent arises from the method of selling insurance. In border-line cases, where the medical examiner is in doubt as to what his decision should be, the influence and persuasion of the insurance agent may occasionally be the determining factor in the approval of the applicant. In this connection it is important to note that the compensation of no individual is directly increased or decreased if a physician approves or fails to approve an application for savings-bank insurance. As in the case of the private companies the medical examiner's fee is the same whether or not the applicant is approved; but whereas, in the case of the companies, rejection by a physician will affect the income of the agent and his immediate superiors, in the case of savings-bank insurance there is no commission or other income lost to anyone if a doubtful applicant is rejected. The only possible exception to this statement is that agencies collecting premiums for the banks are entitled to receive 2 percent of these collections as fees. It should be pointed out, however, that the possibility of persuasion or influence being brought to bear upon the medical examiners by collection agencies is exceedingly small, as is obvious from the fact that in 1932 only 0.89 percent of premium income was actually paid in collection fees.

²⁵ See Annual Reports of the Commissioner of Insurance of Massachusetts, pt. 2, table G.

²⁶ See ch. 1 for a discussion bearing on this matter.

²⁷ The medical examination tends to eliminate bad risks. After 3 or 4 years, however, the insured may develop new ailments, and the effect of the examination may thus be said to have "worn off."

Another factor which probably operates in favor of the savings banks is the relatively small amount of insurance carried by the average policyholder in the system. As will be shown in chapter 8, the great proportion of savings-bank policyholders are persons whose incomes are not high. Experience indicates that persons who hold policies of many thousands of dollars are poorer risks than are small policyholders. Since some risks are always likely to prove unsound in the end, a large risk falling in this category would occasion a heavier mortality loss than a small one. In other words, the death of a person carrying a \$100,000 policy would result in mortality losses equal to those due to the death of 100 persons of the same age, each carrying a \$1,000 policy of the same type. Furthermore, wealthy persons are more likely to engage in irregular living, if for no other reason than that they can afford it better than people with small or moderate incomes. That insurance companies believe these facts of importance is obvious, since they go over applications for large insurance policies much more carefully than they examine those for small policies. They usually make an examination, with the aid of a credit agency using under-cover investigators, to find out whether the applicant for a large policy is a man of good habits, and they often reject such applications on grounds which, though not usually stated to the applicant, are as a rule not even considered worth investigating in the case of applicants for small policies. Despite such investigations, however, risks are often accepted which in the end turn out to have been unsound. Though the savings-bank insurance system also inquires carefully into the living habits of large applicants and is likely to accept small applicants merely if the latter are sound in health, the fact that such a small proportion of their policyholders are well to do probably operates in favor of a lower mortality ratio than that experienced by the companies.

In later years large amounts of savings-bank insurance have been sold, with the encouragement of employers, to workers in factories throughout the States. Such establishments have usually been of the modern type. Sanitary and safety conditions have been of a high order. As a result the employees of such plants are likely to prove good insurance risks. This also may account to some extent for the lower mortality ratios of the banks.

To what extent may the admittedly low ratio of the banks be expected to continue? As the system becomes older the proportion of aged persons insured in it will become greater. This appears to be the only important factor which might operate in the future in the direction of a higher ratio. Operating in favor of maintaining the existing favorable experience are the following factors: (1) The system has attained a momentum which promises to bring in large numbers of new policyholders every year, with the consequence that the part played by the effect of recent medical examinations in promoting a low ratio may actually become more important than it is; (2) the very nature of the system, with its elimination of agents' commissions and the part they play in encouraging the acceptance of bad risks, will be effective in maintaining a lowered mortality ratio; (3) savings-bank life insurance is not likely to experience to any considerable extent reduction in the proportion of small policyholders. There is every reason, therefore, to suppose that savings-bank insurance will continue to enjoy a relatively low mortality ratio.

It should be observed in conclusion that it is not possible to account with finality for the mortality ratio of the savings-bank life insurance system by assigning definite and exact credit to any of the factors discussed. Much of the discussion is admittedly based on a priori reasoning. To the extent that such reasoning is sound the ratio may be regarded as explained, at least in part. That some of the factors above described actually do affect the mortality ratio does not seem open to question. Others have been stated conjecturally and conditionally. Complete accuracy and finality do not seem possible of attainment in the solution of the problem.²⁸

In the final analysis, however, the mortality ratios of the savings-bank insurance system are lower than those of the private companies taken as a whole. This factor, together with relative expenses and earnings on assets, plays an important part in accounting for the lower cost of savings-bank life insurance.

²⁸ Suggestions with respect to an explanation for the low ratio of the insurance departments of the banks were obtained in numerous interviews. Those with Dr. Burnett, the State medical director, and with Mr. Richard Harding of the Associated Industries were especially valuable in this respect. A memorandum by Mr. Harding, entitled "The low mortality of savings-bank life insurance" is particularly suggestive.

Chapter 7.—Factors Affecting Growth of Savings-Bank Life Insurance

An important factor affecting the growth of savings-bank life insurance is its advantage to the policyholders as compared with the insurance bought from insurance companies, whether of an industrial or ordinary type. Its favorable cash surrender privileges, the greater availability of loans on policies, the various other types of nonforfeiture privileges, the fact that, because of paying no commissions to agents and having a relatively favorable mortality experience, savings-bank insurance may be obtained at comparatively low cost—all these advantages make it a desirable type of insurance for the ordinary person. Its rapid growth in recent years indicates that its advantages are becoming more widely known among the citizens of Massachusetts.

In this connection it is significant that there are a number of independent insurance brokers in Boston who recommend that their clients buy savings-bank life insurance instead of ordinary insurance with a private company. Their attitude is that they cannot hope to sell insurance at a cost as favorable as that at which it may be bought from the savings banks, and though, by recommending the latter type, they obtain no commission, they hope that clients, in return for the agents' frankness, will purchase through them such insurance in excess of the maximum of \$23,000 as the clients may require. They hope, further, that since holders of large amounts of insurance are likely to be purchasers also of insurance other than life, such insurance will be bought through them.¹

Public Support

As in any important movement, the character of its leadership has much to do with the growth of the system. From the beginning of the campaign to enact the savings-bank insurance law until the present moment, the system has been fortunate in the type of leaders who have promoted its interests. Throughout its history it has had among its advocates some of the leading business men, labor leaders, and educators of the State.² It has also had the advantage of the

¹ A number of insurance brokers following this policy were interviewed by the author. The names of others were given to him.

² At the beginning of its career such important persons as Governors Bates and Douglas, and President Eliot, of Harvard University, were its advocates, and it benefited from the unpaid services of Gen. S. H. Wolfe, one of the leading independent insurance actuaries in the country, who served as consulting actuary. In recent years it has had the active support of former Gov. David I. Walsh, now United States Senator, of Mr. Lincoln Filene, of Mr. B. Preston Clark of the Plymouth Cordage Co., of Governor Ely, and of Mr. Robert J. Watt, of the State Federation of Labor. For many years it has been greatly aided by Mr. Judd Dewey, now deputy commissioner of the Division of Savings Bank Life Insurance, who served it as unpaid counsel. The system of savings-bank life insurance benefited especially from the leadership of Miss Alice H. Grady. She became the financial secretary of the Savings Bank Insurance League when it was founded in 1906, and retained that position until Jan. 1, 1934, when she resigned because of ill health. On Sept. 10, 1917, she was elected clerk and secretary of the General Insurance Guaranty Fund, and served as such until her death on Apr. 19, 1934. The trustees of the fund appointed her executive secretary of savings-bank life insurance on June 12, 1919. When the law creating the position of deputy commissioner of the Division of Savings Bank Life Insurance was passed on May 28, 1920, the trustees appointed her to this position and she remained deputy commissioner until her death. Both the friends and the opponents of the savings-bank insurance system testify to Miss Grady's loyalty and aggressiveness as the actual head of the system. She seems to have been a redoubtable protagonist and to have defended savings-bank insurance with great effectiveness.

active support and aid of the Massachusetts Savings Bank Insurance League. The league was formed on November 26, 1906, with former Gov. W. L. Douglas, a leading industrialist, as president, and an influential group of persons as its other officers. Its original name was The Massachusetts Savings Insurance League. On February 3, 1930, the organization incorporated under the title of "The Massachusetts Savings Bank Insurance League."³

The earliest task of the league was to promote public support for the enactment of the original bill. As soon as the bill became law the league devoted its attention toward interesting the savings banks in setting up insurance departments, an effort in which it was not successful until 1908, when both the Whitman Savings Bank and the People's Savings Bank of Brockton came into the system. During its entire history the league has carried on active publicity work to promote savings bank insurance.⁴ It has cooperated closely with the work of the State Division of Savings Bank Life insurance at all times in fulfilling its aim, "to acquaint the people of Massachusetts with the opportunities offered by the savings banks for securing life insurance and old-age annuities at cost."⁵

Numerous other organizations have joined with the league in promoting savings-bank insurance. From the beginning the movement has had the support of many of the trade unions of the State. The Massachusetts State Federation of Labor, the Boston Central Labor Union, and the American Federation of Labor have taken a position in favor of savings-bank insurance. The Boston Chamber of Commerce, in early years the Massachusetts Civic League, and in recent years the Associated Industries of Massachusetts, have been among its supporters.⁶

Activities of Employers and of Associated Industries of Massachusetts

Savings-bank life insurance has at all times received the active support of many employers. The savings-bank insurance law, by permitting the setting up of agencies empowered to receive applications for insurance and to accept premiums as agents for the issuing banks, makes possible the establishment of an employer's agency by any employer who wishes to promote the sale of the insurance among his workers. When a worker buys savings-bank life insurance through

³ See ch. 2.

⁴ Early in the year 1934 it organized a course of eight lectures on savings-bank life insurance. This course, which was offered by the division of university extension of the State department of education, was well attended and was offered for the benefit of savings-bank employees, members of civic organizations, and any others interested in the operation of the system. Among the lecturers were Miss Grady, Mr. Judd Dewey, Mr. E. F. Caldwell, actuary of the system, and Mr. George L. Barnes, then Commissioner of Savings Bank Life Insurance. The league has actively defended the system against legislative attempts to restrict its scope.

⁵ The activities of the league have been supported by contributions from a considerable number of persons. Prominent among them have been Mr. Charles H. Jones, president of the Commonwealth Shoe & Leather Co. and holder of the first policy issued under the law (policy no. 1 of the Whitman Bank), Mr. Louis Kirstein, Mr. H. P. Kendall, Mr. J. E. McElwain, Mr. E. J. Bliss of the Regal Shoe Co., and Mr. James L. Richards of the Boston Consolidated Gas Co. The present officers of the league include Mr. Lincoln Filene, president, Mr. Judd Dewey, first vice president, United States Senator David I. Walsh, second vice president, and Mr. Charles W. Rehor, third vice president. Its treasurer is Mr. J. William Fellows, and its executive secretary Mr. Arthur W. Sampson.

⁶ It is significant that at the beginning of 1934, when a measure was being considered by the legislature which the officials of the Division of Savings Bank Life Insurance regarded as prejudicial to its interests, representatives of both the State Federation of Labor and of the Associated Industries of Massachusetts, two groups frequently in opposition to one another, appeared before a legislative committee to defend savings-bank life insurance against what each organization regarded as an unwarranted attack upon it.

an agency set up by his employer, he frequently authorizes the agency to make weekly or biweekly deductions from his wages and directs that these deductions be deposited in some savings bank until such time as a sum sufficient to pay the premium has been accumulated to his credit. At that time the savings bank turns the premium over to its own insurance department, or if it is not an issuing bank, to the insurance department of the bank which issued the policy. The function of the employer who acts as agent is not only to make wage deductions and transfer them to the savings banks, but to do what he can to educate his employees concerning the advantages of savings-bank insurance. The fact that the Division of Savings Bank Life Insurance employs instructors whose function it is to carry on this education is of importance in this connection.

For years numerous personnel managers in the State have urged their workers to buy their insurance from the savings banks. As a result of their effort and those of a number of important employers in the State, the Associated Industries of Massachusetts, the most important organization of manufacturers in the Commonwealth, became interested in savings-bank life insurance. A secretary who devotes his time exclusively to the promotion of savings-bank insurance is employed by the organization.⁷ He has made numerous surveys with the aim of giving employers an idea of the savings which their workers would make if they carried savings-bank policies instead of industrial policies. These surveys have usually succeeded in convincing employers of the advantages of savings-bank life insurance.⁸

Attitude of the Savings Banks

Throughout the history of the system savings banks have hesitated to enter the ranks of the issuing banks. In 1912 only four banks were issuing policies and it took more than 10 years before other banks joined them. Six banks joined the system between 1923 and 1925. The greatest number came in from 1929 to 1931, when 11 new banks began to issue policies. At present, in addition to the 23 issuing banks themselves, other savings banks and their branches, to the number of 103, act as agencies receiving applications and premiums for savings-bank insurance. Despite the relatively rapid growth of the system in recent years, its slow acceptance by savings banks as a whole requires consideration.

Why have not more of the 193 mutual savings banks operating in the State in 1933 become issuing banks? Undoubtedly the conservatism of the trustees and officers of the banks is a factor of importance. Their long tradition of carefulness and circumspection in the management of their institutions was largely responsible in the early years for their refusal to venture into the field of insurance. It is not unlikely that the same factor still operates, in numerous instances, to

⁷ Mr. Richard B. Harding has held this post since its creation in 1930. The Associated Industries in that year also established a subcommittee on savings-bank life insurance.

⁸ It should be understood that neither the Associated Industries nor the employers who set up agencies before that organization became interested in savings-bank life insurance are in this connection interested in the sale of group insurance. Their concern is with the sale of ordinary life insurance among employees as a substitute for the industrial insurance held so extensively by workers and their families. The material upon which this section is based was obtained from interviews, in June and July 1934, with the following persons: Mr. Richard B. Harding; Mr. B. Preston Clark; Mr. Royal Parkinson, personnel manager of the American Optical Co.; Mr. A. M. Porton, personnel manager of Crompton & Knowles; Mr. H. Smith, cost accountant of the Uxbridge-Worcester Co.; and Mr. Paul W. Viets, employment manager of the Plymouth Cordage Co.

keep the banks exclusively in the savings-bank business. Another hindrance to the establishment of insurance departments may be the fact that officers of insurance companies and insurance agents are often on the boards of trustees of the savings banks, and they are not likely to encourage the establishment of insurance departments. A further factor which operates to retard the entrance of banks into the system is the fact that, though savings-bank insurance has been sold for many years, many trustees of banks are still unacquainted with its advantages and the nature of the system itself.

Despite these factors, the number of banks acting as underwriters and the much greater number serving in the capacity of agencies indicate that the system offers certain advantages to those banks which are associated with it. One of these advantages has been suggested by an opponent of the savings-bank insurance system as at present operated. Wesley E. Monk, general counsel of the Massachusetts Mutual Life Insurance Co. and a former insurance commissioner of Massachusetts, described one motive of savings banks which sell insurance as follows:

Savings banks and their trustees, as such, in my judgment, are not interested in engaging in the life-insurance business except for one reason, and that reason is a perfectly sound one, so far as the savings banks are concerned, if they desire to complicate their business to that extent. That reason is based upon the thought and belief that in obtaining policyholders in their life-insurance departments, they thereby encourage people to become depositors in the savings departments of the savings banks. This thought is similar to that which exists in connection with Christmas clubs, school deposits, and other means of inducing people to open accounts, and the same reasoning applies to those savings banks which have no savings-bank insurance departments, but who are acting as agents for the collection of premiums.⁹

Undoubtedly, this is a fair statement of one of the motives of the savings banks in associating themselves with the system. The officers of the banks are convinced that such an association actually does increase the number of their depositors. They point out that when an employer is directed to make deductions from the wages of his workers for the payment of premiums, he deposits the amounts so deducted with the savings banks, where they remain on deposit until such time as an amount sufficient to pay the regular premium has accrued. Not only does this result in an increase in the deposits of the banks, but it also increases the number of regular depositors. Furthermore, these depositors are likely to become regular customers of the savings banks. The savings departments may also benefit in those instances where policyholders pay premiums directly to the banks. Such persons are brought into regular contact with the banks. If they have not been depositors before, they are more likely to become depositors as a result of such contacts. Furthermore, the fact that the banks encourage the deposit of small sums regularly and the payment of insurance premiums from such deposits at quarterly, semiannual, or annual intervals, is likely to lead both to an increase in deposits and in the number of regular deposits. It should be remembered also that agency banks collect a transmission fee equal to 2 percent of the premiums they receive and that this may often amount to more than the cost of collection. Furthermore, the banks which are connected with the system come into possession of funds

⁹ Monk, Wesley E., *Observations Relative to Savings Bank Life Insurance*. Testimony before the joint legislative committee on insurance, Feb. 12, 1930, p. 3.

which are available, to a considerable extent, for investment in the communities which they serve. Their prestige and importance are thereby enhanced and their part in the business life of the community assumes greater proportions.

It is significant that the Savings Bank Association of Massachusetts, which represents the mutual savings banks of the State, and which was indifferent to savings-bank life insurance over a period of many years, appeared in 1934 before a committee of the legislature and opposed the passage of legislation which might be conceived as being directed against the system.¹⁰

¹⁰ The information upon which this section is based was obtained from interviews with officials of the Division of Savings Bank Life Insurance; with Charles J. Bateman, Jr., director of the division of savings banks in the department of banking; with G. Arthur Small, treasurer of the Uxbridge Savings Bank; and from a number of mimeographed letters issued under the signatures of officers of various savings banks. These letters are noted in appendix L.

Chapter 8.—Criticism of Savings-Bank Life Insurance

The savings-bank life insurance system has been subject to criticism for many years. Its opponents have not asserted that the system is unsound from an actuarial point of view. Their position has been well expressed by an important life-insurance official as follows: "No objection can be made to savings-bank life insurance as insurance. It is sound insurance actuarially. It can be bought at a low net cost. Some of the methods used in the promoting and conduct of the business, however, are objectionable."¹ The purpose of the present chapter is to describe the objections which have been commonly made to the operation of the savings-bank life-insurance system, and to attempt, where feasible, to evaluate them.

The significant criticisms of the system may be considered under the following heads: (1) That savings-bank insurance is at present not fulfilling the purposes for which it was originally intended; (2) that savings-bank insurance does not give the service available to the policyholder of the insurance companies; (3) that savings-bank insurance can be sold at a low cost to the policyholder only because part of its actual cost is met by subsidies from private sources and from the depositors of the banks.²

¹ Monk, Wesley E. Observations Relative to Savings Bank Life Insurance. Testimony before the joint legislative committee on insurance, Feb. 12, 1930, p. 1.

² Another criticism is concerned with the fact that the insurance companies are compelled to pay a higher tax than are the insurance departments of the banks. This matter has already been discussed in ch. 6, in which it was shown that whereas the insurance departments of the banks pay about one-half of 1 percent of their premium income in taxes, the insurance companies pay a proportion about four times as great.

Two other frequently reiterated criticisms are not considered in the text, since they appear not to be pertinent to the merits of the Massachusetts system of savings-bank life insurance as an insurance organization. The first has to do with the fact that the savings-bank insurance enjoys certain advantages not available to private companies. These consist of the State seal on stationery used and literature issued by the Division of Savings Bank Life Insurance, the use of offices in the Statehouse, and the activities of employees paid by the State to promote the sale of insurance competing with that sold by the companies. It is contended that these things create an impression among the citizens of the State that the Commonwealth of Massachusetts itself guarantees the safety of savings-bank insurance, and that for the State to promote actively the sale of such insurance and to permit false ideas as to the existence of a State guaranty to continue, constitute a species of unfair competition with the companies. The objection has been expressed in the following terms:

"It is carried on under the false belief, and practical misrepresentation to the public, that it is State insurance. As a matter of law and as a matter of fact, it is not State insurance. Not one dollar of value of the property of the Commonwealth is back of it, and not one obligation of the State guarantees it, and yet purchasers of this insurance believe that if perchance contracts are in danger of not being carried out, the Commonwealth in some way or other is a guarantor of their fulfillment.

"It is a fact that this general belief that the Commonwealth is back of this insurance is encouraged, if not by direct expression, certainly by the implication which arises when representatives of the Savings Bank Insurance Division of the State request an entree to business concerns and request assistance from the heads of business houses to instruct, educate, and solicit this insurance for the savings banks. Its needs no proof that a representative of the State of Massachusetts, appearing with his credentials, will receive more attention and will obtain privileges and preferences that the representatives of a private concern will not receive. This results in unfair competition * * * (Monk, Wesley E. Observations Relative to Savings Bank Life Insurance. Testimony before the joint legislative committee on insurance Feb. 12, 1930, p. 1.)

Another critic asks, "Could there have been found any group of 12 men financially equipped who would not have been willing to pay actually in cash into the State \$1,000,000 or even twice that sum for such an exclusive charter, for the use of the statehouse as a home office, and for the right to use the State seal with which to create and broadcast the impression that the State is guaranteeing a life insurance company so constituted?" (De Groat, Floyd E. Mutual Savings Banks and Mutual Life Insurance. Reprinted from article in the Spectator (issues of Mar, 19 and 26 and Apr, 2, 1931), p. 4.)

Footnote continued on p. 66.

The Original Purpose

It has been asserted frequently that the intention of the savings-bank insurance law when passed was to meet the evils of industrial insurance, that the law was sought because it was regarded as necessary in order to enable workers to buy insurance at low cost and under reasonable conditions, and that at present, with the maximum amount which may be purchased in any one bank equal to \$1,000 and the possibility of buying savings-bank insurance in amounts as great as \$23,000, the system has departed from its original purpose and has become a system of ordinary life insurance, catering to the needs of persons in the higher income groups. One critic expresses this position in the following words:

At the time the savings-bank life insurance came into being, the chief reason back of it was that it provided a method by which the man of small means could procure insurance cheaply. It was not admitted, and would have been disputed and denied, that it was made for bank directors or others of equal means.³

Continuation of footnote 2.

Some insurance company officials have suggested that as a means of eliminating these objections, all connection between the savings-bank insurance system and the State be severed. It is proposed that the banks themselves engage actuaries and medical directors, and operate their insurance departments without the aid or supervision of the Division of Savings Bank Life Insurance and of the General Insurance Guaranty Fund, the officers and members of which are government appointees or employees of the State. In 1930 these proposals were embodied in a bill which was considered by a legislative committee but was not approved. (Monk, Wesley E. Observations Relative to Savings Bank Life Insurance. Testimony before the joint legislative committee on insurance, Feb. 12, 1930, pp. 5-8.)

The advocates of the savings-bank life insurance do not, of course, deny the fact that the system is benefited by the State's connection with it. They point out, however, that the officials of the division and the banks make every effort to explain that there is no State guaranty of savings-bank life insurance. They assert that the State, in fostering the system, is doing something socially desirable, since the system has the effect of offering insurance to the citizens of the State under conditions which are to their great advantage. They believe that in order to promote socially desirable ends, the State is justified in following such a course.

A second criticism which appears to have no relation to the merits of savings-bank insurance is to the effect that the savings banks should not be in the insurance business. In the pamphlet already quoted Mr. Wesley E. Monk says that "The savings banks should not be in the insurance business any more than insurance companies should be in the savings-bank business. It is just as logical to permit mutual insurance companies to be in the savings-bank business as a motive by which more insurance could be sold, as it is to permit savings banks to be in the insurance business in order to induce more savings accounts." (Monk, Wesley E. Observations Relative to Savings Bank Life Insurance. Testimony before the joint legislative committee on insurance, Feb. 12, 1930, p. 5.)

Mr. F. E. De Groat puts the matter as follows:

"Should mutual life insurance companies enter the savings-bank field? It is possibly one of the greatest safeguards with which mutual life insurance is surrounded that either by charter provision or by choice, it has confined itself to the making of contracts which involve the life risk. The charter of one of the most famous life-insurance companies in America expressly provides the following: 'No part of the funds of said corporation shall be used for banking purposes.'

"Mutual savings banks have naught to do with the making of contracts, nor of interest guaranties; they are depositories only. The departure of mutual savings banks from the performance exclusively of those functions which have made them what they are, may prove unwise; adding to their functions by making contracts involving the life risk, is deplored by many persons of unquestioned financial acumen, including some of those prominently identified as directors of the greatest savings institutions in America." (De Groat, Floyd E. Mutual Savings Banks and Mutual Life Insurance. Reprint from article in the Spectator (issues of Mar. 19 and 26, and Apr. 2, 1931), pp. 13-14.)

Against this position the advocates of the savings-bank insurance system urge that if the banks are in the insurance business when they operate a distinct insurance department within their establishments, the insurance companies are no less in the banking business when they sell endowment insurance, which is a combination of insurance protection and savings, and when they sell annuities, which is a form of savings. They point out that endowment insurance has constituted, over the last few decades, an increasingly important form of insurance sold by the private companies.

This attitude is expressed clearly in an open letter written by Mr. Elmer A. MacGowan, treasurer of the New Bedford Institution for Savings, to a person who complained that the savings banks had no business to enter the insurance field. The letter declares: "As a matter of fact, the life-insurance companies have entered the banking field. That is to say, they are soliciting and receiving savings as such. You know * * * that only a fraction of the premium on endowment policies represents or is claimed to represent the insurance feature, and at the younger ages more than half of the premium is intended to enable the company to pay the policy off at a stated time. A considerable part of the 3 billion dollars of assets of [a certain company] is made up of moneys which it has received in this way, not as cost of life insurance and not for the purpose of meeting any death claims, but for the purpose of repayment to the policyholders in the form of accumulated savings under endowment policies. If that is not engaging, to all intents and purposes, in the banking business, then I don't know what is. Certainly you are doing in that connection an important part of the banking business. That is, you are collecting and receiving savings for investment as such." (Elmer A. MacGowan, in an open letter to Mr. D. Howard Nolan of New Bedford, June 7, 1930, obtainable from the Division of Savings Bank Life Insurance.)

³ Monk, Wesley E. Observations Relative to Savings Bank Life Insurance. Testimony before the joint legislative committee on insurance, Feb. 12, 1930, p. 6.

Another puts the matter as follows:

It came into being as an instrumentality for the benefit of the working class. In other words, it would furnish industrial insurance at a cost below that in regular industrial companies. The limit of insurance on a single life was to be \$500, and in the beginning only four banks availed themselves of the permissive law to enter into life-insurance transactions. The industrial field in due course was abandoned for the reason that the plans were totally inadequate for the job in hand. It embraced life insurance of the ordinary type, and makes today its principal appeal to the well-to-do, so that, while originally set up by the State for a charitable purpose—an insurance breadline, so to speak, for the poor and needy—the line remains, but those who stand in it are more often the rich and greedy.⁴

The critics propose that in order to put the system once more upon the course which it was intended to run, the maximum which may be carried by any one person should be limited to \$5,000, regardless of the number of banks authorized to write insurance.

The proponents of savings-bank insurance admit, in answer to the foregoing objections, that one of the principal purposes in the mind of the framers of the law was to eliminate the evils of industrial insurance by proposing a sound substitute for such insurance. They point out, however, that there were other purposes which the law was intended to fulfill. The bill in its original form, and as finally enacted in June 1907, permitted each insurance department to write policies up to the maximum of \$500 on a single life and placed no limit upon the number of banks which might establish insurance departments. When the bill was enacted there were 189 mutual savings banks operating in the State. Thus it would have been possible at the time, if all the banks had chosen to enter the system, for a single person to carry policies totaling \$94,500. The possibility of this was present for all to read in the bill itself. Mr. Alfred A. Aikin, then the treasurer of one of the large savings banks in Worcester and later one of the vice-presidents of the New York Life Insurance Co., speaking before the legislative committee in opposition to the enactment of the savings-bank life-insurance bill on April 4, 1907, implied this was a possibility if the bill were passed.⁵

The advocates of savings-bank insurance also point out that at the time the law was enacted there was in effect a limit of \$1,000 upon the amount which anyone might have on deposit in a single savings bank. A limit on the amount of insurance seemed equally desirable. Whereas the limit on deposits in a bank has since been increased to \$4,000, the insurance maximum has only been doubled.

They assert further that the increase in the permissible maximum of insurance sold to one person by a single bank was not put into effect clandestinely. It was the result of the passage of a law by the State legislature, and, as in all such cases, the measure was subject to examination which might have resulted in its rejection if it was regarded as undesirable by the legislators. Finally, they assert, if savings-bank insurance is found to be a desirable type of insurance for persons with larger incomes than those of the workers, and at the same time is attractive to workers, there is no good reason why the former should be denied the advantages which may accrue to them by buying insurance from the banks.

⁴ De Groat, Floyd E. *Mutual Savings Banks and Mutual Life Insurance*. Reprint from article in the *Spectator* (issues of Mar. 19 and 26, 1926, and Apr. 2, 1931), p. 4.

⁵ Wilmot R. Evans, president of the Boston Five Cents Savings Bank, in an open letter to Mr. Guy Cox, June 4, 1930, a copy of which may be obtained from the Division of Savings Bank Life Insurance.

In investigating this aspect of the controversy it seemed desirable first of all to find out, as far as possible, whether savings-bank insurance was being bought primarily by persons with small incomes or whether it was catering especially to the insurance needs of persons who might otherwise be expected to buy large quantities of insurance with the private companies. Fortunately for the purpose at hand, the Division of Savings Bank Life Insurance, since November 1, 1927, has kept monthly records of the occupations of those persons who apply for savings-bank insurance. Table 27 shows the results of bringing together these records from the time they were first made through the month of June 1934. It was, unfortunately, not possible to classify the applicants with finality. For purposes of simplicity they were grouped under the heads of wage earners, clerical workers and farmers, professional men, business men and executives, homemakers and students, and doubtful cases. The greatest difficulty was experienced in deciding whether a particular person should be classed as a professional worker or business man, or as a wage earner or clerical worker. For example, if an applicant gave his occupation as an engineer, was he really a civil engineer or a mechanical engineer, in which case he should be classed as a professional, or was he a locomotive engineer or a stationary engineer, in which case he should be classed as a wage earner? If his occupation was recorded as an accountant, was he really a professional accountant, perhaps possessed of the certificate of a certified public accountant, or was he a book-keeper in a small establishment? In every case in which it seemed impossible to say that an applicant belonged to a definite group, he was put under the heading of "doubtful".⁶

TABLE 27.—Number of applicants for savings-bank life insurance in certain groups and their proportion to all applicants, November 1, 1927, to June 30, 1934

Year or month	Wage earners, clerical workers and farmers		Professional, business, and executive		Homemakers and students		Doubtful		Total	
	Number	Percent of total	Number	Percent of total	Number	Percent of total	Number	Percent of total	Number	Percent
Nov. 1, 1927-Oct. 31, 1928.....	2,169	55.46	511	13.07	601	15.37	630	16.11	3,911	100.00
Nov. 1, 1928-Oct. 31, 1929.....	1,276	58.32	249	11.38	330	15.08	333	15.22	2,188	100.00
Nov. 1, 1929-Oct. 31, 1930.....	2,412	49.03	685	13.93	1,018	20.70	804	16.34	4,919	100.00
Nov. 1, 1930-Oct. 31, 1931.....	2,827	48.27	687	11.73	1,592	27.18	751	12.82	5,857	100.00
Nov. 1, 1931-Oct. 31, 1932.....	2,006	45.55	579	13.15	1,305	29.63	514	11.67	4,404	100.00
Nov. 1, 1932-Oct. 31, 1933.....	1,986	45.82	516	11.91	1,435	33.11	397	9.16	4,334	100.00
November 1933.....	1,960	48.97	34	8.76	107	27.58	57	14.69	388	100.00
December 1933.....	182	53.53	27	7.94	85	25.00	46	13.53	340	100.00
January 1934.....	320	54.33	36	6.11	185	31.41	48	8.15	589	100.00
February 1934.....	262	53.58	42	8.59	133	27.20	52	10.63	489	100.00
March 1934.....	297	51.47	55	9.53	170	29.46	55	9.53	577	100.00
April 1934.....	273	49.46	63	11.41	156	28.26	60	10.87	552	100.00
May 1934.....	411	55.84	53	7.20	218	29.62	54	7.34	736	100.00
June 1934.....	184	37.32	47	9.53	198	40.16	64	12.98	493	100.00
Total.....	14,795	49.69	3,584	12.04	7,533	25.30	3,865	12.98	29,777	100.00

In examining table 27, which gives the number of persons in each group for the period from November 1, 1927, to the end of June 1934, and their proportion to the total number of applicants, excluding

⁶ Appendix I indicates, in the case of the records for the month of June 1934, the way in which applicants were grouped under the various heads.

cases of applications for infantile insurance, it must be borne in mind that the very nature of the records made it impossible to make a precise classification. It is likely that many persons would not agree to putting certain applicants in one group rather than another. Despite this, however, the results of the table indicate a preponderance of testimony of a definite kind, and it does not seem improper to reach conclusions on the basis of such results.

The table indicates that about 50 percent of all applicants belonged under the head of clerical and other workers and farmers, that about 12 percent were definitely classifiable as professional and business men and women, about 25 percent as homemakers and students, and about 13 percent as in the doubtful group. The implications of the data go beyond the foregoing statement, however. It seems not unreasonable to assume that a large number of those classified as homemakers or students come from the low-income groups, and that the same is true of those classified as doubtful. On the basis of these assumptions it appears that well over half of all the applicants come from low-income groups.⁷

Data of another kind are available to throw some light upon the economic status of the persons who buy savings-bank policies. Since April 1934, the Division of Savings Bank Life Insurance has kept a record of the number of persons applying for insurance in the amount of \$5,000 or more among the several banks. These data for the months of April, May, and June, 1934, are shown in table 28.

TABLE 28.—*Number of persons applying for insurance in amounts of \$5,000 or more in April, May, and June 1934*

Amount	April 1934	May 1934	June 1934	Total	Amount	April 1934	May 1934	June 1934	Total
\$5,000.....	17	25	18	60	\$11,000.....		3	1	4
\$6,000.....	4	2	3	9	\$12,000.....	1		1	2
\$7,000.....			1	1	\$15,000.....	1	1	1	3
\$7,500.....	1			1	\$18,000.....	1			1
\$8,000.....	2	1	2	5	\$21,000.....		1	1	2
\$9,000.....			1	1					
\$10,000.....	10	5	5	20	Total.....	37	38	34	109

It will be noted that during the period covered a total of 109 persons applied for as much as \$5,000 or more of insurance. Applicants for policies of less than \$5,000 aggregated 2,115. The 109 applicants for policies of \$5,000 or more constitute 4.90 percent of the whole number of applicants. It will be noted further that the number of persons applying for as much as \$6,000 or more of insurance was 49, which was only 2.20 percent of the number of all applicants during the period.

Whatever may have been in the mind of the framers of the savings-bank insurance law, or of the legislature which enacted it, it is persons with low incomes and purchasers of relatively small amounts of insurance who generally constitute the system's policyholders.

⁷ The classification of farmers along with wage earners has no significance, even if the farmers are prosperous ones, for in the year ending Oct. 31, 1928, only 14 persons out of a total of 2,169 in the wage-earning and farming group were recorded as farmers, and some of these may have been agricultural wage earners. In 1929, the numbers were 4 and 1,276, respectively; in 1930, 16 and 2,412; in 1931, 12 and 2,827; in 1932, 20 and 2,006; and in 1933, 10 and 1,986. Furthermore, it must be remembered that school teachers, whose incomes generally are not large, are classed among the professional and business men and women. In 1928 there were 132 teachers among the applicants out of a total in the group of 511; in 1929 there were 46 out of 249; in 1930, 154 out of 685; in 1931, 152 out of 687; in 1932, 158 out of 579; and in 1933, 141 out of 516.

Critics of savings-bank life insurance declare that the system as at present operated departs from the original intention of the law in a second respect. According to them the idea of selling insurance across the counter without the use of solicitors was abandoned when the law was amended in 1915 to permit the employment of instructors.

It is clear that, regardless of the manner in which the instructors are employed, they do work which is done for private insurance companies by insurance agents. To the extent that the instructors' work leads to the making of applications for savings-bank insurance, their function is similar to that of life-insurance agents. The advocates of the savings-bank life insurance point out, however, that the idea of selling insurance across the counter was not abandoned when instructors were employed. In their view, the essential difference between the employment of savings-bank insurance instructors and of solicitors by the private insurance companies rests in the fact that whereas the income of the latter closely depends upon the amount of insurance they sell, the income of the instructors employed by the Division of Savings Bank Life Insurance, who are on a straight salary basis, does not vary directly with their success in getting prospects to apply for insurance with the banks. The purpose of prohibiting the employment of solicitors by the banks was to prevent the development of a system of agencies with its high costs in the way of agents' commissions and "high-pressure" methods of insurance salesmanship.

Services to Policyholders

Critics of savings-bank life insurance have frequently declared that the banks do not give their policyholders as much service as do the companies. The latter are said to give superior service with respect to (1) certain policy provisions, (2) persuading people to buy insurance protection, (3) advice to policyholders, and (4) the collection of premiums.

It was pointed out in chapter 5 that insurance policies may be bought from the private companies which contain provisions for premium waiver (and in industrial policies for the payment of benefits in case of disability), and for double indemnity in case of accidental death. It is often asserted that the savings banks, since they sell no policies containing such provisions, are therefore unable to give as much service to policyholders as the companies. The assertion is, of course, justifiable. In view of the fact that savings-bank policies are held so largely by workingmen who are not likely to buy special disability insurance, it might be desirable for the banks to sell insurance providing at least for the waiver of premiums in case of disability, if the insured desires to pay the small extra cost which the companies usually charge ordinary policyholders for such a provision.

It is also said that persons must be sold insurance or they will not buy it, and that, though the banks get most of their insurance business without the intervention of solicitors, their failure to employ salesmen results in the restriction of the sale of savings-bank insurance. Insurance companies, it is claimed, serve the individuals to whom they sell policies when they persuade them to protect themselves and their families by buying insurance. Advocates of savings-bank insurance generally admit that more of it could be sold if agents and solicitors were generally employed to sell it. To engage a large staff of agents

for such purpose, however, would bring back the very agency system which it was the intention of the law to eliminate. They assert that the fact that over \$100,000,000 of insurance is in force with the savings banks at present shows that people will buy insurance without being urged to do so by insurance agents.

It is often declared that insurance agents perform valuable services by acting as insurance advisers for people who cannot afford the luxury of engaging an independent insurance counselor. Furthermore, the agents are often looked to by the holders of industrial insurance for advice on matters not relating to insurance and are frequently regarded as family friends and advisers. That insurance agents act in these capacities cannot be denied. It is possible, however, that as an insurance adviser an agent employed by a particular company is not always the best person to give impartial advice as to the most desirable form of insurance to buy.

It is said, finally, that the collection of weekly premiums by industrial insurance agents saves the insured time and trouble and helps him to keep the insurance in operation. The answer made to this point is that the costs of the agency system are much higher than are justified by the services of collecting premiums and keeping insurance in force. Those who support savings-bank life insurance declare further that the relatively low rate of lapse and the relatively high proportion of insurance which is carried to maturity in the savings-bank insurance system prove that an agency system like that of the insurance companies is not necessary either to secure regular payment of premiums or to maintain insurance in force.

“Subsidies”

In recent years critics of savings-bank insurance have emphasized their belief that the policyholders of the savings banks do not themselves bear the entire cost of their insurance. The policyholders are said to be able to obtain insurance at a relatively low cost because part of the expense of operating the system is paid by the taxpayers, by private persons who contribute to its support, and especially by the depositors of the savings banks. It has been shown already that in previous years the entire expense of operating the office of the Division of Savings Bank Life Insurance was borne by the taxpayer, that beginning in 1927 the insurance departments began to assume an increasing part of this expense, and that by the year 1934 the taxpayer was paying nothing to maintain the savings-bank insurance system, the entire expense of operating the division being reimbursed to the State by the banks. It has been shown also that though in earlier years the expenses of the division were borne entirely by the State, and that this meant that the policyholder paid less than he might otherwise have had to pay, in later years the expenditure of the State constituted only a small fraction of the total expenses of operation.⁸ It seems reasonable to say that the State's expense in connection with the savings-bank insurance system has at no time been an important factor in the low cost of savings-bank insurance to policyholders.

⁸ See chs. 4 and 6, sections on “Expenses of Operation”.

As to subsidies from private agencies, it has been frequently asserted that large contributions, made through the Massachusetts Savings Bank Insurance League, to the cause of savings-bank insurance, have been used to promote its sale. The league has published pamphlets and advertisements which have proved useful to the savings-banks' insurance business. The costs of this publicity, which in the case of the insurance companies would have to be borne entirely by the policyholders, have in the case of the banks been borne by philanthropists interested in advancing the sale of savings-bank insurance. Some critics believe that the total amount of these contributions has been so large as to play an important part in explaining the low costs of savings-bank insurance.

An investigation was made of the books of the league from the year 1908 to the year 1933. During this entire period meticulous accounts were kept of every contribution received and of every expenditure made by it. As a result of an examination of these accounts it is possible to say that over the period as a whole contributions to the work of the league have not amounted to as much as 1 percent of the combined premium income of the savings-bank insurance system.

Subsidies from savings-banks depositors, it has been stated, have taken the form of new insurance departments of the banks paying nothing either in rents or in salaries, over a period of years. It is obvious that a new department uses clerks and requires the supervision of savings-bank officers. It is obvious also that even a new and small insurance department requires space. When the department pays neither salaries nor rents it is assumed that such expenses are borne by the savings department of the bank and that the insurance department is not bearing its proper share of the joint expenses. The insurance policyholder, it is claimed, is therefore being subsidized by the savings-bank depositor, who, because the savings department pays more than its fair share of the bank's expenses, must receive in interest on his deposit account a smaller return than that which he might otherwise get. Not only is this conclusion said to be deducible from the undoubted records of the insurance departments of the banks themselves, showing as they do that numerous banks in the early years pay no rent or salaries or pay very small amounts for these purposes, but it is said to follow also from the fact that whereas insurance dividends of the banks are based on an assumed interest return of 5½ percent, savings depositors do not as a rule receive much more than 4 percent on their deposits and at present are more likely to be receiving only 3½ or 3 percent.

The advocates of the savings-bank insurance system make the following answer to this criticism. They assert that after an insurance department gets started it should be expected to and generally does pay its share of the joint expenses of the bank, and that it frequently pays more than its fair share. They maintain, however, that it is just for a bank not to charge its insurance department with rents and salaries until the latter gets reasonably well started in the performance of its business. They point out that generally a new insurance department requires no additional space and no additional clerical help. The savings bank is thus at first put to no additional expenditure for space and labor as a result of establishing a new insurance department. Even if it could be shown that in its early

years an insurance department does not pay its proper share of the joint expenses of the bank, the fact that the deposits of the bank increase because of the new insurance business justifies the bank in not charging the department with larger amounts for rent and salaries.

As for the claim that the case against the insurance department is proved by indicating the difference between the return going to the policyholders and to the depositors, the protagonists of the savings-bank insurance system assert that a savings department, since it may at any time be asked to pay its depositors on demand,⁹ must have on hand a larger share of its funds than is the case with the insurance department, which is thus able to invest a much greater proportion of its assets. They point out that it is general for the rate of interest on savings deposits to be less than the rate earned on insurance assets, whether one compares the interest rate paid to the depositors of the savings-insurance banks with that earned by their insurance departments, or whether one compares the interest rate paid by savings banks the country over with the rate of interest earned on the assets of private insurance companies.

To the statement that dividends have been paid by the insurance departments upon the assumption that assets have earned 5½ percent, which is said to be more than has actually been earned in recent years, and that, therefore, the dividends paid must have come from the profits of the savings departments, the officers of the Division of Savings Bank Life Insurance make a clear denial. They point out that no insurance department has paid out in dividends more than was available for the purpose. In each year the amount made available for dividends has been less than the actual profits earned in the preceding year, and a portion of these profits has been set aside to surplus. For example, from the profits earned by the system as a whole in 1931 the sum of \$797,991 was made available for dividends and \$117,772 was added to surplus. The analogous amounts for 1932 were \$690,730 and \$123,040. For 1933 they were \$722,384 and \$126,972, respectively.¹⁰

The implication that the assumption of a 5½ percent rate of interest has any necessary connection with a rate of interest earned on invested assets is also denied by the officers of the division. They point out that the assumed interest rate of 5½ percent was used only as the interest factor in the basic dividend formula. Other factors, such as expense and mortality, also enter into the basic dividend formula. The formula is used only for the purpose of determining the manner in which the amounts set aside each year for the payment of dividends shall be distributed among the various classes of policyholders. It has no relationship to the amount of money which is available for dividends as a whole. If the interest factor assumed in the formula is relatively high, those policyholders with large reserves to their credit will be paid a greater share of the total sum paid out as dividends, and those policyholders with small reserves will receive a lesser share. On the other hand, if the interest factor in the formula is lowered from 5½ to 4½ percent, as it was in 1935, the dividends

⁹ Though the law entitles them to demand notice, insistence upon such notice would at once endanger the confidence of the depositors.

¹⁰ Annual Reports of the Commissioner of Insurance of Massachusetts, pt. 2, table M.

paid to the policyholders with large reserves to their credit would decrease and those paid to the other policyholders would increase.¹¹

The fundamental issue raised by the controversy is whether or not the depositors of the savings banks pay a substantial part of the expenses of the insurance carried by the bank's policyholders. This issue is so important and its implications so vital to the operation of the savings-bank insurance system that it deserves the most thoroughgoing examination possible. For if it be true that the depositors subsidize the policyholders, there exists an obvious injustice not only to the depositors but also to the insurance companies. Before proceeding with an investigation of the matter, it should be pointed out that only the items of rents and salaries appear among those which the insurance departments are said not to bear in proper proportion. The expenses for such items as the fees of medical examiners, taxes of the insurance departments, advertising, printing, and postage give rise to no controversy, since they are in practically all cases directly incurred by the insurance departments, definitely allocable to them, and usually directly paid by them. If attention is confined to the problem of rents and salaries, the issue as to the equitable distribution of joint expenses between the two departments may be regarded as covered.

It should be pointed out further that the critics of the system are not inaccurate in pointing to the fact that numerous insurance departments have paid neither salaries nor rents in their early years. Thus, in the year 1932 only 1 of the 11 banks which came into existence during the period from 1929 to 1931 paid anything either as salaries or as rent. In 1933, 6 of these banks paid no salaries and 8 paid no rents. In the latter year 1 of the insurance departments paid only \$12 under the head of salaries for the whole year. In 1934, 1 bank paid neither salaries nor rent and 6 others paid no rent. At first glance the criticism stated in this section appears to be valid.¹²

The problem of determining whether the savings-insurance banks have paid their proper proportion of rents and salaries is essentially a problem in cost accounting. The essential function of cost accounting is to find the most reasonable criteria upon which to base the distribution of expenses between several departments of a business. Cost accounting is in the nature of a process of approximation rather than one of direct measurement. It seeks to apply good judgment and common sense to the solution of the problem rather than some universally applicable formula.¹³

Two preliminary assumptions should be stated before analyzing the problem: (1) Each department should share equitably in the joint expenses of the savings banks, as required by law. (2) If a building, or an officer or worker of any kind, is exclusively used by the insurance department, that department should bear the entire cost incurred by such use.

Since a thorough investigation into the affairs of each savings-insurance bank, in order to determine to what extent a building is

¹¹ For an extended discussion of the basic dividend scale see appendix E.

¹² Tables in appendix A contain data on the important items of expense for each insurance department from the time it was established until Oct. 31, 1934.

¹³ The immediate problem in hand is unique in the sense that it could arise in precisely this fashion only when one business establishment engages at the same time in the business of savings banking and in the quite different business of insurance.

used only by the insurance department and the extent to which officers and workers are employed exclusively in that department, was not feasible, it was necessary to treat the problem of proper distribution of expenses as though it were one entirely of the joint expense incurred for space and staff.

The essence of the problem at hand is to find quantitative criteria in both the savings department and the insurance department which are available in the records and which are sufficiently comparable to furnish a reasonable basis upon which the distribution of joint expenses may be made.

The sets of criteria which suggested themselves are as follows: (1) The amount of deposits in the savings department may be compared with the amount of insurance in force in the insurance department; (2) the deposits received in a given year by the savings department may be compared with the premium income received by the insurance department; (3) the ledger assets of the savings department may be compared with the ledger assets of the insurance department. Other possibilities, such as total income, receipts, and payments, and the number of deposit accounts and of policies, were considered, but in each case they were discarded as less satisfactory than any of those mentioned.¹⁴

Amount of deposits and amount of insurance in force—the first set of criteria—are obviously not comparable. All the deposits of a savings department are liabilities to the depositors, which they may demand at any time. In contrast, the total amount of insurance in force is not a liability to the policyholders. Only that portion of the amount of insurance in force is a liability to the policyholders which equals what the insurance departments have set aside as reserves, plus accrued dividends, premiums paid in advance, undivided profits, and surplus. Furthermore, neither the amount of insurance in force nor the amount of deposit liability is an adequate measure of the work which may be required of each department.

The second set of criteria, the amount of deposits received and the premium income, is hardly more satisfactory than the first. The premium income of an insurance department may possibly be, in some respects, a fair measure of the day-by-day work which must be done, as well as a rough indication of the amount of space which might be required. Deposits received, however, are a poor indication of the amount of work in the savings department, for there is about as much work required when a person withdraws a deposit as when he makes one. The net deposit income of a given year might be almost a negligible quantity, though the activity required because of large-deposit income received and large deposits paid back to depositors might be very considerable. Furthermore, neither the first nor the second set

¹⁴ An analysis based upon the use of receipts from and payments to depositors in the savings departments and the receipts from and payments to policyholders in the insurance departments as criteria for distributing rents and salaries was made. Their use resulted in increasing the share of salaries and rents to be allocated to the savings departments as a whole above the amounts which would be allocated if the criteria of ledger assets were used. The total receipts from and payments to policyholders in the insurance departments for 1933 amounted to \$5,315,000. The total receipts from and payments to depositors in the savings departments of the same banks equaled \$162,447,000. The amount for the insurance departments was thus 3.27 percent of that for the savings departments. The total ledger assets of the insurance departments equaled \$14,502,000, while those of the savings departments came to \$420,554,000. The ratio was thus 3.45 percent. If, therefore, receipts and payments were used as criteria, the insurance departments would have paid a smaller proportion of total rents and salaries than if ledger assets were used as a basis. It is true, of course, that receipts and payments in the savings departments were unusually high in 1933 because of bank runs followed by redepositing. This consideration was one of the factors which led to the decision not to use receipts and payments as criteria. (Data from Annual Report of Commissioner of Banks, 1933, pt. 1.)

of criteria properly takes into account the amount of work required of each department in keeping records of business first done before the current year. Such business requires the keeping of accounts and the necessity of managing the investment of funds no less than does current business. The premium income and the deposit income of a bank in a given year might be small, but the work done in the current period as a result of deposits made and premiums paid in previous years might be great.

The most satisfactory set of criteria available for the purpose at hand is the ledger assets of both departments. In the first place, both the insurance and the savings departments of the banks have ledger assets, and they are thus more strictly comparable in this respect than the other criteria. Second, ledger assets take into account to some extent the volume of present business as well as that of past business. Third, ledger assets represent more adequately than the other criteria the tasks involved in keeping accounts, filling out forms, and similar work, and also the work of managing the investment of assets.

Ledger assets are not a perfect measure, however. Large assets are not likely to require much more care and work in investing than smaller ones. Certain kinds of insurance, such as group insurance, and that on which premiums are paid frequently, require more work to handle than others. It is clear, furthermore, that ledger assets are by no means a good measure of current business activity in each department, for while savings accounts may be in a state of flux and require much activity at a given time, ledger assets may show little indication of this fact; and while a given year's insurance business may be relatively slight and therefore require less current work, ledger assets are not directly indicative of the situation. For all that, however, they give a better indication of current work than other criteria which are available. Finally, it should be pointed out that, dollar for dollar, the assets of the savings department probably involve more work than those of the insurance department. The receipt of insurance premiums and the payment of dividends to policyholders are more regular and systematic than are the receipt and payment of deposits. It seems fair to say, therefore, that more activity is required in the savings than in the insurance department. This is a defect, but its result is to weight the conclusions in favor of the depositors rather than against them.¹⁵

Using the ledger assets of each department as the criteria for determining the proper basis for the distribution of salaries and rents

¹⁵ The decision to use ledger assets as a criterion for distributing joint expenses between the two departments, and the reasoning upon which it was based, were submitted to a large number of skilled accountants. Most of these persons were certified public accountants who had for years dealt with cost accounting. In every instance there was agreement, after careful consideration, that the method here proposed was the most feasible one for the purpose of determining whether joint expenses had been properly distributed in the past.

For the future the banks might well distribute joint expenses on the basis of an analysis of the number of transactions and the average time consumed by each class of transactions in each department. This method is in common use by many banks which attempt to distribute properly the joint expenses among their various departments, such as the trust department, the savings department, and the banking department proper. To use this method would require an original analysis and timing of each class of transactions arising out of each type of policy by a cost accountant, and periodical analyses at infrequent intervals to make possible a modification in case the nature and the proportions of the transactions vary. Though the procedure seems complicated, it has turned out not to be so in practice, especially when an establishment uses bookkeeping machines which record the numbers of various kinds of transactions automatically.

For the past, to the experience of which the present investigation has necessarily been confined, it has obviously not been possible to depend on the analysis of the different classes of transactions, since no such analysis had been made by the banks.

between the departments, an investigation was made of the situation for the year ending October 31, 1933. The first step was to record the salaries and the rents of each department of the 21 savings insurance banks. The salaries and rents of both the departments were then added. The ledger assets of each department were next recorded, and these added. Following this the combined salaries and rents of both departments in each of the 21 banks were compared with their combined ledger assets, and the ratios between these items discovered. These ratios were regarded as the proper ratios upon which the equitable distribution of rents and salaries between departments in each bank might be based. The "proper" ratio for each bank was applied to the data for rents and salaries in each of the 21 banks, and the proper amount which should have been paid by each department determined accordingly. The final step was to find out the extent to which each department was paying more or less than its proper share.

Table 29 shows the process and the results of this method. The headings are self-explanatory.

The table shows that for the savings-insurance banks as a whole the ratio of combined rents and salaries of both departments to their ledger assets was three-tenths of 1 percent. This is above the ratio for all the savings banks in the State, whether or not they run insurance departments. The ratios for all the mutual savings banks were 0.274 percent in 1933, 0.268 in 1932, 0.253 in 1931, 0.247 in 1930, and 0.244 in 1929.¹⁶ The ratio for the insurance banks ranged from 0.17 percent in the case of bank no. 14 to 0.66 percent for bank no. 13.

Important for the purpose of the investigation is the fact that in the year 1933, 13 of the 21 insurance departments paid more and 8 less than their theoretically proper share. Of those paying more than their "proper" share of rents and salaries the excess ranged from \$374 in bank no. 16 to \$5,667 in bank no. 3. Bank no. 16 paid an excess of \$374 on its total actual expenditure of \$680 for rent and salaries in the insurance department. Its insurance department, therefore, should theoretically have paid 55 percent less than it did in fact pay for these items. The insurance department of bank no. 3 paid its excess of \$5,667 on its combined rent and salary item of \$11,569. It therefore paid 49 percent more than it should theoretically have paid. Of those insurance departments paying too little in rents and salaries the range was from \$78 in bank no. 20 to \$428 in bank no. 12. Bank no. 20 paid nothing in salaries or rent. Bank no. 12 paid \$912 instead of the \$1,340 which would have been its proper share; that is, it paid 32 percent less than it should have paid for these items.

The total aggregate payments in excess of their theoretically proper share of rents and salaries made by all the insurance departments was \$38,391. Those insurance departments which paid less than they should have paid expended \$1,751 too little in rents and salaries. The net excess paid by the insurance departments was thus \$36,639.

¹⁶ Report of the Commissioner of Banks of Massachusetts, 1933, pt. 1, p. xxi.

TABLE 29.—Process of finding "proper" basis of distributing rents and salaries between savings and insurance departments of banks; "proper" rents and salaries of each department, and amounts by which actual salaries and rents are above or below what they should have been, 1933

Bank	Insurance department		Savings department		Both departments		Ratios of total salaries and rents to total ledger assets (both departments)	Proper apportionment of salaries and rents		Difference between actual and proper totals of salaries and rents of insurance department	
	Salaries and rents	Total ledger assets	Salaries and rents	Total ledger assets	Total salaries and rents	Total ledger assets		Insurance department	Savings department	Excess	Deficiency
							<i>Percent</i>				
No. 1	\$12,994.41	\$3,138,362.21	\$16,955.22	\$7,127,136.13	\$29,949.63	\$10,265,498.34	0.29	\$9,156.18	\$20,793.45	\$3,838.23	-----
No. 2	9,945.36	2,215,732.01	31,964.55	9,185,987.49	41,909.91	11,401,699.50	.37	8,144.50	33,765.41	1,900.86	-----
No. 3	11,569.01	1,687,507.18	56,797.47	17,858,928.82	68,366.48	19,546,438.00	.35	5,902.30	62,464.18	5,666.71	-----
No. 4	12,375.10	1,337,957.30	49,656.10	9,785,794.00	62,031.20	11,123,751.30	.56	7,461.07	54,570.13	4,914.03	-----
No. 5	5,812.06	1,117,255.26	48,762.00	21,825,851.81	54,574.06	22,943,107.07	.24	2,657.58	51,916.48	3,154.48	-----
No. 6	7,461.89	1,196,072.64	65,775.42	34,623,991.99	73,237.31	35,820,064.63	.20	2,445.48	70,791.83	5,016.41	-----
No. 7	3,489.00	448,203.83	24,761.76	7,362,627.26	28,250.76	7,810,831.09	.36	1,821.09	26,629.67	1,867.91	-----
No. 8	4,849.98	827,055.55	51,167.82	22,189,296.86	56,017.78	23,016,352.41	.51	2,012.91	54,004.87	2,837.05	-----
No. 9	7,500.00	651,138.30	38,117.75	8,247,903.86	45,617.75	8,899,042.16	.24	3,337.83	42,279.92	4,162.17	-----
No. 10	5,367.42	553,138.45	35,823.88	10,964,550.11	41,191.30	11,517,688.56	.36	1,978.22	39,213.08	3,389.20	-----
No. 11	237.34	154,939.73	40,254.71	12,563,248.85	40,492.05	12,718,186.58	.32	493.30	39,998.75	-----	\$255.96
No. 12	912.00	424,731.49	374,527.96	118,532,682.42	375,439.96	118,957,413.91	.32	1,340.49	374,099.47	-----	428.49
No. 13	1,599.96	106,046.60	20,148.84	3,189,035.28	21,748.80	3,295,081.88	.66	699.95	21,048.85	900.01	-----
No. 14	-----	197,355.54	62,107.83	37,049,631.84	62,107.83	37,246,987.38	.17	329.08	61,778.75	-----	329.08
No. 15	800.00	142,770.75	82,933.50	36,008,027.17	83,733.50	36,150,797.92	.23	330.69	83,402.81	469.31	-----
No. 16	680.00	91,368.41	42,500.74	12,317,796.53	43,180.74	12,009,164.94	.33	305.82	42,875.12	374.38	-----
No. 17	-----	30,404.64	10,800.25	3,525,176.35	10,800.25	3,555,580.99	.30	92.36	10,707.80	-----	92.36
No. 18	-----	53,032.55	28,095.37	9,912,198.00	28,095.37	9,965,230.55	.28	149.52	27,945.85	-----	149.52
No. 19	-----	74,603.77	68,028.46	16,787,072.12	68,028.46	16,861,675.89	.40	300.98	67,725.48	-----	300.98
No. 20	-----	22,190.80	29,412.00	8,348,765.48	29,412.00	8,370,956.28	.35	77.97	29,334.03	-----	77.97
No. 21	-----	32,388.65	45,804.69	12,648,362.17	45,804.69	12,680,750.82	.36	116.99	45,687.70	-----	116.99
Total	85,593.51	14,502,255.66	1,224,394.32	420,554,042.54	1,309,987.83	435,056,298.20	.30	48,954.11	1,261,033.72	38,390.75	1,751.35
Net excess	-----	-----	-----	-----	-----	-----	-----	-----	-----	36,639.40	-----

On the basis of the investigation so far, it seems fair to conclude that the savings-bank depositors as a whole did not subsidize the banks' policyholders in the year 1933.¹⁷

It is of interest to determine how the ratio of expenses to premium income in the insurance departments would have been affected if each insurance department had paid its theoretically proper share in 1933. The premium income of each insurance department, the total expenditures with which it was charged, the ratio of these expenditures to premium income, and the "proper" ratio of expense to premium income if proper rents and salaries had been paid, are shown in table 30. It is evident that while the expense ratio of the insurance departments of all the banks combined was 5 percent in 1933, it would have been reduced to 3.88 percent if rents and salaries had been properly distributed.

¹⁷ The results of this analysis, even though the method appears to be the best one available if one is to reach conclusions about the distribution of expenses in the past, have seemed faulty to several persons. It has been pointed out that several of the insurance departments paid neither rents nor salaries in 1933. One of these departments is operated by one of the largest savings banks in the country, which has assets in its savings department which are more than three times as great as those of any other savings department connected with the insurance system. Its insurance department paid only \$12 in salaries and \$900 in rent in the year 1933. A critic has pointed out that this insurance department "employs 9 or 10 full-time clerks", and "occupies a floor in a separate building in down-town Boston." In partial defense of the small expense met by this department, other persons acquainted with the situation have pointed out (1) that the building, one floor of which is used by the insurance department, is owned by the bank and adjoins its main building, and that the insurance department was given space in it at a time when rentals were in general low and the bank did not wish to confine itself by a long-term lease with a private tenant; and (2) that whereas in most insurance banks the savings department receives deposits from policyholders, keeps the records, and turns over the amount of such deposits due as premiums to the insurance department as they become payable, the bank in question has its depositor-policyholders pay deposits to the insurance department, which keeps the records and turns the deposits over to the savings department, thus doing work which would usually be done by the latter department.

It is possible to question the business efficiency of a bank in which such practices as those just described are commonly followed. It may even seem reasonable to concede to the critics of the bank in question that the method used in the above analysis, showing as it does that the bank's insurance department paid only \$428.49 less than its "proper" share of rents and salaries, is on that account suspect, and that the results in this one case throw doubt on the method in general. Before making any such concession, however, certain considerations are pertinent: (1) No person consulted has been able to offer a better method for determining what the proper distribution of expenses should have been in the past. The inadequacies of the method used are admitted, but neither the accounting experts who have approved it nor the persons who have not approved it have been able to suggest a better one, and both groups have frankly said so. (2) It has seemed necessary to investigate the problem and to reach some conclusions on the matter, even though such conclusions might not be finally and definitely satisfactory in every respect, if for no other reason than because the most emphatic criticism of savings-bank life insurance in recent years has been that it was being subsidized by the depositors. (3) The results of the analysis have not been criticized to any considerable extent, except as they apply to one bank. There are, however, 20 other banks which sell insurance. (4) In the case of this one bank certain other factors exist which may account for the concentration of criticism upon it. It is the largest savings bank in the State, with the largest total expenses of operation. Its operations would therefore naturally give rise to more than ordinary interest. Yet its insurance department is by no means important from the point of view of business done. In 1933, of the 20 other insurance departments, 10 had greater assets, 7 had greater premium income, 10 paid out greater amounts in death claims, and 10 had more insurance in force.

The fact appears to be that the bank in question assigned clerks and space to its insurance department to an extent unwarranted by the actual business done in that department. Its purpose may have been to expand its insurance department. In any case sound accounting procedure would probably have resulted in the assigning of greater expenses to it. This fact, however, though it demonstrates that the method used in the present analysis has its faults, does not seem to be sufficient justification for discarding it.

It should be pointed out that in 1934 the insurance department of this bank paid \$2,705 for salaries and \$1,200 for rent. (See appendix J.)

TABLE 30.—Actual and theoretically proper ratios of expenses to premium income for the savings-insurance banks, 1933

Bank	Premium income	Actual expense paid by insurance department	Ratio of actual expense to premium income	Theoretical expense of insurance department adjusted according to "proper" distribution	Ratio of theoretical expense to premium income
			Percent		Percent
No. 1.....	\$538, 202. 33	\$26, 633. 03	4. 95	\$22, 794. 80	4. 24
No. 2.....	362, 530. 83	18, 111. 05	5. 00	16, 310. 19	4. 50
No. 3.....	328, 705. 53	18, 990. 86	5. 78	13, 324. 15	4. 05
No. 4.....	258, 638. 71	20, 387. 90	7. 88	15, 549. 53	6. 01
No. 5.....	270, 043. 04	11, 946. 68	4. 42	8, 792. 20	3. 26
No. 6.....	271, 331. 38	13, 143. 28	4. 84	8, 126. 87	3. 00
No. 7.....	103, 398. 52	5, 870. 33	5. 68	4, 002. 42	3. 87
No. 8.....	210, 146. 97	8, 938. 68	4. 25	6, 101. 63	2. 90
No. 9.....	173, 671. 71	11, 009. 41	6. 34	6, 847. 24	3. 94
No. 10.....	144, 269. 44	8, 998. 32	6. 24	5, 609. 12	3. 89
No. 11.....	62, 024. 22	1, 007. 06	1. 62	1, 263. 02	2. 04
No. 12.....	188, 559. 71	4, 573. 55	2. 43	5, 002. 04	2. 65
No. 13.....	38, 648. 68	1, 996. 91	5. 17	1, 096. 90	2. 84
No. 14.....	91, 281. 62	525. 77	. 58	854. 85	. 94
No. 15.....	64, 650. 68	2, 194. 74	3. 39	1, 725. 43	2. 67
No. 16.....	39, 598. 15	1, 490. 77	3. 76	1, 116. 39	2. 82
No. 17.....	15, 472. 07	368. 91	2. 38	461. 27	2. 98
No. 18.....	27, 546. 01	644. 92	2. 34	794. 44	2. 88
No. 19.....	38, 482. 16	772. 67	2. 01	1, 073. 65	2. 79
No. 20.....	8, 700. 40	194. 64	2. 24	272. 61	3. 13
No. 21.....	21, 395. 05	378. 00	1. 77	494. 99	2. 31
General Insurance Guaranty Fund.....		4, 833. 21		4, 833. 21	
Total.....	3, 257, 297. 21	163, 010. 69	5. 00	126, 446. 95	3. 88

It has been said by the critics of the savings-bank insurance system that if the newer insurance departments paid their proper share of salaries and rents they could not pay the large dividends which they have distributed to policyholders. The following table shows the results of an analysis of this point. It has been shown in preceding chapters that each bank must, until it has accumulated a surplus equal to 10 percent of its insurance reserves, or \$20,000, whichever is greater, put aside to surplus no less than 20 percent and no more than 75 percent of its annual net profits. Table 31 shows the extent to which each insurance department paying less than its proper share of rents and salaries does so, and the amounts by which it has put aside net profits to surplus in excess of the 20 percent minimum required by law.

TABLE 31.—Amounts less than "proper" share of rents and salaries which certain insurance departments paid, and amounts each put aside from net profits to surplus in excess of legal minimum, 1933

Bank	Deficiency in charges for rent and salaries	Excess above legal minimum put to surplus	Bank	Deficiency in charges for rent and salaries	Excess above legal minimum put to surplus
No. 11.....	\$255. 96	\$2, 970. 17	No. 18.....	\$149. 52	\$934. 42
No. 12.....	428. 49	4, 229. 43	No. 19.....	300. 98	1, 278. 86
No. 14.....	329. 08	3, 156. 65	No. 20.....	77. 97	444. 50
No. 17.....	92. 36	214. 04	No. 21.....	116. 99	233. 08

Before paying dividends the banks are compelled to put aside the legal minimum of surplus. The banks considered actually put aside this minimum, paid dividends, and in addition put into surplus the amounts above the legal minimum which are shown in the table. It is obvious, therefore, that the insurance departments could actually have paid much more than their "proper" share in rents and salaries without being compelled to lower dividends. The excess above the legal minimum put aside to surplus ranged from about twice the deficiency in rent and salaries in the case of bank no. 21 to more than 10 times as much in the case of bank no. 11.

After making the investigations described above it was thought desirable to consult the director of the Division of Savings Banks in the Massachusetts Department of Banking and Insurance. Since he, as a State official, was in charge of the supervision of the savings banks, it was thought that he would naturally consider it his function to see that the depositors of the savings banks were not being injured by the operation of the insurance departments. It was discovered that the Division of Savings Banks had made an independent investigation of the controversy discussed in this section and had reached its own conclusions on the question. Since this investigation was made independently of the one above described and some months before it, and since its method is entirely different, it is worth presenting in detail. The investigation of the Division of Savings Banks was based on the following methods: (1) The insurance departments concerning which no criticism respecting improper distribution of joint expenses had been made were separated from those which had been criticized in this respect; (2) the salaries and rents paid by the banks which had not been criticized were set down; (3) the proportion of salaries and of rents to the total income from all sources was then calculated for each of these insurance departments and for all of them combined; (4) the ratios between rents and total income and between salaries and total income for all these departments combined was assumed to be a criterion for determining what the remaining departments should have paid; (5) the actual salaries and rents of each of the insurance departments which had been criticized were set down; (6) the amount by which the criticized banks paid too little or too much in rents and salaries on this basis was then determined.

Table 32 shows the results of this procedure with respect to the insurance departments whose payments for rents and salaries had not been criticized. It is seen that by this method of calculation the proper ratio of salaries to total income in 1933 was 2.01 percent, while the proper ratio of rents to total income was 0.40 percent.

TABLE 32.—*Total income, salaries, and rent, in 9 insurance departments, paying "proper" share of salaries and rent, 1933*

Bank	Total income	Salaries	Rent
No. 1.....	\$696,718.46	\$11,436.66	\$1,557.75
No. 2.....	468,360.25	8,745.36	1,200.00
No. 3.....	415,644.57	9,224.50	2,344.51
No. 4.....	334,112.28	10,375.10	2,000.00
No. 5.....	332,874.88	4,612.06	1,200.00
No. 6.....	332,877.52	6,342.01	1,119.88
No. 8.....	252,201.86	3,349.96	1,500.00
No. 9.....	207,523.98	6,500.00	1,000.00
No. 13.....	43,736.54	1,299.96	300.00
Total.....	3,084,050.34	61,885.61	12,222.14
Percent of total income.....		2.01	0.40

The procedure and the results of the investigation as they relate to the banks whose insurance departments had been subject to criticism are shown in table 33. Total income, salaries, and rents actually charged, together with the proper salaries and rents that should have been charged are shown for each of the insurance departments of these banks. It will be seen that the actual ratio of salaries to total income for all of these departments was 1.13 percent, and of rents to total income, 0.12 percent.

TABLE 33.—Total income, actual salaries, "proper" salaries, actual rents, and "proper" rents in 12 insurance departments, 1933

Bank	Total income	Salaries		Rents	
		Actual	Proper (theoretical)	Actual	Proper (theoretical)
No. 7.....	\$130,521.24	\$3,489.00	\$2,623.48	-----	\$522.08
No. 10.....	176,117.85	5,367.42	3,539.97	-----	704.47
No. 11.....	68,097.59	237.34	1,368.76	-----	272.39
No. 12.....	209,332.21	12.00	4,207.58	\$900.00	837.33
No. 14.....	100,031.15	-----	2,010.63	-----	400.12
No. 15.....	70,006.55	800.00	1,407.13	-----	280.03
No. 16.....	43,412.40	500.00	872.59	180.00	173.65
No. 17.....	16,347.26	-----	328.58	-----	65.39
No. 18.....	31,693.92	-----	637.05	-----	126.78
No. 19.....	43,264.51	-----	869.62	-----	173.06
No. 20.....	10,009.36	-----	201.19	-----	40.04
No. 21.....	23,358.82	-----	469.51	-----	93.44
Total.....	922,192.86	10,405.76	18,536.09	1,080.00	3,688.78
Percent of total income.....	-----	1.13	2.01	0.12	0.40

The total salaries paid by the insurance departments of these banks was \$10,405.76, whereas it should have been \$8,130.33 more, or a total of \$18,536.09, on the present basis of calculating what was proper. The total rents equaled \$1,080.00, which was \$2,608.78 less than the \$3,688.78 which it should have been. Of the 12 banks in this group banks no. 7 and no. 10 paid more than their proper share of salaries, while banks no. 12 and no. 16 paid more than their proper rents. The combined deficiencies for both rents and salaries of the insurance departments of the 12 banks was \$10,739.11 (\$2,608.78 plus \$8,130.33). This amount was 1.16 percent of their combined total income of \$922,192.86.

Though the deficiencies discovered by the investigation of the Division of Savings Banks appear to be relatively small and though the director of the division, after the investigation was made, concluded that the interests of the depositors of the savings banks were not being injured, it would appear, in the absence of other facts, that to the extent that an insurance department actually did pay less in rents and salaries than it should have paid, the difference was paid by the savings department. In no individual case was the difference of importance, but in order to settle the issue definitely it was thought best to carry the matter to its final conclusion. Accordingly, an attempt was made to determine the extent to which the actual interest received by savings-bank depositors would have been affected had those banks whose insurance departments paid less than their "proper" share, according to the criterion used by the director of the Division of Savings Banks, actually paid what they should have paid in rents and salaries.

Table 34 shows the total deposits of the banks in question, the interest rate paid to the depositors in the year 1933, the amount which this interest rate meant to the depositors, the deficiency in the sums paid in rents and salaries by the insurance departments of the banks paying too little, the actual income which might have been distributed to depositors if the proper share of expenses had been borne by the insurance departments, and the resulting rate of interest which might have been paid to depositors.

TABLE 34.—Possible changes in payments of interest to depositors if insurance departments paying too little in rents and salaries had paid their "proper" share, 1933

Bank	Bank deposits	Actual rate of interest	Excess (+) or deficiency (-) in rent and salaries of insurance department	Actual sums distributed as interest	Adjusted sums which might have been distributed	Adjusted rate of interest
		<i>Percent</i>				<i>Percent</i>
No. 7.....	\$6,768,004	3.625	+\$344	\$245,340	\$244,996	3.620
No. 10.....	9,930,665	3.500	+1,123	347,570	346,447	3.489
No. 11.....	11,182,405	3.500	-859	391,384	392,243	3.508
No. 12.....	111,433,886	3.500	-4,133	3,900,186	3,904,319	3.504
No. 14.....	33,736,042	3.750	-2,411	1,265,102	1,267,513	3.757
No. 15.....	32,586,829	3.500	-887	1,140,539	1,141,426	3.503
No. 16.....	11,668,686	3.750	-366	437,576	437,942	3.753
No. 17.....	3,148,743	3.750	-394	118,078	118,472	3.763
No. 18.....	9,048,820	3.500	-764	316,709	317,473	3.508
No. 19.....	15,291,677	3.750	-1,043	573,438	574,481	3.757
No. 20.....	7,540,997	3.750	-241	282,787	283,028	3.753
No. 21.....	11,232,788	3.750	-563	421,230	421,793	3.755

The table shows conclusively that the fact that some of the banks did not require their insurance departments to pay a proper amount in rents and salaries had a negligible effect on the interest which might conceivably have been available for distribution to depositors.¹⁸

It should further be borne in mind that the results indicated in the foregoing table were derived from a procedure involving the use of total income as a standard for determining the proper distribution of rents and salaries between the savings and insurance departments. At the beginning of this section it was shown that ledger assets is a more desirable criterion to use for this purpose. The deficiencies in rents and salaries of those insurance departments said to be paying too little, as determined by the method of using ledger assets, were in each instance either nonexistent or were much below those derived by using total income as a criterion, as a reference to table 29 will show. It is obvious, therefore, that if ledger assets were used, interest payments to depositors would be affected to an even smaller degree than that indicated in table 34.

The deficiencies in rent and salaries indicated by the use of the method employed by the Division of Savings Banks are greater, as has been shown, than those derived from the use of ledger assets as a criterion. As a consequence, amounts actually set aside to surplus would have been reduced, and, in the case of two banks, amounts

¹⁸ The interest rate for the year 1933 shown in the above table is the sum of the interest rates paid at various intervals during the year. The deposits in each case are those at the end of business on Oct. 31, 1933. Though actual interest values computed in this way are not absolutely accurate, they are sufficiently accurate for the purpose at hand. Short of examining the books of each bank to find its deposits on the days when interest was distributed and recording the deposits upon which such interest was paid, no other method of computation is possible.

It should be noted that according to the method used by the Division of Savings Banks there were 10 insurance departments which showed deficiencies in payments for rents and salaries, as compared with 8 insurance departments if the basis of distribution is ledger assets.

equal to \$180 and \$330 would have had to be taken from accumulated surpluses of the past in order to maintain the scale of dividends actually paid.¹⁹

The following conclusions seem reasonable: (1) Taking the savings-insurance system as a whole, during the year 1933 the savings departments, instead of subsidizing the insurance departments, were, if the word "subsidize" is to be used at all, actually being themselves subsidized by the insurance departments. (2) The payment of a proper share of rents and salaries by the insurance departments of those banks paying too little would neither have lowered the dividends to policyholders nor prevented the putting aside of the required surpluses. (3) If expenses for rents and salaries had been distributed on the basis of ledger assets, the ratio of expense to premium income for the system as a whole would have dropped from 5 percent, the actual ratio, to 3.88 percent. (4) The rate of interest received by savings depositors would not have been affected even if those banks whose insurance departments paid less than their proper share had been compelled to pay what they should have paid.

Savings-bank insurance, at least as far as the experience of 1933 is concerned, has not been subsidized by the savings-bank depositors. Its costs to the policyholders are low for reasons other than that the depositors of savings banks pay part of such costs.²⁰

¹⁹ Bank no. 17 shows a deficiency of \$394 according to the method used by the Division of Savings Banks, as compared with the sum of \$214 set aside to surplus in excess of the legal minimum. The difference was, therefore, \$180. Bank no. 21 showed a deficiency of \$563 as compared with the sum of \$233 in excess of the legal minimum put to surplus, the difference, therefore, being \$330. (See tables 29 and 34.)

²⁰ In 1934 the number of insurance departments paying no rent, which was 10 in the preceding year, was reduced to 7, while the number of those paying no salaries was reduced from 6 to 1. For a comparison of rent and salaries paid in 1933 and 1934, see appendix J.

The data upon which the investigation in the foregoing section is based are contained in the Report of the Commissioner of Insurance and the Commissioner of Banks Relating to the Savings and Insurance Banks and the General Insurance Guaranty Fund, 1933; the Annual Report of the Commissioner of Banks of Massachusetts, 1933, pt. 1; and the records of the Division of Savings Bank Life Insurance.

Chapter 9.—Summary and Conclusions

The Massachusetts system of savings-bank life insurance was designed to provide dependable life insurance and annuities at low cost.

Under the system, mutual savings banks in Massachusetts may establish insurance departments. These are operated independently of the savings departments of the banks, but generally under the same executive direction. All insurance departments are under the direction and guidance of the Division of Savings Bank Life Insurance, a branch of the State government. They are subject to supervision by the commissioner of insurance and the commissioner of banks of the Commonwealth. (See ch. 3.)

The law establishing the system of savings-bank life insurance was enacted in June 1907. The Whitman Savings Bank, in June 1908, established the first insurance department. There are at present 23 issuing banks in the system. Four joined between 1908 and 1912, 6 between 1923 and 1925, 11 between 1929 and 1931, and 2 in 1934. Including the savings banks which write insurance, there were, in 1934, 334 agencies of various kinds scattered throughout the State at which application for savings-bank insurance might be made. (See chs. 2 and 3.)

The banks sell all the usual types of ordinary insurance policies and annuity contracts, life insurance, endowment insurance, infantile insurance, and group insurance. Industrial insurance of the usual type is not sold. A person may buy a maximum of \$1,000 of insurance and \$200 in annuity from any one insurance bank. With 23 banks now in the system he is able to hold policies totaling \$23,000 in amount, and annuity contracts yielding a total annuity of \$4,600 per year. (See ch. 3.)

In 1923, there was \$25,678,000 of insurance in force. It had risen to \$57,837,000 in 1928, to \$93,187,000 in 1933, and to over \$100,000,000 by the end of 1934. At that time there was nearly \$11,000,000 of group insurance in force with the banks. (See ch. 2.)

Savings-bank life insurance is held to a great extent by workers and others receiving low incomes. (See ch. 8.) No agents are employed by the banks to sell insurance, and no commissions are paid for its sale. (See ch. 3.)

Premiums may be paid monthly, quarterly, semiannually, or annually. It is a common practice for a policyholder to make regular deposits with a savings bank and to authorize it to turn over an amount equal to the regular premiums due from him to the insurance department of the same bank or another bank as they become payable. (See ch. 3.)

The cost of ordinary life insurance sold by the savings banks is lower than that of ordinary insurance sold by the private companies. Ordinary insurance in general costs much less than industrial insurance. (See ch. 6.)

One important reason for this difference in cost is that the expenses of operation of the savings-bank insurance system are relatively low. The ratios of expense to premium income in the years 1923, 1928, and 1933 were, respectively, 20.20, 18.13, and 14.14 percent for private ordinary insurance; 31.78, 26.30, and 22.77 percent for private industrial insurance; and 6.54, 4.53, and 5.00 percent for savings-bank ordinary insurance. This is due principally to the fact that savings-bank insurance is sold without the use of agents employed on a commission basis. (See ch. 6.)

A second reason for the lower cost is that the savings-bank insurance system has enjoyed a more favorable mortality experience than that of the private insurance companies. The mortality ratios for the years 1923, 1928, and 1933 were, respectively, 55.10, 57.91, and 63.31 percent for private ordinary insurance; 66.69, 64.23, and 56.25 percent for private industrial insurance; and 51.97, 36.22, and 36.77 percent for savings-bank life insurance. (See ch. 6.)

Still another reason for the lower cost of savings-bank insurance is the fact that it has generally received a higher rate of return on its invested assets than have all insurance organizations as a whole. This rate of return in the years 1923, 1928, and 1933 was, respectively, 5.34, 5.04, and 4.25 percent for all insurance organizations, and 5.32, 5.18, and 4.67 percent for the insurance departments of the banks. (See ch. 6.)

The low cost of savings-bank insurance has sometimes been credited to the existence of so-called "subsidies" which enable the policyholders to escape the full cost. One of these is said to be paid by the taxpayers, who for many years paid the expenses of the State Division of Savings Bank Life Insurance. Since 1927 these expenses have been borne increasingly by the insurance departments of the banks, until in 1934 the taxpayers paid nothing for the support of the division, its entire expenditures being borne by the banks themselves. (See ch. 4.)

Another subsidy has consisted of the expenditures by the Massachusetts Savings Bank Insurance League to promote the sale of savings-bank insurance. During the period from 1908 to 1933 the expenditures of the league in behalf of savings-bank insurance have not equaled as much as 1 percent of the premium income of the savings-bank insurance system. (See ch. 8.)

The depositors of the savings banks have often been said to subsidize the bank's policyholders by paying a share of the salaries and rents of the insurance departments. Investigation shows, however, that in the year 1933 the insurance departments of the banks as a whole paid more than their equitable share of the joint expenses of the banks. (See ch. 8.)

Lower costs are also attributed in part to the fact that the insurance companies, which pay both State and Federal taxes, have borne a larger burden of taxes than have insurance departments of the savings banks, which pay no Federal income tax. In recent years the companies have paid approximately 2 percent of their premium income in taxes and fees. The savings-bank insurance system has paid approximately one-half of 1 percent in taxes to the State throughout its existence, though in recent years it has paid about six-tenths of 1 percent. (See ch. 5.)

The terms of the savings-bank insurance policies are in general more favorable to the policyholders than are those of the insurance

companies. Cash surrender values are available in 6 months, and loans on policies may be obtained at the end of 1 year. Other non-forfeiture privileges, such as extended term insurance and paid-up life insurance, are obtainable at the end of 6 months if cash premium payments are discontinued. On the other hand, most of the companies include provisions in their policies permitting the waiver of premiums in case of total and permanent disability on payment of extra premiums. The policies of the savings banks do not have such provisions. (See ch. 5.)

The lapse ratios of savings-bank insurance are unusually low. During the period 1908 to 1931 the average ratios of insurance lapsed to new insurance written were 54.5 percent in the case of private industrial insurance, 21.0 percent in the case of private ordinary insurance, and 2.6 percent in the case of savings-bank insurance. (See ch. 5.)

Appendixes

Appendix A.—Statistical Tables

TABLE 1.—Amounts of group insurance in force in Massachusetts with insurance companies and with savings banks, 1923 to 1933 ¹

Years	All companies, excluding savings banks	Savings banks
1923	\$164,932,000	\$8,569,000
1924	167,659,000	9,584,000
1925	221,420,000	10,706,000
1926	228,232,000	10,699,000
1927	223,548,000	10,928,000
1928	249,335,000	11,529,000
1929	288,224,000	12,361,000
1930	316,465,000	12,385,000
1931	323,036,000	15,607,000
1932	298,933,000	10,433,000
1933	290,375,000	10,170,000

¹ Data from Annual Reports of Commissioner of Insurance, Massachusetts, pt. 2, table 1.

TABLE 2.—Total premium income received and total taxes, salaries, and rent paid by insurance departments of savings banks since their establishment to 1934 and ratios of taxes, salaries, and rent to premium income

Bank	Total amount of—				Ratio to premium income of—		
	Premium income	Taxes	Salaries	Rent	Taxes	Salaries	Rent
					Percent	Percent	Percent
No. 1	\$6,239,292	\$35,720	\$161,585	\$30,834	0.57	2.59	0.49
No. 2	4,680,830	37,242	128,984	25,300	.80	2.76	.54
No. 3	3,776,606	23,599	109,216	20,491	.62	2.89	.54
No. 4	3,080,416	14,219	114,367	21,792	.46	3.71	.71
Total, nos. 1-4	17,777,144	110,780	514,152	98,417	.62	2.89	.55
No. 5	2,073,160	4,622	38,939	8,100	.22	1.88	.39
No. 6	2,110,840	5,789	46,998	8,008	.27	2.23	.38
No. 7	748,196	2,893	24,626	750	.39	3.29	.10
No. 8	1,550,735	4,536	22,943	10,800	.29	1.48	.70
No. 9	1,226,165	3,858	27,882	3,500	.31	2.27	.29
No. 10	1,048,292	3,094	26,494	—	.30	2.53	—
Total, nos. 5-10	8,757,388	24,792	187,882	31,158	.28	2.15	.36
No. 11	278,538	914	1,463	—	.33	.53	—
No. 12	895,617	951	2,719	2,700	.11	.30	.30
No. 13	195,697	332	3,867	900	.17	1.98	.46
No. 14	394,621	272	—	—	.07	—	—
No. 15	302,442	403	3,100	600	.13	1.02	.20
No. 16	180,309	226	1,500	540	.13	.83	.30
No. 17	59,040	43	430	—	.07	.73	—
No. 18	121,755	76	602	—	.06	.49	—
No. 19	218,374	105	1,000	—	.05	1.46	—
No. 20	60,559	33	1,000	200	.05	1.65	.33
No. 21	66,068	40	250	120	.06	.38	.18
Total, nos. 11-21	2,773,020	3,395	15,929	5,060	.12	.57	.18
Grand total	29,307,552	138,967	717,963	134,635	.47	2.45	.46

Appendix B.—Insurance Guaranty Funds

The savings-bank insurance law provides that the trustees of the general insurance guaranty fund may reduce the percentage of premiums payable to the fund by the banks, or may discontinue such payments altogether, whenever the net assets of the fund are in excess of \$100,000 over all liabilities or whenever the net assets exceed 5 percent of the aggregate outstanding insurance reserve of all the savings banks, whichever is the greater. The trustees may, however, require further payments at any time.¹

By October 31, 1921, the net assets had reached \$116,224, which was 7.4 percent of \$1,568,840, the amount of the aggregate insurance reserves. Thereafter, under the law, the trustees of the fund, with the approval of the Commissioner of Insurance, could waive payments by the banks, since the net assets of the fund were well above both the \$100,000 minimum and 5 percent of the reserves. Contributions ceased in June 1921 and have not since been made. The net assets of the fund, which were \$122,159 in 1922, or 6.6 percent of the insurance reserves, increased to \$128,079 in 1923, to \$133,852 in 1924, and to \$181,719 in 1933. The net assets of the fund in 1923 were 5.7 percent of reserves. By 1924, however, the proportion had fallen to 4.9 percent and by 1933 was down to 1.4 percent. It might be argued that section 23 of the savings-bank insurance law might have been interpreted so that the trustees of the fund would have regarded themselves as bound to require further payments from the banks as soon as the proportion of net assets to reserves fell below 5 percent, as it had by October 31, 1924, but this was not the interpretation adopted. The section in question is as follows:

SECTION. 23. Reduction of contribution to General Insurance Guaranty Fund.—Whenever the net assets of the General Insurance Guaranty Fund over all liabilities exceed \$100,000 or 5 percent of the aggregate outstanding insurance reserve of all savings and insurance banks, whichever is the greater, the trustees of said fund may, with the approval of the commissioner of insurance, reduce the percentage of premiums on insurance and annuities so payable to it or altogether discontinue the same; but said trustees may require at any time thereafter said contribution to be made at a rate not exceeding that provided for in section 18.

The final clause seems to justify the interpretation of the trustees, since it is reasonable to suppose that if they "may require at any time thereafter said contribution to be made", they have the right to decide that it need not be made. It is significant, in this connection, that at no time since the system came into existence has it been necessary to use any part of the General Insurance Guaranty Fund.

The trustees of the General Insurance Guaranty Fund have authority to waive the requirement that a new insurance bank must first establish a special insurance guaranty fund before it may operate, whenever in the opinion of the commissioner of insurance and the commissioner of banks the funds of the General Insurance Guaranty

¹ Mass. Gen. Laws, ch. 178, secs. 18, 19, 20, 23.

Fund are sufficient, and on condition that the bank enter into a contract with the General Insurance Guaranty Fund whereby the latter guarantees all risks of the bank until such time as the bank shall have a surplus of not less than \$20,000 nor less than 10 percent of the aggregate insurance reserve.²

The first four banks to open insurance departments set up special insurance guaranty funds as required by section 5 of the law. They paid interest on the advances made to them for the fund until they were able to retire the amounts advanced. The Whitman Bank retired its special guaranty fund of \$20,000 in 1916, the People's Savings Bank of Brockton in the same year, and the Berkshire County Savings Bank of Pittsfield in 1921. The City Savings Bank of Pittsfield retired \$5,000 of its fund in 1920 and the remaining \$15,000 in 1922. The other 17 banks which have come into the system, beginning with November 1922, have not been required to establish special insurance-guaranty funds.³

² Mass. Gen. Laws, ch. 178, sec. 19.

³ The information in this appendix, apart from the provisions of the law, has been obtained from the annual joint reports made to the legislature by the commissioner of insurance and the commissioner of banks on the savings and insurance banks.

Appendix C.—Insurance Reserves and Surplus

One of the duties of the State actuary is to prepare and procure tables computing the legal reserve to be held under insurance and annuity contracts.⁴ The reserves set aside on the level-premium life-insurance policies and on group-insurance policies sold by the insurance banks are based on the American Experience Table, calculated at an interest rate of 3½ percent. The reserves set aside to meet annuities issued since July 1931 are based on the combined annuity tables, with interest at 4 percent on immediate annuities, and at 3½ percent on deferred annuities. On October 31, 1931, the aggregate insurance reserves of the savings and insurance banks was \$10,256,000 against \$90,961,000 of insurance and annuities in force. A year later the analogous amounts were \$11,400,000 and \$90,606,000, and in October 1933 they were \$12,737,000 and \$93,187,000.⁵

Every insurance bank is required by section 21 of the savings-bank insurance law to set apart annually, as a surplus from net profits,⁶ not less than 20 percent nor more than 75 percent of its profits until such surplus equals 10 percent of its net insurance reserve or the amount of its special insurance guaranty fund, whichever is greater. Thereafter it may add no more than 15 percent of the annual net profits to surplus, provided that the surplus at no time shall exceed 10 percent of the insurance department's reserve. This surplus is maintained in order to meet, as far as necessary, the losses of the insurance department arising from an unexpectedly great mortality, depreciation in its securities, or other losses, and for the maintenance of a stable dividend scale.

Since none of the banks which have entered the system since 1922 have been required to set up a special insurance guaranty fund, only the limit of 10 percent of the insurance reserve of those banks has served as the maximum which its surplus might be permitted to attain. On October 31, 1922, more than 10 years after the first four banks had entered the system, their aggregate surplus was \$125,239, which was 6.7 percent of their combined insurance reserves of \$1,856,911.

In 1932 the net profits of the 21 insurance departments were \$823,929. Of this, \$119,729, or 14.5 percent, was added to surplus. The aggregate surplus in that year was \$890,651, which was 7.8 percent of the aggregate reserves of \$11,399,856 and 1 percent of the total of \$90,606,283 insurance in force. In 1932 the proportion of surplus to reserves was approximately 4 percent in one bank, 5 percent in four, 6 percent in four, 7 percent in four, 8 percent in two,

⁴ Mass. Gen. Laws, ch. 178, sec. 15. The reader is referred to the latter part of ch. 1, for a discussion of the principle of insurance reserves.

⁵ Annual Report of the Commissioner of Insurance, 1931, pt. 2, pp. 18, 19; 1932, pt. 2, pp. 18, 19; report of commissioner of insurance and commissioner of banks on savings and insurance banks and the general insurance guaranty fund for 1933.

⁶ Net profits consist of gains on earnings, expenses, and mortality, accruing because premiums were set higher than the year's experience proved necessary.

9 percent in two, and 10 percent—the legal maximum—in four. A year later the proportion was 6 percent in three, 7 percent in six, 8 percent in four, 9 percent in two, and 10 percent in six.

Table 3 gives the names of the banks and the approximate proportion of surplus to reserves in each in 1932 and 1933.⁷

TABLE 3.—*Proportion of surplus to reserves in each insurance bank, 1932 and 1933*

Banks	1932	1933	Banks	1932	1933
	<i>Percent</i>	<i>Percent</i>		<i>Percent</i>	<i>Percent</i>
Whitman.....	10	10	Boston Five Cents.....	6	7
People's.....	7	7	Grove Hall.....	8	10
Berkshire County.....	7	7	Cambridge.....	5	6
City.....	6	6	New Bedford.....	9	10
Lynn Five Cents.....	6	7	Arlington.....	5	7
Lynn Institution.....	8	8	Uxbridge.....	9	8
North Adams.....	10	9	Beverly.....	7	8
Cambridgeport.....	10	10	Willey.....	4	7
Massachusetts.....	10	10	Leominster.....	5	10
Waltham.....	7	8	Fall River.....	5	6
Lowell.....	6	9			

⁷ Data in this section are taken from the annual reports of the commissioner of insurance and commissioner of banks to the legislature on the savings and insurance banks and the General Insurance Guaranty Fund. The figures for amounts of insurance are given in ch. 2, table 2.

Appendix D.—Mortality Ratios and Unification of Mortality

The calculations involved in the unification of mortality are based not upon the tables used in arriving at net insurance premiums and reserves, but upon a modification of these tables to bring them more nearly in line with the experiences of the banks. Thus the mortality ratio according to the tables used in calculating unification of mortality was 80.79651 percent in 1933, whereas according to the American Experience Tables the system's ratio of actual to expected mortality in the same year was 36.77 percent.⁸

Table 4, which is reproduced as prepared by the State actuary, shows the result of unification of mortality for the year ending October 31, 1933. It will be noted that a total of \$17,746.52 was paid into and paid out by the General Insurance Guaranty Fund. The largest amount was received by bank no. 5, the Lynn Five Cents Savings Bank, and the largest amount paid was paid by the Cambridgeport Bank (no. 8).

TABLE 4.—*Ordinary insurance—Unification of mortality—savings-bank life insurance, 1933*¹

Bank ²	Expected mortality ³	Actual mortality	Unified mortality	Unification	
				Receive	Pay
No. 1.-----	\$50,091	\$39,425.97	\$40,471.78	-----	\$1,045.81
No. 2.-----	41,796	31,361.51	33,769.71	-----	2,408.20
No. 3.-----	33,027	31,316.10	26,684.66	\$4,631.44	-----
No. 4.-----	30,622	23,683.67	24,741.51	-----	1,057.84
No. 5.-----	26,768	27,148.56	21,627.61	5,520.95	-----
No. 6.-----	26,342	23,137.10	21,283.42	1,853.68	-----
No. 7.-----	12,203	9,914.28	9,859.60	54.68	-----
No. 8.-----	19,492	7,718.29	15,748.86	-----	8,080.57
No. 9.-----	16,539	11,965.61	13,362.93	-----	1,397.32
No. 10.-----	14,885	11,473.93	12,026.56	-----	552.63
No. 11.-----	3,742	959.15	3,023.41	-----	2,064.26
No. 12.-----	7,515	6,951.18	6,071.86	879.32	-----
No. 13.-----	2,509	2,919.36	2,027.18	892.18	-----
No. 14.-----	2,763	4,272.14	2,232.41	2,039.73	-----
No. 15.-----	2,951	3,081.18	2,384.30	696.88	-----
No. 16.-----	1,811	1,968.36	1,463.22	505.14	-----
No. 17.-----	801	-----	647.18	-----	647.18
No. 18.-----	1,003	993.55	810.39	183.16	-----
No. 19.-----	1,278	985.96	1,032.58	-----	46.62
No. 20.-----	614	-----	496.09	-----	496.09
No. 21.-----	613	984.64	495.28	489.38	-----
Total.....	297,365	240,260.54	240,260.54	17,746.52	17,746.52

¹ Ratio of actual to expected losses = 80.79651 percent.

² See ch. 2, table 1, for key to bank members.

³ "Expected mortality" here is adjusted as explained in footnote 8.

⁸ The mathematical process of obtaining the sums (unification amounts) due to or from each bank is as follows:

$$1. \frac{\text{Total actual mortality losses (all banks)}}{\text{Total expected adjusted mortality losses (all banks)}} = \frac{X}{\text{Expected mortality losses of individual bank}}$$

$$2. X - (\text{Actual mortality losses of individual bank}) = -(\text{Unification amount of individual bank})$$

The adjusted losses in the denominator of the first fraction in equation 1, for ordinary level-premium insurance policies, are obtained by multiplying the expected losses under the American Experience Table by 0.8915 and subtracting \$5 for each \$1,000 of risk. This is the method of adjustment applied only to policies 4 or more years old. Further adjustment is made for younger policies to take into account the fact that the effect of the original medical examination as yet has not generally "worn off." The adjustment is not rigid, but is changed from time to time as experience suggests.

The unification for annuities, group insurance, and other forms of policies is computed in a similar manner. The several items then are added together and the bank pays or receives the net total unification for all classes of business.

The savings-bank life insurance system has had an interesting mortality experience during its existence; the highest ratio of actual to expected mortality, according to the American Experience Table, having been reached in 1918 at the time of the influenza epidemic, when the ratio was 77.90 percent. After that year the lowest ratio was 32.12 percent, attained in 1921. In 1932 the ratio was 39.85 percent and in 1933 it was 36.77 percent. The ratios are lower if group insurance, under which risks are accepted without examination, is excluded. Thus the ratios for ordinary insurance alone were 35.99 percent in 1932 and 30.77 percent in 1933. Table 5 gives the ratios of actual to expected mortality losses for ordinary insurance, for group insurance, and for ordinary and group insurance combined, for each year from 1917 to 1933.⁹

TABLE 5.—Mortality ratios, savings-bank life insurance, 1917 to 1933

Year	Ordinary insurance	Group insurance	Ordinary and group combined	Year	Ordinary insurance	Group insurance	Ordinary and group combined
1917	29.76	28.44	30.19	1926	31.98	65.72	43.24
1918	71.34	81.87	77.90	1927	36.88	60.00	43.74
1919	52.50	75.78	63.57	1928	27.43	59.72	36.22
1920	33.79	75.00	57.90	1929	39.28	67.70	46.85
1921	20.35	42.51	32.12	1930	34.55	61.47	41.55
1922	25.84	55.64	45.36	1931	33.68	57.30	39.43
1923	25.03	73.38	51.97	1932	35.99	55.91	39.85
1924	34.72	51.35	45.57	1933	30.77	66.76	36.77
1925	29.48	65.59	44.98				

⁹ Data for ordinary and group insurance for the whole period separately, and for ordinary and group insurance combined for the year 1933, are from the records in the State actuary's office. The ratios for all losses combined may be found in pt. 2 of the annual reports of the commissioner of insurance for the years 1917 to 1932.

Appendix E.—Basic Dividend Scale

A basic dividend scale is used by numerous insurance organizations as a method of apportioning dividends among various classes of policyholders. As explained in chapter 4, such a scale is drawn up with a view of giving some degree of stability to the dividends paid from year to year on policies of a given type in force for a given number of years. In calculating the basic scale the insurance organization must take into account the factors of expense, mortality, and earnings on assets. The scale is as a rule drawn up on the basis of past experience with these three items.

The amount of profits on hand at the end of the fiscal year is a given sum. An analysis of its origin discloses that it comes from three sources: (1) Savings on expenses; (2) gains on mortality; and (3) interest earnings in excess of the amount required to maintain reserves. An equitable distribution of what remains of these profits among the policyholders after a portion has been set aside to surplus requires that each one receive substantially that portion which is fairly attributable to his policy from each of the three sources. In order to achieve this equitable distribution the actuaries make up a dividend formula containing a factor for each of the three elements. The expense factor is fairly constant but is somewhat higher in the earlier years of the policy than in the later, since it is assumed that the expense of medical examination and the making of initial records in connection with the policy will be incurred in the earlier years. The mortality factor is usually considered constant at any given attained age of the policyholder.

The interest factor which was used in the dividend formula for some years by the savings-bank life-insurance system was 5.5 percent. It is apparent that this interest factor is increasingly important as the amount of assets earning interest in connection with any given policy increases. In general, reserves would be larger in the case of an endowment policy and a limited-payment policy than in the case of a straight life policy. They would also be larger in the case of policies which have been in force for long periods of time.

A comparison of dividends paid by the insurance departments of the savings banks according to their basic scale in the years 1934 and 1935, which is given in table 6, will indicate the effect of a decrease in the assumed rate of interest entering into the basic dividend formula. It will be recalled that for some years up to 1934 the assumed rate of interest was 5.5 percent and that in 1935 the rate was decreased to 4.6 percent.¹⁰ Though some adjustments in the basic scale were made with respect to other factors, the essential difference between the dividends paid in the 2 years is due to the lowering of the rate of interest assumed in the dividend formula.

¹⁰ See ch. 4, section on "Dividends."

TABLE 6.—Dividends on a \$1,000 policy in 1934 (assumed interest rate of 5.5 percent) and in 1935 (assumed interest rate of 4.6 percent)

Age at issue	1934			1935		
	Fourth year dividend	Seventh year dividend	Tenth year dividend	Fourth year dividend	Seventh year dividend	Tenth year dividend
Straight life policy						
10 years.....	\$5.88	\$6.16	\$6.48	\$6.48	\$6.80	\$6.89
25 years.....	7.20	7.74	8.32	7.78	8.22	8.40
40 years.....	8.68	9.86	11.26	9.48	10.14	10.51
20-payment life policy						
10 years.....	\$6.94	\$7.60	\$8.36	\$6.86	\$7.30	\$7.53
25 years.....	8.16	9.10	10.18	8.15	8.71	9.02
40 years.....	10.44	11.98	13.74	11.89	12.74	13.23
20-year endowment policy						
10 years.....	\$8.00	\$9.90	\$12.04	\$5.97	\$6.66	\$7.29
25 years.....	8.74	10.64	12.78	7.02	7.76	8.39
40 years.....	10.42	12.48	14.78	10.26	11.16	11.82

Table 6 indicates that the general effect of a reduction in the assumed rate of interest used in calculating the basic dividend formula is to reduce the share of dividends available for distribution which is paid to policyholders having large reserves to their credit, and to increase the share of those with smaller reserves.¹¹ It should be borne in mind, however, that irrespective of the assumed rate of earnings on assets, the amount of dividend that can be paid to policyholders is in the last analysis determined by the actual profits on hand after insurance reserves and the legal minimum of surplus have been put aside and expenses of operation have been paid.

¹¹ Data in the tables are taken from leaflets published by the Division of Savings Bank Life Insurance, Boston. The dividends recorded in table 8 are those distributed only by those banks paying 100 percent of the basic dividend scale. In 1934 there were 16 such banks and in 1935 there were 17.

Appendix F.—Comparison of Surpluses of Insurance Companies and of Insurance Departments of Banks

The savings-bank insurance departments, as has been shown in chapter 3, are required to set aside to surplus an annual sum of no less than 20 percent nor more than 75 percent of their net profits, until such time as the surplus equals 10 percent of the insurance reserve or the sum of \$20,000, whichever is the greater. Thereafter no more than 15 percent of the net profits may be put to surplus in any one year, and the total surplus may at no time exceed 10 percent of the reserves. In contrast the laws of Massachusetts permit the insurance companies to establish surpluses or "safety funds", but the companies may not add to surplus if the latter exceeds 12 percent of the insurance reserve. They are required by the commissioner of insurance to maintain "adequate reserves" at all times.¹² The amounts of surplus and of reserves, and the proportions of the former to the latter for the years 1923 to 1932 in the savings-bank insurance departments and in the insurance companies, are shown in table 7.¹³ The table indicates that for the 10-year period covered, the proportion of surplus to reserves was 10.3 percent in the case of the savings-bank insurance system and 7.0 percent in the case of the companies.

TABLE 7.—*Surplus and reserves, and proportion of surplus to reserves, in savings-bank insurance system and in insurance companies, 1923 to 1932*

Year	Savings-bank life insurance			All companies		
	Surplus	Reserve	Ratio (percent)	Surplus	Reserve	Ratio (percent)
1923.....	\$294, 209	\$2, 255, 090	13. 1	\$479, 983, 260	\$6, 893, 528, 704	7. 0
1924.....	321, 187	2, 743, 206	11. 7	578, 097, 220	7, 507, 940, 475	7. 7
1925.....	382, 989	3, 381, 175	11. 3	628, 633, 606	8, 353, 425, 038	7. 5
1926.....	462, 608	4, 142, 050	11. 2	692, 364, 890	9, 367, 893, 547	7. 4
1927.....	556, 490	5, 017, 902	11. 1	772, 067, 917	10, 356, 311, 895	7. 5
1928.....	657, 900	6, 142, 176	10. 7	849, 878, 284	11, 446, 925, 509	7. 4
1929.....	779, 739	7, 413, 438	10. 5	893, 931, 267	12, 535, 391, 559	7. 1
1930.....	830, 695	8, 733, 358	9. 5	884, 442, 898	13, 534, 219, 434	6. 5
1931.....	948, 467	10, 255, 924	9. 3	947, 014, 526	14, 403, 457, 876	6. 6
1932.....	1, 071, 507	11, 399, 856	9. 4	873, 913, 073	14, 687, 086, 729	6. 0
Total.....	6, 305, 791	61, 484, 175	10. 3	7, 600, 326, 641	109, 086, 180, 766	7. 0

¹² Mass. Gen. Laws, ch. 175, sec. 141; interview with Mr. Arthur B. Lines, actuary, Division of Insurance, July 25, 1934.

¹³ The General Insurance Guaranty Fund is included in the savings-bank data on surplus. (Annual Reports of the Commissioner of Insurance, Massachusetts, pt. 2, table E.)

Appendix G.—Costs to Policyholder

This appendix contains a table showing comparative costs of savings-bank ordinary insurance and company ordinary insurance in greater detail than do the tables in chapter 6, and two additional tables showing comparative costs calculated on different bases than the base used in the text.

The tables are presented in the following order:

1. Straight life policies, 20-payment life policies, and 20-year endowment policies, issued at age 35 in 1924, based on actual dividend history.

2. Straight life policies, 20-payment life policies, and 20-year endowment policies, issued at age 35, based on dividends payable in 1934.

3. Straight life policies, issued at age 25, at age 35, and at age 45, based on dividends payable in 1935.

Table 8 gives in detail the material covered in text tables 15, 16, and 17. Data for insurance companies are taken from Flitcraft Compend, 1934 edition; data for the seven banks which have been in operation 10 years or more were obtained from the Division of Savings Bank Life Insurance, Statehouse, Boston.

TABLE 8.—Comparative net costs of a \$1,000 policy issued in 1924, at age 35, based on actual dividend history during following 10 years

Straight life policy						
Company or bank	Annual premium	10 years' premium	10 years' dividends	10 years' net payments	Cash value at end of 10 years	10 years' net cost if surrendered
Company:						
No. 1.....	\$24. 89	\$248. 90	\$50. 74	\$198. 16	\$125. 00	\$73. 16
No. 2.....	28. 11	281. 10	87. 49	193. 61	146. 00	47. 61
No. 3.....	25. 88	258. 80	54. 49	204. 31	136. 00	68. 31
No. 4 ¹	21. 40	214. 00	40. 21	173. 79	135. 60	38. 19
No. 5.....	24. 00	240. 00	47. 20	192. 80	137. 00	55. 80
No. 6.....	28. 11	281. 10	81. 06	200. 04	146. 01	54. 03
No. 7.....	26. 35	263. 50	68. 51	194. 99	146. 01	48. 98
No. 8.....	27. 00	270. 00	78. 30	191. 70	146. 01	45. 69
No. 9.....	28. 11	281. 10	79. 85	201. 25	146. 00	55. 25
No. 10.....	26. 88	268. 80	85. 33	183. 47	146. 01	37. 46
No. 10 ²	24. 09	240. 90	43. 37	197. 53	136. 00	61. 53
Average of 10 companies.....	25. 89	258. 93	65. 14	193. 79	140. 51	53. 28
Bank:						
No. 1.....	23. 90	239. 00	86. 07	152. 93	135. 76	17. 17
No. 2.....	23. 90	239. 00	77. 78	161. 22	135. 76	25. 46
No. 3.....	23. 90	239. 00	82. 72	156. 28	135. 76	20. 52
No. 4.....	23. 90	239. 00	75. 99	163. 01	135. 76	27. 25
No. 5.....	23. 90	239. 00	82. 92	156. 08	135. 76	20. 32
No. 6.....	23. 90	239. 00	84. 74	154. 26	135. 76	18. 50
No. 7.....	23. 90	239. 00	72. 33	166. 67	135. 76	30. 91
Average of 7 banks.....	23. 90	239. 00	80. 36	158. 64	135. 76	22. 88

Footnotes at end of table.

TABLE 8.—Comparative net costs of \$1,000 policy issued in 1924, at age 35, based on actual dividend history during following 10 years—Continued

20-payment life policy

Company or bank	Annual premium	10 years' premium	10 years' dividends	10 years' net payments	Cash value at end of 10 years	10 years' net cost if surrendered	10 years' return over net payment if surrendered
Company:							
No. 1.....	\$33.32	\$333.20	\$56.88	\$276.32	\$219.00	\$57.32	-----
No. 2.....	38.34	383.40	103.19	280.21	255.00	25.21	-----
No. 3.....	34.87	348.70	66.04	282.66	232.00	50.66	-----
No. 4.....	32.13	321.30	46.62	274.68	232.00	42.68	-----
No. 5.....	38.34	383.40	99.07	284.33	255.78	28.55	-----
No. 6.....	36.22	362.20	75.52	286.68	255.78	30.90	-----
No. 7.....	36.70	367.00	84.80	282.20	255.78	26.42	-----
No. 8.....	38.34	383.40	96.12	287.28	255.00	32.28	-----
No. 9.....	36.85	368.50	96.70	271.80	255.78	16.02	-----
No. 10 ¹	32.36	323.60	50.93	272.67	232.00	40.67	-----
Average of 10 companies.....	35.75	357.47	77.59	279.88	244.81	35.07	-----
Bank:							
No. 1.....	33.20	332.00	104.28	227.72	232.19	-----	4.47
No. 2.....	33.20	332.00	94.01	237.99	232.19	5.80	-----
No. 3.....	33.20	332.00	99.85	232.15	232.19	-----	.04
No. 4.....	33.20	332.00	91.82	240.18	232.19	7.99	-----
No. 5.....	33.20	332.00	100.58	231.42	232.19	-----	.77
No. 6.....	33.20	332.00	102.69	229.31	232.19	-----	2.88
No. 7.....	33.20	332.00	87.63	244.37	232.19	12.18	-----
Average of 7 banks.....	33.20	332.00	97.27	234.73	232.19	2.54	-----

20-year endowment policy

Company or bank	Annual premium	10 years' premium	10 years' dividends	10 years' net payments	Cash value at end of 10 years	10 years' net cost if surrendered	10 years' return over net payment if surrendered
Company:							
No. 1.....	\$47.63	\$476.30	\$67.34	\$408.96	\$384.00	\$24.96	-----
No. 2.....	51.91	519.10	119.16	399.94	407.00	-----	\$7.06
No. 3.....	50.14	501.40	85.62	415.78	396.00	19.78	-----
No. 4.....	46.12	461.20	51.04	410.16	396.00	14.16	-----
No. 5.....	51.47	514.70	115.62	399.08	407.45	-----	8.37
No. 6.....	49.85	498.50	85.13	413.37	407.45	5.92	-----
No. 7.....	50.00	500.00	94.00	406.00	407.45	-----	1.45
No. 8.....	51.91	519.10	113.65	405.45	407.00	-----	1.55
No. 9.....	50.64	506.40	112.56	393.84	407.45	-----	13.61
No. 10 ¹	46.42	464.20	66.07	398.13	396.00	2.13	-----
Average of 10 companies.....	49.61	496.09	91.02	405.07	401.58	3.49	-----
Bank:							
No. 1.....	44.72	447.20	108.86	338.34	395.99	-----	57.65
No. 2.....	44.72	447.20	97.46	349.74	395.99	-----	46.25
No. 3.....	44.72	447.20	103.17	344.03	395.99	-----	51.96
No. 4.....	44.72	447.20	95.11	352.09	395.99	-----	43.90
No. 5.....	44.72	447.20	105.26	341.94	395.99	-----	54.05
No. 6.....	44.72	447.20	107.24	339.96	395.99	-----	56.03
No. 7.....	44.72	447.20	91.44	355.76	395.99	-----	40.23
Average of 7 banks.....	44.72	447.20	101.22	345.98	395.99	-----	50.01

¹ This company issues a straight life policy only in amounts of \$5,000 or more, but its cost is shown for comparative purposes on \$1,000 (basis first line of figures); for amounts of less than \$5,000 this company issues a policy for endowments at age 35, which is covered here (second line of figures).

² This company's premium pays for a disability benefit (waiver of premiums and payment of proceeds in installments, with interest, over period of 10 years).

The companies in table 9 are the same as those considered in chapter 6. Data for companies in this table are taken from the Flitcraft Compend for 1934; data for the banks were secured from the Division of Savings Bank Life Insurance.

TABLE 9.—Comparative net costs of a \$1,000 policy issued at age 35, based on dividends payable in 1934

Straight life policy						
Company or bank	Annual premium	10 years' premium	10 years' dividends	10 years' net payments	Cash value at end of 10 years	10 years' net cost if surrendered
Company:						
No. 1.....	\$24.89	\$248.90	\$41.66	\$207.24	\$125.00	\$82.84
No. 2.....	28.11	281.10	72.15	208.95	146.00	62.95
No. 3.....	24.60	246.00	32.24	213.76	137.00	76.76
No. 4 ¹	21.40	214.00	37.09	176.91	135.60	41.31
	24.00	240.00	46.17	193.83	137.00	56.83
No. 5.....	28.11	281.10	62.14	218.96	146.01	72.95
No. 6.....	26.35	263.50	47.82	215.68	146.01	69.67
No. 7.....	27.00	270.00	81.75	188.25	146.01	42.24
No. 8.....	28.11	281.10	69.49	211.61	146.00	65.61
No. 9.....	26.88	268.80	64.96	203.84	146.01	57.83
No. 10.....	23.24	232.40	32.85	199.55	137.00	62.55
Average of 10 companies.....	25.70	256.99	53.48	203.51	140.69	62.82
Average all banks.....	23.90	239.00	71.64	167.36	135.76	31.60
20-payment life policy						
Company:						
No. 1.....	\$33.22	\$333.20	\$46.74	\$286.46	\$219.00	\$67.46
No. 2.....	38.34	383.40	84.42	298.98	255.00	43.98
No. 3.....	32.95	329.50	36.70	292.80	232.00	60.80
No. 4.....	32.13	321.30	44.90	276.40	232.00	44.40
No. 5.....	38.34	383.40	77.97	305.43	255.78	49.65
No. 6.....	36.22	362.20	52.66	309.54	255.78	53.76
No. 7.....	36.70	367.00	88.20	278.80	255.78	23.02
No. 8.....	38.34	383.40	81.27	302.13	255.00	47.13
No. 9.....	36.85	368.50	73.29	295.21	255.78	39.43
No. 10 ²	31.51	315.10	38.85	276.25	232.00	44.25
Average of 10 companies.....	35.47	354.70	62.50	292.20	244.81	47.39
Average all banks.....	33.20	332.00	93.88	238.12	232.19	5.93
20-year endowment policy						
Company:						
No. 1.....	\$47.63	\$476.30	\$55.39	\$420.91	\$384.00	\$36.91
No. 2.....	51.91	519.10	95.79	423.31	407.00	16.31
No. 3.....	47.33	473.30	44.40	428.90	396.00	32.90
No. 4.....	46.12	461.20	48.35	412.85	396.00	16.85
No. 5.....	51.47	514.70	92.09	422.61	407.45	15.16
No. 6.....	49.85	498.50	59.21	439.29	407.45	31.84
No. 7.....	50.00	500.00	97.30	402.70	407.45	³ 4.75
No. 8.....	51.91	519.10	93.04	426.06	407.00	19.06
No. 9.....	50.64	506.40	84.89	421.51	407.45	14.06
No. 10 ²	45.43	454.30	46.07	408.23	396.00	12.23
Average of 10 companies.....	49.23	492.30	71.65	420.64	401.58	19.06
Average all banks.....	44.72	447.20	98.05	349.15	395.99	⁴ 46.84

¹ Company 4 issues a straight life ordinary policy only in amounts of \$5,000 or more, but its cost is here shown for comparative purposes on the \$1,000 basis (first line of figures); this company issues insurance for less than \$5,000 on an endowment at age 35 policy (second line of figures). Companies 3 and 10 likewise issue policies for endowment at age 35, and the data in the table for these companies refer to such policies.

² Company 10's premiums cover disability benefits, which include the waiver of premiums and the payment of proceeds in installments with interest over a period of 10 years.

³ Company 7 gave a cash surrender value on this type of policy which was \$4.75 greater than the total net premiums. There was thus a net surplus rather than a net cost for this company if the policy were surrendered after 10 years. The average yearly net surplus was 47 cents.

⁴ The cash-surrender value for all of the banks was \$46.84 in excess of the average total 10 years' net premiums, resulting in an annual net surplus of \$4.68.

The companies in table 10 are not in every case the ones considered in chapter 6. They are numbered in order of net costs in this table. Data for the companies are from Best Illustrations Revised (1935); data for the banks come from the Division of Savings Bank Life Insurance (1935).

TABLE 10.—Comparative net costs of a \$1,000 straight life policy, based on dividends payable in 1935

Policy issued at age 25

Company	Annual premium	10 years' premium	10 years' dividends	10 years' net payments	Cash value at end of 10 years	10 years' cost if surrendered
No. 1.....	\$20.55	\$205.50	\$66.96	\$138.54	\$98.94	\$39.60
No. 2.....	20.70	207.00	57.16	149.84	98.94	50.90
No. 3.....	19.61	196.10	45.76	150.34	98.00	52.34
No. 4.....	20.14	201.40	42.51	158.89	98.94	59.95
No. 5 ¹	19.04	190.40	39.58	150.82	89.00	61.82
No. 6 ²	19.26	192.60	38.71	153.89	92.00	61.89
No. 7.....	20.14	201.40	39.01	162.39	98.94	63.45
No. 8 ²	19.89	198.90	32.98	165.92	100.00	65.92
No. 9.....	21.49	214.90	59.71	155.19	88.00	67.19
No. 10.....	21.49	214.90	56.71	158.19	88.00	70.19
Average of 10 companies.....	20.23	202.31	47.91	154.40	95.08	59.33
Average all banks.....	18.12	181.20	69.89	111.31	89.42	21.89

Policy issued at age 35

No. 1.....	\$26.88	\$268.80	\$77.73	\$191.07	\$146.01	\$45.06
No. 2.....	27.00	270.00	66.12	203.88	146.01	57.87
No. 3.....	25.88	258.80	54.19	204.61	146.00	58.61
No. 4 ²	25.58	255.80	45.92	209.88	142.00	67.88
No. 5.....	26.35	263.50	47.82	215.68	146.01	69.67
No. 6.....	26.35	263.50	46.41	217.09	146.01	71.08
No. 7 ¹	25.35	253.50	49.21	204.29	132.00	72.29
No. 8 ²	26.06	260.60	37.00	223.60	148.00	75.60
No. 9.....	28.11	281.10	67.87	213.23	131.00	82.23
No. 10.....	28.11	281.10	67.21	213.89	131.00	82.89
Average of 10 companies.....	26.57	265.67	55.95	209.72	141.40	68.32
Average all banks.....	23.90	239.00	78.84	160.16	135.76	24.40

Policy issued at age 45

No. 1.....	\$37.82	\$378.20	\$91.26	\$286.94	\$212.62	\$74.32
No. 2.....	38.00	380.00	79.60	300.40	212.62	87.78
No. 3.....	36.72	367.20	65.92	301.28	212.00	89.28
No. 4.....	37.08	370.80	53.71	317.09	212.62	104.47
No. 5.....	37.09	370.90	52.39	318.51	212.62	105.89
No. 6 ¹	36.33	363.30	62.49	300.81	193.00	107.81
No. 7 ²	36.77	367.70	43.48	324.22	216.00	108.22
No. 8 ²	36.75	367.50	54.22	313.28	201.00	112.28
No. 9.....	39.55	395.50	83.09	312.41	191.00	121.41
No. 10.....	39.55	395.50	71.87	323.63	191.00	132.63
Average of 10 companies.....	37.56	375.66	65.80	309.86	205.45	104.41
Average all banks.....	34.74	347.40	102.05	245.35	202.47	42.88

¹ This is a whole-life policy paid up at age 85.
² This is an endowment policy maturing at age 85.

Appendix H.—Comparison of Taxes Paid to State by Insurance Companies and Savings-Bank Life-Insurance System

Table 11 shows the amounts paid in taxes to the State of Massachusetts by the savings-bank insurance system and the insurance companies, their premium income, and the ratios of such taxes to premium income, during the years 1930 to 1933.

TABLE 11.—*Taxes paid on Massachusetts business to the State by insurance departments of banks and by insurance companies, 1930 to 1933*

Year	Savings-bank life insurance			Companies		
	Taxes	Premium income	Ratio (percent)	Taxes	Premium income	Ratio (percent)
1930.....	\$14, 063	\$2, 644, 733	0. 53	\$1, 848, 825	\$162, 900, 074	1. 13
1931.....	15, 925	3, 095, 236	. 51	1, 967, 510	170, 324, 096	1. 16
1932.....	19, 346	2, 979, 423	. 65	2, 089, 421	169, 003, 016	1. 24
1933.....	22, 419	3, 256, 372	. 69	2, 111, 938	170, 377, 383	1. 24
Total.....	71, 753	11, 975, 764	. 60	8, 017, 694	672, 604, 569	1. 19

During these years, the banks paid 0.60 percent in taxes to the State, while the insurance companies paid 1.19 percent of their premium income, about twice as much proportionately.¹⁴

¹⁴ The data on State taxes are obtained from the Annual Reports of the Massachusetts Commissioner of Corporations and Taxation, 1930, pp. 134-135; 1931, p. 87; and 1932, pp. 117 and 221. Data for 1933 were obtained from the records of the commissioner's office. It will be noted that there is a discrepancy between the amounts reported as paid in taxes by the insurance departments of the banks in the tables in the text and the amounts given in this table. This is due to the fact that the fiscal year of the taxing department is different from that of the savings banks, both of which differ from that of the State Division of Insurance, and that data on fees, which are not paid to the commissioner of corporations and taxation, are not included.

Appendix I.—Illustration of Method of Classifying Applicants for Savings-Bank Life Insurance

The method by which applicants for savings-bank life insurance were separated into the classes "Wage earners, clerical workers, and farmers", "Business and professional people", and "Doubtful cases", is shown below and illustrates, for the month of June 1934, the method of classification which was used to reach the results described in chapter 8 under the subject "The original purpose."

Wage earners, clerical workers, and farmers

Assembler	Greens keeper	Repairman
Auto mechanic	Hairdresser	Ropemaker
Beamer	Housemaid	Rubber winder
Axminster setter	Janitor	Sailmaker
Bell boy	Journeyman	Saleslady
Bench work	Laborer	Secretary
Blanking operator	Leather cutter	Sewing
Bobbin boy	Leather worker	Shearer
Bookkeeper	Letter carrier	Shipper
Boxing	Loomfixer	Shoemaker
Braider	Machine operator	Shoeworker
Buffer	Machinist	Speeder tender
Bus operator	Mail carrier	Spinner
Cabinetmaker	Meat cutter	Station employee
Carpenter	Mechanic	Stenographer
Case packing	Messenger	Stereotyper
Cashier	Meter reader	Steward
C. C. C. worker	Moving-picture operator	Stock clerk
Chauffeur	Molder	Stock chaser
Clerk	Nurse	Storekeeper
Compositor	Oil refining	Tanner
Comptometer operator	Opening-room man	Telephone operator
Construction worker	Overseer	Tester
Crane operator	Painter	Textalite operator
Custodian	Paper finisher	Timekeeper
Domestic	Patrolman	Toolmaker
Drawing in	Patternmaker	Typesetter
Dye hand	Paymaster	Typist
Electrical inspector	Plater	Watchmaker
Electrician	Plumber	Watchman
Errand boy	Polker	Water inspector
Factory worker	Preparation-room work	Weaver
Feeder	Pressman	Well driller
Finishing	Printer	Wire drawer
Fireman	Radio operator	Wire inspector
Fruit grower	Radio service	Wrapper

Professional and business people

Advertising writer	Deputy assessor	Professor
Architect	Executive	Research director
Army officer	Lawyer	Sales manager
Assistant manager	Manager	Shoe dealer
Auditor	Physician	Social worker
Candy manufacturer	Physicist	Statistician
Civil engineer	Physiologist	Superintendent
Clergyman	Pilot	Teacher
Dentist	Prison officer	Treasurer

Doubtful

Accountant	Druggist	Newspaper
Artist	Engineer	Pharmacist
Assistant foreman	Estimator	Purchasing agent
Assistant overseer	Field representative	Sales promotion
Assistant purchasing agent	Foreman	Supervisor
Banking	Inspector	Tube manufacturing
Chemist	Jeweler	Unemployed
Collector	Milk dealer	

Appendix J.—Comparison of Rents and Salaries Paid by Insurance Departments of Savings Banks in 1933 and 1934

The insurance departments of the savings banks as a whole increased considerably the amounts paid in rents and salaries in the year 1934, as table 12 shows.

TABLE 12.—Rents and salaries paid by insurance departments of savings banks, 1933 and 1934

Bank	Rents		Salaries		Bank	Rents		Salaries	
	1933	1934	1933	1934		1933	1934	1933	1934
No. 1.....	\$1,558	\$1,558	\$11,437	\$12,943	No. 13.....	\$300	\$300	\$1,300	\$1,267
No. 2.....	1,200	1,700	8,745	10,335	No. 14.....				
No. 3.....	2,345	2,919	9,225	8,057	No. 15.....		600	800	2,300
No. 4.....	2,000	2,000	10,375	10,501	No. 16.....	180	360	500	1,000
No. 5.....	1,200	1,200	4,612	5,160	No. 17.....				430
No. 6.....	1,120	1,154	6,342	6,869	No. 18.....				602
No. 7.....			991	3,091	No. 19.....				1,000
No. 8.....	1,500	1,500	3,350	4,556	No. 20.....		200		1,000
No. 9.....	1,000	2,000	6,500	6,500	No. 21.....		120		250
No. 10.....			5,637	5,189					
No. 11.....			237	1,226	Total.....	13,303	16,811	70,063	84,981
No. 12.....	900	1,200	12	2,705					

Thus of the 10 departments which paid no rents in 1933, 3 paid rents totaling \$920 in 1934. Of the 6 which paid no salaries in 1933, 5 paid salaries totaling \$3,282 in 1934. The eight insurance departments which, according to the criterion of ledger assets, paid \$1,751 too little in salaries and rents in 1933, increased the amounts paid for these purposes from \$1,149 in 1933 to \$8,733 in 1934. In the system as a whole amounts paid by the insurance departments for rents increased 26.4 percent or from \$13,303 to \$16,811, and salary payments rose from \$70,063 to \$84,981, an increase of 21.3 percent. Six of the departments increased rents and 11 increased salaries.

Reference to table 29 in chapter 8 will show that in 1933 the ratio of total salaries and rents of all departments of the savings and insurance banks to total ledger assets was 0.30 percent. Assuming that the ratio in 1934 was approximately the same, it is interesting to observe the ratio of salaries and rents of the insurance departments to their combined ledger assets in that year. The ratio was 0.60 percent. (Total salaries and rents paid by all the insurance departments came to \$101,792 and their combined ledger assets equaled \$16,955,844.)

The statement below shows the total ledger assets of the insurance departments of the 21 banks on October 13, 1934.¹⁵

<i>Ledger assets</i>		<i>Ledger assets</i>	
Bank no. 1.....	\$3,418,638	Bank no. 13.....	\$141,538
Bank no. 2.....	2,363,415	Bank no. 14.....	341,039
Bank no. 3.....	1,821,669	Bank no. 15.....	223,114
Bank no. 4.....	1,426,029	Bank no. 16.....	146,638
Bank no. 5.....	1,295,361	Bank no. 17.....	44,925
Bank no. 6.....	1,392,013	Bank no. 18.....	110,340
Bank no. 7.....	505,932	Bank no. 19.....	195,494
Bank no. 8.....	1,003,877	Bank no. 20.....	53,349
Bank no. 9.....	801,375	Bank no. 21.....	55,529
Bank no. 10.....	655,301		
Bank no. 11.....	214,856	Total.....	16,955,844
Bank no. 12.....	745,412		

¹⁵ Data on salaries, rents, and ledger assets in 1934 are from the report of the commissioner of insurance and the commissioner of banks relating to savings and insurance banks and the General Insurance Guaranty Fund for 1934.

Appendix K.—Comparison of Amounts of Endowment Insurance in Force with Insurance Companies and with the Banks

The savings banks encourage the purchase of whole-life instead of endowment insurance. The data on the relative amounts of both kinds of insurance carried with the banks and with the insurance companies is informative on this point. The amounts of whole-life and endowment insurance carried in the seven largest companies selling ordinary insurance which operate in Massachusetts are given in table 13. The data cover all such insurance in force among the companies both in and out of the State in the years 1932 and 1933.

TABLE 13.—*Amounts of ordinary whole-life and of ordinary endowment insurance in force with the 7 largest insurance companies, 1932 and 1933*
[In thousands of dollars]

Company	Whole life		Endowment	
	1932	1933	1932	1933
No. 1.....	\$4, 504, 859	\$4, 203, 796	\$269, 038	\$250, 768
No. 2.....	5, 621, 975	5, 523, 490	3, 896, 879	4, 028, 365
No. 3.....	3, 536, 601	3, 251, 627	319, 573	296, 954
No. 4.....	6, 046, 869	5, 623, 213	920, 575	876, 201
No. 5.....	3, 480, 296	3, 306, 235	263, 814	257, 088
No. 6.....	5, 224, 278	5, 079, 973	1, 565, 853	1, 596, 207
No. 7.....	1, 931, 179	1, 810, 228	504, 505	485, 637
Total.....	30, 346, 057	28, 798, 562	7, 740, 237	7, 791, 220

The amount of endowment insurance for all the seven companies in 1932 was 25.5 percent of the amount of whole-life insurance in force. Whole-life insurance constituted 73.1 percent and endowment insurance 18.8 percent of all the ordinary insurance in force with the companies. It should be noted that company no. 2 issues many endowment policies maturing at age 85 instead of whole-life policies, which these policies resemble, and that its amount of endowment insurance is accordingly much larger than it would otherwise be. If one excludes data for company no. 2 it is found that the amount of endowment insurance with the remaining six companies was 15.5 percent of the amount of whole-life insurance in force. Among the six companies whole-life constituted 79.2 percent and endowment 12.3 percent of all the ordinary insurance in force.

In 1933 the proportion of endowment insurance carried by the seven companies was greater than in 1932. The amount of whole-life insurance had declined to \$28,798,562,000, and the amount of endowment insurance had increased to \$7,791,220,000. In the case of company no. 2, whole-life insurance declined to \$5,523,490,000, and endowment insurance rose to \$4,028,365,000.

In the year 1932 whole-life insurance constituted 86 percent and endowment insurance 7.3 percent of all ordinary insurance in force

with the savings banks. In 1933 the proportions were 86.3 percent and 6.7 percent respectively.

The proportions whole-life insurance and endowment insurance of an industrial nature are of all industrial insurance in force with the three largest industrial companies, and the proportions whole-life and endowment insurance are of all ordinary insurance in force with the savings banks, are shown in table 14.

TABLE 14.—*Proportions whole-life and endowment insurance are of all insurance in force with 3 largest industrial companies and with savings banks*

Year	Industrial insurance		Savings-bank ordinary insurance	
	Whole-life	Endowment	Whole-life	Endowment
	<i>Percent</i>	<i>Percent</i>	<i>Percent</i>	<i>Percent</i>
1908.....	67.9	31.4	14.0	78.7
1912.....	73.3	25.1	27.2	68.3
1916.....	73.7	23.6	44.3	52.6
1920.....	70.9	25.9	52.2	44.9
1924.....	59.3	36.4	74.6	23.1
1928.....	50.2	43.7	82.8	13.1
1932.....	47.4	40.3	86.0	7.3

The significance of the relative amounts of whole-life and of endowment insurance is of less importance if the policies are carried many years, especially in view of the fact that any whole-life policy may be matured as an endowment at an advanced age by leaving the dividends with the insurance organization. Many policies, however, are lapsed after a relatively short period, and a relatively large amount of endowment insurance is, therefore, not so likely to be desirable from the policyholders' point of view, since premiums for such insurance are higher than they are for whole-life insurance.¹⁶

¹⁶ Data on amounts of the various types of insurance in force are from the Annual Reports of the Commissioner of Insurance of Massachusetts, pt. 2, table G.

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