

Boston, and all contemplating early readiness for active service.

Comparative Aggregates.

Almost incredible revelations appear at every turn in the insurance aggregates of the last twenty years. Some idea of their character and extent is suggested in the fact that the seven millions of insurance carried by the Massachusetts companies in 1850, has grown to \$130,000,000 in 1870, and that the amount taken within the state by outside companies has increased from about \$1,000,000 to \$196,000,000 in the same time; while the gross premiums collected thereon by the latter class of companies stands about \$7,000,000 in 1869, against \$50,000 in 1850.

Without entering into detail, it will be a matter of interest to know the ratio of progress made by 13 companies doing business in Massachusetts from 1858 to 1869, inclusive. These companies, including the five home companies then organized, and eight from other states, had \$116,500,000 insured on 42,500 policies in the first year, and nearly \$850,000,000 on 277,300 policies in the last, showing an increase of \$733,000,000 distributed in 235,000 new policies during the 12 years; while the net premium reserve of the same companies has swollen from \$10,500,000 in 1858, to \$100,000,000 in 1869. During the same period, the aggregate annual income of these 13 companies increased from \$4,836,000 to \$47,000,000; and their aggregate assets from \$17,500,000 to \$123,000,000.

Valuation of Policies.

The department registers now embrace nearly three-quarters of a million of policies, covering upwards of 14,000 large journal pages, including more than 40,000 closely written columns of numerals for addition. The *seriatim* valuation of these policies, requiring a vast number of mathematical computations, followed by weeks and months given to tedious additions, involves no easy or enviable service, irrespective of its constant liability to error—a liability which companies have courteously endeavored to lessen, by aiding us in the correction of inaccurate data which almost inevitably steals into their voluminous policy returns, though made up as they usually are with commendable care. The returns for 1869 brought an unusually large number of exceptional policies, for the valuation of which the preparation of new tables became necessary. With few exceptions, the entire policy list of one of the few companies admitted was of this character. But the work throughout has been done with such care and thoroughness on the part of faithful assistants, as to warrant the hope that no errors exist that can materially impair the correctness of results drawn from the data furnished.

The computed reserve or accumulated fund of a company is the best and safest test of its soundness, and the most promising element of its future stability and strength. Hence, the assumed rates of mortality and interest should be so graded, as to place beyond all peradventure the risk of ultimate disaster. In no way can this result be more positively assured, than by the preservation, intact, of a reserve computed on assumptions of mortality sufficiently high and interest sufficiently low to remove all fear of failure, if wisely and honestly managed. Although this important subject has received the most able, scientific and practical consideration which the insurance experience of the world has suggested, the result has not always appeared in the adoption of standards entirely removed from risk of future deficit. In his own brief experience and necessarily limited investigation, the present Commissioner has been forced to believe that the course of insurance events has never before so clearly and emphatically indicated the indispensable necessity for a large reserve, as in the present crisis. The causes which lead to this conclusion are too obvious for recapitulation. But to other minds, doubtless, the present tendency of the business must have carried the same conviction with renewed force.

If anything were wanting to confirm the wisdom and equity of the Massachusetts legislation of 1858, establishing the present standard for the valuation of life policies, that want is abundantly supplied in current experiences and development, which we think must rapidly diminish the number of those who have regarded the standard as too high. With this conviction, constantly strengthened and confirmed, we venture to express the hope for an early adoption of a uniform standard by states and companies. Of course we advocate the extended establishment of our own, based upon the "Combined Experience," or "Actuaries'" rate of mortality, with interest at four per cent., because we believe it to be the safest, and because the reasons for its adoption are daily becoming more and more potent.

Current Expenses

The cost of management is becoming a matter of such vital importance, and the interest manifested in its gradation is enlisting such general attention and criticism, that an omission to exhibit annual ratios of expense would hardly be deemed excusable, especially in the present aspect of insurance affairs. The rate of expense in the several companies, for the last three years, is therefore submitted for the purpose of comparison.

There is certainly reason for some degree of congratulation and encouragement in the comparison of ratios exhibited inasmuch as they disclose apparent signs of reformation in expenditure, but with what promise for the future we will not attempt to predict. It affords some pleasure to note that neither in these tables, nor in any single case therein represented, is there a ratio so high as the largest in the corresponding connection for 1868; while in nearly every instance the percentage of decrease in the largest ratios, as compared with the previous year, is very noticeable. This is not only something, but a great deal to say, in the existing tendency to recklessness and extravagance. Thirty-five of the 56 companies appearing in the ratios for 1868, exhibit in the aggregate a material reduction for 1869, in some instances a large percentage, the average results given in each table also in indicating a reduced ratio, which is somewhat remarkable in view of the fact that the aggregates include the business of several new companies, the expenses of whose first years are usually heavy. Taking into account the weaknesses of human nature and its tendencies to insatiable greed, we have no desire to awaken unwarranted anticipation; but if this showing shall prove the harbinger of a genuine reformation, it will be doubly welcome.

Premium Reserve and Expense Ratios.

On a previous page we have shown the results of 12 years of business, as an illustration of the growth of life insurance. The annexed table will possess interest in its exhibition of the percentages of expense and surplus of the companies doing business in this state, from 1858 to 1869, inclusive. In the first column will be found the ratio of gross expenses, including net cost of guarantee capital, to gross receipts except income from guarantee capital; in the second, the ratio of gross expenses, except dividends to stockholders, to gross premium receipts; in the third, the ratio of surplus, after excluding guarantee capital from assets.

These figures point, their own moral, and but for the indications of improvement apparent in the ratios for 1869, slight though they are in the general comparison, they would present no redeeming feature. After making all equitable allowance for advances in commercial and industrial values since 1858, the fact that the percentage of expense has increased nearly 100 per cent., and the percentage of surplus decreased in nearly the same proportion, during the last 12 years, certainly does not present a very inviting aspect. True, the status of all business relations and conditions has been subject to unprecedented fluctuation within the last decade, yet were it possible to regard these heavy differences of per-

centage as wholly the result of necessity, they might be accepted with some degree of complacency. But being, as they actually are, so largely the offspring of reckless extravagance and demoralizing competition, it cannot be wondered that confidence is impaired, and that even prudent and well-managed companies are sometimes directly or indirectly, at any rate wrongfully, compelled to share in the damaging credit.

Comparison of Premium Reserve and Expense Ratios, 1858 to 1869, inclusive.

Years.	Expenses to Entire Receipts.	Expenses to Premium Receipts.	Actual to Computed Premium Reserve.
1858.....	9.91	11.13	124.74
1859.....	10.30	12.88	126.15
1860.....	11.21	13.91	133.67
1861.....	11.70	14.60	139.46
1862.....	12.23	15.26	143.76
1863.....	13.39	16.51	131.29
1864.....	13.97	15.92	128.82
1865.....	15.03	17.50	127.63
1866.....	17.98	19.97	120.95
1867.....	17.31	19.05	116.27
1868.....	17.90	19.76	112.92
1869.....	17.31	19.45	112.87
Average.....	14.02	16.41	125.71

Premium Notes and Loans.

These continue to represent an important item in the assets of note companies, the aggregate amount held at the close of 1869 by the 51 such companies doing business in the state being \$52,000,000, nearly one-third of their gross assets.

The percentage of annual premium taken in notes, or allowed to remain on credit, by companies adopting the cash and note system, ranges, as elsewhere stated, from 20 to 50 per cent., though from the best information accessible, the average appears to be about 37 per cent. But the tendency of the business seems clearly towards reduction, which may gradually work out a complete establishment of the cash principle. It will be seen from the table herewith submitted, that the reduction in the aggregate of premium notes and loans on policies, in 1869, is about 8 per cent. to the premium reserve, and about 3 per cent. to the net assets, against a 2 per cent. reduction to both in 1868.

Mortuary Experience.

The recorded mortuary experience of the companies for the year 1869, suggests little to be added to what is already known regarding the mortuary experiences of life insurance companies. By the 63 companies represented, there have been, 5,009 death claims paid, involving an amount of \$15,248,760.98. The ratio of claims paid to mean number of policies, was 75 per cent. The ratio of loss to mean amount insured, was 90 per cent. The deaths on new policies during the year, were 303 in number: the amount paid thereon was, \$963,693.29; the ratio of claims under new policies issued was, 19 per cent.; the ratio of loss to amount insured was, 21 per cent. These figures possess interest in that they practically confirm the average expectancy of life, which according to the most reliable tables of mortality, a life insurance company may safely predict after making due allowance for the influence of medical selection, and the influx of young blood among its members.

Financial Standing of the Companies.

A series of tables, given analyses of the assets, liabilities, income and expenditures of these companies, prepared by Mr. Sargent, is given. These exhibit in new forms the financial operations and standing of the several companies, giving an insight into their business condition which could not otherwise be obtained without laborious