

THE NEW LIFE TABLE.

The labours of the Committee of Actuaries appointed to prepare a new table of life experience have been brought so near completion as to justify a statement being published which has excited, and for some time to come will excite, the greatest interest amongst life insurance companies. One prominent English actuary considers "that the Mortality Investigation will prove a landmark for a whole generation of actuaries and give them a new starting point." The result of the Committee's investigation was communicated to the "London Times" of recent date, copies of which only reached this side the Atlantic a few days ago. The "Times" says: "The work probably ranked as the most accurate and exhaustive statistical investigation which had ever been conducted." The following is the actuary's communication as it appeared in the "Times":

"Ever since 1893 the British life assurance companies and a joint committee of the Institute of Actuaries of England and the Faculty of Actuaries of Scotland have been engaged upon a great and costly undertaking. This has been the preparation of a new table of life experience based upon the actual results disclosed during the years from 1863 to 1893. The work was rendered necessary by the discovered imperfection of existing Institute of Actuaries' table, which was published as long ago as 1869. This old table, though far superior to any of its predecessors, was not considered either sufficiently accurate or sufficiently up to date for the requirements of modern life assurance practice. The preparation of the new table was consequently begun, and it has been brought so near to completion that I am able now to present its main features to the readers of the 'Times.'

"Before dealing with the figures disclosed by the new table as compared with the old one, it may be of interest if I give some details of the scope and range of the investigation from which these figures have been derived. The new table—which will probably be known as the British Life Offices' Experience, 1863-1893—has been founded on the experience of some sixty British offices. The data include:—(1) All life assurances existing on their policy anniversaries in 1863; and (2) all cases entering between January 1st, 1863, and December 31st, 1892, both inclusive. The lives were kept under observation up to their policy anniversaries in 1893 or up to the date of previous death, withdrawal or maturity. The contributing offices each collected their own data on specially prepared cards, and then passed on the cards to joint the committee under whose direction the life table was compiled. The contributing offices, in addition to bearing the expense of preparing the cards, have contributed more than £10,000 towards the cost of the joint committee's labours. The committee consisted of fourteen English and six Scottish members. The chairman was Mr. R. P. Hardy, and among other members were Mr. C. D. Higham (president of the Institute of Actuaries), Mr. G. M. Low (president of the Faculty of Actuaries), Mr. A. F. Burrigide, and Mr. T. G. Ackland (hon. secretaries of the committee); Mr. Gordon Douglas was hon.

secretary of the Scottish section. The whole work, which was under the direction of Mr. T. G. Ackland as honorary official supervisor, has occupied five years from the time when the cards of experience were completed, and probably ranks as the most accurate and exhaustive statistical investigation which has ever been conducted. "The life assurance experience was derived from the records of 44 English and 16 Scottish companies, and the total number of cards was 1,105,630. Only those lives which were resident in the United Kingdom at the date of entry were included, all policies originally granted at extra premiums for impaired lives, for hazardous occupations, and for foreign residence being carefully ascertained and thrown out. The resulting table therefore expresses the mortality in the United Kingdom of healthy assured lives only. More than one table of mortality statistics has been prepared, but the most important are those derived from the experience of healthy males under whole life assurances. The lives which came within the purview of these tables numbered 608,000, among which there were 157,000 deaths and 167,000 withdrawals, and 284,000 remained in existence in 1893. The old H^M table, with which most persons have some familiarity, was based on 130,000 lives, of whom 20,000 died, 35,000 withdrew, and 75,000 were existing on December 31st, 1863. It will therefore be seen that the principal new table is derived from an experience nearly five times as great as that which furnished materials for the old one. This wider range of experience adds very largely to the trustworthiness of the new table, and is at the same time an interesting illustration of the growth of life assurance business since 1863 as compared with the business transacted before that date. It is also worthy of note that the average duration of assurance as shown by the new healthy males' table is 12½ years, as against 9¼ years shown by the old one. The whole life participating assurance table for male lives has been graduated in a masterly fashion by Mr. G. F. Hardy. From the unadjusted data, as shown by the experience of the 60 life offices, Mr. Hardy has deduced a mathematical law of mortality which corresponds with wonderful closeness with the actual facts, and marks in itself an epoch in the progress of actuarial science. "Through the courtesy of the joint committee I am able to give the new healthy males' table for every fifth aged and to compare it age by age with the old H^M table. These tables show the numbers out of 100,000 at age 10 who may be expected to be still alive at the several higher ages.

NUMBER LIVING (HEALTHY MALES).

Age.	Old H ^M .	New H ^M .	Difference in favour of the New Table.
10	100,000	100,000	—
15	98,224	98,284	60
20	96,223	96,453	230
25	93,061	94,387	1,326
30	89,865	91,942	2,077
35	86,281	88,995	2,714
40	82,284	85,467	3,183
45	77,919	81,262	3,343
50	72,726	76,185	3,459
55	66,873	69,919	3,046
60	58,866	62,072	3,207
65	49,297	52,307	3,010
70	38,124	40,615	2,491
75	25,691	27,752	2,061
80	13,930	15,530	1,600
85	5,422	6,359	937