6. *Income.*—On the income side the chief item requiring comment is the Government subsidy. Compared with the annual subsidies reported as necessary in the last actuarial report, the subsidies paid in during the triennium exhibit a shortage of approximately £500,000, apart from the loss of interest thereon.

The effective rates of interest credited to the fund during each year of the triennium are given below together with those of the previous period for the purpose of comparison.

Year.	Rate per Cent. £ s. d.	Year.	Rate per Cent. £ s. d.
1924–25	5 15 1	1927–28	5 18 6
1925–26	5 17 11	1928–29	5 14 6
1926–27	5 17 9	1929–30	5 14 2

The drop in the interest yield for the last two years appears to have been due to a reduction of the amount invested in mortgage securities, and increased investments in debentures and Government securities.

7. *Outgo.*—Retiring-allowances are increasing, and will continue to do so for many years to come. It will be noted that the outgo for benefits during the triennium exceeds the total of the contribution income and the Government subsidy, and is about 75 per cent. of the combined income from contributions, interest, and Government subsidy. As was pointed out in my last valuation report, these high percentages are somewhat disturbing, since the liabilities are essentially of a deferred nature, and consequently funds should be increasing rapidly while the fund is young and the membership is expanding.

Data.

8. The preliminary particulars required for this examination have been obtained from cards supplied by the Secretary of the Superannuation Fund—a separate card being compiled for each member who was in the Service at the valuation date or who had died or withdrawn since the inception of the fund—and these particulars form the main basis of this investigation and valuation.

The Valuation.

9. The main object of an actuarial valuation is to ascertain whether the current funds, together with the present value of the future contributions, will be sufficient to meet the future liabilities. Before the valuation can be carried out it is necessary to make a careful estimate of the various factors on which the payment of the benefits and contributions is dependent. These factors may be briefly summarized as follow:—

(*a*) Rate of interest;
(*b*) Mortality-rates of pensioners;
(*c*) Average salary scales;
(*d*) Mortality-rates of contributors;
(*e*) Voluntary-withdrawal rates of contributors;
(*f*) Retirement-rates of contributors;
(*g*) Marriage-rates of contributors;
(*h*) Probability of a member leaving children under fourteen years of age, and the average number of such children;
(*i*) Remarriage-rates of members' widows.

10. The rate of interest used in valuing benefits and contributions was $4\frac{1}{2}$ per cent., as the fund is State-guaranteed.

11. The mortality-rates adopted for pensioners were those used in the previous valuation, and were based on an investigation of the combined experience of the three Government Superannuation Funds (Public Service, Railways, and Teachers) for the period 1919–1927.

12. Average salary scales in respect of males and females separately were constructed for the year immediately following the valuation date, and the resulting ratios of increase from age to age were applied to the actual salary of each contributor as at the 1st April, 1930.

13. The rates of mortality, withdrawal, and retirement of male contributors used in the valuation were based on an examination of the fund's experience during the triennium under review, together with that of each of the two preceding triennia.

As regards mortality, the experience of the whole three triennia was employed as the larger total of deaths recorded could reasonably be expected to minimize the effect of fluctuations, and so yield more reliable averages for each age.

The rates of withdrawal adopted were based solely on the experience of the triennium under review, as it was found that they showed a progressive decline during the three valuation periods.

The retirements were again heavy between ages 50 and 59, and as attention has been called in the last two actuarial reports to this feature and to the serious financial effect on the fund of its continuance, the practice of retiring irrespective of age a considerable number of officers with from thirty-five to forty years' service must, for valuation purposes, be regarded as a permanent feature of the fund. The persistence of these heavy rates of retirement between ages 50 and 59 were, as might naturally have been anticipated, accompanied by a flattening of the rates at ages over 60, and this appears to suggest that in future the officers over age 60 retained in the Service will be largely composed of those with only short service to their credit.

Rates of mortality, withdrawal, and retirement in respect of female contributors were constructed on similar principles.