

fund was solvent or not. The case is clearly more complicated when there are thrown in with these young men a number of contributors of all ages up to 65 paying less adequate contributions, who, if the matter is not properly regulated, may commence to draw upon the accumulations pertaining to the younger men, a procedure which clearly cannot conduce to greater solvency; and the matter is still further involved when other benefits in addition to the pension are provided. In order to measure the relative magnitude of all these sums of money by way of contributions and benefits payable at different periods and upon different contingencies, it is necessary to reduce them to present values at a common point of time. In no other way can they be weighed against one another and the sufficiency or insufficiency of the financial provisions against the liabilities discovered. This is what the actuarial valuation purports to do.

It so happens that the Public Service Superannuation Fund presents, even to a superficial examiner, some symptoms calling clearly for closer inspection. The following table, for example, conveys a suggestion that the outgo for benefits is rapidly overtaking the combined contribution and interest income :—

Year.	Combined Contribution and Interest Income (exclusive of State Subsidy) per £100 of Outgo for Benefits.					
1909	..	..	..	..	..	£370
1914	..	..	..	..	..	£186
1919	..	..	..	..	..	£149
1924	..	..	..	..	..	£114

This table shows that where the income was more than treble the benefit outgo some fifteen years ago, the two are now nearly equal, so that the outgo is increasing much more rapidly than the income.

BASIS OF VALUATION.

6. In estimating the value of the liabilities of the fund it is necessary to take into account the proportion of the members who will withdraw, die, or retire, and the probable rates of increase of salaries. These factors have been carefully investigated in the light of the fund's experience since the previous valuation, and the rates and the Life and Service Tables which have been adopted in the valuation as a result of this investigation are stated in Tables VII and VIII appended. The next factor entering into the calculations is the average rate of interest which will be earned by the fund during the whole future lifetime of the members. The average rate earned since the previous valuation was £5 11s. 7d., but in view of the very long period over which the liabilities extend it is hardly safe to assume a greater rate than 4 per cent., which has accordingly been adopted. Any interest which may be earned from time to time over and above the rate of 4 per cent. free of depreciations and losses will come into account as and when it is earned, operating in this way as an amelioration of the position; but it is clear that it will all be needed to help the finances of the fund.

RESULTS OF VALUATION.

7. The Act (section 48 (2)) requires the actuarial report to be so prepared "as to show the state of the fund at the close of the period, having regard to the prospective liabilities and assets."

The valuation has accordingly been made, and the results are shown in Table IX appended, but they may be shortly summarized as follows :—

	£
Present value of the liability for benefits	10,222,545
Present value of contributions receivable from members	£2,584,829
Funds in hand	2,103,543
	4,688,372
Present value of total liability of State	5,534,173
Less present value of subsidy of £136,000 (if treated as a perpetuity)	3,400,000
Value of future subsidies to be provided for by the State over and above subsidy of £136,000	£2,134,173

The above statement shows a total State liability of £5,534,173, as compared with £4,142,989 at the last valuation, giving an increase of £1,391,184. This increase is due partly to the accumulation at interest of that part of the State's liability which is unprovided-for, partly to normal expansion of the service, and partly to the enforced retirement of officers with long service. The last-mentioned item is casting a considerable liability upon the fund, and it is understood that the statutory subsidy of £86,000 has been increased to £136,000 on this account.

8. The importance of the ascertainment of the state of the fund in the form given in paragraph 7 lies in the fact that the total liability of the State as there disclosed (viz., £5,534,173) can be readily commuted therefrom into an equivalent annual payment. For example, the capital liability of £5,534,173 is equal (at 4 per cent.) to a perpetual subsidy of £221,367 per annum. If the subsidy in respect of present members were fixed at a higher figure than £221,367, solvency would be attained within some definite time. It follows from this that if the State subsidy is fixed at any lower figure now, it must by way of compensation rise later on to a much higher figure than £221,367 per annum even in respect of present contributors alone.