

earned and that assumed in fixing the scale of contributions is the best possible means of counteracting the effect of a possible fall in mortality-rates above the pension age.

Outgo.—Retirement allowances are increasing, and will continue to do so, but from the very nature of a pension scheme it will be many years before these payments are at all large in comparison with the income.

DATA.

20. The preliminary particulars required for this examination have been supplied on cards by the Superintendent of the fund—a separate card being supplied for each member who was on the books at the valuation date or who had died or withdrawn since the inception of the fund—and these particulars form the main basis of this investigation and valuation.

21. The ages of the contributors at the date of valuation, together with their contributions and other particulars, are shown in Table IV of the Appendix.

THE VALUATION.

22. The main object of an actuarial examination 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 follows :—

- (a) Rate of mortality :
- (b) Rate of voluntary withdrawal :
- (c) Rate of marriage :
- (d) Probability of a member having children under fourteen years of age, and the average number of such children :
- (e) Rate of incapacity during the contributory period of membership.

The above factors are required for both the main scheme and the local-authorities scheme, and in regard to the latter it is also necessary to estimate the rate of retirement and the rate of remarriage of widows. Since the factors employed in the valuation should approximately follow the trend of the fund's experience, it is necessary to examine this experience, and, where the facts are too scanty, to combine it with experience of a similar nature. A full investigation of the fund since its inception has accordingly been made, and the results of this investigation have been supplemented where necessary by the latest experiences of the Government Service Superannuation Funds and the New Zealand population. The investigation disclosed a marked decline in the mortality-rates (a feature which has been concurrently observable in similar funds), but in other respects the experience does not differ materially from the assumptions employed in previous valuations.

In view of the fall in the rate of mortality, a feature which increases the liabilities of the fund, it has been necessary to reconstruct all the monetary tables on which previous valuations have been based, and this process has entailed a very considerable amount of additional work. The new tables, however, give full weight to the various special features indicated by the fund's experience, and it is gratifying to note that, owing mainly to the improved rate of interest earned by the investments, the fund is capable of bearing the more stringent valuation bases, which experience, as now indicated, will approximate nearer to the truth. It is hardly possible to arrive at valuation bases which will exactly coincide with the actual future experience of the fund, because the factors involved are affected by changes in social and economic conditions which can only be estimated approximately. With the assistance, however, of the experiences disclosed at each valuation we are able to adjust earlier assumptions where necessary, and thereby approach gradually towards the main underlying rates and probabilities which are peculiar to the fund. The fund is still comparatively young, and it will be many years before its data will be sufficiently reliable to give an experience on which a valuation can be made without the assistance of more or less similar data derived from other sources.

The main elementary probabilities employed in the valuation of the majority of the local-authorities schemes (retiring-age 65) will be found in Table V of the Appendix. Similar probabilities have been employed in the valuation of the remaining sections of the fund, with adjustments to allow for earlier retirement ages, and, in the case of the main and approved-friendly-society schemes, for the heavier withdrawals.

23. Section 24 (2) of the 1910 Act (now section 73 (2) of the 1926 Act) requires the Actuary's report to show "the state of the fund at the close of the period, having regard to the prospective liabilities and assets." Technically these liabilities and assets should each include the present value of future maternity benefits, but as these are annually voted by Parliament, and no amount of variation can affect the stability of the fund, I have omitted them. The valuation balance-sheet is given in detail in Table VI of the Appendix, a summary being as follows :—

Valuation Balance-sheet of the National Provident Fund as at 31st December, 1925.

<i>Liabilities.</i>				<i>Assets.</i>			
		£				£	
Value of liability for—				Amount of the fund at 31st December, 1925			
Pensions	..	2,774,909		Value of future contributions	..	1,906,247	
Orphans' benefits	..	206,971		Value of future State subsidies of one-fourth	..		
Widows' benefits	..	211,943		(assumed to be received a year later than	..		
Incapacity allowances	..	75,054		above)	..	461,582	
Return of contributions on death	..	90,947					
Return of contributions on withdrawal	..	310,646					
Sundry benefits	..	21,126					
Balance (surplus)	..	54,200					
		<u>£3,745,796</u>				<u>£3,745,796</u>	