10. The rate of interest used in valuing benefits and contributions is $4\frac{1}{2}$ per cent. throughout. As this constitutes a departure from previous valuations, I deem it desirable to point out that the change must not be interpreted as questioning the wisdom of making previous valuations at 4 per cent., since I am fully in accord with the interest basis previously adopted. Compared with fifteen years ago the rate of interest now being earned by the fund has increased by more than $1\frac{1}{2}$ per cent., and good interest-earnings may reasonably be expected for many years to come. It is not assumed that the present rates—or even $4\frac{1}{2}$ per cent.—will continue to be earned indefinitely, and it must be remembered that pension-fund membership covers a long period, in some cases over eighty years. My main justification in adopting a $4\frac{1}{2}$-per-cent. valuation basis is that the fund is State-guaranteed, and it will be many years before any Government subsidy will be required to cover any interest less than $4\frac{1}{2}$ per cent.

11. The mortality-rates adopted for pensioners 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, and supplemented where necessary by the earlier experience of the funds. From a careful study of the figures, combined with the results of concurrent investigations into similar funds and in the general population, it is clear that there is an improvement of vitality which has been progressive over a long period of time, and accordingly it has been deemed advisable in fixing the valuation bases to make some allowance for probable future improvements in the vitality of annuitants.

12. The next factors which entered into the calculations were the scales of average salaries in respect of males and females for the year immediately following the valuation date. The salary scales constructed from the current experience of the fund were not themselves assumed in making the valuation, but the ratios of increase from age to age were applied to the actual salary of each contributor as at the 1st April, 1927.

13. The rates of mortality, withdrawal, and retirement of contributors used in the valuation were based on an examination of the fund's experience since the previous valuation. Details of the Experience Table adopted and the Life and Service Table deduced therefrom are given in Tables VII and VIII of the appendix. The only feature calling for special comment was the very heavy retirement-rates at ages 50 to 59. This was also noticeable at the previous valuation, and special mention was made in the last actuarial report of the very considerable effect such a movement would have on the liabilities if it became general. As it is apparently becoming the practice to retire a considerable number of officers after forty years' service irrespective of age, I felt compelled to make the valuation bases reflect this policy change.

14. The factors necessary for the valuation of widows' and children's benefits were taken from population statistics combined with the experience of the fund itself.

Results of Valuation.

15. 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 existing pensions and allowances		2,924,825
Present value of prospective benefits	£9,052,579	
Less present value of members' contributions	2,823,844	
		6,228,735
Total net liabilities		9,153,560
Funds in hand		2,493,790
Present value of total liability of State		6,659,770
Less present value of present subsidy of £86,000 (if treated as a perpetuity)		1,911,111
Value of future subsidies to be provided for by the State over and above the present subsidy of £86,000		£4,748,659

16. The above statement shows a total State liability of £6,659,770, as compared with £5,534,173 at the last valuation, giving an increase of £1,125,597. This increase, which would have been still greater had the valuation been made at 4 per cent., is due partly to normal expansion of the Service and to the inclusion of house allowance as salary for pension purposes, partly to the accumulation at interest of that part of the State's liability which is unprovided for, and partly to the heavy retirements of young officers with long service.

17. In view of the above-mentioned results disclosed by valuation, it might be helpful to briefly indicate why the financial stability of the Public Service Superannuation Fund is dependent on a strong subsidy.

In the first place, the inauguration of any superannuation scheme depends for its success on adequate provision being made for those employees who have rendered years of service and are too old to pay in full for their pension. In order to grant them the same rate of pension in relation to service that their successor's would receive, an initial deficiency, estimated at roughly one million and a half sterling, was incurred. Short of meeting this liability by a capital payment, annual payments, including principal and interest, were essential to extinguish it within a reasonable period of time.