deficiency I stated, " This increase is mainly due to the accumulation at interest of that part of the State's liability which is unprovided for and to the number of retirements of comparatively young officers with long service being in excess of the valuation assumptions."

Summing up it will be seen that up to 1919 the requirements of the Act as to Government subsidy were more or less complied with, the Act being duly altered to give effect to the recommendations, although payment of the increased subsidy was on the average two years late and no extra payment was made during the war period. From 1919 onwards, however, no action has been taken to give effect to any of the actuarial reports submitted, and for all practical purposes section 50 of the Public Service Superannuation Act is a dead-letter.

Reference to Table X of the Appendix of my latest report (1932, H.–26A) shows a shortage at the 31st March, 1930, of £1,301,000 in the subsidies actually paid by the State as compared with those prescribed by the Act. I have pointd out previously that the method of arriving at the annual subsidy suffered from the practical defect that it meant for many years a rapidly increasing subsidy, and this has been borne out by the experience of the Fund. Another weakness in the method is that each actuarial investigation appears to require legislative enactment to give effect to the recommendations. Under the circumstances, there can be no question that an automatic subsidy would be preferable. As far back as 1915 Mr. Muter (*vide* paragraphs 12 and 13 of his actuarial examination for the triennium ended the 31st December, 1913) drew attention to the delay involved in connection with new legislation and the desirability of a more automatic method of obtaining the necessary subsidy, and stated that an automatic subsidy of 4 per cent. of the pay-roll would provide for the deficiency in the contributions for future service and gradually liquidate the liability for the pensions for back service.

In his next report, for the period ended 31st December, 1916 (*vide* paragraph 14), Mr. Muter again suggested that the subsidy should take the form of a fixed percentage of the annual salaries, or, alternatively, that the subsidy be made a percentage of the contributions actually paid by the public servants. He stated, " A subsidy of 67 per cent. on the contributions of males and 78 per cent. on the contributions of females would extinguish the deficiency in approximately seventy-five years, assuming the expansion of the Dominion to continue at the same rate as hitherto. After that the subsidy would drop to a very much smaller figure."

In his next report, for the triennium ended the 31st December, 1919, Mr. Muter stated, " A change is urgently needed which will place the subsidies upon a basis at once more automatic and more in accordance with the actual liabilities. At the very least it should be possible to say that the accumulations of the younger and greater portion of the members are rigorously set aside and maintained intact to assist in meeting the liabilities appertaining to those members."

In the next report for the period ended 31st March, 1924, the Actuary, Mr. Traversi, stated (*vide* paragraph 12) that in his opinion the subsidies should be placed upon an automatic basis, and be recommended as a commencement 110 per cent. of members' contributions, amounting to about 6½ per cent. of the salaries. Mr. Traversi went on to say, " I might say that a subsidy of 110 per cent. of the contributions of members would not immediately enable the budget to be balanced, but, though the State's payment would be increased somewhat from the outset, there would be a considerable gain in steadiness in regard to the amount of the subsidy as well as in point of ease of working. Provided the liabilities were not unduly inflated by the granting of additional benefits, this subsidy would no doubt suffice in time to right the fund."

In my actuarial examination of the Fund, as at the 31st March, 1927 (*vide* paragraphs 22 and 23), I called attention to the practical defect in the method of arriving at the subsidy and suggested a subsidy of 8 per cent. of the pay-roll.

In my last report on the Fund, as at the 31st March, 1930, pagagraph 22 reads as follows : " In my last actuarial report I drew attention to the method laid down by the Act of arriving at the State's subsidy, and suggested in lieu thereof an automatic basis which, although requiring increased payments at the outset, would minimize the rate of increase in future subsidies.

" It is not necessary to add anything further to the remarks made in that report, beyond pointing out that the suggested subsidy of 8 per cent. of the salary roll would now need to be increased by reason of the short-payment in subsidies during the intervening three years."

It will be seen that in each of the last six actuarial reports made by three different actuaries the existing subsidy method has been adversely commented on and an automatic subsidy recommended to take its place. It will also be noted that the amount of such automatic subsidy necessary to cover the State's share of the liability has risen from 4 per cent. in 1915 to over 8 per cent. at the present time. While to some extent the increase is due to increased pension liabilities following on salary increases due to the war and to the practice of retiring offiers with long service irrespective of age, it must not be overlooked that no small portion of the increase in the subsidy percentage necessary to cover the State's share of the liability is due to the delay in taking steps to put such a recommendation into effect. It is scarcely necessary to point out that every £1 payable now is equivalent at 4 per cent. compound interest to £2 payable seventeen years hence. In this connection I cannot do better than call attention to figures supplied by Mr. G. F. Hardy, F.I.A., President of the Institute of Actuaries, in giving evidence before the Committee appointed by the Board of Trade to inquire into the position of superannuation funds of railway companies in Great Britain. He produced a table showing that if an employer, instead of contributing 5·06 per cent. of salaries to a fund from commencement, adopted the attitude of withholding contribution until it was actually required by current expenditure over and above the 2½ per cent. of salaries contributed by his employees, such employer would have no payments to make for the first forty years, but afterwards the percentage would increase rapidly to 18 per cent. of salaries by the end of the seventieth year.