

demands increasingly heavy annual payments, and the contributions of the employees are progressively inadequate to the situation and the employing authority is called upon for expending annual contributions. Under this method the generation which establishes the scheme escapes its fair proportion of financial responsibility, whilst succeeding generations must bear a continually increasing burden.

Under the actuarial reserve plan, on the other hand, the taxpayers who receive the services of the employees for the time being pay their share of the obligations incurred in respect of that service. Under this method a fund is established and the employer, like the employee, pays (or should pay) into this fund regular contributions. The rate of contribution is so calculated for both sides that the fund should receive annually an amount which, invested at compound interest, will be sufficient to meet all demands on the fund. On the initiation of the scheme it is the usual practice for the employing authority to assume responsibility for back service, and to make regular contributions to liquidate this accrued liability. Ordinarily, as the name implies, the actuarial reserve system provides for periodic actuarial reviews.

(c) *State Superannuation Funds in Operation in New Zealand.*—In New Zealand, in addition to the Local Authorities' Superannuation Funds and the National Provident Fund superannuation scheme, which is mainly availed of by local authorities, there are three separate State Superannuation Funds—viz., Railways, established in 1903; Teachers, established in 1906; and the Public Service, established in 1908. Each of these schemes is contributory, and is based on the actuarial reserve system, although under the Railways scheme there is no statutory provision either for periodic actuarial review, as in the case of the other funds, or for regular subsidies; but this fund is State-guaranteed, and regular subsidies are now paid from the Railways Account. Due to the failure of the Government to contribute its quota the funds have drifted more or less into a hybrid arrangement, which possesses the weaknesses of the cash disbursement system and which loses the stability derivable from regular subsidies and interest from investments that would have been obtained had the actuarial reserve plan been adhered to.

It should be noted that contributions are in effect savings against the day of a contributor's retirement—they are trust funds, but notwithstanding this, due primarily to the failure of the Government in the past to meet its obligations in respect of subsidy, and also due in part to the actuarial unsoundness of the basis of retirement in many cases, the contributions from employees in the Service are being utilized to pay the pensions of employees who have retired; so that not only are the contributions of employees not being credited with interest, but the principal itself is being dissipated, to the grave risk of insolvency of the funds.

By reason of the fact that, with the help of compound interest at the rate of 4 per cent. per annum, the sum of a given contribution per annum will double itself in the course of a service of thirty-one years, it follows that the total contributions of an employee who serves forty years need be less than half the amount required by direct appropriation to give the same pension. It is or should be recognized that there must be a sharp differentiation between accrued liabilities and future liabilities. The contributions made by present employees should be held in reserve to pay future pensions, and not consumed in paying pensions for past services. The accrued liabilities must be paid by the State, or the contributed fund will become insolvent. As indicated in the preceding paragraph, to use the current contributions for the payment of pensions on back service is doubly destructive to any scheme, because it not only takes the contributions that were paid in to meet future obligations, but it cuts off the accumulation of interest.

(d) *History of Various Schemes.*—Many retirement schemes from time to time have been tried in New Zealand, the first being under the Pension Act of 1858.

Pension Act, 1858: This provided for retirement on annuity "in case of incapacity by age, ill-health, or other infirmity after ten years of faithful and diligent service." If the term of service had been ten to seventeen years, the annual allowance was one-quarter of the employee's average salary for the last three years. From seventeen to forty-five years the pension was one-third of such salary, plus one eighty-fourth of such salary for each year of service above seventeen. For forty-five years or more of service the allowance was two-thirds of the said salary. In the discretion of the Governor in Council, relief up to one year's salary could be granted the widow or family of an employee dying in the employ of the Government.

Pension Act, 1866: Under the Act of 1866 changes were made in the provisions for grant of pensions. The allowance on retirement reflected the influence of the British Superannuation Act of 1859. It was fixed at one-sixtieth of the average salary of the three preceding years for each year of service up to forty-sixtieths after forty years' or more service.

Civil Service Act, 1871: The 1871 Act repealed the provisions of the 1858 and the 1866 Acts as applied to persons entering the Service after that date. The reason for the repeal was that Government saw that the amount paid in pensions, though small, was rapidly increasing proportionately. In eleven years it went up from £160 to about £7,400, and there was fear that it might double itself in a very few years, with increasing embarrassment to the Government.

Civil Service Act, 1886: The year 1886 was a year of profound business depression, in which the Government Service suffered with the rest of the colony. The gratuities and compensation granted to Civil employees were felt to be too great a burden on the taxpayer at the time, and a contributory scheme was suggested. When therefore a Civil Service Reform Bill was drawn up in 1886 a clause was inserted providing that State employees should be required to set aside 5 per cent. of their salaries, which should be returned to them with interest on retirement from office. This compulsory savings' scheme was devised mainly in the interests of the taxpayer, to lessen the burden for compensation. It was to be supposed, of course, that the employee who received his savings in a lump sum on leaving the Service would be less disposed to ask for a gratuity or compensation than the one who found himself entirely without funds on retirement from office.