

1928.

NEW ZEALAND.

NATIONAL PROVIDENT FUND.

ACTUARIAL EXAMINATION FOR THE TRIENNium ENDED 31st DECEMBER, 1922.

BY THE ACTUARY APPOINTED BY HIS EXCELLENCY THE GOVERNOR-GENERAL TO MAKE THE ACTUARIAL EXAMINATION OF THE NATIONAL PROVIDENT FUND FOR THE TRIENNIAL PERIOD ENDED 31st DECEMBER, 1922.

Laid before Parliament in pursuance of Section 24 (3) of the National Provident Fund Act, 1910.

Government Actuary's Department, Wellington, 21st February, 1928.

1. I HAVE the honour to submit the following report on the National Provident Fund as at the 31st December, 1922, as required by section 24 of the National Provident Fund Act, 1910.

2. The National Provident Fund falls to be considered under three headings: first, the main scheme; second, the local-authorities scheme; and third, the approved-friendly-societies scheme.

THE MAIN SCHEME.

3. The National Provident Fund Act, 1910, which Act, together with subsequent amending Acts, has now been consolidated in the National Provident Fund Act, 1926 (hereinafter referred to as "the Act"), is an endeavour to solve two of the pressing problems of the times—namely, (1) the making of provision for old age, and (2) the maintenance of some degree of family comfort (the bare necessities of life at the very least) when sickness or death robs the breadwinner of his earning-powers.

4. Old age seems such a distant possibility to the individual that financial provision for its needs is often subordinated to the pleasures or necessities of the moment, and there can be no doubt that the knowledge that the State provides free old-age pensions is a very real impediment to thrift. While it must be apparent that even under the most perfect scheme of contributory social insurance special hardship and other causes will always throw a certain proportion of cases on to the State, it is in the best interests both of the State and the individual to institute some form of social insurance, imposing more than voluntary obligations on the present generation to contribute towards its own old-age pensions.

5. Premature death or even lengthy sickness of the wage-earner, with the accompanying family hardship, is in many ways a more urgent social problem than old age, because even the most thrifty has had insufficient time to have made any real provision without the aid of insurance. As the ability to contribute is generally inversely proportional to the size of the family, it is very desirable that the scheme of social insurance should pay benefits proportionate to the family needs instead of a disability benefit dependent on the contribution.

6. The main scheme of the National Provident Fund offers to the thrifty person the means of meeting the above contingencies, the broad principle being that the State undertakes in effect the cost of providing family allowances (proportionate to the size of the family) in the event of the death or prolonged sickness of the wage-earner, and bears the expenses of administration, so long as the individual contributes sufficient to provide a pension for himself at age 60. While it may be said to offer a solution of the individual's problem, it is only a partial solution of the State's problem, as the scheme is voluntary, and therefore does not embrace the thriftless section of the community, who are naturally the very people who make the biggest call on the State when old age is attained.

7. The benefits provided by the principal Act and the requisite contributions are fully set out in the Appendix, Table 1. A feature of the scheme is that under no circumstances is a member to receive from the fund less than he has paid in. The member has the option to withdraw the whole of his contributions (less benefits) on giving twelve months' notice, and if after his death the allowances that are or have been previously paid to his family fall short of his total contributions the balance is handed over to his representatives.

8. The Government subsidy amounts to one-fourth of the contributions received in the previous year—that is to say, the contributor pays 80 per cent. and the State 20 per cent. of the total cost of the various benefits.

LOCAL-AUTHORITIES SCHEME.

9. The Act permits the National Provident Fund Board to establish pension schemes for the employees of local authorities, and a large number of these schemes have been inaugurated.

10. The purpose is to grant the employees of these bodies a superannuation scheme that will enable them to maintain on retirement a degree of comfort commensurate with that enjoyed during

the later years of service, and to secure, in the event of death, an annuity to the widow and allowances to each of the children under age 14.

11. The main benefit is a pension based on "final" salary and the number of years' service. This and subsidiary benefits are specifically set out in Table II of the Appendix.

12. Membership in the fund is optional in respect of the existing staff, but compulsory for all new entrants.

13. The cost of the scheme is borne jointly by the employee, the local authority (employer), and the State. The State bears 20 per cent. of the total cost, the employee contributes a percentage of his salary (the amount of such percentage varying with the age at joining the fund), and the local authority makes up the balance. The ratio of the contribution cost to the employer and employee depends on the incidence of the ages at entry into the fund, and consequently may show fluctuation not only between one local authority and another, but also in the same local authority at various stages of its existence. At the valuation date the proportion of the total cost of the benefits borne by the local authorities and their employees was approximately 50 per cent. and 30 per cent. respectively.

14. The scheme is noteworthy in many respects, but two features call for special mention, namely—

(1) The actuarial basis of the scheme: In calculating contributions for final-salary pension schemes it is usual to fix a salary percentage (varying with the entry age) based on an estimated average salary at each age. While this is the most practical way of dealing with the problem in the usual type of scheme, where only the employer and the employee are concerned, difficulties arise when a third party (the State) also contributes to the cost of the scheme without having any voice in the service conditions or in the assessment of the salaries, which are fixed by a number of diverse local authorities and accordingly are hardly likely to be homogeneous. Under the circumstances, it was considered that it would not be sound for the State to speculate upon a salary scale, and it was decided that each contributor, with the assistance of his employer and the State, should pay in on the average for the benefits that he will receive, without any addition to or diminution of the burden of any other contributor. This was effected by basing the contribution for pension on present salary and prospective service to the normal pension age (or prior breakdown), and calculating as they emerge the contributions for the additional pension due to subsequent salary-increases. This method of dealing with the actual instead of the speculative salary-increases involves a series of adjustments at fairly regular intervals, but the additional labour is more than compensated as far as the State is concerned by the increased stability of the scheme.

(2) The period over which the contributions are spread: In view of the intention to include in the scheme all employees irrespective of their attained age and to allow back service to count, it was decided that to make contributions cease at retirement would throw too heavy an initial strain on the State and the local authority in respect of old employees. The liability of the State and the local authority was accordingly spread over the lifetime of the employee, the latter's contribution terminating at retirement.

APPROVED-FRIENDLY-SOCIETIES SCHEME.

15. Under the Act approved friendly societies may become contributors to the fund on behalf of any of their members, to secure for them, on attainment of age 60, a weekly pension of 10s., 20s., 30s., or 40s. on special terms.

16. The tables of contributions are set out in Table 1 of the Appendix. The low contributions charged to members are due to (1) the payment into the fund by the friendly society of a sum equivalent to its release from specified sickness benefits after members' attainment of age 60; (2) the increase of the State subsidy under this section to 50 per cent. of the contributions.

17. In addition to the aforementioned subsidy to each section of contributors, the State bears the whole expenses of administration, provides by an annual parliamentary grant a maternity benefit of £6 on the birth of a contributor's child or children (conditional on the parents' joint annual income not exceeding £300), and guarantees the scheme by agreeing to pay into the fund such further amounts as are deemed necessary in accordance with the Actuary's report.

18. The income and outgo during the three years were as follows:—

Consolidated Revenue Account of the National Provident Fund from 1st January, 1920, to 31st December, 1922.

Income.				Outgo.			
	£	s.	d.		£	s.	d.
Amount of fund, 1st January, 1920	338,729	1	2	Maternity allowances	109,410	0	0
Contributions	371,491	0	0	Retirement	12,719	11	6
State subsidy	94,455	2	3	Incapacity	3,445	19	0
Interest	81,669	0	10	Death	11,866	10	10
Fines	2,070	1	10	Refund of contributions—			
Refund by State of maternity allowances	109,410	0	0	Withdrawals and lapses	63,638	5	10
Benefits refunded on exit	142	13	0	Death	3,684	4	4
Contributions overpaid	69	6	4	Refund of contributions overpaid on exit	70	3	4
				Refund of contributions unclaimed or			
				impounded	57	12	9
				Amount of fund, 31st December, 1922	793,143	17	10
	£998,036	5	5		£998,036	5	5

19. The chief items of importance are the rapid increase of the funds, the growth of the contribution income to more than double that of the previous triennium, and the receipt of interest at a substantially higher rate than in the preceding triennium.

The net effective rate of interest (allowing for the incidence of the income) credited to the fund for the past six years has been as follows:—

	£	s.	d.		£	s.	d.
1917 ..	..	4	3	7 per cent.	1920 ..	..	4 18 5 per cent.
1918 ..	..	4	4	2 „	1921 ..	..	4 19 6 „
1919 ..	..	4	5	8 „	1922 ..	..	5 8 7 „

It is gratifying to see such an improvement—more than $\frac{3}{4}$ per cent. per annum higher than the preceding triennium—in the interest earnings, as it is of vital importance that the fund should obtain the highest possible rate of interest consistent with safety.

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 valuation is to ascertain whether the current funds, together with the present value of the future contributions, will be sufficient to meet the future liabilities. In estimating the value of these future liabilities it is necessary to take into account the proportion of members who will withdraw, die, or retire, and these factors have been carefully investigated in the light of the fund's experience since the previous valuation.

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, 1922.

<i>Liabilities.</i>				<i>Assets.</i>			
Value of liability for—			£	Amount of fund at 31st December, 1922 ..			£
Pensions	..	..	2,038,102	Value of future contributions	..	..	793,144
Orphans' benefits	..	..	176,297	Value of future State subsidies of one-fourth	..	..	1,593,647
Widows' benefits	..	..	165,805	(assumed to be received a year later than	..	..	
Incapacity allowances	..	..	63,566	above)	..	..	387,290
Return of contributions on death	..	..	75,135	Balance (deficiency)	..	..	22,792
Return of contributions on withdrawal	..	..	262,607				
Sundry benefits	..	..	15,361				
			<u>£2,796,873</u>				<u>£2,796,873</u>

From this it will be seen that the fund has a ratio of solvency of 19s. 10d. in the pound, as compared with 19s. 11d. at the last valuation. It will therefore be seen that the interest and other profits earned in excess of the previous valuation assumptions have practically offset the increase in the estimate of the liabilities due to the more stringent valuation basis which the experience has shown to be necessary.

24. Section 24 (2) further requires the report to show “the probable annual sums required by the fund to provide the pensions and other allowances falling due within the ensuing three years, without affecting or having recourse to the actuarial reserve appertaining to the contributor's contributions.” I have taken this to mean that the Actuary is to report what proportion of the estimated claims during the triennium succeeding the valuation is unprovided for by the contributions—in other words, he is to state the further subsidies per annum necessary during the period specified, beyond the statutory one-fourth subsidy, to meet the current charges on the fund, and section 25 (2) of the Act makes “such further amounts (if any)” an additional charge on the State.

25. I have to report, under the provisions of these sections, that, beyond the present annual subsidy, no “such further amounts” require to be paid during the three years following the date of this valuation.

GENERAL REMARKS.

26. A study of the tables of mortality compiled at successive censuses here and elsewhere reveals a steady and persistent drop in the death-rate, and it is to be expected that as the result of medical and sociological research longevity will continue to increase. Improvement in longevity will cause a strain on the fund, and unless the State is to contribute more than was originally intended it is important that all reasonable efforts should be made to secure as high a rate of interest on the invested funds as is compatible with security. The very satisfactory improvement which has been effected in the rate of interest earned by the fund since the previous valuation is most gratifying, and this feature has enabled the fund to pass without financial impairment to the more stringent valuation basis adopted in the present investigation.

27. In conclusion, I have to acknowledge the capable assistance of Mr. G. W. Melville, F.F.A., and the efficient service rendered by the staff in carrying out the heavy work of the valuation.

C. GOSTELOW, Fellow of the Institute of Actuaries (London),
Government Actuary.

APPENDIX.

TABLE I.

THE MAIN FUND AND APPROVED-FRIENDLY-SOCIETIES SECTIONS.

MEMBERSHIP QUALIFICATIONS.

ANY person may become a contributor who—

- (a) Is a resident of New Zealand ;
- (b) Is over sixteen years of age ;
- (c) Is under fifty years of age ; and
- (d) Whose average income during three years prior to joining has not exceeded £300 a year.

BENEFITS.

The following benefits are payable :—

- (1) After contributing for twelve months or for such shorter period as the Board determines, a payment of £6 on the birth of a contributor's child or children, provided the parents' joint annual income does not exceed £300.
- * (2) After contributing for five years, an allowance after three months' incapacity to work of 7s. 6d. per week for each child under fourteen years of age ; not to exceed pecuniary loss. Ceases at age 60. Extends to age 18 in case of an infirm child.
- * (3) After contributing for five years, an allowance, on the death of a contributor, of 7s. 6d. per week for each child until fourteen years of age, and 7s. 6d. per week for the widow so long as any child is under fourteen years of age.
- (4) On reaching age 60, a pension of 10s., 20s., 30s., or 40s. per week, according to the scale of contributions.
- (5) Return of contributions, less benefits, on giving twelve months' notice of cessation of membership. This right is exercisable at any time before drawing the first payment of the pension.
- (6) Return of contributions, less benefits, on death, whether before or after receiving pension.

CONTRIBUTIONS.

Age last Birthday of Contributor when first Contribution is made.	Main-fund Section.	Approved-friendly-societies Section.		Age last Birthday of Contributor when first Contribution is made.	Main-fund Section.	Approved-friendly-societies Section.	
	Weekly Contribution required to secure each Pension of 10s. a Week at Age 60.	Weekly Contribution required to secure a Pension of 10s. a Week at Age 60.†	Weekly Contribution required to secure each additional Pension of 10s. a Week at Age 60.		Weekly Contribution required to secure each Pension of 10s. a Week at Age 60.	Weekly Contribution required to secure a Pension of 10s. a Week at Age 60.†	Weekly Contribution required to secure each additional Pension of 10s. a Week at Age 60.
	(i.)	(ii.)	(iii.)		(i.)	(ii.)	(iii.)
	s. d.	s. d.	s. d.		s. d.	s. d.	s. d.
16	0 9	0 4	0 6	35	2 5	1 3	1 9
17	0 10	0 5	0 7	36	2 7	1 4	1 10
18	0 10	0 5	0 7	37	2 10	1 5	1 11
19	0 11	0 5	0 8	38	3 0	1 6	2 1
				39	3 3	1 7	2 3
20	1 0	0 6	0 8				
21	1 0	0 6	0 8				
22	1 1	0 7	0 9	40	3 6	1 9	2 5
23	1 2	0 7	0 9	41	3 10	1 11	2 8
24	1 3	0 7	0 10	42	4 2	2 1	2 10
				43	4 6	2 3	3 1
25	1 4	0 8	0 11	44	4 11	2 6	3 5
26	1 5	0 8	1 0				
27	1 6	0 9	1 1				
28	1 7	0 10	1 2				
29	1 8	0 10	1 2	45	5 7	2 11	3 9
				46	6 6	3 3	4 2
30	1 9	0 11	1 3	47	7 5	3 9	4 8
31	1 10	0 11	1 3	48	8 4	4 3	5 4
32	2 0	1 0	1 4	49	9 4	4 10	6 2
33	2 2	1 1	1 6				
34	2 3	1 2	1 7				

* These benefits (2 and 3) apply only to the main-fund section.

† NOTE.—In respect of each member contributing at these rates (column ii) the friendly society to which he belongs has the option of supplementing the said contribution by the difference between the rates shown in column (ii) and (iii), or of making to the fund on the member's attainment of age 60 the following single payment, viz. : £55 12s. in respect of members joining the fund at ages under 50 ; £45 in respect of members joining the fund at ages 50 or over.

TABLE II.
LOCAL-AUTHORITIES SECTION.
STANDARD BENEFITS AND CONTRIBUTIONS.

Benefits.

- I. *On attainment of normal pension age—viz., (1) males at age 65, females at age 60 ; or (2) after forty years' service and fifteen years' membership in the fund—*
- (a) A pension of one-sixtieth of final* salary for each year's service, and a proportionate part of one-sixtieth of such salary for every fraction of a year of service, with a limit of forty-sixtieths (two-thirds) of salary, but in no case to exceed £300 per annum ;
- (b) Or the option in lieu thereof of a return of total contributions (less benefits).
- II. *On retirement before normal pension age (on the grounds of being medically unfit for future duty)—*
- At any time (not being earlier than one year after the inauguration of the scheme) on the production of satisfactory medical evidence to the Board, a pension calculated in the same manner and with the same limitations as in I (above), or the option in lieu thereof of a return of total contributions (less benefits).
- III. *On voluntary retirement or dismissal—*
- A return of total contributions (less any benefits received).
- IV. *At death, whether before or after becoming entitled to a retiring-allowance,—*
- (a) Leaving no widow or children : A return of the total contributions paid to the fund on the contributor's behalf, less any moneys received by the contributor out of the fund during his lifetime.
- (b) Leaving a widow : An allowance of £18 per annum during widowhood, or in lieu thereof a return of contributions as in (a) above.
- (c) Leaving children : An allowance of 5s. per week on account of each child so long as that child is under the age of fourteen years : Provided that in any case where the contributor leaves children but no widow, if when the youngest child attains the age of fourteen years the aggregate payments made to the children are not equal to the contributions paid to the fund on the contributor's behalf (less any moneys received by him out of the fund in his lifetime) the difference between these two amounts shall be equally divided between the children.
- V. A maternity allowance of £6 on the birth of an employee's child or children (provided the parents' joint income for the twelve months preceding the birth does not exceed £300).

Contributions.

The contributions for the various benefits are based upon the present salary and prospective total service, and adjustments made for each salary-increase. The local authority pays in respect of each employee what is not covered by the State subsidy, and the following percentage of salary contributed by the employee :—

Age at Time of joining the Fund.						Per Cent.
30 and under	..	..	..	..	..	4
Over 30 and not exceeding 35	..	..	..	..	..	5
„ 35	„	40	..	..	..	6
„ 40	„	45	..	..	..	7
„ 45	„	50	..	..	..	8
„ 50	..	..	..	..	..	9

* Final salary is subject to the limitation that no salary increases during the three years prior to retirement shall count.

TABLE III.

MAIN FUND.

STATEMENT OF RETIRING AND OTHER ALLOWANCES FOR THE TRIENNium ENDED 31ST DECEMBER, 1922.

	On Death.				On Incapacity.				On Attainment Age 60.				Total Retiring and other Allowances.			
	Number.		Annual Amount.		Number.		Annual Amount.		Number.		Annual Amount.		Number.		Annual Amount.	
	M.	F.	£	s. d.	M.	F.	£	s. d.	M.	F.	£	s. d.	M.	F.	£	s. d.
Allowances existing 31/12/19 ..	28	..	1,852	10 0	3	..	214	10 0	..	..	..	..	31	..	2,067	0 0
Granted during triennium ..	34	..	2,301	0 0	31	..	1,560	0 0	2	..	130	0 0	67	..	3,991	0 0
Total ..	62	..	4,153	10 0	34	..	1,774	10 0	2	..	130	0 0	98	..	6,058	0 0
Discontinued during triennium (as per statement below)	2	..	136	10 0	24	..	1,462	10 0	..	..	..	..	26	..	1,599	0 0
Existing at 31/12/22 ..	60	..	4,017	0 0	10	..	312	0 0	2	..	130	0 0	72	..	4,459	0 0

Particulars of Retiring and Other Allowances discontinued during the Triennium.

Discontinued by death ..	..	..	..	..	4	..	234	0 0	..	..	..	..	4	..	234	0 0
Expiry ..	..	..	2	..	20	..	1,228	10 0	..	..	..	..	22	..	1,365	0 0
Total ..	..	..	2	..	24	..	1,462	10 0	..	..	..	..	26	..	1,599	0 0

LOCAL-AUTHORITIES SECTION.

STATEMENT OF RETIRING AND OTHER ALLOWANCES FOR THE TRIENNium ENDED 31ST DECEMBER, 1922.

	On Death.				On Medical Unfitness.				On Attainment of Retiring Age.				Total Retiring and other Allowances.			
	Number.		Annual Amount.		Number.		Annual Amount.		Number.		Annual Amount.		Number.		Annual Amount.	
	M.	F.	£	s. d.	M.	F.	£	s. d.	M.	F.	£	s. d.	M.	F.	£	s. d.
Allowances existing 31/12/19 ..	15	..	634	0 0	3	..	231	12 0	11	..	939	6 0	29	..	1,804	18 0
Granted during triennium ..	28	..	866	0 0	15	..	1,094	15 0	68	..	5,337	11 0	111	..	7,298	6 0
Total ..	43	..	1,500	0 0	18	..	1,326	7 0	79	..	6,276	17 0	140	..	9,103	4 0
Discontinued during triennium (as per statement below)	1	..	249	0 0	4	..	246	16 0	6	..	318	3 0	11	..	813	19 0
Existing at 31/12/22 ..	42	..	1,251	0 0	14	..	1,079	11 0	73	..	5,958	14 0	129	..	8,289	5 0

Particulars of Retiring and Other Allowances discontinued during the Triennium.

Discontinued by death ..	..	..	1	..	3	..	160	8 0	6	..	318	3 0	10	..	496	11 0
Expiry ..	..	..	..	..	1	..	86	8 0	..	..	..	..	1	..	317	8 0
Total ..	..	..	1	..	4	..	246	16 0	6	..	318	3 0	11	..	813	19 0

PROGRESS OF RETIRING AND OTHER ALLOWANCES SINCE THE ESTABLISHMENT OF THE FUND TO 31ST DECEMBER, 1922.

	On Death.				On Medical Unfitness.				On Attainment of Retiring Age.				Total Retiring and other Allowances.			
	Number.		Annual Amount.		Number.		Annual Amount.		Number.		Annual Amount.		Number.		Annual Amount.	
	M.	F.	£	s. d.	M.	F.	£	s. d.	M.	F.	£	s. d.	M.	F.	£	s. d.
Total granted ..	105	..	5,699	0 0	60	..	3,490	17 0	81	..	6,406	17 0	246	..	15,596	14 0
Total discontinued ..	3	..	431	0 0	36	..	2,099	6 0	6	..	318	3 0	45	..	2,848	9 0
Total existing at 31/12/22 ..	102	..	5,268	0 0	24	..	1,391	11 0	75	..	6,088	14 0	201	..	12,748	5 0

TABLE IV.
PARTICULARS OF MEMBERSHIP (PENSIONERS EXCLUDED).

Attained Age at Valuation Date.				Main and Approved-friendly-societies Scheme.			Local-authorities-superannuation Scheme.			
				Number of Members.	Number of 10s. Pensions.	Weekly Contribution payable.	Number of Members.	Present Salaries.	Prospective Normal Pensions in respect of Present Salaries.	Annual Contribution payable.
						£ s. d.		£	£	£
14	..	..	..	..	..	..	..	..	..	..
15	..	..	..	..	..	..	..	..	..	..
16	..	..	..	68	82	3 1 5	6	312	208	15
17	..	..	..	492	580	21 19 2	16	1,111	741	53
18	..	..	..	913	1,103	43 9 4	17	1,209	806	61
19	..	..	..	1,159	1,450	58 17 11	18	1,813	1,189	86
20	..	..	..	1,278	1,624	68 5 11	28	3,455	2,323	167
21	..	..	..	1,332	1,720	75 17 0	17	2,584	1,721	125
22	..	..	..	1,363	1,743	79 5 9	27	4,505	2,983	229
23	..	..	..	1,386	1,788	84 15 9	26	5,045	3,348	254
24	..	..	..	1,231	1,555	75 10 4	36	7,617	4,894	423
25	..	..	..	1,161	1,450	74 3 7	39	8,530	5,263	538
26	..	..	..	989	1,213	64 13 5	40	9,126	5,901	515
27	..	..	..	962	1,162	64 14 10	30	6,657	4,234	389
28	..	..	..	840	1,031	59 12 10	35	7,645	4,798	473
29	..	..	..	761	923	55 18 9	35	7,649	4,694	502
30	..	..	..	744	921	58 4 0	32	7,640	4,807	504
31	..	..	..	644	790	52 6 3	42	9,310	5,520	659
32	..	..	..	667	795	54 4 11	50	12,667	7,493	893
33	..	..	..	547	648	47 3 3	62	14,827	8,500	1,113
34	..	..	..	502	595	45 16 0	43	10,322	5,806	798
35	..	..	..	483	576	46 11 0	59	14,344	8,131	1,132
36	..	..	..	397	483	41 5 4	54	13,038	7,082	1,121
37	..	..	..	393	472	43 6 5	50	12,012	6,710	1,044
38	..	..	..	282	329	30 17 3	54	13,929	7,766	1,255
39	..	..	..	281	350	34 3 11	58	15,545	8,437	1,436
40	..	..	..	229	280	29 2 11	40	10,150	5,470	1,011
41	..	..	..	204	251	28 0 9	61	16,258	8,548	1,646
42	..	..	..	188	261	31 4 2	60	16,184	8,320	1,657
43	..	..	..	135	179	22 12 2	64	16,971	8,667	1,919
44	..	..	..	113	146	19 12 4	48	13,450	7,075	1,612
45	..	..	..	100	132	19 6 11	55	14,926	7,479	1,885
46	..	..	..	77	121	19 15 10	47	13,337	7,057	1,769
47	..	..	..	67	107	17 18 6	43	11,681	5,855	1,580
48	..	..	..	57	84	15 0 11	53	14,860	7,223	2,081
49	..	..	..	48	82	13 17 2	53	14,332	7,157	2,158
50	..	..	..	31	50	10 14 3	37	10,690	5,199	1,716
51	..	..	..	30	46	9 11 11	42	10,721	4,913	1,834
52	..	..	..	17	25	5 4 7	41	10,987	4,882	1,902
53	..	..	..	17	25	5 6 9	46	12,923	5,345	2,261
54	..	..	..	7	13	3 2 7	35	9,801	3,914	1,787
55	..	..	..	12	19	5 0 7	34	9,012	3,956	1,808
56	..	..	..	9	15	4 7 0	25	7,854	3,245	1,562
57	..	..	..	2	4	1 6 11	26	6,834	2,497	1,383
58	..	..	..	3	10	4 7 9	22	6,013	2,221	1,236
59	..	..	..	2	5	2 11 8	23	6,116	2,373	1,302
60	..	..	..	..	..	..	22	5,852	2,296	1,421
61	..	..	..	..	..	..	17	4,395	1,467	997
62	..	..	..	..	..	..	34	9,072	2,966	2,066
63	..	..	..	..	..	..	21	6,120	2,515	1,691
64	..	..	..	..	..	..	21	5,926	2,031	1,619
65	..	..	..	..	..	..	12	2,910	1,039	903
66	..	..	..	..	..	..	12	2,926	1,133	1,006
67	..	..	..	..	..	..	9	2,252	1,193	276
68	..	..	..	..	..	..	4	556	166	190
69	..	..	..	..	..	..	3*	..	..	27
70	..	..	..	..	..	..	1*	..	..	9
71	..	..	..	..	..	..	4*	..	..	40
72	..	..	..	..	..	..	..	..	..	..
73	..	..	..	..	..	..	..	..	..	..
74	..	..	..	..	..	..	3	291	87	110
75	..	..	..	..	..	..	2	208	76	82
76	..	..	..	..	..	..	..	..	..	..
77	..	..	..	..	..	..	..	..	..	..
78	..	..	..	..	..	..	1	280	116	108
				20,223	25,238	1,552 10 0	1,895	464,780	239,836	58,439

* These members (and also one at ages 64, 66, and 75, and two at ages 68 and 74) are at present contributing only in respect of widows' and children's benefits. Pensions and contributions will be determined on retirement.

TABLE V.

EXPERIENCE TABLE.

PROBABILITIES PER CENT. PER ANNUM OF DEATH, WITHDRAWAL, AND RETIREMENT USED IN THE CALCULATION OF VALUATION FACTORS FOR THE STANDARD LOCAL-AUTHORITIES SCHEME.

Contributing Members : Males.

Age.	Probabilities of Death, Withdrawal, or Retirement within a Year (expressed as a Percentage of the Number existing in Service at the beginning of the Year).			Age.	Probabilities of Death, Withdrawal, or Retirement within a Year (expressed as a Percentage of the Number existing in Service at the beginning of the Year).		
	Death.	Withdrawal.	Retirement.		Death.	Withdrawal.	Retirement.
	Per Cent.	Per Cent.	Per Cent.		Per Cent.	Per Cent.	Per Cent.
15 ..	0.16	7.00	..	41 ..	0.50	1.35	0.10
16 ..	0.16	6.95	..	42 ..	0.53	1.20	0.10
17 ..	0.16	6.89	..	43 ..	0.56	1.05	0.10
18 ..	0.16	6.81	..	44 ..	0.59	0.90	0.10
19 ..	0.16	6.70	..	45 ..	0.62	0.80	0.10
20 ..	0.16	6.55	..	46 ..	0.65	0.70	0.15
21 ..	0.16	6.35	..	47 ..	0.68	0.60	0.20
22 ..	0.16	6.15	..	48 ..	0.71	0.50	0.25
23 ..	0.16	5.90	..	49 ..	0.74	0.41	0.30
24 ..	0.18	5.65	..	50 ..	0.78	0.33	0.35
25 ..	0.20	5.35	..	51 ..	0.82	0.26	0.40
26 ..	0.21	5.05	..	52 ..	0.86	0.20	0.45
27 ..	0.22	4.70	..	53 ..	0.90	0.15	0.50
28 ..	0.24	4.40	..	54 ..	0.95	0.10	0.60
29 ..	0.26	4.10	..	55 ..	1.00	0.05	0.80
30 ..	0.28	3.80	..	56 ..	1.05	0.02	1.20
31 ..	0.30	3.55	..	57 ..	1.11	0.00	1.90
32 ..	0.32	3.30	..	58 ..	1.17	..	3.00
33 ..	0.34	3.05	..	59 ..	1.29	..	4.50
34 ..	0.36	2.80	..	60 ..	1.41	..	12.00
35 ..	0.38	2.55	..	61 ..	1.53	..	12.00
36 ..	0.40	2.30	..	62 ..	1.68	..	15.00
37 ..	0.42	2.10	..	63 ..	1.85	..	20.00
38 ..	0.44	1.90	0.10	64 ..	2.04	..	30.00
39 ..	0.46	1.70	0.10	65 ..	..	..	100.00
40 ..	0.48	1.50	0.10				

TABLE VI.

SUMMARY OF NATIONAL PROVIDENT FUND VALUATION.

VALUATION BALANCE-SHEET AS AT 31ST DECEMBER, 1922.

Liabilities.

MAIN-FUND AND APPROVED-FRIENDLY-SOCIETIES SECTION.

	£	£
Value of contributors' pensions already granted	1,500	
Value of widows' allowances already granted	8,300	
Value of children's allowances already granted	15,900	
Value of deferred pensions to survivors of existing contributors	1,063,030	
Value of return of contributions (less benefits) on withdrawal in respect of past contributions	86,456	
Value of return of contributions (less benefits) on withdrawal in respect of future contributions	139,488	
Value of return of contributions (less benefits) on death : In the main scheme this is limited to death (i) without children, or (ii) with children, and death taking place within five years from entry—		
(a) In respect of past contributions	16,624	
(b) In respect of future contributions	51,279	
Value of allowance benefits—		
(a) Widows' benefits	68,167	
(b) Children's benefits	145,970	
(c) Incapacity allowances	63,566	
Value of return of balance of contributions where allowances or pensions fall short of the total contributions paid, and of sundry minor benefits	5,100	
		1,665,380

LOCAL-AUTHORITIES SECTION.

LOCAL-AUTHORITIES SECTION.								£	£
Value of contributors' pensions already granted	..	..	..	..	..	..	..	69,887	
Value of widows' pensions already granted	..	..	..	..	..	..	..	8,600	
Value of children's allowances already granted	..	..	..	..	..	..	..	2,510	
Value of prospective pensions (based on present salary scale) in respect of past service	..	..	..	..	..	..	..	444,869	
Value of prospective pensions (based on present salary scale) in respect of future service	..	..	..	..	..	..	..	458,816	
Value of prospective pensions to widows	..	..	..	..	..	..	..	80,738	
Value of prospective allowances to children	..	..	..	..	..	..	..	11,917	
Value of return of contributions on withdrawal (including widow's option in lieu of pension)	..	..	..	..	..	..	..	36,663	
Value of return of contributions on death prior to retirement (leaving no widow or children)	..	..	..	..	..	..	..	7,232	
Value of return of balance of contributions where allowances or pensions fall short of the total contributions paid, and of sundry minor benefits	..	..	..	..	..	..	..	10,261	
									1,131,493
									£2,796,873
<i>Assets.</i>									
Accumulated funds	..	..	..	..	..	..	..	793,144	
Value of future contributions	..	..	..	..	..	..	..	1,593,647	
Value of future State subsidies (assumed to be received a year later than contributions)	..	..	..	..	..	..	..	387,290	
Balance (deficiency)	..	..	..	..	..	..	..	22,792	
									£2,796,873

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