

1899.
NEW ZEALAND.

POLICE PROVIDENT FUND

(PAPERS RELATIVE TO A PROPOSED).

Presented to both Houses of the General Assembly by Command of His Excellency.

MEMORANDUM for the Right Hon. the PREMIER.

26th September, 1899.

Re Police Provident Fund Bill.

I BEG to submit herewith—(1) A report from the Government Actuary, dated 22nd ultimo; (2) a memorandum of my own on that report, dated 1st instant; (3) copy of letter, dated 4th instant, addressed to the Commissioner, Government Life Insurance Department, notifying him that the recommendations of the Actuary, as regard extending the voluntary retiring age from fifty-five to sixty, and reducing the amount of retiring-allowance from one-fiftieth to one-sixtieth of the salary for each year's service, would be adopted, and asking for a further report; (4) a further report from the Actuary, dated 26th instant; (5) a tabulated statement I have had prepared showing (a) the probable charges on the Fund for ten years, from 1st January, 1900, to 31st December, 1909, (b) the probable income to the Fund for the same period, and (c) the annual amount saved by the Government in the form of compassionate allowance.

In making the foregoing calculations I have assumed (a) that the Fund will come into operation on the 1st of January next; (b) that the whole of the members who at that date have attained the age of sixty years, and have not less than twenty-five years' service, will give the necessary three months' notice of their desire to retire immediately the Fund comes into operation, and do so retire at the expiration of that notice; (c) that all other members retire immediately on qualifying as above; and (d) that all members so retired remain chargeable to the Fund from the time of their retirement to the end of the ten years.

No doubt there will be instances of men being retired on medical grounds before they attain the age of sixty. These cases I have not, of course, been able to provide for. I, however, do not anticipate there will be a very large number—at any rate, not more than can be provided for out of the interest earned by the accumulated capital and the pensions that will fall in owing to deaths among the pensioners that occur during the ten years.

The pensions of men who are retired prematurely on medical grounds will necessarily be very small under the present scale, and should the pension of an Inspector fall in during the ten years, as is probable owing to the advanced age of some of the Inspectors, this would provide a reduced pension for four or five prematurely retired constables.

I estimate that after the Fund has been in operation about twelve years the deaths among the pensioners will nearly or quite equal the number of men added to the pension-list.

In conclusion, I wish again to refer to the statement of the Actuary in his report of 22nd ultimo, paragraph 2, on the subject of police mortality.

I have had prepared a return of the men who had died in the Force during the past twenty years. There were fifty-seven deaths, and I find the average age of these deceased members at the time of death was forty-one years and nine months.

I submit that this fully bears out my contention that police are not noted for longevity.

J. B. TUNBRIDGE,
Commissioner of Police.

POLICE PROVIDENT FUND.

RETURN giving—(1) Approximate Annual Amount of Pensions payable during each of the under-mentioned Ten Years, calculated on the Supposition that each Man becomes chargeable to the Fund Three Months after attaining the Age of Sixty Years, and who has not less than Twenty-five Years' Service (for the purpose of this Calculation it is assumed that the Fund shall come into Operation on the 1st January next); (2) the Income to Fund; and (3) the Amount saved by Government in the form of Compassionate Allowances.

Year.	Expenditure.			Income.								
	Amount payable to Men qualifying - during the Year.	Amount payable to Men on the Fund at Commencement of Year.	Total Charges on Fund for the Year.	Deduction from Pay according to Scale.	Reward Fund.	Total Income.	Balance in favour of Fund.	Balance against Fund.	Amount saved by Government in Form of Compassionate Allowances to Members retired during Year.			
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
1900	1,691 14 3	..	1,691 14 3	6,454 19 6	1,650	8,104 19 6	6,413 5 3	..	6,512 7 6	..	..	..
1901	49 13 4	2,657 15 1	2,707 8 5	6,219 7 2	..	6,219 7 2	3,511 18 9	..	1,186 5 0	..	..	..
1902	59 14 8	3,253 18 5	3,313 13 1	6,144 19 10	..	6,144 19 10	2,831 6 9	..	1,487 7 6	..	..	..
1903	29 2 11	3,970 16 10	3,999 19 9	6,114 8 6	..	6,114 8 6	2,114 8 9	..	611 7 6	..	..	..
1904	36 4 9	4,320 12 8	4,356 17 5	6,171 10 9	..	6,171 10 9	1,814 13 4	..	857 15 0	..	..	..
1905	47 17 9	4,755 11 10	4,803 9 7	6,115 8 5	..	6,115 8 5	1,311 18 10	..	1,122 7 6	..	..	..
1906	96 6 7	5,330 6 3	5,426 12 10	6,004 11 1	..	6,004 11 1	577 18 3	..	2,217 7 6	..	..	..
1907	78 11 3	6,486 9 0	6,565 0 3	5,911 18 9	..	5,911 18 9	..	653 1 6	1,852 7 6	..	..	..
1908	84 10 4	7,429 7 4	7,513 17 8	5,813 19 9	..	5,813 19 9	..	1,699 17 11	1,959 0 0	..	..	..
1909	69 1 2	8,443 15 0	8,512 16 2	5,738 17 0	..	5,738 17 0	..	2,773 19 2	1,502 15 0	..	..	..
	2,242 17 0	46,648 12 5	48,891 9 5	60,690 0 9	1,650	62,340 0 9	18,575 9 11	5,126 18 7	19,309 0 0	..	..	..
							Net balance in favour, £13,448 11s. 4d.					

Mr. M. Fox to the COMMISSIONER.

Government Life Insurance Department,

Head Office, Wellington, 26th September, 1899.

Police Provident Fund.

1. In obedience to the further instructions of the Right Hon. the Premier, contained in Mr. Tunbridge's letter of the 4th instant, I have made more exact calculations of the annual amount required to maintain a Pension Fund for the Police Force on the lines laid down in the last annual report of the Commissioner of Police, amended so that the age for voluntary retirement will be sixty years instead of fifty-five, and the retiring-allowance one-sixtieth instead of one-fiftieth of the average amount of pay received during the last seven years of service.

2. I have again assumed $3\frac{1}{2}$ per cent. as the minimum rate of interest at which the funds must be invested, and I have, as instructed, made no provision whatever for expenses of any kind; so that the whole amount provided will, with the interest accruing thereon, go entirely towards the payment of retiring-allowances and other benefits.

3. In my former report, dated 22nd August, I drew attention (paragraph 6) to the fact that there is a liability already accrued on account of present members of the Force having paid nothing to the Fund for the terms of their past service. From the statistics of the Force supplied to me, I estimate this liability to be, approximately, £96,000. In explanation of this heavy liability I may draw attention to the following facts:—

(a.) There are at present eighteen officers entitled to resign on pension immediately. These officers, with present salaries of £3,790, are entitled to pensions amounting to £1,858 per annum, the present value of which comes to £15,800; or, in other words, that sum would need to be in hand now to accumulate at $3\frac{1}{2}$ per cent. in order to pay the pensions until the last man is dead.

(b.) There remain 572 officers, whose total pay is £84,600 per annum. Of these, six will be entitled to pensions in a year's time (should they survive) amounting to £617 per annum. It will require £6,450 to pay these pensions, and one year's deduction from pay will only amount to £65, thus leaving a large sum to be made up otherwise.

Again, seven officers will be entitled to pensions of £566 in two years from now, valued at £5,890, while the 5-per-cent. deductions to be received are only £119.

Again, eight officers will be entitled to pensions of £694 in three years, valued at £7,310; total deductions to be received only £219.

And so on down the list; the liability being, of course, diminished in the case of an officer dying before becoming entitled to pension.

4. Apart from the foregoing special liability, I estimate that an annual sum equal to 10 per cent. of the total pay of the Force will be sufficient to provide the proposed benefits to existing and future members. As the total pay is at present £84,600, exclusive of the pay of the eighteen members now entitled to resign on pension, it will be seen that an annual sum of £8,460 will be required on the present strength of the Force.

5. I understand from my instructions that it is desired to know what annual sum will be required to include both the foregoing liabilities. If the scheme be adopted I would suggest

two methods of dealing with the debt of £96,000. In the first place, the Government might pay to the Fund $3\frac{1}{2}$ per cent. interest on the debt, together with a sinking fund which would redeem it in thirty-five years. It happens that 5 per cent. per annum would exactly cover the interest and sinking fund for that period, making an annual payment of £4,800—£3,360 for interest and £1,440 sinking fund. As I understand, however, that it is desired to know the lowest annual amount necessary, I can only suggest that the debt should be taken over by the Government for an unlimited period, £3,360 being paid annually to the Fund as interest; this would be the lowest that could be paid to maintain the Fund in a sound condition.

6. If the latter suggestion should be adopted, it would be necessary to provide an annual sum of £11,820—of course, increasing with the increase of the Force. I would, however, point out that, in practice, there would be receipts from various sources, which cannot be calculated, that would go towards lessening the annual amount paid by the Government, as follows:—

- (1.) Some officers will doubtless prefer to remain on service drawing full pay after they have become entitled to pensions. It is obviously impossible to make any estimate, but a considerable saving will probably be effected in this direction.
- (2.) In paragraphs 11 and 12 (page 7) of the Commissioner's Report it is provided that there shall be returned to officers resigning or dismissed certain proportions only of their total deductions, whereas my estimates provide for the return of the whole of the deductions in these cases. The balance would go to diminish the annual payment by the Government.
- (3.) The miscellaneous sources of income which it is proposed should go to the Fund (page 5, Commissioner's Report), would properly go to the Government if the whole liability were taken over as proposed.

7. It is impossible to calculate the benefit No. 7 (page 6, Commissioner's Report), as the allowances are indefinite, being anything up to three-fifths of the pay; but I assume that they will be granted with discretion and a due regard for the condition of the Fund.

8. It will be understood that it is absolutely necessary, in order to maintain the Fund in a sound condition, that the whole of the accrued funds belonging to it shall be invested to earn not less than $3\frac{1}{2}$ per cent. interest. Any additional interest that may be earned could go either to the credit of the Fund or to diminish the annual payment by the Government.

9. Finally, I may say that I consider the Fund should be investigated periodically, not less than every five years, as it is not possible to estimate some of the proposed benefits with great exactness, and, although I have made my estimates with care, only the test of actual experience will show whether the payments are too large or too small. I am satisfied, however, that the divergency will not be sufficiently great to interfere with the successful progress of the Fund on the lines laid down.

MORRIS FOX, Actuary.

The COMMISSIONER of POLICE to the COMMISSIONER of INSURANCE.

SIR,—

Police Provident Fund.

4th September, 1899.

By direction of the Right Hon. the Premier, I have the honour to enclose you herewith returns giving—(1) the ages, length of service, and rates of pay of the members of the Force; and (2) number of men retired from the Force on compassionate allowance during the ten years ended 31st ultimo, giving their ages and length of service at the time of retirement; and to request that you will be good enough to obtain and submit a report from the Actuary of your department, stating the lowest probable annual amount required to maintain a fund under which men can be retired on the lines given in my last annual report, except that the age for voluntary retirement is to be sixty years instead of fifty-five, and the amount of retiring-allowance to be one-sixtieth of average salary for each year's service instead of one-fiftieth.

In making the calculations it is requested that no provision whatever be made for management or other similar expenses, the whole of the amount to be provided, and any interest that may accrue therefrom is to go absolutely for the payment of retiring-allowance.

I have, &c.,

J. B. TUNBRIDGE,

Commissioner of Police.

The Commissioner, Government Life Insurance Department, Wellington.

MEMORANDUM for the Right Hon. the PREMIER.

Police Department, Wellington, 1st September, 1899.

Re Attached Report of the Government Insurance Actuary on the Proposed Police Provident Fund.

In submitting this memorandum I desire to state that in presuming to criticise the deductions arrived at by the Actuary I realise that, being a laic in matters of this kind, my remarks will perhaps not receive the consideration they would if emanating from a professional source, and consequently I approach the matter with some diffidence. I will, as far as possible, deal with the Actuary's remarks seriatim.

Paragraph 1: Needs no comment from me.

Paragraph 2: (1.) The Actuary assumes the accumulated capital of the Fund will not earn more than $3\frac{1}{2}$ per cent. interest. I find in the annual report of his own department for the past year that the accumulated capital has earned £4 13s. 11d. per cent. I therefore think the Actuary has placed the probable earnings of the capital of this Fund at too low a figure.

(2.) The Actuary states, *inter alia*, as an argument against my suggestion that policemen are not noted for longevity, that the available mortality statistics of policemen indicate that their mortality is at least as good as that of doctors, lawyers, merchants, bankers, architects, and surveyors.

Now, the following will, I submit, demonstrate clearly that the Actuary's remarks under this head are not only absolutely valueless, but also misleading. Policemen are drawn from persons of all occupations, trades, and professions. They remain policemen only so long as they are strong and active enough to perform police-duty, or are entitled to a pension in forces where a pension-system exists. Immediately they break down in health, or through age become unfit for further service, they are sent out of the Force and return to private life. With very rare exceptions indeed they do not possess sufficient means to live on, and consequently have to resume their original vocation or take up some other, and at death are described not as policemen, but as belonging to the trade, &c., they were following at the time of death. The statistics show only those who actually die while serving in the police. As an illustration I may quote the returns given for the London Metropolitan Police for the year 1895: During that year fifty men died in the Force, while eighty-one were retired, with or without gratuities through ill-health, 385 on pension, sixty-three of the latter number being medically unfit at the time of retirement.

From the foregoing it will be seen that the actual deaths that occurred in the Force only represented about one-ninth of the removals therefrom, and the probability is that not one of the remainder will ever appear in the mortality returns as dying as a policeman.

Doctors, lawyers, merchants, bankers, architects, and surveyors, with very few exceptions indeed, follow the same profession throughout life, and die and appear in the mortality returns as such.

(3.) The Actuary questions that the fund could be administered free of expense.

I still adhere to the opinion that for many years to come at least the Fund could be so administered. I do not anticipate there will be a "rapidly increasing accumulation of capital eventually amounting to hundreds of thousands of pounds." If, however, such should be the case it would, I submit, prove (1) that the sources of income had been too heavily drained, and consequently would admit of a considerable reduction; and (2) that a fund with hundreds of thousands of accumulated capital would very well bear a small outlay as administrative expenses.

Paragraphs 3, 4, and 5 need no comment from me.

Paragraph 6: See remarks in reply to paragraphs 8 and 9.

Paragraph 7: The present liability of the Government in respect to the thirty-three officers referred to herein, in the form of compassionate allowance, is £8,556 7s. 6d., in addition to which there would be the deductions from salary, &c., that would continue to accrue so long as those officers remained in the Force. Under the scheme I propose this would continue for at least two years, as the Fund would not be drawn upon until after the expiration of that period.

Paragraph 8: As regards the "extra liability" of the Government in respect to present members of the Force who are not qualified for pension, estimated by the Actuary at about £100,000, I may say that the present liability of the Government in the form of compassionate allowance to these members when they retire is roughly £94,000.

Paragraph 9: The Actuary here states that to cover the ordinary liability referred to in paragraph 6, which would arise if payments were made into the fund on account of each member from the date of his joining the Force, would require a deduction of at least 18 per cent. from the men's pay.

I submit herewith four examples of men who join the Force at twenty-five years of age and retire at fifty-five.

(1.) The man remains a constable throughout the whole of his service; (2) a constable fifteen years and a sergeant fifteen years; (3) a Constable fifteen years, sergeant ten years, and sub-inspector five years; and (4) a constable fifteen years, sergeant seven years, sub-inspector five years, and inspector three years.

Example 1 shows that an 18 per cent. deduction from pay, with £1 per annum added as the proportion from the outside emoluments, with compound interest at $3\frac{1}{2}$ per cent., would produce the sum of £1,442 13s. 10d. Now this sum alone would purchase an annuity from the Government Life Insurance Department of £116 2s. 9d., whereas the pension the constable would be entitled to under the fund would be only £98 11s.

By adding to the foregoing amount the compassionate allowance, £164 5s., to which the constable would be entitled, the sum of £1,606 18s. is produced. This would purchase an annuity of £129 7s. 2d. For these calculations, however, this is not all. I find the establishment expenses of the Government Life Insurance Department represent about 21 per cent. of the annual income of the department, exclusive of the interest on accumulated capital; therefore, as the Pension Fund would be worked without expense, this 21 per cent. should be added to the amount of the annuity. By adding that amount the annuity would be equal to £156 10s. 3d., or £57 19s. per annum in excess of the pension the constable would receive.

Under Example 2, the annuity would be equal to £169 8s. 4d., or £48 19s. 4d. in excess of the pension.

Example 3, annuity £206 6s. 6d., being £63 1s. 2d. in excess of pension; and Example 4, annuity £218 10s. 8d., being £53 19s. 4d. in excess of pension.

I submit the foregoing proves that the Actuary has much overestimated the liabilities. I have had other examples prepared, but to go into them in this memorandum would take up too much space.

Paragraph 10: I agree in the main with what the Actuary states in this paragraph, and am now prepared to extend the age of retirement without medical certificate from fifty-five to sixty years of age.

Paragraph 11: The Actuary in the specimen case given herein has not taken into his calculations the amount derived from outside emoluments, the compassionate allowance to be paid by Government, and several other small sources of income to the Fund, such as fines for misconduct and moiety of penalties—which at present are paid to the Police Reward Fund—the amount standing to the credit of that Fund, unreturned deductions from unmarried men who die in the Force, men who voluntarily resign or are dismissed, &c. Therefore, here again his calculations are, I submit, not liberal enough, and the specimen case as a consequence is unreliable.

Paragraph 12: The Actuary has here entirely misrepresented (no doubt unintentionally) what I wished to convey, and has distorted my words in placing upon them the assumption he has.

I am certainly at issue with the Actuary in his remarks that it is "necessary not only to provide the money for the pensions which are payable during the year, but to constitute a fund from which to pay eventually the pensions to men now on the active strength of the Force as they fall in." If his contention is correct, then what is to be done with the annual income of £8,000 named in the final sub-paragraph of paragraph 5?

That it would be necessary to have a considerable balance to carry forward each year, for a good many years to come, I admit, and the figures I gave in my report indicated that there would be such a balance.

Paragraph 13 (1): As regards the figures quoted by the Actuary in this paragraph, all I can say is that if I have shown that some at least of his deductions are not borne out by facts the whole of his report is more or less vitiated thereby.

(2.) The Actuary in this sub-paragraph draws attention to the deficiency in the New South Wales Civil Service Superannuation Fund, and quotes Mr. Coghlan's report of 1894.

I think it is to be regretted that the Actuary was contented to make the bald assertion that this Fund had a huge deficiency, and omitted to state that Mr. Coghlan, in the same report, gave as one reason for the deficiency that the Superannuation Fund had been used for purposes never anticipated by its authors. The following paragraph appears in Mr. Coghlan's report, and will speak for itself:—

"The authors of the scheme could never have anticipated that the Fund would become the sport of political necessities when they framed the clause entitling to the benefits of the fund any persons whose offices were abolished by the Government. Wholesale additions to the pension list have at times been made in furtherance of a retrenchment policy, and since the commencement no less than 272 have, for this reason, been placed prematurely among the ranks of pensioners, representing an annual expense to the Fund of £36,212."

The contributions of the members of the New South Wales Superannuation Fund is only 4 per cent of their salary.

Paragraph 14. In connection with the Actuary's remarks under this head, I desire to state that I do not wish my name to be associated with any scheme that is likely to be a failure.

Independent of the figures of the Actuary, I have from certain calculations, made under my own direction, come to the conclusion that the scheme, as drawn up by me, was too liberal.

I am now quite prepared to accept the Actuary's suggestions under sub-headings 1 and 2, and recommend that the draft Bill be altered accordingly.

(3.) If the Workers' Compensation Act can be accepted as an equivalent to the benefits these cases would receive from the Fund, then by all means let this suggestion also be adopted. Judging, however, from the past, there would be very few cases indeed that would come under the category in question.

(4.) I do not see how the necessary machinery to meet each case could be set up in the Bill; besides, it is to do justice to the older men in the Force that the Act is asked for.

Paragraph 15. To prepare the data, &c., named herein would mean abandoning the Bill so far as the present session of Parliament is concerned.

J. B. TUNBRIDGE,
Commissioner of Police.

TABLE showing Examples worked out at 5 per Cent., 10 per Cent., and 18 per Cent., with £1 per Annum added for Emoluments, with Interest at $3\frac{1}{2}$ per Cent., showing Annuities purchasable.

Example.	Years served.	Amounts realised.			Age.	Annuities purchasable.			Pensions.	
		5 per Cent.	10 per Cent.	18 per Cent.		5 per Cent.	10 per Cent.	18 per Cent.	Rate.	Amount.
1. Constable for 30 years ..	30	£ s. d. 426 0 0	£ s. d. 801 9 11	£ s. d. 1,442 13 10	55	£ s. d. 34 5 10	£ s. d. 64 10 5	£ s. d. 116 2 9	30/50	£ s. d. 98 11 0
Compensation ..	..	164 5 0	164 5 0	164 5 0	..	13 4 5	13 4 5	13 4 5	30/60	82 2 6
21 % added ..	..	590 5 0	965 14 11	1,606 18 10	..	47 10 3	77 14 10	129 7 2		
	..	..	..	..	..	9 19 6	16 16 6	27 3 1		
	..				..	57 9 9	94 1 4	156 10 3		
2. Constable, 15 years ..	30	452 12 11	854 15 9	1,538 11 5	55	36 8 9	68 16 2	123 17 1	30/50	120 9 0
Sergeant, 15 years, compensation ..	..	200 15 0	200 15 0	200 15 0	..	16 3 3	16 3 3	16 3 3	30/60	100 7 6
21 % added ..	..	653 7 11	1,055 10 9	1,739 6 5	..	52 12 0	84 19 5	140 0 4		
	..	..	..	..	..	11 0 10	17 17 0	29 8 0		
	..				..	63 12 10	102 16 5	169 8 4		
3. Constable, 15 years ..	30	466 17 4	883 4 7	1,589 16 10	55	37 10 11	71 0 8	127 17 2	30/50	143 5 4
Sergeant, 10 years, compensation ..	..	520 0 0	520 0 0	520 0 0	..	42 13 2	42 13 2	42 13 2	30/60	119 7 10
Sub-Inspector, 5 years ..	..	986 17 4	1,403 4 7	2,109 16 10	..	80 4 1	113 13 10	170 10 4		
21 % added ..	..	..	..	..	..	16 16 10	23 17 3	35 16 2		
	..				..	97 0 11	137 11 1	206 6 6		
4. Constable, 15 years ..	30	481 17 5	913 4 9	1,643 16 6	55	38 15 9	73 10 2	132 6 2	30/50	164 11 4
Sergeant, 7 years, compensation ..	..	600 0 0	600 0 0	600 0 0	..	48 6 0	48 6 0	48 6 0	30/60	137 2 10
Sub-Inspector, 5 years ..	..	1,081 17 5	1,513 4 9	2,243 16 6	..	87 1 9	121 16 2	180 12 2		
Inspector, 3 years, 21 % added ..	..	..	..	..	..	18 5 6	25 11 6	37 18 6		
	..				..	105 7 3	147 7 8	218 10 8		

The ACTUARY to the COMMISSIONER of INSURANCE.

Government Life Insurance Department,

Head Office, Wellington, 22nd August, 1899.

1. As instructed by you I have examined the scheme for a Police Provident Fund, which is outlined in the last annual report of the Commissioner of Police, on which I now beg to submit the following report, in obedience to a Cabinet minute, dated 17th July. My investigation has been principally directed with a view to ascertain the liability which would be imposed upon the Government by the adoption of the aforesaid scheme, and to suggest such alterations as would tend to render the scheme practicable.

2. In my calculations I have assumed $3\frac{1}{2}$ per cent. as the rate of interest, and I do not think a higher rate could properly be taken at the present time as the basis for such a scheme of deferred annuities.

I do not think it would be safe to assume, as suggested by the Commissioner of Police, Mr. Tunbridge, that police-officers are a particularly short-lived class: the available mortality statistics of policemen are few, but the published experience of one large Australian insurance office indicates that their mortality is at least as good as that of doctors, lawyers, merchants, bankers, architects, and surveyors. Although their occupation subjects them to a considerable amount of hardship and exposure, it must be borne in mind that they are a picked body of exceptionally healthy men at the start.

In estimating the yearly sums necessary to provide for the proposed benefits, I have made no addition whatever for expenses, as I understand it is desired that the fund shall be managed by the Police Department itself. At the same time I would point out that, whoever administers the scheme, a considerable outlay must be unavoidable in connection with the management of a large number of pensions involving the receipt and distribution of many thousands of pounds yearly, and the investment of a large and rapidly-increasing accumulation of capital, eventually amounting to hundreds of thousands. This, I think, will be evident from the fact that, if such a fund were administered by the trained staff of any insurance society, a "loading" for expenses would be an absolute necessity, apart from all considerations of profit or dividends to shareholders.

3. The following are the benefits proposed in the scheme:—

I.—Pensions on Survival to age of Fifty-five.

To every officer of the age of fifty-five and upwards, who has served for twenty-five years, a pension of twenty-five-fiftieths of his pay at the time of retirement (or of his average pay for seven years preceding retirement in certain cases), the pension to be increased by one-fiftieth of his pay for each additional completed year's service, the maximum pension being thirty-fiftieths, or three-fifths, of his pay.

II.—Retiring-allowances before reaching age Fifty-five.

(a.) To every officer "returned as medically unfit," with less than five years' service, a return of the amount deducted from his pay during service.

(b.) To every officer "returned as medically unfit," with from five to fifteen years' service, a gratuity equal to one month's pay for each completed year's service, the maximum gratuity being twelve months' pay.

(c.) To every officer "returned as medically unfit" with fifteen years' service and upwards, a pension of one-fiftieth of his pay for each completed year's service, with a maximum pension of thirty-fiftieths.

Note.—When an officer is "returned as medically unfit for further service owing to injuries received in the execution of his duty" his case is to receive special consideration, and he may be granted a pension not exceeding three-fifths of his pay, irrespective of his term of service.

(d.) To every officer voluntarily resigning from the service, with from ten to twenty-five years' service, a return of three-fourths of the amount deducted from his pay during service.

(e.) To every officer dismissed from the service or retired for misconduct, a return of one-half of the amount deducted from pay during service.

III.—Death Benefits.

(a.) In the case of death from injuries received in the execution of duty, a pension of not more than £18 per annum to a widow (so long as she remains a widow), and not more than 5s. a week to each child until the age of fourteen.

(b.) In the case of death not from injuries received in the execution of duty, a return of the amount deducted from pay during service to be made to the next-of-kin.

If any officer in receipt of a pension should die before having drawn an amount equal to that deducted from his pay, the difference to be paid to the next-of-kin.

4. The following are the payments which are proposed in order to provide the benefits described in the last paragraph:—

I.—Contributions from Members of the Force.

A deduction of 5 per cent. from the pay of every officer.

II.—Contribution from the Government.

An amount equal to that now paid as compassionate allowance.

III.—Contributions from Miscellaneous Sources.

(a.) Fifty per cent. of all emoluments received by members of the Force in connection with outside appointments.

(b.) The amount now standing to the credit of the Police Fund.

5. The total 5-per-cent. deductions from the pay of the Force would, at the present time, amount to about £4,200 per annum.

The compassionate-allowances paid by the Government on the retirement of members has amounted during the last ten years to about £28,500, or an average yearly sum of £2,850.

Fifty per cent. of the emoluments received from outside appointments is estimated by Mr. Tunbridge to be worth about £650 per annum.

The reward Fund, now amounting to £1,673, is to be transferred to the Pension Fund; but it will not be a recurring yearly payment, and the income derivable from this source will be comparatively insignificant.

The total income from all sources at the present time would therefore come to slightly under £8,000 per annum, which is between 9 and 10 per cent. of the present total yearly pay of the Force.

6. The main question to be answered, therefore, is: Would annual payments equal to 10 per cent. of the pay of the Force be sufficient, in conjunction with interest-earnings at $3\frac{1}{2}$ per cent., to provide the proposed benefits?

Before proceeding to answer this question it will be desirable to explain that two separate and distinct liabilities are involved in the proposed scheme.

First, there is the ordinary liability which would arise if payments were made into the Fund on account of each member from the date of his joining the Force.

Secondly, there is the extra liability arising from the fact that the present members of the Force have paid nothing to the Fund for the terms of their past service. As an example of the liability thus incurred, I may point out that a sergeant aged sixty, with thirty years' service, and now drawing 9s. per diem, would be entitled under the scheme to retire almost immediately on a pension of £100 per annum for the rest of his life, without anything whatever having been accumulated in the Fund to meet the liability, the present value of which would be more than £1,000 on account of this officer alone.

7. There are at the present time thirty-three officers eligible for pensions under the scheme. Assuming an average salary of £150 per annum, an average age of sixty, and an average term of service of thirty years, the present value of the liabilities incurred on behalf of these thirty-three officers would be, approximately, £30,000. I am aware that Mr. Tunbridge thinks it extremely unlikely that these men would all retire at once, but, considering their age and length of service, it would be unsafe to rely upon the lapse of any considerable time before they are all pensioners on the Fund.

8. In regard to the extra liability which would be incurred on account of the present members of the Force who are not yet qualified for pensions under the scheme, I may say that it would certainly be very heavy, as might be expected from the fact that every year a fresh number of men would become eligible for pensions who had only paid into the Fund one, two, three years, and so on. It would involve considerable clerical labour to calculate this liability with any great accuracy, and it would also be necessary to have exact data regarding the service of every man now in the Force; but I think it will be quite sufficient for the present purpose to say that I roughly estimate the present value of the extra liability incurred under this head as not falling far short of £100,000.

9. In the next place, with reference to the ordinary liability referred to in paragraph 6, I find that, in order to provide the benefits contained in the proposed scheme, it would be necessary that the men's deductions of 5 per cent. from pay should be increased, not to 10 per cent., but to at least 18 per cent. An additional 13 per cent. of the total pay of the Force would, therefore, have to be supplied yearly by Government or obtained from miscellaneous sources, apart from the heavy extra liability alluded to in paragraphs 6, 7, and 8.

10. As I am aware that the foregoing estimate is not unlikely to create some astonishment, I would say that it is a common thing for the cost of deferred annuities, or pensions, to be popularly underestimated, and that the difference in the value of pensions commencing at fifty-five and sixty respectively is very considerable indeed.

11. The consideration of a specimen case may perhaps cause this matter to be more clearly understood. If the pay of a man of thirty were £100 per annum, and remained at that rate until he arrived at the age of fifty-five, he would then be able to retire with a pension of £50 per annum under the proposed scheme. In order to purchase this pension (without any extra benefits), he would have to pay £12 a year for the twenty-five years between thirty and fifty-five, and this would not provide for any allowances whatever at death or retirement before age fifty-five. In order to provide the extra benefits of the proposed scheme, it would be necessary for the £12 per annum to be increased to £18 per annum.

12. In Mr. Tunbridge's report it is assumed that the proposed fund would work satisfactorily because there would be a balance in hand at the end of the first year. I may say that this is altogether a mistake, as in any properly arranged scheme of deferred annuities the funds in hand are bound to accumulate rapidly for some years after the commencement of the scheme. It is, in fact, necessary not only to provide the money for the pensions which are payable during the year, but to constitute a fund from which to pay eventually the pensions to men now on the active strength of the Force as they fall in. Unless that is done a portion of the present liabilities is left to look after itself in the future.

13. The present value, at $3\frac{1}{2}$ per cent., of the ordinary liability (referred to in paragraph 9), which is not provided for by the proposed contributions, amounts to about £200,000. The present value of all the liabilities connected with the proposed scheme, over and above the present value of the proposed contributions, will therefore come to £330,000 approximately, and it would be necessary to provide that amount, by vote or otherwise, before the scheme could be placed on a sound footing as it now stands. I may point out that there are many disastrous instances of pension-funds becoming hopelessly insolvent in the course of time, owing to having been started on unsound

lines. One of the most conspicuous cases on record is that of the New South Wales Civil Service Superannuation Fund, which had a deficiency of nearly three millions sterling, when investigated by Mr. Coghlan in 1894, and the deficiency was then increasing at the rate of £120,000 per annum.

14. I have also made approximate calculations to show how the scheme could be modified in such a way as to lessen its cost, and I believe that if the Government were to supplement the 5 per cent. deduction from the pay of members of the Force by an equal amount, making the total contribution 10 per cent. of the pay, the scheme outlined by Mr. Tunbridge could be adopted with a few important modifications, as follows :—

1. The age of retirement being changed from fifty-five to sixty.
2. The pensions being taken as sixtieths, instead of fiftieths, of average salary for the last seven years.
3. The allowances to members injured on duty, and pensions to families of members killed on duty, being left to be provided for by the Workers' Compensation Act.
4. Present members of the Force over forty years of age being specially treated.

I should have to make more exact calculations on fuller data than are now available before being able to say positively.

15. Should the suggestions contained in the foregoing paragraph be seriously considered, it would be desirable that a decision should be come to upon the schedule of rates of pay proposed by the late Royal Commission. If this or any other scale be adopted, the fact should be known before making more exact calculations for an amended scheme. It would also be necessary that complete data should be compiled relating to the particulars of age and service of the present members of the Force, and more exact calculations could be based upon these data than I have been able to make at present.

MORRIS FOX,
Actuary.

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