SECOND ACTUARIAL REVIEW OF THE NATIONAL INSURANCE AND SOCIAL SECURITY SCHEME

BAR/74/003(2)

BARBADOS

Project Findings and Recommendations

UNITED NATIONS DEVELOPMENT PROGRAMME

INTERNATIONAL LABOUR ORGANISATION
Geneva 1976

CONFIDENTIAL

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Report prepared for
the Government of Barbados
by
the International Labour Organisation
acting as Executing Agency for
the United Nations Development Programme

UNITED NATIONS DEVELOPMENT PROGRAMME
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INTRODUCTION

Origin of mission

1. In accordance with a request from the Government of Barbados, the International Labour Organisation provided, under the United Nations Development Programme, the assistance of an actuary in carrying out the second actuarial review of the operation of the National Insurance and Social Security Scheme in accordance with Section 34(1) of the National Insurance and Social Security Act of 1966.

In agreement with the Government, the Director-General appointed Mr. F.G. Smith, an actuary from the United Kingdom, to undertake the review. The mission also included a review of the Widows' and Children's Pension Scheme for Public Officers which is the subject of a separate report.[1] The mission commenced on 7 October 1974 and was originally scheduled for six months, but it was realised at the outset that a longer period would be necessary, the amount of extension being determined after an appreciation of the situation. For various reasons it had not proved possible to prepare the actuarial data for either review in advance of the arrival of the actuary. The collection and tabulation of the necessary statistical data for the review of the Social Security Scheme were not completed until nearly ten months after the start of the mission and in the case of the Widows' and Children's Pension Scheme, more than 10 months. It was necessary to extend the mission ultimately to 14 months in order to ensure the completion of both reviews.

Terms of reference of the actuary

2. The actuary's terms of reference were as follows:-

(a) To organise the collection and analysis of statistical and other data necessary for an actuarial analysis of the Barbados National Insurance and Social Security Scheme covering the following benefits: old age grants or pensions, invalidity benefits, survivors' benefits, sickness cash benefits, maternity benefits, funeral grants and employment injury benefits.

(b) To carry out the second actuarial review of the Barbados National Insurance and Social Security Scheme in compliance with the provision of the Barbados National Insurance and Social Security Act, 1966, which requires a review for the period ending 31 March 1974. This involves a detailed analysis of the financial operations of the scheme, an assessment of the financial equilibrium of each of the social security branches covered by the Scheme, and the formulation of the recommendations arising out of the results of the actuarial analysis.

(c) To advise on the statistical data to be maintained on a continuing basis to facilitate the periodic and other actuarial reviews.

(d) To review the Widows' and Children's Pension Scheme for Public Officers with special reference to the funding of the Scheme and the adequacy of the present rate of contributions to sustain benefits payable thereunder.

Outline of the development of the National Insurance and Social Security Scheme from its inception in 1967

3. Contributions under the Scheme were payable from 5 June 1967 and the entire employed population of Barbados in the age range 16 to 65 earning $5 a week or more, apart from the self-employed, were covered. The latter were brought in from 1971. The Scheme has operated smoothly from the inception and its success has been generally acknowledged by workers, employers and Government. The number of insured persons has grown from 1967 when 72,252 persons registered under the Scheme to 118,690 at December 1973, including about 1,500 self-employed. The financial reserves had grown by the end of 1975 to about $75 million and the savings under the scheme are making a major contribution to the development of the country.

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1 "Financial and [illegible]arial [illegible]y of the Widows' and Children's Pension Scheme for Public Officers" [illegible]AR/74/[illegible]) - UN[illegible] ILO, Geneva 197[illegible].

4. The number of insured workers normally increases as the population increases, apart from times of recession and heavy unemployment. A raising of the ceiling of wages covered by the Scheme from time to time to take account of inflation or to increase the level of cover provided by social security will result in an appreciable increase in the contribution income and an acceleration in the growth of the accumulated funds.

5. Although virtually all workers from age 16 to 65 are covered by the Scheme, at the outset earnings exceeding $50 a week were not taken into account for assessing benefits or contributions. The situation was remedied to some extent in January 1974 by an increase in the maximum insurable earnings for the purposes of the Scheme from $50 to $100 a week. There has, however, been a very high level of inflation in recent years; for example, the cost of living index prepared by the Government Statistical Service and published by the Central Bank of Barbados shows that there was an increase of more than 40 per cent in the period of 12 months ending October 1974. As a result the increase to $100 was not sufficient to allow for the drop in the value of money since the start of the Scheme. On the basis of the cost of living index the wage ceiling would have needed to be raised to $190 per week at mid-1975 in order to be equivalent to $50 at the outset of the Scheme in 1967. Furthermore, it may be seen from Table 13 that nearly one-third of male insured persons were in the highest wage group in 1974 after the change of the ceiling. Consideration might be given, therefore, to modify the ceiling and wage grades further in order to ensure that insured persons in this group receive benefits and pay contributions which are adequately related to their earnings.

6. Since January 1971 self-employed workers earning more than $400 per year have been compulsorily covered under the Scheme, apart from employment injury insurance, although they were not covered for sickness and maternity benefit until January 1974.

7. In January 1971 the National Insurance and Social Security Scheme was extended to include a comprehensive scheme of employment injury benefits, thereby replacing the very limited protection afforded under the Workmen's Compensation arrangements. The employment injury scheme covered all workers regardless of age, i.e., it included those under age 16 or over age 65.

8. Established civil servants and other Central Government employees continue to enjoy their wages while sick and do not receive sick pay benefits from the Scheme. The contribution in respect of them is reduced by 1 per cent of earnings to allow for this.

9. The Scheme is due for actuarial review every three years in accordance with the provisions of the National Insurance and Social Security Act. The first review was made as at the end of 1970 and the report was submitted in 1973.[1] This first review found that the financial position was satisfactory and assuming an earnings limit for the purposes of the Scheme of $100 per week, that the contribution rate should be sufficient to ensure a steady growth in reserves until about 1985 after which the funds would begin to decrease if contributions were not raised. The report showed that an increase in 1985 in the rate of contribution to 9 per cent of earnings would ensure the continued growth of the reserves for another 15 years from then.

10. The current review covers another three years' operation of the Scheme up to the end of 1973. It takes place at a time when inflation is running at a very high rate in Barbados and in the world in general. The present review is therefore of particular importance in providing guidance for making adequate provision to meet the considerable future pension liabilities and for ensuring the financial stability of the scheme despite the problems of inflation.

11. When the wages ceiling was increased from $50 to $100 a week with effect from the beginning of 1974 all the wages grades were revised and the contributions and benefits were adjusted accordingly. At the time of the revision of the wage

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[1] "Report to the Government of Barbados on the First Actuarial Review of the National Insurance and Social Security Scheme." (ILO/TAP/Barbados/R.9, Geneva 1973)

grades, because of the low level of employment injury payments in the first three years of operation of this benefit, the employment injury contributions for the six new grades were retained at practically the same level as those for the original six grades (see Table 1). This in effect meant that the employment injury contributions were reduced from an average rate of 1 per cent of earnings to one-half per cent. A careful examination of the finances of the employment injury scheme has been necessary as part of this review because, as the actuary making the first actuarial review had pointed out, it is many years before the cost of employment injury benefits reaches its full level. A life pension to the insured person or to his widow in event of death will be payable many years after the accident and the employment injury scheme not only needs sufficient resources for current costs but also needs reserves to meet the cost of continuing benefits.

12. A scheme for severance payments by employer if an employee is laid off was introduced with effect from 1 January 1973 under the Severance Payments Act, 1971. Although for convenience of operation the contributions are collected along with National Insurance contributions the scheme is an entirely separate financial entity. Its introduction should have, therefore, no financial effect on the National Insurance and Social Security Scheme. As, however, the National Insurance Board have been directed to administer the Severance Fund Scheme it will be necessary to ensure that the full cost of this administration is debited to the Severance Fund.

Contents of the report

13. The present report covers the actuary's mission as follows:-

(i) Chapter I gives a description of the Social Security and National Insurance Scheme and the changes made since the date of the first actuarial review.

(ii) Chapter II summarises the accounts of the Scheme for the three years 1971, 1972, 1973 including employment injury benefits.

(iii) Chapter III deals with the financial organisation of the Scheme and the technical bases for the actuarial analysis including statistics relating to the insured population.

(iv) Chapter IV gives an analysis of the short-term and long-term benefits experience.

(v) Chapter V deals with the projections of future numbers of beneficiaries and contributors and estimates of the expected income and outgo of the Scheme over the next 25 years. It also gives conclusions regarding the present state of the finances of the Scheme (excluding employment injury) and recommendations regarding the rate of contribution.

(vi) Chapter VI gives an analysis of the employment injury benefits experience, provides for separate accounts for an employment injury benfits fund, and makes recommendations regarding the future rate of contributions.

(vii) Chapter VII includes some miscellaneous observations mainly on the problem of inflation.

(viii) Chapter VIII summarises the conclusions and recommendations contained in the report.

Acknowledgement and thanks

14. The Director-General of the ILO is grateful to the Barbados Government for providing the encouragement and help the actuary needed for his mission. Special mention should be made of the co-operation and help of the Minister responsible for National Insurance and Social Security, the Honourable Philip Greaves, his Permanent Secretary, Mr. W.M. Rogers, the Chairman of the National Insurance Board, Mr. H.A.Williams and other members of the Board, Mr. Humphrey Walcott, the Director of the National Insurance Office, and the Deputy Director, Mr. C.O. Gittens. The actuary was impressed by the high standard of administration of the Barbados National Insurance and Social Security Scheme; he wishes to thank the members of the staff of the National Insurance Office for their ready help available at all times and especially for the excellent secretarial assistance. He also wishes to place on record his appreciation of the technical assistance of Mr. Robert Williams, of the Data Processing Unit, and for the various statistical tabulations he provided so that the necessary financial projections could be made.

[illegible]

12. [illegible]

[illegible]

Contents of the Report

(i) [illegible]

(ii) [illegible]

(iii) [illegible]

(iv) [illegible]

(v) [illegible]

(vi) [illegible]

(vii) Chapter VII [illegible] of inflation.

(viii) Chapter VIII summarizes the conclusions and [illegible] the report.

Acknowledgements

13. The Director-General of the ILO is grateful to the [illegible] Government for providing the [illegible] during [illegible]. Special mention should be made of [illegible] of the Minister [illegible] for National [illegible] and Social Security, the Honourable Philip [illegible], Permanent Secretary, Mr. [illegible], the Chairman of the National Insurance [illegible], Mr. R.A. Williams and other members of the Board, [illegible] the Director [illegible] of the National Insurance [illegible], and the Deputy Director, [illegible]. The actuary [illegible] the high [illegible] of administration [illegible] of the National Insurance and Social Security Scheme. [illegible] the staff of the National Insurance office for their [illegible] and especially for the excellent secretarial assistance. [illegible] place on record [illegible] of the [illegible] assistance of Mr. Robert Williams, of the Data Processing Unit, [illegible] provided so that the necessary [illegible] could be made.

CHAPTER I.

THE NATIONAL INSURANCE AND SOCIAL SECURITY SCHEME

15. Full particulars of the benefits and contributions as at the end of 1970 were set out in the report on the first actuarial review, ILO/TAP/Barbados/R.9, Geneva 1973. It is only necessary, therefore, in the current review to deal with subsequent changes and some of these have already been briefly mentioned in the introduction to this report. The main developments are as follows:

(i) Employment Injury benefits were introduced with effect from 4 January 1971 by The Employment Injury (Benefit) Regulations, 1970 /S.I. 1971 No. 7/. The Employment Injury (Benefit) (Amendment) Regulations, 1975 /S.I. 1975 No. 10/ provided for an increase in funeral grant in event of death as a result of an employment injury from $100 to $200.

(ii) Self-employed persons earning more than $400 per annum were compulsorily brought under the Scheme with effect from 4 January 1971 by The National Insurance and Social Security (Self-Employed Persons) Regulations 1970 /S.I. 1971 No. 1/. Originally the self-employed were not entitled to sick pay, maternity benefit or employment injury benefit and paid correspondingly reduced contributions. With effect from 7 January 1974, however, under the National Insurance and Social Security (Self-Employed Persons) (Amendment) Regulations, 1974 /S.I. 1974 No. 3/ they were included for all benefits apart from employment injury benefits. The contributions were increased appropriately. Benefits are generally paid on a similar basis as for those paid to employed persons. The amount of insurable weekly earnings for benefit and contribution purposes is based on the previous year's earnings as determined by the person himself, subject to approval and review by the National Insurance Board. The contribution qualifications for sickness benefit for self-employed persons require that in addition to other standard qualifications, a person has paid or has had credited not less than 39 contributions in the preceding contribution year. The qualification of being at work on the day preceding sickness does not, however, apply to self-employed. For invalidity or old age pensions a yearly average of not less than 39 contributions paid or credited since entry to the scheme is required from self-employed persons.

(iii) With effect from 4 January 1971 for a person to receive the benefit of special credits towards old age pension entitlement the requirement was added that he must have a yearly average of 39 contributions paid or credited from his entry to the Scheme and up to age 65. This requirement was introduced by the National Insurance and Social Security (Benefit) (Amendment) Regulations 1971 /S.I. 1971 No. 82/. These amending regulations also modified the qualifications required for the grant of maternity benefit to ensure that all received a minimum of 12 weeks' benefit.

(iv) Under the National Insurance and Social Security (Benefit) (Amendment) Regulations, 1974 /S.I. 1974 No. 2/, an employed person who was not at work the day before he went sick could nevertheless qualify for benefit provided that not less than 39 contributions had been paid or credited in the preceding contribution year. These Regulations came into effect on 7 January 1974.

(v) The earnings groups for Social Security purposes were revised with effect from 7 January 1974 under the National Insurance and Social Security (Collection of Contributions) (Amendment) Regulations, 1974 /S.I. 1974 No. 5/. The following table sets out the changes introduced:-

TABLE 1

Earnings group gradings effective prior to and after 7 January 1974

Earnings group	Actual weekly earnings	Insurable weekly earnings	Insured person's weekly contribution	Employer's weekly contribution: Benefits not as a result of employment injury	Employer's weekly contribution: Employment injury benefits	Employer's weekly contribution: Total	Total weekly contribution insured person and employer
Grading prior to 7 January 1974							
I	Under 10.00	8.00	0.24	0.24	0.07	0.31	0.55
II	10.00 - 14.99	12.50	0.37	0.37	0.11	0.48	0.85
III	15.00 - 19.99	17.50	0.53	0.53	0.19	0.72	1.25
IV	20.00 - 29.99	25.00	0.75	0.75	0.25	1.00	1.75
V	30.00 - 44.99	37.50	1.13	1.13	0.34	1.47	2.60
VI	45.00 and over	50.00	1.50	1.50	0.50	2.00	3.50
Grading effective from 7 January 1974							
I	Under 15.00	10.00	0.30	0.30	0.07	0.37	0.67
II	15.00 - 29.99	22.50	0.68	0.68	0.09	0.77	1.45
III	30.00 - 49.99	40.00	1.20	1.20	0.18	1.38	2.58
IV	50.00 - 69.99	60.00	1.80	1.80	0.30	2.10	3.90
V	70.00 - 89.99	80.00	2.40	2.40	0.35	2.75	5.15
VI	90.00 and over	100.00	3.00	3.00	0.50	3.50	6.50

(vi) Under the National Insurance and Social Security (Benefit) (Amendment) Regulations, 1974 /S.I. 1974 No. 291/ effective from 1 January 1975, the funeral grant was raised from $100 to $200 and the amount is also payable on the death of the spouse of an insured person if on the death of that insured person a funeral grant would have been payable under Regulation 18. The Regulations also provide for a minimum old age or invalidity pension of $15 a week. In those cases to which the $15 a week minimum applies survivors' benefits are also correspondingly increased. Provision of this minimum pension represents a significant advance in the extent to which the Scheme meets the needs of the lower wage grades. Social Security Schemes often provide for lower wage grades somewhat higher benefits in relation to contributions paid in those grades than for the higher grades and this aspect of the Barbados Scheme may need further examination.

CHAPTER II.

ACCOUNTS AND FINANCIAL OPERATION OF THE SCHEME FROM 1 JANUARY, 1971 TO 31 DECEMBER, 1973

Income and expenditure

16. The following table shows the income and expenditure of the National Insurance Fund for the years 1971-1973, including the Employment Injury Branch for which separate accounts are shown later in Chapter VI. Accounts are prepared on a cash basis, only bringing into account actual receipts and payments, without allowance for items accrued but outstanding at the end of the year.

In following trends of individual items of income or expenditure suitable adjustment needs to be made for accrued items. The longer the Scheme is in operation, however, the less the effect of such adjustments should become.

TABLE 2

Income and expenditure under the National Insurance Fund 1971-1973

[Unit: $]

ITEMS	1971	1972	1973
INCOME			
Contributions	8 225 912	8 358 195	9 625 746
Investment Income	1 672 450	1 973 522	2 761 134
TOTAL INCOME	9 898 362	10 331 717	12 386 880
EXPENDITURE			
BENEFITS			
Sickness	585 854	635 487	721 342
Maternity	244 686	309 785	356 786
Funeral Grants	21 000	20 700	23 800
Invalidity Grants	11 144	3 640	3 875
Invalidity Pensions	5 720	27 528	59 195
Old Age Grants	33 448	28 338	51 104
Old Age Pensions	214 724	500 816	878 688
Survivors' Grants	7 466	3 506	2 818
Survivors' Pensions	29 815	49 095	79 141
Employment Injury	123 419	149 899	164 985
Total benefit payments	1 277 276	1 728 794	2 341 640
Administration Expenses	106 285	141 533	218 255
Capital Expenditure	6 615	5 138	10 516
TOTAL EXPENDITURE	1 390 176	1 875 465	2 570 411
EXCESS OF INCOME OVER EXPENDITURE			
Accumulated Fund at beginning of year	20 178 345	28 686 531	37 142 783
Excess of income over expenditure during year	8 508 186	8 456 252	9 816 469
Accumulated Fund at end of year	28 686 531	37 142 783	46 959 252

Contributions

17. The figures shown in Table 2 represent the net income to the Fund from contributions after allowing for any refunds to the Government in respect of their employees. Established Government employees who receive full pay while they are sick are not eligible for sickness benefit under the Scheme. To allow for this the social security contribution for such Government employees is one per cent less than that for regular members. The Government actually paid the full contribution but received a refund in respect of the excess. The first refund made to the Government in 1972, was an amount of $702,751 representing the excess one per cent on contributions of established Government employees during the period 1 January 1968 to 30 September 1972. In 1973 a refund of $178,294 was made in respect of the twelve month period 1 October 1972 to 30 September 1973.

Expenses of administration

18. The expenses shown in the accounts for 1971-1973 do not allow for the salaries of the staff which were paid by the Government. In 1974 however a payment was made to the Government of some $926,000 made as follows:-

Salaries for 1972 (for 9 months)	$234 000
Salaries for 1973	312 000
Salaries for 1974	380 000
	$926 000

The following table shows the extent of administration expenses in relation to contribution income after allotting the payment made in 1974 in respect of salaries to the respective years to which it related and after deducting from 1973 onwards an estimated amount of administrative expenses which should have been charged to the Severance Fund.

TABLE 3

Expenses of administration in relation to contributions (1971-1974)

[Unit: $1 000]

	1971	1972	1973	1974
Contributions	8 226	8 358	9 626	13 069
Administrative Expenses				
Post Office and General	106	142	218	258
Civil Service Salaries	-	234[1]	312	380
less Expenses of Severance Fund(Estimated)	-	-	(-)20	(-)20
Net total Expenses	106	376	510	618
Net total Expenses as a % of contributions	1.3%	4.5%	5.3%	4.7%

[1] Nine months

The Government provides office space, including some utilities, without charge to the National Insurance Fund. A long-term loan of $2,500,000 at 7 per cent interest from the National Insurance Fund to the Government has financed the construction of a new Government building in the centre of Bridgetown called the National Insurance Building.

Expenses of administering the Severance Fund set up under the Severance Payments Act of 1971

19. The administration of the Severance Fund Act has been delegated by Ministerial order to the National Insurance Board. So far the expenses incurred in this work have been paid by the National Insurance Board but it is important that as soon as possible the Severance Fund reimburses the Board for this expenditure and makes regular payments to the Board in respect of future expenditure incurred on administering the Severance Fund.

Interest yield on the National Insurance Fund

20. The following table shows the yield on the Fund for the years 1968 to 1973.

TABLE 4

Annual investment yield on the National Insurance Fund

Year	Fund at mid-year excluding interest income during year	Interest income during year	Average yield per cent over year
1968	5 088 688	252 489	4.96%
1969	10 271 496	652 239	6.35
1970	16 240 787	1 129 853	6.96
1971	23 596 213	1 672 450	7.09
1972	31 927 933	2 304 992*	7.22
1973	41 002 025	2 842 256*	6.93

* Includes interest due from the Barbados Government on 31 December.

The yield on the Fund in 1973 is somewhat depressed because of the lending to the Government in the form of Treasury Bills and Debentures at fairly modest rates of interest.

21. The following table shows the distribution of investments according to the period to run before maturity:

TABLE 5

Investments at 31 December, 1973 according to unexpired term

Item	Amount $	Percentage %
Cash in hand or at Bank	314 252	0.7
Government of Barbados Treasury Bills	9 516 250	20.3
One year:		
Fixed Bank Deposits	15 550 000	33.1
Two to five years:		
Fixed Bank Deposits	1 000 000	
Government of Barbados Debentures	2 985 000	8.5
Five to ten years:		
Government of Barbados Debentures	8 740 000	
Government of St. Lucia Debentures	483 750	
Government of St. Vincent Bonds	242 500	
Barbados Development Bank	6 200 000	34.9
Government of St. Christopher-Nevis-Anguilla Debentures	485 000	
Government of Dominica Debentures	242 500	
Over ten years:		
Government of Barbados Debentures	1 200 000	2.5
TOTAL	46 959 252	100.0

Investment policy

22. The investment policy should aim at the maximum yield consistent with security of capital. It is necessary to arrange for funds to be readily available at the appropriate time to meet the payment of benefits, and the maturity dates of investments need to be matched to the future cash requirements. In the case of a relatively immature fund such as the Barbados National Insurance Fund the problem of availability of funds is fairly straightforward because for the foreseeable future the Fund will be increasing and the current income from contributions and interest will be more than sufficient to meet current outgo on benefits. This is illustrated by the following table showing the growth of the fund since its inception. The figures for 1974 which are available at the time of the writing of this report have been included.

TABLE 6

Growth of National Insurance Fund since its inception in June 1967

Year	Fund at end of year ($ millions)	Growth in Fund over year ($ millions)
1967(7 months)	2.6	2.6
1968	7.8	5.2
1969	13.4	5.6
1970	20.2	6.8
1971	28.7	8.5
1972	37.5	8.8
1973	47.4	9.9
1974	60.3	12.9

Notes : (i) starting from 1972, the balance of the Fund each year has been adjusted for outstanding interest due from the Government at the end of the year;

(ii) the increase in 1971 reflected the extension of the Scheme to self-employed, and the increased contribution to cover employment injury benefit;

(iii) the increase in 1974 reflected the revision of wages grades to cover earnings up to $100 a week instead of $50 a week.

The Fund amounts to approximately $75 million by the end of 1975. Despite appreciable increases in the amounts paid in pension benefits the rate of growth of the Fund is likely to be maintained so that by the end of 1978 it can be expected to amount to something of the order of $120 million. Further increases in the wages ceiling of the Scheme to take account of inflation would accelerate the rate of growth. An increase in the wage ceiling is already overdue because using the retail price index prepared by the Government Statistical Service and published by the Central Bank of Barbados, the wage ceiling would require to be $150 a week in September 1975 in order to be equivalent to a ceiling of $50 a week at the start of the Scheme 1967.

23. For the foreseeable future the Fund will be increasing and should be invested in long-term securities. There are at present relatively few suitable long-term securities available in Barbados. Investment outside Barbados is not, however, recommended. The liabilities of the Scheme are expressed in Barbados dollars and the assets should be in the same currency. If they are not, the financial position of the Fund can be adversely affected by changes in rates of exchange. The unwisdom of investment in other currencies is illustrated by an appreciable loss by the Fund in 1975 because of bonds and debentures expressed in East Caribbean dollars which have lost in value compared with the Barbadian dollars when Barbados moved from a sterling to a U.S. dollar parity. The Fund is built up from saving in Barbados and it follows that investment should be in Barbados, preferably in socially desirable interest earning projects which may also contribute to the economic development of the country.

The longest term investment at present (mid 1975) held by the Fund is the Government Debenture for $2,500,000 maturing 1990-1993, issued in connection with the construction of the new National Insurance Building but other medium and long-term debentures are being arranged for housing purposes amounting in total to $4 million. Investments should be as long-term as possible until further suitable longer-term investments are available. This is particularly important when interest rates are high in order to secure the benefit of high rates for as long as possible. Short-term investment of new money may be appropriate as a temporary expedient when interest rates are low so that capital can be re-invested without undue loss when higher long-term interest rates become available. Short-term investments are inappropriate at the present time.

At the end of 1973 about 20 per cent of the investments of the National Insurance Fund were in Treasury Bills and a further 33 per cent in one-year Bank Deposits. The position at the end of 1974 was much the same with more than half the investments of the Fund for a term of one year or less. Such a policy is inappropriate for the National Insurance Fund and is not in accordance with generally accepted investment principles. It will inevitably lead to a lower yield on the Fund than would have been secured by long-term investment. Furthermore, the increase in reinvestment activities brought up by the frequent maturities of short-term investments may unduly detract the National Insurance Office from its prime responsibility, which is to administer the Scheme and, in particular, to pay out the benefits thereunder.

CHAPTER III

FINANCIAL ORGANISATION, STATISTICAL DATA AND TECHNICAL BASES FOR THE ACTUARIAL ANALYSIS

A. Financial organisation

The present situation - general

24. The Acts and Regulations governing the National Insurance and Social Security Scheme only provide for the establishment of the National Insurance Fund into which are paid contributions payable and out of which are paid claims for benefits. They do not provide for a specific financial organisation and, so far, all the resources of the Scheme have been pooled. There are no provisions governing a mechanism for establishing financially autonomous branches, i.e. separate accounts and separate reserve funds with no transfers permitted between branches. The Act refers to one contribution in respect of long-term and short-term benefits combined (Section 12) and a separate contribution in respect of employment injury benefits (Section 14). The Collection of Contributions Regulations define the amount of such contributions.

When the first actuarial review was made, the expert established his estimates of future costs, on the basis of the practice followed so far, by pooling all benefit expenditure, with the exception of employment injury benefits for which a separate analysis was made and which, in any event, became operative from 4 January 1971 only. In spite of the fact that the practice followed was not in accordance with the financial system on which the initial actuarial estimates were made, the expert did not propose at that stage to make any modifications to the financial organisation but suggested that this question be examined in connection with the present actuarial review. He recommended, however, that the employment injury benefits branch be treated financially entirely separate from the other branches, with separate accounts and separate reserve funds. The Scheme has, nevertheless, continued so far to operate as one financial entity and employment injury benefits have not been dealt with in a separate fund.

Long-term benefits branch (old-age, invalidity and survivors' pensions)

25. The contribution rate for these benefits has been determined under the assumption that it would be financed under the scaled premium system of financing. Under this system, the contribution rate is fixed at such a level that the income from contributions and investments will exceed the expenditure on benefits and expenses for a period generally referred to as the period of equilibrium.[1]

Short-term benefits branch (sickness, maternity and funeral benefits)

26. The contribution rate for these benefits has been determined under the assumption that the assessment system of financing would be applicable. Under this system the current contributions are estimated as sufficient to meet the current expenditure on benefits and expenses and a margin to provide for unfavourable fluctuations in the experience.[1]

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[1] For a more complete description of the financial systems, see ILO/TAP/Barbados/R.9, pages 26-28.

Employment injury benefits branch

27. It is generally found most appropriate to adopt for the long-term benefits (permanent incapacity and survivors' pensions) under this branch the system of assessment of "constituent capitals" (or of "capital cover") of benefits, while the short-term benefits are generally financed under the assessment system. It may be recalled that under the system of assessment of constituent capitals the contribution rate is fixed at such a level that the contribution income for a given year is equal to the capital value of pensions awarded during the same year.[1]

Separate accounts prepared for the employment injury benefits branch

28. In view of the particular systems of financing applicable to the employment injury benefits branch and of the fact that such benefits are the responsibility of the employer, the employee not contributing towards their cost, it is imperative that separate accounts be maintained and that separate reserve funds be accumulated in respect of this branch. As a first step, the expert has prepared, for the employment injury benefits branch, separate accounts covering the years 1971, 1972 and 1973, to which have been carried:

(i) the employers' contributions under Section 14 of the National Insurance and Social Security Act as defined by the National Insurance and Social Security (Collection of Contributions) Regulations;

(ii) a proportion of the investment income;

(iii) all expenditure relating to employment injury benefits;

(iv) a proportion of the expenses of administration;

(v) an allocation to the reserve for long-term benefits.

These accounts are set out in Chapter VI.

Recommendation as to the financial organisation of the Scheme

29. It is recommended that separate accounts be prepared for the employment injury benefits branch for the years 1974, 1975 and onwards using as a starting balance that shown at the end of 1973 in the accounts prepared by the expert and following the methods described in Chapter VI and in Appendix II.

Although financial autonomy is necessary in order to be able to follow the financial development of each branch if different systems of financing are applied in respect of the various branches, the Government has not yet decided to establish, for the long-term benefits branch, accounts separate from those for the short-term benefits branch. In view of the practical impossibility obtain an accurate picture of the exact financial situation of each branch resources and expenditure are pooled, it is strongly recommended that eparate funding and accounting be also adopted for these two branches as soon as possible.

B. Statistical data

General

30. The future financial development of the long-term benefits branch is established by the preparation of estimates, covering the next 25 years, of the future outgo on benefits and expenses of administration and comparing them

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[1] For a more c[illegible] description of the financial system, see ILO/TAP/Barbados/R.[illegible] 26-2[illegible]

with estimates of the future income from contributions and investments. These demographic and financial estimates are based on lengthy actuarial calculations depending on many factors such as the numbers of the insured population, rates of mortality, retirement and invalidity, proportion married and ages of wives and numbers of children, progression of average wages according to age, future changes in wages levels, and variations in the rates of interest. The statistics used and the treatment of these factors for the purpose of the valuation are described and summarised in the following paragraphs of this chapter.

Statistics on the insured population

Insured persons in 1973, their contribution record and level of earnings

31. Punched cards were prepared based on data extracted from the permanent record sheet (form R 4) written for each entrant to the Scheme. These sheets are kept in registers in the order of the national insurance number allotted on registration. There is, in addition, an alphabetical index for use in assisting identification and determination of an insured person's national insurance number.

32. The record sheets did not record whether the person was employed or self-employed so that the tabulations in Tables 7 to 10 include employed and self-employed persons. A separate investigation into the numbers of self-employed was made by means of a scrutiny of the 1974 contribution cards. The record sheets also did not record whether a person was a public servant entitled to full pay while sick and ineligible for sickness benefit under the Scheme. Special adjustment had to be made to allow for those public servants not entitled to sickness benefit under the Scheme.

33. The following table shows the number of registrations year by year since the start of the Scheme:

TABLE 7

Registrations under the Scheme over the period 1967-1974

Calendar year	Number of registrations during the year	Cumulative number of registrations at end of year
1967	72 252	72 252
1968	11 478	83 730
1969	10 287	94 017
1970	9 588	103 605
1971	9 019	112 624
1972	7 941	120 565
1973	7 180	127 745
1974	6 720	134 465

Note: Some registrations did not become effective because no contributions were ever paid to the Scheme. In preparing the punched cards for use in obtaining tabulation of information relating to insured persons, cases where there were no contributions were disregarded.

Particulars of insured persons who made at least one contribution in 1973

34. Tables 8 and 9 show for male and female insured workers respectively, according to age group, the number of insured persons in 1973, the percentage in each earnings group, the average number of contributions per head in 1973,

TABLE 8

Particulars on male insured persons who made at least one contribution in 1973

Age in 1973	No. of insured persons in 1973	Percentage in earnings group						Average number of contributions per head in 1973	Average number of contributions since entry and up to the end of 1973	Average weekly rate of earnings per head	Average annual insurable earnings per head
		I	II	III	IV	V	VI				
										$	$
Unknown	472	0.1	0.4	0.9	4.9	18.4	75.0	36.6	201.3	45.9	1 680
65	467	1.1	1.7	0.4	5.8	17.9	73.1	28.8	335.1	45.1	1 299
60 - 64	2 657	0.8	0.7	1.5	4.0	9.2	83.8	46.8	333.0	46.8	2 190
55 - 59	3 440	0.7	0.5	0.7	2.4	7.7	88.0	47.8	324.2	47.7	2 280
50 - 54	3 423	0.4	0.4	0.6	1.9	5.2	91.5	47.6	314.4	48.4	2 304
45 - 49	3 429	0.3	0.2	0.4	1.7	5.0	92.4	47.2	317.0	48.6	2 294
40 - 44	3 592	0.5	0.1	0.3	1.2	4.1	93.8	46.1	311.5	48.8	2 250
35 - 39	3 733	0.1	0.2	0.4	1.1	4.7	93.5	45.4	308.6	48.9	2 220
30 - 43	4 301	0.2	0.2	0.3	0.9	4.8	93.6	43.3	307.1	48.9	2 117
25 - 29	6 985	0.1	0.1	0.3	1.0	5.2	93.3	42.2	301.6	48.9	2 064
20 - 24	9 195	0.1	0.2	0.4	2.5	11.7	85.1	39.9	196.3	47.7	1 903
16 - 19	4 600	0.9	1.6	3.1	11.9	30.2	52.3	30.8	61.8	41.3	1 272
TOTALS	46 294	0.3	0.4	0.7	2.9	9.5	86.2	42.5	-	47.6	2 031

Notes: (i) The earnings group in which an individual is classified is that corresponding to his highest rate of earnings in 1973.

(ii) The low average number of contributions in the lower age groups reflects the large number of new entrants at these ages during the year.

TABLE 9

Particulars on female insured persons who made at least one contribution in 1973

Age in 1973	No. of insured persons in 1973	Percentage in Earnings Group						Average number of contributions per head in 1973	Average number of contributions since entry and up to the end of 1973	Average weekly rate of earnings per head	Average annual insurable earnings per head
		I	II	III	IV	V	VI				
										$	$
Unknown	328	0.9	2.4	7.6	22.0	26.8	40.3	38.7	195.6	37.4	1 447
65	221	7.7	10.4	11.8	30.3	14.9	24.9	28.6	368.1	29.6	847
60 - 64	1 378	6.0	6.4	11.6	25.0	21.0	30.0	47.2	344.4	32.4	1 529
55 - 59	1 952	3.9	5.4	8.9	21.5	23.0	37.3	46.9	324.0	35.2	1 651
- 54	2 216	2.6	3.4	6.7	17.7	24.2	45.4	46.9	310.0	38.0	1 782
- 49	2 610	1.7	3.4	6.0	15.6	26.3	47.0	45.8	301.5	38.9	1 782
40 - 44	2 752	0.9	2.4	5.9	14.1	25.7	51.0	45.3	290.5	40.1	1 817
35 - 39	3 039	0.5	1.9	4.4	13.6	25.2	54.4	44.9	279.8	41.1	1,845
30 - 34	3 343	0.4	1.9	4.3	13.3	21.0	59.1	43.0	271.2	41.8	1 797
25 - 29	4 973	0.4	1.0	3.7	10.7	20.5	63.8	42.6	273.0	43.1	1 836
20 - 24	7 077	0.3	1.1	3.4	10.6	22.0	62.6	41.4	181.0	43.0	1 780
[illegible] - 19	3 435	0.9	2.1	9.6	20.5	26.7	40.2	31.3	58.0	37.3	1 167
TOTALS	33 324	1.2	2.4	5.6	14.8	23.3	52.7	42.5	-	40.3	1 708

Notes: (i) The earnings group in which an individual is classified is that corresponding to her highest rate of earnings in 1973.

(ii) The low average number of contributions in the lower age groups reflects the large number of new entrants at these ages during the year.

the average number of contributions per head since entry and up to the end of 1973, the average weekly rate of earnings allowing for a maximum of $50 a week, and the average annual insurable earnings per head. Contributions include those paid and those credited in respect of sickness or employment injury. There were 46,294 male and 33,324 female insured persons who paid at least one contribution in 1973, making a total number of 79,618 insured persons who paid at least one contribution in 1973. Their average insurable earnings were $1,896 a year and their average number of contributions in the year 42.5.

The average weekly rate of earnings for male insured workers is steady between the ages of 25 and 54 with a variation of less than 1 per cent. It reduces by about 5 per cent from age 55 to retirement age. The regular increase in the average annual insurable earnings from the age group 20-24 to the age group 50-54 is accounted for mainly by the increase within that range, in the average number of contributions paid in the year.

For female insured persons the maximum average weekly rate of earnings is reached in the 25-29 age group; above that age the rate decreases steadily until by the time retirement age is reached it is some 25 per cent less than the maximum. However, on account of the increase with age in the average number of contributions paid in the year, the average annual insurable earnings show a different pattern of evolution with increasing age, being quite steady from the age group 20-24 to the age group 50-54.

In the three years since the first actuarial review at the end of 1970 the average annual insurable earnings have increased as follows:

TABLE 10

Increase in average annual insurable earnings since the first actuarial review

	Average annual insurable earnings of persons making at least one weekly contribution in		Percentage Increase
	1970	1973	
	$	$	%
Males	1 687	2 031	20.4
Females	1 229	1 708	39.0
Males and Females	1 501	1 896	26.3

Number of ~~insured persons contributing to the~~ Scheme over ~~the period 1971-1973~~

35. The number of insured persons contributing during the years 1971, 1972 and 1973 has been fairly static, with a fall of somewhat less than 1/2 per cent in 1973, which is not unexpected in view of the difficult economic situation. The average number per head of contributions paid or credited in a year has increased slightly over the period.

TABLE 11

Evolution of the number of contributors and of the average number of contributions paid or credited over the period 1971-1973

Insured persons with at least one contribution in the year								
1971			1972			1973		
Males	Females	Males and Females	Males	Females	Males and Females	Males	Females	Males and Females
47 614	32 302	79 916	46 958	33 037	79 995	46 294	33 324	79 618
Average number of contributions paid in the year								
40.8	40.1	40.5	41.7	41.1	41.4	42.5	42.5	42 5

Membership changes over the period from 1 January 1971 to 31 December 1973

36. The change in membership of the Scheme over the three years 1971, 1972 and 1973 is summarised in Table 12. Membership of the Scheme includes all persons who have an interest in the Fund. It includes those who have contributed at some time but have not yet become entitled to benefit other than sickness or maternity, or short-term employment injury benefit. It includes persons who are not currently employed but may eventually become entitled to a retirement pension or other benefit. It also includes 630 persons, 414 males and 216 females, who appear to be over retirement age and may be entitled to a benefit even if it is only a return of contributions.

The number of members is, therefore, considerably greater than the number of insured persons who made at least one contribution in 1973. The total membership amounted to 118,690 at the end of 1973 compared with 79,618 who made at least one contribution in that year.

Many of the new entrants in the years 1971-73 at the older ages are accounted for by the extension of the Scheme from 4 January 1971 to include self-employed persons.

Change in earnings groups with effect from 7 January 1974

37. The complete revision of earnings groups with effect from 7 January 1974 (see Table 1) with the raising of the maximum weekly rate of earnings reckoning under the Scheme from $50 a week to $100 a week has a major effect on future forecasts of contribution income and benefit outgo under the Scheme. It would have been unrealistic not to take account of it, although it occurred after the valuation date of 31 December 1973. An examination of the 1974 contribution cards was, therefore, made with a view to determining the earnings group distribution according to age, sex and whether self-employed or not. The self-employed status was determined by the amount of the stamp affixed to the card.

The average annual insurable earnings per head is obtained by multiplying the average weekly rate of earnings per head by the average number of contributions paid in a year determined from the 1973 data. For the purpose of the actuarial projections it was assumed that the average number of contributions paid in a year would remain at a constant level. The earnings group selected for the tabulations was that according to the stamp paid in the week commencing 25 November 1974, or, if no stamp was paid in that week, the week the person was last employed before 25 November 1974. This week was selected rather than the last week in the year because earnings tend to be inflated in December as a result of Christmas bonus, the bonus in the case of monthly employees affecting the amount of stamp for all weeks in December.

TABLE 12

Evolution of the total membership of the Scheme over the period 1971-73

	Males		Females		Total	
Membership 1 January 1971		57 831		41 260		99 091
Add:						
New entrants in 1971		5 163		4 347		9 510
Deduct exits in 1971:						
Deaths	131		50		181	
Retirements at age 65	261		152		413	
Retirements, invalidity	2		-		2	
Retirements with lump sum grants	102		56		158	
Retirements not entitled to grant or pension	68	564	22	280	90	844
Membership 1 January 1972		62 430		45 327		107 757
Add:						
New entrants in 1972		3 585		3 664		7 249
Deduct exits in 1972:						
Deaths	143		49		192	
Retirements at age 65	360		190		550	
Retirements, invalidity	12		7		19	
Retirements with lump sum grants	108		66		174	
Retirements not entitled to grant or pension	82	705	30	342	112	1 047
Membership 1 January 1973		65 310		48 649		113 959
Add:						
New entrants in 1973		3 065		2 996		6 061
Deduct exits in 1973:						
Deaths	172		60		232	
Retirements at age 65	445		237		682	
Retirements, invalidity	30		27		57	
Retirements with lump sum grants	144		81		225	
Retirements not entitled to grant or pension	87	878	47	452	134	1 330
Membership 1 January 1974		67 497		51 193		118 690

A count was also made of the numbers for whom a stamp was paid on 4 March 1974 and 8 July 1974 in order to make an assessment of the effect of seasonal employment.

The results of the examination are set out in Tables 13 and 14 for employed persons and self-employed respectively.

TABLE 13

Data on earnings of employed persons in 1974

Age in 1974	Percentage in earnings group						Average weekly rate of earnings per head	Average Annual insurable earnings per head
	I	II	III	IV	V	VI		
MALES								
Unknown	4.3	13.9	24.0	31.3	11.4	15.2	-	-
65	3.4	9.6	18.4	30.6	14.5	23.5	63.3	-
60 - 64	1.4	6.6	17.0	33.3	14.5	27.2	67.2	3 144
55 - 59	1.2	5.2	13.6	33.0	17.5	29.5	70.0	3 347
50 - 54	1.0	3.3	10.1	30.9	17.7	36.9	74.5	3 548
45 - 49	0.7	3.7	9.5	27.1	19.2	39.8	76.2	3 595
40 - 44	0.9	3.2	9.5	27.3	17.5	41.7	76.6	3 533
35 - 39	1.3	3.5	9.4	23.1	16.4	46.3	78.0	3 539
30 - 34	1.2	3.4	10.2	24.3	16.0	45.0	77.3	3 346
25 - 29	1.4	3.8	11.4	25.5	18.5	39.4	75.1	3 168
20 - 24	2.6	5.5	19.1	33.7	18.2	20.9	64.8	2 586
16 - 19	6.3	17.9	37.3	26.2	6.3	5.9	46.3	1 425
16 - 64	1.9	5.5	15.0	28.6	16.6	32.5	70.3	3 053
FEMALES								
Unknown	4.3	26.5	39.5	14.1	8.3	7.2	-	-
65	13.4	33.7	27.8	11.2	4.3	9.6	39.8	-
60 - 64	7.0	34.4	34.5	9.6	4.4	10.1	41.6	1 958
55 - 59	6.0	32.5	36.1	8.2	4.4	12.8	43.6	2 046
50 - 54	5.2	23.7	38.4	9.5	6.2	16.9	48.9	2 292
45 - 49	4.4	22.4	39.5	10.5	6.4	16.8	49.5	2 268
40 - 44	3.3	18.5	37.8	11.5	7.1	21.8	54.0	2 447
35 - 39	2.9	16.0	36.7	12.3	8.2	23.9	56.4	2 533
30 - 34	3.0	15.5	32.5	12.5	10.2	26.3	58.7	2 525
25 - 29	3.1	12.3	29.5	16.2	13.3	25.7	60.9	2 593
20 - 24	3.3	13.0	30.9	24.2	12.5	16.2	56.3	2 331
16 - 19	8.5	23.9	36.3	21.1	6.4	3.8	42.3	1 325
16 - 64	4.1	18.2	34.0	15.6	9.3	18.7	53.6	2 304

TABLE 14

Data on earnings of self-employed persons in 1974

Age in 1974	Percentage in earnings group						Average weekly rate of earnings per head	Average annual insurable earnings per head
	I	II	III	IV	V	VI		
MALES								
65	5.7	20.8	26.4	11.3	7.5	28.3	56.9	-
60 - 64	14.6	23.4	15.8	8.2	5.3	32.7	57.3	2 679
55 - 59	18.7	10.6	25.2	13.8	1.6	30.1	54.0	2 581
50 - 54	8.3	13.8	22.9	7.3	7.3	40.4	63.7	3 034
45 - 49	5.8	12.8	16.3	11.6	3.5	50.0	69.7	3 292
40 - 44	7.0	7.0	9.3	12.8	2.3	61.6	77.2	3 557
35 - 39	4.3	2.9	14.3	12.9	8.6	57.1	78.5	3 564
30 - 34	5.6	4.2	12.7	11.3	8.5	57.7	77.9	3 371
25 - 29	2.1	12.8	10.6	6.4	4.3	63.8	78.4	3 308
20 - 24	7.4	7.4	22.2	29.6	18.5	14.8	58.7	2 342
16 - 19	-	50.0	-	-	25.0	25.0	56.2	1 733
16 - 64	9.8	12.6	17.0	11.1	5.5	44.0	65.7	3 034
FEMALES								
65	29.2	45.8	12.5	4.2	4.2	4.2	28.3	-
60 - 64	54.5	16.1	13.4	6.3	1.8	8.0	27.6	1 304
55 - 59	45.8	19.6	12.1	6.5	2.8	13.1	33.1	1 553
50 - 54	43.7	26.8	12.7	7.0	-	9.9	29.5	1 385
45 - 49	31.7	18.3	18.3	8.3	8.3	15.0	41.3	1 891
40 - 44	27.3	20.5	6.8	4.5	9.1	31.8	51.9	2 350
35 - 39	19.4	25.8	16.1	16.1	6.5	16.1	45.2	2 028
30 - 34	16.7	19.4	25.0	8.3	-	30.6	51.6	2 219
25 - 29	6.7	-	13.3	-	-	80.0	86.0	3 664
20 - 24	11.1	27.8	16.7	11.1	11.1	22.2	51.8	2 145
16 - 19	-	-	-	-	100.0	-	80.0	2 50[illegible]
16 - 64	37.8	19.8	14.1	7.3	3.8	17.2	38.5	1 750

Proportion of self-employed persons and the numbers employed on 4 March 1974 and 8 July 1974

38. Tables 15 and 16 show for the employed and self-employed respectively the numbers who made at least one contribution in 1974, together with the numbers who made a contribution on 4 March 1974 or 8 July 1974.

Out of a total of 74,500 insured persons who paid one contribution in 1974, there were 1,425 self-employed persons representing just under 2 per cent of the total.

Of the total number who made at least one contribution in 1974, 87.4 per cent were employed on 4 March 1974 and 83.0 per cent on 8 July 1974.

About 750 cards with contributions for 1974 came in for exchange in September 1975 and later. It was not possible to include them in the tabulations but it means that the total number of insured persons who made at least one contribution in 1974 was about 75,250 and not 74,500.

Voluntary contributors

39. At the time of writing the report there were only 25 voluntary contributors and the number of such contributors is likely to decrease. The contributions for voluntary contributors are assessed to correspond to the benefits for which they are eligible so that their inclusion in the Scheme should not affect its financial basis. In view of the small numbers, voluntary contributors have not been treated specially in the financial projections.

New entrants into the Scheme

40. In view of the relatively static number of contributors over the period 1971-1973, it was deemed appropriate to assume, for the purposes of the demographic and financial projections, that the total number of persons covered under the Scheme would increase 1 per cent per annum, as in the first actuarial review. A study of the age distribution of new entrants over the same period indicated that they might be assumed to enter, on the average, at age 20 to replace wastage and achieve the 1 per cent per annum increase.

Statistics on beneficiaries

Old age, invalidity and employment injury disablement pensions

41. Table 17 shows the numbers and annual amount of old age pensions in payment at the end of calendar years 1970, 1971, 1972 and 1973 and the average annual amount per head for male and female pensioners separately.

There were, in addition at the end of 1973, 70 male invalidity pensions, the total annual amount being $53,508 with an average pension per head of $764 a year, and 73 female invalidity pensions amounting in total to $31,713 and with an average annual pension per head of $434.

At the end of 1973 there were three disablement pensions payable as result of employment injury, one to a male and two to females, the respective annual amounts of the three pensions being $1,470, $4[illegible]7 and $567.

Survivors' pensions (death not as a result of employment injury

42. At the end of 1973 there were 91 pensions payable to widows aged over 55, the total annual amount of pension being $33,293 and the average annual pension per head $366. At the end of 1973 there were 38 survivors' pensions payable to widows aged under 55 [illegible] arried for less than three years at the date of their husband's death, t[illegible] otal annual amount in payment being $16,281 and the average annual pension p[illegible] ead $428.

TABLE 15

Data on number of contributors (employed persons) in 1974

Age in 1974	Numbers who made at least one contribution in 1974	Numbers who contributed on 4 March 1974	Numbers who contributed on 8 July 1974
MALES			
Unknown	396	343	303
65	408	312	217
60 - 64	2 441	2 280	2 173
55 - 59	3 034	2 857	2 775
50 - 54	3 086	2 892	2 779
45 - 49	3 215	3 025	2 891
40 - 44	3 375	2 925	2 804
35 - 39	3 531	3 234	3 067
30 - 34	4 183	3 735	3 550
25 - 29	6 830	6 050	5 550
20 - 24	8 420	7 088	6 422
16 - 19	3 508	2 288	2 199
TOTALS	42 231	37 009	34 730
FEMALES			
Unknown	276	232	223
65	163	155	100
60 - 64	1 243	1 173	1 097
55 - 59	1 724	1 399	1 530
50 - 54	2 001	1 865	1 804
45 - 49	2 481	2 181	2 190
40 - 44	2 511	2 281	2 211
35 - 39	2 917	2 433	2 513
30 - 34	3 327	2 910	2 800
25 - 29	5 064	4 407	4 253
20 - 24	6 645	5 612	5 456
16 - 19	2 459	1 596	1 600
TOTALS	30 844	26 752	25 777

TABLE 16

Data on numbers of contributors (self-employed persons) in 1974

Age in 1974	Numbers who made at least one contribution in 1974	Numbers who contributed on 4 March 1974	Numbers who contributed on 8 July 1974
MALES			
Unknown	2	2	2
65	53	48	35
60 - 64	186	174	172
55 - 59	125	123	125
50 - 54	110	109	107
45 - 49	88	85	85
40 - 44	89	86	85
35 - 39	74	68	70
30 - 34	75	65	65
25 - 29	48	45	44
20 - 24	28	22	22
16 - 19	4	3	3
TOTALS	882	830	815
FEMALES			
Unknown	6	6	6
65	25	19	13
60 - 64	114	112	110
55 - 59	110	109	107
50 - 54	71	71	69
45 - 49	65	64	64
40 - 44	45	45	45
35 - 39	32	28	31
30 - 34	39	34	34
25 - 29	15	15	15
20 - 24	20	17	19
16 - 19	1	1	1
TOTALS	543	521	514

TABLE 17

Number and amounts of old age pensions in payment on 31 December 1970-1971

31.12.1970		31.12.1971		31.12.1972		31.12.1973	
Number of pensions in payment	Annual amount of pensions	Number of pensions in payment	Annual amount of pensions	Number of pensions in payment	Annual amount of pensions	Number of pensions in payment	Annual amount of pensions
	$		$		$		$
Male pensioners							
152	101 349	446	291 352	789	527 504	1 148	799 780
Average amount of pension per head	667		653		669		697
Female pensioners							
88	32 833	254	93 526	436	168 666	613	256 708
[illegible]age [illegible] of pension per head	373		368		387		419

43. At the end of 1973 there were 363 children's pensions in payment, the total annual amount being $43,225 and the average amount per head $119.

Survivors' pensions (death as a result of employment injury)

44. At the end of 1973 there were 12 of such pensions payable to widows, the total annual amount being $10,563 and the average amount per head $880.

45. At the end of 1973 there were 26 of such pensions payable to children, the total annual amount being $7,847 and the average amount per head $302.

C. Actuarial bases

Rates of mortality

(i) Mortality of insured persons

46. The experience over the three years 1971, 1972 and 1973 showed that mortality among insured persons was considerably lighter than that expected according to the Barbados Life Tables 1959-1961, the mortality tables used for the original estimates for the Scheme, and points to the improvement in vitality that has taken place in recent years. Table 18 gives the percentage of actual to expected deaths of insured persons, separately for males and females for the years 1971, 1972 and 1973, and for the three years combined.

If the trend towards lighter mortality continues, the question of the adoption of lighter mortality rates for the actuarial projections will need to be considered. In the present review, however, the Barbados Life Table 1959-1961 which was used in the first actuarial review has been retained as the basis. The detailed mortality experience relating to insured persons according to age and sex is set out in Appendix I.

(ii) Mortality of pensioners

The mortality of old age pensioners shows, over the years 1971 to 1973, broad agreement between total numbers of actual deaths of males and females, namely 82, and expected deaths of 80 according to the Barbados Life Tables 1959-1961. In view of the reduction of mortality of insured persons in recent years this is, on the face of it, surprising. The explanation is that invalidity pensioners on reaching age 65 are reclassified as old age pensioners. As invalidity pensioners experience heavier than normal mortality, their amalgamation, over age 65, with old age pensioners increases the over-all mortality rates. Information was not available to determine which of the pensioners' deaths related to those who were originally invalidity pensioners and so it was not possible to quantify the effect on the rates.

Table 19 gives a comparison of the actual to expected deaths of pensioners separately for males and females for each year 1971, 1972 and 1973 and for the three years combined.

The Barbados Life Tables 1959-1961 have been retained as the basis for valuing pensioners.

Rates of invalidity and mortality of invalids

47. The rates used in the actuarial estimates at the inception of the Scheme and in the first actuarial review are based on Italian experience with minor adjustments. Analysis of the Barbados experience over the years 1971 to 1973 showed a very light incidence of invalidity, less than 20 per cent of that expected according to the valuation basis. It has to be remembered, however, that the Scheme is still in its early stages as far as invalidity benefits are concerned. The invalidity pension roll in 1973 was more than 10 times what it was in 1971 and is growing rapidly. It is apparent that the basis will require modification but further experience is desirable in order to make suitable adjustments. For the present, the or[illegible]inal basis has been retained and the consequent somewhat over-estimate of [illegible] incidence of invalidity constitutes a slight margin in the bas[illegible] Its [illegible] the estimated rate of contribution is slight.

TABLE 18

Mortality of insured persons over the period 1971-1973

Group	1971			1972			1973			1971-1973		
	Actual deaths	Expected deaths	Actual/ expected	Actual deaths	Expected deaths	Actual/ expected	Actual deaths	Expected deaths	Actual/ expected	Actual deaths	Expected deaths	Actual/ expected
			%			%			%			%
Males	136	249	54.6	139	262	53.0	154	272	56.6	429	785	54.6
Females	36	90	40.0	50	98	51.0	56	104	53.9	142	292	48.6
[illegible]es and [illegible]les	172	339	50.7	189	360	52.5	210	376	55.9	571	1 075	53.1

TABLE 19

Mortality of old age pensioners over the period 1971-1973

Group	1971			1972			1973			1971-1973		
	Actual deaths	Expected deaths	Actual/ expected	Actual deaths	Expected deaths	Actual/ expected	Actual deaths	Expected deaths	Actual/ expected	Actual deaths	Expected deaths	Actual/ expected
			%			%			%			%
Males	8	8.5	94	20	19.5	103	27	32.7	83	55	60.7	91
es	5	2.9	172	7	6.4	109	15	10.2	147	27	19.5	138
ales and males	13	11.4	114	27	25.9	104	42	42.9	98	82	80.2	102

Rate of interest

48. The Fund yielded about 7 per cent interest on the average over the years 1971 to 1973. The yield increased to over 8 per cent in 1974. Because a large proportion of the investments, however, are short dated, a high rate is not assured even in respect of existing investments for more than a few years. By mid-1975 the rates of interest obtainable on short-term bank deposits were beginning to fall appreciably.

A margin in the rate of interest earned over the rate assumed in the financial projections is needed for two reasons:

(i) to counteract at least in part the cost of increases in long-term benefits resulting from future increases in earnings. Such increases can arise on account of a general rise in the level of wages as a result of greater productivity or higher cost of living;

(ii) to help to meet the cost of upward adjustments of pensions after they have been awarded to take account of possible cost of living increases.

Having regard to all the circumstances the same rate of interest, namely 5 per cent, as in the last actuarial review, has been adopted for the purpose of the financial estimates.

Earnings of the insured population

49. For male and female employees a progression of average annual insurable earnings with age was assumed based on Tables 13 and 14, except that the earnings progression was assumed to remain level over age 50. Combined figures were used for employed and self-employed, but a separate progression was used for males and females. The progression of average earnings with age is set out in Table 20.

TABLE 20

Average annual rate of earnings of male and female insured persons based on an examination of the 1974 contribution cards

Age of insured person	Average annual rate of earnings at 1 January 1974	
	Male insured persons	Female insured persons
	$	$
18	1 658	1 419
23	2 658	2 275
28	3 039	2 397
33	3 184	2 385
38	3 275	2 324
43	3 302	2 214
48	3 275	2 129
53	3 262	2 116
58	3 262	2 116
63	3 262	2 116

Note: The earnings [illegible]own in Tabl[illegible] 13 and 14 of the report which related to the week commen[illegible]g 25 Novembe[illegible] 1974 were reduced to arrive at the level of earnin[illegible] [illegible]anuary 1974.

Apart from the increase in average earnings according to age it was assumed that the general level of earnings would increase by 10 per cent in each of the years 1974 and 1975, that it would increase 5 per cent in each of the five years 1976 to 1980 and increase by 2 1/2 per cent each year thereafter.

In making these allowances the further assumption was made that the wage gradings will be adjusted from time to time to take account of the increases in the general level of earnings. If the system is changed so that benefits and contributions, apart from an upper limit, are assessed directly on the level of earnings and the grades are abolished, the adjustment to higher levels of earnings would be automatic.

Calculations were also made under the assumption that the general level of earnings would remain constant, in order to assess the extent to which the calculated rate of contribution depended on assumptions about future earnings levels.

Adjustments in levels of pensions after award

50. Since pensions are based on the average earnings over the best three consecutive years of the last 15 years and in view of the fact that there is an inevitable lag between increases in levels of earnings or increases in cost of living and adjustments in levels of pensions in payment as a compensation therefor, it was felt sufficient to assume an increase of 2 per cent per annum after award in the level of pensions.

Calculations were also made under the assumption that the pensions would not be adjusted after award in order to assess the extent to which the calculated rate of contributions depended on assumptions about future pensions levels.

Proportion of male employed workers who are married (including common-law marriages) and average disparity in age between husband and wife

51. Data relating to Barbados on the proportion of males who are married are still not available and the proportions adopted were those used in a recent actuarial report on the scheme of a Carribean country having similar demographic characteristics.

No information was available regarding the relative ages of husbands and wives in the Barbados Scheme. For the purpose of the actuarial estimates the proportions of wives aged 55 and over at the date of death of the husband were based on the distribution of ages of wives according to age of husband obtained from the experience of the Social Security Scheme in Tunisia.[1]

Orphans' mortality and average number of orphans

52. Because the effect on the estimates is so small, orphans' mortality before age 16 was ignored. The assumption was made that the total number of orphans' pensions arising in any one year would decrease by equal annual steps because of orphans attaining age 16. The average number of orphans according to the age of the deceased worker was based on the experience of the Italian Social Security Scheme. The experience indicates that the average number of orphans may be somewhat higher in Barbados and when further experience of the Barbados Scheme is available appropriate adjustment can be made. The effect on the over-all finances of any adjustment is likely to be relatively slight.

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[1] "Rapport au Gouvernement de la Tunisie sur des études actuarielles des régimes tunisiens de sécurité sociale effectuées en vue de l'introduction d'un régime de pensions". OIT/TAP/Tunisie/R.25 - Genève, 1972.

Density of employment

53. Tables 8 and 9 show the average number of contributions per head in 1973, males and females, according to age group. For males the average increases from 40 weeks in the age group 20 to 24 to a maximum of just under 48 for the age group 55 to 59. For female workers the average increases from 41 1/2 weeks in the age group 20 to 24 to a maximum of just over 47 for the age group 60 to 64.

In framing the actuarial estimates of future income and outgo under the Scheme it was assumed that, on average, insured male and female workers, retiring in the next 25 years, would contribute for 45 weeks a year, and the time when 500 contributions would be completed was computed on this basis. The projections of future numbers of insured persons each year are based on the numbers assumed to contribute at least one contribution in the year in question. The number of retirements will be greater than the numbers reaching age 65 on the basis of these projections because of those persons who have not contributed in the year immediately preceding the retirement age of 65, but who have a sufficient number of paid or credited contributions to be entitled to a retirement pension on reaching age 65. Their rate of benefit will be appropriately adjusted to take account of their contribution record. In making the calculations regarding the rate of contribution necessary to support the benefits due allowance has been made for the retirements of those persons not contributing in the year immediately preceding the attainment of age 65. The average annual insurable earnings calculated for the purpose of the actuarial projections is obtained by multiplying the average weekly earnings by the average number of weeks of contribution.

Expenses of administration

54. A broad analysis of the expenses of administration is given in paragraph 18. In making the financial estimates it has been assumed that all the expenses of the Severance Fund will be charged to that Fund and will not be a charge on the National Insurance Fund. Future expenses of the National Insurance Fund were assumed to amount to 0.50 per cent of insurable earnings for the administration of the main scheme and 0.10 per cent in respect of the administration of employment injury benefits. If and when a full separation of branches is made as recommended in this report as well as in the preceding ones, it will be necessary to do an apportionment of administration expenses among the branches. As a rule, it is not feasible to base this on the actual expenses involved. Very often, therefore, the ILO recommends a simple approximation formula for the apportionment of expenses between the long-term and the short-term branches in proportion to the turnover in the two branches, turnover being measured by the total of contributions and benefits in each branch.

If, for example, C_1 and C_2 and B_1 and B_2 represent the contributions and the benefits for the long-term and short-term branches respectively, the proportion of the total administration expenses, A, allocated to each branch will be as follows:

(i) Long-term branch: $A_1 = A \times \dfrac{(C_1 + B_1)}{(C_1 + C_2 + B_1 + B_2)}$

(ii) Short-term branch: $A_2 = A \times \dfrac{(C_2 + B_2)}{(C_1 + C_2 + B_1 + B_2)}$

Suggestions for improvement of statistics relating to the working of the Scheme

55. The collection of the necessary statistics for this actuarial review has taken a considerable amount of time and effort on the part of the staff of the National Insurance Office and the final data were not available until 10 months after the start of the mission. For various reasons it had not proved possible to arrange for the preparation of statistics on a continuing basis and to prepare tabulations in advance of the mission, as recommended in the report on the first actuarial review. The National Insurance Board were, however, aware of the need for the preparation of statistics. Arrangements had been made

for an expert to come on a three-month assignment under the auspices of the Organisation of American States to advise on the problem. He has suggested a comprehensive system for the maintenance of statistical records on a continuing basis. These records would enable the various statistics required by the actuary undertaking the periodic actuarial reviews to be prepared without difficulty. If the records are maintained on an up-to-date basis as intended, the actuarial data should be obtained without more delay than the time necessary to check the computer programmes and to produce the various actuarial tabulations from the computer. The recommended system covers not only insured persons but beneficiaries as well. As far as insured persons are concerned the system builds up from the computer record for each insured person already prepared for the actuary for this review, using information from the original record sheets written for each entrant to the Scheme together with information from the 1974 contribution cards.

This review had to rely on the computer record just referred to obtained from the original record sheets and on the office records relating to beneficiaries. The preparation of the computer record revealed that some of the information necessary for the actuary was not recorded and enquiries were initiated with a view to obtaining the missing particulars. Items involved included:

(i) The date of entry into insurance.

(ii) The sex of the insured person.

(iii) Whether the insured was self-employed.

(iv) Whether the insured was an established civil servant not entitled to sickness benefit from the Scheme.

(v) The age of the insured person.

(vi) The age of widow beneficiaries.

(vii) Whether the insured was a voluntary contributor.

Difficulties also arose because no system has yet been initiated to deal with the person who attains age 65, does not claim a pension, and continues to make contributions. There were similar problems when the date of death of a person or his retirement was not recorded on the record sheet.

The actuary suggests that the OAS expert's recommendations should be implemented without delay. A senior clerk in the National Insurance Office is working full time on this matter and the OAS expert is returning towards the end of the year for a further three months to assist in the final stages of implementing the system. The forms containing the various tabulations required for the actuary in conducting the actuarial review are presented in Appendix III of this report.

The actuarial estimates of the future financial progress of the Scheme include allowance for expenditure arising from the maintenance of adequate statistical records and other improvements in administration.

CHAPTER IV.

ANALYSIS OF SHORT-TERM AND LONG-TERM BENEFITS EXPERIENCE

I. Short-term benefits

A. Sickness benefit experience

Sickness benefit expenditure

56. In Table 21 sickness benefit expenditure each year since the inception of the Scheme is expressed as a percentage of insurable earnings of those insured persons eligible for benefit when sick. It excludes public servants who are not entitled to sickness benefit under the Scheme.

TABLE 21

Sickness benefit expenditure expressed as a percentage of insurable earnings

YEAR	Estimated annual insurable earnings of insured persons, excluding public servants not entitled to sickness benefit under the Scheme	Sickness benefit paid	Sickness benefit expressed as a percentage of earnings
	$	$	%
1967	35 547 700	48 727	0.137
1968	76 109 600	314 508	0.413
1969	83 727 800	415 151	0.496
1970	95 154 000	440 146	0.463
1971	100 222 400	585 854	0.585
1972	111 222 300	635 487	0.571
1973	121 212 600	721 342	0.595

Note: This table makes no allowance for the expenses of administering sickness benefits.

Incidence of sickness according to age and sex

57. The over-all average number of days of sickness in a year for men and women combined was 2.10 in 1971, 2.17 in 1972 and 2.20 in 1973 and investigation showed that the incidence of sickness did not vary significantly over these years. The detailed analysis of sickness experience was, therefore, based on the 1973 data. The analysis set out in Table 22 below shows that there is a steady increase with age in the number of days of sickness per year. The sickness rates (or average number of days of sickness per year) for women are appreciably higher than those for men and [illegible]ween ages of 30 and 50 are more than 50 per cent higher. The over-all average [illegible] sickness for women was only 23 per cent more than that for men because

of the relatively higher proportion of men at the older ages where sickness rates are high.

The favourable experience can be accounted for by the healthy climate of Barbados, the absence of heavy industries and a largely agricultural and tourist economy. In a small compact island with a total population of about a quarter of a million, it is also possible to control sickness claims fairly closely and this tends to limit the number and average duration of claim. The cost of sickness benefits is also reduced by the small number of long illnesses. As Table 23 shows only 15 per cent of the claims are in respect of illnesses lasting more than 14 days.

Although the scheme in Barbados is still in a comparatively early stage and some future increase in the incidence of sickness claims must be expected, it would appear that a lower rate of sickness than that assumed originally can be used for the purpose of future financial estimates. In the future estimates of cost in this actuarial review a rate of 0.70 per cent of insurable earnings is assumed. This provides a reasonable margin to cover any increase in the current rate of claim of just under 0.600 per cent of insurable earnings as shown in Table 21. The rate to be assumed for future cost estimates should, however, be reviewed at the next actuarial investigation in the light of subsequent experience.

<u>Incidence of sickness claims according to duration of illness</u>

58. Table 23 shows that about 85 per cent of sickness claims are in respect of illnesses of 14 days duration or less and about 63 per cent of a week or less. It confirms that chronic and severe illnesses are relatively infrequent.

<u>Refunds to Government in respect of sickness benefit not payable to civil servants</u>

59. The present arrangement is that the Government is refunded a contribution equivalent to 1 per cent of earnings in respect of those public servants who are not entitled to sickness benefit under the Scheme. One per cent of earnings was the original estimate of the cost of sickness benefit but, as Table 21 illustrates, the actual cost has been considerably less even after making an addition for expenses of administering sickness benefit. A return of 0.70 per cent of earnings to the Government would be the appropriate amount of refund according to the rate assumed, as stated in paragraph 57, for the purposes of future financial estimates, and refunds should be adjusted accordingly as soon as possible.

B. <u>Maternity benefit</u>

60. Table 24 shows the cost of maternity benefit since 1968. The increases in 1971 and 1972 are accounted for partly by a liberalisation in the maternity benefit provision to ensure that at least 12 weeks of benefit would be paid to each eligible person. This modification was introduced by Regulation with effect from 4 January 1971 - see paragraph 15 (iii).

TABLE 22

Incidence of sickness in 1973 according to age and sex

Age Group	MALES			FEMALES			MALES AND FEMALES		
	Numbers insured against sickness	Benefit days paid	Days per head	Numbers insured against sickness	Benefit days paid	Days per head	Numbers insured against sickness	Benefit days paid	Days per head
Under 20	4 182	5 770	1.38	3 123	4 960	1.59	7 305	10 730	1.47
20 - 29	14 709	22 837	1.55	10 955	23 480	2.14	25 664	46 317	1.81
30 - 39	7 304	11 697	1.60	5 802	14 591	2.51	13 106	26 288	2.01
40 - 49	6 383	11 133	1.74	4 875	13 115	2.69	11 258	24 248	2.15
50 - 59	6 239	18 579	2.98	3 789	11 355	3.00	10 028	29 934	2.99
60 - 64	2 627	13 017	4.95	1 354	6 299	4.65	3 981	19 316	4.85
All Ages	41 444	83 033	2.00	29 898	73 800	2.47	71 342	156 833	2.20

Notes: (i) The numbers insured were reduced by 10% at all ages to allow for public servants not entitled to sickness benefit under the Scheme; detailed information regarding numbers of public servants according to sex and age was not available. It was estimated, however, that the total numbers of public servants not covered for sickness benefit were between seven and eight thousand.

(ii) There were 472 males and 528 females whose age was not known and these have not been included in the numbers insured shown in the table. This means, in effect, that the number of days of sickness per head should be reduced by about 1 per cent.

TABLE 23

Incidence of sickness claims in 1971-1973 according to duration of illness

Category	1971			1972			1973		
	Completed claims	Percentage of claims in category	Benefit days paid	Completed claims	Percentage of claims in category	Benefit days paid	Completed claims	Percentage of claims in category	Benefit days paid
MALES		%			%			%	
7 days or less	5 305	64.9	18 662	4 751	62.7	16 590	5 343	65.3	20 303
8 - 14 days	1 647	20.1	16 125	1 524	20.1	15 033	1 689	20.6	16 666
15 - 21 days	395	4.8	6 915	453	6.0	7 857	419	5.1	7 259
22 - 28 days	226	2.8	5 510	259	3.4	6 313	237	2.9	5 834
29 - 35 days	137	1.7	4 360	147	1.9	4 701	122	1.5	[illegible]
36 - 49 days	177	2.2	7 333	176	2.3	7 366	152	1.2	[illegible]
50 and over	291	3.5	31 038	272	3.6	27 204	221	2.7	22 733
Total	8 178	100.0	89 941	7 582	100.0	85 064	8 183	100.0	83 035
FEMALES									
7 days or less	3 913	61.0	14 046	3 848	59.9	13 678	4 448	61.6	[illegible]
8 - 14 days	1 463	22.8	14 360	1 488	23.1	14 656	1 585	22.0	15 733
15 - 21 days	392	6.1	6 868	412	6.4	7 081	444	6.2	7 801
22 - 28 days	198	3.1	4 861	222	3.5	5 477	227	3.2	5 618
29 - 35 days	108	1.7	3 442	117	1.8	3 764	131	1.8	[illegible]
36 - 49 days	149	2.3	6 104	150	2.3	6 205	187	2.6	[illegible]
50 and over	192	3.0	18 286	192	3.0	19 821	173	2.4	15 772
Total	6 415	100.0	67 967	6 429	100.0	70 682	7 195	100.0	73 800
MALES and FEMALES									
7 days or less	9 218	63.2	32 708	8 599	61.4	30 268	9 791	63.7	37 238
8 - 14 days	3 110	21.3	30 485	3 012	21.5	29 689	3 274	21.3	32 399
15 - 21 days	787	5.4	13 783	865	6.2	14 938	863	5.6	15 060
22 - 28 days	424	2.9	10 371	481	3.4	11 790	464	3.0	11 452
29 - 35 days	245	1.7	7 802	264	1.9	8 465	253	1.6	8 130
36 - 49 days	326	2.2	13 437	326	2.3	13 571	339	2.2	[illegible]
50 and over	483	3.3	49 324	464	3.3	47 025	394	2.6	38 505
Total	14 593	100.0	157 908	14 011	100.0	155 746	15 378	100.0	[illegible]

TABLE 24

Cost of maternity benefit

Year	Amount paid in maternity benefit	Amount expressed as a percentage of insurable earnings
	$	%
1968	110 074	.12
1969	151 651	.16
1970	168 506	.16
1971	244 686	.21
1972	309 785	.24
1973	356 786	.26
1974	470 844	.23

The original cost estimates for the Scheme allowed for a cost for maternity benefits of 0.25 per cent of insurable earnings. The first actuarial review had reduced the allowance to 0.20 per cent, but this was in accordance with the experience before the liberalising provisions introduced in 1971. A figure of 0.27 per cent has been used for the purpose of future estimates in this review.

C. Funeral grant

61. The benefit expenditure on funeral grants is shown in Table 25 below:

TABLE 25

Cost of funeral grant benefit

Year	Amount of funeral grants paid in year	Cost of funeral grants as a percentage of insurable earnings
1968	15 300	.017
1969	13 700	.014
1970	18 600	.017
1971	21 000	.018
1972	20 700	.01[illegible]
1973	23 800	.017

With effect from 1 January 1975 the amount of funeral grant has been increased from $100 to $200 and the grant is also payable on the death of the spouse of an insured person or a person receiving a pension from the Scheme (see paragraph 15). On the other hand the ceiling of wages on which contributions are levied has been increased from $50 a week to $100 a week with effect from 7 January 1974 (see paragraph 15). This change increases appreciably the average level of insurable earnings on which contributions are levied. The effect of these various changes is allowed for by assuming that the cost of funeral benefit will on average amount to 0.03 per cent of insurable earnings.

D. Summary of results of the analysis of the cost of short-term benefits

62. The total allowance for the cost of short-term benefits, apart from administrative expenses, in making future estimates is 1.00 per cent made up as follows:

TABLE 26

Cost of short-term benefits expressed as a percentage of insurable earnings

	%
Sickness benefit	0.70
Maternity benefit	0.27
Funeral benefit	0.03
Total cost of short-term benefits	1.00

II. Long-term benefits

63. Reference may be made to Table 2 (paragraph 16) showing the income and expenditure of the National Insurance Fund for the years 1971-1973.

Old age pensions become payable at age 65, whereas invalidity pensions depend on permanent incapacity. The light expenditure on invalidity grants and pensions shows that the incidence of invalidity has been lighter than that expected according to the basis used in the original cost estimates of the Scheme. The cost of invalidity pensions is, however, increasing rapidly, and until the Scheme reaches a more mature state in regard to invalidity benefit experience, it is difficult to make a suitable adjustment of the valuation basis. For the present the existing basis has been retained (see paragraph 47). Any adjustment is not likely to have a significant effect on the rate of contribution estimated as necessary to support the benefits under the Scheme.

Comparisons of income and expenditure on long-term benefits must be made over long periods of time for reliable criteria to be established regarding likely future experience. Projections of future benefit expenditure and contribution income in respect of long-term benefits covering the next 25 years are presented in Chapter V and it is on the basis of these projections that the appropriate rate of contribution for long-term benefits is assessed.

CHAPTER V.

RESULTS OF DEMOGRAPHIC AND FINANCIAL PROJECTIONS IN RESPECT OF BENEFITS UNDER THE SCHEME APART FROM EMPLOYMENT INJURY BENEFITS

64. The demographic and financial projections relate to all benefits under the Scheme apart from the employment injury benefits for which separate calculations are made.

It has been assumed that out of the total contribution under Section 12 of the National Insurance and Social Security Act, i.e. excluding the Section 14 contribution in respect of employment injury benefits, 1 per cent of the insurable earnings will be utilised each year to meet the cost of short-term benefits (sickness, maternity and funeral benefits). The balance of the contribution will be available to meet the current payments in respect of old age, invalidity and survivors pensions and grants, the cost of expenses of administration, and to provide funds to accumulate a reserve in respect of these long-term benefit payments.

The projections have been made in accordance with the technical bases described in Chapter III taking as a starting point the number of insured persons and beneficiaries under the scheme at the end of 1973.

Table 27 shows the estimated future numbers of active insured persons and beneficiaries, and Table 28 the estimated future expenditure at 5 year intervals over the 25 year period from 1 January 1974 to 1 January 1999. The financial projections indicate that the Scheme is in a sound financial position and that it has developed broadly as expected, apart from the substantial increases in the general level of earnings in recent years. Average insurable earnings for all workers which were then subject to a ceiling of $50 a week increased by 26.3 per cent in the three years 1971 to 1973; the average of actual earnings increased by about 35 per cent over the same period. The higher increase in actual earnings has greater effect on the Scheme in 1974 when the wages ceiling was increased to $100 a week and due allowance is made for this in the financial projections.

Recommended rate of contribution to support the cost of long-term and short-term benefits under the scaled premium system of finance for long-term benefits and current annual assessment of cost for short-term benefits

65. On the bases described in paragraphs 46 to 53 and used for the financial projections presented in paragraph 64 (Table 28) calculations were made under the scaled premium system of financing regarding the rate of contribution necessary to meet the future cost of -

(i) existing and future awards of old age, invalidity and survivors' pensions;

(ii) grants payable where there is no entitlement to a pension;

(iii) sickness, maternity and funeral benefits amounting in total to 1 per cent of insurable earnings of all insured persons except for established civil servants, not entitled to sickness benefits from the Scheme, for whom the cost will be 0.30 per cent of insurable earnings;

(iv) expenses of administration, excluding those relating to employment injury benefits, amounting to 0.50 per cent of insurable earnings

allowing for a National Insurance Fund at 31 December 1973 of $43,266,522 after separating $3,692,730 appertaining to the employment injury benefits branch.

The scaled premium calculations indicate that the present rate of contribution of 6 per cent of insurable earnings (correspondingly less for established civil servants) will ensure the continued growth of the Fund for a period of about 15 years from 1 January 1974. To ensure continued growth for 20 years, an immediate increase in the rate of contribution to 7 per cent of insurable earnings would be necessary.

TABLE 27

Results of demographic projections in respect of long-term benefits

1 Jan.	Number of active insured persons	Number of old age pensioners	Number of invalidity pensioners	Number of widow beneficiaries		Number of orphan pensioners	Total number of pensioners	Number of pensioners per 100 active insured persons
				1 year's pension	Life pension			
1974	78 911	1 761	145	38	91	363	2 398	3
1979	82 937	5 633	1 685	221	390	3 016	10 945	13
1984	87 168	9 373	2 358	264	826	5 074	17 895	21
1989	91 615	11 996	2 798	304	1 417	6 669	23 184	25
1994	96 288	13 672	3 179	341	2 067	7 776	27 037	28
1999	101 200	14 588	3 670	381	2 689	8 861	30 189	30

Notes: (i) There are in addition a number of grants paid on retirement, invalidity or to a survivor where there is no entitlement to a pension. As the scheme matures, entitlement to a pension will become fairly general and the number of such grants should diminish.

(ii) By an active person is meant one who makes at least one weekly contribution in the year in question; the numbers have been increased by 1 per cent to allow for those insured persons whose age is unknown.

TABLE 28

Results of financial projections in respect of long-term benefits

(Amounts in $1 000's)

1 Jan.	Total annual insurable earnings	Old age pensions	Invalidity pensions	Widows' benefits		Orphans' pensions	Total benefits	Total benefit cost expressed as a percentage of earnings
				One year's pension	Life pension			
1974	212 502 912	1 056 488	85 221	16 281	33 293	43 225	1 234 508	0.58
1979	321 900 558	5 965 848	1 915 731	173 857	224 711	699 170	8 979 317	2.79
1984	403 135 959	13 603 275	3 544 684	271 055	622 405	1 494 750	19 536 167	4.85
1989	481 864 760	21 820 364	5 178 299	380 497	1 311 153	2 393 231	31 073 544	6.45
1994	573 459 622	30 354 194	7 293 917	519 597	2 319 027	3 406 866	43 893 601	7.65
1999	680 695 634	39 291 175	10 116 055	691 930	3 632 449	4 131 512	57 863 119	8.50

Notes:

(i) There are in addition grants paid on retirement, invalidity or to a survivor where there is no entitlement to a pension. The number of such grants is likely to diminish as the scheme matures.

(ii) The Table does not include any allowance for expenses of administration which also have to be met out of the contribution income (see para. 54).

(iii) The Table is calculated on the basis of increases in the general level of wages, an average increase with age, and cost of living adjustments to pensions, as described in para. 49.

(iv) Total annual insurable earnings includes an allowance of 1 per cent for those insured persons whose age is unknown.

(v) Future awards have been increased by 11 per cent to allow for insured persons whose age is unknown (1 per cent) and for those persons who are not currently contributing but are insured persons by virtue of past contributions (10 per cent).

66. Although the present rate of contribution is adequate for the immediate future, it may be pointed out that an increase to 7 per cent might be considered should the Government desire to avoid too important rate increases later on and to assure a relatively more stable and greater accumulation of funds. Any such increase should be earmarked to the invalidity, old age and survivors' benefits branch.

It may be noted that the additional calculations made under the assumption that the general level of wages would remain constant and that the pension would not be adjusted upwards after award, produced rates of contributions not significantly different from those assuming increases in the general level of wages and in pensions. They also indicate that the financial stability of the Scheme over the next 25 years would not be greatly affected by the increases in future earnings and pensions levels assumed in making the financial projections.

CHAPTER VI.

EMPLOYMENT INJURY BENEFITS

67. The following table shows the expenditure of the employment injury benefits over the three-year period 1971-1973. For the purpose of this analysis, employment injury benefits have been dealt with as a financially autonomous benefits branch.

TABLE 29

Benefits expenditure of the employment injury benefits branch, 1971-1973

Benefits	1971	1972	1973
Injury benefits (temporary)	66 905	75 890	73 290
Medical care	42 822	44 406	50 921
Death benefits (Survivors' pensions and funeral grants)	2 163	10 264	21 289
Disablement benefits (Permanent incapacity pensions and grants)	7 846	14 569	13 823
Travelling expenses	3 683	4 770	5 662
Total expenditure before allocation to reserve for long-term pensions	123 419	149 899	164 985
Allocation to reserve for long-term benefits	26 567	106 216	100 853
Total expenditure including allocation to reserve for long-term pensions	149 986	256 115	265 838

Note: The allocation to reserve for long-term benefits is equal to the difference between the capital values of all long-term benefits (i.e. survivors' pensions and permanent incapacity pensions) outstanding as of the end of the year and the capital values of long-term benefits outstanding as of the end of the preceding year. Reference should be made to Appendix II showing the factors to be used for the computation of such capital values and giving, as an illustration, the computation of the capital values as of the end of 1973.

68. During 1971, 2,210 claims were allowed; during 1972, 2,315 claims were allowed and during 1973, 2,344.

There were 3 fatal accidents in 1971, 6 in 1972 and 2 in 1973.

There were 8 disablement grants in 1971, 10 in 1972 and 18 in 1973 - a disablement grant is paid for permanent incapacity rated at less than 30 per cent. There was 1 disablement pension granted in 1971 but limited to 3 months payments, 1 life pension in 1972 and 2 life pensions in 1973. At the end of 1973 all 3 disablement pensions were still in payment.

At the end of 1971, 5 survivors' pensions were in payment, at the end of 1972, 23 and at the end of 1973, 38.

69. The following statements of income and expenditure of the employment injury benefits branch since its inception at the beginning of 1971 and up to the end of 1973 have been prepared from the accounts for all social security benefits by apportioning an approximate amount of expenses and of investment income to the employment injury fund. The expenses of the employment injury benefits branch were taken as that proportion of the total expenses that the sum of the contribution income and of the benefits expenditure for the employment injury benefits branch bears to the sum of the total contributions income and of the total benefits expenditure for the Scheme as a whole. The investment income of the branch was taken as that proportion of the to[illegible] investment income that the mean fund of the branch during the year bears [illegible] mean fund of the Scheme as a whole.

TABLE 30

Statements of income and expenditure of the employment injury benefits branch, 1971-1973

	1971	1972	1973
INCOME			
	$	$	$
Contributions	1 169 190	1 287 147	1 392 050
Investment income	36 517	100 450	195 685
Total income	1 205 707	1 387 597	1 587 735
EXPENDITURE			
Benefit expenditure	123 419	149 899	164 985
Expenses	15 356	20 910	29 765
Total expenditure*	138 775	170 809	194 750
PROGRESS OF FUND DURING YEAR			
Fund at beginning of year:			
(1) Unallocated	-	1 040 365	2 150 937
(2) Allocated to reserve for long-term pensions	-	26 567	132 783
(3) Total	-	1 066 932	2 283 720
Excess of income over expenditure:			
(1) Unallocated	1 040 365	1 110 572	1 292 132
(2) Allocated to reserve for long-term pensions	26 567	106 216	100 853
(3) Total	1 066 932	1 216 788	1 392 985
Fund at end of year:			
(1) Unallocated	1 040 365	2 150 937	3 443 069
(2) Allocated to reserve for long-term pensions	26 567	132 783	233 636
(3) Total	1 066 932	2 283 720	3 676 705

* Excluding allocation to reserve for long-term pensions.

Experience of the employment injury benefits branch over the period 1971-1973

70. Reference has already been made in paragraph 11 to the reduction in the rate of contribution from 1 per cent to approximately 0.50 per cent of insurable earnings from the beginning of 1974 when the earnings group gradings were changed. This reduction was made by the National Insurance Board after three years of operation of the employment injury benefits branch because the experience was showing a very light rate of claim. It will have the effect of reducing the rate of growth of the employment injury fund.

The analysis set out in the following Table 31 confirms that the experience has been favourable even after allowing for the setting up of reserves to cover the cost of future pensions already awarded. As indicated, on the other hand, in Table 30 the employment injury fund amounted to $3,676,705 at the end of 1973 and the interest on the greater part of this fund is available towards meeting part of the benefits expenditure of the employment injury branch.

TABLE 31

Cost of employment injury benefits expressed as a percentage of average insurable earnings

Benefits	1971	1972	1973
Injury benefits (temporary)	.057	.059	.053
Medical care	.037	.034	.037
Death benefits (Survivors' pensions and funeral grants)	.002	.008	.015
Disablement benefits (Permanent incapacity pensions and grants)	.007	.011	.010
Travelling expenses	.003	.004	.004
Total cost before allocation to reserve for long-term pensions	.106	.116	.119
Allocation to reserve for long-term pensions	.023	.082	.073
Total cost including allocation to reserve for long-term pensions	.129	.198	.192

71. The favourable experience in Barbados regarding the cost of employment injury benefits compared with that of other countries might be explained by the absence of heavy industries and an economy largely based on agriculture and tourism. At the end of 1973, there was an appreciable fund accumulated under this branch amounting to $3,676,705 and it will continue to increase in the next few years despite the effective reduction in the rate of contribution to 0.50 per cent. At the end of 1975, it will have increased to more than $5.5 million.

Some increase must be expected, however, in the cost of medical care and other benefits for some years until a more mature situation is reached.

Even allowing for the immaturity of the branch and the absence of heavy industries, the number of claims appears low compared with the experience of other countries. Some investigation by the administration into the reasons for the low claim rate would be advisable because possibly the insured population may not be fully informed regarding their entitlement to employment injury benefits.

CHAPTER VII.

MISCELLANEOUS OBSERVATIONS

The problem of inflation

72. Inflation at a high level such as at present raises considerable problems in the financing of long-term benefits, i.e. old age, invalidity and survivors' pensions. The effect on the financing of short-term benefits such as sickness, maternity and funeral benefits is, however, much less marked. The reason is that the reserves needed for financing short-term benefits are relatively small. Apart from the provision of a contingency reserve and a working balance, the current contributions are used to meet current outgo on benefits and inflation affects income and outgo equally. In this context, it should be noted that the short-term benefits, which are payable for limited periods and at rates determined on the basis of the earnings immediately preceding the contingency, do not need to be adjusted to changes in the cost of living.

Long-term benefits, however, require the accumulation of considerable reserves if the ultimate charge on current wages is not to become unreasonably high. Present levels of inflation are so high, however, that it is proving impossible in many countries to invest pension funds in such a way as to fully protect the funds from the loss of value in real terms caused by inflation. As a result the cost to a pension fund of paying pensions related to the level of earnings near retirement cannot be fully covered by investment of past contributions based on much lower levels of earnings. The problem is more difficult in private pension funds than in social security because the former need, in general, to be fully funded so that in event of discontinuance of the pension scheme at any time, the accrued liabilities are fully covered. The financial system recommended for the long-term benefits under the Scheme, called the scaled premium system, makes provision for future payment of pensions partly from current contributions and partly from accumulations of past contributions. The system is described in detail in the report on the first actuarial review (ILO/TAP/Barbados/R9, Geneva 1973) of the Barbados Scheme. This system is flexible and is capable of suitable adjustment to deal with the problem of inflation. Large reserves have been built up in the Barbados Scheme, but if inflation continues for any appreciable period at current levels, a larger proportion of the cost of future pensions may have to be found from current contributions than would have been the case if inflation had been at a low level. The higher contribution income resulting from increases in the current level of insurable earnings has a favourable effect on the immediate cash flow position of the Scheme because of a time-lag of some years before the corresponding increase in benefits operates. This time-lag occurs for two reasons: firstly, because existing pensions are unaltered apart from any cost of living adjustments made to them. Such cost of living adjustments in practice tend to follow rather than to keep pace with the increases in cost of living; secondly, because new awards are based partly on the level of earnings over a three-year period generally towards the end of his career and partly on earnings over the period since the insured person completed payment of 500 contributions to the Scheme. The effect of all these factors will be revealed by the periodic actuarial reviews so that appropriate adjustments in the rate of contributions can be made if proved necessary. The time-lag already referred to has the effect of reducing the amount of any increase in current contribution needed to cover any additional cost caused by inflation.

Revalorisation of pensions in course of payment

73. In any pension scheme there is need to maintain the real value of pensions in relation to the cost of the goods and services for which they will be exchanged. This is of crucial importance in times of high inflation because the pensioner may be relying entirely on his pension for his support and may be living close to bare subsistence level. The problem is usually met by suitable adjustments to pensions granted as a result of periodic reviews of the position. The most pressing needs of the lowest paid workers are helped by the introduction of a minimum pension such as that of $15.00 a week introduced in the Scheme. This had the effect of nearly quadrupling the pensions of those in grade I, and increasing by 67 per cent the pensions of those in grade II. Pensions in grades III and above were unchanged by the minimum. A minimum pension is however only a first-aid measure and a suitable system of adjustment of existing pensions should be introduced as soon as possible

as recommended in the first actuarial review.[1] It should be applied to pension awards as calculated before the application of the minimum. If the addition produced a total pension below the minimum, as it might in grades I and II, the minimum would still operate.

74. The system of adjustment should be consistent with the International Labour Conventions concerning standards in social security benefits which have been ratified by the Barbados Government:-

(i) The Social Security (Minimum Standards) Convention, 1952 (Convention No. 102), ratified with respect to the following branches:

Part III	Sickness benefit.
Part V	Old age benefit.
Part VI	Employment injury benefit.
Part IX	Invalidity benefit.
Part X	Survivors' benefit.

(ii) The Employment Injury Benefits Convention, 1964 (Convention No. 121).

(iii) The Invalidity, Old Age and Survivors' Benefits Convention, 1967 (Convention No. 128), ratified with respect to the following branches:

Part II	Invalidity benefit.
Part III	Old age benefit.

It should be noted, however, that Parts V and IX of Convention No. 102 have ceased to apply by virtue of the ratification of Parts II and III of Convention No. 128, and that Part VI has ceased to apply by virtue of the ratification of Convention No. 121.

While Conventions Nos. 102 and 121 require that the rates of current periodical payments shall be reviewed following substantial changes in the general level of earnings where these result from substantial changes in the cost of living, Convention No. 128 provides that the rates of periodical benefits currently payable shall be reviewed following substantial changes in the general level of earnings or substantial changes in the cost of living.

75. The Barbados Government Statistical Service furnishes to the ILO on a continuing basis statistical information on consumer prices and on wages levels for use in preparing international statistics. The following Table 32 shows the evolution, since 1970 when the first pensions under the Scheme became payable, of the general indices of consumer prices and of the average weekly wages of male adult workers in non-agricultural sectors.

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[1] Op. cit., pp. 74-77 and p. 84, para. 14.

TABLE 32

Evolution of consumer prices (general indices) and of average weekly wages in non-agricultural sectors

Year	Consumer prices	Weekly wages
		$
1970	100.0	44.23
1971	107.5	52.14
1972	120.2	55.36[1]
1973	140.5	58.58[2]
1974	195.1	63.31[3]
1975	234.7	Not available

Source: "Bulletin of labour statistics", 1976, 1st quarter, ILO, Geneva.

[1] Data not available; assumed equal to average of 1971 and 1973 figures.

[2] Provisional.

[3] Average of the first three quarters.

In view of the fact that no adjustment has been made in pensions in course of payment since the first pensions under the Scheme became payable in 1970 and in order that compliance with the ILO conventions ratified by the Barbados Government be assured, it is strongly recommended that adjustments in pensions in course of payment be made as soon as possible.

76. Table 33 below illustrates the factors which might be applicable if pensions in course of payment were adjusted, say during 1976, in order that they attain such a level that they are in line either with the increase in the consumer price index since award (with an average time lag of one year) or with the increase in average weekly wages (with an average time lag of two years). These factors are based on the data of Table 32 and are determined in accordance with the method explained in the report relating to the first actuarial review.[1]

TABLE 33

Illustrative adjustment factors for pensions in course of payment

Year of original award of pension	Factor based on evolution of consumer price index	Factor based on evolution of average weekly wages
1970	2.35	1.43
1971	2.18	1.21
1972	1.95	1.14
1973	1.67	1.08
1974	1.20	-

[1] Op.cit. pp. 76-77.

77. Although the two series of Table 33 are not strictly comparable because the 1975 data on average wages were not available, so that the factors based on wages correspond to an average time lag of two years instead of a time lag of one year. In the case of the factors based on the consumer price index, it is apparent that the cost of living in Barbados has risen considerably in recent years and that the level of wages has failed to keep pace with the rise of the cost of living. It may be difficult, under the circumstances, to justify adjustments on pension benefits based upon consumer price indices, resulting in relatively much greater immediate increases than if they were based on indices of evolution of wages which, in any event, may be expected to catch up sooner or later with changes in the cost of living.

In view of this situation, it is not found appropriate to introduce at this stage a permanent formal system of adjustment. As a first step, however, towards compliance with the ILO Conventions ratified by the Barbados Government, it is recommended that ad hoc adjustments based on the wages level indicators be made in 1976 and that at the next actuarial review, the question of whether or not the system of adjustments should be automatic and of the type of indicator on which it should be based should be examined. If in the meantime, however, substantial changes occur in the level of wages, say of the order of ten per cent or more, additional adjustments should be made.

78. At this stage of development of the Barbados Social Security Scheme the immediate effect of the introduction of a system of adjustments would be relatively small. The long-term effect will, however, be appreciable. In the estimates regarding the future financial position of the Scheme the actuary has assumed that there will be regular reviews in order to provide suitable additions to pensions because of wage level and cost of living changes in accordance with the International Labour Conventions.

Life pensions to be granted to widows aged 50 or more at the time of the death of their husbands

79. As the scheme at present operates, widows have to be aged 55 or more at the time of their husbands' death, if they are not then invalid, in order to be entitled to a life pension. The underlying assumption is that widows aged under 55 will find employment and thus qualify for a social security pension at age 65. Unemployment is high in Barbados and there is pressure to find jobs for young people. It is, therefore, not easy for an older widow to find employment especially if, as is often the case, she is not qualified for any particular employment. For a widow between the ages of 50 and 55 it will be almost impossible to be certain of continuous employment up to age 65 in order to secure the minimum qualification for an age pension of 500 contributions. For this reason it is desirable for the qualifying age for a widow's life pension to be reduced from 55 to 50 years. Old age and invalidity pensions represent most of the cost of long-term benefits under the Scheme and the financial effect of this improvement on the cost of the Scheme as a whole would be relatively small. It would not necessitate any immediate adjustment of the present rate of contribution. Subsequent actuarial reviews would afford an opportunity to assess the effect it has had on the cost of the Scheme.

Possible increase in the insurable wages ceiling

80. The authorities are, at the time of writing this report, considering a change in the system of collection of contributions. Until now the stamp method has been in operation. If it is decided to go ahead with the change to a direct system of collection, the switch will offer a suitable opportunity to appreciably raise the wages ceilings. This is recommended for two reasons:

(i) to take account of cost of living changes since the introduction of the Scheme, and;

(ii) to ensure that higher paid workers secure benefits for themselves as well as for their dependents and pay contributions more commensurate with their level of earnings.

An increase to a ceiling such an $1000 a month with a weekly equivalent of $230 a week would be reasonable.

81. The employees who progress throughout their working careers to a maximum near retirement, i.e., in general the higher paid employees, secure better old age, survivor and invalidity benefits in relation to the contributions they have paid, than the majority of workers. This is because, in general, higher paid workers receive benefits based on their earnings near retirement whereas their contributions have been paid on average on lower levels of earnings. On the other hand the majority of workers reach peak earning capacity in mid career or late mid career and their contributions are paid on higher earnings in relation to their earnings for benefit purposes than those progressing steadily to maximum earnings at retirement.

Whilst it is appreciated that the present test for identifying "average insurable earnings" (i.e.... the sum of the insurable earnings on which contributions were based during the best three consecutive contribution years of the last fifteen contribution years of the insured person ... divided by three) was introduced specifically in an attempt to overcome at least some of the objectives referred to above, there is still a bias in favour of higher paid employees. It is suggested that a correction of this bias could be achieved by some modification in the method of calculating pension benefits so as to favour the lower paid employees. The introduction of the minimum pension of $15 a week should be regarded only as a first step towards the introduction of a suitable modification to redress the imbalance of the Scheme. An example of a possible modification would be the use of a higher percentage than 1 per cent for calculating the pension earned, after completing 500 contributions, in respect of the first $4000, say, of annual earnings and a lower percentage for earnings over this level. An alternative approach would be to charge a higher rate of contribution on higher levels of earnings.

Optional early retirement between the ages of 60 and 65 with reduced pension benefits

82. The question of optional early retirement between the ages of 60 and 65 with pension benefits reduced to give equivalence in value to the normal pension at age 65 was examined by the National Insurance Board. It had already been examined at the time of the first actuarial review and no decision had been taken. A further consideration was the need to secure consistency with similar modification of other Caribbean Social Security Schemes so as not to create any difficulties over the ...duction in due course of reciprocity arrangements. It was agreed that self-...oyed could not be included in any Scheme for voluntary early retirement. ...matter was still under consideration at the time of completion of this report.

Internal audit

83. The balance in the Fund is growing at the rate of about $15 million a ...and at the end of 1975 the Fund will amount to more than $75 millions. This ...resents a very considerable sum of money and there must be suitable provision ...make quite sure that there are no losses. The question of considerably strength...ing the status, responsibility and quality of the Internal Audit service of the ...tional Insurance Scheme is a subject of particular importance and is dealt with ... the Administrative Review Report. No more need be written here on the matter, ...t to emphasise the urgency of establishing a competent section given clearly ...ed duties and reporting at a suitably senior level.

CHAPTER VIII.

CONCLUSIONS AND RECOMMENDATIONS

Financial position of the Scheme and recommended rate of contribution

84. The Scheme is in a sound financial position. The Fund amounted to about $47 million at the end of 1973, the date to which the actuarial review relates and will have increased to about $75 million by the end of 1975. It is growing at a present rate of about $15 million a year. Increases in earnings levels in recent years have been greater than expected but the investigation shows that the present rate of contribution of 6 per cent of insurable earnings for the long-term and the short-term benefits branches will ensure the continued growth of the Fund until towards the end of 1988.

The contribution of 6 per cent of insurable earnings for the long-term and short-term benefits branches includes an allowance of 0.50 per cent for expenses of administration and 1 per cent in respect of sickness, maternity and funeral benefits, the balance of 4.50 per cent being assigned to the financing of the long-term benefits.

Further calculations made assuming a constant future level of earnings and no adjustment of pensions after award indicate that the financial stability of the Scheme over the next 25 years would not be greatly affected by the increases in future earnings and pensions levels assumed in making the financial projections.

Investment policy

85. In view of the continued growth of the Fund as far as the foreseeable future is concerned, the investments should be as long-term as possible especially at the present time when interest rates are high. This policy is essential if the Fund is to secure the best yield from its assets. Current exchange uncertainties make it advisable for investments to be restricted to those expressed in Barbados dollars, the currency in which liabilities are expressed. The investments of the Fund should also contribute to the economic development of the country.

Statistical information

86. It is recommended that the system of preparation of statistics on a continuing basis, referred to in paragraph 55 of this report, be fully implemented as soon as possible.

Adjustments of pensions in course of payment

87. As a first step towards compliance with the ILO Conventions ratified by the Barbados Government, it is recommended (see paragraph 77) that ad hoc revalorisations of pensions based on the wages level indicators be made in 1976 and that at the next actuarial review, the system of adjustment and its basis should be examined. If in the meantime, substantial changes occur in the level of wages, say of the order of 10 per cent or more, additional adjustments should be made.

Life pensions to be granted to widows aged 50 or more at the time of their husband's death

88. It is recommended to reduce the present age limit of 55 to 50 in order that widows can secure a retirement pension in due course either through their own or their husband's insurance. The financial effect of this improvement on the Scheme as a whole would be relatively small and would not require any immediate adjustment of the contribution rate.

Possible increase in the insurable wages ceiling

89. If a change in the system of collection of contributions is adopted, a suitable opportunity will be afforded to raise the wages ceiling. This is recommended for two reasons:

(i) to take account of cost of living changes since the introduction of the Scheme, and
(ii) to ensure that higher paid workers secure benefits for themselves and their dependants and pay contributions more commensurate with their level of earnings.

An increase to a ceiling such as $1,000 a month ($230 a week) would appear reasonable.

Refunds to Government in respect of sickness benefit not payable to public servants

90. In view of the reduction in cost of sickness benefits as a result of the favourable experience the refund to the Government for civil servants, who are not entitled to such benefits under the Scheme, should be reduced from 1 per cent of insurable earnings to 0.70 per cent.

Employment injury benefits

91. The number of claims has been very low and the branch is in a strong financial position despite a reduction in the rate of contribution from 1 per cent of insurable earnings to practically 0.50 per cent from the beginning of 1974. The employment injury fund at the end of 1973 amounted to $3,676,705, and will have attained more than $5.5 million by the end of 1975. Over the years 1973, 1974 and 1975 the investment income in broad terms covers the outgo on benefits and expenses.

Some increase must be expected, however, in the cost of benefits for some years until a more mature situation is reached. As stated in paragraph 71, the experience is exceptionally low and the Administration should investigate on the possibility that the insured population be not fully informed regarding their entitlement to employment injury benefits.

Financial autonomy of the branches

92. It is recommended that separate funding and accounting be adopted as soon as possible for the three branches of the Scheme, that is the long-term benefits branch (old age, invalidity and survivors' benefits), the short-term benefits branch (sickness, maternity and funeral benefits) and the employment injury benefits branch for which separate accounts have been prepared by the expert for the first three years of operation of the branch, namely 1971, 1972 and 1973. It is essential for the next actuarial review that separate accounts also be prepared for subsequent years.

Systems of financing

93. It is recommended that the appropriate systems of financing for each of the three branches be formally adopted as soon as possible as follows:

(a) for the long-term benefits branch, the "scaled premiums system";
(b) for the short-term benefits branch, the "assessment system";
(c) for the employment injury branch, the "system of assessment of constituent capitals" in the case of long-term benefits (permanent incapacity and survivors' pensions), and the "assessment system" for the short-term benefits.

APPENDIX I

Comparison of actual and expected deaths according to Barbados Life Tables 1959-61

Age group	1971			1972			1973		
	Insured population	Actual deaths	Expected deaths	Insured population	Actual deaths	Expected deaths	Insured population	Actual deaths	Expected deaths
MALES									
60 - 64	3 141	27	65.7	3 334	42	69.8	3 367	36	70.5
55 - 59	3 818	25	46.5	4 130	27	50.3	4 189	36	51.1
50 - 54	4 245	17	36.3	4 252	19	36.3	4 384	27	37.5
45 - 49	4 128	12	27.3	4 443	14	29.4	4 517	17	29.9
40 - 44	4 740	12	19.8	4 790	14	20.0	5 057	11	21.1
35 - 39	4 709	12	11.0	5 251	8	12.3	5 520	10	12.9
30 - 34	6 055	8	10.7	6 324	1	11.1	6 650	1	11.7
25 - 29	8 359	3	11.4	9 659	5	13.1	10 870	7	14.8
20 - 24	12 523	14	15.0	13 133	6	15.8	13 459	6	16.2
16 - 19	5 202	6	5.2	7 123	3	7.1	6 722	3	6.7
Totals	56 920	136	248.9	62 439	139	262.2	64 735	154	272.4
FEMALES									
60 - 64	1 695	9	17.1	1 836	10	18.5	1 971	11	19.9
55 - 59	2 370	7	11.8	2 688	9	13.4	2 774	7	13.8
50 - 54	2 885	4	12.3	2 960	8	12.6	3 131	9	13.3
45 - 49	3 130	3	10.7	3 465	2	11.8	3 621	7	12.5
40 - 44	3 813	5	6.4	3 877	5	6.5	4 198	3	7.0
35 - 39	3 896	5	5.8	4 316	5	6.5	4 521	5	6.8
30 - 34	4 581	2	6.2	4 843	1	6.5	5 187	7	7.0
25 - 29	5 921	1	7.4	6 905	6	8.6	7 906	4	9.9
20 - 24	9 191	-	8.7	9 986	2	9.5	10 634	2	10.1
16 - 19	5 063	-	3.4	5 252	2	3.6	5 060	1	3.4
Totals	42 545	36	89.8	46 128	50	97.5	49 003	56	103.5
MALES AND FEMALES									
Totals	99 465	172	338.7	108 567	189	359.7	113 738	210	375.9

APPENDIX II

THE COMPUTATION OF CAPITAL VALUES OF LONG-TERM PENSIONS IN THE EMPLOYMENT INJURY BENEFITS BRANCH

Under the system of financing generally adopted for the long-term benefits of the employment injury benefits branch, that is the "system of assessment of constituent capitals", it is required that the capital value of future payments of all long-term pensions awarded during a financial year be charged to the operations of that year, in order that these operations reflect the total liability incurred in the branch throughout the year.

It may be difficult at this time to apply the usual method of computing the total reserves necessary to cover the cost of future pensions already awarded at the end of any year. Such method should be reviewed at the next actuarial review together with the drafting of appropriate corresponding financial regulations. A simple practical method of providing for the correct allocation each year, and which can be applied when the number of pensioners is low, consists in calculating the capital value at the end of the year of future payments in respect of all long-term pensions already awarded and to increase the reserve carried at the end of the preceding year to this amount.

Tables III-1, III-2 and III-3 show the factors which may be used, until they are modified at the next actuarial review, for ascertaining the capital values, as of the end of the year, of the disablement, widows' and orphans' pensions, respectively.

As an example, the detailed computation of the capital values of the long-term benefits outstanding at the end of 31 December 1973 is given below.

(1) Capital values of disablement pensions

(a) Males:

Number of cases	Year of birth	Calendar age[1]	Weekly pension	Factor	Capital value
1	1914	59	$28.27	505	$14 276

(b) Females:

Number of cases	Year of birth	Calendar age[1]	Weekly pension	Factor	Capital value
2	1934	39	$20.27	861	$17 452

(2) Capital values of widows' (or widowers') pensions

(a) Males: Nil

(b) Females:

Number of cases	Year of birth	Calendar age[1]	Weekly pension	Factor	Capital value
1	1911	62	$18.75	591	$11 081
1	1924	49	17.31	778	13 467
1	1925	48	14.06	790	11 107
1	1927	46	16.60	814	13 512
1	1928	45	18.75	826	15 488
1	1931	42	18.75	861	16 144
1	1932	41	7.71	872	6 723
1	1933	40	17.31	883	15 285
2	1935	38	36.40	903	32 869
1	1938	35	18.75	932	17 475
1	1949	24	18.75	1 014	19 013
12			$203.14		$172 164

[1] The "calendar age" is equal to the difference between the financial year and the year of birth.

(3) Capital values of orphans' (or dependent children's) pensions

Number of cases	Year of birth	Calendar[1] age	Weekly pension $	Factor	Capital value $
1	1970	3	6.25	502	3 138
1	1969	4	6.25	471	2 944
1	1968	5	5.88	439	2 581
1	1967	6	5.88	405	2 381
1	1964	9	5.63	295	1 660
3	1963	10	17.40	255	4 437
3	1962	11	17.65	213	3 759
4	1961	12	22.19	169	3 750
4	1960	13	23.35	124	2 895
4	1959	14	22.94	76	1 743
3	1958	15	17.52	26	456
26			150.94		29 744

(4) Total reserve for long-term pensions on 31.12.73

	$
Disablement pensions - males:	14 276
Disablement pensions - females:	17 452
Widows' pensions:	172 164
Orphans' pensions:	29 744
Total reserve:	233 636

As for the reserve as of 31 December 1972, it was estimated to be equal to $132,783, so that the amount to be charged on the operations of 1973 was estimated to be equal to $100,853 ($233,636 - $132,783 = $100,853) as indicated in Table 29, under 1973, for the item "Allocation to reserve for long-term pensions" and in Table 30, also under 1973, for the item "Excess of income over expenditure: (2) Allocated to reserve for long-term pensions".

[1] The calendar age is equal to the difference between the financial year and the year of birth.

TABLE III - 1

Factors for ascertaining the capital values, as of the end of the year, of the disablement (permanent incapacity) pensions

Age attained during year	Factor by which the weekly rate of benefit is to be multiplied		Age attained during year	Factor by which the weekly rate of benefit is to be multiplied	
	Males	Females		Males	Females
Under 15	1 035	1 054	45	730	790
15	1 029	1 048	46	716	778
16	1 023	1 043	47	702	766
17	1 017	1 037	48	687	754
18	1 011	1 032	49	671	741
19	1 004	1 026	50	655	728
20	997	1 020	51	639	714
21	990	1 014	52	622	700
22	982	1 008	53	606	686
23	974	1 001	54	588	671
24	966	995	55	571	656
25	958	988	56	554	640
26	950	981	57	538	624
27	941	973	58	521	608
28	932	965	59	505	591
29	922	957	60	489	574
30	912	949	61	473	556
31	902	941	62	457	538
32	892	932	63	441	520
33	881	923	64	425	502
34	869	913	65	409	483
35	857	903	66	393	465
36	845	893	67	378	447
37	833	883	68	363	429
38	821	872	69	348	412
39	809	861	70	332	395
40	796	849	71	316	377
41	784	837	72	300	360
42	771	826	73	284	342
43	757	814	74	267	325
44	744	802	75	250	308

Basis - Barbados 1959-61 census - interest 4 1/2% - rated up 3 years.

TABLE III - 2

Factors for ascertaining the capital values, as of the end of the year, of the widows' (or widowers') pensions

Age attained during year	Factor by which the weekly rate of benefit is to be multiplied		Age attained during year	Factor by which the weekly rate of benefit is to be multiplied	
	Males	Females		Males	Females
Under 15	1 051	1 067	57	588	671
15	1 046	1 063	58	571	656
16	1 040	1 059	59	554	640
17	1 035	1 054	60	538	624
18	1 029	1 048	61	521	608
19	1 023	1 043	62	505	591
20	1 017	1 037	63	489	574
21	1 011	1 032	64	473	556
22	1 004	1 026	65	457	538
23	997	1 020	66	441	520
24	990	1 014	67	425	502
25	982	1 008	68	409	483
26	974	1 001	69	393	465
27	966	995	70	378	447
28	958	988	71	363	429
29	950	981	72	348	412
30	941	973	73	332	395
31	932	965	74	316	377
32	922	957	75	300	360
33	912	949	76	284	342
34	902	941	77	267	325
35	892	932	78	250	308
36	881	923	79	235	291
37	869	913	80	221	275
38	857	903	81	208	259
39	845	893	82	197	244
40	833	883	83	186	230
41	821	872	84	177	217
42	809	861	85	168	204
43	796	849	86	159	192
44	784	837	87	150	180
45	771	826	88	142	169
46	757	814	89	134	159
47	744	802	90	127	149
48	730	790	91	120	140
49	716	778	92	113	132
50	702	766	93	106	123
51	687	754	94	100	116
52	671	741	95	95	109
53	655	728	96	90	102
54	639	714	97	85	96
55	622	700	98	80	89
56	606	686	99 and over	75	83

TABLE III - 3

Factors for ascertaining the capital values, as of the end of the year, of the orphans' (or dependent children's) pensions

Age attained during year	Factor by which the weekly rate of benefit is to be multiplied
0	586
1	559
2	531
3	502
4	471
5	439
6	405
7	370
8	333
9	295
10	255
11	213
12	169
13	124
14	76
15	26

Note: For invalid orphans, the factors of Table III - 2 should be used.

APPENDIX III

STATISTICAL DATA TO BE MAINTAINED ON THE SCHEME

List of returns to be completed on a continuing basis for the purpose of the triennial actuarial reviews together with drafts of the suggested forms.[1]

FORM I

Persons insured under the Scheme, by virtue of current or past contributions, at end of year.

FORM II

Employed persons by income level as of last week in November or last week employed if not working in November.

FORM III

Membership movement in calendar year.

FORM IV

Sickness benefit claims.

FORM V

Sickness claims divided according to length of sickness.

FORM VI

Maternity allowance claims.

FORM VII

Funeral grants

FORMS VIII, IX and X

Survivors' benefits resulting from deaths of female insured persons, old-age pensioners, invalidity pensioners.

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[1] The forms pertaining to the employment injury benefits branch shall be reviewed at the next actuarial review. It should be noted, however, that many of the forms presented herein are also directly applicable to this branch. As for those relating specifically to employment injury benefits, reference should be made to Part B of the paper "Scheme of statistical tables for the practical application of a minimum programme of social security statistics", published in the International Review of Actuarial and Statistical Problems of Social Security, ISSA, Geneva, No. 8, 1972, and which is available as an offprint.

FORMS XI, XII and XIII

Survivors' benefits resulting from deaths of male insured persons, old-age pensioners, invalidity pensioners.

FORMS XIV and XV

Old-age pensions and invalidity pensions.

FORMS XVI and XVII

Widows' pensions, widow aged 55 or over at death of husband, and widow aged under 55 at death of husband.

FORM XVIII

Children's pensions.

FORM I

Persons insured under the Scheme, by virtue of current or past contributions, at end of year

CALENDAR YEAR			MALES FEMALES					EMPLOYED SELF-EMPLOYED CIVIL SERVICE	
Year of birth	Insured Persons	Persons with at least 1 contribution in year	Number of persons according to number of weekly contributions in calendar year				Total number of contributions paid in year	Total number of contributions paid at any time up to the end of year	
			1-13	14-26	27-39	40 and over		Those with contributions in calendar year	Those with no contributions in calendar year
Totals									

Note: Six returns required for each calendar year: employed, self-employed, civil servants, separately for each sex.

FORM II

Employed persons by income level as of last week in November or last week employed if not working in November

<table>
<tr><td colspan="2">CALENDAR YEAR ....</td><td colspan="4">MALES
FEMALES</td><td colspan="2">EMPLOYED
SELF-EMPLOYED
CIVIL SERVICE</td></tr>
<tr><td rowspan="2">Year of birth</td><td colspan="6">Numbers in grade</td><td rowspan="2">Total numbers</td></tr>
<tr><td>I</td><td>II</td><td>III</td><td>IV</td><td>V</td><td>VI</td></tr>
<tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>Totals</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td colspan="8">Note: Six returns required for each calendar year: employed, self-employed, civil servants, for each sex separately.</td></tr>
</table>

FORM III

Membership movement in calendar year ....

CALENDAR YEAR .... | MALES / FEMALES | EMPLOYED / SELF-EMPLOYED / CIVIL SERVICE

Year of birth	Total number insured at beginning of calendar year	Exits during year									New entrants during year	Total number insured at end of calendar year
		Deaths		Retirement						Other exits		
		Not employment injury	Employment injury	Pension at 65	Invalidity pension	Grant at 65	Invalidity grant	Pension, employment injury	No grant or pension			
Totals												

Note: Six returns required for each calendar year: employed, self-employed, civil servants, separately for each sex.

FORM IV

<u>Sickness benefit claims</u>

CALENDAR YEAR				EMPLOYED SELF-EMPLOYED		
	Males			Females		
Year of birth	Number of claims paid	Number of benefit days paid	Total amount of benefit paid	Number of claims paid	Number of benefit days paid	Total amount of benefit paid
			$			$
Totals						
Note: Two returns required for each calendar year.						

FORM V

Sickness claims divided according to length of sickness

CALENDAR YEAR				
Number of benefit days	Males employed	Females employed	Males self-employed	Females self-employed
	No. of claims paid	No. of claims paid	No. of claims paid	No. of claims paid
Less than 8				
8 - 14				
15 - 28				
29 - 49				
50 and over				
Totals				

Note: One return required for each calendar year

FORM VI

Maternity allowance claims

CALENDAR YEAR ....

Year of birth	Employed persons			Self-employed persons		
	No. of claims paid	No. of days benefit paid	Total amount of benefit paid	No. of claims paid	No. of days benefit paid	Total amount of benefit paid
			$			$
Totals						

Note: One return required for each calendar year.

FORM VII

Funeral grants

CALENDAR YEAR				
Year of birth of insured person	Males insured employed and self-employed no. of grants paid		Females insured employed and self-employed no. of grants paid	
	Deceased insured	Deceased spouse	Deceased insured	Deceased spouse
TOTALS				
Note: One return required for each calendar year.				

FORM VIII, IX, X

Survivor's benefits resulting from deaths of:

male insured persons (Form VIII)
male old age pensioners (Form IX)
male invalidity pensioners (Form X)

CALENDAR YEAR							
Year of birth of insured person or pensioner	No. of deaths		Pensions			Average age of wife	Average number of children for those with entitled survivors
	Without entitled survivors	With entitled survivors (wife or children)	No. to widows under age 55	No. to widows 55 and over	No. of entitled children		
Totals							

Note: For each form, one return required for each calendar year.

FORM XI, XII, XIII

Survivors' benefits resulting from deaths of:

female insured persons (Form XI)
female old age pensioners (Form XII)
female invalidity pensioners (Form XIII)

CALENDAR YEAR					
Year of birth of insured person or pensioner	No. of deaths		No. of pensions		Average number of children for those with entitled survivors (v)/(iii)
	Without entitled survivors (ii)	With entitled survivors (iii)	Widowers (iv)	Children (v)	
Totals					

Note: For each form, one return required for each calendar year.

FORM XIV, XV.

Old age pensions (Form XIV)

Invalidity pensions (Form XV)

CALENDAR YEAR .... MALES / FEMALES

Year of birth	Pensions in payment at beginning of year		Pensions terminated during year						Pensions awarded during year		Pensions in payment at end of year	
			Deaths		Other causes		Attd. age 65 (invalidity cases)					
	Nos.	Amounts	Nos.	Amounts	Nos.	Amounts	Nos.	Amounts	Nos.	Amounts	Nos.	Amounts
		$		$		$		$		$		$
Totals												

Notes: (i) cost of living additions included;
(ii) amounts are annual amounts;
(iii) for each form, two returns required for each calendar year - males, females.

FORM XVI, XVII.

Widows' pensions, widow aged 55 or over at death of husband (Form XVI)

Widows' pensions, widows aged under 55 at death of husband (Form XVII)

CALENDAR YEAR ....

Year of birth of widow	Pensions in payment at beginning of year		Pensions terminated during year						Pensions awarded during year		Pensions in payment at end of year	
			Deaths		Remarriage		Other causes					
	Nos.	Amounts	Nos.	Amounts	Nos.	Amounts	Nos.	Amounts	Nos.	Amounts	Nos.	Amounts
		$		$		$		$		$		$
Totals												

Notes: (i) "other causes" includes completion of one year's payments for widows under age 55;
(ii) cost of living additions to be included;
(iii) amounts are annual amounts;
(iv) individual returns for any widowers' pensions;
(v) for each form, one return required for each calendar year.

FORM XVIII

Children's pensions

CALENDAR YEAR		
Age at last birthday	Pensions in payment at end of year	
	Numbers	Amount
		$
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
16 or over		

Notes: (i) Amounts are annual amounts
(ii) 16 and over relates to disabled children
(iii) One return required for each calendar year

ANNEX 11

Training for Foremanship

Interpretation

A foreman is generally promoted from the ranks of the skilled workers. His authority rests in his personality and his superior skill/knowledge. He may sometimes be in charge of a small project, one technical section of a project, or smaller activities on a project. His duties will generally include :

a) site organisation and discipline,

b) quality control,

c) production control,

and occasionally :

d) site administration,

e) ordering/controlling materials and equipment.

The type of foreman we have in mind is one of several working under the control of an engineer. Training will not therefore include d) and e) which are covered in the Engineers course on project implementation. Similarly, b) Quality control, apart from generalities, will not form part of the training, since specialisation is involved and most countries have procedures for this. Similarly, c) Production control, is already dealt with under "Production control technician" which can equally well be used by foremen.

The training proposed will therefore concentrate on site organisation and discipline in the context of labour-intensive construction. As in the case of production control technicians, it will take the form of a manual, to be justified, presented and explained at the course for engineers on project implementation. The engineers will subsequently use it for developing their own forem hemselves.

The following is therefore the outline of the contents of the manual on foremanship.

Content of the Manual for Foremanship (Works Supervisors)

1. Duties : organisation and discipline ; quality control ; production control.
2. Factors affecting productivity of work force : climatic, human, physical, moral, organisation and supervision.
3. Health, safety and welfare (refer to Health and Safety Technicians manual).
4. Human relations, grievances and dispute.
5. Motivation and discipline : ethnic variations, general considerations.
6. Timekeeping, absenteeism, engagement and dismissal.
7. Wages.
8. Allocation of tasks, delegation and control.
9. Quality control (general considerations).
10. Production control (refer to P.C. manual).
11. Personal attributes desirable for good foremanship.

Where appropriate, the text will be illustrated by case studies, standard formats, etc ...

ANNEX V

REPORT OF THE SUB-COMMITTEE ON TRAINING COURSES

1. The sub-committee has considered the tentative training courses proposed in the Secretariat's paper and the views expressed thereon by the various participants in the general meeting. It reiterated the need for training of programme staff including those concerned with planning and administration at different levels. However, since the training envisaged under the UNDP/ILO Interregional Project would cover only those concerned with planning, administering and managing programmes at the national and regional levels, the national Governments might like to organise training courses for middle and lower level personnel in which ILO, UNDP and other interested agencies may participate by providing technical and financial inputs.

2. With regard to the resources available under the present project and the limitation it inevitably entails on the number of trainees, the Committee recommends that three Courses may be organised as under:

Course I: Manpower Assessment, National and Regional Physical Infrastructural Planning, Project and Programme Evaluation including cost-benefit analysis, monitoring and concurrent evaluation. This course would be meant for planners, administrators and economists. The duration of this course may be 4 weeks. The number of trainees should be 30, some special consideration being given to those countries which intended to launch a programme of this nature for the first time or did not have much past experience in this area.

Course II: Organisation, Institution building, financing and education and training. This course should be for planners, administrators and economists. The duration of this course may be four weeks. The number of trainees may be 30, special consideration in respect of number of trainees being given to those countries which intended to launch a programme of this nature for the first time and which have so far had not much past experience.

Course III : Project design, implementation and evaluation. This should be meant for engineers, economists and for other specialists engaged in areas like forestry, pasture development, soil and water management, drainage and irrigation, etc. The duration of this course may be four weeks. The number of participants may be 30, special consideration in respect of number of trainees being given to those countries which intended to launch a programme of this nature for the first time or which have so far had not much past experience.

3. All three training courses should include institutional training as well as field studies and observations.

4. Detailed syllabi should be drawn up after taking into account the common problems and regional characteristics of participating countries.

5. In view of the interregional nature of the Project and the specific allocation of resources for holding training at the interregional level, it would be necessary to locate the venue for the training courses at suitable institutions having physical and infrastructural facilities and access to projects and field programmes in operation. In this context, the Committee noted that during the general discussions, the Governments of India and Bangladesh were willing to offer their institutions and infrastructural facilities for conducting some of these training courses.