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REPORT

OF THE

INTER-DEPARTMENTAL STUDY COMMITTEE

ON

THE QUEBEC PENSION PLAN

VOLUME 1

APRIL 1964

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APRIL 1964

ASSEMBLÉE NATIONALE
DU QUÉBEC

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Inter-Departmental Study Committee on THE QUEBEC PENSION PLAN

MEMBERS

Wheeler DUPONT, Q.C., Chairman,
Department of Labour.

Gérald ALAIN, Statistician,
Department of Industry and Commerce.

Edouard LAURENT, Legal Adviser,
Department of Finance.

André MARIER, Economist,
Department of Natural Resources.

CONSULTANT ACTUARIES

Claude CASTONGUAY, F.S.A., Pierre LEMAY, L.S.C., F.S.A.,

Carmin GRAVELINE, L.S.C., F.S.A.

Thaddée POZNANSKI, Actuary, Doctor of Science.

SECRETARY

Charles MIVILLE-DESCHENES,
Department of Labour.

The Honourable Jean Lesage, P.C., Q.C.,
Prime Minister,
Government House,
Quebec, P.Q.

Mr. Prime Minister:

We have the honour to submit our report regarding the Quebec Pension Plan.

In accordance with your request, our Inter-Departmental Committee was organized at the very beginning of 1963 to study a pension plan especially designed for Quebec, the question of the preservation of workers'rights, the transfer of their pension credits, and, finally, to submit its recommendations on the matter.

We beg you to accept this report most respectfully submitted.

Chairman

Member

Member

Member

Consultant Actuary

Consultant Actuary

Consultant Actuary

Consultant Actuary

Secretary

QUEBEC, april 1964.

FORENORD

A - THE UNIVERSAL RETIREMENT PLAN

In the Province of Quebec, the idea of establishing a universal retirement plan for the collectivity of workers is nothing new. For some twenty years at least, labour unions in Quebec, a few economic and social study groups and some of our sociologists have studied one or more aspects of the possible realization of such an idea.

Since 1958, however, this idea has effectively interested politicians and has come definitely into the open. Since 1960, it has become the concern of the Government. More precisely, in September of the same year the Department of Labour opened a file on this subject which arouses public opinion today. The Hon. René Hamel, then in charge of this Department, asked Mr. François Bregha to begin the first studies in this respect. Mr. Bregha left the Department, and a few months later in November 1961 the Minister requested us to start preliminary work and to collect general information regarding the establishment of a provincial general plan. As early as 1962, we were commissioned by the Prime Minister to follow closely the work being done by the Ontario Committee on Portable Pensions, to scrutinize its reports, to attend public hearings of the Ontario Committee and to report on the subject, verbally or in writing, to the Prime Minister and to the Minister of Labour.

During the same period, the Department of Industry and Commerce requested Messrs. Emile Landry, economist, and Doria Tremblay, C. A., to prepare a preliminary report on certain effects which the Ontario bill, then called Bill 165, might have in the field of taxation.

On the basis of frequent verbal reports on the work and studies being carried out and after several interviews with the Prime Minister and the Minister of Labour, the Prime Minister commissioned the undersigned, in the fall of 1962, to create an Inter-Departmental Study Committee on Retirement Funds.

After proper investigation and consultation, the Committee was formed of Wheeler Dupont, Q.C., formerly Assistant Superintendent of the Insurance Department and of Messrs. Gérald Alain, statistician, Emilien Landry, economist, both from the Department of Industry and Commerce (Mr. Landry, for lack of time, withdrew from the Committee in July 1963, much to the regret of his colleagues), Edouard Laurent, legal adviser in the Department of Finance, André Marier, economist, Supervisor of Economic Studies for the General Planning Section of the Department of Natural Resources.

The Committee has retained, as consultant actuaries, the services of Messrs. Thaddée Poznanski and the members of the firm Castonguay, Lemay, Graveline and Associates, namely: Claude Castonguay, F.S.A., Pierre Lemay, L.S.C., F.S.A., Carmin Graveline, L.S.C., F.S.A. This professional firm is specialized in the field of employee benefit programs.

The members of the Committee wish to express their deepest gratitude to these actuarial specialists . Without their professional co-operation, this report would have been inconceivable. These consultant actuaries were effectively assisted by Messrs. Julien Lessard and Michel Bélanger, statisticians of the Department of Industry and Commerce.

On behalf of the Committee, I wish to express my thanks to the Minister of Labour, Hon. Carrier Fortin, Q.C., for the constant interest he has shown in our work and the friendliness expressed in his dealings with us. His unremitting diligence in giving us all usefull information and in complying with our requests has greatly eased our task.

B - THE MANDATE OF THE COMMITTEE

In its initial stage, the mandate of the Committee was very wide, almost unlimited. It is good that it was so. For the beginning was the period of initiation to this vast problem and a clearing of the way. It was a very arduous period. The Committee had to find out and study what was being done elsewhere and the strengths and weaknesses of existing plans. Briefly, the invaluable experience of others had to be collected.

This mandate, at the request of the Committee submitted to the Prime Minister, was then made more explicit in July 1963, by directives from the Executive Council and, in August 1963, by a unanimous resolution of the Legislative Assembly. These directives determined the purpose of the Committee's study, that is to say, the establishment of "a public and universal retirement plan on the basis of actuarial calculations and of contributions."

C - THE PROCEEDINGS OF THE COMMITTEE

Obviously, the task entrusted to the Committee called for a great degree of constant vigilance and attentive prudence. All recommendations of the Committee were unanimous although they were at the beginning the subject of free discussion between the members and the consultant actuaries.

The proceedings were complicated because the sources of information were numerous and widely scattered over the most varied legal, social, economic and territorial fields; because public experience in this branch of social security was in full development; since Federal and Provincial statistical information which was not only useful but sometimes necessary, was limited, incomplete, and sometimes non-existent. In the performance of its task, the Committee held 154 plenary meetings and more than 50 sub-Committee meetings; each member of the Committee and each consultant actuary has had to accomplish personal tasks, prepare memoranda, and carry out research in his own particular field of work.

The very valuable and spontaneous co-operation given by several Departments and Government Commissions must be emphasized because it was especially generous and is deeply appreciated. We express our thanks to the Prime Minister and his colleagues of the Departments of Family and Social Welfare, Industry and Commerce, Labour, and the Presidents of the Workmen's Compensation Commission and of the Minimum Wage Commission, Judges Joseph Marineau and Alexandre Bastien respectively. Many thanks also to La Mutuelle des Employés Civils whose General Manager, Mr. Edgar Morin, has been kind enough to let us have the use of the Board of Directors' room of this society for our Committee meetings.

In addition, we have consulted individually Messrs. Jean-Baptiste Bergevin, Assistant Deputy Minister in the Department of Industry and Commerce, J. André Dolbec, C.A., Comptroller of the Treasury; Gérard Grondin, C.G.A., Supervisor of the Accounting Department in the Treasury, Raymond Lemay and Benoit Rondeau, the former a programmer and the latter an analyst in the Treasury; J.R. Forest, Assistant Deputy Minister in the Department of Family and Social Welfare and Jean-Paul Labelle, of the same Department; Yves de Jocas, Raymond Gagné and Gilles Martin, all Division Supervisors in the Department of Industry and Commerce; Gilles Miron and Gérard Ouellet, respectively technical advisor and Supervisor of Information in the Department of Labour.

The Committee wishes to express its deepest gratitude to its Secretary, M. Charles Miville-Deschenes, to the Assistant Secretary, Miss Madeleine Turcotte, to Mrs. Hélène Dumont and to Misses Olivette Gagnon and Liliane Marier.

During the long months of our investigation, we made a profitable study of the memoranda of la Confédération des Syndicats Nationaux and La Fédération des Travailleurs du Québec, and of the statements made by the Canadian Manufacturers Association, the Professional Association of Industrialists, l'Association des Propriétaires de Mines du Québec, the International Railroad Unions, (Quebec local) and the Canadian Life Insurance Officers Association, etc.

D - SUBMISSION OF THE REPORT

The Committee is proud to emphasize the spirit in which the problem of the Quebec Pension Plan has been studied and the report written. The spirit was completly objective and perfectly open to the analysis of the advantages and disadvantages of such and such plan, or such and such option. There was no intervention or coercion; the spirit of work of a free man prevailed.

Three factors have delayed the submission of this report. These factors were of a political nature; one: the resolution of the Federal Government, in July 1963, to the effect that it would establish a pension plan; another was the federal-provincial meeting last September between the Honourable Judy Lamarsh and the Provincial Ministers accompanied by their technical advisers; a third, the plenary Federal-Provincial Conference, in November 1963 and finally, the letter from the Honourable Mr. Pearson, on January 10,1964, regarding modifications made to the Federal project.

E - PLAN OF THE REPORT

This plan is simple. First, the introduction gives the historical and legislative highlights of Social Security.

The first Part describes the Quebec Pension Plan, its financial system, administrative structure and economic aspects. It deals with the establishment of a "Deposit and Investment Fund", and its economic and fiduciary roles.

Finally, the last Part describes the adaptation of private, public or special pension plans to the Quebec Pension Plan.

At the end of Volume 2 is the table of contents giving the subjects of the various chapters and indicating the corresponding page numbers. It also contains the list of tables and graphs. Finally,after the introduction and the first and last Parts, the reader will find the list of references to the various sources of information referred to in the report.

Chairman of the Committee.

INTRODUCTION

CHAPTER I

OUTLINE OF THE RETIREMENT PROBLEM

IN SOCIAL SECURITY

SECTION A - DEVELOPMENT OF SOCIAL LEGISLATION

1 - Three distinct stages

The institution of social legislation has been developing for a hundred years. Its rather slow development is explained both by the difficulties which accompany any attempt to synthesize the human risks within contemporary society and by a strange misunderstanding of the close coordination which should be established between the different scientific branches which combine their knowledge and their techniques to give it a suitable form. Without wishing to place the problem within a scientific context, historians underline three distinct stages in its development: the first is marked by the progress of foresight under the banner of individual freedom; the second saw the birth of compulsory schemes intended to cover certain human risks and the third is commonly called Social Security. This development is far from culmination and cannot, strictly speaking, be divided into three different stages since each of them is still, in certain countries, the framework for special social security programs.

2 - Definition of Social Security

Social Security is, in fact, the combination of measures adopted, or which should be adopted, to enable society to guarantee a reasonable level of income. The general principles of the recommendation approved by the International Labour Conference, in Philadelphia, in May 1944, constitute a descriptive definition of Social Security:

> 1. Income security schemes should relieve want and prevent destitution by restoring,

up to a reasonable level, income which is lost by reason of inability to work (including old age) or to obtain remunerative work or by reason of the death of a breadwinner.

2. Income security should be organised as far as possible on the basis of compulsory social insurance, whereby insured persons fulfilling prescribed qualifying conditions are entitled, in consideration of the contributions they have paid to an insurance institution, to benefits payable at rates, and in contingencies, defined by law.

3. Provision for needs not covered by compulsory social insurance should be made by social assistance: certain categories of persons, particularly dependent children and needy invalids, aged persons and widows, should be entitled to allowances at reasonable rates according to a prescribed scale.

4. Social assistance appropriate to the needs of the case should be provided for other persons in want (1).

3 - Modern Conception of Social Security

The most recent conception of social security, however, indicates a still indefinite trend towards a legislative and administrative unity which would ensure its operation. The unity and the simplification of social security were the main objectives of the Beveridge Report (2). Already, it is no longer possible to consider the various social laws as independent of one another. If this trend could be translated into reality, it would constitute a real code of social security. Is not failure to make this synthesis one of the misunderstandings of the contemporary world? The countries where this trend is the most discernible are those in which French law rules, as in France , where, a real social security code has been elaborated with its own legal principles and its particular jurisprudence. In Quebec, the report submitted in 1963 by the Study Committee on Public Assistance marks a possible first step towards unity (3).

A more rational social security system does not necessarily mean the disappearance of assistance laws, but it tends to constantly narrow their field of application for reasons of human dignity. Assistance laws must cover more and more limited fields in the protection against certain particular risks which cannot be covered by what we usually call social security in its proper sense. The present means at our disposal do not allow us to cover this field properly. Its exploration, for social security purposes, is still to be made. It is an unknown field in which the State assumes a pioneering responsability. Assistance is, in our way of thinking, a residuary instrument the use of which should diminish slowly with time, while sciences having to do with the progress of social security are trying to discover the unknown. This is what we might call social security in its improper meaning.

4 - Purpose of Social Security

In its broader sense, the purpose of social security, according to Netter (4), is to create for the benefit of the workers, a combination of guarantees against a certain number of contingencies liable either to reduce or to eliminate their activity, or to impose additional burdens upon them.

This report contains in fact several distinct but complementary subjects. In addition, it is inspired by the need to take the opportunity of creating a coherent social security policy in conformity with our social and economic requirements. The first deals with the guarantee of resources to retired persons. The second subject aims at lightening the burden of exceptional expenses and permanent loss of income which at the death of the bread-winner , falls upon the wife and children. Finally, the third subject envisages a partial solution to the problem of the worker who is unable to work because of disability. For economic and technical reasons, it is impossible at the present time to find a satisfactory solution to this last problem.

These three protective measures, formerly independent of one another, tend in the most recent programs, to form a whole (5). Moreover, it must be admitted that any security program must necessarily develop with the march of progress and the requirements of social and economic life. Therefore, the recommendations of this report contain attempts to reach a solution adapted to the present, but these solutions are very likely to be improved upon, provided that they comply with social and economic necessities and are not hampered by political contingencies.

5 - Old Age Security

Regarding old age policy in Canada, a distinction should be established, which is not necessarily a logical one, between old age security and retirement plans. This distinction is quite debatable, but the legislator has seen in it two realities and, from the beginning, has wanted to apply a solution to the human risk of old age by way of old age security pensions and, later, to bring a solution to the industrial risk of old age, by way of retirement plans. Such realities appeared very early in the history of our legal institutions. The legislator has in turn, borrowed certain English and certain French conceptions and successive adoptions have caused confusion. During part of the 19th century, the legislature of the Parliament of Union and, later, the Quebec legislature granted civil status to hundreds of mutual benefit associations. A good number of these associations had to pay retirement benefits to their members. False conceptions which too often took the place of actuarial accuracy in determining contributions and benefits led to numerous unfortunate experiences. A certain number of these associations were formed through the commendable effort of workers to unite for the purpose of attaining such aim. The workers themselves had exercised their natural rights of association, for mutuality purposes before it occurred to them to use such rights for the protection of their professional interests.

Needless to say, the regulation of every form of mutuality which is inspired by the Civil Code comes under provincial jurisdiction. It is a first manifestation of professional organization which itself comes under the responsibility of the Provincial legislature.

6 - History of the Idea of the Old Age Pension

The idea of an old age pension from the federal State is quite old, since it is possible to trace its origins to a bill passed in the British Parliament in 1773. This bill provided for the payment of benefits to what was called "the industrious poor", but was turned down by the House of Lords. During the 19th century, the idea of old age pensions enlivened many discussions and appeared in British electoral platforms in 1893. Electoral discussions brought the matter into the limelight and, apparently, it was on such an occasion that it appeared for the first time in Canada. Several newspapers reported the statements of English politicians. Some indicated their opposition to an old age pension plan since they saw in it simply an official organi ation of pauperism under another name. Certain newspapers maintained that it was a reward for laziness and, at the same time an unjustifiable tax on

industry. At the turn of the century, the Toronto "Globe" (6), for instance, brought the attention of its readers, with a certain favourable note, to the compulsory old age insurance plans existing in Germany and in Denmark.

In 1898, New Zealand became the first country of the British Empire to adopt a non-contributory old age pension plan. This plan created keen interest in Canada. In 1905, the question was raised for the first time in this country. The Trade and Labour Conference made representations for the adoption of measures to help both the poor and those citizens who were incapable of earning a livelihood. The following year, the British Parliament adopted an old age pension plan and this plan was favourably received by a great number of Canadians. Undoubtedly, the adoption of an old age pension plan in England explains the numerous debates on the problem, in Canada, in 1907. On February 20, of that year, a member of the House of Commons proposed the adoption of a resolution to ensure the establishment of a plan to assist the aged and needy. To support his resolution, certain requests from labour unions were mentioned.

> The soldier of labour, the pioneers of industrial life must be given certain considerations from their country, Canada, especially when we pension our civil servants and there are pensions granted by banking and other private institutions.

Sir Wilfrid Laurier, then Prime Minister, declared himself to be in favour of the project. However, the resolution was withdrawn since there existed in the minds of the majority very serious doubts as to the validity of federal jurisdiction in this field.

During the same session of 1907, another, somewhat different debate took place in the Senate on the question of old age retirement pensions. It was a project of life annuities for Canada, (7) submitted by Sir Richard Cartwright. Retirement plans in England and Germany were fully explained and discussed during this debate.

In the same year, Nova Scotia appointed a committee to investigate on old age pensions and Miners'Mutual Aid Societies. The investigation opened in September 1907 and the report was submitted in February 1908. The Committee came to the conclusion that a general old age pension plan was not then practicable in Nova Scotia nor would it probably be in the near future, because of the limited financial resources of the province. The Committee also stressed the point that the solution of the problem was more difficult in Nova Scotia than in other provinces because the proportion of the aged was higher here than in the other provinces.

This Commission of Inquiry began its work as the National Conference of Trade and Labour assembled at Glace Bay, including workers from all the provinces. The Conference adopted the following resolution:

> That in the opinion of this Congress the time has arrived when the workmen of this country should be paid pensions in their old age, or when they become disabled. We hereby petition the Federal Government to establish a fund to be known as the "Old Age Pension Fund", to be used for workingmen who have passed their working days, or are no longer able to support themselves (8).

7 - Government Life Annuities

So, as the first provincial inquiry on the matter opened in Nova Scotia, the Trade and Labour Conference requested the intervention of the federal government and, in May 1908, the delegates of this labour organization repeated their request to the federal government. In reply, the ministers expressed the opinion that Canada was not ready to operate a pension plan for the aged and invalids. A committee of the House of Commons, however, took up the study of the matter, but made no report. The federal government limited its action to the adoption of a law on government life annuities. This law, which is still in force, has permitted the accumulation of a reserve amounting to $1,264,436,143, as at March 31, 1963 (9). This matter of old age pensions was again discussed by a committee of the House of Commons in 1912, but the problem remained unsolved.

8 - Old Age Assistance

It must be recalled, however, that the Royal Commission on Relations between Capital and Labour, in 1889, had recommended to the federal and provincial governments the adoption of a retirement plan for workers, which could be supplemented by subsistence pensions for their dependents (10). This recommendation was formulated again on a different level by the Royal Commission of Inquiry on Industrial Relations of 1919, when the Commissioners suggested a program of cooperation between the Federal and Provincial governments to establish an old age pension plan (11). This resolution was discussed in the committees of the House

of Commons in 1924 and 1925, and led to an exchange of opinions between the Federal government and the Provincial goverments. The latter showed little enthusiasm for the plan, claiming that they did not have adequate revenue to support the expenses of such a plan. Finally, in 1927, the Old Age Pensions Act (12) was passed by the Federal Parliament in spite of reserves and certain opinions to the effect that the law was encroaching on provincial jurisdiction. In fact, the law provided for the payment of a maximum old age pension of $20 per month to any needy person of at least 70 years of age, whose yearly income was less than $125. The provinces were invited to participate in the program, provided that they pay half the cost of the pensions. During the following years, all the Canadian provinces, in turn, adhered to the federal system. In 1931, the federal contribution was increased to three fourths of the pension cost. In 1943, the maximum pension was increased to $25 ; in 1947, to $30 and, in 1949, to $40. At that time, certain additional amounts were payable, under certain conditions, to the beneficiaries of the plan. To conclude, the 1927 act is an old age assistance law, which is still in force, but which gave birth, in 1951, to the Old Age Security Act (13).

9 - Old Age Insurance

During this period, the idea of old age insurance continued to develop throughout the population. In 1929, a special committee of the House of Commons on Industrial and International Relations studied the possibility of introducing old age insurance in Canada. In 1932, the Quebec Social Insurance Commission, in its report on old age insurance, submitted the following recommendation:

> lo. Having studied the legislation of different countries dealing with protection for old-age, and having examined many opinions expressed before it, the Social Insurance Commission declares itself in favour of a contributory and obligatory system of old-age insurance in preference to the system of charity now in force which, in the opinion of the Commission may lead to many abuses. The Commission recommends therefore that the province of Quebec should take the initiative in encouraging the other provinces to make a joint request to the Federal Government with a view to promoting and establishing an obligatory and contributory system of old-age insurance (14).

A few years later, in 1940, the Rowell-Sirois Commission recommended that the federal government be given necessary authority to establish a compulsory old age insurance plan throughout Canada, as well as an insurance plan for the benefit of survivors (15). In 1943, the Marsh Report on Social Security in Canada contained a similar recommendation (16).

During the years immediately following the World War II, economic prosperity took precedence over wartime social concerns, but the decline of economic activity in the years 1949 and 1950 brought renewed interest in this problem (17). Old Age insurance was studied in 1950 by a joint committee of the Senate and the House of Commons and one of the recommendations of this committee was the establishment of an old age insurance plan in Canada and an amendment to the Constitution to put this responsibility under federal jurisdiction (18). It also recommended a transformation of the old age assistance plan on a basis of federal-provincial cooperation, for needy persons from ages 65 to 69. Section 94a was added to the Canadian Constitution and both recommended plans were accepted by the Federal Parliament and the provincial legislatures. Any person aged 70 or more would receive a pension of $40 per month regardless of income. The financing of the plan is ensured by a certain percentage of the personal and the corporation income tax, as well as by a percentage of the federal sales tax. Canadians are thus paying an indirect contribution, the annual proceeds from which must ensure payment of the annual benefits.

There is an analogy worth mentioning, with respect to the amount of old age assistance and old age insurance pensions. In 1927, the amount of old age assistance was $20 a month. It has increased constantly since then and, from 1952, it has followed the increase in the amount of old age security. The old age pension, $40 per month, at the start, on January 1st, 1952, was increased successively to $46 per month on July 1, 1957; $55 per month on November 1, 1957; $65 per month on February 1, 1962 and $75 per month on October 1, 1963. An identical scale, therefore, is to be noted.

10 - Private retirement plans

Private retirement plans are in fact quite different from old age insurance plans. A number of plans are the result of collective bargaining between employers and employees. Such plans have very different backgrounds and, in certain instances, are nothing more than deferred compensation while, in other cases, they are combined with the most varied welfare measures such as group insurance, health insurance etc. They developed independently from old age insurance plans and expanded

quite rapidly in the United States and Canada during and after the World War II. Since then, there exists a trend towards including in collective labour agreements the conditions and amendments of retirement plans.

Before the last war, retirement plans were in most cases an additional condition of the labour contract. Thus, the first retirement plan in Canadian private enterprise was that of the railway employees of the Grand Trunk, which dates back to 1874 (19). Federal government employees have had a pension plan since 1870 while provincial government employees have had one since 1876 (20).

According to the results of an investigation published in 1949 by the Federal Bureau of Statistics, only three firms in Canada, excluding railway companies, had a pension plan in 1900. In 1918, such plans numbered 159 and, in 1938, 711. In 1947, 3,539 pension plans were in force in Canada, the majority of them being in Ontario and Quebec (21). These statistics do not seem to include pension plans and certain private plans organized in virtue of certain special Quebec laws.

The law on this subject, especially in the province of Quebec, is based on the same motives which inspired the mutual benefit associations to organize retirement plans. The number and importance of these associations has reached very significant proportions, thus making it necessary for the legislator to regulate them (22). Moreover, there are in the Quebec statutes provisions aimed at the regulation of the teachers' pension plan (23), the municipal employees' pension plans (24), as well as a special law regulating the pension plan of Quebec-Hydro employees (25). The federal laws on banks, merchant marine, militia and the R.C.M.P. also include special provisions regarding pensions. In 1903, the Quebec Legislature amended the Cities and Towns Act in order to allow municipalities to establish pension funds for their employees (26). In an act of 1947 (27), the Legislature established certain rules to strengthen municipal pension plans. Finally, the federal government adopted general legislation on retirement plans of companies having federal charters (28). The constitutionality of this law is debatable and the Provincial Legislature has taken a similar initiative in a law allowing companies to establish a contributory pension plan for their employees (29). The Legislature allowed school boards (30) to organize retirement plans for their employees not covered by the law on Education pensions. Finally, the Collective Agreement Act was amended to allow the insertion, in the decree, of provisions regarding welfare benefits (31). This amendment allowed the Montreal Joint Committee of the Building Industry to establish, on January 1, 1963, a retirement plan providing for the transfer of the contributor's pension credits from one firm to another and from one joint committee to another, within the circle of the building trades, for its 60,000 employees subject to the decree with respect to this industry. In spite of all these laws, the regulation of retirement plans is still incomplete.

11 - Conclusions

The history of retirement plans is quite different from that of old age insurance or old age assistance. The recent Ontario law (32) on retirement plans is in fact a first attempt at regulation of retirement plans, while the federal Old Age Security Act appears to have reached a definite stage, with the possible exception of the amount of pension and of the retirement age which may be subject to changes from time to time.

However, the present discussions on the problem of retirement pensions indicate an increasingly unanimous desire to achieve unity in the field of old age protection and to establish an old age security policy where differences between the human and industrial risks of old age no longer exist. Many factors have contributed to the development of this policy of old age protection, the most important of which, from a legal point of view, are the development of the Professional Syndicates Act and the expansion of collective bargaining between employers and employees. However, it is probably the regulations adopted with respect to the Income Tax Act which have allowed pension plans to considerably expand in Canada. Since 1919, employees have been allowed to deduct from their income, from income tax purposes, their contributions to a retirement plan (33). During the last war and the post-war period, the freezing of salaries moved a number of employers to establish a policy of fringe benefits to attract and retain the needed employees. In 1938, in virtue of the Federal Income Tax Act, companies and corporations were allowed to deduct from their income contributions paid to a retirement plan for the past services of their employees and, in 1941, they were granted the same advantage regarding current service. Such tax deductions are to be found in all provincial income tax laws.

SECTION B - DIVISION OF LEGISLATIVE AUTHORITY

1 - Section 94a of the Canadian Constitution

In the present state of the constitution, it is very difficult to realize the administrative unity of old age protection measures. During 1963, the federal government attempted, under the LaMarsh Plan, to give a very broad interpretation of article 94a of the 1867 Act, in order to sustain that this whole sector of the security fell under its jurisdiction, while the Quebec government, by a unanimous resolution of the Legislative Assembly, on August 23, 1963, recognized that retirement

plans fell primarily under its jurisdiction. Here is the text of this resolution:

> That it is expedient for the Legislature of the Province of Quebec to pass as soon as possible an act to establish a public and universal retirement fund based on actuarial calculations, and maintained by compulsory contributions (34).

This definite stand of the Quebec Legislature is in accordance with the interpretation given to the 1867 Act by jurisprudence.

2 - Division of legislative powers

The division of legislative powers in the field of old age security is determined by section 94a of the Constitution. This section was added in 1951, at the request of the federal government and all the provincial governments.

It reads as follows:

Section 94a

> "It is hereby declared that the Parliament of Canada may, from time to time, make laws in relation to old age pensions in Canada, but no law made by the Parliament of Canada in relation to old age pensions shall affect the operation of any law, present or future, of a Provincial Legislature in relation to old age pensions" (35).

This article presents a new problem in the matter of the division of powers, because it apparently divides the same subject by entrusting it partly to federal jurisdiction and partly to provincial jurisdiction. No problem of this nature has ever been brought to the attention of Constitutional jurisprudence.

3 - Interpretation of Section 94a of the Canadian Constitution

The only valid method of understanding the true meaning of the amendment is a reference to the recommendations included in the report of the 1950 joint committee of the Senate and House of Commons on old

age pensions. This report is at the same time the origin of the amendment and of the federal Old Age Security Act. The recommendations of this committee make a distinction between the old age security field and the field of retirement plans; it separates the human risk from the industrial risk at the old age level. It is the only possible rule of interpretation for jurisprudence, and this rule was applied in a particular case by the judicial committee of the Privy Council in Ladore vs Bennet, which recognized the necessity to consult parliamentary documents which form the basis or origin of an amendment to an act. The rule established in this case dictates that, should there be any doubt as to the meaning of a law, the courts may consult the....

> "materials which the Government....had before them before promoting....the statute....impending. Such material has, therefore, evidential value in determining the matter of the Act."

Professor Kennedy shares the same opinion in his "Essays on Constitutional Law" (37), when he questions whether the reports of the Imperial Conferences of 1926 and 1930, as well as the Conference on the application of Dominion laws, might be used in the interpretation of the Statute of Westminster. "The Statute", he declares, "cannot be isolated from its immediate sources". However, a very clear-cut distinction should be made between these study or investigation reports and the Parliamentary debates to which Canadian courts never referred in their research on the interpretation of a law. Besides, the judicial committee of the Privy Council has already made use of the report of a Royal Commission to establish the intention of the Government in making certain amendments to the law. Recourse to such sources of the law is but an application of a very old legal principle according to which the Courts, where the text of the law is ambiguous, may assess the intention of Parliament in trying to find the wrong which the law had sought to remedy. In a number of subsequent judgments, it was admitted that, under such circumstances, the Courts could have recourse to any document, with the exception of Parliamentary debates, in order to establish the nature of the wrong which the legislators wanted to eliminate.

If this rule applies, then it is possible to arrive at a logical solution, whereby the legislator would be in a position to isolate the field of what is called old age insurance and which is intended to cover what social security calls the human risk of old age, as opposed to what it calls the industrial risk of old age. In the first case, the same advantages are ensured to all citizens. In the second, the advantages may be quite different according to trades, professions and, in certain cases, various contingencies inherent to social life. Certain classes of workers must contemplate retirement at a younger age than that which may be considered normal in other classes where the work is less strenuous. Should we accept this principle, which is not new and which, moreover,

is contained in the report of the Joint Committee of the Senate and the House of Commons, we could define quite easily the fields of federal and provincial jurisdiction. Federal jurisdiction thus holds authority on matters of a general nature, while provincial jurisdiction is more specific and more conscious of sociological reality. Moreover, the Federal Government seeks to ensure a strict subsistance minimum to Canadian residents, while the retirement plans allow citizens to maintain, after their retirement, a standard of living more in keeping with that which they had during their working life.

This interpretation may permit each to complement the other in practise so as to constitute a single system of security and welfare. Thus, the federal old age security pension is a basic pension, a strictly minimum pension. This system may now be complemented by a retirement plan which cannot be of the same general character as the preceding one, but which must possess a certain particularism allowing it to adapt itself to sociological realities peculiar to each province. Only provincial jurisdiction can be flexible enough to allow the plan to take this particular shape, based on facts of a local and provincial nature.

4 - Limits of provincial jurisdiction

This provincial jurisdiction has its limits. It may not extend beyond the boundaries of the Province and cannot apply to Federal Government employees. It is the only exception mentioned in the Constitution, and it is easy to understand that the labour contract of Federal Government employees cannot be controlled by the provincial governments. Retirement plans are tied in with labour contracts and can alter the situation of certain professions and trades; these subjects all undoubtedly fall under provincial jurisdiction. They may be considered, under certain aspects, as the continuation of syndicalism and mutuality.

To conclude, we could state that on the vertical plan there is a very clear dividing line between old age insurance and retirement plans, while on the horizontal plan, only federal employees, from a constitutional point of view, seem to escape provincial jurisdiction.

5 - Pensions to Survivors and Invalids

There is no constitutional difficulty regarding the legislative responsibility on the matter of pensions to survivors and invalids. The Federal Government has never claimed this jurisdiction and it belongs unquestionably to provincial governments. During discussions of its proposed retirement plan, the Federal Government , however, has suggested

that the Constitution be amended to allow it to legislate on the matter.

Some provinces have attempted to solve the problem created by the death of the bread-winner through the adoption of laws to help needy mothers. The first law in Quebec dates back to April 14,1937 (38). It applies to certain classes of widows and wives of invalids and provides at the same time for supplementary family allowances to their children. The 1937 Act merely touched upon the problem of disability. The 1965 joint program of assistance to invalids broadens the field of assistance to these underprivileged persons (39). The Federal Government and the Provincial Governments share equally the cost of such allowances. All these laws remain assistance laws, the application of which is necessarily limited to a restricted group of citizens.

SECTION C - CONSIDERATIONS ON SOCIAL SECURITY

1 - History of old age security measures

At the present time, extensive documentation can be found on social security. There is no point in attempting to trace the highlights of its history in connection with the proposed retirement plan. Moreover, it would not be easy to trace the history of old age security and related measures through the last century, because their development is, on the whole, quite incoherent. Words do not always represent the same realities from one country to another, and from one era to another, and this makes any valid comparison almost impossible.

2 - Trends of modern old age security measures

However, by observing facts it is possible to discover from the history of recent years certain trends which have exercised some influence on our Committee. It is worth mentioning in particular that several old age security plans were established before World War I. Some date back to the period between the wars, when countries with no such plans tackled this problem. Finally, a new solution to this problem was found after World War II, through the influence of the Beveridge Report on social security in England. During the past fifteen years, studies on social security made possible scientific comparisons between the plans of different countries and helped to uncover their weaknesses and their advantages. On the whole, no one plan supersedes the others through its

scientific or social value. On the one hand, it would seem that haphazard considerations which had inspired earlier plans are being gradually replaced by attention given to economic and social necessities. On the other hand, more accurate scientific knowledge in the fields of sociology and economics, as well as progress in actuarial mathematics and experience acquired in the administration of retirement plans give a new orientation to these problems in most countries. In view of the multiplicity of formulas, it is natural that almost everywhere questions of unity and synthesis arise. The formulas are losing their former value, to the advantage of more rational policies on human as well as on industrial risks. In 1960, France requested a commission to study the problem of old age security (40). The report of this commission is in fact an attempt to elaborate a new old age policy, on the basis of coordination in the fields of employment and education, in the fields of pensions and allowances, of social and medico-social activity and of information. Identical concerns have inspired the report of the Study Committee on public assistance which was submitted to the Quebec Government in June 1963. Findings of this nature are numerous at the present time and invite legislators in the field of social security to seek solutions of synthesis. One of the weaknesses of contemporary political thinking may be that so far there has been no success in carrying out such synthesis.

3 - Basic law for supplementary security measures

The proposed pension plan for Quebec is sufficiently flexible to facilitate substantial future improvements; its scope allows it to be used as a framework for additional or supplementary protective measures. In many respects, it remains a first and modest attempt at synthesis. Moreover all recent plans regarding old age have regrouped several security measures which were previously independent of one another. This explains our attitude respecting pensions to survivors of workers and pensions to invalids.

Along the same lines, the International Organization of Labour, following very lengthy work and numerous investigations, prepared in 1952 a project of international agreement on the minimum standard for social security. This model agreement bears No. 102 (41) Like all other projects on social security or labour legislation, this model has deeply influenced more recent legislation. It was in fact an attempt to give to social security a concrete form which would be similar throughout the world. It was a contribution to unity of thought and action.

Several principles and standards of the International Organization of Labour have influenced the thinking of the members of the Committee regarding old age pensions and disability and survivor pensions. In most cases, the recommendations of our committee are inspired by the minimum standards of the model agreement, so that they may be compared with the provisions of plans existing outside Quebec, taking into account sociological and economic factors peculiar to Quebec and which are the results of long evolution.

C H A P T E R II

PURPOSES OF THIS REPORT

1 - The Committee believes that contemporary society imposes the obligation to look for appropriate means to guarantee a minimum income to the aged, invalids and survivors who are no longer able to find a suitable place within the framework of traditional life, due to the breach of family ties between generations, accelerated by the exodus of rural citizens towards cities and by the modern way of life.

2 - The report aims at being a practical expression of the rights of the Province in the field of social security, especially as regards retirement pensions to aged workers and pensions to invalids, widows and orphans.

3 - In the opinion of the Committee, the report is a first step in the formulation of an integrated policy of social security in the Province, in conformity with the wish expressed by the study committee on public assistance.

4 - This report takes into account, for the purposes of the formulation of its proposed pension plan, the existence of the federal Old Age Security Act, but completes it with a general, contributory and universal retirement plan.

5 - The Committee believes it necessary to subject private retirement plans to a minimum of regulations in order to protect workers' rights.

6 - The Committee believes it necessary to submit certain recommendations intended to modify the existing special public plans in order to bring them more into line with the principles which have inspired the new general plan.

7 - The Committee deems it necessary to correlate the problem of retirement pensions, that is to say the problem of the loss of income for the aged worker following termination of remunerative work , with the problem of the loss of family income due to the worker's death, as breadwinner.

8 - The Committee considers it essential to formulate some of the legal principles which in the future must govern any retirement plan, leaving however to private initiative, through individual and collective bargaining, the task of going deeper into detail, according to the nature of each profession, trade and enterprise. It also leaves to insurance and trust companies the establishment of additional security measures in the case of any individual or group, according to its needs.

9 - In the opinion of the Committee, the funding system, conditioned and determined by the level of contributions and benefits recommended in this report, should be established somewhere between:

(a) the system of integral accumulation of contributions with full funding of pensions,

and (b) the "pay as you go" system.

It shall therefore be considered as one of the so called "mixed" or "partial funding" systems.

10 - The Committee feels that a minimum delay of 18 months should elapse between the adoption of the law and its effective date. This delay is necessary to permit organization of the administrative apparatus required by the application of the law and to permit necessary modifications of public and private retirement plans.

C H A P T E R III

RIGHTS AND OBLIGATIONS OF THE PARTICIPANT

SECTION A - GENERAL PRINCIPLES

The Committee believes it useful to underline the general principles used in determining the participant's rights and obligations within the context of the Quebec Pension Plan, and in the regulation of supplementary and special plans.

1 - The law gives no definition of the retirement plan; therefore, we must have recourse to doctrine in order to establish its constituent elements. The retirement plan is an agreement whereby a person undertakes to pay a contribution in cash or in service in order to have the right, subject to certain conditions, to receive from another person the payment of benefits.

2 - The law identifies very clearly the party of the first part, that is the person paying contributions to a retirement plan, but the party of the second part is not so precisely identified because he or she may share responsibilities with others.

3 - Although the legislator may wish to leave this agreement with its characteristic freedom, he must however make regulations regarding retirement plans in order to define present and future rights of participants and beneficiaries. For example, the minimum salary regulations influence labour contracts and help to define the rights and obligations of the parties stipulated by Common Law. Minimum regulation of retirement plans would have similar effects.

4 - Every participant has a vested right to his contributions, when they are identified. When they are not identified, the participant's right is determined by law and regulations. These contributions are an integral part of the salary or earned income (42).

5 - The right of every participant to his employer's contributions is not a vested one unless expressly stipulated.

6 - In the case of the employer's termination of operations or bankruptcy, and in the absence of any express provision, the apportionment of moneys is made according to ordinary rules.

7 - Every participant in a retirement plan is always responsible for the amount of debts contracted by him with regard to the plan of which he is a member. This amount may be deducted from any benefits that he or his estate might receive.

8 - Every participant is entitled to a deferred pension whenever it is so provided in the supplementary plan to which he subscribes. He alone can exercise this option and the employer must respect this choice.

9 - The orphans' pension must be used solely to the advantage of the orphan. In the case of misconduct of the father, mother or tutor of the child, the Board may, whatever the plan, and if deemed fit, take steps to have the pension paid to another person, in order to protect the interest of the child.

10 - Every legally adopted child has the same rights as a legitimate child with respect to the orphans' pension.

11 - The Board may refuse to pay a widow the orphan's and the widow's pensions, if she had abandoned the family home or her children prior to her husband's death, or, if the husband had obtained against her a judgment declaring separation as to bed and board. In such cases, the amount of the widow's pension may, on a request made to the Board, and if the latter deems fit, be paid in order to provide for the education of the children.

12 - All contributions and benefits in virtue of a retirement plan shall not be subject to assignment, seizure, lien or attachment, except for debts owed to the plan itself and in the cases expressly stipulated in the law. Thus, an employer who is a victim of embezzlement by his employee, having obtained a legal condemnation against such employee, may always be reimbursed out of his own contributions and those of the said employee in the case of any supplementary plan.

13 - Should the beneficiary of a retirement plan be imprisoned for an offence under the Criminal Code, or should he be absent and his whereabouts unknown, the Board may, at its discretion, order his benefits to be paid, in whole or in part, to his wife or children.

C H A P T E R IV

DEFINITIONS

The word "actuary" means a Fellow of the Society of Actuaries or of the Faculty of Actuaries, or of the Institute of Actuaries or, in short, any member of a professional association having an equivalent status.

The word "beneficiary" means any person to whom a benefit provided by a retirement or pension plan is paid.

The word "Fund" means the deposit and investment fund.

The word "Committee" means the Inter-Departmental Study Committee on retirement plans.

The word "agreement" means every legal instrument of social security entered into on an international, federal or provincial, bilateral or multi-lateral basis, to co-ordinate legislation with a view to determining the rights and obligations of mobile workers and their dependents.

The word "contributor" means, as the case may be, every worker, dependent or independent, and every employer who must, in virtue of the law, pay a contribution to the plan.

The word "contribution" means the share of the contribution to be paid by any contributor in accordance with the law.

The word "employer" means every person, natural or juridical, employing the services of one or more workers.

The word "participant" means, as the case may be or at the same time, every contributor, beneficiary and person covered by the plan.

The words "old age pensions" mean the Federal Pension Plan established by the Old Age Security Act.

The word "benefit" means the single or periodic payment of moneys to every beneficiary of a plan.

The word "Board" means the Quebec Pension Board.

The words "general plan" mean the Quebec Pension Plan.

The words "retirement plan" mean all the provisions governing a pension plan.

The words "special retirement plan" mean every retirement plan established by a special law.

The words "federal plan" mean the Canadian Pension Plan project.

The words "private plan" mean every retirement plan as long as it has not been approved and registered by the Board.

The words "supplementary plan" mean every private plan approved and registered by the Board.

The words "particular plan" mean every retirement plan excepting the general plan.

The word "pension" means every periodic benefit payable to any beneficiary of a plan.

The words "earned income" mean the income resulting from a position, or an employment, that is to say not only the wages, salary and other remuneration, bonuses, gratuities and allowances, but also the value of the lodging and other benefits whatsoever that the contributor receives during the exercise of his position or employment.

The word "service" mean the duration of the employement period of the worker with an employer.

The words "dependent worker" mean every worker bound to an employer in a subordinate capacity.

The words "independent worker" mean every worker who is not a dependent worker.

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FIRST PART

QUEBEC PENSION PLAN

CHAPTER I

DECLARATION OF PRINCIPLES

A public and universal pension plan constitutes, in the first place, a social security measure. According to the Committee, the general plan must be based on the following principles:

1 - The purpose of the general plan is to provide to the contributor at his retirement, either by reason of old age or disability, or at his death, the continuance of a part of his income thus allowing him and his family to maintain a standard of living somewhat related to that which existed during his active life. The purpose of the general plan is not to guarantee the maintenance of his beneficiaries' standard of living. The burden imposed upon the economy of the Province as well as the necessity of limiting the employers' and workers' contributions are the main factors establishing this relationship between the standard of living before and after the worker's retirement.

2 - The rights of the contributor must be fully protected so that the highest degree of freedom and mobility on the labour market may be maintained.

3 - The advantages of the general plan must constitute rights for every contributing worker, his wife and children and should not be the result of a paternalistic attitude towards them on the part of the Government.

4 - The advantages granted by the general plan must not be unduly affected by unemployment and inflation, that is to say by contingencies over which the participants have no control.

5 - The pension plan must be universal. Consequently, the exclusion of certain classes of workers must be kept to a strict minimum.

6 - The pension plan must be contributory. In fact, recognition of the worker's rights in the general plan requires that the worker bear the cost jointly with his employer. Thus, the dignity of the worker is

CHAPTER II

CONTRIBUTIONS

SECTION I - THE CONTRIBUTOR TO THE PLAN

RECOMMENDATION "1"

1 - The Committee recommends that all dependent and independent workers be compelled to join the Plan, with the exception of Federal Government employees and employees of Crown corporations.

A - Dependent and independent workers

The plan is a social security measure. It is, therefore, important that the maximum portion of the population benefit from it. It is, however, essential to exclude persons who receive no earned income on account of the necessity:

a) that the cost of the Plan be supported solely and directly by its contributors (dependent and independent workers and their employers);

b) that the cost of benefits, in principle, be related to the contributor's income.

Since income from sources other than work is liable to continue after death or retirement, the Committee considers it necessary to limit the income, for the purposes of the Plan, to income accruing from work.

Moreover, according to the Committee, no person should benefit from a redistribution which favours certain classes of participants

by way of income received from sources other than work. This means that only dependent and independent workers may contribute to the Plan.

B - Compulsory participation

If the recommended plan were solely a savings plan, whereby each member received benefits equivalent to the value of his contributions, optional participation could be considered. On account of the different types of redistribution, the Plan differs considerably from an exclusive savings plan and it follows that compulsory participation is necessary in order to avoid disturbing the financial equilibrium. In fact, it is easy to imagine that if participation were optional, there would be a concentration of contributors among classes which would obtain the greatest advantages. Moreover, and this is confirmed by experience, one may suppose that a great number of workers would refuse to participate in the Plan, even if such a step were to their disadvantage. The problems of old age and of the survivors of such workers would not be resolved and the Government would inevitably be called upon to provide for their needs. Therefore, the Committee has come to the conclusion that participation of workers in the Plan must be compulsory.

C - Workers not included

Employees of the Federal Government and of Federal Crown corporations must be excluded, since they come under Federal jurisdiction in virtue of the Act of 1867.

It is also necessary to exclude temporarily certain classes of workers by reason of the virtual impossibility to collect their contributions and those of their employers. The number of workers in such classes will be small. Any exclusion shall be valid only following a decision of the Board.

SECTION 2 - AGE IN RELATION TO THE CONTRIBUTION

RECOMMENDATION "2"

1 - The Committee recommends that the worker, and his employer in the case of a dependent worker, contribute as from the first day of January following the worker's eighteenth birthday. Payment of contributions shall cease on the first day of the month following the contributor's 65th birthday. Any worker who has attained the age of 63 at the effective date of the Plan shall be excluded therefrom.

A - Minimum Age

The Plan provides invalids', widows' and orphans' pensions, as well as death benefits, provided the worker has contributed during a certain number of years at the time of his disability or death. A comparatively low minimum age, for contribution purposes, is indicated since the worker's need for such protection develops at a comparatively young age. Moreover, the more the cost of the Plan is spread over a long period of contributions for a given level of benefits, the lower is the contribution rate, which is obviously desirable. Finally, as contributions to the Plan are partly in the form of a tax, on account of the redistribution already mentioned, the Committee considers it preferable not to lower the minimum age below the Quebec voting age.

B - Maximum Age

In the following chapter, the Committee requests that the worker become entitled to a retirement pension on his 65th birthday. This recommendation of the Committee results therefore in establishing the maximum age, for contribution purposes, at the worker's 65th birthday. It is to be noted that the choice of a fixed maximum age simplifies the collection of contributions and that, moreover, this age is that at

which higher personal exemptions are granted for income tax purposes.

C - Female Worker

In private retirement plans, the minimum age for admission of female employees is often higher than that for male employees. This difference exists only in order to reduce the operating expenses incurred by the preparation of records and the refund of contributions to female employees who stay only a short while on the labour market before marriage. The nature of this plan being quite different and the operating expenses incurred by this class of workers being small, the Committee has not deemed it fit to set a different minimum age for the female worker.

D - Single admissibility date: the first day of January of each year

So that the date of the worker's admission to the plan may be easily determined, the Committee feels that this date should be the first day of January following the worker's 18th birthday.

However, it is to be noted that a person over 18 years of age when beginning to work must contribute as from the date of his taking up residence in the Province.

SECTION 3 - CONTRIBUTOR'S INCOME

RECOMMENDATION "3"

1 - The Committee recommends

a) that the contributory income be equal to that part of the contributor's earned income exceeding a yearly minimum income of $1,000 and not exceeding a yearly maximum income of $6,000;

b) that the amount of maximum income be adjusted periodically after the first two years of the Plan, in relation to the national Consumer Price Index.

A - Explanation

There are two types of contributions in social security: level contributions and progressive contributions. Level contributions are necessarily low, but the system mostly in use is that of progressive contributions according to income or earnings. This latter system appears to be more equitable, provided it contains both a minimum and a maximum limit.

The contributory income is the portion of the contributor's earned income on which he is to contribute and, in the case of a dependent worker, on which his employer must also contribute. In the opinion of the Committee, the determination of the contributory income requires:

a) that a first bracket, the minimum income, be free from contribution;

b) that the portion of income in excess of the maximum income be free from contribution.

B - Determination of a Minimum Income

In the opinion of the Committee, the worker whose earned income is not in excess of $1,000 during one year should not be requested to contribute for the following reasons:

a) every worker whose income is less than $1,000 shall be deemed a marginal worker and cannot be included in the definition of contributor to the Plan; and

b) the authentic worker whose income is less than the minimum income has not a sufficiently high income to allow him to contribute to the Plan.

C - Deduction of Minimum Income for all Workers

The question however is whether the contributor whose earned income exceeds $1,000 should be requested to contribute as from his first dollar of income or only on the portion of his income exceeding the minimum income.

The Committee feels that the minimum income should be deducted from the earned income for contribution purposes, for the following reasons:

a) the effect of the deduction of the minimum income is to substantially reduce the actual contribution rate with regard to the contributor's income as the amount of his income decreases (See Table 1). Without such a deduction, one may question whether the contributer whose income is low would, in general, be able to pay the contribution based on the recommended rate; and,

b) from the point of view of production costs, the deduction of the minimum income is very desirable. This matter is fully analysed in the chapter dealing with the economic aspects of the Plan; and,

c) the principle of the deduction of a minimum income has already been accepted in provincial and federal income tax laws. The deduction of a minimum income, identical to the uniform deduction of $1,000 granted by these laws, would therefore simplify, both for the Board and the employer, the problem of collecting contributions.

D - Possible Criticism and Suggestions

The recommendation of the Committee with regard to deducting the first $1,000 from the income of any contributor may give rise to certain criticism. As an example, let us mention the proposed federal pension plan (1x) under which there is no deduction of minimum income. Without knowing all the reasons for which this project has been thus set up, it seems that the absence of a deductible minimum income has been one of the causes for the inclusion in the federal project of independent workers solely on an optional basis, a factor which has been the subject of serious criticism regarding this project.

The suggestion could be made to reduce the contribution rate applicable to the minimum income or to abolish the contribution in the case of persons economically weak. The Committee felt that the first

suggestion could not be accepted without rejecting the principle recognized by income tax laws. As for the second suggestion, its application would necessitate a great number of investigations, the cost of which would necessarily be high and would probably result in arousing serious discontent and criticism from the working classes.

E - Determination of a Maximum Income

In any social security measure, it is necessary to draw the line beyond which the individual must be left free to act as he pleases. Beyond this limit, the individual is generally better equipped to face his personal problems, and private enterprise places the necessary instruments at his disposal.

The problem of determining the maximum income, therefore, claims our attention and it is all the more difficult to solve because the amount of benefits is also related to income. The various arguments and considerations regarding this matter are given below, with the opinion of the Committee on each of them.

F - Arguments in Favour of a High Maximum Income

The following arguments may be brought forward in favour of a high maximum income:

a) a contributory plan in which the amounts of benefits are related to the contributor's income is not justifiable if too large a number of contributors to the Plan have an income in excess of the maximum; and,

b) the assets of the Plan would constitute a sufficiently important instrument of the Government's economic policy for the amount of the contributory maximum income to be established in taking into account its repercussions on the accumulation of such assets.

These two arguments leave a wide margin as regards the choice of an acceptable level of contributory income. Moreover, it is the opinion of this Committee that the second argument should be subordinated to social and political considerations.

G - Arguments in Favour of a Low Maximum Income

The following arguments may be brought forward in favour of a low maximum income:

a) if the amount of maximum income is high, the Government will enter a field in which private enterprise should continue to play its role; and,

b) by reason of the transition provisions, a redistribution of financial resources in favour of the best paid workers will be made in the course of the transition period. By reason of the nature of this redistribution, the higher the maximum income, the more the best paid worker will be able to benefit from it; and,

c) should the maximum income be established at a high level, there would be the risk that the amount of income be fictitiously increased by certain contributors during the years preceding their retirement. This would impose an unforeseen burden on the Plan and would prejudice other contributors.

The first two arguments are very important. While the first is of a general nature, the importance of the second may be valued quantitatively. The study of the various kinds of redistribution is made along with the analysis of the financial system. Therefore, we shall only mention that, according to the Committee, the relative equity of the Plan towards the various classes of participants is safeguarded with the recommended maximum income.

As for the last argument, the Committee feels it to be more of an administrative problem. In fact, how many contributors would be in a position to realize that they would thus unjustly profit from the Plan? Moreover, a fictitious increase of income leads automatically to an increase in contributions and in the amount of income tax payable by the contributor, since the collection is made by means of income tax. Finally, in the case of dependent workers, this danger is almost non-existent, and in the case of independent workers, it exists only for those having an income lower than the maximum income.

H - Amount of Maximum Income

In addition to the arguments analyzed above, the Committee has also considered the following facts:

a) the proposed Canada Pension Plan (2x) provides for a max-

imum income of $4,500; however, it should be mentioned that there is no deductible minimum income; and,

b) the Ontario law on portable pensions (3x) establishes the maximum income at $4,800 without deduction of a minimum income; and,

c) according to the 1961 census, 14.2% of dependent workers (male and female) in Quebec receive a salary of $5,000 or over, and 7.5% receive a salary of $6,000 or over (4x). Besides, the average salary amounts to $3,469 for male workers and $1,920 for female workers. Although there exists no corresponding statistics regarding independent workers, it has been possible to establish that their average income does not differ substantially from that of dependent workers.

Therefore, taking into account the amount of the minimum deductible income of $1,000, the Committee has come to the conclusion that the setting of the maximum income at $6,000 is a reasonable compromise between the different points of view, while it is very close to the amount adopted in Ontario and envisaged in the Canada Pension Plan. However, for study and discussion purposes, the Committee, in the chapter on the financing system of the Plan, gives, in addition to estimates based on a maximum income of $6,000, estimates for the cost and accumulation of contributions based on a maximum income of $5,000.

I - Adjustment of Maximum Income

For the reasons indicated in the description of the method of determining the amount of retirement pensions and in the analysis of the financing system of the Plan, the amount of maximum income must be adjusted periodically in relation to the consumer price index. The recommended method of adjustment is fully described in the chapter dealing with the adjustment of pensions and of the amounts of income used in the calculation of pensions to variations in economic conditions. For practical reasons, the adjustment of the maximum income should be made only in amounts of $100.

SECTION 4 - CONTRIBUTION RATE

RECOMMENDATION "4"

The Committee recommends that the contribution rate be equal to 4% of the contributory income of the contributor; this rate is divided into two parts:

a) 3¼% of the contributory income to be credited to the account of retirement, widows' and orphans' pensions and of death benefits; and,

b) ¾ of 1% of the contributory income to be credited to the account of pensions to invalids.

The employer, in the case of the dependent worker, should pay one-half of the total contribution. The employer is responsible for the total remittance to the Board of both contributions. The independent worker pays the total contribution.

A - Remarks

In accordance with the principles which have guided the Committee in the preparation of the Plan, the cost should be borne directly and jointly by the worker and his employer, if there be one. The possibility of a subsidy to the Plan from the consolidated revenue fund of the Province is ipso facto excluded.

B - Contribution Rate

According to the financing system recommended by the Committee regarding retirement, widows' and orphans' pensions and death benefits, the contribution rate shall be 3¼% of the contributor's contributory income. This contribution rate, as explained in the chapter

on the financing system of the Plan, is sufficient to cover the benefits and operating costs and to allow for the accumulation of a reserve intended to maintain the contribution rate at the same level.

Moreover, in the opinion of the Committee, it is necessary to keep a separate account for pensions to invalids, as explained in more detail in the chapter on pensions to invalids. In this same chapter, the Committee recommends a contribution rate of ¾ of 1% of the contributory income for the financing of such pensions.

C - Actual Average Rate of Contribution: 2.9%

It is interesting to note that by reason of the deduction of the minimum income in determining the contributory income, the actual rate of contribution in relation to the contributor's income increases as his income does. The following table illustrates this point quite clearly.

TABLE No. 1

GRADUATED CONTRIBUTION RATE

Earned Income	Contributory Income	Contribution of 4% of Contributory Income	Graduated Contribution Rate in relation to Income from Work
$	$	$	%
2,000	1,000	40	2
3,000	2,000	80	2 2/3
4,000	3,000	120	3
5,000	4,000	160	3 1/5
6,000	5,000	200	3 1/3

With the aid of fiscal statistics (5x), the Committee has established that the average contribution rate for all contributors will be approximately 2.9% of their earned income up to $6,000 without deduction of the minimum income. In addition to the effect on the em-

ployer's costs mentioned in the preceding section, the Committee wishes to point out that this rate of 2.9% and not the rate of 4% of the contributory income must be compared to the rate of 2% envisaged in the Canada Pension Plan project (6x).

D - Independent Workers

The Committee has considered the possibility of imposing a contribution of less than 4% on independent workers. This possibility has been rejected for the following reasons:

a) if the contribution rate for independent workers is less than 4%, a redistribution shall be effected in favour of this class of contributors, unless benefits are reduced accordingly. Such a reduction is hardly justifiable in a social security plan. It would also involve considerable administrative complications.

b) the independent worker is at the same time an employer and an employee.

E - Fixed Contribution for Certain Classes of Contributors

The Committee wishes to state that it considered the possibility of a fixed contribution from certain classes of independent workers who could fictitiously increase the amount of their earned income during the years preceding retirement or for those workers who might find it difficult to establish the portion of their earned income. This possibility has been rejected on account of the difficulty of determining such special classes as well as the amount of the fixed contribution. However, the Board will, if necessary, set a fixed amount as earned income in the case of certain classes of independent workers.

F - Dependent Workers

In the case of a dependent worker, the equal apportionment of the cost between the worker and his employer is, according to the Committee, the most equitable. Moreover, such apportionment of the cost is customary in a great number of private pension plans and national social security plans.

G - Income Tax

The Committee wishes to state that, in its opinion, for the purpose of Federal and Provincial income taxes, contributors' and employers' contributions must be deductible on the same basis as contributions to private pension plans.

CHAPTER III

BENEFITS

SECTION 1 - RETIREMENT BENEFITS

ENTITLEMENT TO RETIREMENT PENSION AT AGE 65

RECOMMENDATION "5"

The Committee recommends that payment of the retirement pension commence on the first day of the month following the worker's 65th birthday. If the beneficiary of this pension receives an earned income between his 65th and 70th birthdays, the Committee recommends that the amount of his pension be reduced by (a) $1 for each $2 of earned income during one year, between $900 and $1,500 plus (b) $1 for each dollar of income in excess of $1,500.

A - Entitlement to Retirement Pension

In studying the retirement age, the Committee has considered the human aspect of the problem to be the most important with regard to both employees and employers. Therefore, the Committee has felt it necessary to grant the highest degree of freedom to the worker in the choice of his effective retirement age and to impose only those restrictions which are strictly necessary. The Committee also considers that such freedom allows the employer to adopt a balanced personnel policy.

Available statistics (1) indicate that in Canada a great number of workers retire at age 65. As the choice of a certain age, the attainment of which gives right to the retirement pension, simplifies the administration of the Plan with respect to collection of contributions and payment of benefits, it is the opinion of the Committee

that payment of the retirement pension should commence on the first day of the month following the worker's sixty-fifth birthday. Besides being as close as possible to reality, the choice of this age corresponds to the minimum age the Federal Government is envisaging for the anticipated payment of the Old Age Security pension (2).

B - Entitlement Subject to Withdrawal from Labour Force

According to this recommendation, a certain number of retirement pension beneficiaries will still form part of the labour force or receive an earned income. In fact, on the basis of the 1961 census (3), the proportion of workers between ages 65 and 69 inclusive, in comparison to the total population in the Province, is 44% for men and 11% for women. On account of the importance of these percentages, the Committee considers it essential to subject retirement pensions to the virtual total withdrawal from the labour force, because otherwise:

a) the cost of the Plan would be uselessly and substantially increased; and,

b) the duplication of the retirement pension, the anticipated Old Age Security Pension and the earned income would temporarily increase the income of such workers and, consequently, increase their requirements after their definite withdrawal from the labour force. There would inevitably follow an indirect increase in the cost of social security.

However, in spite of such reasons, the Committee believes that from a social standpoint it is proper to allow the retired worker to do small jobs and to supplement his retirement income within reason.

Therefore, the Committee feels that in order to reach these two objectives the amount of retirement pension should be reduced by:

a) $1 for each $2 of earned income between $900 and $1,500 received during one year, plus

b) $1 for each dollar of earned income in excess of $1,500.

Since payment of old age security is granted unconditionally as of the 70th birthday, the Committee feels that from this age payment of the retirement pension should no longer be conditional upon the termination of remunerative work. Moreover, an examination of the participation rates of the population in the labour force, according

to the 1961 census, reveals that approximately 90% of workers have retired before age 70 (4). Such a plan is very flexible since it grants the participant the desired degree of freedom as to his retirement date and allows him to return to work occasionally or full time without compromising the objectives of the Plan.

C - Reduction of Benefits

In order to avoid administrative complications, this pension reduction will be effected through income tax and amounts recovered shall be refunded to the Board.

D - Earned Income and Retirement Pension

The following table establishes a comparison of the amounts of reduction in the retirement pension according to different levels of annual earned income. In this table, a single amount of retirement pension, that is to say $1,000, has been used to simplify the analysis.

TABLE No. 2

Retirement Pension	Earned Income	Reduction in Retirement Pension	Reduced Retirement Pension	Earned Income and Retirement Pension
$	$	$	$	$
1,000	500	-	1,000	1,500
1,000	1,000	50	950	1,950
1,000	1,500	300	700	2,200
1,000	2,000	800	200	2,200
1,000	2,500	1,000	-	2,500

E - Female Worker

The Committee fully considered the possibility of reducing the retirement age to 60 years in the case of the female worker, but it finally rejected this possibility for the following reasons:

a) payment of the anticipated Old Age Security Pension shall commence only at age 65; therefore it is natural that the normal pension should commence at the same age; and,

b) to avoid imposing too heavy a burden on the Plan, it would be necessary to reduce the amount of the retirement pension. If the actuarial adjustment method envisaged for the Old Age Security Pension be used, the amount of the pension starting at age 60 would be reduced by approximately 50% in comparison with the amount at age 65. Thus the amount of the retirement pension would be too small.

SECTION 2 - RETIREMENT PENSION

RECOMMENDATION "6"

The Committee recommends:

a) that the amount of retirement pension be equal to 25% of the worker's "average adjusted income"; and,

b) that the "average adjusted income" be calculated in two steps as follows:

i) the amounts of earned income during the years in which the participant has been contributing to the Plan shall be adjusted according to the method based on the national consumer price index. For the purposes of this report, the amount of income of a contributor during one year shall not exceed the amount of the then current maximum income;

ii) the average of the incomes so adjusted is calculated by dividing the total adjusted incomes by 47, that is to say the maximum possible number of years of contribution to the Plan; and,

c) that, in the calculation of the "average adjusted income", when the worker has contributed during 21 years or more, the years involving the smallest adjusted incomes should be ignored if such exclusion is in favour of the beneficiary, and this to the extent hereinafter indicated. The divisor (47) is also reduced by the same number of years; and

NUMBER OF YEARS OF CONTRIBUTION BY THE PARTICIPANT	NUMBER OF YEARS EXCLUDED
21 - 25	1
26 - 30	2
31 - 35	3
36 - 40	4
41 - 47	5

d) that, in order to establish the right to the retirement pension, the worker must have completed a minimum of two years of contribution to the Plan. However, if the worker is not a Canadian citizen, he must have completed a minimum of ten years of contribution to the Plan, subject to the provisions relating to reciprocal agreements.

A - Remarks

The retirement pension in a social security program may be divided into two portions of a very distinct character. The first portion, which we call the basic pension, must guarantee to the retired person a minimum subsistence income. Therefore, it may be in the form of a pension of a level amount payable to all citizens starting at a certain age. The second portion, called pension related to income, guarantees to the worker, during his retirement, the continuance of a portion of his income and allows him a standard of living comparable to that which he enjoyed prior to his retirement.

B - Basic Pension

In Canada, the Old Age Security pension of $75 per month from age 70 constitutes what is called the basic pension. It is the intention of the Federal Government (6) that persons who so wish may apply for a reduced pension payable from their 65th birthday. According to the proposed method of reduction of the amount of pension, the person requesting the pension to start at age 65 receives $50.62 per month. We shall consider later the problem created by the absence of control by the Quebec Government on this pension with regard to the present pension plan, and we shall analyze the situation which would develop if the Federal Government did not carry out its intention of allowing commencement of the Old Age Security pension from age 65.

It is, therefore, important to determine in the first place whether the Old Age Security pension adequately fulfills its role as a basic pension. Should the answer be in the affirmative, the retirement pension in the Quebec Plan will be directly related to the worker's contributory income. On the other hand, should the answer be in the negative, the pension under the plan being studied will be proportionately higher in regard to contributory income for workers whose income is too low.

In the Province, living conditions differ from one region to another and there is a wide gap between the extremes. It is therefore impossible to establish a uniform amount of income which could be considered as the adequate minimum subsistence income for all regions of the Province. Moreover, it is comparatively difficult to establish such a minimum amount for a given region in view of the multiplicity of factors to be considered.

In the case of a retired couple living in Montreal, the required minimum subsistence income has been estimated according to standards considered acceptable by the Department of Family and Social Welfare (7). This income must amount to $137.61 per month if the rent is subject to control by the Rental Board, and to $160.69 in the absence of rent control. The average between these two amounts is $149.15 per month or approximately $1,800 per year. In the case of an old person living alone, the minimum income required is $1,100 per year.

Since the cost of living is higher in Montreal than in any other region of the Province, the Committee feels that the Old Age Security pension adequately fulfills its role for the whole Province only when retirement takes place at age 70, and in the case of a retired couple when the wife herself receives the Old Age Security pension.

C - Pension Related to Income

Consequently, the pension related to income must supplement the basic pension when the participant actually retires before age 70, or when he retires at 70 and his wife is younger than he is. It is, therefore, necessary that the pension related to income, that is to say the pension under the Plan, represent a higher percentage of the worker's contributory income as this amount nears the bottom of the scale. In fact, if the pension related to income is equal to a uniform percentage of the contributory income, whatever the amount of such income, the total retirement income will be insufficient in too many cases.

D - Income Used in the Calculation of Retirement Pension

Although it is desirable that the pension related to income be higher proportionately as the participant's contributory income nears the bottom of the scale, it is necessary that such difference be not too pronounced. This results from the fact that a redistribution of resources will result in favour of workers whose incomes are low and that it is desirable that the financing system of the Plan should not deviate from a savings system more than is strictly necessary. Moreover, the Plan should not assume too large a part of the normal role of the Old Age Security pension so that the respective roles of the two plans be well defined and that, in future, adjustments to one or the other of these two programs be effected whenever necessary.

The Committee feels that such objectives may be reached if the pension related to income is equal to a fixed percentage of the worker's income not in excess of the amount of maximum income, but without deducting the minimum income.

E - Average Income

Before determining the percentage which the worker's retirement pension should represent in relation to his earned income, it is necessary to establish the method to be used in the calculation of this income.

During the last few years, it has become more and more obvious that retirement plans, according to which the amount of pension is

equal to a percentage of the average salary during the full period of service of the worker, provide pension amounts too low in relation to final salary. Such a situation results either from the ascending scale of the workers' salary according to their experience and responsibilities or from the general increase of the salary level resulting from an increase in productivity and from a decreasing dollar value. Therefore, an increasing number of private retirement plans determine the pension amount in relation with the worker's salary during his last years of service.

However, the formulas used in the private plans, according to which amounts of retirement pension are determined in relation to income during the last years of service, present major inconveniences in a universal plan. For example, we have already mentioned the problem of independent workers who could artificially increase the amount of their income during the years preceding their retirement so as to receive higher benefits. The use of a formula based on the income of the last working years would increase this risk. Moreover, we also find classes of workers whose income decreases during the years preceding retirement.

It is, therefore, advisable and even necessary to use, in the calculation of the amount of retirement pension, the worker's average income during the maximum period of contribution possible under the Plan, that is to say between the ages of 18 and 65. The average income so calculated offers the advantage of being automatically reduced in the case of workers who enter the Province after having attained the age of 18 and in the case of those who do not contribute to the Plan during a certain number of years, either because they have left the Province or because they are not engaged in remunerative work.

F - Average Adjusted Income

However, to prevent the amount of retirement pension being too low in relation to the income for the years preceding retirement, owing to the general increase of salary level and to the decrease in dollar value, it is necessary to adjust incomes, before calculating the average income, according to an index representing either the general salary increase or the increase in consumer prices.

When the amounts of income used in the calculation of the average are adjusted so as to take into account the general salary increase between the years where such incomes were earned and retirement, the amount of the pension thus established allows the worker to benefit fully from the improvement in the standard of living which he enjoyed

during his active life and, in addition, to maintain the purchasing power of his pension. On the other hand, if the adjustment is based on the increase in consumer prices, the worker is then only assured that the amount of his pension will keep its purchasing power.

The first adjustment method corresponds to formulas of private plans based on an employee's terminal salary while the second method is closer to a formula based on average salary during a long period of years of service.

The Committee feels that the adjustment method should be limited to maintaining the purchasing power of the worker's pension and not make him benefit from the increase in the standard of living during his active life. Since this question is analyzed in detail in the chapter on the adjustment of pensions and of incomes used in the calculation of pensions, we shall merely mention, for the time being, that the Committee feels that incomes used in the calculation of the retirement pension should be adjusted according to a method based on the national Consumer Price Index.

G - Maximum Adjusted Income

It is also necessary to provide that the maximum income for purposes of contributions and calculation of the amount of pension be also adjusted in conformity with the adjustment method advocated by the Committee, for the following reasons:

a) the portion of incomes used in the calculation of pensions would diminish rapidly in the absence of such an adjustment and, gradually, the plan would lose its efficiency; and

b) the adjustment of the maximum income is necessary in order that contributory incomes and, consequently, total contributions increase along with adjustments made in incomes used in the calculation of pensions.

H - Exclusion of Low Income Years

The Committee feels that another form of adjustment in the calculation of average adjusted income is necessary. In fact, during his normally active period, the worker may very well have been unable to contribute to the plan, either for reasons over which he had no con-

trol or for other justifiable reasons. We shall mention only the most frequent causes: sickness, unemployment and studies after the age of 18. Therefore, in the opinion of the Committee, the years of lowest adjusted income must not be taken into account in the calculation of the "average adjusted income", that is to say in the numerator and denominator, if such exclusion is to the advantage of the beneficiary, and this to the following extent:

NUMBER OF YEARS OF CONTRIBUTION BY THE PARTICIPANT	NUMBER OF YEARS EXCLUDED
21 - 25	1
26 - 30	2
31 - 35	3
36 - 40	4
41 and more	5

I - Amount of Retirement Pension as a Percentage of Average Adjusted Income

Having established the method of calculation of average income used in the calculation of the pension, its amount should be determined in the form of a percentage of the average adjusted income.

The Committee has considered various percentages of average adjusted income taking into account contributions which would be required, objectives generally aimed at in national social security plans, the proposed Canada Pension Plan, the Ontario law on portable pensions and, finally, the pension formulas used in public and private retirement plans. The Committee finally decided on a percentage of 25% of the average adjusted income.

J - The Worker's Right to a Retirement Pension

The Committee feels that the restrictions necessary to the establishment of the right to a retirement pension should not result in penalizing the worker needlessly or in affecting his employment mobility between provinces. Such restrictions should therefore have the sole effect of not allowing the worker who has contributed occa-

sionally to the Plan the right to a retirement pension. The Committee feels that a minimum of two years of contribution, not necessarily consecutive, is sufficient to establish the worker's right to a retirement pension.

According to the Committee, such restrictions are not sufficient, however, if the worker is not a Canadian citizen. In the absence of an agreement based on reciprocity, it becomes in fact necessary to impose restrictions which are almost identical to those of the United States Social Security System, in order that American citizens working in Quebec be on the same level, in this respect, as Canadian citizens working in the United States. This is why the Committee feels that a minimum of ten years of contribution to the Plan is a legitimate prerequisite for establishing the right to a retirement pension of the participant who is not a Canadian citizen. This type of restriction exists in various national plans, such as the Swedish plan (8) according to which a minimum of ten years of contribution is required of the participant who is not a Swedish citizen while only three years are required of Swedish citizens.

K - Illustrative Tables

To facilitate the analysis of the Committee's recommendations regarding the retirement pension, three tables appear below:

Table No. 3: Effective Retirement at Age 65

In this table, we give amounts of the retirement pension in cases where the worker retires effectively from the labour market at age 65, assuming he requested the commencement of his anticipated Old Age Security pension as from that age.

TABLE No. 3

Worker's Average Income	Average Contributory Income	Retirement Pension		Retirement Pension and Anticipated Old Age Pension	
$	$	$	% (1)	$ (2)	% (3)
2,000	1,000	500	50.0	1,107	55.4
3,000	2,000	750	37.5	1,357	45.2
4,000	3,000	1,000	33.3	1,607	40.2
5,000	4,000	1,250	31.3	1,857	37.1
6,000	5,000	1,500	30.0	2,107	35.1

Notes: (1) Percentage in relation to the worker's average contributory income.

(2) The amount of anticipated Old Age Security Pension, at age 65, would be $50.62 per month, therefore $607 per year (9).

(3) Percentage in relation to the worker's average income.

An analysis of this table leads to the following comments:

a) the retirement pension in the Quebec Plan, i.e. pension related to income, represents an increasing percentage of the average contributory income as the worker's income decreases. In fact, this percentage is 50% when the average contributory income is $1,000 and 30% when it is $5,000. We have already seen that it is necessary that the pension related to income be proportionately higher at lower levels of income by reason of the insufficiency of the anticipated Old Age Security pension.

b) the worker's total retirement income, i.e. the total of the pension under the Quebec Plan and the anticipated Old Age Security pension, is $1,107 per year for an average income of $2,000. We have already seen that an income of $1,000 per year is, for the whole Province, the minimum required by an aged person living alone.

c) in private retirement plans, it is considered desirable to provide an employee with a retirement pension representing between 50% and 70% of his average salary during his last years of service.

An analysis of the percentages which represent the total retirement income in relation to the worker's average income, as the amount of such income increases, i.e. 55.4% for an income of $2,000 and 35.1% for an income of $6,000, shows that the worker must supplement his retirement pension.

Therefore, according to the Committee, this leaves the worker with a reasonable share of responsibility, thus allowing private initiative to play its normal role.

Table No. 4: Effective Retirement at Age 65, Married Worker

Table No. 4 makes possible the analysis of the situation of a married worker retiring at the same age.

TABLE No. 4

EFFECTIVE RETIREMENT AT AGE 65, MARRIED WORKER

Worker's Average Income	Retirement Pension	Retirement Pension and Anticipated Old Age Pension	
$	$	$ (1)	% (2)
2,000	500	1,715	85.8
3,000	750	1,965	65.5
4,000	1,000	2,215	55.4
5,000	1,250	2,465	49.3
6,000	1,500	2,715	45.3

Notes: (1) Total amount when the worker and his wife are each receiving the Old Age Security pension of $50.62 per month at age 65, or a total of $1,215 per year (10).

(2) Percentage in relation to the worker's average income.

The analysis of this table shows that the worker's total retirement income is almost always in excess of the minimum subsistence

income. In fact, we have already seen that the minimum income for a retired couple is approximately $1,800 per year.

It is important to note that if the wife is younger than the worker, the total retirement income is less than the amounts indicated in Table No. 4 as long as the wife has not attained age 65. The total income during this period is that indicated in Table No. 3 and it is found that it is always less than $1,800 per year, except at the highest level of income.

Therefore, the Committee desires to emphasize the fact that the suggested pension amounts constitute minimum amounts.

Table No. 5: Effective Retirement at Age 70

In this table, we give retirement pension amounts when the participant retires effectively at age 70, assuming he elects for his Old Age Security pension to begin only at that age.

TABLE No. 5

EFFECTIVE RETIREMENT AT AGE 70

Worker's Average Income	Retirement Income	Retirement Income and Old Age Pension			
		Single Worker		Married Worker (1)	
$	$	$	% (2)	$	%
2,000	500	1,400	70.0	2,300	115.0
3,000	750	1,650	55.0	2,550	75.0
4,000	1,000	1,900	47.5	2,800	70.0
5,000	1,250	2,150	43.0	3,050	61.0
6,000	1,500	2,400	40.0	3,300	55.0

Notes: (1) Married worker whose wife has attained age 70.

(2) Percentage in relation to the worker's average income.

The analysis of this table shows that the total retirement income is always higher than the minimum subsistence income, whether the worker is married or single.

The Committee realizes that the total amount of retirement income may be deemed too high if the worker retires at age 70. It believes it is important to mention in this respect that the amounts shown result from actuarial adjustment according to the age at which the Old Age Security pension begins.

In the three preceding tables, amounts of retirement pension are expressed as percentages of the worker's average income. Since a worker's income generally reaches its highest level during the last years of his career, pension amounts will represent lower percentages than indicated, in relation to the worker's terminal income, except for those whose income always exceeds the maximum income. The Committee has not deemed it proper to give such percentages in relation to the worker's terminal income because of the different scales of income according to various classes of workers.

L - Optional Method of Calculating Retirement Pension

The above formula recommended by the Committee is inspired by the formula advocated by the Federal project. It may appear involved to participants, since it is uncommon in retirement plans.

The Committee describes the optional formula:

> " The yearly amount of retirement pension, at age 65, is equal to 0.55% of the worker's annual average adjusted income during the years he contributed to the Plan, the amount of contribution being multiplied by the number of years of contribution."

The suggested formula follows the same principle and gives approximately the same result as the formula recommended by the Committee.

For example, after 47 years of contribution, the amount of pension is equal to 0.55% times 47, that is to say 25.85% of average income, as compared with 25% in the Committee's recommendation.

SECTION 3 - TRANSITION PERIOD

RECOMMENDATION "7"

The Committee recommends that for the worker over age 18 on the effective date of the Plan, the "average adjusted income" be calculated by dividing the worker's total adjusted income by the greater of the following number of years:

a) 20 years; or,

b) the number of years between the effective date of the Plan and the worker's 65th birthday.

A - Reminder

We have seen that the amount of retirement pension is equal to 25% of the average adjusted income. With the exception of the possible exclusion of a certain number of years, when the worker has contributed to the Plan during more than 20 years, the average adjusted income is calculated by dividing the worker's total income during his contributing years by the number of years between the minimum age for admissibility to the Plan (age 18), and age 65, i.e. by 47.

In this method, it is obvious that a period of 47 years must be completed before the amount of retirement pension then granted reaches its maximum level. For example, the worker who has attained age 50 on the effective date of the Plan may contribute during 15 years, which means that his pension amount would be equal to 15/47 of the normal amount.

B - Necessity of a Transition Period

It is socially desirable that the normal level of benefits be

attained more quickly, so that the worker who has not had the opportunity of contributing in the past may benefit from the Plan to the fullest extent possible. This worker has contributed to the development of the economy of the Province and it seems only fair that he be treated thus. Therefore, the Committee believes that transition provisions are necessary in the method of calculating the average adjusted income.

C - Effect of Transition Provisions

In conformity with the recommended transition provisions, every worker over age 18, who has not attained age 46 on the effective date of the Plan, may receive a full retirement pension, provided, however, he has contributed regularly. For the worker age 46 or more on the effective date of the Plan, the amount of retirement pension is based on his total adjusted incomes during his contributing years, divided by 20 instead of by 47. This represents an increase of 135% of the pension amount.

D - Redistribution of Financial Resources

The existence of such transition provisions causes, however, a redistribution of financial resources in favour of the first contributors to the Plan. In other words, the value of contributions paid by all such workers will be less than the value of benefits they will receive and the difference will be made up by contributions paid by future contributors. The Committee feels that transition provisions should be based on a period of 20 years because the redistribution which would result from shorter periods would:

a) benefit the worker whose income is higher (explanation of this phenomenon is given in the chapter dealing with the financing system of the Plan); and,

b) distinguish the Plan even more from a system based mainly on savings.

E - Consequences of a Shorter Period

The Committee feels it necessary to draw attention to the fact

that the proposed Canada Pension Plan contains transition provisions based on a period of 10 years (11). Such a short period may appear more attractive to the first beneficiaires but it is hardly justifiable.

This aspect of the Federal project has, however, been strongly criticized because:

a) it burdens future generations with a dispreportionate portion of the cost of this project; and,

b) it gives too great an advantage to participants in the highest income brackets by reason of the redistribution effected in their favour; and,

c) it allows a certain number of beneficiaries who have contributed to private retirement plans to receive a total retirement income higher than their terminal salary.

Since a similar situation would arise if the Quebec Plan were to provide transition provisions based on 10 years, we are giving below an example which substantiates this last criticism.

Let us take as an example a worker in a firm whose retirement plan provides, after 35 years or more of service, for a pension of 70% of the average salary for the last 5 years of service. If this employee has completed 35 years of service, is 55 years of age on the effective date of the Quebec Plan and has a salary of $6,000, he would receive, at age 65, a total retirement income of $6,307 per year, i.e.:

a) the anticipated Old Age Security pension of $607 per year; and,

b) a pension of $4,200 per year from his employer's retirement plan, even if this plan is amended following the establishment of the Quebec Plan; and,

c) a pension of $1,500 per year from the Quebec Plan (25% of his adjusted income).

The Committee feels that such situations should be avoided, all the more as the amount of contributions paid by such a worker to the Quebec Plan would be much less than that of his benefits. This example shows that the use of transition provisions based on 20 years reduces the worker's pension from the Quebec Plan (paragraph c)above) to $750 per year; therefore, this worker's total retirement income becomes $5,557 instead of $6,307 in accordance with the provisions contemplated by the Canadian project.

F - Consequences of a Longer Period

The Committee has also considered transition provisions based on a period longer than 20 years. A longer period would lighten the redistribution and bring the Plan closer to a pure savings plan. A study of the criticism formulated in this respect, regarding the Ontario law on portable pensions, has, however, convinced the Committee that it would not be wise to make such a recommendation. In fact, according to this law, the maximum level of retirement pensions will be reached only 40 years after its effective date. This is justly considered as much too long a period for a social law to fully play its role.

The Committee came to the conclusion that transition provisions based on a 20-year period would constitute a reasonable compromise between these two extremes.

G - Optional Method of Calculating Retirement Pension

For contributors born before 1947, the optional formula for retirement pension calculations, as described in Paragraph L of Section 2 of this chapter, remains unchanged with the exception of the percentage of 0.55% which is replaced by percentages given in Table No. 6 below. This percentage varies with the contributor's year of birth.

The suggested formula follows the same principles and gives approximately the same results as those of the formula recommended by the Committee.

TABLE No. 6

Contributor's Year of Birth	Percentage for Calculation of Pension	Contributor's Year of Birth	Percentage for Calculation of Pension
	%		%
1946	0.56	1933	0.78
1945	0.57	1932	0.81
1944	0.59	1931	0.83
1943	0.60	1930	0.86
1942	0.62	1929	0.89
1941	0.63	1928	0.92
1940	0.65	1927	0.96
1939	0.66	1926	0.99
1938	0.68	1925	1.03
1937	0.70	1924	1.08
1936	0.72	1923	1.12
1935	0.74	1922	1.175
1934	0.76	1921	1.23
1933	0.78	1920 and before	1.29

SECTION 4 - CALCULATION OF AMOUNT OF RETIREMENT PENSION

A - Preliminary Explanations

The Committee believes it useful to give a few examples illustrating the method of calculating the amount of retirement pension, for the following reasons:

i) these examples show the effect of the various provisions relating to the amount of retirement pensions; and,

ii) these examples describe the operation of the point system which may be used to determine the amount of retirement pension; and,

iii) since the amount of pensions to invalids and widows, and of death benefits, is directly related to the amount of the retirement pension, it is important to understand how the latter is calculated.

B - Point System

On account of the very large number of contributors to the Plan, it is necessary to simplify, as much as possible, the keeping of individual records as well as the calculations required to establish the amount of the retirement pension, since the provisions establishing this amount are fairly complex.

The point system constitutes a procedure which simplifies greatly the operation of such a plan. It is used in a certain number of national plans, for example in Sweden (12) and more particularly when the plan provides for the adjustment of incomes used in the calculation of the amount of the retirement pension according to an index.

The Committee wishes to mention that the point system to be used may differ from the system described below and that it should be set up by specialists responsible for data processing in co-operation with those responsible for collection of contributions.

According to the point system, the calculation of the amount of the retirement pension is effected in three steps:

First Step:

For each year during which the worker is contributing, he will be granted a certain number of points. This number of points is obtained by dividing the amount of the contributor's income by the amount of maximum income for the year during which contributions are made. For example, if a contributor's income amounts to $4,500 during the first year of the Plan while the amount of maximum income is $6,000, his number of points is equal to .750 (4,500 ÷ 6,000 = .750).

Second Step:

The average adjusted income is calculated at the commencement of the retirement pension by multiplying the average number of points earned by the contributor during his career by the amount of maximum income at the beginning of the current year.

Third Step:

The amount of retirement pension is calculated by multiplying the average adjusted income by 25%.

C - Assumptions on which Examples are Based

The examples below are based on the following assumptions:

i) that the Plan will take effect on January 1, 1966; and,

ii) that the amount of maximum income is $6,000 in 1966 and in 1967, and increases by 1% per year from 1968. In other words, it is assumed that the national Consumer Price Index will increase by 1% per year from 1968. The maximum income is adjusted only in amounts of $100.

D - Examples

Firstly, let us suppose that a worker is exactly age 55 on the effective date of the Plan and that his earned income amounts to $4,000 during each of the 10 following years; the amount of his retirement pension at age 65 will be calculated as follows:

TABLE No. 7

Year	Maximum Income (1)	Worker's Income (2)	Number of Points 2 ÷ (1)
	$	$	
1966	6,000	4,000	.667
1967	6,000	4,000	.667
1968	6,000	4,000	.667
1969	6,100	4,000	.656
1970	6,100	4,000	.656
1971	6,200	4,000	.645
1972	6,300	4,000	.635
1973	6,300	4,000	.635
1974	6,400	4,000	.625
1975	6,400	4,000	.625
1976	6,500		
		Total:	6.478

Notes:

i) The average number of points is obtained by dividing the total number of points by 20 instead of by 47, on account of the transition provisions (see Recommendation 7).

ii) The yearly amount of retirement pension is obtained by multiplying the average adjusted income by 0.25.

Average number of points: 6.478 ÷ 20 = .324

Average adjusted income: $6,500 x .324 = $2,106

Yearly amount of retirement pension: $2,106 x 0.25 = $526.50

Secondly, let us suppose that a worker exactly age 40 on the effective date of the Plan earns an income of $ 4,000 in 1966 and that his income increases by $200 per year subsequently up to and including age 64. The amount of his retirement pension, at age 65, will be calculated as follows:

TABLE No. 8

Year	Worker's Age	Maximum Income	Worker's Income	Number of Points
1966	40	6,000	4,000	.667
1967	41	6,000	4,200	.700
1968	42	6,000	4,400	.733
1969	43	6,100	4,600	.754
1970	44	6,100	4,800	.787
1971	45	6,200	5,000	.806
1972	46	6,300	5,200	.825
1973	47	6,300	5,400	.857
1974	48	6,400	5,600	.875
1975	49	6,400	5,800	.906
1976	50	6,500	6,000	.923
1977	51	6,600	6,200	.939
1978	52	6,600	6,400	.970
1979	53	6,700	6,600	.985
1980	54	6,800	6,800	1.000
1981	55	6,800	6,800	1.000
1982	56	6,900	6,900	1.000
1983	57	7,000	7,000	1.000
1984	58	7,100	7,100	1.000
1985	59	7,100	7,100	1.000
1986	60	7,200	7,200	1.000
1987	61	7,300	7,300	1.000
1988	62	7,300	7,300	1.000
1989	63	7,400	7,400	1.000
1990	64	7,500	7,500	1.000
1991	65	7,600		
				22.727

Notes:

i) According to the transition provisions, the average adjusted income is calculated by taking the average of his yearly adjusted incomes during the 25 years he contributed to the Plan (See Recommendation 7).

ii) Since the worker has contributed during 25 years, one year is excluded in the calculation of the average adjusted income; the excluded year is followed by an asterisk in the table (See Recommendation 6, paragraph C).

iii) From 1981, the amount of the worker's income, for purposes of the Plan, is limited to the amount of maximum income.

Total number of points: 22.727 - .667 = 22.060

Average number of points: 22.060 ÷ 24 = .919

Average adjusted income: $7,600 x .919 = $6,984

Yearly amount of retirement pension: $6,984 x 0.25 = $1,746

Thirdly, let us suppose that an immigrant, arriving in Quebec in 1972, begins to work on January 1, 1973 and is of the same age and has the same income, in the years between 1973 and 1990 inclusive, as the worker in the preceding example. The amount of his retirement pension at age 65 will be calculated as follows:

i) The number of years between the effective year of the Plan and the year of the worker's retirement is 25; the worker's average income is based on this number of years. Since the worker has contributed only during 18 years, he is not entitled to any points for the first 7 years (See Recommendation 7).

ii) Since the worker has contributed only during 18 years, no other year will be excluded in the calculation of his average adjusted income (See Recommendation 6, paragraph C).

Total number of points: 22.727 - (.667 + .700 + .733 + .754 + .787 + .806 + .825) = 17.455

Average number of points: 17.455 ÷ 25 = .698

Average adjusted income: $7,600 x .698 = $5,305

Yearly amount of retirement pension: $5,305 x 0.25 = $1,326.25

CHAPTER IV

BENEFITS TO SURVIVORS

SECTION 1 - WORKER'S DEATH BEFORE BEING ENTITLED TO RETIREMENT OR DISABILITY PENSION

RECOMMENDATION "8"

The Committee recommends that the entitlement to widows' and orphans' pensions and to death benefits should be granted on the worker's death before his entitlement to a retirement or disability pension provided the following conditions of eligibility are fulfilled:

a) the worker must have contributed to the Plan during a minimum of two years;

b) the worker must have contributed to the Plan during one of the three years immediately preceding the year of his death; and,

c) the number of years of contribution by the worker shall not be less than one year for each possible three years of contribution, counting from the last of the following years:

i) the effective year of the Plan; or,

ii) the year during which the worker attained age 20; and,

d) in the case of a widows' pension, the marriage must have been contracted at least three years before the date of the worker's death. However, if such a worker leaves orphans, this provision does not apply.

A - General considerations

At the family level, the problems resulting from the worker's death, as bread-winner, are of an entirely different nature to those resulting from retirement, and are all the more complicated since it is impossible to foresee the time of death.

In general, the financial responsibilities of the married worker reach a high level fairly soon and stay at this level for a long time, then diminish very slowly. These responsibilities are faced by any married worker who brings up children and gives them a proper education. Even when the worker's children have become self sufficient, the wife still needs protection since she is generally no longer able to do remunerative work either for health reasons or for lack of experience and preparation.

B - Necessity of conditions of eligibility

A plan based solely on savings cannot properly protect the worker in the event of death. Protection, in virtue of such a plan, is almost nonexistant during the period when family obligations are at their highest level. If it is desired that the plan retain the essential characteristics of a social security program, it is then necessary to introduce an element of insurance in order to cover the case of the worker's premature death. Thus, it becomes possible to ensure, after the worker's death, the continuation of a portion of his income even if the accumulation of the contributions paid on his behalf is insufficient to constitute an adequate pension to the survivors. Consequently, the introduction of the insurance principle in the Plan means that, in the event of premature death, benefits, the value of which is superior to that of the contributions, will be paid.

C - Conditions of eligibility

The Committee has therefore considered it essential to impose certain conditions in order to establish the right to widows' and orphans' pensions and to the death benefit.

a) Number of years of contribution

Since the worker's contributions are derived from his earned income, the Committee is of the opinion that the right to widows' and

orphans' pensions and to the death benefit be granted only when the worker, on his death, can be considered as an authentic part of the labour market. This restriction prevents payment of benefits in favour of persons who had no solidary relationship with workers.

The recommended conditions are therefore based on the number of years of contribution to the worker's account, beginning with whichever of the following dates occurs last:

i) the effective year of the Plan; or

ii) the year during which the worker attained age 20.

To establish the worker's right, one year of contribution is required for each three possible years of contribution between the last of the above defined dates and the year of his death. Moreover, a minimum of two years of contribution is required and the worker must have contributed to the Plan during one of the three years immediately preceding the year of his death.

b) Date of marriage

Secondly, in the case of widows' pensions, it is necessary to disqualify a widow whose marriage with the worker would appear to have been contracted solely for the purpose of benefiting from the Plan. Therefore, the Committee is of the opinion that, if the worker leaves no orphan of child from a previous marriage, only the widow whose marriage has been contracted for at least three years, on the date of the worker's death, shall be eligible for a widows' pension. However, this condition does not apply to orphans' pensions.

D - Practical example

The following example shows how the right to survivor benefits is established. Let us suppose that a worker dies nine years after the establishment of the Plan, when he is 32 years of age. The number of possible years of contribution since the entry into force of the Plan being 9, the right exists if the worker has contributed for at least three years, of which at least one must have been within the three years preceding the year of his death.

In this example, it is evident that if the calculation of the number of possible years of contribution could not be made, from the effective year of the Plan, for the worker who is then age 20 or over, the number of possible years of contribution would have been twelve and his right would have existed if he had contributed to the Plan for at least four years.

There is thus no discrimination against the worker who is over age 20 on the effective date of the Plan.

SECTION 2 - WORKER'S DEATH AFTER HIS ENTITLEMENT TO A RETIREMENT OR DISABILITY PENSION

RECOMMENDATION "9"

The Committee recommends that the right to widows' and orphans' pensions and to the death benefit be granted on the worker's death after his entitlement to the retirement or disability pension.

In the case of the widows' pension, the marriage must have been contracted for at least three years on the date of the pensioned worker's death; however, should the worker leave orphans or children under age 18, from a previous marriage, this restriction to the widows' pension shall not apply.

Comments

The worker being pensioned, the conditions of eligibility no longer apply. However, it remains necessary to set a restriction to the widows' pension when the marriage would appear to have been contracted only with the aim of benefiting from the advantages of the Plan.

SECTION 3 - WIDOWS'PENSIONS

RECOMMENDATION "10"

The Committee recommends:

a) that the widows' pension be payable to the widow as from the worker's death, either before or after his entitlement to the retirement pension, provided he had fulfilled the conditions of eligibility; and,

b) that the pension payment terminate on the widow's remarriage; and,

c) that the pension be composed of two amounts as follows;

i) a basic amount of $25 per month, payable up to the widow's 70th birthday;

ii) an amount related to the worker's income, payable for life, equal to 37½% of the amount of the retirement pension the worker would have received, based on the amount of his average adjusted income on the date of his death and assuming he would have kept on working up to his 65th birthday.

A - Ideal Amount of Widows' Pension

The widows' pension must include a basic amount and an amount related to income for the same reasons as are given for the retirement pension. Normally, the basic amount should be sufficient to provide the widow with a minimum subsistence income. Since the current amount of Old Age Security pension is $75 per month, the basic amount of the widows' pension should also be $75 per month. Payment of this amount should cease at age 70, with the start of payment of the Old Age Security pension. As for the amount related to income, it is generally considered that it should be equal to 50% of the amount of the retirement pension the worker would have received.

TABLE No. 9

IDEAL AMOUNT OF WIDOWS' PENSIONS

Table 15 gives the amount of widows' pensions which would result from the description given above.

Worker's Average Adjusted Income	Basic amount (1)	Amount Related to Income (2)	Ideal Amount of Widows' Pension (3)	
$	$	$	$	%
2,000	900	250	1,150	57.5
3,000	900	375	1,275	42.5
4,000	900	500	1,400	35.0
5,000	900	625	1,525	30.0
6,000	900	750	1,650	27.5

Notes:

(1) Payable up to the widow's 70th birthday; the old age security pension becomes payable as of this date.

(2) Payable for life.

(3) Percentage of the worker's average adjusted income.

B - Impossibility of Granting the Ideal Amount of Pension

The Committee has however judged that the adoption of this description of the widows'pension was neither recommendable nor possible for the following reasons:

i) the widow's need for protection is provided mainly by life

insurance. Even if no statistics are presently available regarding the amount of life insurance held by workers with comparatively low incomes, the fact that the Canadian people hold the largest amount of life insurance in relation to national income (13) suggests that the needs not covered are probably less than in many other countries. The fact that residents of Quebec had insured their lives for almost $17.5 billion as at December 31, 1962, gives an idea of the importance of this protection; (14) and,

ii) The cost of these amounts of widows' pensions, added to the cost of other benefits, would increase the contribution rate to a higher level than that presently considered acceptable.

C - Recommended Amount of Widows' Pensions

This is why the Committee recommends a widows' pension composed of a basic amount of $25 per month, payable up to the widow's 70th birthday, and of an amount related to income, payable for life, equal to 37½% of the amount of the retirement pension which the worker would have received, basing this amount on his average adjusted income on the date of his death and assuming he would have kept on working up to his 65th birthday.

TABLE No. 10

RECOMMENDED AMOUNT OF WIDOWS' PENSIONS

The following table gives the amounts of widows' pensions resulting from this recommendation.

Worker's Average Adjusted Income	Basic Amount (1)	Amount Related to Income (2)	Recommended Amount of Widows' Pension (3)	
$	$	$	$	%
2,000	300	188	488	24.4
3,000	300	281	581	19.4
4,000	300	375	675	16.9
5,000	300	469	769	15.4
6,000	300	563	863	14.4

Notes:

(1) Payable up to the widow's 70th birthday. Thereafter, the Old Age Security pension, in the amount of $900 per year, is payable.

(2) Payable for life.

(3) Percentage of the worker's average adjusted income.

D - Redistribution of Financial Resources

The Committee wishes to emphasize the fact that this recommendation produces amounts of widows' pensions which are proportionately lower as the level of the worker's income increases. This description of the widows' pension means therefore a redistribution of resources in favour of workers whose incomes are comparatively low. As already indicated, this question is treated in detail in the chapter dealing with the financing system of the Plan.

E - Questions Relating to the Widows' Pension

As there are basic differences between the widows' pension and the retirement pension, it is necessary to analyze certain particular aspects of the former.

i) Widow's Remarriage

Does the widow receiving a widow's pension lose her right to that pension in the event of remarriage? The husband, as head of the family, has the financial responsibility of providing for his wife and children. Consequently, should the husband die, the widow as such receives a pension. Following the same logic, the Committee recommends that, should the widow remarry, payment of such pension should terminate. Moreover, as the widow seldom indicates her remarriage when such action entails cancellation of a pension, the Committee recommends that the new husband be held responsible for benefits paid after remarriage, regardless of matrimonial status.

ii) Widowers' Pensions

On the death of a female married worker, is the widower entitled to a widowers' pension?

In accordance with the principle stated in the precedings paragraph, the Committee recommends that no widowers' pension be granted unless the widower is an invalid. The provisions relating to the widows' pension would apply, mutatis mutandis, to the widowers' pension.

iii) No Means Test

We have seen that it is necessary to introduce into the Plan an insurance element with respect to the widows' pension.

The two following questions are therefore immediately raised, to wit: should payment of the widows' pension

a) be subject to a means test of the widows' income; and,

b) terminate if the widow receives an earned income in excess of a certain limit.

These two questions are of the same nature and may be analyzed simultaneously. The first principle laid down is that of the participant's right to the benefits of the Plan. The Committee insists on the importance of this principle and recommends,

naturally, that payment of the widows' pension shall not be subject to any restriction as to income.

It is equally important to mention that the widow would thus be able, if she so desires and if she has the proper training, to take either permanent or temporary employment to tide her over any difficult periods and, subsequently, she could terminate such employment, if circumstances so required it.

iv) Divorce and Separation

The Workmen's Compensation Act (15) contains a provision which reads as follows:

> "A woman who was divorced, separated from, or was not being maintained by the workman, who has died as a result of accident or disease covered by this act, shall not receive any of the compensation, rent or allowances by this act provided, unless in the opinion of the Commission she was entitled to be maintained by him at the time of his death."

As the widows' or widowers' pension is not strictly based on the accumulation of contributions paid on behalf of the deceased worker, the Committee feels it would be improper to pay a widows' or widowers' pension in cases of divorce, separation as to bed and board or where the spouse was not provided for by the deceased participant. Therefore, the Committee recommends, for the Plan, a provision similar to that contained in the Workmen's Compensation Act and quoted above.

SECTION 4 - ORPHANS' PENSIONS

RECOMMENDATION "11"

The Committee recommends:

a) that the orphans' pension be payable on the death (i) of a male worker or (ii) of a female worker whose husband is an invalid or deceased, if the worker has fulfilled the conditions of eligibility applicable before being entitled to a retirement or disability pension; and,

b) that payment of the orphans' pension terminate on his or her 18th birthday; and,

c) that payment of the orphans' pension may be continued after his or her 18th birthday, if the orphan is attending school regularly; and,

d) that the amount of the orphans' pension be $25 per month.

A - General considerations

The purpose of the orphans' pension is to increase the widow's income while her children are not self-supporting. This pension is, therefore, a complement of the widows' pension. The provisions relating to the orphans' pension must therefore be established in relation to the widow's financial needs and not in relation to the accumulation of contributions in the worker's account on his death. The introduction of an insurance element with respect to the orphans' pension is necessary, as indicated before, just as in the case of the widows' pension.

B - Analysis of Financial Needs

In order to determine the amount of the orphans' pension, it is necessary first to establish the minimum amount of income required to provide for the child's needs. Studies made in this respect according to the standards of the Department of Family and Social Welfare (16) show that the minimum amount of monthly income required for a child, in Montreal, varies between $20 and $50. The difference between these two amounts results from the fact that as the child gets older, clothing, food, education and housing expenses increase substantially.

A first slice of the required amount comes from the federal family allowances granted for each child who has not attained age 16. The amount of the family allowance is $6 per month up to the child's tenth birthday and $8 per month subsequently. Under the Schooling Allowances Act (17) sanctioned in 1961, an allowance of $10 per month is paid for any student age 16 to 18. Therefore, the balance of the minimum income required per child varies generally between $14 and $40 per month.

C - Recommended Amount of Orphans' Pensions

In the determination of the amount of orphans' pensions, it is necessary to consider:

i) that the amounts of income given above apply to the Montreal region and are therefore higher than for any other region of the Province; and

ii) that the purpose of the Plan is to provide the worker with a minimum of protection; and

iii) that this protection may be provided through insurance on the worker's life and that in this respect the Quebec population is in general comparatively well protected.

The Committee is of the opinion that the amount of the orphans' pension should be $25 per month, payable up to the child's eighteenth birthday, and that payment may be continued beyond such age if the child is regularly attending school. The Committee wishes to mention that these provisions are identical to those contained in the Workmen's Compensation Act (18).

D - Explanatory Table of Pensions to Survivors

TABLE No. 11

RECOMMENDED AMOUNTS OF PENSIONS TO SURVIVORS

Table 11 gives the yearly amounts of pension, for various amounts of the worker's average adjusted income which the widow would receive in accordance with the Committee's recommendations, depending on whether she has one, two or three eligible children.

Worker's Average Adjusted Income	Widows' Pension (1)	Widows' and Orphans' Pensions (2) One Child	Two Children	Three Children
$	$	$	$	$
2,000	488	788	1,088	1,388
3,000	581	881	1,181	1,481
4,000	675	975	1,275	1,575
5,000	769	1,069	1,369	1,669
6,000	863	1,163	1,463	1,763

Notes:

(1) Amounts of widows' pensions are those given in Table 16.

(2) It is to be noted that there is no limit per family as to the number of orphans eligible for the orphans' pensions.

E - Redistribution of Financial Resources

As the amount of the orphans' pension is uniform, it represents a smaller percentage as the worker's level of income increases. A redistribution of resources is, therefore, effected in favour of workers whose incomes are lower. As indicated before, the question of redistribution is treated in detail in the chapter dealing with the financing system of the Plan.

F - Questions Relating to the Orphans' Pension

The orphans' pension presents a certain number of particular aspects which are analysed below:

i) Widow's Remarriage

Does the orphans' pension cease by reason of the mother's remarriage?

The Committee recommends that the widow or the child's tutor continue to receive the orphans' pension after remarriage. (Similar provisions are contained in the Workmen's Compensation Act) (19)

ii) Death of the Worker and of his Wife

When the worker and his wife are both deceased, is the amount of the orpahns' pension increased?

In such a case, whether the wife's death occurs before or after that of the worker, the Committee recommends that the widow's pension be payable to the orphan's tutor in addition to the regular orphans' pension.

iii) Mother's Death

In the event of the death of the worker's wife, is the worker entitled to the orphans' pension for his children?

To answer this question, it is necessary to distinguish between the wife who is not a member of the labour force and the one who, by reason of her contributions to the Plan, fulfils the conditions of eligibility relating to the orphans' pension.

In the first case, the worker remains responsible for his family, even though his wife has died. Consequently, the Committee considers there is no need for the orphans' pension. Thus, the worker has no right to the orphans'pension.

In the second case, if the wife has contributed to the Plan and fulfilled the conditions of eligibility establishing the right to the orphans' pension, the Committee recommends that the orphan's pension be payable only if the widower is an invalid.

iv) Orphan Attending School

Does payment of the orphans' pension continue if the orphan is attending school after his or her 18th birthday?

The Needy Mothers Assistance Act and the Workmen's Compensation Act stipulate the continuance of payments after the 18th birthday if the child is regularly attending school. Therefore, the Committee recommends that the same principle be adopted regarding the orphans' pension.

v) Orphan's Marriage

Is payment of the orphans' pension continued if the orphan marries?

The Committee is of the opinion that, according to the provisions of the Civil Code, the legal status of the orphan is modified by marriage and he or she can no longer be considered a dependent. Therefore, payment of the pension must be discontinued upon the orphan's marriage.

vi) Divorce and Separation

We have seen that the Committee recommends that no widow's pension be granted in cases of divorce or separation, and in cases where the wife had not been supported by the worker. According to this recommendation, the Committee is of the opinion that, in such cases, the orphans' pension be payable to the orphan's tutor.

SECTION V - DEATH BENEFIT

RECOMMENDATION "12"

The Committee recommends:

a) that a benefit be payable when, on the worker's death before his entitlement to the retirement or disability pension, no widows' or orphans' pension is payable, provided the worker has fulfilled the conditions of eligibility even if he has not contributed to the Plan during one of the three years preceding his death; and,

b) that if, after the termination of retirement, widows', orphans' and invalid pensions, the total amount of pension payments made falls short of the amount of the death benefit, the balance be payable; and,

c) that the amount of the death benefit be established as follows:

i) when the worker dies before being entitled to his retirement or disability pension, the amount is equal to two years of payment of the retirement pension he would have received, this amount being based on his average adjusted income on the date of death and on the assumption that he

would have continued to contribute up to his 65th birthday; or,

ii) when the worker dies after being entitled to his retirement or disability pension, the amount is equal to two years of payment of the retirement or disability pension, after deduction of benefits already paid;

d) that the death benefit be payable to the worker's legal assigns

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A - General Considerations

According to the various recommendations of the Committee regarding benefits granted on the worker's retirement, disability or death, certain categories of workers would not be entitled to any benefit in the event of their death before they become entitled to a retirement or disability pension. Such classes of workers are the following:

i) a worker married for less than three years at the time of his death and who leaves no child younger than 18; and,

ii) the worker married for over three years at the time of his death but who is divorced, separated or who does not support his wife, provided he leaves no child younger than 18; and,

iii) the single worker; and,

iv) the female married worker whose husband is not an invalid.

Since all workers are compelled to contribute to the Plan and the recommended contribution rate contains a real element of savings, the Committee considers it essential to provide a death benefit on the death of the worker before his entitlement to a retirement or disability pension.

Moreover, if the total amount of pension payments made is less than the amount of the death benefit at the termination of the retirement, disability, widows' and orphans' pensions, the Committee is of the opinion that the difference be paid so that, in such cases, the total amount of payments made be no less than the amount of the death benefit.

B - Analysis of Financial Needs

The status of the workers referred to above is different from that of married workers because, generally, they have no dependents. Naturally there are exceptions, such as that of the worker married for less than 3 years, without children, and that of the single worker financially supporting his aged parents.

Therefore, according to the Committee, the Plan, insofar as such classes of workers are concerned, should cover a portion of expenses incurred in the event of death, in order that they be guaranteed an essential minimum of hospital, medical, and funeral expenses, so that in no such case shall these expenses become a burden for their close relatives or friends.

In its analysis of this question, the Committee considered the following possibilities:

i) the refund of the worker's contributions; and,

ii) the payment of a lump sum benefit related to the worker's income and not to contributions paid.

C - Refund of the Deceased Worker's Contributions

In private retirement plans, it is often stipulated that, on a worker's death before retirement, the total amount of his contributions to the Plan is payable to his beneficiaries. In a large number of plans, interest is added to this amount. Moreover, in a smaller number of plans, the employer's contributions on behalf of the deceased worker are also paid, in whole or in part, to the beneficiaries .

Under such provisions, there exists no relation between the amount of death benefit and the needs of protection of the worker because such provisions result in granting benefits of an amount which increases with the number of years the worker has contributed to the Plan. The Committee has therefore rejected this possibility.

D - Death Benefit

The second possibility for which a lump sum death benefit, in an amount related to income is payable on the worker's death, before entitlement to a retirement or disability pension, when there is no right to a

widow's or orphan's pension, is recommended by the Committee for the following reasons:

i) the amount of benefit being related to the worker's income and not to the amount of his contributions to the Plan does not vary according to the number of years the worker contributed to the Plan and thus comes closer to his need for protection, which remains comparatively level; and,

ii) the definition of the death benefit in relation to the worker's need for protection is in accordance with the principle which has guided the Committee concerning widows' and orphans' pensions.

E - Recommended Amount of Death Benefit

Group life insurance programs for employees, members of labour unions, etc., are generally established for the purpose of providing the widow with an amount sufficient to cover the last illness and funeral expenses, and to grant her an amount representing a few months' salary in order to allow her to become adjusted to her new living conditions. Generally, such programs provide life insurance for an amount which varies between one and two times the worker's annual salary.

As the death benefit in the Pension Plan covers lesser needs than those indicated in the preceding paragraph and since the purpose of the Plan is to provide a minimum of protection, the Committee is of the opinion that the amount of the death benefit be equal to approximately half a year of the worker's income. In order that the provisions relating to the death benefit be expressed in the same manner as the other provisions of the Plan, the Committee considers that the death benefit should be equal to two years of payment of the retirement pension which the worker would have received, this amount being based on his average adjusted income at the time of his death and on the assumption that he would have kept on working up to his 65th birthday, which represents 50% of the worker' average adjusted income.

When the worker's death occurs after he becomes entitled to the retirement or disability pension, the Committee is of the opinion that the amount of death benefit should be equal to two years' payment of the retirement or disability pension, after deduction of pension payments made.

F - Questions Relating to the Death Benefit

i) Other dependents

The Committee has investigated the possibility of granting a pension, instead of the death benefit, to any worker's dependent other than the widow and orphans.

The Committee has rejected this possibility for the following reasons:

a) the Committee believes to be essential the principle whereby advantages of the Plan are granted by right to the worker, and not subject to a means test or a proof of financial support. To grant a pension only when the worker was the financial support of another person would amount to a renunciation of this principle; and,

b) from a practical point of view, the administration of such a provision would be extremely difficult and necessarily arbitrary and could certainly give rise to discontent.

ii) Absence of Death Benefit

According to the various provisions of the Plan, only the estate of the worker who, on his death before becoming entitled to a retirement or disability pension, has not fulfilled the conditions of eligibility, is not entitled to any benefit. The Committee fails to see any injustice here because such workers have nevertheless received the benefit of real protection. The same situation must exist in any insurance when the covered contingency does not occur.

It should be emphasized that actually the number of cases in these categories will be very restricted compared to the total number of beneficiaries under the Plan.

CHAPTER V

BENEFITS TO INVALIDS

RECOMMENDATION "13"

The Committee recommends:

a) i) that the worker receive a disability pension if he has attained his 60th birthday and has contributed to the Plan for at least 2 years; and

ii) that the amount of the disability pension be equal to 25% of the worker's average adjusted income. The amount of average adjusted income is calculated as of the worker's 60th birthday or at the beginning of the disability if he becomes disabled after his 60th birthday; and

iii) that payment of the pension be discontinued if the worker ceases to be an invalid before his 65th birthday; and

iv) that, when the payment of the disability pension ceases in accordance with paragraph (iii), the period during which the worker was disabled shall not be taken into account in the calculation of the average adjusted income for purposes of the retirement pension.

b) that a separate contribution rate equal to $\frac{3}{4}$ of 1% of contributory income be established for the purposes of disability benefits,

c) that the Board keep a separate account for disability purposes,

d) that the Board make the necessary investigations and submit the recommendations it may deem fit within three years following the adoption of the act in order to complete the provisions relating to disability.

A - Comments

The worker's retirement is an event the approximate date of which can be foreseen. Moreover, the retired worker's financial needs are generally limited to providing for his own needs and those of his wife. Unfortunately, a number of workers make no preparation at all for their retirement, either through thoughtlessness or because they consider their immediate obligations too heavy.

The problems created by the worker's disability are much more complex. In fact, the possibility that the worker may become an invalid exists throughout his active life and the financial problem resulting from disability is generally very acute compared to the retirement problem. To realize this, one need only consider the case of the invalid worker who is faced with medical and other expenses resulting from his disability, in addition to his normal obligations toward his wife and children.

B - Need for such Protection

The risk of long term disability may not be easily covered by insurance companies and the cost of such protection is comparatively high. To be strictly objective, it must be noted that insurance companies are conscious of this situation and are making efforts to extend this type of protection and to reduce its cost. Although there are no statistics on which to judge exactly the situation in this field, it is obvious that the number of workers who are adequately protected against this risk is comparatively small.

Therefore, the Committee feels that the Plan should provide disability pensions and that this aspect of the Plan is just as important as those relating to the worker's retirement and death.

C - Complexity of the Disability Problem

The operation of a disability pension program is very complicated because it is difficult to define disability and then to judge the validity of pension claims.

The analysis of the report of the Study Committee on Public Assistance (20) reveals that this problem is even more complicated in Quebec for various reasons. In the analysis of the causes of the high level of

unemployment assistance, this report emphasizes particularly the three following factors:

i) The Poor Health of the Population

The Study Committee comes to the conclusion that "le niveau moyen de santé de la population québécoise est inférieur à celui de l'ensemble des citoyens des autres provinces". For example, it is noted "que par rapport au total canadien, le Québec comptait, pour l'anné terminée le 31 mars 1961, 47.4% des personnes touchant l'allocation d'assistance aux invalides" and that this is a joint Federal-Provincial program operated according to a uniform regulation throughout the country. The Quebec population then represented 28.8% of the Canadian population.

ii) The Weakness of the Quebec Economy

As unemployment assistance allowances are paid to the needy, the Study Committee believes that the high percentage of beneficiaries can be explained by the weakness of the Quebec economy. The report mentions that "la production domestique brute du Québec ne représente que 23% de celle du Canada et que, de plus, le revenu est distribué d'une façon très inégale d'une région économique à l'autre".

iii) The Mentality of the Population

Finally, the Study Committee believes "qu'il semble exister au sein d'une partie de la population québécoise une certaine attitude quémandeuse qui peut, les circonstances s'y prêtant, facilement se transformer en mentalité de dépendance".

These three causes, according to the Committee, should be considered very seriously. In fact, the poor health of the population will obviously give rise to an increase in the cost of disability pensions in the Pension Plan to a comparatively high level. Regarding the weakness of the Quebec economy, one of the consequences of which is the high level of unemployment, it would undoubtedly result in multiplying the number of unjustified claims for disability pensions. Finally, the mentality of the population only increases the gravity of the problem.

D - Necessary Co-ordination of Social Policy

The Committee also believes that the second recommendation of the Study Committee on public assistance is especially important in regard to disability. This recommendation reads as follows:

> "Il importe que la politique économique et sociale d'ensemble du gouvernement du Québec soit coordonnée dans ses parties et coherente dans son orientation" (21).

The establishment of a complete program of disability pensions will necessitate a co-ordination of this program with that of assistance to invalids and with the workmen's Compensation Act as regards the definition of disability, the investigation of pension claims, the control of the continuance of disability and the need to avoid duplication of benefits.

E - Present Impossibility of Establishing a Complete Program

In the opinion of the Committee, it is impossible to contemplate the immediate establishment of a complete program of pensions to invalids on account of the difficulties of the operation of such a program and the need to co-ordinate it with the program of assistance to invalids and the Workmen's Compensation Act.

The Committee wishes to call attention to the fact that in the U.S. Social Security System pensions to invalids have been granted only since 1956, i.e., more than 20 years after the establishment of the system. In Switzerland, disability insurance came into force 13 years after the establishment of the 1947 system of old age and survivor insurance.

The Committee's recommendations regarding disability pensions constitute, therefore, only a partial solution.

F - Provisions Regarding Disability Pension

These provisions may be grouped in three categories:

i) Disability Pension

a) that the worker receive a disability pension if he has reached his 60th birthday and has contributed to the Plan

for at least two years; and

b) that the amount of disability pension be equal to 25% of the worker's average adjusted income. The amount of average adjusted income is calculated as of the worker's 60th birthday or at the beginning of disability if he becomes disabled after his 60th birthday; and

c) that payment of the pension be discontinued if the worker ceases to be an invalid before his 65th birthday; and

d) that when payment of the pension is discontinued, in accordance with paragraph (c), the period during which the worker has been disabled shall not be taken into account in the calculation of the average adjusted income for purposes of the retirement pension; and

e) that the definition of disability shall be that given in the Provincial Act Respecting Assistance to Disabled Persons, to wit:

"For the purpose of the Act and the regulations, a person shall be deemed to be totally and permanently disabled when suffering from a major physiological, anatomical or psychological impairment verified by objective medical findings which is likely to continue indefinitely without substantial improvement and, as a result thereof, such person is severely limited in activities pertaining to normal living".

ii) Distinct Contribution Rate and Separate Disability Account

By their very nature, disability pensions offer particular aspects which are not to be found in retirement pensions or in pensions to widows and orphans. The participant's retirement or death which results in the granting of these pensions may be established or proved quite easily. Such is not the case with disability because this is not merely a physiological phenomenon since various factors have a very important influence on the incidence of disability, such as the economic situation, unemployment, etc.

In practice, this means that benefits to invalids are subject to pronounced fluctuations on account of the very nature of disability and the fact that cost estimates used to determine contribution rates include a margin of uncertainty. In a few national social security programs, as in the United States and Switzerland, it has been felt necessary to establish a distict contribution rate as well as a separate account for pensions

to invalids in order to bring out more clearly the cost of this part of the program and to allow more frequent analyses of estimates.

In the opinion of the Committee, such a procedure is desirable and the Committee recommends the adoption of a distinct contribution rate as well as a separate account for disability pensions. The adoption of such a policy would offer an additional advantage by reason of the accumulation of a large reserve in the Plan and since the investment policy relating to the reserve for disability pensions will probably be directed toward greater liquidity.

Finally, we have already seen that the Committee recommends a contribution rate of $\frac{3}{4}$ of 1% of the contributory income for disability pensions. This rate is definitely higher than the contribution rate required to finance pensions to invalids according to the recommended provisions in sub-section (i) above; in fact, it will be seen in the chapter relating to the financing system of the Plan that the level rate is approximately equal to 0.41% of the contributory income.

iii) Responsibility of the Board Regarding Disability

Since it is essential that a full disability program be established as soon as possible, the Committee suggests that the Board be requested to make the necessary studies and to prepare such recommendations as it might think fit in this respect within three years following the adoption of the law. If the law is adopted during the first half of 1964, the Board would, therefore, have to make its recommendations during the first part of 1967. This means that this part of the law could be completed before the first benefits would become payable on January 1, 1968.

This is the reason why the Committee has recommended a contribution rate for disability pensions higher than the rate required for the benefits presently considered. However, it would be wrong to suppose that the rate of $\frac{3}{4}$ of 1% of contributory incomes has been chosen arbitrarily. In fact, this rate is equivalent to a rate of 0.54% of the first $6,000. of contributory income, without any deduction of the minimum income, while the contribution rate for pensions to invalids is $\frac{1}{2}$ of 1% in the U.S. system and of 8/10 of 1% in the Swiss system, of which half is paid through ordinary taxation.

The contribution rate recommended by the Committee should, therefore, be sufficient to complete the provisions relating to disability, since it corresponds to the contribution rate in the American program, the provisions of which relating to disability pensions are comparatively generous. The contribution rate of 8/10 of 1% in the Swiss plan is higher, but it must be noted that the provisions relating to disability insurance in this country are very generous (22).

CHAPTER VI

ADJUSTMENT OF PENSIONS

RECOMMENDATION "14"

The Committee recommends:

a) that retirement, disability, widows' and orphans' pensions be adjusted periodically in relation to variations in the national Consumer Price Index;

b) that the adjustment be subject to the following limitations:

i) the adjustment be deferred if the increase in the index, during the year, is less than 1%;

ii) that the adjustment be limited to 2% if the increase in the index, during the year, is greater than 2%. The excess is then taken into account during future years when the index increase is less than 2%;

iii) that the adjustment not be made if the index drops during the year; on the other hand, that no subsequent adjustment be made as long as the index remains below the highest level previously reached.

A - Comments

According to the provisions relating to the commencement of the retirement pension, the worker's age, on his effective retirement, will be between 65 and 70 years. The average duration of retirement for all workers, male or female, shall therefore be approximately 12 years (23). As for the duration of widows' pensions, it is obvious that it will be, on the average, much longer. As the pension under the Plan will constitute

an important portion of the income of a great number of beneficiaries, it is important to analyze their situation in relation to the duration of pension payments.

B - Effects of Inflation

First, it is obvious that should the progressive inflation we have been witnessing for a good number of years continue into the future, the purchasing power of pensions will drop substantially. To illustrate this statement, it need only be said that since 1949 the index of consumer prices has increased by more than 32%. Moreover, nothing indicates that this progressive inflation will soon stop. Mr. Robert M. Clark, in his report to the Canadian Government on the question of economic security for the aged, sums up the effects of inflation as follows:

> "Those widows, orphaned children and retired persons who are largely dependent financially upon the proceeds of life insurance policies, annuities, interest on government or corporate bonds, or other investments with fixed or nearly fixed rates of interest suffer from inflation with no prospect of relief" (24).

In fact, retired persons, invalids, widows and orphans, constitute the classes of persons in society who cannot protect themselves against the effects of inflation. In contrast to workers whose salaries and wages can be increased and manufacturers and merchants who can increase their prices and professional men who can increase the scale of their fees, such persons generally continue to receive an almost fixed income. It is important to note that normally they have no organization to give capable expression to their claims, while other classes of persons are organized in unions or professional associations.

C - Particular Situation of the Aged

Moreover, certain specialists who have studied old age problems claim that the financial needs of the aged increase with age after retirement, instead of becoming stabilized or decreasing. Although in Canada or in Quebec this question has never been scientifically studied, it is plausible to suppose that the situation does not differ materially from that in countries where the problem has been studied (25). For example, in France (26), it is noted that the aged are more frequently sick as they grow older and since they are unable to take care of themselves, and their medical and hospital expenses are increasingly frequent and

expensive. For the same reasons, the aged require more help at home as they grow older. This situation thus creates financial needs which, on the whole, may become increasingly heavier in spite of the reduction in certain budget items such as food and clothing.

Consequently, even if the total amount of pension is adequate at the time of the worker's retirement, there is a strong possibility that this amount will gradually become insufficient during the retirement period, a situation which is further aggravated by the reduced purchasing power.

D - Necessity of a Periodic Adjustment

The Committee has, therefore, analysed the measures taken in a certain number of social security programs in order to reduce the difficulties encountered by the beneficiaries of such plans. This study reveals that, in all social security systems, it has been necessary to periodically adjust the pension level to compensate for the loss of the purchasing power of money or to take into account the increase in salary level.

E - Adjustment by Way of Amendment to Legislation

In Canada, the Old Age Security pension, which was $40 per month at the outset of the program, has been progressively increased to $75 per month. In the United States, the minimum pension, which was $10 per month in 1939, has been periodically increased to $40 a month in 1961, and the maximum pension which was $60 per month has been increased to $127 a month in 1958. In each case, the beneficiaries of the then existing pensions also benefited from such increases.

In our country, as in the United States, adjustments have been made by way of amendments to the legislation.

Such amendments resulted in adjustments having no relation whatsoever with any index such as those of salary or consumer price. On the contrary, such adjustments have been made for reasons which are quite different from those which would normally be considered. The increase in the Old Age Security pension, according to the consumer price index, would have resulted in increasing this pension from $40 per month to $53 while it is now $75 per month. Moreover, it is to be noted that all increases have been granted since 1957. Considered objectively, it is necessary to note that the initial amount of the Old Age Security pension was probably too low.

F - Automatic Adjustment Procedure

This is the reason why some countries have introduced in their social security plans provisions for the automatic adjustment of pensions in relation to an index. In France and Holland, pension amounts are regularly adjusted according to the variations in a salary index. In West Germany, income amounts used in the calculation of pensions are adjusted according to changes in the general level of salaries. In Sweden, pension amounts and income amounts used in the calculation of pensions are adjusted in relation to the consumer price index.

G - Analysis of Adjustment Procedures

Theoretically, the legislative amendment method appears superior to that of automatic adjustment, since a full analysis of the situation can be made each time an adjustment may appear necessary. In practice, the results of this method are unfortunately highly questionable and the succession of adjustments to the Old Age Security pension in Canada is a striking example. In fact, since 1957, this pension has increased from $40 per month to $75 per month, which represents a considerably greater increase than that in the indexes of consumer prices, salary level or productivity. Moreover, each of such increases was the result of electoral promises. The following is the statement of the Honourable James Sinclair in the Canadian House of Commons, as early as 1957, during the debate on the proposal to increase the Old Age Security pension to $55 per month:

> "I hope that when this bill comes foward after the resolution is adopted it will contain a provision for an automatic annual revision based on the year-end costs of living to maintain the purchasing power, not just of the old age pension but of a minimum basic retirement income....Above all, it would remove the old age pension from the political arena and save us all from the spectacle of political parties trying to bribe the electors with their own money with election promises of higher and higher pensions, the height of the promises being directly related to the unlikelihood of the party succeeding to office" (27).

It is also interesting to analyze the results of an investigation made by the "Association Internationale de Sécurité Sociale" (28) on the various methods of adjustment. According to information obtained, it has been possible to classify the following countries as those where adjustment is made at the inclination of the legislator: Australia,

Spain, the United States, Ireland, Italy, Japan, Norway, the United Kingdom and Switzerland. Here are the practical results of such a method:

> "Tous les pays énumérés dans ce premier groupe ont procédé, au cours des dernières annees, à l'ajustement des pensions par des revisions ad hoc. Le résultat obtenu dépasse le plus souvent celui qu'on aurait obtenu par la seule adaptation automatique des pensions au niveau des prix (tel est, par exemple, le cas des Etats-Unis), et parfois même au niveau des salaires (tel est, par exemple, le cas au Royaume-Uni et en Suisse".

H - Recommended Method of Automatic Adjustment

The Committee has therefore reached the conclusion that the adjustment of pensions (or the variability) besides being necessary from a social standpoint, is unavoidable in practice. Consequently, it favors an automatic adjustment method in preference to the method of amendments to the legislation. Such a method

i) allows a rational adjustment of pensions in so far as the amount of adjustments is concerned; and gives to present and future pensioners the assurance that the purchasing power of their pension will maintained; and

ii) offers pensioners the protection they need against inflation without the delay inherent in the method of legislative amendments.

In recommending an automatic adjustment formula, the Committee feels that such a method could easily be adapted to our parliamentary system. In political systems such as that existing in the United States, there is a more definite division between the legislative and executive branches of the Government. Such division of powers has prevented the adoption of measures which are quite attractive from an electoral point of view but which have been deemed exaggerated or premature while, in our system, numerous examples prove this situation to be different. Amendments to the Unemployment Insurance Act and the Old Age Security Act, during the last two years, with the consequences which resulted in both cases, justify this opinion.

The Committee wishes to mention the fact that the recommended adjustment method does not exclude, however, the possibility of future adjustments of pensions where the original amounts will have proved to be insufficient.

I - Economic Aspects of Automatic Adjustment

Although the Committee recommends automatic adjustment of pensions and of incomes used in the calculation of pensions, it nevertheless recognizes that such a method seems questionable in the opinion of certain economists. This is why this particular aspect of the provisions of the Plan is analyzed in the chapter relating to economic aspects of the Quebec Plan.

J - Adjustment in Relation to the National Consumer Price Index

The Committee therefore deems it essential to temper with prudence the use of an automatic adjustment method. First, the Committee prefers the adjustment of pensions and of incomes used in the calculation of pensions in relation with the consumer price index and rejects the general index of salaries and wages which, in the past, has shown much greater increases.

In fact, since 1949, the consumer price index has shown an increase of approximately 32% while the salary index has shown an increase of approximately 90% (29) during the same period. The adjustment of current pensions in relation to the salary index would therefore have definite inflationary results since it increases generally at a much more rapid pace than the consumer price index.

Moreover, pension amounts resulting from the adjustment of incomes used in the calculation of pensions by means of the salary index are far too high. For example, the retirement pension of a worker contributing from age 20 to age 65 would be approximately 30% higher at his retirement, compared with the retirement pension calculated according to the method recommended by the Committee assuming that the salary index will increase at the rate of 3% per year in future and that the consumer price index will increase at the rate of 2%. Should the salary index increase at the rate of 4% per year, which is a quite plausible assumption in view of past experience, the amount of retirement pension would then be 70% greater than the amount calculated according to the adjustment method recommended by the Committee. It is to be noted, in these two examples, that the increase of 2% in the consumer price index corresponds approximately to the rate of increase of such index during the period from 1949 to 1962.

Finally, the Committee wishes to mention that the purpose of its recommendation is none other than to protect the pension's purchasing power and not allow beneficiaries of the Plan to participate in the improvement of the standard of living resulting from the increase in general productivity.

K - Limited Automatic Adjustment Method

Moreover, in order to prevent pension adjustments from becoming a cause of increase in the rate of inflation, the Committee recommends that the adjustment in pensions and incomes used in the calculation of pensions for a given year should not exceed 2%. If, during any one year, the percentage of increase in the consumer price index is greater than 2%, the excess is taken back, during subsequent years, when the index increase is less than 2%.

This maximum percentage is suggested by the Committee because it is somewhat lower than the average rate of increase in the consumer price index during the period from 1949 to 1962, viz. 2.2%. This period includes the year 1951 during which the consumer price index showed an increase of 10.5% due to the Korean War. Since the average rate of increase from 1952 to 1962 was only 1.25%, it is found that the recommended maximum percentage of 2% would have been sufficient during the whole period besides offsetting almost entirely the effect of the period of runaway inflation of 1951, as shown in Table 18.

Finally, the Committee believes, moreover, that such formula has the advantage of being simple and easy to describe.

L - Possible Criticism of this Recommended Method of Adjustment

In spite of the various advantages of the adjustment method described in the preceding paragraph, it is necessary to mention that criticism is to be expected against this method because

i) this method considers inflation as inevitable;

ii) this method offers inevitable protection against galloping inflation;

iii) the maximum adjustment of 2% during any one year is a percentage established by a partially arbitrary method.

Regarding criticism "i", the Committee is of the opinion that the answer is to be found in the chapter dealing with the economic aspects of the Plan. Its answer to the second criticism "ii" is, that galloping inflation is of the nature of a catastrophic and unforeseeable calamity such as war... etc. The recommended method is not intended to solve such a problem.

M - Another Automatic Adjustment Method

The Committee therefore considered it necessary to offer, as an alternative, a second method which, although more complicated, presents the advantage of being more rational. This method consists of adjustment in relation to the consumer price index, providing the productivity index per capita shows, during the year, an equal or greater increase.

According to this method, when productivity does not increase there is no adjustment in pensions even if consumer prices increase. On the other hand, if the productivity index increases, implying generally a more or less automatic increase in the standard of living, the adjustment method then allows the maintenance of the purchasing power of the pension.

In order to eliminate the effects of marked fluctuations in the productivity index, the Committee would suggest that the average increase, during a period of three years, be used for each index. (While this report is being prepared, the Federal Bureau of Statistics is working on the preparation of a per capita productivity index. It is impossible to know when and how frequently this index will be published).

N - National Indexes

The Committee recommends the use of indexes prepared for the whole country and published by the Federal Bureau of Statistics in order to avoid that pressures be brought to bear on the Quebec Government to modify the method of calculation of such indexes with a view to allowing more pronounced adjustments.

O - Provisions Relating to the Adjustment Method

The Committee recommends that various provisions be adopted regardless of the adjustment method used:

i) since experience teaches that reductions in the consumer price index are generally temporary, no adjustment shall be made when the index decreases. Conversely, any subsequent adjustment will be made only when the index again reaches the highest level ever attained; and

ii) in order to eliminate minor adjustments, the adjustment shall be reported when the index increase is less than 1%; and

iii) for practical reasons, the adjustment should be made only once a year. Moreover, the first adjustment following the establishment of the Plan should be made only at the beginning of the third year, when payment of benefits commences.

P - Brief Analysis of the Adjustment Method Applied to Past Experience

The Committee has felt it necessary to illustrate the recommended adjustment method by applying it to the 1949 - 1962 period. Table 18 shows the equilibrium obtained by the choice of the maximum adjustment percentage of 2% during a period where fluctuations have been quite pronounced.

TABLE No. 12

Year	Consumer Price Index	Percentage of Increase	Recommended Adjustment expressed as a percentage	Adjusted Index (1)
1949	100.0	-	-	100.0
1950	102.9	2.9	2.0	102.0
1951	113.7	10.5	2.0	104.0
1952	116.5	2.5	2.0	106.1
1953	115.5	(-) 0.9	2.0	108.2
1954	116.2	0.6	2.0	110.4
1955	116.4	0.2	2.0	112.6
1956	118.1	1.5	2.0	114.9
1957	121.9	3.2	2.0	117.2
1958	125.1	2.6	2.0	119.5
1959	126.5	1.1	2.0	121.9
1960	128.0	1.2	2.0	124.3
1961	129.2	0.9	2.0	126.8
1962	130.7	1.2	2.0	129.4

Note:

(1) The first decimal has been brought to the nearest unit.

Q - Old Age Security Pension

As the Quebec Plan and the Federal Old Age Security program must be considered jointly, it is the opinion of the Committee that automatic adjustment should also exist in the old age security pension if this responsibility were to come under provincial jurisdiction. The provisions of the Quebec Plan would call for a modification only as regards minimum income in order to integrate both programs. On the other hand, should the old age security pension adjustment continue to be effected by means of legislative amendment, it is unfortunately impossible to foretell if such adjustments would be adequate.

R - Adjustment in Disability, Widows' and Orphans' pensions

We have seen that the financial problem of the invalid worker or widow is generally more pronounced than that of the retired worker. It is also necessary to consider that, generally, the duration of the widows' pension may be much longer than that of the retirement pension. Consequently, in the opinion of the Committee, it is just as necessary, if not more so, to adjust disability, widows' and orphans' pensions as it is to adjust retirement pensions.

The Committee therefore recommends the same limited automatic adjustment method for disability, widows' and orphans' pensions.

S - Repercussions of Adjustment of Pensions on the Financing System of the Plan

In the chapter dealing with the financing system of the Plan, the adjustment problem is analyzed. It is stated, in that chapter, that the Committee concludes that adjustment to economic variations is possible according to the recommended financing system.

CHAPTER VII

TERMS AND CONDITIONS RELATING TO BENEFITS

SECTION 1 - LIMITATION OF AMOUNT OF BENEFITS

RECOMMENDATION "15"

The Committee recommends:

a) that the total amount of benefits should in no case exceed the worker's average adjusted income at the time of his death. To evaluate the total amount of benefits, the Board, by regulation, may take into account any other social security benefit payable to the beneficiaries; and

b) that when a beneficiary may under the provisions of the Plan, receive simultaneously a retirement or disability pension and a widow's (or widower's) pension, the total amount of pension be limited to the greater of the following amounts:

i) the amount of retirement or disability pension, or

ii) 60% of the total amount of retirement, disability and widows' (or widowers') pensions which would be otherwise payable to him or her.

A - Comments

Since contributions to the Plan are in the form of a tax, the Committee considers that the Board must, by regulation, be able to take into account any benefit paid by a public authority to any beneficiary.

Although the advantages of the Plan constitute rights for the participant, such power is necessary in order to safeguard the purpose of the Plan, which is to guarantee the continuance of a portion of the participant's income in the event of retirement, disability or death.

Within the Plan itself, the possibility of the concurrence of a retirement or disability pension with widows' or widowers' pensions would have precisely such an effect. The Committee therefore considers that, in such a situation, the total amount of benefits must be limited.

SECTION 2 - CO-ORDINATION WITH ANY WORKMEN'S COMPENSATION LAW

RECOMMENDATION "16"

The Committee recommends that, when a beneficiary under the Plan also receives a pension under any workmen's compensation law the amount of pension paid under the Plan be reduced so that the total of both pensions shall not exceed 100% of the participant's average adjusted income, in the case of a retirement or disability pension, or 75% of the average adjusted income, in the case of a widows' or orphans' pension.

A - Comments

According to the recommendation of the Study Committee on Public Assistance, regarding the necessity of co-ordinating social policy, the Committee has analyzed the consequences of the concurrence of pensions under the Quebec Plan and under any workmen's compensation law. This question is particularly important by reason of the principles involved.

According to the principle already stated, the advantages of the Plan must constitute rights for the participant. On the other hand, the payment of a pension under the Workmen's Compensation law is never subject to a means test of the beneficiary and the employers alone are compelled to pay the total cost of the protection under such act. The

question is, therefore, whether it is desirable and fair to compel the employers to contribute twice for the same risk.

B - Extreme Solutions

Two extreme solutions have been considered by the Committee. The first would be to deduct the pension paid by any Workmen's Compensation Commission from the pension paid under the Plan. Such a solution would eliminate concurrence of pensions, but would be opposed to the principle stated in the preceding paragraph.

According to the second solution, there would be no reduction in the amount of pension when there is concurrence or duplication. This solution is no more acceptable than the first on account of the possibility that the total of both pensions would be greater than the earned income of the participant.

C - Compromise Solution

The Committee, therefore, presents the following compromise solution:

When a participant to the Plan may simultaneously receive pensions under a Workmen's Compensation law and under the Plan, the amount of the pension under the Plan will be reduced so that in the case of a retirement or disability pension the total of both pensions shall not exceed 100% of the participant's average adjusted income, or in the case of a widow's or orphan's pension, 75% of the average adjusted income at the time of the participant's death.

It is important to note that, according to this recommendation, the amount of the death benefit under the Plan is never reduced even if the survivors receive a compensation under a Workmen's Compensation law.

SECTION 3 - TERMS AND CONDITIONS RELATING TO PAYMENT OF BENEFITS

RECOMMENDATION "17"

The Committee recommends:

a) that payment of any benefit be due on the first day of the month following the date of the contingency which establishes the right to the benefit; and,

b) that, if such contingency occurs on the first day of the month, payment be due on the first day of the following month; and,

c) that, subsequently, any pension payment shall be made on the first day of the month; and,

d) that no pension payment be due after the date of expiry of the right to a pension; and,

e) that payment of retirement, widows' and orphans' pensions shall not be made retroactively for more than thirty-six months.

Comments

According to this recommendation, no proportionate payment of benefits shall be made. From an administrative standpoint, this represents an important advantage. Moreover, the Committee emphasizes that the method of payment shall, in general, be similar to that of family allowances and old age security pensions.

SECTION 4 - MINIMUM PENSION PAYMENT

RECOMMENDATION "18"

The Committee recommends that the frequency of pension payments be reduced when the amount of a pension is less than $10 per month, so that no payment of benefits under this amount shall be made.

A - Comments

According to the provisions of the Plan, pension payments may, in certain cases, be small. For example, in the extreme case of a worker who arrives in the Province at the age of 63, after the expiration of the transition provisions, and has contributed to the Plan for only two years, he will receive a small retirement pension. If his income has been $5,000., the monthly payment of his retirement pension, from the age of 65, would be $4.43.

The monthly payment of such small pension amounts would impose on the plan excessive administrative expenses.

B - Analysis of Possible Solutions

The Committee has considered the three following solutions which would eliminate or reduce such expenses:

i) the simplest solution would be to pay no pension when the amount of the pension is less than a certain minimum, such as $10 per month. The Committee rejected this solution since it is:

   a) irreconcilable with a system based partially on savings; and,

b) unfair to workers whose occupation requires a high degree of mobility; and,

ii) the second solution would be to make a final settlement in a lump sum. This solution was also rejected because payment of a pension is necessary in the case of mobile workers. This pension, added to other pensions under plans to which the worker has contributed, constitutes the protection to which he is entitled; and,

iii) the last possibility would be to reduce the frequency of payments so that the amount of each pension payment be equal to or more than the minimum amount. For instance, in the example given above, the pension payment would be made every three months in the amount of $13.29.

C - Frequency of Payments

It is for this reason that the Committee feels that when the amount of the pension is less than $10 per month, benefit payments should be made at less frequent intervals, in order that no payment of less than this amount be made.

CHAPTER VIII

EFFECTIVE DATE OF THE PLAN

RECOMMENDATION "19"

The Committee recommends that, if a law be adopted following this report and made effective in 1964, the provisions regarding contributions should not take effect until the first of January, 1966 and that the provisions regarding payment of pensions should not be applicable until the first of January, 1968.

Such delays, according to the Committee, constitute absolute minimums, assuming that the administrative apparatus will be set up during the first weeks following the adoption of the law.

A - Comments

On the one hand, the entry into force of the Plan will require on the part of the Government the establishment of a comparatively complex administrative system covering the whole Province. On the other hand, the majority of employers who now have retirement plans will have to modify them as indicated in the second part of this report. Although it is desirable that the Plan be established as soon as possible, it is essential that an adequate delay be granted between the adoption of the law and the entry into force of the Plan, in view of the importance of the problems to be solved by the Government, the Board and the employers.

Since the administration of the Pension Plan is analysed in the following chapter and the subjects of adjustment of private and public plans is dealt with in detail in the second part, the Committee limits itself, in the present chapter, to analysis of the time factor only.

B - Administration of the Quebec Plan

Once the Plan is established, approximately 1,800,000 workers will be required to contribute. It will, therefore, be necessary to establish systems of collection of contributions, numbering of contributors, entry of contributions into individual records, payment of benefits, accounting and inspection capable of handling the high number of contributors. This normally would entail the use of electronic data processing equipment in order to ensure an efficient administration of the Plan.

The Board will, therefore, have to hire a competent staff and develop administrative procedures suitable for this type of operation. In addition to the time required for such purposes, consideration must be given to the fact that delays in the delivery of electronic equipment may vary between 12 and 15 months. Finally, in regard to the collection of contributions, mention must be made of the fact that in the opinion of officials of the Department of Revenue, the introduction of new tables of tax deductions requires a delay of at least six months.

C - Amendments to Private and Public Retirement Plans

In the second part of this report, the Committee recommends that the Government legislate in the field of private retirement plans. Such legislation will require amendments to a great number of plans following the establishment of certain standards relating to the preservation of worker's rights and the integration of such plans into the general plan.

On the one hand, the Board will have to adopt adequate measures to fulfil this responsibility, which is in itself of great importance. It will be necessary to establish a registration and inspection system with respect to supplementary retirement plans. As this field is quite complex, it will obviously be necessary for the Board to hire a competent staff for this purpose, and the establishment of the registration and inspection system will necessitate a fairly long delay.

On the other hand, it will be necessary to amend private retirement plans following the establishment of the Plan and the legislation relating to preservation of the workers' rights. The Committee considers it essential that employers and employees should not be compelled to amend their plans in two steps. Under these conditions, it would, therefore, be necessary that the delay granted be long enough to allow them to modify these retirement plans under satisfactory conditions.

The Committee desires to stress the fact that the problem of modification of private retirement plans is in itself enormous. The number of plans requiring modification during the prescribed period will impose a considerable burden on specialists in the field. One must bear in mind, also, that labour unions will have to negotiate with a great number of employers such modifications. In consequence, a reasonable delay must be granted for this purpose in order to avoid difficulties between employers, workers and labour unions. Although the modifications of public plans do not present the same difficulties, the Government itself will need some time to make those modifications which are deemed necessary.

D - Entry into Force of Certain Provisions of the Law, at Different Dates

In addition to the problems already mentioned, it must be remembe that other particular or unforeseeable problems will have to be solved.

Therefore, the Committee considers that, if the law is adopted in 1964, the collection of contributions could start on January 1, 1966. As for the initial date of payment of benefits, it has been noted that no retirement, disability, widows' or orphans' pensions or death benefit may be paid before the expiration of a delay of two years on account of the minimum number of years of contribution required to establish the participant's right to benefits under the Plan. Payment of benefits would start two years after the aforesaid date, viz. on January 1, 1968. This date means that the worker who has attained age 63 or more in 1965 would not join the Plan.

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CHAPTER IX

COMPULSORY PARTICIPATION

RECOMMENDATION "20"

The Committee recommends that participation in the Quebec Plan be compulsory and without any contracting-out;in other words, no exception may be granted in favour of members of a private retirement plan providing equivalent advantages.

A - Comments

Although the resolution adopted unanimously by the Legislative Assembly on August 23, 1963 states clearly that the Plan must be universal, the Committee has as a matter of principle and because of results submitted to that effect analyzed the possibility of suggesting the granting of the contracting out to members of private retirement plans providing equivalent advantages.

B - Advantages of the Contracting Out Option Formula

It is the opinion of the Committee that the contracting out formula offers two advantages worth mentioning. In the first place, the contracting out option gives more freedom to the employer and, as regards the employee, the Committee feels that the existence of the contracting out would not give him more freedom.

In the second place, this option protects existing institutions against a possible reduction in the rate of increase of assets derived from retirement pensions. However, the study of this question in the

chapter on the economic aspects of the Quebec Plan allows one to anticipate that instead of a reduction, there may well be a greater acceleration, in the long run, in the rate of increase of reserves under private retirement plans, in view of the educational influence which the establishment of the Plan will have.

C - Government Responsibility

The Committee considers that the establishment of the Pension Plan will constitute a necessary second level of protection in addition to the Old Age Security pension. The Government cannot delegate any portion of this responsibility to private enterprise in spite of the competence which many administrative agents have shown in this field.

D - Difficulties Regarding the Contracting Out Option

In order that the option be granted, certain conditions and provisions would be necessary. Many administrative difficulties would inevitably arise. The analysis resumed below is sufficient evidence:

i) Equivalent Advantages

The problem of judging whether a private retirement plan grants advantages equivalent to those of the Plan is extremely complex. For example, should a private retirement plan which provides a higher retirement pension but does not provide any widows' pension be considered as equivalent? One might also ask, for example, what is an advantage equivalent to the adjustment of pensions to economic variations, since it is extremely difficult to fully ensure such an adjustment under private retirement plans.

ii) Preservation of Workers' Rights

To ensure preservation of workers' rights, provisions regarding the solvency of private retirement plans are necessary. Even if provisions relating to solvency were very strict, there would always remain the danger that the enterprise would close its doors or go bankrupt. There would also be great difficulties regarding transfer of pension credits.

iii) Approval of Option Requests

The official judging option requests would have an extremely difficult task. Preservation of the workers' rights demands that no risk shall be taken and it is easy to imagine that all kinds of pressures could be exerted to influence his decision. And then, to what extent would it be possible to revoke an approval which had already been given?

iv) Procedure Relating to Option Requests

It would be necessary to establish a procedure relating to option requests. On this subject, may the employer alone submit a request or should the consent of the majority of employees be necessary? Moreover, a procedure allowing for eventual changes in this decision would have to be established.

E - Financial Consequences of the Contracting Out Option

The employer who would have the choice between participation in the Plan and establishment or maintenance in force of an existing private retirement plan would inevitably analyse each possibility in relation to cost. The Committee considers that the question of cost constitutes the most important factor to be considered. Since employers choosing in favour of the private retirement plan would generally do so in view of a lower cost, this would inevitably result in an increase in the cost of the whole Quebec Plan.

By way of example, let us consider the case of the employer whose employees are very young. This employer would have strong reasons for favouring a private retirement plan. With every such decision taken, the average age of members of the Quebec Plan would be affected and the cost consequently increased.

F - Conclusion

According to the Committee, advantages resulting from the contracting out option are not sufficiently important to allow the Government to delegate a portion of its responsibility to private enterprise or to justify the additional costs resulting from the administration of provisions relating to the option.

CHAPTER X

FEDERAL OLD AGE SECURITY ACT

In drawing up the provisions of the Plan recommended by the Committee, it has been necessary to take as a starting point the Federal Old Age Security Act. Moreover, it seems needless to mention that such a program, under which pensions representing for all Canada a yearly disbursement of approximately $900 million, (30) could not be ignored.

Therefore, this proposed general plan takes into account the existence of the Federal Old Age Security Act. It must be admitted, however, that the existence of this measure hampers the drawing up of a completely unified general plan in Quebec. Moreover, even if the Province of Quebec were to agree to participate in the proposed federal pension plan, such a decision would not ensure the existence of a unified plan, since the provinces would continue to keep the power of regulating retirement plans organized by private initiative. It must therefore be hoped that the wish expressed by the Prime Minister of the Province, at the Federal-Provincial Conference of November 1963, may become a reality in the not too distant future. His declaration reads as follows:

> "To help iron out this difficulty, Quebec proposes that the federal government hand over the entire administration of old age security to which its citizens of 70 years and over are eligible, provided of course that at the same time, be handed over the means which have already been devised for financing this program or the fiscal equivalence thereof. This formula would also allow Quebec to standardize its entire old age social security program and to better co-ordinate its component parts" (31).

If this proposal were to become a reality, it would be possible to modify the present project slightly in order to give it more flexibility and unity.

Considered in relation to the purpose for which the Old Age Security Act has been enacted, its results have obviously been beneficial. Unfortunately, the fact that this program comes under the Federal Government's jurisdiction creates serious difficulties for the Quebec Plan, and, more generally, for the elaboration of a coherent social security program.

Although the Committee recognizes that it is not within its powers to study the implications of the contracting out formula in relation to the Old Age Security Act, it has deemed it necessary to state what such difficulties are:

i) the Committee considers that the Old Age Security pension should be automatically adjusted according to the adjustment method recommended for the Quebec Pension Plan. In fact, the only possibility of maintaining a necessary balance between this pension and the retirement pension under the Quebec Plan is to provide that they be adjusted according to same method. This would also permit adjustment of the minimum income for contribution purposes with the result that the amount of minimum income free from contributions would be adjusted in relation to variations in the purchasing power of the dollar.

ii) the Committee believes there are reasons for concern in regard to the evolution of the amount of the Federal Old Age Security Pension. In fact, should future adjustments be made in the same manner as in the past, it would be impossible to ignore the possible consequences:

   a) the workers' retirement incomes could unduly increase and impose too heavy a burden on the provincial economy; and,

   b) pressure would necessarily be exerted for the increase of disability and widows' pensions to the level of retirement pensions. The burden of social security on the economy of the Province would thus be made heavier by reason of decisions over which the Government of Quebec has no control.

iii) in the plan recommended by the Committee, payment of the retirement pension commences on the worker's 65th birthday. In addition to the reasons invoked in favour of this recommendation, the Committee has accepted the hypothesis that the Federal Government would carry out its intention to grant Old Age Security pensions on a reduced basis as early as age 65 to those requesting them (33) and to finance additional disbursements thus created through the present taxation formula. Should the Federal Government fail to carry out this intention, a serious anomaly would then exist since the participant retiring before the age of 70 would receive, in the beginning, only the retirement pension under the Quebec Plan and after the age of 70 would receive an additional pension of $900 per year. Since a very large proportion of workers actually retire at the age of 65 and there is no special justification for an increased income at the age of 70, it is obvious that if such an anomaly were to occur it could not be ignored.

The Committee is of the opinion that it would be desirable for the Federal Government to entrust the Quebec Government with full administration of the Old Age Security Act.

CHAPTER XI

FINANCING SYSTEM OF THE PLAN

SECTION 1 - MIXED FINANCING SYSTEM

RECOMMENDATION "21"

The Committee recommends:

a) a mixed financing system for the Quebec Pension Plan; and,

b) that a complete analysis of the system be made at least every five years; and,

c) that no change be made in the plan without first requiring, by way of appropriate actuarial studies, an analysis of the effect of such change on present and future contribution rates and on accumulation of reserves.

A - Introduction

In purely economic terms, the role of social security may be described in the following manner. During a given period, one year for example, the active population produces a certain quantity of goods and services; a portion of such goods and services is used for the maintenance, improvement or extension of the means of production, while the other portion is consumed, not only by the active population which created them, but also by the inactive population. Leaving aside the purchasing power resulting from remuneration of capital, it may be said that access to consumer goods and available services is open to the active population

through the purchasing power resulting from its earnings, and to the inactive population through the purchasing power resulting from social security benefits.

The expression "social security" is used here in a very wide sense and includes private and public retirement plans. The purpose of this section is to analyse various financing methods or systems and to recommend the most appropriate financing system for the Quebec Plan. It should be strongly emphasized that a public and universal retirement pension plan cannot be judged by the same standards as those used in judging a private retirement plan administered by a life insurance or trust company.

B - Particular Characteristics of a Public and Universal Plan

In the first place, it is essential to analyse the particular characteristics of the universal and public plan in order to differentiate it from private retirement plans. These characteristics are the following:

i) the Government, and consequently the public and universal plan, are assured of their future existence. An enterprise establishing a private retirement plan cannot enjoy such certainty; and,

ii) income from contributions cannot stop in the universal and public plan by reason of the taxing power of the Government. Maintenance of contributions in any private plan depends essentially on the present and future financial situation of the enterprise; and,

iii) the public and universal plan is assured that its future body of contributors will not only be renewed but will increase. In a private retirement plan, the number of contributors may either diminish or increase.

The considerations determining the elements of the financing system in a private retirement plan are, by reason of these basic differences, not the same as those governing the choice of the financing system for a public retirement plan. In a private retirement plan, the financing system must guarantee that the obligations of the plan toward its members shall be fulfilled, taking into account the particular situation of the enterprise. The choice of a financing system for a universal retirement plan must be in relation to the social and economic situation of the community.

The following extract from a study of the financing system of the United States Social Security System confirms this conclusion:

> "As the result of intensive study of the many implications of the "full reserve" concept, it became apparent that many of the reasons why private pension plans often use the "full reserve" basis are not applicable to a national compulsory contributary old-age plan of the type established by the Social Security Act. The essential security of this plan rests, in the final analysis, upon the taxing power of the United States Government and the willingness of the people to have it exercised. Hence, it has been recognized that the degree of reserve financing desirable for the Old Age Insurance depends primarily on practical considerations peculiar to that plan, and not on the actuarial considerations often used for private plans" (34).

C - Analysis of Various Financing Systems

Having determined the factors to be considered in the choice of the financing system of a public and universal pension plan, it is now necessary to analyse the three main types of financing systems.

i) Pay as you go system

According to this system, contributions collected during a comparatively short period are used for payment of benefits becoming due during that same period.

The reserve, which constitutes an equalization fund, is small and its only purpose is to avoid fluctuations in the expected contribution rates.

Under this system, the contribution rate increases gradually, during the necessary transition period, so that a balance is established between contributions collected and benefits paid.

The "Association Internationale de Sécurité Sociale" has drawn the following conclusions regarding the pay as you go system, after a comprehensive study of various financing systems.

> "Le système de répartition constitue le type pur de financement en caisse ouverte (garantie d'un renouvellement obligatoire) et se prête excessivement bien à l'ajustement des pensions en fonction des nouvelles conditions économiques. Les taux de cotisation choisis en temps d'économie stable peuvent être maintenus tels quels, même en cas d'adaptation intégrale de toutes les pensions à une intense évolution économique" (35).

ii) Full reserve system

Generally, the full reserve system provides for the accumulation of a reserve sufficient to guarantee payment of current benefits and those which are being earned. The full reserve system presents a certain number of variations. In spite of such variations, this system always involves the accumulation of large reserves.

The full reserve system has been created for plans in which renewal of membership is not guaranteed. This is why actuarial reserves must be available, both for current pensions and for prospective pensions being earned, so that the latter may be paid when they become due.

iii) Mixed system

Any system between the pay as you go and full reserve systems is a mixed system. A type of mixed system is that under which an actuarial reserve for current pensions is maintained. Apart from this typical system, a whole range of other mixed financing systems exists.

Generally, the mixed system may be considered as composed of a pay as you go system to which is added a reserve created by the balance of contributions which have not been used for payment of benefits.

According to the mixed system, the contribution level is established in accordance with desired objectives, both from the point of view of initial and future levels of contribution and from that of reserve amounts.

The purpose of such reserve is to:

a) reduce the future contribution rate because of interest on the invested reserve; and to

b) offset fluctuations in amounts of contributions and benefits resulting from economic cycles and from changes in various factors such as the relationship between the numbers of beneficiaries and contributors, the income level, etc.; and to

c) allow gradual changes instead of sudden and unforseeable changes in the contribution rate.

D - Mixed financing system of the Quebec plan

We have seen that the full reserve system has been created for private retirement plans, i.e. for plans in which the renewal of membership is not guaranteed. This renewal being guaranteed in the public and universal plan, it is unnecessary to constitute full reserves in the conventional sense of the word. The Committee therefore rejected the full reserve system as being unsuitable for a plan of the type envisaged in this report.

Moreover, we have seen that the pay as you go system constitutes an exclusive system of financing for a public plan and that it is well indicated when only social needs, such as transition provisions over a short period and the adjustment of pensions to variations in economic conditions, are considered. The Committee considers that this system cannot, however, be recommended for the following reasons:

i) the pay as you go system might result in slowing down, at least temporarily, the rate of accumulation of reserves under private retirement plans without creating a public fund necessary to the economic expansion of Quebec. This would be contrary to the role assigned to the general plan under present economic policy; and,

ii) the initial contribution rate being very small under the pay as you go system, the result is that the ultimate rate may become comparatively high at a time when the economy of the province could not possibly support such a burden without harmful consequences; and,

iii) by reason of the low initial contribution rate under the pay as you go system, there exists a serious danger that strong pressure may be brought to bear on the Government to increase amounts of benefits. Any such request would naturally ignore the future cost of the Plan and would only result in aggravating the possible consequences mentioned in the preceding paragraph.

This is why the Committee recommends a mixed financing system the elements of which would permit conciliation of the social and economic objectives already defined.

E - Adjustment of pensions in a mixed financing system

Before formulating the mixed system recommended by the Committee, it is necessary to determine whether such a system is consistent with the adjustment of current pensions to variations in economic conditions. The question of adjustment of incomes used in the calculation of new pensions is not analysed because this is only a technical method used to determine the amount of pensions.

It has already been seen that the pay as you go system is a financing system appropriate for any plan providing variability in pensions and that the mixed financing system is composed of the pay as you go system to which is superimposed an accumulation fund the effect of which is to reduce and level the future contribution rate. Thus, in moving away from the pay as you go system, we are however faced with a difficulty resulting from the setting up of funds which will have less value when they are returned as benefits, should the purchasing power of the dollar decrease in the meantime. As this difficulty exists in a more or less pronounced degree in all savings systems, the Committee considers that to accept it as being sufficiently serious to justify the elimination of the mixed system of financing would be equivalent to a condemnation of savings.

Moreover, from a technical point of view, this revalorization of reserves under the Plan is not necessary. In fact, Table No 13 shows that the yearly income from contributions exceeds the yearly amount of benefits during the first 25 years of the Plan. If the amount of benefits is inflated due to an increase in the consumer price index, income from contributions will soon become automatically increased, since the workers' incomes are adjusted to the decrease in the purchasing power of the currency, interest rates increase generally in periods of inflation and finally the total amount of contributory income is automatically increased by reason of the adjustment in the maximum amount of contributory income. Consequently, in the course of the first 25 years of the Plan, an inflationaly upsurge could, during a short period, slow down the rate of reserve increase and, subsequently, the reserve would accumulate more rapidly.

When the yearly amount of benefits exceeds the yearly income from contributions, i.e. more than 25 years after the establishment of the Plan, a sustained inflationary upsurge would only result in slightly reducing the reserve level; it is to be noted here that the recommended

adjustment method limits pension adjustments to a maximum of 2% per year. Considering that the reserve amount shall then be equal to more than 14 times the yearly amount of benefits, it seems impossible that the automatic adjustment method recommended by the Committee could, in a period of inflation, create a consecutive and immediate increase in the contribution rate or affect the financial soundness of the plan.

The following extract from a report adopted unanimously by the "Assemblée Générale de l'Association Internationale de la Sécurité Sociale" confirms moreover the Committee's conclusions in this respect:

> "Les investigations scientifiques démontrent clairement que l'ajustement des pensions au niveau des salaires est grandement facilité si l'on a recours à un système financier se rapprochant tout au moins de la répartition" (35x)

The Committee recalls that the recommended adjustment method is not based on the salary index but solely with limitation on the consumer price index, which makes adjustment of pensions still easier.

The analysis of national solutions applied to the adjustment of pensions according to various financing systems is also very enlightening (36). In fact, the following countries call for contributions only from contributors and employers: West Germany, the United States, France, Sweden and Holland. All these countries proceed to make pension adjustment either by means of an automatic formula or by means of periodic legislative amendments and, among such countries, the United States and Sweden use a mixed financing system.

The Committee therefore, has come to the conclusion that a mixed system may be used without necessarily having to reject the automatic adjustment of pensions or to call for contributions from the Government.

F - Elements of the recommended mixed financing system

The elements of the recommended mixed financing system have been determined by means of estimates of contributions to be collected, of the yield on the assets of the fund, of operating expenses necessary for the administration of the Plan and of benefits to be paid. Such estimates are based on a great number of assumptions relating to projections of the population and the labour force, contributory incomes, the unemployment rate, interest rates, operating expenses, etc. A detailed description of these various assumptions is given in the following chapter.

It is, however, necessary to mention at this point that;

i) two groups of assumptions have been used, the first resulting in low costs and the other in high costs. The average of such estimates provides intermediate estimates which have guided the Committee in the formulation of the recommended financing system; and,

ii) the Committee has assumed that the provisions of the Plan shall not be changed in future. In this respect, the Committee recommends, at the end of this chapter, that any future change be preceded by an analysis of the effects which such change would have on present and future costs of the Plan; and,

iii) estimates of cost and reserve accumulation have been calculated on the assumption that the consumer price index will never rise in the future. Although it is certain that this assumption will not be realized, its use results in giving conservative estimates of cost and reserve accumulation for the period of approximately 25 years following the establishment of the Plan. In fact, we have already seen that an inflationary upsurge would result in an acceleration of the rate of accumulation of the reserve. On the other hand, if it were possible to project with great accuracy the reserve accumulation beyond the said period, this assumption would give estimates which would be somewhat too optimistic. Consequently, according to such an assumption, the estimates of cost and reserve accumulation remain valid, even if the adjustment of current pensions in accordance with the method recommended by the Committee were rejected.

iv) The level contribution rate required to cover the estimated cost of benefits and of operating expenses under the Plan is now established. The amounts of benefits, operating expenses and contributory incomes have been calculated up to the year 2016. Although it cannot be assumed that contribution and benefit levels will become constant then or at any subsequent time, these projections over too distant a period not being sufficiently accurate, calculations have been made, in order to take into account the substantial liability represented by future benefits, by projecting in perpetuity the amounts of benefits, operating expenses and contributions at the level attained in the year 2016.

The level contribution rate so obtained, based on high cost assumptions and an interest rate of 4%, amounts to 3.28% of the contributory income. Therefore, the Committee recommends that the financing of retirement, widows' and orphans' pensions, and of death benefits be based on a contribution rate of $3\frac{1}{4}\%$ of the contributory income. According to high cost assumptions, this contribution rate will give rise to the accumulation of a reserve which will increase during the first 50 years of the plan. No increase in the contribution rate shall therefore be required during the first 50 years of the Plan and thereafter, the existence of a large reserve will permit the absorption

over a long period of years, of any increase in benefits unaccompanied by a corresponding increase in contributions.

As for the financing of disability pensions, a contribution rate of 0.41% of contributory incomes would be sufficient according to the method and assumptions described above and the recommended provisions. It has been seen that the Committee recommends a higher contribution rate, i.e. 0.75% of contributory incomes, in order to enable the provisions relating to disability pensions to be completed. The recommended contribution rate, therefore, results in the accumulation of a reserve which, according to the provisions recommended in this report, will never be stabilized.

G - Estimates of contributions, operating expenses, interest, benefits and reserve accumulations

Estimates of total contributions (4% of contributory incomes), operating expenses, interest, total benefits (including disability pensions) and reserve accumulation are given in Table No. 13 on the basis of intermediate, high and low cost assumptions. Such estimates are given for the period of 30 years covered by demographic projections, which necessitates the accumulation of a reserve according to an interest rate which can reasonably be expected in the future. A rate of 4% per year has been used although such rate may be considered somewhat low because, in practice, such estimates are generally based on the net rate of interest on long term investments, reduced by 0.5% or by 0.75%.

Corresponding estimates for the account of retirement, widows' and orphans' pensions, and death benefits and disability pensions are given in Tables 14 and 15. Estimates of the amounts of retirement, widows' and orphans' pensions, death benefits and pensions to invalids are also given in Table No. 16.

H - Importance of the rate of interest in the recommended mixed financing system

By reason of the accumulation of a large reserve under the recommended mixed financing system, the yield of the assets of the fund will have a strong influence on the real cost of the Plan. Actually, according to the intermediate cost estimates (Table 13) the interest of the reserve is higher than the total amount of benefits during more than 10 years following the establishment of the Plan and it still represents 53% of total contributions in the year 1996.

To illustrate the repercussion which a rate of yield of more than 4% would have on the actual cost of the Plan, estimates given in tables 13, 14 and 15 have been calculated on the basis of an interest rate of 5% per annum for the first 15 years of the Plan and of 4.5% subsequently. Such estimates are given in tables 17, 18 and 19 below.

I - Maximum income of $5,000 for contribution and benefit purposes

As indicated in Section 3 of Chapter II, estimates of cost and reserve accumulations based on a maximum income of $5,000 instead of $6,000 for contributions and benefits have been calculated for study and discussion purposes. Such estimates are given in seven tables (20, 21, 22, 23, 24, 25 and 26) which correspond to those referred to in the preceding paragraphs.

TABLE No. 13

ESTIMATES OF THE OPERATIONS OF THE QUEBEC PENSION PLAN

Total Contributions and Benefits
(in millions of dollars)

Year	Contributions (1)	Benefits (1)	Operating Expenses	Interest (2) on fund	Amount of fund
			Intermediate cost estimates		
1966	128	-	6	2	125
1967	175	-	6	9	303
1968	186	8	6	16	491
1969	197	13	6	23	691
1970	208	18	6	31	906
1971	219	24	7	39	1 133
1976	276	73	7	87	2 442
1981	341	155	8	144	3 976
1986	397	280	10	203	5 566
1991	458	430	11	258	7 012
1996	532	576	13	307	8 303
			Low cost estimates		
1966	129	-	6	2	126
1967	176	-	6	9	305
1968	188	8	6	16	495
1969	200	13	6	23	698
1970	211	18	6	31	915
1971	222	24	7	39	1 146
1976	281	74	7	88	2 478
1981	348	157	8	146	4 046
1986	407	284	10	207	5 681
1991	471	438	11	264	7 183
1996	549	586	13	315	8 542
			High cost estimates		
1966	128	-	6	2	124
1967	174	-	6	9	301
1968	184	8	6	15	486
1969	195	13	6	23	685
1970	205	18	6	30	896
1971	216	24	7	39	1 120
1976	271	72	7	86	2 406
1981	333	153	8	141	3 907
1986	387	275	10	199	5 451
1991	445	423	11	252	6 841
1996	516	565	13	298	8 064

Notes: (1) Based on a maximum income of $6,000 for purposes of contributions and benefits.

(2) Interest rate: 4% per annum, compounded yearly.

TABLE No. 14

ESTIMATES OF THE OPERATIONS OF THE QUEBEC PENSION PLAN

Retirement, Widows' and Orphans' Pensions and Death Benefits Account

(in millions of dollars)

Year	Contributions (1)	Benefits (1)	Operating Expenses	Interest(2) on fund	Amount of fund
			Intermediate cost estimates		
1966	104	-	5	2	102
1967	142	-	5	7	246
1968	151	8	5	13	397
1969	160	12	5	19	558
1970	169	17	5	25	730
1971	178	22	5	31	911
1976	224	66	6	69	1 947
1981	277	137	7	114	3 140
1986	322	245	8	159	4 334
1991	372	378	9	197	5 338
1996	432	508	11	227	6 118
			Low cost estimates		
1966	105	-	5	2	102
1967	143	-	5	7	248
1968	153	8	5	13	401
1969	162	12	5	19	564
1970	171	17	5	25	738
1971	181	23	5	32	922
1976	229	67	6	70	1 976
1981	283	139	7	116	3 196
1986	331	249	8	162	4 426
1991	383	384	9	202	5 475
1996	446	516	11	234	6 310
			High cost estimates		
1966	104	-	5	2	101
1967	141	-	5	7	244
1968	150	8	5	13	394
1969	158	12	5	18	553
1970	167	17	5	25	722
1971	175	22	5	31	901
1976	220	65	6	68	1 918
1981	271	135	7	112	3 084
1986	314	242	8	155	4 242
1991	362	373	9	192	5 200
1996	419	499	11	220	5 925

Notes: (1) Based on a maximum income of $6,000 for purposes of contributions and benefits.

(2) Interest rate: 4% per annum, compounded yearly.

TABLE No. 15

ESTIMATES OF THE OPERATIONS OF THE QUEBEC PENSION PLAN

Disability Pensions Account

(in millions of dollars)

Year	Contributions (1)	Benefits (1)	Operating Expenses	Interest (2) on fund	Amount of fund
			Intermediate cost estimates		
1966	24	-	1	0.5	23
1967	33	-	1	2	57
1968	35	0.1	1	3	93
1969	37	1	1	4	133
1970	39	1	1	6	176
1971	41	1	1	8	222
1976	52	7	1	18	494
1981	64	18	2	30	836
1986	74	34	2	45	1 232
1991	86	52	2	61	1 675
1996	100	68	2	80	2 186
			Low cost estimates		
1966	24	-	1	0.5	24
1967	33	-	1	2	57
1968	35	0.1	1	3	94
1969	37	1	1	4	134
1970	40	1	1	6	178
1971	42	2	1	8	224
1976	53	7	1	18	502
1981	65	19	2	31	850
1986	76	35	2	46	1 254
1991	88	53	2	62	1 708
1996	103	70	2	82	2 232
			High cost estimates		
1966	24	-	1	0.5	23
1967	33	-	1	2	56
1968	35	0.1	1	3	93
1969	37	1	1	4	132
1970	38	1	1	6	174
1971	40	1	1	8	219
1976	51	7	1	17	487
1981	62	18	2	30	822
1986	72	34	2	44	1 209
1991	83	51	2	60	1 641
1996	97	66	2	78	2 139

Notes: (1) Based on a maximum income of $6,000 for purposes of contributions and benefits.

(2) Interest rate: 4% per annum, compounded yearly.

TABLE No. 16

ESTIMATES OF THE OPERATIONS OF THE QUEBEC PENSION PLAN

Amounts of Benefit Payments (1)

(in millions of dollars)

Year	Retirement Pension	Widow's Pension: Basic Pension	Widow's Pension: Pension Related to income	Orphan's Pension	Death Benefits	Disability Pension
			Intermediate cost estimates			
1968	0.1	2	1	1	3	0.1
1969	0.5	4	2	2	4	1.0
1970	1.0	6	4	3	4	1.0
1971	2	8	5	3	4	1
1976	21	18	15	7	5	7
1981	65	27	28	10	5	18
1986	144	35	46	14	6	34
1991	245	43	66	18	7	52
1996	341	49	87	22	8	68
			Low cost estimates			
1968	0.1	2	1	1	3	0.1
1969	0.5	4	2	2	4	1.0
1970	1.0	6	4	3	4	1.0
1971	2	8	5	3	4	2
1976	21	18	15	7	5	7
1981	66	28	29	11	6	19
1986	146	36	47	14	6	35
1991	248	44	67	18	7	53
1996	345	51	89	23	8	70
			High cost estimates			
1968	0.1	2	1	1	3	0.1
1969	0.5	4	2	2	3	1.0
1970	1.0	6	4	3	4	1.0
1971	2	8	5	3	4	1
1976	21	18	15	7	5	7
1981	65	27	28	10	5	18
1986	143	35	45	13	6	34
1991	243	42	64	17	7	51
1996	337	48	85	22	8	66

Note: (1) Benefits according to a maximum income of $6,000.

TABLE No. 17

ESTIMATES OF THE OPERATIONS OF THE QUEBEC PENSION PLAN

Total Contributions and Benefits

(in millions of dollars)

Year	Contributions (1)	Benefits (1)	Operating Expenses	Interest (2) on fund	Amount of fund
		Intermediate cost estimates			
1966	128	-	6	3	126
1967	175	-	6	11	305
1968	186	8	6	19	496
1969	197	13	6	28	703
1970	208	18	6	38	925
1971	219	24	7	49	1 162
1976	276	73	7	113	2 565
1981	341	155	8	172	4 273
1986	397	280	10	246	6 048
1991	458	430	11	319	7 761
1996	532	576	13	388	9 415
		Low cost estimates			
1966	129	-	6	3	126
1967	176	-	6	10	307
1968	188	8	6	19	501
1969	200	13	6	29	710
1970	211	18	6	39	934
1971	222	24	7	50	1 175
1976	281	74	7	114	2 603
1981	348	157	8	175	4 347
1986	407	284	10	251	6 170
1991	471	438	11	326	7 944
1996	549	586	13	398	9 674
		High cost estimates			
1966	128	-	6	3	125
1967	174	-	6	10	303
1968	184	8	6	19	492
1969	195	13	6	28	696
1970	205	18	6	38	915
1971	216	24	7	48	1 149
1976	271	72	7	111	2 528
1981	333	153	8	169	4 199
1986	387	275	10	242	5 925
1991	445	423	11	311	7 578
1996	516	565	13	377	9 156

Notes: (1) Based on a maximum income of $6,000 for purposes of contributions and benefits.

(2) Interest rate: 5% per annum for the first 15 years and 4½% per annum subsequently, compounded yearly.

TABLE No. 18

ESTIMATES OF THE OPERATIONS OF THE QUEBEC PENSION PLAN

Retirement, Widows' and Orphans' Pensions and Death Benefits Account

(in millions of dollars)

Year	Contributions (1)	Benefits (1)	Operating Expenses	Interest(2) on fund	Amount of fund
			Intermediate cost estimates		
1966	104	-	5	2	102
1967	142	-	5	9	248
1968	151	8	5	16	402
1969	160	12	5	23	568
1970	169	17	5	31	745
1971	178	22	5	39	935
1976	224	66	6	90	2 047
1981	277	137	7	136	3 377
1986	322	245	8	193	4 717
1991	372	378	9	244	5 929
1996	432	508	11	289	6 988
			Low cost estimates		
1966	105	-	5	3	103
1967	143	-	5	9	250
1968	153	8	5	16	405
1969	162	12	5	23	573
1970	171	17	5	31	753
1971	181	23	5	40	946
1976	229	67	6	91	2 077
1981	283	139	7	139	3 436
1986	331	249	8	196	4 815
1991	383	384	9	250	6 076
1996	446	516	11	297	7 196
			High cost estimates		
1966	104	-	5	2	102
1967	141	-	5	8	246
1968	150	8	5	15	398
1969	158	12	5	23	562
1970	167	17	5	31	737
1971	175	22	5	39	924
1976	220	65	6	89	2 016
1981	271	135	7	134	3 318
1986	314	242	8	189	4 619
1991	362	373	9	238	5 781
1996	419	499	11	280	6 779

Notes: (1) Based on a maximum income of $6,000 for purposes of contributions and benefits.

(2) Interest rate: 5% per annum for the first 15 years and 4½% per annum subsequently, compounded yearly.

TABLE No. 19

ESTIMATES OF THE OPERATIONS OF THE QUEBEC PENSION PLAN

Disability Pensions Account

(in millions of dollars)

Year	Contributions (1)	Benefits (1)	Operating Expenses	Interest(2) on fund	Amount of fund
			Intermediate cost estimates		
1966	24	-	1	1	24
1967	33	-	1	2	57
1968	35	0.1	1	4	95
1969	37	1	1	5	135
1970	39	1	1	7	179
1971	41	1	1	10	227
1976	52	7	1	23	519
1981	64	18	2	36	896
1986	74	34	2	54	1 331
1991	86	52	2	75	1 832
1996	100	68	2	99	2 428
			Low cost estimates		
1966	24	-	1	1	24
1967	33	-	1	2	56
1968	35	0.1	1	4	95
1969	37	1	1	5	137
1970	40	1	1	7	181
1971	42	2	1	10	230
1976	53	7	1	23	526
1981	65	19	2	37	911
1986	76	35	2	55	1 355
1991	88	53	2	76	1 868
1996	103	70	2	101	2 478
			High cost estimates		
1966	24	-	1	1	23
1967	33	-	1	2	57
1968	35	0.1	1	4	94
1969	37	1	1	5	134
1970	38	1	1	7	178
1971	40	1	1	9	225
1976	51	7	1	22	511
1981	62	18	2	35	881
1986	72	34	2	53	1 307
1991	83	51	2	73	1 796
1996	97	66	2	97	2 377

Notes: (1) Based on a maximum income of $6,000 for purposes of contributions and benefits.

(2) Interest rate: 5% per annum for the first 15 years and 4½% per annum subsequently, compounded yearly.

TABLE No. 20

ESTIMATES OF THE OPERATIONS OF THE QUEBEC PENSION PLAN

Total Contributions and Benefits

(in millions of dollars)

Year	Contributions (1)	Benefits (1)	Operating Expenses	Interest(2) on fund	Amount of fund
			Intermediate cost estimates		
1966	118	-	6	2	115
1967	161	-	6	8	278
1968	172	8	6	14	451
1969	182	12	6	21	635
1970	192	17	6	28	831
1971	201	23	7	36	1 038
1976	247	69	7	79	2 209
1981	296	145	8	128	3 525
1986	342	259	10	177	4 828
1991	393	396	11	219	5 944
1996	451	527	13	254	6 841
			Low cost estimates		
1966	119	-	6	2	116
1967	163	-	6	8	280
1968	173	8	6	14	454
1969	184	13	6	21	641
1970	194	18	6	28	839
1971	204	23	7	36	1 050
1976	251	70	7	80	2 241
1981	302	147	8	130	3 586
1986	351	264	10	180	4 926
1991	404	403	11	224	6 087
1996	465	537	13	261	7 038
			High cost estimates		
1966	118	-	6	2	114
1967	160	-	6	8	276
1968	170	7	6	14	447
1969	180	12	6	21	629
1970	189	17	6	28	822
1971	198	23	7	35	1 026
1976	242	68	7	78	2 177
1981	289	143	8	125	3 464
1986	333	255	10	173	4 730
1991	382	390	11	214	5 800
1996	437	518	13	246	6 644

Notes: (1) Based on a maximum income of $5,000 for purposes of contributions and benefits.

(2) Interest rate: 4% per annum, compounded yearly.

TABLE No. 21

ESTIMATES OF THE OPERATIONS OF THE QUEBEC PENSION PLAN

Retirement, Widows' and Orphans' Pensions and Death Benefits Account

(in millions of dollars)

Year	Contributions (1)	Benefits (1)	Operating Expenses	Interest(2) on fund	Amount of fund
			Intermediate cost estimates		
1966	96	-	5	2	93
1967	131	-	5	7	226
1968	139	8	5	12	365
1969	148	12	5	17	512
1970	156	17	5	23	669
1971	163	22	5	29	834
1976	201	62	6	63	1 759
1981	240	128	7	101	2 777
1986	278	228	8	137	3 742
1991	319	349	9	166	4 487
1996	367	466	11	185	4 964
			Low cost estimates		
1966	97	-	5	2	94
1967	132	-	5	7	228
1968	141	8	5	12	368
1969	150	12	5	17	517
1970	158	17	5	23	676
1971	166	22	5	29	844
1976	204	63	6	64	1 785
1981	245	130	7	102	2 825
1986	285	231	8	140	3 821
1991	328	354	9	170	4 602
1996	378	474	11	191	5 122
			High cost estimates		
1966	96	-	5	2	93
1967	130	-	5	6	224
1968	138	7	5	12	362
1969	146	12	5	17	508
1970	154	16	5	22	662
1971	161	21	5	28	825
1976	197	61	6	62	1 734
1981	235	126	7	99	2 728
1986	271	224	8	134	3 664
1991	310	344	9	162	4 372
1996	355	458	11	179	4 806

Notes: (1) Based on a maximum income of $5,000 for purposes of contributions and benefits.

(2) Interest rate: 4% per annum, compounded yearly.

TABLE No. 22

ESTIMATES OF THE OPERATIONS OF THE QUEBEC PENSION PLAN

Disability Pensions Account

(in millions of dollars)

Year	Contributions (1)	Benefits (1)	Operating Expenses	Interest(2) on fund	Amount of fund
			Intermediate cost estimates		
1966	22	-	1	0.4	22
1967	30	-	1	2	52
1968	32	0.1	1	3	86
1969	34	1	1	4	122
1970	36	1	1	5	162
1971	38	1	1	7	204
1976	46	7	1	16	450
1981	55	17	2	27	748
1986	64	32	2	39	1 085
1991	74	47	2	53	1 457
1996	85	62	2	69	1 877
			Low cost estimates		
1966	22	-	1	0.4	22
1967	31	-	1	2	53
1968	33	0.1	1	3	87
1969	35	1	1	4	123
1970	36	1	1	6	163
1971	38	1	1	7	206
1976	47	7	1	16	456
1981	57	17	2	27	761
1986	66	32	2	40	1 105
1991	76	49	2	54	1 485
1996	87	64	2	70	1 916
			High cost estimates		
1966	22	-	1	0.4	21
1967	30	-	1	1	52
1968	32	0.1	1	3	85
1969	34	0.5	1	4	121
1970	35	1	1	5	160
1971	37	1	1	7	201
1976	45	7	1	16	443
1981	54	17	2	27	736
1986	63	31	2	39	1 066
1991	72	46	2	52	1 428
1996	82	60	2	67	1 838

Notes: (1) Based on a maximum income of $5,000 for purposes of contributions and benefits.

(2) Interest rate: 4% per annum, compounded yearly.

TABLE No. 23

ESTIMATES OF THE OPERATIONS OF THE QUEBEC PENSION PLAN

Amounts of Benefit Payments (1)

(in millions of dollars)

Year	Retirement Pension	Widow's Pension: Basic Pension	Widow's Pension: Pension Related to income	Orphans Pension	Death Benefits	Disability Pension
			Intermediate cost estimates			
1968	0.1	2	1	1	3	0.1
1969	0.5	4	2	2	3	0.5
1970	1.0	6	3	3	3	1.0
1971	2	8	4	3	4	1
1976	20	18	13	7	4	7
1981	60	27	26	10	5	17
1986	132	35	41	14	5	32
1991	223	43	59	18	6	47
1996	309	49	78	22	7	62
			Low cost estimates			
1968	0.1	2	1	1	3	0.1
1969	0.5	4	2	2	3	0.5
1970	1.0	6	3	3	3	1.0
1971	2	8	5	3	4	1
1976	20	18	14	7	4	7
1981	60	28	26	11	5	17
1986	133	36	42	14	6	32
1991	226	44	60	18	6	49
1996	313	51	80	23	7	64
			High cost estimates			
1968	0.1	2	1	1	3	0.1
1969	0.5	4	2	2	3	0.5
1970	1.0	6	3	3	3	1.0
1971	2	8	4	3	3	1
1976	19	18	13	7	4	7
1981	59	27	25	10	5	17
1986	131	35	40	13	5	31
1991	221	42	58	17	6	46
1996	305	48	76	22	7	60

Note: (1) Benefits according to a maximum income of 35,000.

TABLE No. 24

ESTIMATES OF THE OPERATIONS OF THE QUEBEC PENSION PLAN

Total Contributions and Benefits

(in millions of dollars)

Year	Contributions (1)	Benefits (1)	Operating Expenses	Interest(2) on fund	Amount of fund
			Intermediate cost estimates		
1966	118	-	6	3	115
1967	161	-	6	10	280
1968	172	8	6	18	456
1969	182	12	6	26	645
1970	192	17	6	35	848
1971	201	23	7	45	1 065
1976	247	69	7	102	2 322
1981	296	145	8	153	3 793
1986	342	259	10	215	5 261
1991	393	396	11	272	6 610
1996	451	527	13	323	7 821
			Low cost estimates		
1966	119	-	6	3	116
1967	163	-	6	10	283
1968	173	8	6	18	460
1969	184	13	6	26	651
1970	194	18	6	36	857
1971	204	23	7	45	1 077
1976	251	70	7	103	2 355
1981	302	147	8	156	3 858
1986	351	264	10	219	5 365
1991	404	403	11	278	6 765
1996	465	537	13	332	8 035
			High cost estimates		
1966	118	-	6	3	115
1967	160	-	6	10	278
1968	170	7	6	17	452
1969	180	12	6	26	639
1970	189	17	6	35	839
1971	198	23	7	44	1 053
1976	242	68	7	101	2 289
1981	289	143	8	151	3 729
1986	333	255	10	211	5 156
1991	382	390	11	266	6 456
1996	437	518	13	314	7 606

Notes: (1) Based on a maximum income of $5,000 for purposes of contributions and benefits.

(2) Interest rate: 5% per annum for the first 15 years and 4½% per annum subsequently, compounded yearly.

TABLE No. 25

ESTIMATES OF THE OPERATIONS OF THE QUEBEC PENSION PLAN

Retirement, Widows' and Orphans' Pensions and Death Benefits Account

(in millions of dollars)

Year	Contributions (1)	Benefits (1)	Operating Expenses	Interest(2) on fund	Amount of fund
			Intermediate cost estimates		
1966	96	-	5	2	94
1967	131	-	5	8	228
1968	139	8	5	14	369
1969	148	12	5	21	521
1970	156	17	5	28	683
1971	163	22	5	36	856
1976	201	62	6	81	1 850
1981	240	128	7	121	2 991
1986	278	228	8	167	4 086
1991	319	349	9	207	5 012
1996	367	466	11	237	5 728
			Low cost estimates		
1966	97	-	5	2	94
1967	133	-	5	8	230
1968	141	8	5	14	372
1969	150	12	5	21	526
1970	158	17	5	29	690
1971	166	22	5	37	866
1976	204	63	6	83	1 876
1981	245	130	7	123	3 043
1986	285	231	8	170	4 169
1991	328	354	9	212	5 136
1996	378	474	11	245	5 900
			High cost estimates		
1966	96	-	5	2	93
1967	130	-	5	8	226
1968	138	7	5	14	366
1969	146	12	5	21	516
1970	154	16	5	28	676
1971	161	21	5	36	846
1976	197	61	6	80	1 823
1981	235	126	7	119	2 939
1986	271	224	8	164	4 002
1991	310	344	9	202	4 888
1996	355	458	11	230	5 555

Notes: (1) Based on a maximum income of $5,000 for purposes of contributions and benefits.

(2) Interest rate: 5% per annum for the first 15 years and 4½% per annum subsequently, compounded yearly.

TABLE No. 26

ESTIMATES OF THE OPERATIONS OF THE QUEBEC PENSION PLAN

Disability Pensions Account

(in millions of dollars)

Year	Contributions (1)	Benefits (1)	Operating Expenses	Interest(2) on fund	Amount of fund
Intermediate cost estimates					
1966	22	-	1	1	22
1967	30	-	1	2	53
1968	32	0.1	1	3	87
1969	34	1	1	5	124
1970	36	1	1	7	165
1971	38	1	1	9	209
1976	46	7	1	21	472
1981	55	17	2	32	803
1986	64	32	2	48	1 175
1991	74	47	2	65	1 599
1996	85	62	2	86	2 093
Low cost estimates					
1966	22	-	1	1	22
1967	31	-	1	2	53
1968	33	0.1	1	3	88
1969	35	1	1	5	125
1970	36	1	1	7	167
1971	38	1	1	9	211
1976	47	7	1	21	479
1981	57	17	2	33	816
1986	66	32	2	49	1 196
1991	76	49	2	66	1 629
1996	87	64	2	87	2 135
High cost estimates					
1966	22	-	1	1	21
1967	30	-	1	2	52
1968	32	0.1	1	3	86
1969	34	0.5	1	5	123
1970	35	1.0	1	7	163
1971	37	1	1	9	206
1976	45	7	1	20	465
1981	54	17	2	32	790
1986	63	31	2	47	1 154
1991	72	46	2	64	1 568
1996	82	60	2	84	2 051

Notes: (1) Based on a maximum income of $5,000 for purposes of contributions and benefits.

(2) Interest rate: 5% per annum for the first 15 years and 4½% per annum subsequently, compounded yearly.

J - Periodic revision of the financing system

In the opinion of the Committee, a periodic revision of the financing system is essential for the following reasons:

i) any modification of the provisions of the Plan must be preceded by an actuarial analysis of its effect on present and future costs of the Plan and on the reserve accumulation which would result from such a modification; and,

ii) as the mixed financing system gives a certain latitude in regard to the future level of the reserve, a periodic revision of this aspect of the Plan must be made in relation to the economic policy of the Government; and,

iii) as estimates of amounts of contribution, benefits, operating expenses and interest are based on several assumptions and on economic and demographic factors subject to cyclic and secular changes, a periodic revision of such estimates is necessary; and,

iv) according to one of the Committee's recommendations with respect to the investment of the reserve, a periodic revision of the interest rate used in the calculation of estimates is necessary.

The following extract from a study of the United States Social Security System, moreover, confirms the opinion of the Committee on this question:

> "Continued successful operation of the plan requires not only annual appraisal of the operating results, but also re-examination at regular intervals of the techniques and assumptions for the long-range estimates. Such periodic re-examinations should be made by both the Board of Trustees and Advisory Councils authorized by Congress" (37).

The Committee therefore recommends that the financing system be thoroughly analyzed, at least every five years, and that the law stipulate that no modification be made to the provisions of the Plan without an analysis, by means of appropriate actuarial studies, being made of the effect of such modification on present and future contribution rates and on the accumulation of reserves.

K - Social security programs: Sweden and the United States

The Committee has considered it advisable to give a brief analysis of certain aspects of Sweden's pension plan and of the United States Social Security System, since certain erroneous conceptions exist with respect to these programs and since the Committee has, to a certain degree, based itself on the provisions of these programs.

i) Sweden's Program

The national pension plan is composed of two distinct parts, the basic plan and the complementary plan. The basic plan provides retirement, disability and widows' pensions of uniform amounts for all recipients. The amounts of such pensions are adjusted automatically in relation to the consumer price index. This part of the plan is financed on the pay as you go system and the Government pays a portion of the cost.

Under the complementary plan, retirement, disability, widows' and orphans' pensions are provided for; the amounts of such pensions are related to income. Moreover, the amounts of income used in the calculation of pensions as well as current pensions are automatically adjusted in relation to the consumer price index. Since benefit amounts are comparatively higher and transition provisions are based on a period of 15 years, the cost of this plan is higher than that of the pension plan recommended by the Committee.

Financing of the plan is provided through a mixed system and only employers and independent workers are called upon to contribute; no portion of the cost of the complementary plan is paid by the Government. The law provides that the board responsible for the program must recommend every five years the contribution rates for the next 7 years. Contribution rates expressed in terms of percentage of contributory incomes are established as follows for the first five years of the plan: 3% in 1960; 4% in 1961; 5% in 1962; 6% in 1963 and 7% in 1964.

At the end of 1962, the reserve amounted to 2,870 million kroner, i.e. $574 million according to the official rate of exchange (38). It is estimated that the reserve will amount to $1,400 million at the end of 1964 and that it will continue to increase during the next twenty to thirty years (39).

As indicated in the chapter of this report dealing with the economic aspects of the Plan, such reserve amounts are proportionately higher in relation to Sweden's economy than the

reserve amounts contemplated in the pension plan recommended by the Committee, in relation to the economy of Quebec.

ii) The United States System

The American program (Old-Age, Survivor and Disability Insurance System) provides, in general terms, for retirement, disability, widows' and orphans' pensions as well as for death benefits. The law was adopted in 1935 and amendments were made approximately every two years starting in 1939, in order to gradually improve the benefits of the plan, to adjust pension amounts in consequence of inflation and the general increase in the standard of living and to adjust the financing system to modifications made in the plan taking into account social and economic conditions.

The plan is financed only through contributions from workers and employers, and it is expressly stipulated that no part of the cost will be paid by the Government.

The Committee wishes to stress the fact that the American plan is financed by means of a mixed system, and not a pay as you go system. In spite of the periodic adjustment of pensions and the absence of Government contributions, this system is considered very satisfactory since it is still in use after 28 years.

Originally, a reserve was to be accumulated according to estimates used for the adoption of the law, whereby the amount of the reserve would have exceeded the national debt then existing. The financing system was gradually modified later on, but it still remains a mixed system. Here is how it was described recently by the Chief Actuary, Mr. Robert J. Myers:

> "Our general financial principle is that the system is on a partial-reserve basis. Over the long-run, interest on invested assets will meet about 10% of the cost of the program, the rest of the cost coming from the contributions. In the last few years many people have thought that the system is on a pay as you go basis because income and outgo has been more or less in balance, but if the increases in contributions scheduled for 1966 and 1968 go into effect, we once again start a fairly sizeable fund accumulation. **There are some people who feel there should not be any** great fund accumulation, but at least under present law there is a partial-reserve funding basis, and this is no different than what was originally intended, except as to degree" (40).

The Committee also wishes to draw attention to another erroneous conception which exists in regard to the American plan. In fact, it is often stated that increases in the contribution rate, which was 2% at the outset of the plan and which will be 9.25% in 1968, have not been foreseen and that they result from a weakness in the financing system.

It is necessary to mention first that the principle of contribution rates graduated over the years has been adopted since the establishment of the program (41). Moreover, such increases have resulted mainly from periodic amendments to the plan which have all been aimed at the improvement of its benefits. Moreover, **in all the documentation dealing with the United States Social Security System, the Committee failed to find a single statement to the contrary.**

The financing system also appears very satisfactory even with respect to the future contribution rate, the conclusion of the advisory committee entrusted in 1959 with the study of the financing aspect of the program, confirms this opinion:

> "The method of financing the old-age, survivors and disability insurance program is sound, and based on the best estimates available, the contributions schedule now in the law makes adequate provision for meeting both short-range and long-range costs" (42).

SECTION 2 - A TEST OF THE ADJUSTMENT TO ECONOMIC VARIATIONS OF INCOMES USED IN THE CALCULATION OF PENSIONS AND CURRENT PENSIONS

It is impossible to determine with strict accuracy the value of a method intended to be applied in the future, especially when it is necessary to consider it from a statistical point of view in order to judge it. However, if we assume that the adjustment of pensions has been applied in the past, we can then use as a basis of comparison the results substantiated by statistics. Such an experience has convinced the Committee of the value of this method. In order to test the recommended method, we took as our starting point the year 1913, in order to take into account the effects of the two world Wars, a severe economic depression and the Korean War; this test also shows the real effects of such events on the cost of living and salary indexes.

GRAPH I

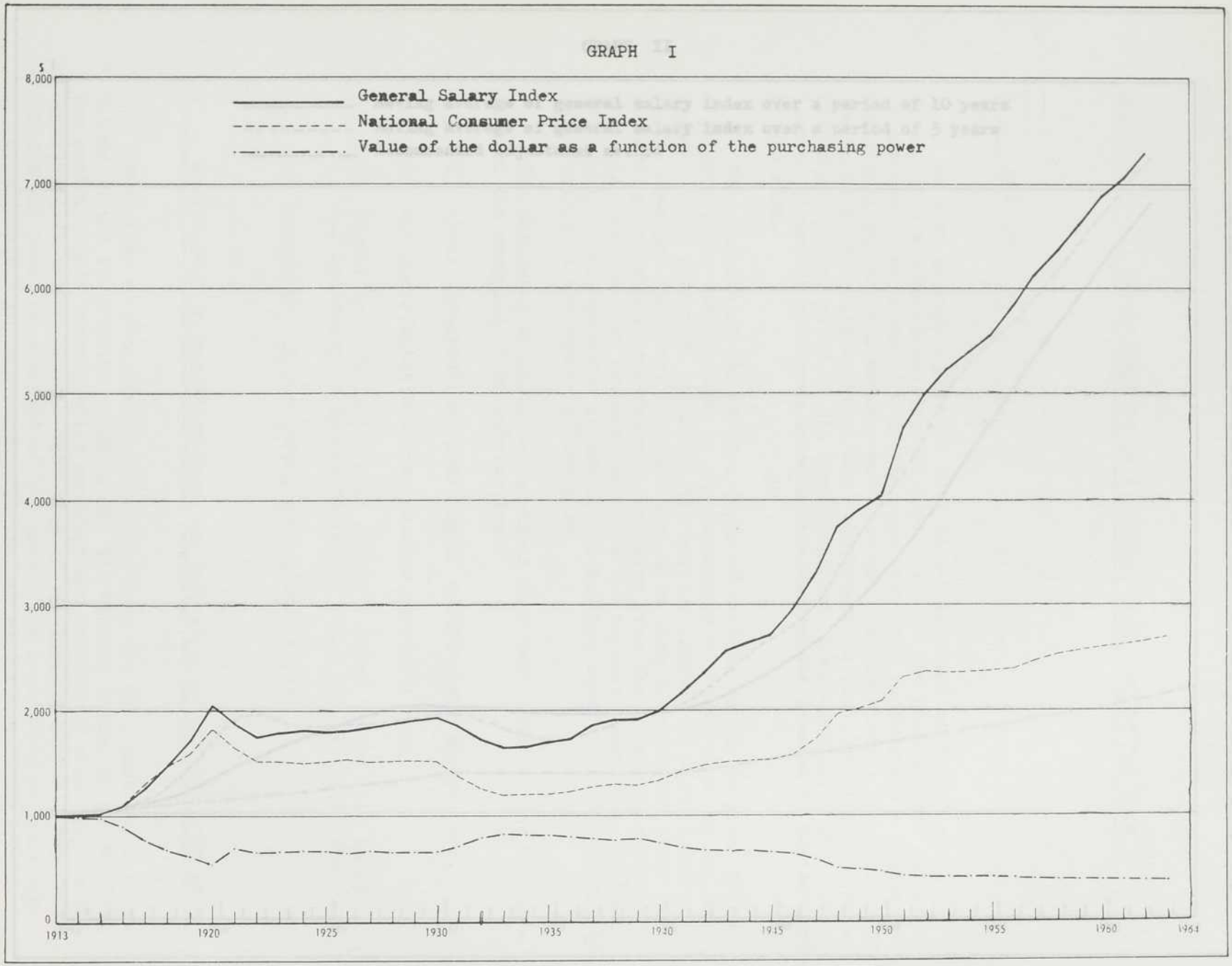
In Graph I, the curve of the general index of salaries may be compared with that of the national Consumer Price index. The graph of the dollar value expressed in terms of purchasing power is also shown as a corollary. The area between the first two curves represents the improvement in the standard of living during this period.

Generally, any method of pension adjustment in relation to the salary index would follow the first graph to a large extent; any adjustment method based on the consumer price index would follow the second curve. The third curve illustrates pension formulas involving no adjustment.

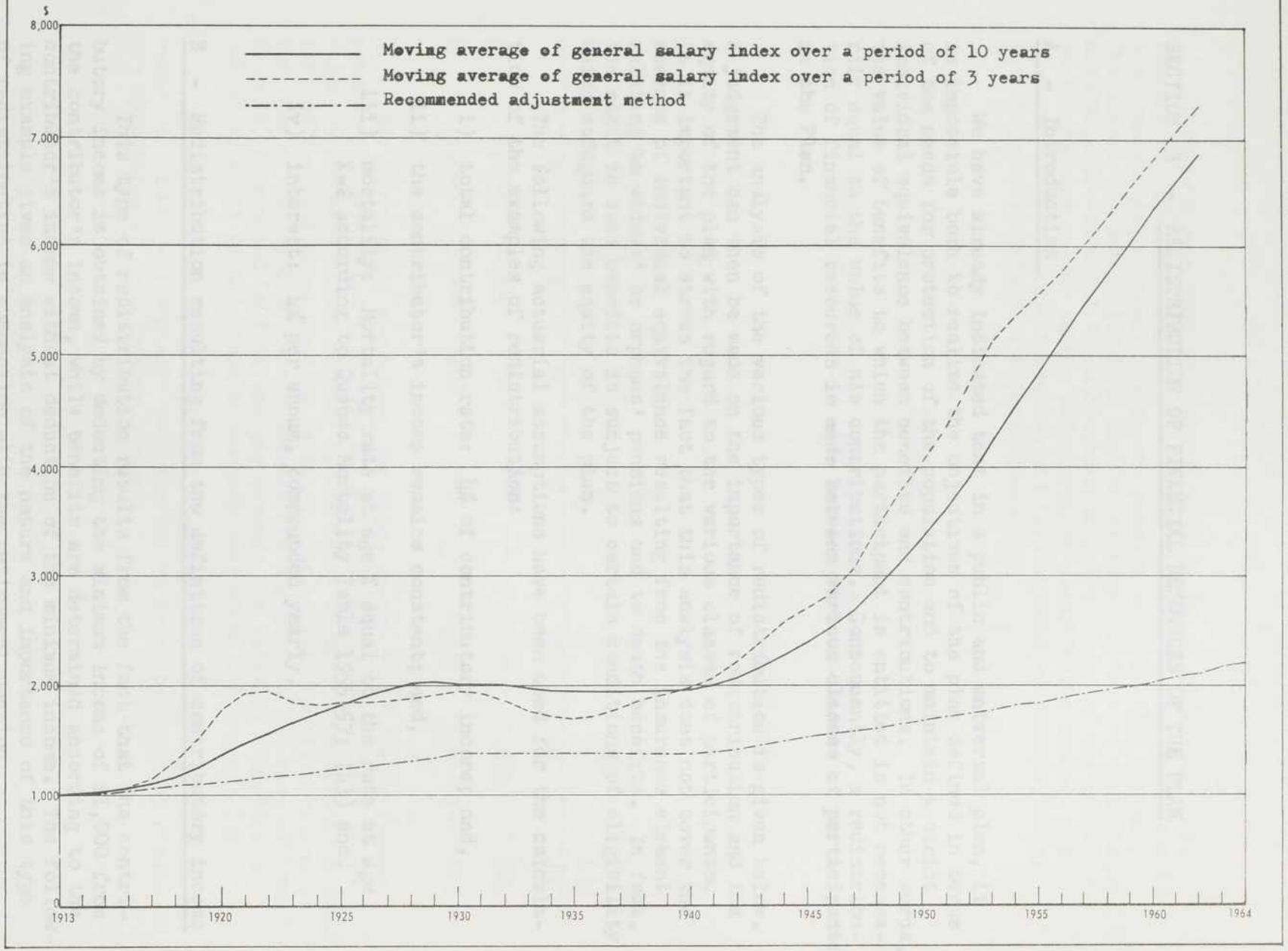
GRAPH II

Graph II illustrates, in a more precise way, results obtained through various methods. With respect to the determination of the amounts of retirement pensions, the first graph refers to a method based on the average of the last ten years' salary, the second on the average of the last three years' salary and the third is based on the adjustment method in relation to the price index, with limitation, as recommended by the Committee. (Statistical sources are given in the appendix)

GRAPH I


$
8,000
7,000
6,000
5,000
4,000
3,000
2,000
1,000
0
General Salary Index
National Consumer Price Index
Value of the dollar as a function of the purchasing power
1913
1920
1925
1930
1935
1940
1945
1950
1955
1960
1964

GRAPH II


$
8,000
7,000
6,000
5,000
4,000
3,000
2,000
1,000
0
Moving average of general salary index over a period of 10 years
Moving average of general salary index over a period of 3 years
Recommended adjustment method
1913
1920
1925
1930
1935
1940
1945
1950
1955
1960
1964

SECTION 3 - REDISTRIBUTION OF FINANCIAL RESOURCES OF THE PLAN

A - Introduction

We have already indicated that in a public and universal plan, it is impossible both to realize the objectives of the plan defined in terms of the needs for protection of the population and to maintain a strict individual equivalence between benefits and contributions. In other words, the value of benefits to which the participant is entitled is not necessarily equal to the value of his contributions. Consequently, a redistribution of financial resources **is made between various classes of participants in the Plan.**

The analysis of the various types of redistribution is given below. A judgement can then be made on the importance of redistribution and the equity of the plan with regard to the various classes of participants. It is important to stress the fact that this analysis does not cover the absence of individual equivalence resulting from the insurance element relating to widows' or orphans' pensions and to death benefits. In fact, the right to such benefits is subject to certain conditions of eligibility which safeguard the equity of the plan.

The following actuarial assumptions have been used for the calculation of the examples of redistribution:

i) total contribution rate: 4% of contributory income; and,

ii) the contributor's income remains constant; and,

iii) mortality: Mortality rate at age X equal to the rate at age X-2 according to Quebec Mortality Table 1955-57; (43) and,

iv) interest: 4% per annum, compounded yearly.

B - Redistribution resulting from the definition of contributory income

This type of redistribution results from the fact that the contributory income is obtained by deducting the minimum income of $1,000 from the contributor's income, while benefits are determined according to the contributor's income without deduction of the minimum income. The following example gives an analysis of the nature and importance of this type of redistribution in connection with the retirement pension.

Let us assume that two participants, A and B, both aged 40 on January 1, 1966, contribute continuously to the Plan from that date to the commencement of their retirement pension on their 65th birthday. The income of contributor A is $2,000 per year and that of contributor B is $6,000. In order to demonstrate only the effect of the deduction of the minimum income on the definition of contributory income, the amount of their retirement pension has been determined without taking into account the transition provisions.

TABLE No. 27

EFFECT OF THE DEFINITION OF CONTRIBUTORY INCOME

Contributor	Yearly income	Contributory income	Yearly contribution	Amount of yearly pension	Value at age 65		
					Contribution	Benefit	Redistribution of resources
	$	$	$	$	$	$	$
A	2,000	1,000	40	266	1,699	2,684	985
B	6,000	5,000	200	798	8,495	8,052 (-)	443

The above table shows that the value at age 65 of the retirement pension of contributor A exceeds the value of his contributions by $985, while in the case of contributor B, the value of his contributions exceeds that of the retirement pension by $443. The negative redistribution in the case of contributors whose incomes are high, as in the case of contributor B, is applied to fill the gap between the value of contributions and of benefits in the cases of contributors whose incomes are low.

Examples given later show that a redistribution is also made in the cases of widows' and orphans' pensions and in death benefits by reason of the definition of contributory income.

C - Redistribution resulting from transition provisions

The amount of retirement pension for contributors A and B in the preceding example does not take into account the transition provisions. These provisions will increase the amount of retirement pension for participants who are over 18 years of age at the beginning of the Plan. Therefore, a redistribution will take place.

TABLE No. 28

EFFECTS OF TRANSITION PROVISIONS

(contributor aged 40)

Table 28 is based on the same example as table 27 except that the amounts of retirement pensions have been adjusted by reason of the transition provisions.

Contributor	Yearly income	Contributory income	Yearly contribution	Amount of yearly pension	Value at age 65		
					Contribution	Benefit	Redistribution of resources
	$	$	$	$	$	$	$
A	2,000	1,000	40	500	1,699	5,045	3,346
B	6,000	5,000	200	1,500	8,495	15,135	6,640

The above table shows that a redistribution of resources is made in favour of the first participants in the Plan whose incomes are high as well as for those whose incomes are low. However, although the total contribution of contributor B is five times that of contributor A, the amount of redistribution is only double.

TABLE No. 29

EFFECTS OF TRANSITION PROVISIONS

(contributor aged 45)

Table 29 shows the maximum level of redistribution resulting from the transition provisions; this maximum redistribution appears in the case of contributors aged **exactly 45** at the beginning of the Plan. This table is based on the same data as the preceding one, except that contributors are aged 45 on January 1, 1966.

Contributor	Yearly income	Contributory income	Yearly contribution	Amount of yearly pension	Value at age 65		
					Contribution	Benefit	Redistribution of resources
	$	$	$	$	$	$	$
A	2,000	1,000	40	500	1,215	5,045	3,830
B	6,000	5,000	200	1,500	6,074	15,135	9,061

Although the absolute amount of redistribution in favour of contributor B is more than double the amount in favour of contributor A, it represents only 149% of the accumulated value at the age **of 65 of total contributions** in favour of B, while the amount of redistribution in favour of A represents 315% of the accumulated value of contributions paid on his account.

Tables 28 and 29 therefore lead us to the conclusion that a redistribution is made in favour of the first participants **in** the Plan.

D - Redistribution resulting from the method of calculating the widow's pension

The widow's pension is composed of an amount of $25 per month payable up to the widow's 70th birthday and of an amount equal to 37½% of the contributor's retirement pension calculated on his average

adjusted income at the time of his death. A redistribution is made in favour of participants whose incomes are low on account of the fact that the amount of $25 per month is not related to the participant's income; the redistribution resulting from the definition of contributory income is also affected in the same manner as for the retirement pension.

Let us assume that contributors A and B die on the same date and that their widows are then 30 years of age.

TABLE No. 30

EFFECTS OF THE METHOD OF CALCULATING

THE AMOUNT OF THE WIDOW'S PENSION

Contributor	Yearly income	Contributory income	Amount of yearly pension (1)	Value of pension (2)	Value of Pension in relation to contributory income
	$	$	$		
A	2,000	1,000	488	9.823	9.823
B	6,000	5,000	863	17.619	3.523

Notes:

(1) The amount of the pension is reduced by $300 per year starting at age 70.

(2) The value of the pension does not take into account the probability of remarriage.

This table shows that the value of the widow's pension represents a much higher proportion of the contributory income of contributors whose incomes are low. The amounts of redistribution are not indicated in this table, since part of this redistribution results from the insurance element in connection with the widow's pension.

E - Redistribution resulting from the method of calculating the amount of orphans'pensions

The amount of the orphan's pension is $25 per month, payable, generally, up to the 18th birthday. As the amount of this pension is not related to the contributor's income, a redistribution is made in favour of contributors whose incomes are low in addition to the redistribution resulting from the definition of contributory income.

Let us assume that contributors A and B die on the same date and that each leaves three children who are respectively, 3,6 and 9 years of age.

TABLE No. 31

EFFECTS OF THE METHOD OF CALCULATING

THE ORPHAN'S PENSION

Contributor	Yearly income	Contributory income	Total Value of orphans' pensions	Total Value of Orphans'pensions in relation to contributory income
	$	$	$	
A	2,000	1,000	8,560	8.560
B	6,000	5,000	8,560	1.712

The above table shows that the value of orphans' pensions represents a much higher proportion of the contributory income of contributors whose incomes are low. As in the case of the widow's pension, the amounts of redistribution are not indicated since a portion of this redistribution results from the insurance factor in connection with the orphans' pensions.

F - Redistribution resulting from the method of calculating the death benefit

The amount of the death benefit is equal to two years' payment of the retirement pension that the contributor would have received, calculated on the amount of his average adjusted income at the time of his death.

Les us assume that contributors A and B are single and that they die on the same date.

TABLE No. 32

EFFECTS OF THE METHOD OF CALCULATING THE AMOUNT OF DEATH BENEFIT

Contributor	Yearly income	Contributory income	Death benefit	Death benefit in relation to contributory income
	$	$	$	
A	2,000	1,000	1,000	1.000
B	6,000	5,000	3,000	.600

G - Comments on redistribution

The foregoing demonstrates that all types of redistribution analyzed favour contributors with low incomes. Judged from this angle, the Quebec Plan is fair from a social point of view.

The Committee wishes to mention that there are other types of redistribution which cannot easily be reduced to numerical examples as has been done with the preceding ones. It should be stated that in practice, and contrary to the assumption made, contributors'incomes increase gradually with age, and the position of the participant in the Plan is thus constantly changing during his active life with regard to redistribution.

While younger workers will generally be called upon to contribute in favour of older workers, they in their turn benefit from succeeding generations as they grow older. The Committee considers that, in a general retirement plan, this question should not be discussed from an individualistic point of view but from a social standpoint, since all workers have a community of interests and each generation benefits from the efforts of preceding generations.

It is possible, however, that certain criticisms will be directed towards the Plan as regards the amounts of redistribution resulting from the transition provisions and which are made with respect to contributors whose incomes are higher (Table No. 29). Such criticisms would be based on the fact that it is not fair to require from future contributors amounts of contributions which will be used for payment of a portion of the retirement pensions of the first contributors to the Plan whose incomes are high.

According to the Committee, the equity of the Plan is not disturbed because transition provisions, as has already been stated, are socially necessary. Moreover, to consider that future contributors will be called upon to contribute in favour of the first contributors to the Plan is not accurate. In fact, as in private retirement plans, one should consider that contributions necessary for such redistribution are made by employers. When a private retirement plan is established, the employer frequently gives pension credits to employees for their past services. Generally, the employees are not required to contribute in that respect. When such employees are retired, they therefore receive a pension of a greater value than that of their contributions and the regular contributions of their employers. The excess is provided by the contributions which the employer is required to pay in this respect, in addition to his regular contributions. It would be wrong to think that this portion of the cost of the plan will be paid by future employees and this is also the case for the Quebec retirement plan. It is also necessary to state that the equity of private plans in this respect is never questioned.

CHAPTER XII

ACTUARIAL ANALYSIS OF THE QUEBEC PENSION PLAN

A - Introduction

This chapter deals with the description of actuarial assumptions and statistics on which are based estimates of the cost and of the accumulation of reserve relating to the Quebec Pension Plan, as well as the method adopted to make the appropriate calculations.

B - Projection Method

The actuarial analysis of the Plan has been made according to the projection method. According to this method, it is necessary to project into the future such factors as the number of contributors and beneficiaries, the amounts of contributory incomes, contributions, benefits, interest and operating expenses.

C - Low Cost and High Cost

No actuarial estimate of cost and accumulation of reserve is ever entirely accurate, no matter what method of analysis is used and in spite of all the attention and refinement which may be given to such calculations. Unavoidably, differences will arise between results and original assumptions. However, in spite of such difficulties, it is necessary to prepare actuarial estimates in order to establish the future costs of the Plan with maximum accuracy.

For this reason, estimates of low and high costs as well as the corresponding amounts of reserve have been established. The average between such estimates constitutes intermediate estimates; these last estimates have been prepared in order to facilitate the analysis of results.

D - Effective Date of the Plan

According to the Committee's comments in this respect, it has been assumed that collection of contributions will commence on January 1, 1966 and that payment of benefits will commence on January 1, 1968.

E - Amendment to the Provisions of the Plan

For purposes of actuarial analysis, we have assumed that there would be no amendments to the provisions of the Plan in the future. Such amendments will probably be necessary, for example, if the standard of living continues to improve.

Such an assumption is in accordance with the Committee's recommendation to prepare beforehand an actuarial analysis of the effects of any proposed amendment to the Plan on present and future costs.

F - Demographic Projections

The study entitled "Perspectives démographiques 1961-1996" was used for the Quebec population projections necessary for the calculation of actuarial estimates. This study, dated November 27, 1963, was made under the direction of Mr. Yves de Jocas, Supervisor of Demographic Studies in the Economic and Scientific Research Bureau of the Department of Industry and Commerce. The descriptive text of this study is reproduced in full in Appendix 2 of this report.

As it is very difficult to foresee the effects of migrations on Quebec demographic projections, the study gives five assumptions relating to the volume of net migration. Moreover, it is mentioned that the proposed assumptions offer a possible range of projections relating to migration.

Since an increase in the volume of net migration results in a reduction of the cost estimates of the Plan, the use of conservative assumptions, based on past experience, has been judged necessary. Consequently, assumption II of the study, according to which the maintenance of the present situation has been assumed without change, has been used as a basis for the calculation of low cost estimates. As to high cost estimates, a positive net migration of 50,000 in each five year period is assumed; this assumption is located therefore halfway between assumptions I and II of the study.

TABLE NO. 34

DEMOGRAPHIC PROJECTIONS FOR MAXIMUM COST ESTIMATES

('000)

Year		14 years and under	15 to 19 years	20 to 24 years	25 to 44 years	45 to 64 years	65 to 69 years	70 years and over	Total Population	Population Aged 65 and over in relation to Population aged 20 to 64 %
1961	Men	951	236	181	695	424	57	88	2,632	11.2
	Women	912	232	189	706	427	60	101	2,627	12.2
	Total	1,863	468	370	1,401	851	117	189	5,259	11.7
1966	Men	1,024	291	239	727	477	62	97	2,917	11.0
	Women	979	282	235	743	492	69	117	2,917	12.7
	Total	2,003	573	474	1,470	969	131	214	5,834	11.8
1976	Men	1,269	346	325	908	594	84	120	3,646	11.2
	Women	1,209	334	313	904	630	99	159	3,648	14.0
	Total	2,478	680	638	1,812	1,224	183	279	7,294	12.6
1986	Men	1,666	423	368	1,221	663	106	160	4,607	11.8
	Women	1,591	404	352	1,183	705	128	226	4,589	15.8
	Total	3,257	827	720	2,404	1,368	234	386	9,196	13.8
1996	Men	2,040	562	492	1,479	842	132	206	5,753	12.0
	Women	1,947	538	472	1,419	859	154	303	5,692	16.6
	Total	3,987	1,100	964	2,898	1,701	286	509	11,445	14.3

TABLE NO. 33

DEMOGRAPHIC PROJECTIONS FOR MINIMUM COST ESTIMATES

('000)

Year		14 years and under	15 to 19 years	20 to 24 years	25 to 44 years	45 to 64 years	65 to 69 years	70 years and over	Total Population	Population Aged 65 and over in relation to Population Aged 20 to 64 %
1961	Men	951	236	181	695	424	57	88	2,632	11.2
	Women	912	232	189	706	427	60	101	2,627	12.2
	Total	1,863	468	370	1,401	851	117	189	5,259	11.7
1966	Men	1,030	294	244	737	479	63	97	2,944	11.0
	Women	985	286	240	750	493	69	118	2,941	12.6
	Total	2,015	580	484	1,487	972	132	215	5,885	11.8
1976	Men	1,303	352	334	946	601	85	121	3,742	11.0
	Women	1,241	341	322	936	635	99	161	3,735	13.7
	Total	2,544	693	656	1,882	1,236	184	282	7,477	12.3
1986	Men	1,736	439	382	1,283	684	107	162	4,793	11.5
	Women	1,656	420	367	1,240	722	130	227	4,762	15.3
	Total	3,392	859	749	2,523	1,406	237	389	9,555	13.4
1996	Men	2,144	589	519	1,563	889	135	208	6,047	11.5
	Women	2,046	566	498	1,498	899	157	306	5,970	16.0
	Total	4,190	1,155	1,017	3,061	1,788	292	514	12,017	13.7

Tables 33 and 34 give population estimates for every 10 years from 1966, by sex and by age groups, in accordance with the two assumptions relating to migration. The proportion of population aged 65 and over compared to that aged 20 to 64 is also given.

G - Participation Rates

Participation rates represent the proportion of the population in the labour force. Participation rates required for the determination of the number of workers who will contribute to the Plan have been prepared by the Employment Division of the Economic Research Bureau of the Provincial Department of Industry and Commerce. They have been calculated, for each sex and each age group, for the years 1953 to 1961, and have been projected for the years 1966 to 1971 (44). Due to the multiplicity of factors affecting the composition of the labour force, it has been assumed that the participation rates would remain unchanged after 1971.

Labour force estimates obtained through the application of participation rates to population projections correspond to the definition of the contributor to the Plan, except that Federal Government employees and employees of Federal Crown Corporations are not excluded. The participation rates have therefore been adjusted, in this respect, by assuming that the number of such employees would increase in the future in the same proportion as the population. No adjustment has been made to exclude the number of workers who will not participate at the beginning of the Plan on account of difficulties of an administrative nature. The number of such workers will be comparatively low and, consequently, estimates of the costs of the Plan and of reserve accumulations are only slightly over-valued.

According to the method of calculation used, the participation rates have also been adjusted to exclude the number of workers representing the assumed unemployment rate for the future. As it is illogical to project the future unemployment rate on the basis of past experience, it has been assumed that the present unemployment rate (45) would gradually decrease to reach a level of 4% in 1976, according to low cost assumptions and a level of 5% according to high cost assumptions. Such rates must be compared to the rate of 3% which is considered to be the irreducible rate resulting from frictional unemployment. Assumptions relating to the unemployment rate are given in Table No. 35.

TABLE No. 35

Year	Low Cost Assumption	High Cost Assumption
	%	%
1962	7.5	7.5
1966	7.1	7.3
1971	5.5	6.2
1976 and after	4.0	5.0

These unemployment rates have been distributed by sex and by age groups (46).

It is to be noted that the unemployment rate has a greater influence on the amount of contributions than on the amount of benefits by reason of the exclusion of a certain number of years in the calculation of the average adjusted income for benefit purposes. Consequently, if future unemployment rates are inferior to rates used in the calculations, the cost of the Plan will be lower than the estimated cost.

The participation rates resulting from these various adjustments are given in Table 36.

TABLE NO. 36

ADJUSTED PARTICIPATION RATES

Classification	Ages										
	18-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69
Men -- Low cost											
1966	.35	.81	.86	.87	.88	.87	.85	.84	.72	.72	.44
1971 and following years	.30	.85	.87	.88	.87	.87	.86	.85	.70	.70	.44
Men -- High cost											
1966	.35	.81	.86	.87	.87	.87	.85	.84	.72	.72	.44
1971 and following years	.30	.83	.87	.88	.87	.86	.85	.84	.67	.67	.44
Women - Low cost and High cost											
1966	.40	.48	.25	.25	.28	.28	.28	.28	.17	.17	.11
1971 and following years	.35	.50	.29	.29	.33	.33	.34	.34	.22	.22	.11

H - Average Income

The determination of the workers' average incomes which have been used in the calculations of estimates of the amounts of contributory and of average incomes for benefit purposes has been made in four steps as follows:

i) calculation of the workers' average incomes according to sex in 1961; and,

ii) determination of future rate of increase of average incomes and projection of future average incomes; and,

iii) distribution of future average incomes by age groups; and,

iv) adjustment of future average incomes by age group in accordance with the provisions of the Plan.

i) Workers' average incomes in 1961

The average salary of Quebec salaried workers, in 1961, amounted to $3,469 for men and to $1,920 for women (47). Unfortunately, there are no corresponding statistics for independent workers.

The average income of salaried and independent workers, therefore, has been established on the basis of the total earned income in 1961, which amounted to $5,536 million (48), and on the basis of the numbers of salaried and independent workers according to the 1961 census and of the amounts of average income for salaried workers given in the preceding paragraph. The amounts of average income so obtained are $3,511 for men and $1,920 for women.

In the calculation of these amounts, it has been necessary to make certain assumptions regarding the distribution of the unemployed and the number of unpaid family workers. Assumptions made have given amounts of average income somewhat lower than the probable amounts. There is, therefore, a balancing factor to the fact that the estimated membership of the Plan is slightly overestimated as already indicated.

ii) Rate of Increase of Average Income

The composite index of average weekly salaries and wages in Quebec, for the period from 1950 to 1962, is given in Table 37 along with the percentage of increase in the index for each year (49).

iii) Average Incomes by Age Group

The only statistics presently available on income distribution by age group are taken from the 1951 census (50). These statistics have been used to establish the distribution, by age group, of future average incomes obtained on the basis of the rate of increase.

iv) Adjustment of Average Incomes

According to the provisions of the Plan, the contributory income is obtained by deducting from the worker's income the minimum income of $1,000 and the excess over the maximum income of $6,000. The amount of income, for the purposes of benefits, does not involve the minimum income deduction.

The adjustment of future average incomes, in accordance with the provisions of the Plan, was based on Taxation Statistics (51) from which can be established the proportion of employees receiving various multiples of various amounts of average income in relation to all employees.

Table 38 of average incomes thus adjusted for benefit purposes is given on page 168. Average incomes for contribution purposes are lower than the amounts given in Table 38 by a little less than $1,000.

TABLE No. 37

AVERAGE WEEKLY SALARIES AND WAGES

Year	Composite Index	Increase
		%
1950	42.89	
1951	47.37	4.5
1952	51.66	9.1
1953	54.55	5.6
1954	56.40	3.4
1955	58.62	3.9
1956	61.86	5.5
1957	65.18	5.4
1958	67.79	4.0
1959	70.56	4.1
1960	73.00	3.5
1961	75.33	3.2
1962	77.99	3.5

These statistics indicate that the increase in the composite index has always been higher than 3% per year. Moreover, it can be established from these statistics that the average rate of increase has been 5.1% since 1950 and 4.2% since 1952.

Since the composite index of salaries and wages has been increasing for several decades, it is plausible to assume that it will continue to increase in the future by reason of increased productivity and other economic and social factors affecting this index. On the other hand, since the increase in average income results in an increase of the total amount of contributions, before the corresponding effect influences the total amount of benefit payments, the use of too high a rate would result in an underestimation of the cost of the Plan, and in showing too high an accumulation of the reserve.

Therefore, it has been assumed that the average income increases by 3% per year up to 1981 and by 1.5% thereafter, and that increases will take effect on January 1 of each year. According to this assumption, it is supposed that the independent workers' average income increases at the same rate as salaried workers' income.

TABLE No. 38

AVERAGE ADJUSTED INCOMES FOR BENEFIT PURPOSES

Age Group	Year			
Men	1966	1976	1986	1996
	$	$	$	$
18 - 19	1,845	2,449	2,987	3,377
20 - 24	2,986	3,762	4,303	4,575
25 - 44	3,877	4,518	4,887	5,114
45 - 64	3,912	4,546	4,906	5,133
65 - 69	3,202	3,958	4,444	4,735
All ages	3,624	4,358	4,768	4,969
Women				
18 - 19	1,572	2,092	2,571	2,940
20 - 24	2,189	2,852	3,444	3,836
25 - 44	2,403	3,130	3,711	4,083
45 - 64	2,274	2,968	3,537	3,931
65 - 69	1,481	1,967	2,403	2,775
All ages	2,173	2,832	3,423	3,815

I - Operating Expenses

Operating expenses of the Plan will come mainly from salaries to employees, cost of floor space, rent of electronic or data processing equipment, cost of furniture and supplies. Even if certain administrative functions, such as the collection of contributions, will be performed by other government departments, we have assumed that all expenses will be totally imputed to the Plan.

To establish an estimate of operating expenses, it was impossible to proceed otherwise than by way of comparison with other social security programs. Unfortunately, the different methods used to measure the operating expenses of such programs are only approximate. They most frequently tie in operating expenses with contributions or with benefits, or express such expenses in terms of a number of dollars per participant. It is obvious that such methods cannot take into account differences between the provisions of the plans and other factors affecting these expenses.

According to the assumption used, operating expenses will represent 3.5% of contributions during the first year of the Plan. This percentage will subsequently diminish evenly from year to year, until it reaches 2.5% in the tenth year and remains level from then on. Estimates of operating expenses have been calculated in accordance with the amounts of contributions incurred in virtue of high cost assumptions.

The percentages used appear reasonably conservative since in the United States the corresponding percentages were 4.1% in 1940, 2.3% in 1950 and 2.3% in 1961. It is worth mentioning that the provisions of the U.S. System are more complex than those of the Quebec Plan.

J - Payment of Contributions

To establish the total amount of contributions incurred during a given year, we have assumed that they will be paid in full when due. For the accumulation of the reserve, we have assumed that dependent workers' contributions will be paid when due and that independent workers' contributions will be paid on April 30th of the year following that in which they became due.

K - Interest Rate

Reserve accumulations have been calculated according to the two following assumptions regarding the interest rate:

i) 4% per annum, compounded yearly;

ii) 5% per annum, compounded yearly, during the first 15 years following the establishment of the Plan and 4.5% per annum, compounded yearly, thereafter.

L - Mortality Rate

The Quebec Life Table 1955-57 (52) has been used to project the number of beneficiaries for the different types of benefits. To provide for continuation of the improvement in mortality rates, the mortality rate used for a given age corresponds to the mortality rate at age x-2 for both men and women.

TABLE No. 39

MODIFIED MORTALITY RATE

Age	Rate per 1,000	
	Men	Women
20	1.42	0.56
25	1.68	0.71
30	1.65	0.96
35	2.00	1.30
40	2.65	1.94
45	4.20	2.97
50	7.13	4.51
55	11.77	6.84
60	18.72	11.67
65	28.53	18.84
70	41.80	28.73

M - Remarriage Rate

The rates used have been developed from the experience of employees of the Federal civil service for the years 1948 to 1957.

This experience indicates important fluctuations in the rates according to the widow's age and the duration of widowhood. These rates are given in Table No. 40.

TABLE No. 40

REMARRIAGE RATE

Age of Wife at Husband's Death	Period of Widowhood				
	1	3	5	10	After 10 years
25	.050	.148	.132	.060	.028
30	.029	.086	.076	.035	.016
35	.018	.048	.042	.019	.009
40	.011	.027	.023	.010	.004
45	.006	.015	.012	.005	.002
50	.004	.008	.006	.002	.001
55	.002	.004	.003	.001	0

N - Disability and Recovery Rates

The choice of disability and recovery rates required to calculate estimates of the cost of disability pensions is very difficult and involves, necessarily, a greater degree of uncertainty. In fact, disability and recovery rates may vary considerably on account of the definition of disability and various factors as indicated in Chapter V.

Considering the incomplete nature of the provisions relating to disability pensions recommended by the Committee, it has not been deemed necessary to use different rates for the low and high costs. The disability rates used are given in Table 41, and the recovery rates in Table No. 42.

TABLE No. 41

DISABILITY RATE

Rate per 1,000

Age	Men	Women
22	1.25	2.50
27	1.25	2.50
32	1.59	3.18
37	1.90	3.80
42	2.35	4.70
47	3.55	7.10
52	7.23	14.46
57	11.81	23.62
62	18.06	36.12

TABLE No. 42

RECOVERY RATE

Recovery rate (men and women)

Age	1st year	Years 2 to 5	Years 6 to 10
22	.553	.181	.065
27	.553	.181	.065
32	.553	.181	.065
37	.567	.187	.068
42	.601	.203	.077
47	.559	.221	.074
52	.313	.254	.044
57	.373	.116	.060
62	.129	.062	.012

O - Consumer Price Index

Estimates of cost and of reserve accumulations have been calculated on the assumption that the consumer price index will not change. Consequently, no change has been made in the amount of maximum income, in the amounts of incomes used in the calculation of pensions or in the amounts of current pensions which would result from possible future variations in the consumer price index.

P - Effect of Economic Cycles

Actuarial assumptions have been formulated without directly taking into account the influence of economic cycles, since it is practically impossible to determine their durations and importance in advance beyond a very short period. This means that the short term results of the operations of the Plan may deviate from estimates.

On the other hand, since most of the assumptions have been formulated in relation to past experience, the influence of economic cycles since the last World War has been indirectly introduced in these assumptions. The long term estimates are therefore valid even in the absence of assumptions relating to economic cycles.

Q - Cost of Retirement Pensions

The major part of the cost of the Plan results from retirement pensions. The number of participants entitled to such pensions at the age of 65 has been established on the basis of the active population adjusted on account of the assumptions relating to unemployment. The total amount of benefits at the age of 65 has been obtained by multiplying the number of beneficiaries by the amount of pension received by each. Once the amount of new pensions payable at the age of 65 has been calculated for the years 1968, 1971, 1976 ..... 1996, amounts of new pensions for intermediate years were obtained by interpolation.

The amount of benefits at the ages of 66, 67, 68 and so forth, has been obtained by the projection, with mortality, of the amounts of new pensions at age 65.

Payment of retirement pensions being conditional upon virtual withdrawal from the labour force, there will be a certain number of beneficiaries who will not receive the full amount of their retirement pensions between the ages of 65 and 69 inclusive. The amount of benefits has therefore been adjusted accordingly, the adjustment being based on the taxation statistics according to which it has been possible to establish the proportion of beneficiaries of each sex in each income group.

R - Cost of Widows' Pensions

The widow's pension may be divided into two parts:

i) an amount of $300 per year payable until the widow's 70th birthday; and,

ii) an amount related to the husband's income and payable to the widow during her lifetime.

i - Pension of $300 per Year

The number of women who will become widows in the years 1968, 1971, 1976 .... 1996 has been established by multiplying, for each five year age group, the number of men in the labour force by the percentage of married men (53) and the mortality rate for men.

The number of such widows has then been projected, with mortality and remarriage rates, at five year intervals from 1971 up to the time they attain the age of 70. The number of new widows for intermediate years has been obtained by interpolation and the total number of widows during the years 1968, 1971, 1976 .... 1996 then becomes the total of projected numbers of new widows.

As the widow's pension is payable even if she receives an earned income, it has not been necessary to adjust the number of widows to take into account those who are receiving an earned income.

However, it has been necessary to adjust the number of widows to take into account those who are receiving a retirement pension on

account of their own contributions to the Plan. We have assumed that the amount of retirement pension would then always be superior to the widow's pension. The number of widows receiving a retirement pension was then deducted from the total number of widows aged 65 and over.

The yearly amount of this portion of widows' pensions is equal to the product of the number of widows so obtained multiplied by $300. Amounts for intermediate years have been obtained by interpolation.

ii - Amount Related to Income

The amount of widow's pension related to income was obtained in the manner described in paragraph (i) above, except that:

a) the average amount of the widow's pension varies with the amount of the husband's income during his participation in the Plan;

b) the projection of the number of new widows has been made beyond their 70th birthdays.

S - Cost of Orphans' Pensions

The yearly amount of orphans' pensions is equal to the product of the number of eligible orphans multiplied by $300. The eligible orphans may be divided into three groups: i) Orphans bereaved of their father, ii) Orphans bereaved of their mother, iii) Orphans bereaved of their father and mother.

i) Orphans Bereaved of their Father

The number of widows, for each quinquennial year from 1971 to 1996, has been obtained by applying to the total female population the percentages of widows by age group. These percentages are the following (54):

TABLE No. 43

PROPORTION OF WIDOWS IN RELATION TO TOTAL POPULATION OF THE SAME AGE

Women's Age	Percentage of Widows %
15 - 19	0.02
20 - 24	0.1
25 - 29	0.4
30 - 34	0.8
35 - 39	1.7
40 - 44	3.5
45 - 49	5.9
50 - 54	9.7
55 - 59	15.6
60 - 64	23.5
65 - 69	32.8
70 - 74	44.7
75 - 79	56.0
80 - 84	66.0
85 - 89	74.0

As only a worker's orphans are entitled to a pension, the number of widows so calculated has been adjusted by the participation rates for men. Moreover, we have assumed that only widows classified as heads of families have children entitled to a pension.

Percentages of widows classified as heads of families are given in Table 44, by age group (55):

TABLE No. 44

PROPORTION OF WIDOWS CLASSIFIED AS HEADS OF FAMILIES IN RELATION TO THE TOTAL NUMBER OF WIDOWS

Widow's Age	Percentage
	%
Less than 25	46
from 25 to 34	74
from 35 to 44	75
from 45 to 54	61
from 55 to 64	40
65 and over	27

Finally, the number of children under the age of 18 and those between the ages of 19 to 24 attending school was obtained from the 1961 census. The average number of orphans per widow classified as head of a family is given in Table No. 45:

TABLE No. 45

AVERAGE NUMBER OF ORPHANS PER WIDOW

Widow's Age	Average Number
Less than 25	1.7
from 25 to 34	2.6
from 35 to 44	2.9
from 45 to 54	1.7
from 55 to 64	0.5
65 and over	0.07

ii) Orphans Bereaved of their Mother

As the widower must be an invalid in order that his children may receive the orphans' pension, the number of widowers whose children will receive this pension is necessarily very limited. We have assumed that for each quinquennial year from 1971 to 1996, the number of widowers would represent 35% of the number of widows. The corresponding percentages from the 1951, 1956 and 1961 censuses were respectively 45.8%; 41.8% and 36.6%.

According to the results obtained in paragraph (i), the percentage of widows whose children receive an orphan's pension in relation to the total number of widows was as follows:

Year	Percentage
	%
1971	8.9
1976	15.8
1981	21.9
1986	26.4
1991	29.1
1996	30.6

The same percentages have been applied to the total number of widowers. An average disability rate was then applied to the number of widowers so calculated, in order to ascertain the number of widowers whose children would receive an orphan's pension. Finally, statistics on the number of children for each widow, as head of a family, indicated .97 of a child; the same number has been used for widowers.

iii) Orphans Bereaved of their Father and Mother

Orphans bereaved of their father and mother are children of deceased widowers or widows. From the numbers of eligible orphans obtained above, the number of such orphans has been obtained by applying appropriate percentages. Thus, it has been assumed that widowers who die, leave 150% more eligible orphans than those who become invalids. Finally, it has been assumed that mortality among widows is equal to 80% of that among widowers.

T - Cost of Death Benefits

If a participant dies before becoming entitled to his retirement pension, a death benefit is payable, provided there is no right to a widow's or orphan's pension. The total amount of death benefit payments is equal to the average amount of benefits multiplied by the number of beneficiaries.

The number of beneficiaries is obtained by applying the mortality rates, according to age and sex, to the active population for each quinquennial year from 1971 to 1996. We have assumed that death benefits would be paid solely on the death of the following participants:

i) single men and widowers; and

ii) single women and widows with no children.

The percentage of single persons and widowers or widows which have been used are given in Table 46 below (56):

TABLE No. 46

PERCENTAGE OF SINGLE PERSONS AND WIDOWERS AND WIDOWS IN RELATION TO ACTIVE POPULATION

	Percentage of Single Persons		Percentage of Widows or Widowers	
Age	Men	Women	Men	Women
	%	%	%	%
15-19	99	95	-	-
20-24	76	52	-	-
25-29	33	22	0.9	0.4
30-34	19	15	0.2	0.8
35-39	14	14	0.4	0.7
40-44	11	13	1.2	3.3
45-49	11	14	1.6	5.5
50-54	11	15	3.0	9.5
55-59	11	15	5.1	15.5
60-64	11	15	8.4	23.5

For any death occurring after the commencement of the retirement pension, we have assumed that benefits would be payable only in the event of death of beneficiaries who are single, widowers or widows.

U - Cost of Disability Pensions

The number of new invalids was obtained, for each quinquennial year from 1971 to 1996, by multiplying the numbers in the active population by the disability rate. In order to obtain the total number of invalids in a given year, it has been necessary to:

i) project the numbers of new invalids, at five year intervals; and

ii) interpolate for intermediate years; and

iii) add the numbers so obtained for each quinquennial year from 1971 to 1996.

The total amount of benefits is equal to the product of the total number of invalids by the average amount of disability pensions.

We have assumed that a beneficiary of a disability pension would continue to receive the pension up to his death or recovery.

V - Determination of the Level Rate of Contribution

To obtain the recommended level rate of contribution, it has been necessary to calculate the present value of the various benefits and of the operating expenses payable in the future and to divide this present value by that of 1% of future contributory incomes.

The present value means the value, at a given time, of a payment which must be made at a subsequent date, taking into account the interest and the probability of payment. For example, an amount of $1,000 payable in ten years has a present value of $676 if it is assumed that this amount will accumulate at an interest rate of 4% per annum, compounded yearly. This means that the compound interest on $676 is sufficient to bring this amount to $1,000 at the end of the period. In the same manner it is possible, with the help of appro-

priate actuarial formulas, to obtain the present value of a whole series of payments commencing on any date and conditioned by various contingencies.

A similar procedure was used to determine the recommended contribution rate. Future amounts of benefits, operating expenses and contributions were calculated for the years 1966 to 2016. We have assumed that, after the year 2016, these amounts will remain constant. Such an assumption implies that contributions and interest on the reserve will be sufficient from year to year for payment of benefits and operating expenses. This method is derived from that according to which the level cost of the U.S. System is calculated. In the United States, it is assumed that the amount of benefits, operating expenses and contributions will be constant from the year 2050 (57). The level contribution rate thus obtained amounts to 3.28% of contributory incomes for the accounts of retirement, widows' and orphans' pensions and death benefits. A similar procedure has been used for disability pensions.

Amounts of benefits for the years after 1996 have been calculated by extrapolation save in the case of retirement pensions. Amounts of retirement pensions have been calculated by the same method as that used for the years preceding 1996.

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