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PROFESSOR EMIL SCHOENBAUM

Brief Biography

Professor Emil Schoenbaum was born in the city of Benésov, Czech Republic, formerly Czechoslovakia, on June 10 1882, He studied mathematics in the School of Philosophy of the University of Prague, in Vienna, Austria and in Göttingen, Germany. He was outstanding in the actuarial field in the subject of social security which enabled him to obtain high positions in different institutions of his country, such as that of director general of the General Pensions Institute. Father of the Czechoslovakian law of 1924, which introduced the old age, disability and survival insurance for hand workers.

As a member of the committee of social security experts of the International labor Organization (ILO), in 1930 the Greek government entrusted him with the preparation of the financial

plan and of the actuarial studies for the implementation of social securities.

In 1939 he accepted the invitation of the ILO to travel to Ecuador to organize the social securities; after having completed his task, he traveled to Bolivia, Chile, Paraguay and Costa Rica with similar commissions. In 1943 he settled for some time in Mexico where he prepared the social security law.

After the war he returned to Czechoslovakia where he renewed his professorship, but a short time later he accepted the appointment as technical counsel of the Mexican Social Security Institute for which purpose he lived in Mexico the last twenty years of his life, making this country his second fatherland. He died on November 16 1967, at the age of 85.

**Official communication
presenting the report of
Professor Emil Schoenbaum
to the Chairman of the
National Welfare Institute of
Ecuador
1941**

Complying with the request of the International Labor Office, with which I have been linked since several years ago due to my profession as actuary, I committed myself to travel to Ecuador and carry out the studies that would lead to the revision and reform of the organization and operation of social security in this country, according to the terms of the respective contract that I signed in Geneva with the representative of the institute, Mr. Alejandro Casteló, Consul General of Ecuador in that city.

Since January 1940, I have devoted myself to fulfill my commitment, with all the interest aroused in my mind by the problems of social security which has been the reason of my activities and concerns during the past thirty years, and with all the love that from the first moments I have felt for this beautiful country plethoric with the gifts of nature and destined for a brilliant future.

I was lucky to count with the decided support of the Board of Directors of the institute and, especially, of its enthusiastic chairman, and with the efficient collaboration of the managers and of the personnel of each one of the funds and of the technical department, a fact that I want to leave here on record. Naturally, and with respect to the technical department, my first steps were aimed at educating this area in the discipline of actuary, whose principles and whose technique were unknown, a task that, on the basis of the profound knowledge of Dr. Meter Thullen and of his assistant and disciple, Mr. Gonzalo Arroba, and with the interest shown to learn that relatively new science, I have obtained a magnificent success, to the extent that I can assure with pride and satisfaction that the country already has two true actuaries, mi disciples; that for the institute and for the welfare fund the need for a true management and support of this technique has been satisfied and that the high ranking employees of the funds now have a more precise and ample knowledge for the better development of their functions.

With patient and scrupulous zeal I have studied the Ecuadorian legislation on social securities, I have gathered, organized and compiled all the data of an economic-social nature that have been possible to obtain, to penetrate in the Ecuadorian realities; I have analyzed and criticized the statistical documentation of the funds, unfortunately very scarce and, in short, I

have come to know at depth, down to the slightest details, the organization and operation of social security in this country.

The results of my studies and observations, and the suggestions that in my opinion are pertinent, with a view at the legislative and administrative reform that will have to be faced, have been concretized in the ample and detailed general report that I am submitting to the enlightened consideration of the Board of Directors. This report is accompanied by an actuarial and statistical report which amply describes the mathematic-actuarial methods applied to make all calculations and the statistical material used as a basis. Truly, Mr. Chairman, the task has been hard and complex. The implementation of social security in Ecuador, without the mature and extensive preparation of the environment, and without the availability of the statistics necessary for the establishment of the technical bases on which an institution of this kind must rest, constituted a true improvisation, justifiable only by virtue of the good intervention of the authors and defenders of such a transcendental national reform, and of the probable difficulties that would have been encountered when trying to realize it via a normal legislative negotiation, due to the political modalities of the country, as far as I know. Hence that, naturally, the present system suffers errors and gaps whose correction or elimination, after several years of operation, constitute a serious problem for techniques and for the public power. Fortunately, with a profound sense of the nature of the social problems and of the political idiosyncrasy of the country, the 1935 legislator, when issuing the *Mandatory Social Security Law*, founded a system of a properly consulted autonomy that would permit, within the system itself, a relatively easy reform of the defects that were foreboded in the work implemented. The establishment of the National Welfare Institute, as a technical-

legislative organization of the Ecuadorian social security, was an excellent idea that I applaud without reserve. Thanks to this modality also, a distinguished group of specialists in the field is being integrated, with whose help it has been possible not only to establish with clarity and precision the failures of the present regime, but to reach the urgent and fundamental reform required.

As you know, Mr. Chairman, and as the directors know, it is not possible to establish a formula or a fixed pattern for all latitudes on the matter of social security. For this reason, it is necessary to have a profound knowledge of the realities of the country involved, to adopt a system that will respond to them, a system that, in turn, will be susceptible of multiple modalities, depending on the amplitude of insurances desired, the resources available, the manner in which services will be rendered, etc. Hence that after learning the true situation of Ecuador in its different aspects, the report I am presenting does not contain one only project of reforms in a given line, but a few specific alternatives for each one of the different problems with the objective that the institute, with a better understanding of the idiosyncrasy of the environment and of the peculiar political and administrative characteristics of the nation, will elect that which is considered more convenient. Of course, since my work does not end with this report, I will attend, until the term of my contract expires and while the Board of Directors considers it necessary, the deliberations prior to the reform and participate in the difficult tasks of legal and administrative implementation, because I am interested in witnessing the realization of the suggestions that, with true love for the cause of the Ecuadorian social security, my knowledge and experience in this field have inspired me.

Because I have the honor of having witnessed closely the enthusiasm, the

understanding and the intelligence of the directors of the Ecuadorian social security and of the Welfare Minister, to face the problems entrusted to them, I am confident that in the near future the country will be proud to have a social security system that, due to its technique and efficiency, will serve as a model to many nations interested in the implementation or in the improvement of their own systems.

Since I will attend the meetings of the Board of Directors in which the report will be discussed, I omit an explanation of the scopes of anyone of its parts that might give place to different interpretations or whose terms are not sufficiently clear.

With this opportunity I remain, Mr. Chairman, very truly yours.

Professor Emil Schoenbaum

Financial and actuarial report on the draft of the 1949 legal report

Introduction

The social security law became effective as a result of a decree of the president of the Republic, on January 1, 1944; in contradiction to the program of gradual implementation of the law, described in detail on page 102 of the financial and actuarial report on the draft of the law, all the branches of social security became immediately effective. Therefore, five years have elapsed since the enforcement of the law.

It is necessary to consider that the draft of the law was prepared by the Preparation

Commission at the end of 1941. Seven years have elapsed since the preparation of the draft. And it was precisely at that time when the social security legislation shows a considerable progress expressed in the declaration and in the recommendation of social security approved by the International Labor Conference in the twenty sixth meeting held in Philadelphia on May 1944 and in subsequent legislative acts in the different countries of practically all the world.

It may be a reason for satisfaction to the creators of the Mexican law, that the above mentioned recommendation and the new social security laws have been issued under the direct influence of the Mexican law. Some of the fundamental ideas of this law are accepted in the new laws, for example the unification of all the branches of social security in one single law with uniform quotations and benefits that are complemented organically, or the exercise of the insurance by one single insurer.

The fast progress of the social security legislation in the years following the implementation of the Mexican social security leads to the need for submitting the law to revision. However, even without bearing this progress in mind, the five years of existence of the Social Security Law represent a sufficiently long period so that the experience may be used to reform a task of such scope, so complex and whose realization demands a rather long preparation.

When the original draft was formulated, it was estimated that the reform would be necessary precisely after a period of four or five years of effectiveness of the law, especially in the branch of disability, old age and death insurance. We know that all the social security laws were subject to a depth revision after an even shorter period.

The law was not applied according to the original plan of gradual introduction of the different fields of insurance, especially with respect to the disability, old age and death branch, whose implementation was projected after eight or ten years of operation of the social security. All the branches of social security were implemented simultaneously, including medical benefits for the members of the family, benefits that had to be postponed after a long preparation.

The simultaneous implementation of all the branches of social security, constitutes a precedent in history and, however, has not brought about damage to the economic development of the country, as could have been expected. On the contrary, it has resulted in notable benefits that may be appreciated after five years of operation of the institute; in other countries, where the same gradual implementation has occurred, its beneficial effects have been felt only after a long period of activities.

The unforeseen burden that suddenly affected the Mexican economy has been thoroughly absorbed by the employer and workers sector without any damage whatsoever, while the demographic-social benefits in hygiene and national health reported by the integral introduction of social security have had a considerable importance.

Unfortunately, the immediate implementation of the family members insurance, advantageous from the demographic and social points of view, implied an increase in the premium calculated only for workers in the field of general illnesses and maternity, an increment that should have been determined by the law before the establishment of the insurance for members of the family, through a method similar to that applied to calculate the premium for workers fringe benefits.

The lack of preparation of the administrative and medical material and, especially, of the psychological environment of workers and employers, inevitably produced serious difficulties in the operation of social security.

The implementation of the law must have been effected (page 103 of the preliminary draft) on the basis of the general inscription of enterprises and workers, to make feasible the continuous and permanent control of the rights and benefits of the workers. However, the first inscription – that occurred in the second semester of 1943– was made in the form of a census without bearing in mind the administrative and organizational needs of social security and without respecting the experiences acquired in more than 60 years in different countries. This brought about as a result, the growing deficiency of the administrative and organizational machinery of the institute and the fact that the institute does not know nor will know as a social institution should know, the obligations acquired towards hundreds of thousands of affiliates and furthermore, due to the lack of control there is a notable lack of proportion between the number of affiliates and the number of workers that should be insured (a difference that amounts to more than 100,000 persons). Likewise, many employers, often in connivance with the workers, register salaries lower than those actually earned, and there is a selection of risks unfavorable for the institute that consists in that, preferentially, older workers, married and with numerous family members, with a precarious health, etc. are registered; this has been evidenced by the comparison of the data obtained in the census. The lack of control of medical services is evident by the excessive amount of expense entries in the field of illness and maternity.

From the above exposition can be derived, as a consequence, the urgent need to reform

the law. The reform project seeks the following purposes:

1. Present a law that will better correspond to the needs resulting from the recent changes in the economic and social life of the nation, that will implement benefits contained in more recent laws and that will also respect, as far as possible, the recommendations suggested by the International Labor Office.
2. Guarantee a financial equilibrium, especially in the illness and maternity insurance, in which the peremptory implementation of medical care insurance for members of the family, motivated by the hygienic needs of the nation, has produced an unbalance.

For this coverage, it has been necessary to increase the total quotas by 2% of the average salary of the group, distributed in an increase of 1% of the employers quota, ½% of the workers quota and ½% of the state quota.

In addition to the increase in quotas, the establishment of the financial equilibrium demands unconditionally the reorganization of the inscription system, of the collection procedure and of the medical services, to attain an effective control, as explained in point 4 and, more in detail, in the general section and in the chapter of this report relative to the general illness and maternity branch.

3. Improve the amount and conditions, especially of the benefits of the disability, old age and death insurance, according to the modern theory of minimum accumulation. The wishes expressed by several groups of workers and employers have been respected as far as possible.

For the actuarial coverage of the improvements, safety coefficients which were originally contained in actuarial calculations have been liberated, thus maintaining the original premiums of the professional and disability, old age and death risks branch.

4. Simplify administration and introduce a more efficient control of income and expense, and, especially, establish a registry of the rights of the insured; for this purpose several provisions of the law are applicable and especially those which refer to a new inscription of workers and employers, to the periodical modifications with respect to the situation of workers rights, and to an administrative reform in the general illness insurance. With all of the above, a base will be created that will make possible a more efficient administration that will make available the statistics necessary for the actuarial control of the financial equilibrium of the institute.

The present law has as a basis an actuarial report that is considered as a manual of the actuarial mathematics of social security. It is opportune to remember that the methods employed in said report were approved by the critics as can be seen in the references reproduced in pages 90-91 of the actuarial report on the preliminary project and, after their publication, were used for the Bolivian, Venezuelan, Costa Rican, and Ecuadorian social securities and for the social securities of other countries. Suffice it to mention the *Actuarial report for the Costa Rican insurance*, prepared by Mr. Mark Kormes, notable North-American actuary, published in 1945 by the International Labor Office. The methods employed in the Mexican actuarial report were developed and adapted recently to the needs to extend social security to all the nation which was originally limited to salaried people. In the years following the

publication of the Mexican actuarial report, the minimum accumulation principle was especially developed, expressed in page 89 of the report, both in the theoretical and in the practical aspect.

General considerations

With respect to the coverage of the three different branches of social security, we limit ourselves here to general considerations.

The changes produced by the reform relative to the amount and to the conditions of fringe benefits, as well as to the amount of the coverage, do not endanger the financial equilibrium of the institute in the branch of the illness and maternity insurance. On the contrary, they guarantee this equilibrium under the assumption that no abnormal economic or social fluctuations will take place. The details are shown in the exposition of motives, in which the new methods employed for the calculation of the obligations resulting from the disability and old age insurance are set forth. It is necessary to indicate that the deficiencies of the statistics of the institute have hindered considerably the use of its own experiences; this is due, first, to the fundamental defects of the first general inscription and, in the second place, to certain deficiencies in administration, that is, the lack of coordination of affiliation with the collection of quotas and with the granting of fringe benefits. It is necessary to recognize that the unfavorable effect of some of these deficiencies has decreased as a result of certain administrative reforms.

In the light of these considerations, the test of the financial equilibrium was made as follows: through the use of some new data derived from the experience of the institute and from the extensive statistical material contained in the exposition of

motives for the original preliminary draft. It has been demonstrated that the premiums calculated and established by the law in the branch of the professional risks insurance, as well as in the branch of disability and old age insurance, are enough to cover the improved benefits. On the other hand, in the professional illness and maternity insurance, it is necessary to increase the original quota established by the law by 2% of the average salary of the group, of which 1% corresponds to the employer, ½% to the affiliate and ½% to the state contribution, to cover the benefits of family members insurance, as well as the improvement of certain benefits of this insurance necessary from the socio-political viewpoint. This result, relatively favorable, shows that the calculations of the original project were made very conscientiously and with safety coefficients.

The changes introduced by the decree of December 30 1947 in the salaried groups system, have also had a favorable effect on the financial equilibrium.

In detail, we can indicate the following:

1. The professional risk insurance, as regards the amount and the conditions of the benefits, may be compared with more modern laws, so that the reform is limited to the increase of the minimum for funeral expenses to \$250 pesos (Art. 37, VIIa), to the implementation of a pension for the widowed and the extension of orphan's pensions in the event of permanent disability of the orphan or to allow him or her to study up to the age of 25. These improvements are covered amply by the premium, so that no increase in quotas is necessary. It can be expected that the first actuarial balance sheet, prepared on the basis of the new general inscription of employers and affiliates pursuant to transitory article 16, will show a surplus that may be used to integrate an

emergency fund, pursuant to article 116, necessary for the insurance in view of possible casual deviations, especially in the event of collective accidents. This balance sheet, together with the new inscription, will make possible some changes in the classification of enterprises which, otherwise, has proven to be correct.

2. With respect to the illness and maternity insurance, the burden resulting from the benefits has been calculated according to the current law and the proposed improvements, taking advantage of the experience of the institute regarding the intensity of the benefits in 1947 and the distribution of contributing affiliates, according to the salary groups in the second and third two-month periods of 1948; the above applies to the Federal District and the Puebla, Monterrey and Guadalajara funds.

The improvements whose financial weight is calculated according to the serial charts used in the exposition of motives of the original preliminary draft published in Annex B.V., refer to the 10% increase in medical assistance and cash subsidy in case that the disability should last more than 13 weeks and 20% in case of long and serious illnesses that last more than 26 weeks; also, the increase in funeral expenses to \$250 pesos and the implementation of the baby outfit chest in cases of childbirth, pursuant to article 56.IV. The right to benefits in species is implemented pursuant to article 51.X for all the categories of pensioners, with the exception of those partially disabled by a work accident or occupational illness.

After having finished this report, we could verify in the actuarial report for the general assembly of September 26 1949, using a new although approximate method, that not only is it necessary to

reach an equilibrium in this field, but that an actuarial balance sheet is necessary. For more details we refer to chapter II of this report.

The burden resulting from benefits in species is covered by a surcharge on the disability and old age insurance premium, so that it will not burden the expenses of the illness insurance.

These improvements have a great social and political importance because prolonged illnesses may be seriously harmful to the social and economic situation of the affiliate and, normally, they precede disability and, hence, imply a considerable burden for the institute. For this reason, the calculation of the corresponding burden was made with utmost caution. We should consider that the probabilities of abuse on the part of affiliates by simulating the illness or its worsening, are almost excluded in the case of prolonged illnesses and the resulting disability. With this reform, the Mexican law is placed among the most progressive laws, because only a minority of laws recognize a period of medical assistance and cash subsidy longer than 39 weeks

The wish that the right to benefits be granted also to the parents of the affiliate in cases where no other family members hold this right, has not been satisfied due to reasons rather administrative than financial. Aside from the fact that the marriage of the affiliate or the birth of a child implies the extinction of the right of the parents, the control of the economic dependency of the right-holders that do not belong directly to the family of the insured is very difficult because it can lead to fraud. It will be possible to implement an extension of the circle of right-holders, without this kind of limiting conditions with the next reform, after

the experience obtained with a better control of family members.

Apart from the improvements to benefits and to the conditions for granting them, the reform contains, in chapter IV, provisions that tend to intensify the control of the right of the insured to these benefits and of the conditions for granting them. This refers to the start of the illness and, mainly, to the notification thereof. The new medical services regulation must eliminate abuse to a great extent without limiting, even to a minimum extent, the efficiency of this important part of the protection to the affiliate; otherwise, the concentration of financial means for cases of true need may intensify the medical service.

The main section of the report reproduces methods and calculations: chart A indicates the annual expenditure for illness and maternity insurance and its coverage as a percentage of the salary for benefits, pursuant to the current law, and separately for the proposed benefits. This chart reveals that the increase in the quota from 6% to 8% of the average salary of the group, covers the expenditure resulting from benefits according to the experience of 1947, including those for the members of the family. It is fully justified to use the experience relative to the 1947 expenditures because it can be expected that the above mentioned administrative measures will permit that the current expense for each affiliate will remain below the level of that year.

It can be expected that, due to the new provisions of articles 7, 29 and 34 and to the establishment of a more efficient control, the number of contributors will be closer to the true number of workers and the amount of the salaries

registered will be closer to that of the salaries actually received. Income will exceed, therefore, the level of 1948. Consequently, the reform guarantees an equilibrium in the branch in which the premature implementation of the insurance for benefits in species for right holding members of the family, not foreseen originally but justified from the social and demographic viewpoints, has unbalanced the financial system.

For the establishment of equilibrium, it will be necessary to reduce expenditures for benefits in species, especially medical and pharmaceutical assistance, by means of an effective control that will not damage the effectiveness of the services.

The chart also shows that the proposed increase makes it possible to cover administrative expense guaranteeing, also, the coverage of the cash deficit that some Regional Funds have reported the last three years.

3. The disability, old age and death insurance continues to maintain the collective capitalization system by average premiums corresponding to the basic principle of quota stability and to the idea of solidarity, because the affiliate that will register in the future at a young age contributes to the coverage of the rights of those who registered on the day of the implementation of the insurance whose age is over 30 years according to the data of the 1940 census.

However, the changes introduced by the reform in the benefits system have accentuated even more than the original law the principle of the minimum accumulation. In the first place, it is a matter of an increase in the basic amounts of the disability and old age rents from 20% of the minimum salary

of the group to 26%, and of the reduction in the increase from 1.5 to 1%. The socio-political importance of this amendment (article 74) consists in that all categories of rents are increased in the event that the disability or death of the affiliate occurs during the first 18 years of the insurance; that is, in the event of premature disability or death, precisely when the rents that compensate, at least in part, the extinguished salary of the affiliate, become necessary. Furthermore, in the event that an affiliate should have children, the rents are increased by 10% for each child, pursuant to article 75.

The actuarial transcendence of these amendments is very important. The increase in the basic amounts and the reduction in the increase have as a consequence a decrease in the speed and an accumulation of capital. Transitory article 6th, taken from the current law but so far not applied to the detriment of the present generation of affiliates, has the same consequence. According to this article –worded in a more precise manner– all affiliates registered simultaneously before the effectiveness of the reform or during the first months of its effectiveness, will be recognized the period during which they were salaried workers but who could not be insured because the Social Security Law was not in force. This recognition that immediately increases the rights of the older affiliates has been simplified by the new wording, so that its implementation will not present administrative difficulties. From the actuarial point of view, the burden resulting from this benefit has been estimated in a manner that it guarantees safety, as has been noted in the original exposition of motives.

The system of collective capitalization through fixed premiums that maintains the principle of minimum accumulation, has considerable advantages in comparison to

the effective risks distribution system or, in other words, proposed capital distribution for the financing of the disability and old age insurance. We quote literally the following paragraphs of the project:

It is considered "that this regime amply guarantees the deferred obligations of the institute and at the same time decreases the high volume of reserves permitting, also, to unify and increase the basic amounts of pensions, and to reduce the periods of shortcoming to obtain the benefits granted".

"According to this proposed system of effective risks, with respect to the pensions insurance, the capital necessary to grant the pensions that have become payable is journalized instead of accumulating funds to grant possible pensions to the insured mass, with which it is estimated that the risk coverage quota could be reduced by two percent of what the financing of this insurance amounts to up to this date, on the basis of actual costs and not of probable costs, which makes possible a reduction in the accumulation of reserves and at the same time the granting of pensions under more favorable conditions than those provided by the law as of now."

After presenting this report it was possible to verify more accurately in the report presented to the general assembly of September 1949, the results of the calculations in the chapter on general illnesses and maternity insurance on the basis of the expenditures of the year 1948, as shown on annex B to above mentioned report. This shows that a 25% reduction in the cost of medical services and a 30% reduction in the cost of pharmaceutical services, which could be obtained by the effective control of the services supplied, have produced not only a financial equilibrium in this field, but moreover it might be possible to gradually absorb the deficit carried over in the years 1946-1949.

The coverage capitals distribution system has as consequences:

Since fluctuations always exist in the number and amount of the disability, widowhood and orphan's pensions granted, because mortality and, mainly, disability fluctuate in time, there will be fluctuations in the value of the quotas that must cover the pensions constitutive capitals. The quotas decrease, for example, if an economic conjuncture takes place or they increase if a crisis or an epidemic occur that may provoke abnormal disability or mortality.

In the social security technique the primitive system of constitutive capitals distribution is superseded by the system of pre-determined premiums that cover constitutive capitals estimating "a priori" the number and the amount of the pensions for disability, old age, widowhood, etc., so that by introducing probabilities of disability, survival, death, marriage, childbirth, etc., it may be possible to calculate "a priori" premiums that will cover constitutive capitals for the pensions that are granted every year.

With this modification, the system must use the same actuarial bases that the collective capitalization system with an average premium, as that employed in the Mexican disability, old age and death insurance. This also avoids the casual fluctuations of the simple distribution system, but has always the disadvantage that the premiums will increase year after year, because the pensions grow with the period of quotations, a fact that occurs precisely in the benefits system of the Mexican social security.

This growth may be prolonged during forty years and provoke economic problems. Also, it will bring about unfavorable psychological consequences if the premiums rise annually even if the benefits

are not improved and even if there are considerable accumulations of reserves.

The system of capital coverage premiums is based on the hypothesis that the distribution of the affiliates by ages remains constant in time. This hypothesis is contrary to the facts, as evidenced by the statistics of the last fifty years (the decrease in the birth and mortality rates and the development of other demographic and economic phenomena will change by themselves the distribution by age of the affiliates).

Now, if the constitutive capitals distribution system has to be adjusted to the above mentioned objections, it will lead to average premiums of the collective capitalization system identical to those established by the law.

The mathematical comparison of the identity of both systems can be found in a very general manner in different publications of the field.

To conclude, we can assert that in the premiums resulting from both system, the increases in the pensions are respected and, if the rights of the persons that abandon the social security regime are maintained, the same premiums are transitorily produced.

In the professional risks insurance, where there is no waiting time nor fluctuations provoked by economic crises or by epidemics and where –especially– the amount of the benefits does not depend on the period of quotation and where, in addition, the probability of accidents does not depend essentially on the age of the affiliate, the constitutive capitals distribution system can be used without leading to a constant increase in the premiums. For these reasons this system was employed, from the start, for the

calculation of the professional risks premiums in the Mexican social security.

The tendency to reduce capitals accumulated in a long term in the disability, old age and death insurance, based on the principle of minimum accumulation, was strengthened after the First World War and intensified even further after the Second War. From the actuarial report for the current law we reproduce the reference to some factors that make it mandatory to reduce the intensity of accumulation: "the higher or lower stability of the currency in relation to its purchasing power, the political insecurity, the credit situation of the states, the regulation of the financial market and, especially, the governmental regulation of the interest rate and of salaries (the two most important factors for actuarial calculations) compels us to limit ourselves to the principle of the minimum accumulation, a principle that is applied in this preliminary project".

Apart from this, the gradual decrease in the rate of interest that corresponds to certain economic theories –especially that of Keynes and his school– leads us to limit ourselves to the principle of minimum accumulation, maintaining as far as possible the stability of the premiums.

Summing up, the benefits system of the original law and of this reform, combined with the collective capitalization system, lead to an accumulation that is very close to the optimum position of accumulation, according to the principle of the minimum accumulation theory.

The following reforms are those that fulfill this purpose: the increase in the basic amount and the 10% increase for each child of those who receive a disability or old age pension, the reduction in the increments of the amounts of the pensions and the improvement for old age to which transitory article 3rd refers:

The reduction in the waiting time for pensions from 200 to 150 weeks of quotation and for old age pensions from 750 to 500 weeks; the granting of the complete old age pension at age 60 under more liberal conditions; the extension of the orphan's rent in the event of disability or studies up to the age of 25, a measure that implies, according to the experience of other countries, to an insignificant amount of orphan's rents, and the implementation of the dowry insurance that amounts to 30% of the disability rent, to which is entitled an affiliate that at the time of his marriage has covered 150 weeks of quotations after the date of effectiveness of the reform. The coverage of these improvements is guaranteed without need to increase the quotas, because the value of the expectations in the disability and widowhood insurance has been calculated more accurately.

Some of the safety coefficients, contained in the calculations of the original exposition of motives, have been liberated.

In the first place, the actuarial calculations take into consideration reactivity, the fact, statistically confirmed, that disabled pensioners lose their pension not only at the time of death but also when returning to salaried work. Zimmermann's material is used for this calculation, which is similar to that of our social security and new methods have been employed inferred by the author of this exposition.

Since the actuarial evaluation reveals that the widowhood pension is extinguished not only at the time of death but also in the event of a new marriage, those who get married are granted a compensation that amounts to three widowhood annuities.

In addition to the above, in accordance with the experience of the institute during the last few years, it is assumed that the number of affiliates registered for the first

time is 12% of the total of the so called initial generation, although the experiences of the institute apparently reflect during the first years a higher figure, as can be seen in annex C, chapter III of this report.

The surcharge for administration expense was reduced to 8% of the gross premium under the circumstance that the disability and old age insurance does not demand new administrative expenses essentially different from those of the illness and professional risks insurance, covered by a sufficient surcharge for the premiums of these branches. For more details, see the special section of this report.

Due to lack of statistical material it has not been possible to calculate the first actuarial balance sheet. Therefore, a method that substitutes it and that offers safety to determine the premiums has been used. This method is based on the idea that, if the benefits should have been known according to the new law as from January 1 1944, the quota of the original law would have been absolutely sufficient to cover these benefits, including the provisions of the transitory articles and the integration of technical reserves for the stability of the quotas.

Finally, the fact stands out that other safety coefficients shown in the original exposition of motives have not been affected; for example, the disability figures during a rather long period will probably be lower than those foreseen; the assumption that an affiliate acquires annually an average of 50 weeks of quotation compared to the reality that the average number of weeks of quotation acquired within one year is substantially lower; the hypothesis that the unconditional old age rent is granted exactly at the age of 65 while actually a considerable proportion of affiliates remain in social security after that date. Due to lack of material it has not been possible to

take into account, not even at this time, the fact that the right to the widowhood and orphan's pension does not have, for insured women, the same weight that for insured men. Another safety coefficient results from the fact that in the case of premature and definite discharges the institute has a usable reserve that could be evaluated as the institute acquires its own experience; these discharges fully compensate the postponed registrations in the social security after 20 years of age.

This compensation is necessary because the comparison of the numbers of workers registered in social security during the first five years deviates intensely from the number of workers of the 1940 census; these deviations are unfavorable for the finances of the institute, as they refer to ages under 25 and are caused, no doubt, by deficiencies of the present inscription regulations that permit employers not to inscribe single and young workers, taking advantage of the provisions of article 6th that exempts from social security eventual and temporary workers without defining these categories. The numerical data that prove this deviation can be found in annex D.

It is to be expected that the new regulations and, especially, the new general inscription, pursuant to the provisions of transitory article 10th of the legal reform, will reduce this influence which is unfavorable for the finances of the institute.

The transitory provisions will furnish the material necessary to calculate the actuarial balance sheet to be prepared according to a plan that has already been designed, emphasizing the grouping methods that will constitute the bases for future actuarial balance sheets.

Chart E shows that there is an equilibrium between the value of the obligations of the institute and that of future contributions, based on the premium determined by the

law. It is also evident that, apart from the above mentioned safety coefficients, the burden resulting from the natural increase in salaries is amply covered, as explained more in detail in the special section of the report.

After preparing this report it has been possible to confirm, through a new method, in the report corresponding to the general assembly of the institute in September 1949, that an equilibrium exists, under the assumption that the general inscription referred to in transitory article 12th of the law in force and the introduction and effective practice of new affiliation and collection regulations, can absorb a considerable mass of workers –more than 100,000– that had not been inscribed and whose distributions, according to ages and family and civil composition can be very favorable for the financial equilibrium of the institute. For more details please refer to the report for the general assembly attached to this report.

We must underline that transitory articles 8, 9 and 10 integrate an organic group with the purpose of making possible an administrative reorganization of the institute, providing new fundamentals for the registration of the affiliates and of their rights. The need to establish, through these articles, a new system for the granting of pensions with respect to the time of quotations prior to the date of effectiveness of the reform, is based on the fact that due to deficiencies of the first inscription of workers, as well as of the subsequent inscription, discharges and salary changes notification system, a registry of time quoted does not exist, in particular for the years 1944, 1945 and 1946 and –for different reasons– their reconstruction is impossible; however, a careful investigation demonstrates that such reconstruction is possible for the years 1947 and 1948.

For this reason, article 8th is aimed at substituting the number of weeks quoted up to the date of effectiveness of the reform with the number of weeks quoted during the last two years prior to that date, evaluating them in such manner that under no circumstance will the rights acquired by the affiliates be damaged; for this purpose, 50 weeks acquired by payment of quotas during the last two years are recognized as equivalent to the 200 weeks of quotation required as waiting time according to the original law.

In the case of affiliates that have not complied with the payment of the 50 weeks, the number of weeks computable for the determination of the waiting time must be evaluated in the same proportion.

Special regulations, prepared on the basis of the concentration of the number of weeks of quotation in the last two years, and of the new general inscription pursuant to transitory article 10th, that will also be the basis for the certification of rights to which transitory article 9th refers, must determine in detail the conditions and amounts for this group and for other groups of affiliates, probably in a very reduced number; for instance, for the group of affiliates who have weeks of quotation in the years 1944-1946 and who subsequently would have interrupted their insurance at least up to the date of the effectiveness of the reform and would re-enter social security after said date. It is only natural that the volume of these exceptional cases may be known after preparing the new regulations for notifications that must contain provisions that will permit controlling these cases.

In any event, pensions will be granted under conditions and in amounts better than those that would correspond to the affiliates if the time of quotation would have been recognized pursuant to the original law.

The burden resulting from the application of transitory article 8th is covered, because the actuarial calculations for the legal reform assume that all the affiliates registered on the date of implementation of social security will comply as affiliates, the legal waiting time. We must remember that transitory article 8th of the original law allows a maximum of one hundred weeks for the computation of the 200 week waiting time.

The burden resulting from the provisions of transitory article 3rd, relative to improvement for old age, was estimated in the calculations of the legal reform as can be seen in Chart E (paragraph d) of the annex and is covered by the legal premium.

The certificates under transitory article 9th will determine the rights acquired up to the date of effectiveness of the legal reform and will create the documentary material for the years prior to that date.

**Conference delivered by
Professor Emil Schoenbaum
on the subject:
Observations on the method
for the construction of
actuarial balance sheets,
September 30 1949,
Mexico City**

The financial and actuarial report presented to the consideration of the general assembly of the institute held on September 26, prepared as replacement for the actuarial balance sheet that was not prepared due to the reasons set forth in detail in this document, does not constitute a true substitute for the balance sheet. The method employed for the first time, for

whose determination and application I had to develop a painful and arduous mental effort, supports me in the assumption that the actuarial hypotheses of the calculations are maintained. If favorable or unfavorable deviations to such assumptions are produced, a surplus or a deficit will be generated that –due to the nature of the method– cannot be quantified.

The use of the method referred to above (whose analysis can be found in the report mentioned) cannot under any circumstance be repeated; instead, the actuarial balance sheets must be constructed periodically, with the periodicity established by the law.

In fact, the periodical preparation of the balance sheet, an instrument that measures the financial equilibrium of social security institutions, constitutes one of the essential tasks of the actuary; however, the task of the social actuary has a more ample scope, it must attempt that within an equilibrium, a principle of justice be applied among the different human groups that integrate the insured mass.

The social actuary must bear in mind that with each peso that enters the treasury of the institute, obligations of a mediate or immediate realization that must be complied with opportunely are created.

When examining these obligations within each branch of the Mexican social security currently in operation, we can observe the following:

- 1) In the branch of general illness and maternity, whose financial regime is the annual distribution with pre-determinations of the amounts of income and expense, the obligations are of an immediate nature, that is, they must be paid within the year for which the resources and the burdens have been calculated.

- 2) The financial regime in the professional risks insurance is that called a capitals or capitals distribution regime, erroneously known as «distribution constitutive capitals method», consisting in capitalizing pensions of all kinds granted in the past.

The reasons that have lead us to introduce the method explained briefly, that is different than that used in the disability, old age and death regime, are essentially the following:

- a) In the professional risks insurance, the benefits are independent of the time of permanence in social security; in other words, the waiting time does not exist. The benefits do not grow by virtue of the number of weeks quoted.
- b) Experience shows in all countries, that the probabilities of occurrence of disasters are independent of the age of the worker (we must point out here that an absolute consensus does not exist with respect to the criterion that the probability of suffering an accident is totally alien to age: some people try to indicate more relative frequency of accidents in young workers, adducing inexperience, incompetence, confusion, etc., but others reject this arguing the increased elasticity and speed of reaction to movements in young individuals. Be it as it may, in case of existing dependency, this is reduced to such extent that it can be ignored).
- c) In the disability, old age and death insurance, benefits increase with the period of quotations; therefore, it is not prudent to establish the constitutive capitals system in this regime because in doing so, a constant revision of burdens and of premiums, due precisely to the constant increase in the value of benefits, would be necessary.

The fact of requiring the year-after-year change in the premiums against the financial entities of social security, has economic and psychological effects totally unfavorable for the effective development of social security.

In contravention of the projects for the gradual implementation of social security services, in the year 1944 all the branches were established simultaneously, which constituted an unforeseen and very heavy burden for enterprises. In effect, it imposes on production a burden of approximately 14% of the salaries; however, after some hesitation, the burden was accepted by the employers and by the workers. But what bothers them –and with a reason– is the constant increase, although small, because it upsets all their cost budgets, sales plans, etc. We must not forget that it is of exceptional importance to maintain constant the social security burden for rather long periods. However, the stable quota could be calculated as from the start of the activities of the insuring institute but then the probabilities of disability, death, etc. should also be calculated.

There is another reason more not to accept the constitutive capitals method. Often the institute is criticized for the high reserves that, according to its detractors, it has accumulated and will accumulate.

In this respect we must say that, in the first place, in the general illnesses and maternity insurance there is no creation of technical reserves and, in the second place, that in the professional risks regime reserves are created only for pensions already constituted; only in the disability, old age and death regime do we have the collective capitalization system with average premiums.

In a subsequent conference I will speak in more detail about this so strongly debated point, demonstrating that the constitutive

capitals method leads to identical results with respect to the collective capitalization method by average premiums and that, by the utilization of the theory of minimum accumulation, it is possible to obtain results close to the optimum.

It is opportune here to elaborate on the explanation of the use of the "method of differences", that permits the constant control of mechanization of calculations of all natures.

The method of differences offers the following advantages:

- a) The values used to operate are always much lower with respect to the original values (because they are differences of the latter).
- b) It is very easy to discover errors in calculations because they can be controlled whenever considered necessary, by making the direct calculation.

The differences permit to discover, in one simple inspection of errors made, if the tendency is abruptly interrupted, in the case of a continuous series.

It is clear that it is possible to make compensated errors, but the probability of this event –already calculated– is negligible, so that if the amounts reviewed in the manner indicted are correct, one can be certain that each and every one of the values calculated are correct.

Report of Professor Emil Schoenbaum with respect to health protection and protection against unemployment of migrant workers, especially day workers known as "braceros"

(The exact date of the document is unknown)

A. Antecedents

A) SOCIAL SECURITY IN MEXICO

According to the Law of the Mexican Social Security, only those workers whose employers carry out their activities within the territorial circumscription where mandatory social securities have been established, are protected against the consequences of professional risks, general illnesses, maternity and disability, old age and death. Mandatory social security has not been extended to farm workers, which must be implemented by decree of the federal executive government pursuant to the provisions of article 6th of the law.

The mandatory social security against unemployment does not exist at present in Mexico; workers not subject to the mandatory social security regime, whether because they are excluded by article 6th or because social security has not been implemented in all territorial circumscriptions, are protected in cases of work accidents and professional illness by the Federal Labor Law that protects workers also in case of maternity.

B) SOCIAL SECURITY IN THE UNITED STATES OF AMERICA

In the United States the mandatory social security is limited to the old age insurance

of workers, the insurance for their wives and children if they meet certain conditions, and the widowhood and orphan's insurance. Social security has not been implemented to cover general illnesses and disability, although in some states the general illnesses insurance does exist, at least in part, and the professional risks insurance has been substituted by legal obligations on the part of the employers.

Old age and widowhood insurance has been extended, with the legal reform of 1950, to regular farm workers, that is, to those who satisfy a definition of regularity in the job; in my opinion this extension cannot be made applied to migrant workers, especially "braceros".

The mandatory social security is financed with the contributions of workers and employers, with no participation of the state.

In addition to the above, an unemployment mandatory insurance exists for all farm workers with benefits and quotations that differ in each state, but that under its conditions cannot be extended either to migrant workers.

A mandatory insurance against risks other than those indicated does not exist, but only public welfare laws different in each state, which do not grant the right to benefits, being limited only to residents and not applied to the "braceros".

B. Conclusions

On the basis of these antecedents, the problem of health protection and protection against unemployment of Mexican migrant workers arises as follows:

1. Inasmuch as Mexican migrant workers go to the United States of America for

limited periods, generally in harvest time, for salmon fishing and, occasionally, for the repair of railways, these categories of workers normally are not submitted to old age and widowhood insurance that require a minimum number of three month periods with payment of salary.

It would be unfair to deprive these workers of the quotas that the employers that hire them temporarily must mandatorily pay on their behalf; it would be advisable that these quotas be either delivered to the workers themselves at the end of their contract, or deposited in the IMSS to integrate a special fund credited to their social security in Mexico once they become subject to this regime.

2. As regards health and maternity protection, these benefits should be covered by the employers, under conditions similar to those established by the Mexican Federal Labor Law and by the special laws of the states of the American union in which they render their services.
3. In the case of professional risks, migrant workers must be protected like other workers of the United States of America, where, either through insurance with private insurance companies or otherwise, employers guarantee such protection, similar to that determined by the Mexican Federal Labor Law.
4. In cases of unemployment, migrant workers should be subject to the Unemployment Federal Law if they meet the established conditions, but this protection would not be too important, because employment is, by nature and through signed contracts, of a transitory nature.

5. It is recommendable for the future that the two countries establish a reciprocity agreement for social security on the basis of the norms set forth in international agreements, as those that exist in several countries, that protect the workers that exchange from one country to another, granting them the protection enjoyed by resident workers with some slight modifications.

With respect to this reciprocity, there are agreements sponsored by the International Labor Office; It should be pointed out that the reciprocity provided for in these agreements for migrant workers, has as an assumption that the mandatory social security includes most of the workers in the two countries, offering similar protection for similar risks.

Yours very truly,
Professor Emil Schoenbaum

Letter from Professor Emil Schoenbaum to Mr. Benito Coquet, Director General of the Mexican Social Security Institute, dated December 15 1960

To satisfy your wishes for the collaboration of the actuarial mathematics department, I am presenting a draft of the memorandum that, for some time now, I am preparing for you, warning you that it is not definite, not only from the formal point of view, but because it lacks the results of investigations not yet completed of facts that have financial effects, for instance, the quantification of the extraordinary cost of the first time registrations to the mandatory social security regime of aged persons, registrations that in their majority

have fraudulent purposes; and the consequences, expressed in figures, of the lack of quotations due to absences from work without payment of salary, a fact not permitted by explicit provisions contained in the last two reforms to the law and whose tolerance has produced, besides economic damage to the institute, serious consequences of a psychological nature, as well as other investigations still in the process of completion that I have entrusted to different departments.

I bring to your attention that the memorandum contains, to a good extent, repetitions of matters, problems and propositions as to how to solve them, dealt with in four financial-actuarial reports relative to other mathematic-actuarial balance sheets and in reports that, with respect to the situation of the institute, I have prepared annually for the persons who have preceded in the directorship of the institute and who have had under their charge the technical and medical under-directorates, to attain the financial equilibrium in the branch of general illnesses and maternity and the reorganization of the administrative procedures of the institute, tending to eliminate serious defects and vices that are analyzed in detail in the above mentioned reports¹ which not only describe the development of the three branches of social security, but that supply abundant material that clarifies the principles of the technique used as a basis for the activities of social security. I have considered it convenient to present to you the documentary and technical material on the development of our institution.

Essentially, the memorandum is aimed at the examination of the financial development of the general illnesses and maternity and professional risks insurances, and I wish to bring to your attention that we have considered convenient to deal separately with the

financial effects resulting from the establishment of medical unions, because the system and the organization of medical services in charge of these unions was not supported on the principles of the technique or of the financing of our social security, and because we did not have available the data necessary to make an actuarial estimate. However, we included a special chapter to explain the most important defects in the procedure of the supply of medical services and in the control procedure, that cause the worsening of the administrative and financial situation of our social security, which will undoubtedly worsen even further if the measures suggested in some of the reports referred to above are not introduced with all energy.

It is my duty to emphasize the effective help of the mathematical-actuarial department that merits praise and, especially, the loyal and invaluable collaboration of Mr. Alfonso Velarie Sacristán who is the co-author of this memorandum.

I beg you to consider the attached draft as the expression of our will to help you solve the serious and huge problems faced by the institute, whose solution must not be delayed further, reserving for a special report our recommendations on the administrative reorganization of the IMSS.

Yours truly
Professor Emil Schoenbaum

Introduction to the memorandum

The memorandum contains frequent mentions, references and transcriptions of the reports corresponding to four mathematical-actuarial balance sheets, as

well as of numerous systematic and extraordinary reports presented to the directorate general and to the under-directors of the Mexican Social Security Institute, explaining the annual financial development from a technical viewpoint, and presenting important problems that have occurred in the administration of social security, to emphasize that the Mexican social security, like social security in all countries that have a good or poor organization of the administration of a regime, operates with a special technique, different for each branch of insurance and different from the techniques used in the organization of the activities of banking enterprises, private insurance companies, public service institutions and private entities, a technique that requires specialized procedures for inscriptions, collection of premiums, granting of benefits, accounting, statistics and actuarial mathematics.

We offer also, a description from the technical and financial point of view, of the development of the Mexican Social Security from its establishment in 1944 through the year 1959, a procedure that we consider to be convenient to better explain the defects discovered in the organization and in the administration of the institute, and the errors made, whether due to ignorance of the special technique on the part of the management organs, or due to the alterations made by legislative chambers to the original drafts of the law and of its reforms of which we only mention:

- a) The immediate establishment of the family insurance without a financial support.
- b) The implementation of the insurance for eventual and temporary workers.
- c) The determination of a ceiling salary of \$60 pesos per day, instead of the proposed \$100 salary, that served as a

basis for the calculation of the improvements introduced in the 1956 reform, in the existing benefits and, to estimate the cost of the new benefits.

- d) The important increases in benefits in the professional risks branch and the substantial change in the *Disabilities evaluation chart* that the institute was compelled to accept in order to respect the amendments to the Federal Labor Law of 1956 in which it had no intervention.
- e) Other points that are dealt with in the body of the memorandum.

These changes and other of lesser importance that were introduced on the original preliminary drafts, had unforeseeable financial consequences.

They constitute two sections of this memorandum: in the first one we analyze, from the technical point of view, the situation and the development of the branches of insurance and, in the second section, we deal also from the technical viewpoint, with some administrative defects verified by means of statistical and accounting figures referred to the income of the institute. In this second section, we point out the solution to certain problems that will be discussed at length in a *Program for the restructuring of the organization and the administration of the institute*, which we will present to you in due time.

Unfortunately, for the preparation of this memorandum we have not been able to have the support of statistical or accounting material which should be available for the presentation of the reports on actuarial balance sheets, for two reasons:

- a) Because it was not possible to obtain in time part of the material mentioned.

- b) Because we were not informed, until having almost completed the document, of the definite preparation of the income and expense statements of account.

The memorandum presents serious problems whose solution is almost vital for the institute in each branch of social security, elaborating, due to their seriousness, on the financial and administrative matters relative to general illnesses and maternity; in fact, the actuarial equilibrium of this insurance, attained in 1957, in spite of the fact that several of the defects denounced in multiple occasions, that I duly detail, were corrected and in spite also of the evasion of costs by the continuous improvement in the quality of the diversification of medical service, was suddenly affected in 1958 by the implementation of the medical unions in the administration of social security, with a deficit that grew year after year, caused in part by the omission of the technical-actuarial, financial and medical principles in the organization of the operating procedures of those unions.

I am presenting in the memorandum some projects to solve the financial and administrative problems of the three branches of insurance that maintain an organic relationship.

To convert these projects of solution into specific proposals, it is necessary to carry out careful investigations on the maintenance of all the departments of the institute that intervene in the operations connected with the collection of quotas, and with the granting of the benefits in species and in cash established by the law.

After having completed these investigations, that must be carried out according to the work program, it will be necessary to issue numerous regulations and instructions that will specify the tasks of the personnel of the institute in charge

of affiliation, collection of quotas and granting of benefits and of the services and that make it possible, if performed in the manner and terms proposed, that our institution will become a model not only of financial consistency but also of organization and administration.

For the purpose of the investigations, special care should be taken in the operation of the regional delegations, in which, as of now, more than 50% of the affiliates are registered and that show extraordinary and particular defects, probably due to the lack of an adequate interpretation of the regulations and of the instructions of the officials of the institute, but also due to the committing of abuse and fraud that, with certain exceptions, affect the financial results of these delegations.

Comments of Professor Emil Schoenbaum on the financial development of professional illness, maternity and professional risks insurances

(The exact date of the document is unknown)

1. The technical base of the general illness and maternity insurance and the estimate of the premium are explained in detail in the *Preliminary draft of the social security law* published in the *Report of the Labor and Social Welfare Ministry* for the year 1942.

With respect to the financial and actuarial report relative to the preliminary draft, the International Labor Office commented: "The supervision of the actuarial work has

been entrusted to a technician with worldwide experience in the whole sense of the word, a professor of insurance mathematics and a true social actuary. Using to the maximum the available Mexican statistical data available, gathered and published by the directorate general of statistics of the Labor and Social Welfare Ministry, the actuary has had to resort –this is essential in the case of the first introduction of a general social security regime– to the experience of foreign countries that present the closest similarity with the bio-demographic and medical-social conditions of Mexico. The social and biological hypotheses of one part and the economic hypotheses of the other, seem to have been established fairly and taking into account the complex of similarities and dissimilarities that may be observed in these cases.

The election of the financial regime and the affecting of resources, both specific for each risk, has been made in accordance with the most rigorous technical rules.

The provision of the illness-maternity insurance, destined to operate within a regime of annual distribution of expense, seems to be ample. This provision is, however, necessary to permit, in parallel with the effectiveness of the benefits service, the constitution of the welfare assistance tools indispensable for the efficiency and the economy of medical and pharmaceutical benefits, tools whose connotation will be made easier and will be accelerated pending the operation of the family insurance".

"The International Labor Office, conscious of the intrinsic value of the initiative, is instilled with the wish to see Mexico endowed with a general

mandatory social security regime, a system that according to the common experience of the countries of America and of other continents, appears as the most rational and effective means of social and economic security. The draft of the law, solidly prepared and technically founded, furnishes the opportunity to achieve this end."

2. The same report sets forth, in chapter *Estimate of the probable cost of the illness and maternity insurance*: "The family members illness insurance (family insurance) was not respected in the previous calculations. The reasons are obvious. The mandatory insurance for members of the family is operating since quite a long time in Germany, Czechoslovakia, Yugoslavia, Hungary, Poland and, since a few years ago, in France. Chile, has a facultative insurance based on a supplementary quota, and the Peruvian law provides for mandatory social security with a special quota of 2% or 1% of the salary. Unfortunately, the family insurance data cannot be taken from available statistics because they add together the expense of the general illness insurance and that of the family insurance. This is one of the reasons why the medical and pharmaceutical service expense has been estimated on the basis of the Ecuadorian experience where the family insurance does not exist, complementing it with the experiences of other countries.

The possibility of estimating the burden of the family insurance directly on the basis of the family statistics does not exist either, because the family statistics, if they should be prepared within the 1940 census, will be the last of the works involved in the census. Also, even if this very complicated statistic should exist, the greatest difficulty would consist in appreciating

the illness and maternity risk for the members of the family, on which no Mexican experience exists, mainly with respect to the endemic illnesses of the country. To these estimation difficulties should be added the difficulties in administration, control and inspection that, mainly in the Mexican environment, can be very important due to the obstacles for the identification of the members of the family and to the lack of material and moral preparation. In fact, the family insurance has been always introduced after a long duration of the illness insurance for workers.

With respect to these estimation and administration difficulties, we recommend that, if the family insurance is to be introduced, its implementation be postponed until the medical service and its technical control is organized and in operation for the insured workers and until experiences with this main group have been obtained.

We limit ourselves to transcribe the part of the report that mentions the reasons for which the implementation of the illness insurance for family members had to be postponed, observing that the bases used for the calculation of the premium and the calculation method are explained in detail in the report.

On this occasion we must bring to your attention that the introduction of the Mexican social security, should have been made by stages, according to the plan to introduce the insurance, that provides, as the first stage, the implementation of the illness insurance after a period of preparation of, at least, one year; after the end of another period of three to four years, the work accidents and professional illnesses insurance could become effective and in the last stage the disability, old age and death insurance after 8 or 10 years. Contrary to these provisions, the

mandatory social security was implemented simultaneously for the three branches of insurance, including family members, as from January 1 1944, with the consequences amply described in the exposition of motives for the reform of the law, whose effectiveness started on February 28, 1949.

3. From the technical and financial equilibrium viewpoints, the development of the general illnesses and maternity insurance must be treated in five periods:

- A.- From I-1-1949 to II-28-49
- B.- From III-1-1949 to XII-31-1952
- C.- From I-1-1953 to XII-31-1957
- D.- From the year 1958
- E.- From I-1-1959 to this date



¹ The reports are not attached because they have a purely mathematical-actuarial development; only the introduction to the corresponding memorandum is attached.
