UNITED NATIONS

ECONOMIC
AND
SOCIAL COUNCIL

LATIN AMERICAN SEMINAR ON HOUSING STATISTICS
AND PROGRAMMES

2-25 September 1962
Copenhagen, Denmark

Item 5.2 of the tentative programme

BASIC FEATURES OF THE HOUSING PLAN FOR CHILE, WITH

SPECIAL REFERENCE TO FINANCING BY MEANS OF A

SYSTEM OF ADJUSTABLE SAVINGS AND CREDITS

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Sponsored by:

The United Nations
Economic Commission for Latin America
Economic Commission for Europe
Statistical Office
Bureau of Social Affairs: Housing, Building and Planning Branch
Bureau of Technical Assistance Operations
The Government of Denmark
The Inter-American Statistical Institute

In collaboration with:

The Latin American Demographic Centre
The Inter-American Housing and Planning Centre

I. INTRODUCTION

1. Background data and Ten-Year Development Plan

Since Chile's mainland territory is 3 950 kilometres long, urban development and housing standards vary substantially from one end of it to another. The minimum levels acceptable for housing units in Arica, with a mean annual temperature of 19°C.and a semi-tropical climate, are bound to differ fundamentally from requirements in Magallanes, where the mean temperature is 6° C. and the climate is characteristic of the zone adjacent to the Antartic Circle. Again, differences of climate do much to determine which periods of the year can be used for residential building, as well as the grouping of the housing units built.

Special local conditions, deriving from regional economic structures based on different social and cultural backgrounds and different customs, help to intensify this distinctiveness, which finds expression in differences in degree of understanding of the housing-problem, in the attitude of the diverse sectors or groups, and in particular ways of approaching housing (greater or lesser readiness to accept co-operative systems, do-it-yourself methods of building, savings and credit associations, etc.).

The extent to which this immense variety of standards and conditions affects any procedure for evaluating the national housing deficit is reflected in the fact that the Corporación para el Fomento del Desarrollo de la Producción (CORFO), in the studies relating to the Ten-Year Development Plan, recognizes the existence of no fewer than seven hypotheses, implying seven different magnitudes for Chile's housing deficit.

However, a study of the maximum housing investment compatible with domestic capital formation resources in 1960-70 gives a more accurate idea of what is actually feasible in respect of the housing effort.

The Ten-Year Development Plan makes provision for the investment of 2 800 million escudos in the housing and urbanization sector, i.e., 28 per cent of the total investment proposed. The Plan assumes that if differentiated housing standards are applied an investment of 1 727 million

escudos will suffice for the construction of 29.57 million square metres of floor space; the balance of 2 800 million is to be spent on urbanization, public utilities and buildings for other than residential purposes.

This total of 29.5 million square metres, togehter with the urbanization and public utilities projects, might mean the solution of the housing problem for 538 700 households, a number equivalent to the housing output required in 1960-70 to cope with the natural growth of the population and with the replacement of demolished or obsolete housing units, as well as those destroyed in the 1960 earthquakes.

A breakdown by social groups shows that dwellings intended for the manual worker group - 406 720 in all, to be built in the course of the decade - represent the largest proportion of the total (75.5 per cent), while the remainder, amounting to 131 980 housing units (24.5 per cent), will be for the middle and higher income groups.

It is assumed that the majority of the dwellings (82.5 per cent, or 444 500 units) will be situated in urban areas, but by virtue of an energetic promotion effort is is hoped that 94 800 dwellings, or 17.5 per cent of the total for the ten-year period, will be built in rural areas.

The following data will give a clearer idea of the Chilean Housing Plan, on basis of its underlying principles:

(a) The financing of the entire Plan is based on the exchange situation in 1960, when the rate was approximately one escudo to the dollar;

(b) The annual output of urban dwellings programmed amounts to about six housing units per thousand inhabitants;

(c) The programme adopted is limited by the funds available for the housing sector under the Over-all Development Plan, and is not excepted to reduce the carry-over housing deficit to any great extent within the ten-year period 1960-70;

(d) The public sector will be responsible for about 75 per cent of total investment in housing. Its income may be broken down as follows:

From the national budget .... 35 per cent

From the social security system .... 35 per cent

From the savings system .... 20 per cent

From amortization and other housing income 10 per cent;

(e) The proportion of the total national budget represented by the budget for the housing sector has been about 3 per cent, in the past but it may be as much as 8 per cent during the first stage of the Plan;

(f) In the first year of implementation of the Plan (1961), approximately 21,000 housing units were built by the public sector, and the joint action of the public and private sectors probably fell far short of the figure programmed. Nevertheless, the public sector's housing output has increased enormously during the last three years, and if sufficient funds are available, the target specified in the programme may be attained;

(g) The adjustable amortization system is one of the outstanding features of the Chilean Housing Plan, and is described in detail further on in the present document. During the past decade, inflation made inroads on the funds accumulated under the social security system, or by other methods of savings, which were used for housing purposes and were amortized at a very low productive value. The inflationary trend continues, although efforts are being made to control it, and if this method of protecting mortgage investment from the effects of inflation is as successful as it seems to be at present, Chile will have devised a very useful instrument for action in the field of housing.

It is felt that the needs of the first sector mentioned, i.e., the mannual workers can be met by the various State agencies whose programmes for the building or financing of housing units invariably have a social bias (CORVI, social security institutions, Fundación de Viviendas dé Emergencia). In these cases, the annual rate of interest loans fluctuates between 2 per cent and 4 per cent; unpaid balances and amortization instalments are adjustable in accordance with the annual variation in the Chilean wage and salary index; and the period of the loan is, as a rule, thirty years.

In the case of dwellings for the middle and higher income
brackets, recourse can be had to the systems of savings and credit
for housing purposes established by Legislative Decrees No. 2 and
No. 205, created in 1959 and 1960, respectively.

According to estimates, a savings and credit system needs
outside contributions to the extent of about 20 per cent of the capital
required for a given level of investment in housing, the balance
being covered by the savings of subscribers and the amounts recovered
on loans. Thus, in housing projects for the middle and higher income
groups 1 077 million escudos will be invested, which would mean that
an outside contribution of about 215.4 million escudos would be needed
in the course of the ten-year period.

To sum up, for the execution of the housing plan established as
a target in the CORFO study the following contributions would be
required:

For the manual worker sector	E° 650 000 000
For the middle and higher income sectors	215 400 000
Total	E°865 400 000

In addition, private investment amounting to 861.6 million escudos
would be necessary.

2. Housing standards

All the foregoing remarks imply a substantial lowering of housing
standards, which are approximately represented by the following figures
and average measurements:

Dwellings for the manual worker groups: 40 square metres for 5.5 persons,
i.e., 7.3 per inhabitant

Dwellings for the middle income groups: 82.5 for 5.5 persons
i.e., 15 per inhabitant

Dwellings for the higher income groups: 137.5 for 5.5 persons
i.e., 25 per inhabitant

The legislation in force establishes tax exemptions and reliefs, and priority as regards the allocation of credits, for dwellings with less floor space, mainly under the terms of Legislative Decree No. 2 (1959), which defined the "low-cost dwelling" as a housing unit with a total floor space of not more than 140 and a minimum of 17.5 per inhabitant. Only a "low-cost dwelling" fulfilling these conditions is eligible for the reliefs mentioned above.

3. Popular saving for housing purposes

The Government is interested in obtaining the support of popular savings in order to expedite housing plans, and has established the system of "adjustable savings for housing purposes" as a safeguard against currency inflation. In the two and a half years during which the CORVI system has been in operation, saving for housing purposes has increased to an encouraging extent.

II. THE CHILEAN HOUSING PLAN

As has already been said, at the time when the present Government took office the housing deficit in Chile had assumed overwhelming proportions. The Housing Plan project, therefore, tried to ensure that everything possible was done to prevent the existing housing deficit from increasing. Legislative Decree No. 2 (1959), generally known as the Housing Plan Act, created incentives to private housing investment, which was expected to carry 50 per cent of the responsibility for attainment of the target proposed, and measures were devised to encourage popular saving for housing purposes and to secure more efficient investment of the treasury funds allocated to housing, as well as their effective recovery.

To clarify this point, the most important of the procedures whereby, in the writers' view, the Chilean Housing Plan seeks to eliminate the housing deficit are briefly listed below:

1. Advocacy of realisitic housing standards, more compatible with the prospective purchasers' real capacity for payment;

2. More efficient utilization of the funds earmarked by social security institutions for providing their contributors with housing facilities;

3. Effective recovery of investment in housing, by means of adjustable
.   mortgage debts and repayment rates;

4. Encouragement of popular saving for housing purposes, by means of
the adjustable savings system and other inducements;

5. Provision of incentives to private building, in the shape of tax
exemptions, freedom from control, etc.;

6. Extension of taxes levied for housing purposes on the profits
of industrial establishments to commercial and agricultural under-
takings.

In the next section, items 3 and 4 will be discussed in some detail,
and the remainder only in outline.

1st. procedure. A severe but absolutely essential measure was a drastic
reduction of the housing standard for projects undertaken by the public
sector from about 17 or 18 square metres per inhabitant to some 10 or
12. Private investors were offered inducements in the form of
progressive tax exemptions and priorities in obtaining credits for
residential building, according as the dwellings erected approximated
to the housing standard proposed.

2nd. procedure. For many years, the social security institutions had
been allocating their budget surpluses - funds in excess of those needed
to serve their primary purpose, i.e., social security (retirement and
other pensions, emergency loans, etc.) - to the building of housing
units for their own contributors. These dwellings were costly, and their
housing standard was very high, owing to the complete chaos that reigned
in methods of awarding building contracts and to the discount implicit in
inflation, which in this instance greatly favoured the small minority
of contributors who were able to obtain real estate, at the expense of
the majority, whose security funds steadily declined in purchasing
power from one year to the next.

Legislative Decree No. 2 (1959) stipulated that these surplus
social security funds should be handed over to the Corporación de la
Vivienda (CORVI) - the hub and driving force of the Housing Plan -
to enable this specialized government agency to invite public tenders,

/build dwellings

build dwellings in accordance with the proposed housing standard, and
hand them over on completion to the bodies owning the funds, in
return for the sums received. Every dwelling built through CORVI
must be sold to contributors under a system of adjustable debit
balances and dividends which will be explained later.

3rd. procedure. Inducements to private investment in housing take
the form of a very wide range of tax exemptions and other incentives
which it would take too long to enumerate here, but calculated to
make residential building the more tempting a proposition for the private
investor, the more closely the dwellings built approximate to the proposed
housing standard.

4th. procedure. The same is true of the 5-per-cent tax on the profits
of establishments, which can be applied in a great variety of attractive
ways, and are actually recoverable after the expiry of thirty years, or
on the death of the owner, or if a business closes down.

III. EFFECTIVE RECOVERY OF INVESTMENT IN HOUSING BY STATE AGENCIES. NEED FOR A SYSTEM OF ADJUSTABLE DEBIT BALANCES AND DIVIDENDS

1. Currency inflation in Chile

(a) Cost-of-living index

For several decades, and even in our own time, Chile has suffered
a steady devaluation of its currency that in some years has reached an
extremely serious pitch. The best way of measuring the devaluation
of the currency is to observe the movements of the cost-of-living index,
which, as its name implies, is a statistical indicator of over-all
price levels for goods and services consumed by specific social or
economic population groups.

(b) Devaluation of the currency in Chile from 1940 to 1960. Need to
establish a system of adjustments.

Table 1 presents the cost-of-living and cost-of-building indices
for a period of about twenty years, together, with the basic legal wage
(in Chilean pesos) for the department of Santiago, as registered by the
National Statistical and Census Service of Chile.

/Table 1

Table 1

BASIC LEGAL WAGE AND COST-OF-LIVING AND COST-OF-BUILDING
INDICES, 1940-61

Year	Basic legal wage in department of Santiago (Chilean pesos)	100 = Cost-of-living or consumer-price index	100 = Cost-of-building index as calculated by the National Statistical and Census Service
1940	460	210.3	—
1941	600	242.3	—
1942	815	304.3	205.2
1943	1 050	353.9	253.2
1944	1 185	395.4	317.2
1945	1 320	430.2	317.2
1946	1 470	498.6	394.6
1947	1 995	666.0	392.4
1948	2 400	785.9	525.0
1949	3 040	933.3	581.4
1950	3 800	1 074.55	704.4
1951	4 670	1 316.70	823.6
1952	6 070	1 604.26	1 029.4
1953	7 550	2 012.89	1 331.1
1954	11 600	3 465.80	2 072.8
1955	18 400	6 068.94	3 136.1
1956	26 959	9 474.21	4 699.8
1957	35 086	12 016.81	6 642.5
1958	42 103	15 134.52	7 563.9
1959	57 550	20 976.44	10 384.7
1960	57 550	23 413.10	—
1961	77 170	—	—

As can be seen, in 1940 housing units cost about one hundred times
less than in 1960. Consequently, the amount of the medium and long
term mortgage loans recovered steadily diminished. It can also be
deduced from table 1 that over the long term the average variations
in the cost-of-living and cost-of-building indices are very similar.
In the present instance, the average annual increase in the three indices
concerned fluctuates around 27 per cent. Such a devaluation seriously
affects the recovery of long-term credits. The following calculations

/show what

show what happens in this connexion, given different rates of inflation.

Let P represent a loan negotiated for a term of m years, at an annual rate of interest i. Let it be further assumed that the devaluation of the currency in such that the average rise in the cost of housing is r.

If, then,

$P =$ initial debt

$D =$ initial mortgage instalment

$f =$ actuarial factor giving the initial instalment

$R = 1 + r =$ capital appreciation factor related to the rise in the cost of housing as a result of inflation

$m =$ period of loan,

the total sum in currency of the initial date, to be disbursed by the borrower in order to pay off the debt completely will be

$$T = Pfm$$

On the other hand, the amount that he should disburse, strictly speaking, in order to offset the gradual effects of inflation, will be

$$T' = P.f.R \frac{m-1}{R-1}$$

and the ratio between the two disbursements will be

$$(1) \quad \frac{T}{T'} = m \frac{R-1}{R^m - 1}$$

From formula (1) it can be seen that the ratio between the percentage repaid by a borrower in respect of amortization and interest when no adjustment system is applied, and fair repayment under a system of adjustments, is independent of the amount of the initial loan and of the interest payable thereon, and varies as a function of the period for which the loan is negotiated and the inflation factor R.

Table 2 has been drawn up to give some idea of the significance of these latter elements in the effective recovery of credits.

Table 2

PERCENTAGE OF RECOVERY OF LOANS WHEN NO ADJUSTMENT SYSTEM
IS APPLIED, IN ACCORDANCE WITH DIFFERENT RATES OF
INFLATION AND LOAN PERIODS

Annual rate of inflation r (Percentage)	Capital appreciation Factor $R(1 + r)$	Period of loan or credit m (Years)	Ratio $\frac{T}{T^1}$ (Percentage)
10	1.10	10	63
10	1.10	20	35
10	1.10	30	18
20	1.20	10	39
20	1.20	20	11
20	1.20	30	3
30	1.30	10	23
30	1.30	20	3
30	1.30	30	0.3

As the rate of inflation during the period 1940-60 was in the
neighbourhood of 27 per cent, the inference is that the amount of
the loans recovered during those two decades was very low. Nor was
saving possible for any income group, since the value of deposits
depreciated rapidly. Hence, the present Government, on taking office,
promulgated the requisite legislation to introduce a system of adjustable
savings and loans which will be explained in the following section.

(c)   System of adjustment of outstanding debit balances and repayment
       instalments on mortgages.

In view of the inescapable need to establish a system of adjustable
debit balances, the experts made a study of the various indices which might
be of help in determining the annual adjustment of debit balances and
repayment rates. The latter must also be adjustable so that no change
need be made in the period of the loan as laid down in the original
loan agreement.

Clearly, since the sums in question should be recovered on such terms that they will suffice to build the same number of housing units as the original loans, the most appropriate indicator would seem to be the cost-of-building index. This is, however, an extremely dubious guide, as it depends upon the level of amenities assigned to the dwelling whose cost is to be determined every year. Other important determinants are the value of the site and the nature of the building to be erected – one-family dwelling or block of flats. Again, as CORVI and the social security institutions are agencies with evident social objectives, the purchasers' future capacity to pay had to be taken into account. Thus it was thought preferable to use the wage and salary index as a basis for the adjustment of debit balances and instalments on mortgages. This index is at present computed by the National Statistical and Census Service, under the provisions of the first basic Housing Act promulgated by the present Government – Legislative Decree No. 2 (1959).

Article 68 of the decree in question provides for annual variations in mortgage debit balances and repayment rates on the basis of "an annual adjustment equivalent to the percentage variation in the wage and salary index as established by the National Statistical and Census Service, reduced by one unit and rounded to the next lowest integer". Subsequently, a further stipulation was introduced to the effect that in no case could this variation exceed that of the cost-of-living index in the relevant period.

The legislation established that in adjusting mortgage debit balances repayment rates the variation in the wage and salary index should be applied not in its entirety but with an average annual reduction of 1.5 per cent, since it was considered that over the long term the rate of increase of the index in question would be 1.5 per cent higher than that of the cost-of-living index, which, in the opinion of the present writers, most accurately reflects the devaluation of the currency.

This disparity between the rates of growth of salaries and wages and the cost of living would seem to indicate the average improvement in the standard of living of the population as a result of the country's general progress.

The later clause limiting the adjustment variation to a maximum
equivalent to the change in the cost-of-living index over the same period
was established because it does not seem advisable to require borrowers
to pay out sums of a higher intrinsic value when average wages in Chile
rise more rapidly than the cost of living, since it is the latter index
that reflects the value of the currency, and that should therefore be
taken as a yardstick for the repayment of mortagages.

In brief, so far CORVI has determined the adjustment of mortgage
debit balances and repayment rates since July 1959 in relation to the
fluctuations of the wage and salary index. This index is essentially
based on surveys carried out every year in April, and its percentage
variation, reduced by one unit and rounded to the next lowest integer,
affects the value of the "adjustable unit" in the subsequent period.

In order to facilitate its operations, CORVI has created a sort of
currency unit for payment purposes, known as the "adjustable unit", the
value of which is fixed every year in accordance with the annual variation
in the wage and salary index during the twelve-month period ending in April.

The new value of the "adjustable unit" applies as of 1 July every year.
Consequently there is a period of grace between the month in which the
wage and salary survey is carried out (April) and that in which its
findings are applied (July).

As from July 1962, the variation in the cost-of-living index in the
same period as that covered by the wage-and-salary survey will be applied,
if the former index increases less than the latter, as explained above.

On the two occasions when the variation in the wage-and-salary
index has already had to be applied to establish new annual values for
the "adjustable unit", the annual increase has been such as to call for
a 14-per-cent adjustment (see table 3).

Table 3

"ADJUSTABLE UNIT" VALUES

Period	Variation in wage-and-salary index	Unit value of "adjustable unit"
31 July 1959 to 30 June 1960	100	1.00
1 July 1960 to 30 June 1961	115	1.14
1 July 1961 to 30 June 1962	133	1.30

/Many people

Many people have a disquieting feeling that under the system of adjustable debit balances and repayment rates, loans will not be repaid within the period specified in the original loan agreements.

Let us now try to show, by means of an arithmetical example, how the application of "adjustable units" works.

Suppose that a loan of 1 000 escudos is granted for a period of five years, at an annual rate of interest of 4 per cent. For the sake of simplicity, let us assum that the rise in the wage-and-salary index is such as to imply a 10-per-cent annual increase in the "adjustable unit". Applying the ordinary actuarial tables, we get the annual repayment instalment to be paid by the borrower at the end of the first year, namely 224 627 escudos.

As a first step, table 4 shows the evolution of the proposed debt if no adjustment system is applied.

Table 4

EXAMPLE OF CREDIT RECOVERY WITHOUT APPLICATION OF
ADJUSTMENT SYSTEM

(Loan = 1 000 escudos: Rate of interest = 4 per
cent per annum:

Period of loan = 5 years: Annual instalment =
224 627 escudos)

Year	Debit balance out-standing after pay-ment of dividend E⁰	Interest E⁰	Amortization E⁰	Repayment instalment E⁰
1	815 373	40 000	184 627	224 627
2	623 361	32 615	192 012	"
3	423 668	24 934	199 693	"
4	215 988	16 947	207 680	"
5	0	8 639	215 988	"

Under the system of adjustments, however, after payment of the first annual instalment the adjustment would be applied to the debit balance outstanding and to the instalment itself giving the following results:

Table 5

EXAMPLE OF CREDIT RECOVERY WITH APPLICATION OF
ADJUSTMENT SYSTEM

Year	Debit balance out-standing after payment of annual instalment E°	Interest E°	Amortization E°	Repayment instalment E°
	First year repayment instalment = 224 627			
1	815 373	40 000	184 627	224 627
	x			x
	1.10			1.10
	=			=
	896 910			247 090
	Second year repayment instalment = 247 090			
2	685 696	35 876	211 214	247 090
	x			x
	1.10			1.10
	=			=
	754 266			271 799
	Third year repayment instalment = 271 799			
3	512 638	30 171	241 628	271 799
	x			x
	1.10			1.10
	=			=
	563 902			298 979
	Fourth year repayment instalment = 298 979			
4	287 479	22 556	276 423	298 979
	x			x
	1.10			1.10
	=			=
	316 228			328 877
	Fifth year repayment instalment = 328 877			
5	0	12 649	316 228	328 877

/New debit

New debit balance outstanding   E⁰ 815 373 x 1.10 = E⁰ 896 910

New annual instalment   E⁰ 247 090

During the second year of servicing of the debit, the adjustable balance outstanding brings in 4 per cent interest, and, after payment of the second annual instalment, the status of the debt is as follows:

Debit balance outstanding at beginning of second year	E⁰ 896 910
Interest for 1 year	35 876
Repayment instalment for 2nd. year	247 090
Amortization payment on debit	211 214
Debit balance outstanding after payment of 2nd. instalment	685 696

If the 10-per-cent adjustment is again applied both to the debit balance outstanding and to the annual repayment instalment, the following result is obtained:

New debit balance outstanding	E⁰ 754 266
New repayment instalment	271 799

By repeating the process for the remaining years, a table of the evolution of the debt can be drawn up.

Let it now be assumed that the loan of 1 000 escudos is specified as negotiable in "adjustable units", each of which is worth 1 escudo at the date of signature of the loan agreement.

This "adjustable unit" will vary in proportion to the rise in the wage-and-salary index. In the case under study, where the variation is assumed to be the same every year, the values of the "adjustable unit" in terms of escudos will be those shown in table 6.

Table 6

"ADJUSTABLE UNIT" VALUES, ON THE ASSUMPTION OF A
REGULAR ANNUAL VARIATION IN THE WAGE-AND-
SALARY INDEX

Year	Value of "adjustable unit" (Escudos)	Factor $(1+r)^n$ 1.10^n
1	1.10	1.10
2	1.21	1.21
3	1.33	1.331
4	1.46	1.4641
5	1.61	1.61051

As in table 5 the debit balance outstanding and the corresponding
instalments payable were adjusted at the beginning of each year of
servicing of the debt, the same result can be reached if the balances and
annual instalments appearing in table 4 are multiplied by the relevant
factors in table 6 (see table 7).

Table 7

CREDIT RECOVERY WITH APPLICATION OF ADJUSTMENT SYSTEM

Year	Debit balance outstanding E^o	Repayment instalment E^o	Factor	Adjusted debit balance out-standing	Adjusted instalment E^o
	1 000				
1	815 373	224 627	1.10	896 910	247 000
2	623 361	"	1.21	724 266	271 799
3	423 668	"	1.331	563 902	298 979
4	215 988	"	1.4641	316 288	328 877
5	0	"			

By this means, the evolution of the debt can be worked out in "adjustable
units" just as if it were expressed in escudos, regarding the unit as equi-
valent to the factor appearing in table 6.

As the unit is adjusted once a year, all outstanding debit balances
and the corresponding repayment instalments are automatically adjusted at
the same time, whether they are payable monthly or yearly.

IV. ADJUSTABLE SAVINGS FOR HOUSING

The adjustability of savings became an indispensable condition for
inducing the broad masses to put their savings into the financing of
housing. Owing to the high rates of currency inflation mentioned previously,
popular saving had been virtually disappearing in a short space of time
since savings soon lost their purchasing power. Hence, there was no incen-
tive for people to attempt to put money aside, especially for housing,
where the delivery dates are usually longer than for ordinary consumer goods.
Legislative Decree No. 2 of 1959 empowered CORVI to preserve the purchasing
power of savings for housing by adjusting them periodically and adding an
annual interest charge of 3 per cent.

The index applied for making the adjustments is the same as that used for adjusting mortgage debts and repayments, as referred to earlier, i.e. the wage-and-salary index (with the maximum variation in the cost-of-living index as a ceiling). Recent legislation provides for balancing out over the period of a year, the sums paid to investors by CORVI under the head of adjustments and the amounts repaid by mortgagees under the same head.

As in the case of adjustable mortgage, debts and repayment instalments CORVI created a kind of currency to use for housing savings, known as "savings points". (Cuota de ahorro)

These savings points may be defined as a kind of monetary unit, whose value in escudos varies annually with the variations in wages and salaries. This means that if wages and salaries rise during the year the value of the savings points will increase proportionately. Similarly, if average wages and salaries drop the savings points will also decrease. But, according to the recent legislation mentioned, if the average rise in wages and salaries indicated in the relevant index, reduced by one unit and rounded to the next lowest integer is higher, in any one year, than the rise in the cost-of-living index during the same period, the savings points will be adjusted to bring them into line with the variation in the latter. The points are used for making housing deposits in the Banco del Estado de Chile.

Every year, CORVI fixes the so-called "official value" of the savings points for the period beginning on 11 July of the year in which they are determined and ending on 10 July of the following year. Thus, the official value of the savings points in May 1962 corresponds to that of the period 11 July 1961 to 10 July 1962.

To arrive at the official value of the points, CORVI adds the following amounts to the official value in the preceding year:

(a) Three per cent of the official value of the preceding year's points, under the head of interest; and

(b) The figure obtained by multiplying the percentage rise in the wage-and-salary index, as determined by the National Statistics and Census Service, reduced by one unit and rounded to the next integer below, by the official value of the savings points in the preceding year.

/A specific

A specific example may help to remove any doubts regarding the mechanism in question. The National Statistics and Census Service duly transmitted the following information to CORVI:

Wage-and-salary index up to April 1959 = 100.00

Wage-and-salary index up to April 1960 = 115.09

Percentage variation in the wage-and-salary index during the period in question = 15.09

Taking these data into account, the official value of the savings points which had stood at 1 escudo from 11 July 1959 to 10 July 1960, was raised officially to 1.17 escudos on the basis of the following calculation:

Official value of the savings points from 11 July 1959 to 10 July 1960 = E⁰ 1.00

Interest (3 per cent annually) = 0.03

Wage and salary increase (15.09 per cent; 14 per cent applied to (a)) = 0.14

Official value of the savings points from 11 July 1960 to 10 July 1961 = 1.17

The official value of the savings points indicated below was obtained in the same way.

Period of application	Value of points
31 July 1959 - 10 July 1960	E⁰ 1.00
11 July 1960 - 10 July 1961	1.17
11 July 1961 - 10 July 1962	1.37

In 1962 the maximum variation in the cost-of-living index was used, in accordance with the amendment in the law as referred to above, instead of the method based on the wage-and-salary index, which showed a greater annual variation during the period under consideration than the former. The following figure was obtained:

Period of application	Value of points
11 July 1952 - 10 July 1963	E⁰ 1.54

The savings points are assessed at their official value when funds are reimbursed to persons who have deposited savings points in the Banco del Estado and subsequently ask to withdraw them. Before they are repayable, the savings points must have been in the Banco del Estado for three years. Points used for buying or building low-cost housing units are taken at their "provisional value" as explained below.

For the purpose stated above, and also to prevent possible speculation by third parties in the case of one sharp rise in the year, CORVI is empowered to fix monthly a provisional value for the savings points. The montly provisional value is that adopted for making savings deposits and for buying and building the dwelling to be taken over by the person transacting any form of mortgage with CORVI. The provisional value is determined monthly, by adding to the official value in force at the particular date an interest charge of 3 per cent covering the time that has gone by, together with an estimated percentage of the probable variation in wages and salaries during the same period. If the cost-of-living index is considered to have fluctuated less during the time, this will be used.

To take an example, suppose that a monthly variation taking place in the wages-and-salaries index leads to a rise of 0.8 per cent monthly (9.6 per cent annually) in the savings points, and that this variation is lower than the fluctuation in the cost-of-living index during the same period. The provisional value of the savings points in October 1962 may be calculated in the following way:

Official value of the savings points from
11 July 1962 to 10 July 1963 E^0 1.540

Interest (3 months, i.e. $\dfrac{0.03 \times 3}{12}$ = 0.0075x1.540)   0.01155

Adjustment: $\dfrac{0.024 \times 1.540}{100}$ 0.03696

Total   1.58851

After rounding the probable provisional value of the savings points from 11 October 1962 to 10 November 1962 will be 1.59 escudos. These figures are, of course, given as an illustrative example, and should in no case be regarded as the provisional value of the savings points that will actually be in force in October.

1. Saving for housing: savings and loan agreement

Prior to Legislative Decree No. 2 of 1959, both the general public, through CORVI, and the contributors to social security institutions, through their respective provident funds, exercised their option to obtain housing by amassing points in their favour according to the number of their dependants, the length of time contributions had been made and the date on which housing had been applied for, and, as a rule did not save anything to secure a better position on the waiting list.   /Today, the

Today, the person who needs a house can make "prior savings deposits"
in order to obtain more points, if claims are dealt with in order of priority,
or in order to complete his savings programme in the case of savings and
loan agreements, which will be discussed below.

2. Savings and loan system for housing

(a) Financial savings and loan systems: general organization

Savings and loans for housing constitute a financial system which takes
the savings of individual members of the community and utilizes them for
the financing of housing. This financial system may be applied by private
agencies, such as the savings and loan societies which are beginning to
operate in Chile, or by the State, as in the case of CORVI. The organiza-
tions in question pool individual savings and use them for the purchase,
construction, finishing or enlargement of dwellings. The cost of buying
and urbanizing a site may also be included in the mortgages.

In Chilean legislation on the subject, i.e. Legislative Decrees No. 2
of 1959 and No. 205 of 1960, one general condition is laid down, namely
that the dwellings to be built, purchased, finished or enlarged should be
low-cost dwellings, as explicitly defined in Legislative Decree No. 2.
It should be remembered that this restriction is counterbalanced by the
innumerable tax reliefs and exemptions that the same decree establishes
for such housing. The society concerned, or CORVI, must try to protect
itself against possible losses by endeavouring to cover its expenditure
from the interest it charges on mortgages.

The course that it is hoped to follow in Chile is marked out by
that taken in the United States, but naturally with the different stages
shortened as much as possible. The first savings and loan society in the
United States was formed in 1831. All those who invested their savings
in it had the option of being future mortgagees. As time went by,
societies were created in which people could invest their savings without
any commitment on the society's part to lend them money later. Modern
societies in the United States are of this kind.

In Chile, because capital is in short supply and that the habit of
saving is, generally speaking, non-existent, the savings and loan system
has been established on the principle of making the desire to be a house-
holder its chief incentive. Thus a savings and loan system was set up

/in CORVI

in CORVI on the basis of savings and loan agreements or contracts. This contractual type of arrangement stimulates the saver and enables him to carry on saving for several years if necessary, since he knows that at the end of the time he will receive a loan to complement his savings and give him the house he desires.

A simple explanation will be given further on of the mathematical basis on which the contractual system of saving and loans operates.

(b) Source of the right vested in CORVI and future societies to negotiate in these fields

CORVI is legally empowered, by Legislative Decree No. 2, to set up a system of savings accounts - known as "savings for housing" - as well as savings and loan agreements. The societies, for their part, are permitted to operate legally by Legislative Decree No. 205 of 1960. This Decree set up the Caja Central de Ahorros y Préstamos, as an autonomous legal entity responsible for enforcing the provisions of the Decree and supervising the societies authorized under the Decree.

A simple explanation of the elementary financial mechanism under-lying the savings and loan agreements is given by means of the figures presented below. The example cited does not pretend to do more than give an outline of the development of the different resources in a hypothetical case, and, generally speaking, the percentages quoted do not correspond to those applied in practice.

The agency in question is a savings and loan institution which offers savings and loan agreements to the public on the following terms:

Prior saving period	3 years
Percentage of prior saving in relation to the total/cost of the dwelling	75 per cent
Annual amortization in relation to the total cost of the dwelling	5 per cent
Term of the debt	5 years

In other words, if a dwelling were valued at 100 escudos, the sub-scriber should save 25 escudos annually for three years, which would give him 75 escudos. The loan he received at the end of the prior saving period - 25 escudos - would be reimbursed over five years at the rate of 5 escudos yearly. For the sake of simplicity, interest on the loan is not taken into account here.

/Let us

Let us suppose that at the beginning of each year 100 subscribers enter the plan in the conditions described above. Once they have completed their three-year period of prior saving and have amassed the necessary percentage, their respective dwellings will be handed over to them. At the end of the first year there will be 100 subscribers saving, which will make a total of 100 x 25 per cent = 25 dwellings. The corresponding figures are to be found in columns 1, 2 and 3 of table 8 opposite the first year. As no housing has yet been allotted, nothing appears in column 4 under amortization, the 25 dwellings built or financed appearing as the sum total in column 5. In column 6 the 25 dwellings are put down as a comulative total carried over from construction during the first year, and column 7 indicates that the 25 units constitute a surplus at the end of that year.

At the beginning of the following year the 100 second-year subscribers enter, and these, added to the 100 from the preceding year, give a cumulative total of 200 subscribers who have joined the plan up to then, as indicated in column 2. These 200 subscribers save the same amount and at the end of the second year they have 200 x 25 per cent, which equals 50 housing units, as indicated in column 3. The other items are as in the first year, since no amortization has yet taken place.

During the third year the procedure is the same, and columns 1-6 can be readily filled in. With respect to column 7, allowance is made for the fact that by the end of the third year the 100 subscribers who had been saving since the beginning of the first year will have fulfilled their savings commitment. One hundred housing units are therefore handed over to them, and they begin to pay for them the following year. Thus, with a cumulative total in column 6, of 150 houses built, 50 houses will be available at the end of the third year, as indicated in column 7.

During the fourth year, as column 2 shows, the total number of subscribers is 400; they consist of 300 savers in their second, third and fourth years and 100 first-year subscribers who already have a house and have begun to amortize their debt. The respective figures are given in columns 8 and 9. The dwellings that can be built during the fourth year through the savings of 300 subscribers will be 300 x 25 per cent, or 75.

<div align="right">/The number</div>

The number of dwellings resulting from recovery of the loans will be 100 x 5 per cent, i.e. five. The last two figures go into columns 3 and 4, as in the previous cases. The total number of dwellings that can be built in the fourth year is given in column 5. It is equal to the sum of the amounts stated above, i.e., 75 + 5 = 80 units.

The 80 new houses, plus the balance of 50 from the previous year (in column 7), give a total of 130 which, less 100 that have to be handed over to the group that began saving in the second year, produces a surplus of 30 housing units, as indicated in column 7 opposite the fourth year.

This procedure continues to hold good for filling in the columns up to the ninth year, when the first 100 subscribers no longer take part, since they finished amortizing their debts by the end of the eighth year. The first entries are therefore made in column 10, which will list the cumulative total of ex-mortgagees of the savings and loan institution.

In figure 1, the surpluses at the end of each year are indicated by the ordinate and the time measured in years by the abscissa.

As may be seen from figure 1, there are no surpluses or deficits in resources from the eighth year onwards. This means that the receipts from subscribers' savings and borrowers' amortizations exactly covered the new loans required by subscribers completing their three-year period of prior savings, according to the example given.

Thus the plan is taken to be stabilized or to enter into effect, inasmuch as the number of new subscribers incorporated yearly into the system equals the number of new house holders and the number of mortgagees who have finished paying for their houses.

If the individual savings indicated in the foregoing example had been effected by one person on his own, he would have amassed enough capital to buy or build a house in the space of four years instead of three, which is the time it would take if he belonged to the savings and loan system in the conditions described.

Lastly, if savers who do not wish for loans, or other kinds of capital extraneous to the system, join the scheme, the savings percentage will be reduced, as will also the length of time subscribers have to wait for a house.

Tablo 8

FINANCIAL MECHANISM OF SAVINGS AND LOAN AGREEMENTS SYSTEM

Year	Total number of subscribers at end of each year	Number of houses that can be built by means of annual savings	Number of of houses that can be built by means of annual loan recoveries	Total number of houses that can be built annually	Cumulative total of houses built	Number of surplus houses each year after allocation	Number of subscribers saving each year	Number of subscribers amortizing loans each year	Number of subscribers who have completed payment
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1	100	25	-	25	25	25	100	-	-
2	200	50	-	50	75	75	200	-	-
3	300	75	-	75	150	50	300	-	-
4	400	75	5	80	230	30	300	100	-
5	500	75	10	85	315	15	300	200	-
6	600	75	15	90	405	5	300	300	-
7	700	75	20	95	500	-	300	400	-
8	800	75	25	100	600	-	300	500	-
9	900	75	25	100	700	-	300	500	100
10	1 000	75	25	100	800	-	300	500	200
11	1 100	75	25	100	900	-	300	500	300
12	1 200	75	25	100	1 000	-	300	500	400

Figure I

SURPLUSES AT END OF YEAR AFTER LOANS HAVE BEEN
GRANTED TO SUBSCRIBERS QUALIFYING FOR THEM

Natural scale
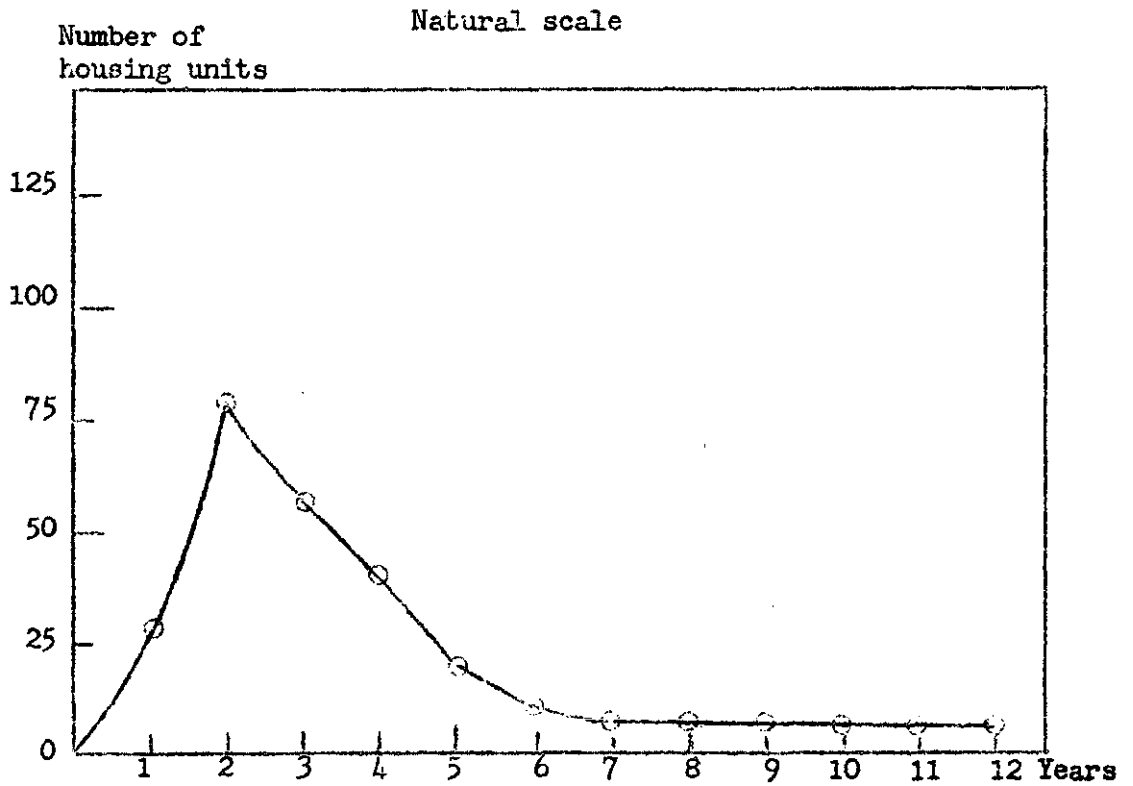
/3. Characteristics

3. Characteristics of CORVI savings and loan agreements

(a) Definitions

(i) Savings points: Without prejudice to the earlier definition given, it may be said that the savings points are the units adopted for depositing and withdrawing funds from the savings for housing accounts. They have been legally defined and their characteristics established in articles 26 et seq. of Legislative Decree No. 2, published in the Diario Oficial of Chile dated 31 July 1959.

(ii) "Savings for housing accounts": These are the individual accounts that may be opened by natural or juridical persons, upon request, with the Banco del Estado de Chile, for deposits and withdrawals in the form of "savings points". Such accounts are legally established under article 25 of Legislative Decree No. 2 of 1959 and their method of operation specified in Decrees Nos. 1996 and 2307, published in the Diario Oficial dated 23 November 1959.

(iii) Savings and loan agreements for housing: These are agreements between CORVI and individual savers who are anxious to become householders, whereby the saver, thereafter known as the subscriber, undertakes to make regular and equal deposits in his savings for housing account, and CORVI undertakes to grant him a loan over and above his own savings when the saving period has been completed, always provided that the subscriber has carried out his deposit programme and has complied with the other provisions laid down in the agreement.

(iv) Prior savings: This refers to the amount that the subscriber is required to pay in the form of equal and regular monthly deposits, or advance deposits, in order to earn entitlement to a loan once his savings commitment has been complied with.

(v) Prior savings period (or period of the agreement). This is the period stipulated in the agreement within which the subscriber must complete his prior saving through equal and regular monthly deposits or advance payments.

(b) Savings and loan agreements

An agreement may be signed with CORVI by any natural person who makes the necessary request. Building co-operatives may also enter into such agreements.

/The agreement

The agreement must include particulars relating to the subscriber, e.g. his name, identity card number, number of savings for housing book, marital status, address, occupation, age and whenever relevant, place of employment.

The following data have also to be included in the agreement: number of savings points that the subscriber undertakes to deposit monthly, number of months during which regular deposits are to be made and total number of savings points, and sum of prior savings plus loan, which together make up the "amount of the agreement". The agreement also specifies the date on which the said amount will be made available to the subscriber.

(c) Fulfilment of the agreement

The subscriber has to keep his monthly payments up to date. If he has failed to do so for two consecutive months he must make the necessary deposits before the expiry of the agreement in order to preserve his right to the amount of the agreement on the stipulated date. If from three to six consecutive monthly deposits are in arrears payment of the loan sum will be deferred for an equivalent length of time. If deposits are not made for more than six consecutive months, the agreement will automatically become null and void. To say that the subscriber has fallen behind by two, three or more consecutive months means that the balance in his savings for housing book is lower than it should be according to the normal progress of the agreement by two, three or more monthly sums, no deposits having been made during two, three or more consecutive months.

(d) Loans

CORVI will notify the subscriber, by registered letter sent to the latest address left by him with that institution, of the date on which he is entitled under the terms of the respective agreement to receive the amount it represents.

In order to enjoy the benefits of the loan, the subscriber undertakes to carry out the systematic saving specified in the agreement and not to withdraw savings points until the final date of the agreement, although he may make advance deposits whenever he likes. Such deposits will be subject to the same criteria as those governing ordinary savings, but will not serve to reduce the period required for exercising his claim to the amount of the agreement. CORVI may, however, take such deposits into

/account if

account if it has all the funds it needs at a given moment and is thus in a position to shorten the period.

The loan granted by CORVI to the subscriber under the terms of the agreement bears an annual interest charge of 4 per cent and is negotiated in adjustable units. The loan is paid back within the time-limits laid down according to the prior savings period or the period of the agreement.

Amortization period of the loan

	Years
Agreement for 6 months	7
" " 1 year	10
" " 2 years	12
" " 3 "	14
" " 4 "	16
" " 5 "	17.5
" " 6 "	19.5
" " 7 "	19.5
" " 8 "	19.5
" " 9 to 15 years	21.5

The amount of the agreement is handed over by CORVI to the person concerned, once it has been ascertained that the sum is sufficient for investment in the work projected by the subscriber. If the cost of the work exceeds the amount of the agreement, the subscriber must prove to CORVI's satisfaction that he has sufficient means to finance it.

The subscriber is required to declare that he has not signed any other agreement of the same nature with CORVI, and in all circumstances the parties explicitly state that the subscriber is entitled to one agreement amount only.

The amortization period of the loan will begin, in the case of a sale, three months after the date on which the relevant deeds are signed. In the case of construction, the loan will begin to be reimbursed nine months after the signature of the deed. In both cases, the loan or initial debt is fixed at the provisional value of the savings points on the day the corresponding deed is signed and is converted at the same tiem into adjustable units at the official rate in force.

/4. System

4. System of savings and loan agreements

(a) Schedule of agreements

Table 9 presents the main elements in the system of agreements adopted by CORVI.

The prior saving periods range from 6 months to 15 years, as indicated in column 1. Thus, when a programme covering n years or months is mentioned, it refers to an agreement or body of agreements with n years or months of prior saving. Column 2 shows, in relation to the total value of the agreement, the percentage of prior savings that must be amassed by a subscriber in order to be entitled to a loan. This percentage drops in proportion to the duration of the programme, thus enabling sectors with a lower saving capacity to take advantage of the housing scheme. Column 3 indicates the theoretical financing to be extended by CORVI to each programme on an individual basis. In other words, the beneficial effect of a combination of programmes is not taken into account. The percentage of the loan to be received by the subscriber in each plan and the perspective periods for amortizing the loans are shown in columns 5 and 6.

The rate of repayment of the loan (see column 7) is obtained by applying the table of compound interest charges of 1/3 per cent monthly to the loan specified in column 5.

(b) Particulars of resources proper to the plans themselves and outside contributions

The prior saving percentages proposed do not finance the plans unaided; the agreements system needs external help as well.

The theoretical percentages for self-financing are too high to be accepted by the general public, and are, moreover, unnecessary since the savings and loan system has several characteristic external sources of financing, the following being the most important:

(i) Voluntary savings: These consist of deposits by people who have not signed any agreement and are therefore not applying for loans under the savings system.

/(ii) Frozen

(ii) Frozen savings: These are deposits made by industrial, agricul-
tural and business firms subject to a profits tax of 5 per cent (increased
by 40 per cent) under article 20 of Legislative Decree No. 285 of 1953.

(c) Other sources and methods of financing

These include moratoria, the withdrawal of funds during subscriber's
prior savings periods, extraordinary savings, deferment of loans, and
extraordinay amortizations.

Table 9

MAIN FACTORS IN SYSTEM OF AGREEMENTS

Prior savings period		Prior saving by subscribers	CORVI contribu- tions	Financed by the system	Total loan received by subscriber	Total loan period	Monthly repay- ments 1/3 per cent of inte- rest on loan
Years	Months	%	%		%	Months	(per mil)
1/2	6	45	38.99	17.01	56	84	13.7
1	12	41	37.86	21.14	59	120	10.1
2	24	37	34.78	23.22	63	144	8.8
3	36	35	32.60	22.40	65	168	7.7
4	48	33	31.22	35.78	67	192	7.1
5	60	31	30.90	38.10	69	210	6.6
6	72	30	29.20	40.80	70	234	6.2
7	84	28	28.70	43.20	72	234	6.2
8	96	27	27.64	45.36	73	234	6.2
9	108	26	26.70	47.30	74	258	5.8
10	120	25	25.95	49.05	75	258	5.8
11	132	25	24.35	50.65	75	258	5.8
12	144	25	23.89	52.11	76	258	5.8
13	156	23	23.50	53.50	77	258	5.8
14	180	22	22.04	55.96	78	258	5.8