Republic of Lebanon
Office of the Minister of State for Administrative Reform
Center for Public Sector Projects and Studies
(C.P.S.P.S.)

Progress Report No.3

Feasibility Study for 6,000 Low Cost Housing Units

I. General Findings

Having studied a full range of interest rates maturity dates and shares of income affordable for housing we have found that it is feasible to design a program which provides housing for the low income ranges without government subsidy.

The present report is concerned with a preliminary study of the government cash position under the proposed graduated payment mortgage concept. Several details require further analysis. The first essential analysis required is a study of design standards as they relate to construction costs, with an eye to reducing total built cost, now assumed to be around LL.500/m^2. A second area requiring further study is the establishment of realistic land costs. The impact of land cost on total built cost per square meter is considered to be 60% of the cost of one square meter of land. Since government owned lands intended for housing purposes have market values between LL.50/m^2 and LL.300/m^2. The method used to determine land values, and the location of projects within the program have a dramatic effect on the feasibility of the program.

II. Cash Position

The following assumptions were made as basis for the cash-flow tables:

- Unit house sizes: $60m^2$, $80m^2$, $95m^2$, representing 2, 3, and 4 bedroom units.
- Distribution of house sizes: $60m^2$:35%; $80m^2$:50%; $95m^2$:15%
- Total construction cost: LL.500/m^2 built (Gross).
- Loan needed: LL.180.6 millions.
- Sources of Finance: IBRD and AID.
- Capital loan terms:

i. AID: loan LL.75 million ($25 million)
maturity period 30 years - 10 years grace
11% as effective cost of capital.

ii. IBRD: loan: LL.105.6 million ($37 million)
maturity period 15 years - 3 years grace
10% as effective cost of capital.

- Relending Terms: 10.5% interest rate, representing average effective cost of capital, with variable maturity periods between 19 and 28 years -; graduated mortgage payment increasing at 5% a year; one year grace on principal
- Family income allocated to housing: 30%
- Down payment: 20%
- Eligible beneficiary incomes: LL.6,000/year up to LL.12,000/year

It is further assumed that beneficiaries will opt for the largest house they can afford, among those offered, giving the following distribution of house sizes by income range:

TABLE 1

Income LL.	Distribution	Size m^2	Loan Maturity period . years
6000	20%	60	28
7000	15%	60	21
8000	20%	80	28
9000	20%	80	22
10000	10%	80	19
11000	10%	95	21
12000	5%	95	19

The median income served is roughly LL.7600. The allocation of house sizes above, springs from an attempt to weight the program towards the low incomes, without geoperdizing government cash position. If market surveys reveal a demand among the higher income groups for smaller houses, the distribution will be weighted accordingly, and shorter maturity periods imposed. Maturity periods are set at the minimum affordable thus requiring all beneficiaries to maintain their housing expenditure at 30% share of income in order to minimize government advances in the early years of the program.

Table 4 in Annex E, shows that the government needs to increase its borrowing power over the early period, of lown repayment, reaching a peak of net cash outflow of LL. [illegible] in the year 1 and totaling an amount of LL.40,688 by the end of year 9. The accumulated net cash outflow give rise to a present value of LL.31,808 which is recuperated gradually during the maturity period of the loan (details given in the above mentioned table) at the effective average cost of capital of 10.5%

III. Recommendations

It is suggested that the next steps in program development be as follows:

A. Careful analysis of effect of the program expenditure and graduated mortgage payments on the government fiscal position.

B. Careful physical design analysis of construction costs, aimed at reducing costs.

C. Initiate discussions on establishing a procedure for arriving at a balanced and economically feasible geographic distribution of projects under the program. Points to be considered include optimum project sizes (economic versus social considerations) and regional plan considerations.

D. Initiate discussions on method of implementation.

It is recommended that specific task forces be given the responsibility of dealing with these issues.

C.D.R.
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