Central Mortgage and Housing Corporation
Société centrale d'hypothèques et de logement

AN EVALUATION OF THE FEDERAL ASSISTED RENTAL PROGRAM (1976-77)

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FOREWORD

The following evaluation of the federal Assisted Rental Program (ARP) is one part of an overall evaluation of the Federal Housing Action Program (FHAP). This program was announced in late 1975. The purposes of this evaluation are to permit the Minister of State for Urban Affairs to report to the Prime Minister and the Ministers of the Treasury Board on the achievements of FHAP and the directions it might take in the future, and to provide information for a wider review of social policy on shelter, now under way.

The evaluation presented here assesses the successes and failures of ARP at the national level primarily in relation to the major goal of the program: increasing the supply of new rental accommodation in Canada. Although there is some discussion of regional and local market differences, the report does not attempt to evaluate the impact of ARP market by market. Further studies of ARP are now being desinged to permit such detailed assessment.

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CHAPTER ONE

INTRODUCTION

In November, 1975, the Minister of State for Urban Affairs announced the establishment of the Federal Housing Action Program, a package of measures intended to produce one million new housing units over the next four years.[1] The goals of the FHAP program, as expressed by the Minister, may be summarized as follows:

(a) to increase the supply of new housing;

(b) to do so at prices that moderate-or low-income purchasers and renters could afford; and

(c) to stimulate employment.

The three main instruments developed for achieving these aims were: the Assisted Home Ownership Program (AHOP), the Assisted Rental Program (ARP), and the Municipal Incentive Grant (MIG). Each of these three instruments is the subject of a separate report by the Program Evaluation Unit, Corporate Planning Division, Central Mortgage and Housing Corporation. The present report is an evaluation of the Assisted Rental Program, but AHOP and MIG inevitably enter the discussion from time to time.

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[1] News release, Honourable Barney Danson, Minister of State for Urban Affairs, Ottawa, November 3, 1975.

At the time of the announcement of the Federal Housing Action Program, an Assisted Rental Program was already in existence.[1] The FHAP announcement involved substantial modification to the ARP program. The basic features of the new Assisted Rental Program were:

1. An Assistance Loan (AL) of up to $1,200 per unit per annum in the first year is given to the entrepreneur of new rental accommodation to bring rents down to market levels.

2. Assistance is paid directly to the entrepreneur and secured by a second mortgage. Assistance is normally free of interest for ten years.[2] At the end of ten years, the AL begins to earn interest.

3. Units must be "modest" in size and must be priced at or below the AHOP maximum price limit for that market area.[3]

4. To qualify, a new rental project must have

   a) normally a minimum of eight units, and

   b) an insured mortgage for 90 per cent of the value of the project.[4]

5. There are no restrictions on who may rent units built under the program.[5]

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[1]Guidelines for the original ARP program were announced on April 29, 1975, in CMHC General Memorandum B-952.

[2]See Appendix B for a discussion of the alternative methods of repayment.

[3]For discussion of the size restrictions and AHOP price limits see Chapter Four.

[4]While privately insured mortgages qualify, the project must meet National Housing Act standards. As a result, virtually all projects have NHA insured mortgages.

[5]Under the previous ARP program, a renter at time of entry could not have an income greater than five times the rent paid.

6. Normally an AL is given each year for ten years and the size of the AL is reduced by one-tenth of the original amount each year.

7. The entrepreneur must submit an annual audited financial statement along guidelines established in an operating agreement with CMHC. If, on the basis of this statement, the entrepreneur does not earn a fair return on equity (5 to 10 per cent per annum depending on the individual agreement), assistance can be continued at the same level as before (i.e., not decreased by one tenth as is normally the case). If his yield is above this fair return rate, assistance may decline more rapidly than one tenth; although the interest-free period remains ten years.

8. Under exceptional conditions, the interest-free period may be extended to 15 years.

9. Rents are established in the first year by agreement between CMHC and the entrepreneur. Thereafter, rent levels are set by market conditions. Any increase in rent will of course raise the yield on equity; if the yield goes above the agreed fair return, assistance will be reduced.

The target for 1976 was 19,000 units to be financed by approved lenders at a cost of $92 million. This target was in fact exceeded and over 23,000 units were approved in 1976, almost all financed by private lenders. In some regions, ARP accounted for almost all rental units approved for financing under the National Housing Act in 1976.[1] This large-scale

[1] In the first eight months of 1977, 86 per cent of all rental accommodation financed under the National Housing Act received ARP assistance.

participation by approved lenders represents one of the major achievements of ARP--the ability to shift the financial burden of subsidizing housing from the government to the private sector.[1]

The primary reason for this large-scale participation in ARP by builders is that the subsidy in the program enables entrepreneurs to earn a profit on housing even if the rents they charge on new housing are not sufficient to cover cash outflows. The rents that they could charge were determined by the large stock of existing rental accommodation built in previous years when costs were lower. Rents on the latter were controlled in most of the provinces by provincial rent boards and therefore could not rise to their full market value. The Corporation was concerned that, with vacancy rates already low in many centres, failure to produce new rental accommodation would increase pressure on the rental market. The consequences of this would be rent increases (perhaps illegal), or substantial political pressure for government to solve a worsening housing situation.

How successful has the Assisted Rental Program been? In this report, the program is evaluated in terms of the mechanisms used for implementation,

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[1]For a discussion of whether it is more efficient to use private or government funds to finance housing programs, see J. Guttentag, "Direct Federal Housing Loans versus Interest Rate Subsidies" in Housing in the Seventies:Working Papers (Washington, D.C.: U.S. Government Publications, 1974), Volume 2, p. 1317 - 1325.

the extent of the achievement of its goals, and its overall costs. The structure of the report is as follows.

Chapter Two presents an evaluation of the delivery processes and program criteria. The specific mechanisms examined in that chapter are:

(i) the participation of approved lenders;

(ii) controls on rents and resale prices;

(iii) overmortgaging and resales;

(iv) control of tenants; and

(v) the requirement for audited financial statements.

In Chapter Three, ARP is evaluated in terms of its success in reaching two goals: increasing the availability of rental units to individuals, and increasing output and employment in the economy as a whole. Economic conditions at the end of 1975 were relatively depressed, and residential construction had been an effective tool of government for generating new employment.[1] The analysis begins with an estimate of how

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[1]See L.B. Smith, The Post-War Canadian Housing and Residential Mortgage Market and the Role of Government (Toronto: University of Toronto Press, 1974).

many of the units started in 1976 under the Assisted Rental Program would not have otherwise been built. The employment component of these additional units is then estimated.

Apart from increasing the supply of rental units and generating new employment, another goal of ARP was to ensure that the new housing produced was modest and within the financial reach of low-and moderate-income people. There was concern that the new units not be too luxurious nor a waste of resources. As a result, price and size constraints were imposed. In Chapter Four an attempt is made to identify the extent to which ARP succeeded in moderating quality in new rental construction.

One important aspect of the FHAP program that made ARP particularly attractive to investors was the extension to December 31, 1977, of income tax provisions allowing an individual investor to offset losses created by depreciation of new rental units against other income.[1] Because of the importance of this program to the overall ARP program, Chapter Five estimates the extent to which it is being used, both generally and within ARP.

Chapter Six examines the costs of the ARP program. These costs will include both cash flow implications and subsidy costs implicit in the

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[1]In the Income Tax Act, depreciation is referred to as Capital Cost Allowance or CCA.

interest-free nature of the ARP loan and the CCA provisions described above. Furthermore, the effect on costs of provincial supplementation of ARP, as now takes place in British Columbia and Ontario, will be estimated.

In September, 1977, the total allocation for ARP was increased to 60,000 units, or more than twice the level approved in 1976. Should this level continue for the next few years, the program will likely have a significant effect on the rental housing markets of most market areas in Canada. Chapter Seven examines the nature of this impact in several of the major markets.

Chapter Eight reviews a number of the problems that have arisen during the past year and half in the delivery of the ARP program and, on the basis of information currently available, attempts to recommend courses of action. Chapter Nine summarizes the findings and the recommendations of the evaluation.

CHAPTER TWO

DELIVERY PROCESSES

The ARP program under FHAP includes a number of new processes outlined in Chapter One, designed to ensure the efficient delivery of the program. This chapter will examine these processes in turn.

2.1 PARTICIPATION OF APPROVED LENDERS

A principal concern of ARP is to shift the financing of subsidized housing from CMHC onto private lenders in order to reduce the cash flow requirements of government. Under ARP, CMHC pays only the subsidy, and not the full mortgage. The evidence reported here indicates that the private lending institutions have been extremely willing to participate in ARP, as in AHOP. Trust companies and life insurance companies have been the major source of funding for ARP projects (Table 2.1). In contrast, banks have been the major AHOP lenders.

This pattern is consistent with the traditional lending practices of these institutions. Specifically, banks have a highly decentralized branch structure and are therefore in a good position to cater to the requirements of the individual home owner. By contrast, life insurance companies have a highly centralized structure and therefore prefer administering a single large mortgage to a large number of small mortgages.[1]

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[1]The average number of units in ARP projects financed by life insurance companies is greater than in projects approved by banks or trust companies. Thus, as can be seen in Table 2.1, life insurance companies have a larger share of units than of projects.

TABLE 2.1

DISTRIBUTION OF APPROVALS BY LENDING INSTITUTION
ARP, AHOP AND OTHER NEW RESIDENTIAL CONSTRUCTION

Lending Institution	Per Cent of ARP Approvals[1]		Per Cent of AHOP Approvals[2]	Ratio of Mortgages Approved for New Multiple Dwelling Units to Total Mortgage Approvals for New Units[3]
	By Project	By Dwelling Unit		
CMHC	3	1	9	n.a
Life Insurance Companies	27	34	7	0.61
Loan Companies	13	11	14	0.53
Trust Companies	36	31	22	0.57
Chartered Banks	17	15	42	0.38
Other	4	8	6	n.a.

[1]ARP projects based on 971 projects covering 44,566 units approved in 1976 and the first six months of 1977.

[2]AHOP approvals based on 18,526 approvals in 1976.

[3]Other multiple unit and total mortgage approvals based on Canadian Housing Statistics, 1976, Table 43. These exclude AHOP and ARP but include conventional as well as NHA mortgage loans.

Since life insurance companies already own a large stock of rental accommodation, they are in a better position to take over a project that goes into default than are banks.[2]

The reduction of CMHC capital commitments was one of the major goals of the FHAP revisions. Note in Table 2.1 the very small requirement for CMHC direct financing, only 3 per cent of all projects and 1 per cent of all units. It is clear that ARP has been successful in the achievement of this goal.

2.2 CONTROLS ON RENT

Under the Limited Dividend housing program, the control of rent was the key feature of rental assistance.[3] Rents could not be increased in LD projects without CMHC approval. While the control on rents was

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[2]The extent to which life insurance companies also have equity or participation in the ARP projects that they finance is not known. In the late 1960s, early 1970s, life insurance companies frequently held a portion of the equity in the renewal units they financed. See J.E. Hatch, The Canadian Mortgage Market (Toronto: Government of Ontario, 1975), pp. 145-156.

[3]The LD program was the major CMHC direct lending program for rental accommodation between 1946 and 1975, providing preferred interest rate mortgages. It was gradually replaced by ARP in 1975.

desirable insofar as it would ensure that landlords did not earn excess profit, it placed a substantial administrative load on CMHC local offices which frequently lacked the time to determine whether requests for rental increases were reasonable. As a result, most requests for increases were granted on the basis of minimal information supplied by the entrepreneur to the branch office.

Partly because of this administrative problem, the ARP program removed any direct control of rents. Instead, it established an incentive for not increasing rents abnormally. Specifically, the level of Assistance Loan in any year beyond the first year is based on the difference between cash outflow and rents.[1] Should rents rise without an increase in cash outflow, the level of assistance will fall accordingly. Since the AL is not taxable, while rent increases if they generate a net income are taxable, there is a strong implicit incentive not to increase rents. This incentive is augmented by a regulation that does not allow increases in the AL over time. Thus, should a landlord raise rents and thus substantially reduce the size of his Assistance Loan, he cannot request an increase in the AL in subsequent years.

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[1]Legitimate operating costs include debt charges, contingency, vacancy loss, general maintenance, property taxes, return on equity and reserves for replacement. A CMHC appraiser from Edmonton has argued that the latter is in fact profit for the entrepreneur and ought to be excluded from costs.

In addition, there is also the control exercised through provincial rent control legislation. Although new units in most provinces are exempt from rent control, the control in the remainder of the rental market prevents owners of new units from increasing their rents out of line with the rest of the market. This can occur either through the downward pressure on rent as supply increases or through psychological pressure on the owner regarding what he can charge.

Despite these indirect controls on rent levels, it is nevertheless possible that there might be a substantial change in the revenues or costs of a landlord, warranting a reassessment of the level of assistance. For example, in the sixth year of a project's life, most mortgages will be renewed at the rate of interest prevailing at that time.[1] Should interest rates fall from the average of 11½ per cent that prevailed in 1976 to 10 per cent in 1981, the result will be a substantial decline in debt carrying charges on the project, and the typical unit will not require further assistance at this time (Table 2.2). In fact, the landlord can lower rents by $164 per annum and still break even.

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[1] Of the 971 projects recorded on file to August, 1977, 69 per cent were for a 5-year term and 18 per cent for a 10-year term; the remainder were for 15 years or longer. See Appendix C, Table C.5.

Despite this eventuality, the ARP agreement provides for continuation of the interest-free period for the accumulated AL to the end of the tenth year. Given the possibility of a fall in interest rates, it would have been desirable to have some control in the program at that point (for example, by requiring re-negotiation of the ARP agreement after five years). What has happened instead is that many of the new ARP projects in 1977 have mortgages with a 10-year, rather than a 5-year, initial term. While the example in Table 2.2 describes what might happen if interest rates fall, the opposite problem will arise for ARP projects being negotiated in 1977 at 10¼ per cent, should interest rates rise to 12 per cent in 1982. In such cases, the AL might not be sufficient to cover the gap between costs and rents and assistance might have to be renegotiated upwards. However, current agreements preclude any increases in Assistance Loans above the levels in the preceding year.[1] This may create problems of default or arrears, depending on interest rates in 1982.

2.3 RESALE OF ARP PROJECTS AND OVER-MORTGAGING

A previous evaluation of the Limited Dividend program suggested that many entrepreneurs were able to get a mortgage loan that exceeded the value

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[1]While rents and costs are also likely to inflate more rapidly during a period of higher interest rates, the net effect would still be the need for an increase in the size of the AL.

TABLE 2.2

AN EXAMPLE OF THE EFFECT OF A DECLINE IN INTEREST RATES ON COSTS
ASSISTED RENTAL PROGRAM, 1976

	Year 1	Year 6	Assumed Annual Rate of Increase
Value of Mortgage, Per Unit	$24,300	$23,500	
Interest Rate	11½%	10%	--
Annual Principal and Interest Payments[1]	$2,971	$2,434	--
Other Costs	$1,484	$2,180	8%
Total Costs	$4,455	$4,614	
Annual Rent	$3,252	$4,778	8%
Excess of Costs Over Rents	$1,203	- $164	--

[1]Based on initial 35-year amortization period.

of the entire project.[1] This can be done by over-appraising the project and/or efficient construction practices.[2] In ARP, a high appraisal would lead to an increase in the size of the AL.[3] There exists, therefore, a strong incentive for a builder to value a project at the highest possible amount. On the other hand, the lender and the CMHC appraiser attempt to provide a loan based on the true value of the project. The difficulty, of course, is determining the true value. CMHC uses two different methods to do this--an income approach, and a cost-of-replacement approach.[4] However, with large rental projects, these methods have wide margins of error, especially in times of rapid inflation. Thus, the extent of over-mortgaging is difficult to measure or evaluate on a national basis. Even on an individual project basis, it is difficult to estimate the degree of over-mortgaging, although most persons involved in the construction industry would agree that it is an essential aspect of all rental production.

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[1]M. Dennis, Low-Income Housing (Ottawa: CMHC, 1972), pp. 225-242. This is frequently referred to as "mortgaging out."

[2]For example, if a company has its own architect, it can charge itself more for architectural fees than the actual cost.

[3]Even without ARP there is an incentive to mortgage out since the interest paid in mortgage loans is 10 to 20 per cent cheaper than on builder loans.

[4]Under the income approach, the estimated revenue generated by the project is compared to annual costs. The cost approach compares actual costs to the appraiser's estimate of how much it would cost to reproduce a similar structure using benchmarks derived from previous experience. Since the income approach is based on the size of the AL and the AL is based on income, it is clear that this approach is of no use in ARP projects to determine whether there is over-mortgaging. Since large projects tend to be unique in design and location, the cost approach is also very inaccurate. For a detailed discussion of methods, see CMHC Appraisal Manual.

A related issue in the case of ARP involves projects that receive a mortgage based on legitimate construction costs but which, on the basis of market value, are underpriced. As a result, the original owner is able to resell the project, together with ARP assistance, at a higher price.[1] In terms of his own equity, the original owner is able to earn profit rates as high as 100 per cent.[2] Even if construction costs are the same as market value, Capital Cost Allowance provisions make the property substantially more valuable to an individual investor such as a doctor than to an incorporated landlord.[3] As a result, the individual investor may be willing to pay a substantial premium for an ARP project relative to the original value of the project to the corporate builder.

There is, however, little that CMHC can do to offset this high rate of profit. Since the CCA provisions do not enter into the calculation of AL assistance, renegotiation of ARP terms upon resale, even if permitted, would not solve the problem.[4] CMHC might not permit transfers of ARP

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[1]Under a bona fide sale agreement with a second owner, CMHC must agree to the sale. However, under a sale agreement to a "beneficial" trust, the Corporation maintains no control; a beneficial ownership occurs when a group of private investors purchase units primarily as tax shelters, but where the original owner continues to manage the project and is responsible to CMHC under the ARP agreement.

[2]If equity is 10 per cent of original value, and the selling price is 10 per cent above original cost, the profit rate is 100 per cent on equity.

[3]See Chapter Five below.

[4]The alternative possibility of including CCA benefits in the calculation of AL would be difficult, though not impossible, to implement.

assistance to subsequent purchasers.[1] However, this would create hardship for the owner of an ARP project who, for various reasons such as sickness or death, is forced to sell the project.

2.4 CONTROL OF TENANTS

A second major difference between the ARP (1976) program and the old Limited Dividend program was the removal under ARP of any control on the income of possible tenants. A tenant entering an LD unit could not have an income above four times the rent of that unit. Furthermore, if income rose above five times rent, the tenant was supposed to leave.[2]

While the operating agreement under LD between an entrepreneur and CMHC required the entrepreneur to implement the income criterion, the Corporation rarely checked to see if, in fact, the entrepreneur was enforcing it.[3] The major reason for non-enforcement was the lack of personnel at the local office to undertake the required surveys.[4] Consequently, in developing

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[1]This is done under AHOP. In the evaluation of AHOP it is recommended that the Interest Reduction Loan assistance be transferred to subsequent purchasers.

[2]During the life of the LD program, these limits (i.e., four and five times rents) were frequently changed.

[3]M. Dennis, Low-Income Housing, pp. 238-241.

[4]In addition, there was a fear that even if income was too high, it would raise substantial adverse publicity to have to evict a tenant for this reason.

ARP (1976) CMHC decided to remove all income limitations.[1] It justified the action not only on the grounds that it was administratively difficult to implement income controls, but, more importantly, because ARP units were rented at market rents, and not below market rents like LD units.

Since CMHC maintains no control on tenants of ARP units, there is no direct information on who occupies the units. Presumably, the typical ARP tenant is very much like the typical non-ARP tenant renting a unit at or above the average rent in that market area.[2] As can be seen in Table 2.3, the typical tenant in 1974, relative to the total population, is somewhat poorer, substantially younger, more likely to be an unattached individual, a single parent or married without children. To the extent that these are also the characteristics of ARP unit tenants, then the very poor are not being directly assisted by ARP. However, ARP is able to increase the supply of rental units, thus indirectly increasing the availability of other rental accommodation for the very poor through the filtering process.

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[1]Under the previous ARP program, there was an income entry requirement, but once in the tenant's income was no longer controlled.

[2]While ARP units are at the upper end of the range of rents for rental accommodation, it is impossible to determine exactly where in the range to cut off the potential hypothetical tenant. The criterion of at or above the average rent was selected in part to ensure that the sample was large enough. As can be seen in Table 2.3, the distribution is much the same if the average or 25 per cent above the average is used. In several ARP projects, the provinces have agreed with entrepreneurs to permit a limited number of rent supplement units, i.e., units which are rented to low income households from the public housing waiting list. The province thus guarantees the builder that these units will be rented by the province and the tenants pay rent to the province according to the rent-to-income scale. The difference between the two is cost-shared by the province and CMHC on a 50/50 basis under section 44.(1).(a). of the NHA.

TABLE 2.3

ESTIMATE OF CHARACTERISTICS OF ARP TENANTS

Characteristics	Renters Paying More Than the Average Rent		Renters Paying More Than 125 Per Cent of Average Rent		Total Population	
	Number	Per Cent	Number	Per Cent	Number	Per Cent
1. Total Households	1,113,000	100	489,000	100	6,590,000	100
2. Number of Bedrooms						
Bachelor	32,000	3	5,000	1	197,000	3
1	309,000	28	91,000	19	959,000	15
2	448,000	40	206,000	42	1,720,000	26
3	263,000	24	152,000	31	2,558,000	39
4	49,000	4	28,000	6	858,000	13
5	11,000	1	6,000	1	296,000	5
3. Income[1] in 1976						
Under $5,000	131,000	12	40,000	8	951,000	14
$5,000 - 9,999	227,000	20	75,000	15	1,350,000	21
$10,000-14,999	303,000	27	126,000	26	1,511,000	23
$15,000-19,999	227,000	20	109,000	22	1,205,000	18
$20,000+	210,000	19	131,000	27	1,482,000	23
4. Relation to Low Income Line						
At or Below	191,000	17	64,000	13	1,196,000	18
Above	922,000	83	425,000	87	5,394,000	82
5. Age of Head						
Under 25	264,000	24	94,000	20	682,000	10
25-34	360,000	32	164,000	33	1,440,000	22
35-54	281,000	25	142,000	29	2,449,000	37
55-64	96,000	9	41,000	8	998,000	15
65+	113,000	10	49,000	10	1,021,000	16
6. Type of Household						
Unattached Individual	341,000	31	138,000	28	1,357,000	21
Married, No Children	256,000	23	104,000	21	1,402,000	21
Married, With Children	350,000	31	172,000	35	2,995,000	46
Single Parent	108,000	10	47,000	10	393,000	6
Other	58,000	5	25,000	5	442,000	6
7. Urban Size Group						
Over 100,000	746,000	67	298,000	61	3,447,000	52
30,000-99,999	119,000	11	62,000	13	652,000	10
15,000-29,999	84,000	8	33,000	7	446,000	7
1,000-14,999	93,000	8	51,000	10	758,000	12
Rural	71,000	6	46,000	9	1,287,000	20
8. Provincial Distribution						
NFLD	10,000	1	5,000	1	118,000	2
P.E.I.	3,000	--	1,000	--	30,000	--
N.S.	28,000	3	12,000	2	226,000	3
N.B.	26,000	2	12,000	3	172,000	3
QUE	363,000	33	194,000	40	1,731,000	26
ONT	409,000	37	144,000	30	2,468,000	37
MAN	47,000	4	24,000	5	311,000	5
SASK	32,000	3	17,000	4	269,000	4
ALTA	90,000	8	36,000	7	511,000	8
B.C.	107,000	10	42,000	9	752,000	11

SOURCE: Survey of Household Income, Facilities and Equipment (HIFE), 1974, special tabulation; figures may not add to total because of rounding.

[1]The 1974 HIFE survey asked for 1973 incomes. These incomes were multiplied by 1.25 to approximate 1976 incomes.

2.5 AUDITED FINANCIAL STATEMENTS

One area in which the Corporation is likely to encounter substantial difficulty is the requirement that, within four months after each anniversary date, the owner of an ARP unit must present an audited financial statement of revenues and expenditures. For the person who owns a single project, the keeping of reliable financial accounts is likely to prove to be an impossible task. Without some background in accounting, it is very difficult for an owner to maintain financial accounts in a form that can be easily and readily audited. For the corporation that owns several projects, costs of such items as management fees, legal fees and even maintenance and repairs are chargeable to the entire portfolio of projects owned and not just to ARP units. The allocation of costs becomes arbitrary. Even if the Corporation had some control over the efficiency of the original owner, it has no control over subsequent purchasers.[1]

On the other hand, without an audited statement it is impossible to determine whether ARP assistance should be decreased at a rate different from the anticipated decline of one-tenth of the original amount. Only owners capable of maintaining audited statements will be able to vary from this norm.

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[1]Dennis complained that owners of rental projects frequently lack the management expertise needed to efficiently operate a rental project. (Low-Income Housing, p. 235.) Under LD the keeping of accounts was also necessary in order to justify a rent increase. Experience under LD revealed how difficult it can be to have to authorize rent increases on the basis of these accounts.

2.6 SUMMARY

This chapter examined a number of the processes used in the delivery of ARP under FHAP. The major findings were:

Approved lenders, especially life insurance and trust companies, have participated fully in the program.

Lack of control on rents may provide some with an unforeseen windfall and others with a large deficit, depending on what the rate of interest will be at the time of the five-year roll-over of the mortgage.

The program contains a built-in incentive for builders to over-mortgage their properties, but, apart from the usual diligence applied by the local CMHC lending office, little further control can be exercised.

Builders can earn a substantial profit, over 100 per cent on equity, through the resale of the property to a beneficial trust.

Tenants living in ARP units are likely to be poorer than average, unattached individuals or married persons without children.

The requirement for annual audited statements will, in many situations, be impossible to enforce; as a result, the AL will decline by one-tenth per annum in lieu of the audit.

CHAPTER THREE

ACHIEVEMENT OF GOALS: (1) INCREASE THE PRODUCTION OF NEW RENTAL HOUSING

A major goal of the FHAP program was to increase the production of new housing, to satisfy demand and to generate employment, since it was felt that sufficient production would not be forthcoming without assistance. The goal of ARP as stated in the General Memorandum is "to encourage the immediate production of new rental housing that would otherwise be deferred because of the gap between the costs to build and operate, and market rentals".[1]

Another goal of ARP was to increase the level of employment in Canada.[2] Section 3.2 of this chapter estimates the number of new man-years of employment created as a result of increased construction under the ARP program. Because of the importance of delays or lags in determining whether a program will have its effect on employment at the right time, Section 3.3 briefly examines the lag between initial program announcement and the final occupancy of the rental units built under ARP.

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[1]General Memorandum B 1067, March 30, 1976, Central Mortgage and Housing Corporation, Ottawa.

[2]Submission by Central Mortgage and Housing Corporation to Cabinet, October, 1976, p. 1.

3.1 ESTIMATE OF INCREASE IN RENTAL UNITS

In the evaluation of the Assisted Home Ownership Program, the procedure used to estimate net new production involved estimating what would have been the value of mortgage approvals in 1976 had lender behaviour in 1976 resembled lender behaviour in the period from 1958 to 1972.[1] Specifically, the RDX2 econometric model of the Bank of Canada was applied to 1976 mortgage approvals data for each of the major lending institutions.[2] The estimated value of mortgage approvals represents the value of mortgages that these institutions would have approved had there been no significant government program. That estimate of mortgage approvals was then compared to actual approvals in 1976. The excess of actual over estimated approvals was attributed to government programs; specifically, 52½ per cent was attributed to AHOP, 37½ per cent to ARP and 10 per cent to various other government programs that use private lenders. This division between ARP and AHOP was based on the relative value of approvals under each program in 1976,[3] and the fact that these two programs were the major government housing subsidy programs using private lenders.[4]

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[1]For a detailed description of the regression method, see "An Evaluation of the Federal Assisted Home Ownership Program (1976)," Report by Irwin Lithwick, Program Evaluation Unit, Corporate Planning Division, Central Mortgage and Housing Corporation, October, 1977.

[2]Bank of Canada Research Department, The RDX2 Model Estimated to 4Q72 (Ottawa: Bank of Canada, 1976).

[3]Based on estimates to December 31, 1976, by the Program Management System, Central Mortgage and Housing Corporation, Ottawa.

[4]Provincial Mortgage Companies, such as Ontario Mortgage Corporation, are classified as "private lenders." These are assumed to account for the additional 10 per cent.

In these calculations, it was estimated that net additional mortgage approvals by these institutions totalled $265 million. If 37½ per cent of this total can be "allocated" to ARP, then it generated $99 million more in mortgage approvals in 1976 than would otherwise have occurred. Since the average loan amount per unit was $21,000,[1] this suggests that 4,601 units out of a total of 25,290 approvals, or 19 per cent of the total, can be considered as net new additions.[2]

A major difficulty in the econometric method outlined above is its failure to take into account the gap between market rents and operating costs plus debt service costs.[3] As can be seen in Table 3.2, a typical unit built in 1971 with an 8½ per cent mortgage would cost $176 per month to operate in 1976. A similar unit built in 1976 would have cost $310 to operate, with the large increase being due to increases in mortgage rates and capital costs over the five years. Since over 95 per cent of the rental units existing in 1976 had been built before 1976, at a time when capital costs and interest rates were relatively low, the rents that could be charged for rental accommodation would be based largely on this existing stock. Thus new units, according to this example, could not be built without some

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[1]Calculated from approvals to July 31, 1977.

[2]See Table 3.1. No attempt was made to estimate the increment in mortgage funds to mid-year 1977 because of measurement difficulties.

[3]While conceptually a model might incorporate this gap, the fact that it was not significant prior to the 1970s means that equations that use it would not be reliable; as a result, it is not present in RDX2.

TABLE 3.1

ESTIMATE OF NEW UNITS ATTRIBUTABLE TO THE ASSISTED RENTAL PROGRAM, 1976

1.	Total Additional Mortgage Approvals	$265m
2.	Total Approvals Attributable to ARP ($37\frac{1}{2}$ per cent of (1))	$99m
3.	Average Loan per Unit	$21,600
4.	No. of New Units Attributable to ARP ((2) ÷ (3))	4,601
5.	Total ARP Approvals	25,290
6.	Per cent of Approvals Considered Additional ((4) ÷ (5))	19

SOURCE: Estimates by the author using the RDX2 econometric model of the Bank of Canada, The RDX2 Model Estimated to 4Q72 (Ottawa: Bank of Canada, 1976).

See also Irwin Lithwick, "An Evaluation of the Federal Assisted Home Ownership Program" (Ottawa: CMHC, October 1977).

TABLE 3.2

COMPARISON OF HYPOTHETICAL COSTS IN RENTAL PROJECTS, 1971 AND 1976

Components of Costs and Expenses		Unit Built in 1971		Unit Built in 1976
		1971 Cost Dollars	1976 Cost Dollars	1976 Dollars
Price per Unit[1]		15,000		24,000
Equity		1,500		2,400
Size of Mortgage		13,500	12,875	21,600
Interest Rate		8½%	8½%	11 3/4%
Principal and Interest	per annum	1,230	1,230	2,848
Taxes	per annum	300	377[2]	377
Utilities	per annum	100	173[2]	173
Other Operation	per annum	200	327[2]	327
Total Expenses	per annum	1,830	2,107	3,725
	per month	153	176	310
Rent	per annum	2,000	2,755[2]	
	per month	167	230	

SOURCE: [1]Based on average cost per rental unit.

[2]Statistics Canada, Consumer Prices and Price Indexes (Ottawa: Statistics Canada) vol. 62-010, Oct.-Dec., 1976. 1976 figures based on 1971 costs inflated by movement in the relevant Consumer Price Index. In the case of rent, twice the CPI rate of increase is used. While it is recognized that the CPI rent index is low, there is no satisfactory explanation of why. See R.M.A. Loyns, CPI and IPI as Measures of Recent Price Change (Ottawa: Prices and Income Commission, 1972).

TABLE 3.3

TRENDS IN COSTS AND REVENUES FOR NEW RENTAL HOUSING

Year	Median Capital Cost Per Unit[1]	Interest Rates on Rental Loans[2]	Annual Principal and Interest Payments, per Unit	Average Unsubsidized Monthly Rents	Index of Principal and Interest Payments	Index of Rent
	Dollars	Per Cent	Dollars	Dollars	1970 = 100	1970 = 100
1970	14,000	10.39	1,318	167	100	100
1971	14,700	9.13	1,240	193	94	116
1972	15,000	9.08	1,260	202	96	121
1973	16,400	9.78	1,463	197	111	118
1974	18,900	11.27	1,912	213	145	128
1975	22,100	11.81	2,337	221	177	132
1976	26,200	11.59	2,719	261	206	156

SOURCE: CMHC Computer File N951N951.

[1] LD and normal Section 6 approved lender rental loans.

[2] At December 31, 1970-76.

form of assistance. The historical experience with NHA-approved rental accommodation confirms this, with average rents increasing by only 56 per cent from 1970 to 1976 Principal and Interest costs increased by 106 per cent over the same period.[1]

This situation does not hold true across the entire country, though it would appear to hold for most of the metropolitan areas. Had it been a universal situation, none of the units would have been built without ARP (i.e., 100 per cent of all units under ARP can be considered as net new starts).[2]

Taking the average of the lower estimate of 19 per cent of ARP units using the econometric method, and 100 per cent using the gap assumption, it is estimated that 60 per cent of all units built under ARP would not have been built without the ARP program.[3] In other words, of the 25,290 approvals under ARP in 1976, 15,174 would not have been built without some form of assistance.

Given the difficulty of estimating the behaviour of the housing market without ARP, this estimate should be treated with a substantial degree of caution.

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[1] See Table 3.3.

[2] In the first eight months of 1977, 86 per cent of all rental starts under the National Housing Act were designated as ARP-eligible units.

[3] As stated in Chapter One, the Capital Cost Allowance provisions of the Income Tax Act are considered to be part of the ARP program.

In 1977, the level of activity under ARP has almost tripled to an estimated 60,000. Because of this change in the overall scale of the program, it is impossible to argue by analogy that 60 per cent of the units are also incremental. In Chapter Seven of this report, the implications of this large-scale increase in program activity will be examined in greater detail. In particular, the overall impact of the program on five metropolitan areas will be analyzed in that chapter.

3.2 ESTIMATE OF EMPLOYMENT GENERATED BY ARP

To calculate the total number of new man-years of employment generated by ARP in 1976, CMHC estimates of labour requirements derived from a 1971 survey were used.[1] On the assumption that 60 per cent of total ARP approvals can be attributed to the program, Table 3.4 indicates that the ARP program generated 12,510 new man-years of direct employment.[2]

New housing units also generate additional employment in complementary industries, such as furniture and appliances. In the evaluation of AHOP (1976), it was assumed that for each man-year directly involved in

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[1] L. Hansen, Labour Requirements for the Residential Construction Industry (Ottawa: CMHC, March 1976).

[2] If the lower estimate of additional starts were used, ARP would have generated 3,800 additional man-years.

TABLE 3.4

ESTIMATED ADDITIONAL DIRECT EMPLOYMENT GENERATED BY ARP, 1976

Type of Unit	Per Cent of Total ARP Approvals	Estimated Number of New Starts[1]	Employment per Unit[2]	Total Employment
	Per Cent	Number	Man-Years	Man-Years
Single-Detached	0	0	1.267	0
Semi-Detached and Duplex	1.5	228	1.068	243
Row	7.5	1,138	0.940	1,069
Apartment	91.0	13,808	0.811	11,198
Total	100.0	15,174		12,510

[1]Assuming 60 per cent of the 25,290 ARP approvals are net additions.

[2]L. Hansen, Labour Requirements for the Residential Construction Industry (Ottawa: Central Mortgage and Housing Corporation, March, 1976), Table 6, p. 40.

housing, an additional three-tenths of a man-year would be involved in complementary industries.[1] Using that figure, it is estimated that a total of 16,263 additional man-years of employment were generated by the ARP program in 1976: 3,753 in complementary industries and 12,510 in employment directly related to new construction.

3.3 LAGS IN THE DELIVERY OF ARP

Although the FHAP program was announced on November 3, 1975, it was not until March 31, 1976, that the General Memorandum outlining the detailed operations of the program was issued. Since the FHAP announcement outlined the broad details of the program, it appears that a number of builders were able to proceed with the planning of eligible projects before the General Memorandum. However, the bulk of applications occurred in the last four months of 1976, and the number has continued to grow rapidly in 1977.[2] Thus, the lag between the announcement of program rules and the submission of applications would appear to be approximately three months.[3]

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[1] See Lithwick, "An Evaluation of the Federal Assisted Home Ownership Program," pp. 43-44.

[2] In several centres, it has been necessary to refuse further applications for ARP assistance because so many units are currently being completed, giving rise to the fear that many of the units would stand vacant. In August, 1977, the following centres were identified by CMHC's lending office as being saturated: Halifax, Sydney, Saint John, Hull, Peterborough, Amherstville, Moose Jaw, Estevan, Prince George, Kamloops, Penticton, Kelowna, Vernon, Terrace, Prince Rupert, Victoria, Chilliwack, Vancouver, Squamish, Kitimat, Abbotsville, Whitehorse.

[3] From March 30 to July 1. In fact, rental projects may take up to two years of direct negotiation between the builder and the local CMHC office. During this time, the local office feels it makes an implicit commitment to the entrepreneur by requesting that he make changes and adjustments. It is thus very difficult, after this long period, to tell the entrepreneur that CMHC has run out of money.

The above two lags, from program announcement to program rules and from rules to general acceptance are lags associated with the original establishment of the program. They do not recur as long as the program does not change. In addition, there are a number of recurring lags. The first involves securing appropriate zoning. For most projects approved in 1976, appropriate zoning appears to have been already in place. Otherwise, the securing of zoning changes may take as long as two years.[1] With appropriate zoning, it is then necessary to secure municipal approval for the project. This can take up to three months, depending on the size and location of the project.[2] Generally at the same time municipal approval is sought, the builder will apply for final mortgage financing, which includes CMHC approval.

The final lag is the amount of time it takes to secure a mortgage and erect the unit. While the time varies by type of structure, CMHC estimated that it takes approximately seven months for row housing units and ten months for smaller apartment projects. Large apartment projects generally

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[1] In response to complaints by developers that delays in securing zoning significantly increase the holding costs for developable land, the Minister of State for Urban Affairs created a task force under Mr. A. Greenspan to examine the land development process.

[2] In some areas, municipal approval can take substantially longer, although the Municipal Incentive Grant program was designed to reduce this lag.

TABLE 3.5

MONTHLY DISTRIBUTION OF ARP APPROVALS
(1976-77)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1976	--	--	199	1080	1801	1628	2456	3562	2546	4043	2857	5118
1977	488	1135	4159	3683	4306	5505	--	--	--	--	--	--

SOURCE: CMHC Computer File on New Rental Unit Approvals.

take up to two years to complete.[1] Since most of the ARP units approved in 1976 were low rise, wood frame structures, most will be completed and ready for occupancy by the end of 1977.

3.4 SUMMARY

In this chapter, it has been estimated that from 19 per cent to 100 per cent of all ARP units approved in 1976 can be considered to be net new approvals attributable to the FHAP program. The average, 60 per cent, has been selected as the best estimate of the incremental effect of ARP. These units provided a total of 16,263 new man-years of employment, including both direct and indirect jobs. The average lag in the delivery of the program is 17 months, consisting of five months from program announcement to issuance of program rules, a further three months until plans are in a final form, and about nine more months until the project is built and ready for occupancy.

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[1]According to Statistics Canada, the median lag between start and completion for row and apartment dwellings is 11 and 14 months respectively.

CHAPTER FOUR

ACHIEVEMENT OF GOALS: (2) PRODUCTION OF MODEST HOUSING

The guidelines to the ARP program state that "the program is directed towards the production of modest rental housing accommodation."[1] To ensure that units are modest, the program requires that the average lending value per unit be below the AHOP price limits and that the size of the unit be within the maximum size limits listed in Table 4.1.[2]

4.1 EFFECT OF PRICE LIMITS ON ARP

With regard to the price limit, Table 4.2 indicates that lending values for ARP projects are generally substantially below AHOP limits. This is not surprising since rental units are valued below the price of identical units put up for sale and ARP units are primarily one-and two-bedroom units

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[1] Ibid., Section 1.2.

[2] Units in a project can be averaged, i.e., some individual units may be above these limits, but the average size of a unit must be at or below the maximum. In 1974, the Appraisal Division of CMHC drew up an extensive definition of what would qualify as an economical unit under LD. However, because of regional variation in construction practices and because of the great amount of detail in the Appraisal Division paper, this definition was not used. When FHAP was introduced, it was decided to use only the two criteria of price and floor area.

TABLE 4.1

ASSISTED RENTAL PROGRAM
MAXIMUM UNIT SIZE CRITERIA

Unit	Apartment Sq. Ft.	Other Sq. Ft.
Studio	400	--
1 Bedroom	600	650
2 Bedroom	800	900
3 Bedroom	1000	1100
4 Bedroom	1200	1300

SOURCE: CMHC General Memorandum B1067, March 30, 1976.

TABLE 4.2

COMPARISON OF ASSISTED HOME OWNERSHIP MAXIMUM HOUSE PRICES AND LENDING VALUES UNDER THE ASSISTED RENTAL PROGRAM, 1976

Location[1]	AHOP Maximum House Prices, September, 1976	Median Lending Value per Unit	90th Percentile Lending Value per Unit	Number of Projects on File
	Dollars	Dollars	Dollars	
Calgary	41,000	33,000	39,000	14
Montreal	33,500	19,000	29,000	214
Quebec City	33,000	19,000	25,000	35
Saint John, New Brunswick	34,500	21,000	23,000	15
Vancouver	47,000	33,000	39,000	44
Victoria	45,000	27,000	31,000	37
Winnipeg	37,500	29,000	33,000	11
Sherbrooke	31,000	19,000	21,000	10
Quebec Centres, Population 10,000-39,000	n.a.	19,000	21,000	26
Quebec Centres, Population under 10,000	n.a.	21,000	23,000	18
Saskatchewan Centres, Population 10,000-39,999	n.a.	23,000	27,000	15
Saskatchewan Centres, Population under 10,000	n.a.	21,000	25,000	15
British Columbia Centres, Population 10,000-39,999	n.a.	27,000	37,000	14

SOURCE: CMHC Computer File, Special Tabulation.

[1]Selection based on centres with 10 or more ARP projects to the end of January, 1977; values rounded to mean of size class; the latter are in $2,000 intervals.

sale and ARP units are primarily one-and two-bedroom units whereas AHOP units are mainly larger row housing units.[1] Thus, the imposition of AHOP price limits has had very little effect on the quality of units being built under ARP. For example, despite the price limit, several projects built under the ARP program have facilities such as swimming pools and tennis courts.[2] While the cost of these facilities, when averaged over an entire project, may not add significantly to the rent for an individual unit, they would appear to contradict the objective that:

> it is both necessary and desirable for the present level of expectations about housing consumption to be restricted and redefined; frugal, but well-designed and constructed units...are the desired end product.[3]

In a random survey of 58 projects approved for ARP assistance, it was found that six had swimming pools and three had saunas. The capital cost of the former when averaged over all units in the project was $241; for saunas, the average cost per unit was $30.[4] Thus, while these "luxuries" do occur in

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[1]The value of a rental unit is related to the income that it can generate. The low rents in 1976 have resulted in low values to rental projects. In contrast, ownership prices are based on both the intrinsic value of the unit to the occupant and, in periods of inflation, the potential for capital gains.

[2]In the May, 1977, Activity Report by Lending Division, Central Mortgage and Housing Corporation, one project in Calgary is reported to have stoves, dishwashers, refrigerators, garburators, tennis courts, swimming pools and playgrounds.

[3]Memorandum to Cabinet, October 24, 1975.

[4]Based on approximately every tenth record on file at National Office at the time.

approximately 10 to 15 per cent of the projects, they do not add significantly to the costs, and therefore to the rents, of the units.

4.2 TYPES OF UNITS BUILT UNDER ARP

What type of units have been built under ARP? As can be seen in Table 4.3, most of the units are low-rise apartment dwellings: 42.3 per cent in 1-3 storey walk-ups and a further 10.8 per cent in 1-3 storey buildings with elevators. As will be discussed in Chapter Five, the Capital Cost Allowance provisions have fostered the construction of low-rise structures under the ARP program.

A surprisingly small number of units are double or row units, and, of these, almost all are in Calgary, Winnipeg and smaller centres. Such structures are being built under AHOP without maximum floor area constraints. The typical three bedroom row unit under AHOP is 1,200 square feet, or 100 square feet greater than that allowable under ARP.[1] Many builders apparently feel that families who would demand row or duplex housing generally prefer ownership under AHOP to rental under ARP, whereas potential renters prefer paying less for an apartment, especially in a low-rise building, relative to the higher rent required for row units.

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[1] There is some evidence of projects being refused under ARP because the size was too great. While it would appear that most were resubmitted with smaller sizes, there is no reliable information on the extent to which projects are being refused because of size.

TABLE 4.3

ASSISTED RENTAL PROGRAM DISTRIBUTION BY LOCATION AND STRUCTURAL TYPE (1976-77)

Location	Semi Detached		Duplex		Row		Apartments										Total
							1-3 Storey Walk-Up		1-3 Storey Elevator		4-6 Storey		7-10 Storey		11+ Storeys		
	Number	Per Cent	Number	Per Cent	Number	Per Cent	Number	Per Cent	Number	Per Cent	Number	Per Cent	Number	Per Cent	Number	Per Cent	Number
Canada	330	0.8	202	7.4	3,307	7.4	18,849	42.3	4,802	10.8	6,949	15.7	3,571	8.1	6,526	14.6	44,566
Calgary	--	--	--	--	564	15.5	2,652	72.7	--	--	26	0.7	111	3.0	296	8.1	3,649
Chicoutimi	--	--	--	--	--	--	95	100.0	--	--	--	--	--	--	--	--	95
Edmonton	--	--	--	--	55	35.9	98	64.1	--	--	--	--	--	--	--	--	153
Halifax	--	--	--	--	14	3.0	222	47.4	57	12.2	--	--	--	--	175	37.4	468
Hamilton	--	--	--	--	--	--	--	--	--	--	--	--	48	100.0	--	--	48
Kitchener	--	--	88	10.6	103	12.4	62	7.5	--	--	--	--	--	--	576	69.5	829
London	--	--	--	--	--	--	72	10.6	--	--	--	--	312	45.8	297	43.6	681
Montreal	38	0.4	--	--	--	--	4,262	40.2	618	5.8	3,291	31.1	890	8.4	1,498	14.1	10,597
Niagara	--	--	--	--	--	--	70	38.5	--	--	--	--	112	61.5	--	--	182
Oshawa	--	--	--	--	212	26.0	20	2.5	--	--	108	13.3	114	14.0	360	44.2	814
Ottawa-Hull	--	--	--	--	145	13.8	24	2.3	--	--	120	11.5	52	5.0	707	67.5	1,048
Quebec City	16	0.7	--	--	24	1.1	1,931	89.8	--	--	180	8.4	--	--	--	--	2,151
Regina	94	10.1	--	--	140	15.0	452	48.3	--	--	249	26.6	--	--	--	--	935
Saint John	--	--	--	--	--	--	238	100.0	--	--	--	--	--	--	--	--	238
St. John's	--	--	--	--	--	--	469	66.6	72	10.2	163	23.2	--	--	--	--	704
Saskatoon	--	--	--	--	--	--	911	100.0	--	--	--	--	--	--	--	--	911
Sudbury	--	--	--	--	100	55.9	--	--	--	--	--	--	79	44.1	--	--	179
Thunder Bay	--	--	--	--	205	36.3	93	16.5	--	--	267	--	--	--	--	--	565
Toronto	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1,233	100.0	1,233
Vancouver	64	1.7	--	--	111	3.0	394	10.7	2,398	64.9	272	7.4	--	--	454	12.3	3,693
Victoria	--	--	--	--	--	--	121	6.9	719	40.9	781	44.4	138	7.8	--	--	1,759
Windsor	20	3.4	--	--	31	5.3	179	30.3	--	--	--	--	45	7.6	315	53.4	590
Winnipeg	--	--	--	--	514	36.1	358	25.2	96	6.8	106	7.5	98	6.9	250	17.6	1,422
Other Centres Over 40,000	20	0.6	--	--	382	10.7	1,198	33.4	64	1.8	575	16.0	1,144	31.9	202	5.6	3,585
Rest of Canada	78	1.0	114	1.4	707	8.8	4,928	61.3	778	9.7	841	10.5	428	5.3	163	2.0	8,037

SOURCE: CMHC Computer File to end of July, 1977.

4.3 OTHER CHARACTERISTICS OF ARP UNITS

In Appendix C, several of the characteristics of ARP units are described in detail. Briefly, most ARP projects are built with outdoor parking and with fully or partly finished basements. Most of the projects are electrically heated, using baseboard radiation. These features reflect an attempt on the part of the builders to reduce costs by using space more efficiently, providing fewer luxuries and putting the costs of maintenance (e.g., heating) onto the tenant.[1] In addition, most units are in medium-sized projects of 50-99 units and are two-bedroom apartments.

How do ARP units compare with other rental units built under the NHA? As can be seen in Table 4.4, there has been a shift since 1972 away from oil heating and, later, away from gas, into electricity. This reflects the rising costs in utilities and, consequently, the attempt by landlords to put the cost of utilities onto tenants. This can be done most effectively through the use of electrical heating. With regard to bedroom count, ARP units are likely to be smaller than other rental units. This occurs because of the use of AHOP Maximum House Prices and the availability of AHOP subsidies on the larger, usually row, units. With regard to units per acre, ARP units tend to be built at densities of 25 to 100 units to the

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[1] In several cases, the attempt to reduce cost has resulted in a significant decline in the quality of the basic construction, requiring substantial investment in rehabilitation soon after building. This is especially significant for CMHC since such projects have a high probability of defaulting and thus becoming a part of the mortgage insurance fund.

TABLE 4.4

COMPARISON OF NHA RENTAL LOANS BY PROGRAM (1971-77)

	Normal Approved Lender Rental Loans (Sec 6)							Limited Dividend Rental Loans					Assisted Rental Program Loans	
	1971	1972	1973	1974	1975	1976	1977	1971	1972	1973	1974	1975	1976	1977
1. Number of Units	47,024	47,207	38,136	8,767	11,109	5,895	2,520	11,800	9,208	4,520	1,877	10,562	25,290	19,276
2. Distribution of Approvals [2]														
A. Type of Exterior Construction														
Wood Frame	46	38	31	50	48	60	81	63	53	39	61	65	79	74
Masonry	54	62	69	50	52	40	19	37	47	61	39	35	21	26
B. Type of Fuel														
Oil	17	17	9	2	4	2	17	30	20	12	2	11	2	3
Gas	53	53	61	47	41	68	47	35	45	46	29	27	14	24
Electricity	21	24	24	42	45	24	35	23	19	32	41	39	57	53
Not Given	9	6	6	9	10	6	1	12	16	10	28	23	27	20
C. Dwelling Type														
Duplex, Triple, Double	2	1	1	3	1	7	17	2	3	5	6	2	2	1
Row	9	6	6	11	9	10	18	20	20	7	4	19	5	10
Apartment--1-3 floors	32	26	20	25	36	39	23	43	30	24	54	27	56	49
--4-10 floors	18	21	16	24	18	21	32	16	16	28	9	31	25	22
--11+ floors	40	46	57	37	36	23	10	19	31	36	27	21	12	19
D Number of Bedrooms														
Bachelor	5	7	7	8	8	2	6	3	7	14	19	2	12	19
1-Bedroom	37	38	38	34	35	11	31	22	26	27	18	20	29	33
2-Bedroom	42	42	41	42	44	35	31	42	37	37	22	49	49	47
3-Bedroom	15	12	13	15	12	52	37	31	28	20	37	28	14	14
4+-Bedroom	1	1	1	1	1	1	1	2	2	2	5	1	--	--

SOURCE: CMHC Computer File N951N951.

[1]Figures for 1977 are based on approvals recorded on file as of September 15, 1977.

[2]All figures are column percentages.

TABLE 4.5

DENSITY OF DEVELOPMENT UNDER SELECTED NHA RENTAL PROGRAMS (1971-77)[1]

Net Densities by NHA Program[2]	Year						
	1971	1972	1973	1974	1975	1976	1977[1]
1. Section 6--Rental							
Under 10	1	1	1	2	3	--	n.a.
10 - 24	14	11	9	19	28	41	n.a.
25 - 44	32	32	26	31	51	39	n.a.
45 - 99	32	36	45	27	23	13	n.a.
100+	21	20	19	21	13	.8	n.a.
2. Limited Dividend							
Under 10	1	--	3	--	1	n.a.	n.a.
10 - 24	21	24	10	14	24	n.a.	n.a.
25 - 44	46	38	30	26	45	n.a.	n.a.
45 - 99	19	14	37	24	19	n.a.	n.a.
100+	13	24	20	35	10	n.a.	n.a.
3. Assisted Rental							
Under 10	n.a.	n.a.	n.a.	n.a.	n.a.	2	--
10 - 24	n.a.	n.a.	n.a.	n.a.	n.a.	17	16
25 - 44	n.a.	n a.	n.a.	n.a.	n.a.	48	41
45 - 99	n.a.	n.a.	n.a.	n.a.	n.a.	27	30
100+	n.a.	n.a.	n.a.	n.a.	n.a.	6	43

SOURCE: CMHC Computer File N951N951.

[1]1977 figures based on approvals on file to September 15, 1977.

[2]Density classes in units per acre.

gross acre. In contrast, LD units tended to be built at both higher and lower densities. The importance of medium densities probably reflects the use of wood frame dwellings, resulting from the CCA, rather than any influence of the MIG program.[1]

4.4 SUMMARY

This chapter described the extent to which ARP has succeeded in promoting economy in rental units. The use of the AHOP price limits was found to be generally ineffective because rental units generally have a value significantly lower than ownership units. The size constraints have been more effective, with several projects being rejected on those grounds. In general, units built under the program have been modest, with evidence of cost savings on the part of the builders in such areas as parking. There are, however, a number of cases of swimming pools and saunas being included in the projects.

A very large proportion of the units built under ARP are low-rise apartments. This is largely because of current competition with AHOP in

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[1] Unfortunately, it is impossible to identify which ARP units qualified for MIG. See S. Carey, "Evaluation of the Municipal Incentive Grant Program" (CMHC: Program Evaluation Unit, October, 1977).

the row-housing market on the one hand, and, on the other hand, because of the CCA provisions of the tax system which promote wood frame units. In addition, the MIG program has been a factor in promoting this type of medium-density structure.

CHAPTER FIVE

THE CAPITAL COST ALLOWANCE AND ARP

In announcing the FHAP Program, the Minister also stated that the government would

> extend to the end of 1977, capital cost allowance for rental accommodation. This measure encourages investment in rental construction by allowing capital costs to be deducted from other income for tax purposes.[1]

Normally, an individual taxpayer must include net income from all sources in his taxable income. If he has a loss, it can be deducted from his income. With regard to rental properties, the calculation of net income involves subtracting from gross income both current expenses[2] and an amount to account for capital consumption.[3] From 1972 to 1974, the latter could not be included if it created a net loss on the property.[4] In 1974, a temporary provision was made to allow owners of rental units started between November, 1974, and the end of 1975 to deduct CCA even if it created a net loss. This was designed as a tax shelter to encourage investment in residential construction for rental tenure. The FHAP announcement extended this measure for a further two years.

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[1] News release, Honourable Barney Danson, Minister of State for Urban Affairs, Ottawa, November 3, 1975.

[2] Including mortgage interest but not principal repayment.

[3] This item is called the Capital Cost Allowance (CCA).

[4] The reason for this rule was that in times of inflation, the capital value of a building increases in value, especially if general repairs are made; the latter are permissible expenses.

What exactly is this CCA provision and how important is it to the owner of an ARP project? Section 5.1 of this chapter describes the CCA briefly. In Section 5.2, an estimate of the value of the CCA, by itself and in conjunction with ARP assistance, is made.

5.1 THE CCA PROVISION

Table 5.1 describes the hypothetical tax position of an individual under two alternative sets of assumptions. In situation A, gross income on the property is less than current expenses. Without the CCA provisions, he could claim $30,918 as a loss against other income but could not use the CCA. With CCA, he could claim a total of $120,918 as a loss against other income. At a 50 per cent tax level, this means that he would pay $15,409 and $60,409 less respectively in income tax under each set of rules.[1]

In situation B, net income excluding CCA is $9,082. Without CCA provisions, he could use only $9,082 of his depreciation since he cannot use his CCA to create a loss. With the CCA he could create a loss of $80,918 and reduce his income tax by $40,459.

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[1] These sums are somewhat high since his marginal tax bracket would decline as well.

TABLE 5.1

TAX BENEFITS OF CAPITAL COST ALLOWANCE PROVISIONS
HYPOTHETICAL EXAMPLE

ASSUMPTIONS:		
Tax Bracket of Individual Excluding Project		50%
Price of Project		$1,000,000
Price of Building (excl. land)		900,000
Principal and Interest per Year at 11½ Per Cent		105,088
of Which Interest in First Year		100,918
Depreciation at 10 Per Cent (Class 32)		90,000
Operating Expenses		30,000
CALCULATION OF TAX: Situation A		
Gross Income		$100,000
Less Expenses:		
(1) Interest $100,918		
(2) Operating 30,000		
Total Expenses	$130,918	$130,918
Net Loss on Current Expenses		30,918
Capital Cost Allowance		90,000
Capital Cost With CCA Provisions		120,918
CALCULATION OF TAX: Situation B		
Gross Income		$140,000
Less Expenses:		
(1) Interest $100,918		
(2) Operating 30,000		
Total Expenses	$130,918	$130,918
Net Income on Current Expenses		9,082
Capital Cost Allowance		90,000
Net Income Without CCA Provisions		0
Net Income With CCA Provisions		-80,918

When he sells the property, he must repay the value of the capital costs deducted during the time that he held the building, provided he sells the property for at least as much as he paid for it. If he sold it for less, he would have to repay only the amount of the CCA up to the selling price. Since it is rare for the price of properties to decline as long as there is general inflation, the latter situation is unlikely to occur on most of the rental properties currently being constructed.

The value of the CCA to the recipient is in the income that he can earn with this interest-free loan, its cost to the government being the interest lost on the loan. Table 5.2 shows that the value of the CCA loan on a $1 million building, if the property is held for 10 years, is $118,800 if masonry and $206,906 if wood frame (i.e., 5 per cent and 10 per cent rates respectively).[1] In other words, the value of the CCA is 11.9 per cent and 20.7 per cent of a masonry and a wood frame building, respectively. With a 10 per cent equity, in the form of the land, in the original project if the property is held for 10 years, this is equivalent to a yield of 7.5 per cent and 11.1 per cent per annum, respectively, on the CCA, independent of any other profits that might be earned on the property itself.[2] If the property

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[1]The Income Tax Act defines two classes of rental properties: Class 31 properties are masonry and Class 32 properties are wood frame. Originally, it was believed that wood frame buildings had a shorter life than masonry, partly because of the risk of fire. As a result, they could be depreciated at 10 per cent per annum whereas masonry structures could be depreciated at only 5 per cent.

[2]For ARP projects, the average value of the building is 14.3 per cent of the total value of the property, or 16.7 per cent of the building. The yield on equity is $118,800 for masonry frame buildings. If held for 10 years, this amounts to 5.5 per cent per annum.

TABLE 5.2

CAPITAL COST ALLOWANCE: ESTIMATED VALUE FOR COMPARABLE MASONRY AND WOOD FRAME BUILDINGS

Year	Masonry Building (5 p.c. rate)						Wood Frame Building (10 p.c. Rate)					
	Undepreciated Value	Value of CCA	Cumulative Value of CCA	Cumulative Taxes Not Paid	Interest Foregone in Current Dollars	Unpaid Taxes Discounted Dollars	Undepreciated Value	Value of CCA	Cumulative Value of CCA	Cumulative Taxes Not Paid	Interest Foregone in Current Dollars	Unpaid Taxes Discounted Dollars
1	1,000,000	50,000	50,000	25,000	2,500	2,273	1,000,000	100,000	100,000	50,000	5,000	4,545
2	950,000	47,500	97,500	48,750	4,875	4,029	900,000	90,000	190,000	95,000	9,500	7,851
3	902,500	45,125	142,625	71,312	7,131	5,358	810,000	81,000	271,000	135,500	13,550	10,180
4	857,375	42,869	185,494	92,747	9,275	6,335	729,000	72,900	343,900	171,950	17,195	11,744
5	814,506	40,725	226,219	113,110	11,311	7,023	656,100	65,610	409,510	204,755	20,476	12,714
6	773,781	38,689	264,908	132,454	13,245	7,477	590,490	59,049	468,559	234,280	23,428	13,224
7	735,091	36,754	301,663	150,831	15,083	7,740	531,441	54,144	521,703	260,851	26,085	13,386
8	698,337	34,917	336,580	168,290	16,829	7,850	478,297	47,830	569,533	284,766	28,477	13,285
9	663,420	33,171	369,751	184,875	18,488	7,841	430,467	43,047	612,580	306,290	30,629	12,990
10	630,249	31,512	401,263	200,632	20,063	7,735	387,420	38,742	651,322	325,661	32,566	12,556
11	598,737	29,937	431,200	215,600	21,560	7,557	348,678	34,868	687,190	343,095	34,309	12,025
12	568,800	28,440	459,640	229,820	22,982	7,322	313,810	31,381	717,571	358,785	35,879	11,432
13	540,360	27,018	486,658	243,329	24,333	7,048	282,429	28,243	745,814	372,907	37,291	10,802
14	513,342	25,667	512,325	256,162	25,616	6,746	254,186	25,419	771,232	385,616	38,562	10,154
15	487,675	24,384	536,709	268,354	26,835	6,424	228,768	22,877	794,109	397,055	39,705	9,505
16	463,291	23,165	559,873	279,936	27,994	6,092	205,891	20,589	814,698	407,349	40,735	8,865
17	440,126	22,006	581,880	290,940	29,094	5,756	185,302	18,530	833,228	416,614	41,661	8,242
18	418,120	20,906	602,786	301,393	30,139	5,421	166,772	16,677	849,906	424,952	42,495	7,643
19	397,214	19,861	622,646	311,323	31,132	5,090	150,094	15,009	864,915	432,457	43,246	7,071
20	377,354	18,868	641,514	320,076	32,076	4,768	135,085	13,509	878,423	439,212	43,921	6,527
Total -- After 10 years					118,800	63,661					206,906	112,471
Total -- After 15 years					240,126	98,758					392,652	166,389
Total -- After 20 years					390,561	125,885					605,710	204,737

N.B. Assumptions:

Original Value of Building	$1 Million
Marginal Tax Rate	50 Per Cent
Discount Rate	10 Per Cent per Annum
Interest Rate	10 Per Cent per Annum

Rounded to nearest dollar.

were held for 20 years, the yield would be 7.8 per cent and 9.8 per cent respectively.

A major concern has been that the two allowable depreciation rates have resulted in a bias in the market, particularly in western Canada, toward the construction of wood frame housing.[1] In one project, wood frame has been combined with concrete floors so that the structures will qualify for the 10 per cent depreciation rate. They have argued that the same rate ought to apply to wood frame and masonry because they have similar structural lives, i.e., the probability of rot, fire or heaving in a wood frame building is no longer high because of improved materials. As will be recalled from Table 4.4, there is a preponderance of wood frame units. Furthermore, from 1972 to 1975 when the CCA provisions were not in force, the proportion of wood frame buildings declined considerably.

5.2 THE RELATIONSHIP OF THE CCA TO ARP

In the CMHC document designed to promote ARP, the CCA is considered an integral part of the program.[2] Most CMHC regional economists have argued that withdrawal of CCA provisions would make the ARP program insufficiently attractive to investors since the rate of return on new rental property

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[1] "The Capital Cost Allowance" (Ottawa: Program and Market Requirements Division, Central Mortgage and Housing Corporation, June 1977), mimeo.

[2] "Investing in New Rental Housing" (Ottawa: Lending Division, Central Mortgage and Housing Corporation, September 3, 1976), mimeo.

without the CCA is close to zero.[1]

One reason why the CCA is so lucrative in relation to the ARP program is that ARP assistance is in the form of a loan. As a result, the investor need not include it as income in the calculation of his tax position. Thus the typical owner could have a positive cash flow with ARP but a loss for income tax purposes.[2]

How extensively have the CCA provisions been used? The Department of National Revenue reports that from November, 1974, to July 1, 1977, a total of 4,883 certificates were issued. Unfortunately, these certificates are issued with a minimum of detail beyond the location of the project and the certificate number. They do not give details on the type of structure, i.e., wood frame or masonry, the number of units, or whether the project is being subsidized under ARP. It is therefore necessary to use estimates based on ARP approvals.[3]

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[1]"Ontario Region Monthly Report to Management Board" (Ottawa: Central Mortgage and Housing Corporation (confidential), June 16, 1977).

[2]Conversely, when the AL is repaid the repayment of principal cannot be treated as an expense for tax purposes. As a result, the investor can have a small or negative real cash flow while earning a profit for income tax purposes.

[3]The CCA certificate can be issued to any building, whereas ARP projects must have an insured mortgage and generally consist of eight or more units.

As can be seen in Table 5.3, it is estimated that 212,044 housing units received CCA certificates.[1] This represents 70.3 per cent of all eligible units. Since the program was not as widely known in 1975 as it is in 1977, it is likely that close to 90 per cent of current starts are receiving certificates.

A certificate costs the builder nothing but may significantly increase the value of the property when resold, should the CCA provisions be withdrawn.[2] Consequently, many builders are likely to be applying for the certificate even though they will not use it themselves.[3] Unfortunately, the Department of National Revenue does not record the number of certificates actually used. Table 5.4 assumes that 50 per cent of all certificates are used and that the marginal tax rate of users is 50 per cent.[4] The resultant real subsidy cost, using a 10 per cent discount rate and ten-year time frame for the 4,883 certificates used to date, is $192 million. Since the certificate is transferable, it may be of benefit as long as the building

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[1]This refers to all rental units started, and not just ARP units. Virtually all ARP units have received the certificate.

[2]If the CCA provisions are withdrawn at the end of 1977, the supply of certificates becomes fixed, or inelastic, and therefore their price is bid up. If the provisions are extended, the supply can be increased and therefore the value of an individual certificate will not be as high.

[3]If the building is owned by a corporation, the certificate is of no immediate use.

[4]The Department of National Revenue does not record either the number of certificates in use or the income of individuals using certificates. Taking provincial and federal income taxes into consideration, a 50 per cent marginal tax rate applies to individuals with taxable income of $28,000 to $44,000 in Ontario. In Quebec, provincial income tax regulation does not permit the carryover of CCA losses to other income.

TABLE 5.3

CAPITAL COST ALLOWANCE, ESTIMATED USE OF CERTIFICATES

(1)	Total Number of Certificates Issued[1]	4,883
(2)	Average Number of Units per ARP Project[2]	45
(3)	Per Cent of Units Receiving Certificates That Are Not Triplexes, Duplexes or Fourplexes[3]	96.5%
(4)	Estimated Number of Units with Certificates	212,044
(5)	Estimated Number of Rental Units Built November 1974 to May 1977[4]	301,744
(6)	Per Cent of Eligible Units Receiving Certificates (4) + (5)	70.3%

[1]Communications with Department of National Revenue.

[2]Analysis of CMHC Rental File

[3]Generally, projects must contain more than eight units to qualify for ARP assistance. Based on CMHC Survey of 1662 certificates, in February, 1977.

[4]Canadian Housing Statistics, 1976 (Ottawa: Data and Systems, Central Mortgage and Housing Corporation, March, 1977), Table 9. The 1977 figures are estimated from preliminary data.

1974		9,980
1975		107,526
1976		138,890
1977	Jan-May	45,348
		301,744

TABLE 5.4

CAPITAL COST ALLOWANCE, ESTIMATION OF OVERALL COST OVER 10 YEARS

(1)	Estimated Number of Units Receiving CCA Certificates[1]	212,044
(2)	Estimated Per Cent of Certificates Used[2]	50
(3)	Average Value of Building per Unit[3]	$ 17,771
(4)	Per Cent of Wood Frame Units[3]	77
(5)	Estimated Present, Discounted Subsidy Cost of CCA on Wood Frame Units per Dollar of Building[4]	0.1124
(6)	Per Cent of Masonry Units[3]	23
(7)	Estimated Present Discounted Cost of CCA on Masonry Units per Dollar of Building[4]	0.0637
(8)	Estimated Cost of CCA Program[5]	$192 million

[1]Table 5.3.

[2]See text

[3]Based on ARP approvals.

[4]Table 5.2.

[5](1) x (2) x (3) x ((4) x (5) + (6) x (7)) =
212,044 x 0.5 x $17,771 x (0.77 x 0.1124 + 0.23 x 0.0637 =
$192 million

remains standing. As a result, the use of a 10-year time frame is likely to yield a low estimate of the cost over the life time of the property.

5.3 REGIONAL DISTRIBUTION OF ARP BY TYPE OF CONSTRUCTION

As can be seen in Table 5.5, wood frame buildings under ARP are being used to a greater extent in the West and East (with the exception of Halifax) than in Ontario and Quebec. One reason for this is that building codes in western provinces permit four-storey wood frame buildings whereas in Ontario wood frame can be used for one and two-storey structures only.[1]

5.4 SUMMARY

This chapter described the CCA provisions contained in the FHAP announcement. While not administratively part of the ARP, they are an integral part of the selling campaign used by CMHC for ARP. It has been estimated that the profit generated by the CCA, depending upon the type of structure, varies from 7.5 per cent to 11.1 per cent of equity. Over a 10-year period, CCA provision on units built from November, 1974, to May, 1977, are likely to generate a cost to government of $192 million, a cost that will

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[1]Building codes in general vary by municipality, and not by province.

TABLE 5.5

ASSISTED RENTAL PROGRAM, TYPE OF CONSTRUCTION BY LOCATION

Location	Number of Projects	Number of ARP Units	Per Cent of all ARP Units	Per Cent Units That Are Wood Frame
Canada	971	44,566	100	77.0
Calgary	32	3,649	8.2	88.8
Chicoutimi	6	95	0.2	82.1
Edmonton	3	153	0.3	100.0
Halifax	10	468	1.1	57.7
Hamilton	2	48	0.1	0
Kitchener	9	829	1.9	57.2
London	9	681	1.5	10.6
Montreal	269	10,597	23.8	72.4
Niagara	3	182	0.4	61.5
Oshawa	8	814	1.8	26.0
Ottawa-Hull	9	1,048	2.4	16.1
Quebec City	60	2,151	4.8	98.9
Regina	9	935	2.1	100.0
Saint John	15	238	0.5	100.0
St. John's	13	704	1.6	100.0
Saskatoon	12	911	2.0	91.4
Sudbury	2	179	0.4	44.1
Thunder Bay	12	565	1.3	45.5
Toronto	7	1,233	2.8	50.7
Vancouver	65	3,693	8.3	100.0
Victoria	45	1,759	3.9	91.2
Windsor	8	590	1.3	56.3
Winnipeg	16	1,422	3.2	82.4
Other Municipalities Over 40,000 Population	73	3,585	8.0	70.5
Rest of Canada	274	8,037	18.0	83.9

SOURCE: CMHC Computer File on 44,566 approvals from Jan. 1, 1976 to July 31, 1977.

come in the form of postponed tax revenue, rather than cash outflow as is the case with ARP. The different treatment of wood frame and masonry buildings in the calculation of allowable depreciation has resulted in 77 per cent of all ARP units being of wood frame construction. This compares to approximately 40 per cent of all NHA rental units being wood frame in 1972-74 when the CCA provisions were not in effect.

CHAPTER SIX

THE COST OF ARP

This chapter estimates the costs of the Assisted Rental Program in terms of cash flow and subsidy cost. Section 6.1 examines the cash flow implications of the 25,290 units approved in 1976 as well as expected approvals over the next 15 years.[1] Since the Assistance Loan begins to earn interest at the normal Section 58 rate at the end of 10 years, the cash flow does not represent the net cost of the subsidy; the latter is estimated in Section 6.2. Section 6.3 describes the distribution of the subsidy by region and housing type. The effects of provincial supplementation on the subsidy costs of ARP are estimated in Section 6.4. Finally, in Section 6.5 the benefits of the CCA and ARP together are examined from the perspective of the owner.

6.1 CASH FLOW IMPLICATIONS OF ARP

During 1976, CMHC approved 25,290 units under ARP of which only 244 were financed directly by CMHC. In 1977, there have been virtually no directly financed units. As a result, all the estimates of costs in this chapter will be based on the assumption of private financing.[2]

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[1] Program Management System, Central Mortgage and Housing Corporation, Ottawa.

[2] The subsidy for directly financed ARP is the same as privately financed ARP. As a result, direct financing increases the capital commitment of CMHC but not its subsidy cost.

Given the lag of eight to 12 months between mortgage approval and initial occupancy, very few projects were receiving AL assistance by the end of December, 1976.[1] As of July 1, 1977, 77 projects covering 3,485 units were receiving an AL cheque, the average value of the AL being $85.25 per month or $1,023 in the first year.[2] If assistance declines by one-tenth each year for ten years, this represents a total commitment of $5,627 per unit over the ten years. Table 6.1 shows the cash flow implications of these approvals on both a year of receipts and calendar year basis. In deriving the calendar year estimates it is necessary to make assumptions about the phasing of payment. This is because initiation of AL payment may begin only in December, 1977, in which case only one-twelfth of total AL payments can be assigned to 1977. It has been assumed in Table 6.1 that one-half of the original approvals will generate cash outflows in the year after approval, and the remainder in the following year. In addition, it has been assumed that assistance will decline by one-tenth each year over the ten-year period, at the end of which the accumulated AL begins to earn interest.[3] In reality, some AL's might decline more rapidly whereas others may be extended for up to 15 years.

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[1]See Chapter Three above.

[2]Special tabulation constructed by author from Mortgage Administration Division information.

[3]See Appendix B for the cash flow implications during the period of repayment as well as disbursement under the alternative options for repayment.

TABLE 6.1

CASH FLOW AND SUBSIDY IMPLICATIONS PER UNIT OF AVERAGE ARP APPROVAL

	Year of Receipt Basis							Calendar Year Basis[2]				
Year	Assistance Loan	Discounted Value of Assistance Loan	Cumulative Assistance Loan	Interest Foregone on Assistance Loan[1]	Discounted Value on Interest Foregone			Year	Assistance Loan	Cumulative Assistance Loan	Interest Foregone on Assistance Loan	Discounted Value on Interest Foregone
		10 p.c.			5 p.c.	10 p.c.	15 p.c.					10 p.c.
	Dollars	Dollars	Dollars	Dollars		Dollars			Dollars	Dollars	Dollars	Dollars
1	1023	1023	1023	102.3	97.4	93.0	89.0	1977	512	512	51.2	46.5
2	921	837	1944	194.4	176.4	160.7	147.0	1978	972	1484	148.4	122.6
3	818	676	2762	276.2	238.6	207.5	181.6	1979	870	2354	235.4	176.9
4	716	538	3478	347.8	286.1	237.6	198.9	1980	767	3121	312.1	213.2
5	614	419	4092	409.2	320.6	254.1	203.4	1981	665	3786	378.6	235.1
6	512	318	4604	460.4	343.6	259.9	199.0	1982	563	4349	434.9	245.5
7	409	231	5013	501.3	357.3	257.2	188.5	1983	461	4810	481.0	240.8
8	307	158	5320	532.0	360.1	248.2	173.9	1984	358	5168	516.8	241.1
9	205	96	5525	552.5	356.1	234.3	157.1	1985	256	5424	542.4	230.0
10	102	43	5627	562.7	345.4	216.9	139.1	1986	154	5578	557.8	215.1
								1987	49	5627	562.7	197.2
Total	5627	4339	5627	3938.8	2881.5	2169.4	1677.5		--	--	--	--

SOURCE: Analysis of CMHC Approvals File by the author. See Appendix D for cash flow implications during the period of repayment.

[1] 10 per cent of value of cumulative Assistance Loan.

[2] One-half of year one's approvals allocated to 1977, the other half to 1978.

Table 6.2 presents the cash flow implications of the 25,290 Assistance Loans approved in 1976. As can be seen, the outflows will peak at $22.5 million in 1978 and then decline. Repayment will begin in 1988 and continue to rise until 1998 when it is expected that the remaining outstanding AL will be amortized, generating annual repayments of $23.6 million up to the year 2011.

If the ARP program is continued indefinitely, what would be the overall cash flow effects? This depends on the rate of interest, the rate of inflation in costs and the level of approvals over this indefinite period. It is assumed that the decline of interest rates to 10½ per cent will reduce the size of the AL by $25 per month, to $60.25 per month for 1977 approvals. In addition, this lower rate of interest is expected to continue indefinitely. The effect of inflation is expected to be an 8 per cent per annum increase in the size of the Assistance Loan. With regard to approvals, it is expected that the number will reach 60,000 in 1977. In 1978, approvals will decline to 28,000 per annum and to 25,000 from 1979 onward. This assumed pattern of approvals reflects the expectation that in 1977 high levels of approvals will be required in order to satisfy the current high level of demand. As this demand becomes satisfied, a lower level of approvals will be required to satisfy long-term demands.[1]

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[1]The levels are based on the CMHC Corporate Plan as of October 1, 1977.

On the basis of these assumptions, Table 6.2 presents the cash flow implications of ARP to 1994, should approvals stop in 1981, or continue until 1994. Under the former assumption, cash disbursement will rise to $104 million in 1981 and then decline as no new approvals are given. By 1990, the program will enter a net cash inflow position as repayment of early approval begins. Should the program be continued to 1994, cash outflows will continue to rise, largely as a result of the assumed inflation in costs. Thus, by 1994, total outflow will be $203 million.

6.2 SUBSIDY COSTS OF ARP

Because the AL is spread over time and repaid, cash flow does not represent the true subsidy cost of the program. The true cost is calculated as the interest not paid in any year on the cumulative value of the AL. As can be seen in Table 6.1, the total of interest not paid on the average AL is $3,939, or 70 per cent of the value of the cumulative AL.

To calculate the saving to government of switching from a grant to an interest-free loan, it is necessary to compare the discounted value of the repayable loan, had it been a grant, back to the base year, to the discounted value of the interest not paid. Using a 10 per cent rate, the present value of the grant comes to $4,338. The cost of the interest not paid, using the 10 per cent rate, is $2,169. Thus the saving is $2,169, or exactly one-half the assistance, had it been given as a grant.[1]

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[1]Had a 5 per cent rate been used, the cost of a grant would be $4,895 and the cost of the cost of the loan $1,440. The saving would therefore be $3,434. This, of course, is the same as the value of the total AL, $5,627, discounted back 10 years at 5 per cent per annum.

TABLE 6.2

CASH FLOW IMPLICATIONS OF ARP
TO 1994

Year	Situation One: 1976 Approvals Only		Situation Two:[1] Approvals to 1981		Situation Three:[1] Approvals to 1994	
	New Approvals	Total Cash Outflow	New Approvals	Total Cash Outflow	New Approvals	Total Cash Outflow
	Number	Millions of Dollars	Number	Millions of Dollars	Number	Millions of Dollars
1977	25,290	12.9	25,290	12.9	25,290	12.9
1978	--	24.6	60,000	47.9	60,000	47.9
1979	--	22.0	28,000	78.2	28,000	78.2
1980	--	19.4	25,000	92.4	25,000	92.4
1981	--	16.8	25,000	104.6	25,000	104.6
1982	--	14.2	--	103.5	25,000	116.1
1983	--	11.7	--	89.2	25,000	127.1
1984	--	9.1	--	75.2	25,000	137.9
1985	--	6.4	--	60.8	25,000	147.7
1986	--	3.9	--	47.1	25,000	157.7
1987	--	1.3	--	32.7	25,000	166.1
1988	--	-1.3	--	18.5	25,000	174.1
1989	--	-3.9	--	-4.1	25,000	181.2
1990	--	-6.4	--	-10.0	25,000	187.7
1991	--	-9.1	--	-24.3	25,000	192.9
1992	--	-11.7	--	-38.4	25,000	197.7
1993	--	-14.2	--	-52.7	25,000	201.0
1994	--	-16.8	--	-66.7	25,000	203.4

[1]Assuming a 10½ per cent mortgage interest rate and an 8 per cent inflation rate.

Because the AL is a loan, it is not included in total income and therefore is not subject to taxation, whereas a grant would be taxable. As a result, there is an additional subsidy arising out of the CCA provisions. As discussed in Chapter Five, the ability to shelter other income through the CCA is a key feature of the FHAP program. For a wood frame building, and at a 10 per cent discount rate, Table 5.4 shows that the cost of the CCA represents 11.2 per cent of the value of the building. Since the typical structure financed by ARP costs $17,700, the cost of the CCA is $1,982.[1] For a masonry building, the cost of the CCA subsidy is 6.4 per cent of the building, or $1,133. Since masonry buildings account for 23 per cent of all ARP units, in 1976-77 the weighted average subsidy cost of the CCA is $1,787. Thus the total subsidy contained in both ARP and CCA is $3,955, or almost the same as would have occurred had the subsidy been a grant.[2] For the 25,290 units approved under ARP the total subsidy cost is therefore $92 million dollars.

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[1]The average of $17,700 excludes the cost of land.

[2]This assumes the CCA is used in all units and is used for ten years only. The former assumption likely generates an overestimate of cost whereas the latter generates an underestimate.

6.3 DISTRIBUTION OF SUBSIDY

Table 6.3 presents the monthly value of the AL in the first year, across the country and by dwelling type. The AL is highest in the urban centres of Ontario and in several of the Quebec centres. It is low in Alberta generally, including Calgary and Edmonton, because of the relatively high rents in these buoyant markets in 1976. In terms of dwelling type, the subsidy is highest for semi-detached and lowest for row units.

6.4 PROVINCIAL STACKING

As of the middle of 1977 only two provinces, Ontario and British Columbia, had signed agreements with CMHC for supplementing the ARP assistance. The nature of these arrangements will be discussed in the following two sections.

(i) British Columbia Supplementation

Under the British Columbia agreement, the province first gives a grant of up to $600 in the first year. If further assistance is required, CMHC will provide up to $1,200. As assistance is reduced each year by one-tenth, provincial assistance steps out first and then federal assistance.

Because provincial assistance comes in first, it is likely that the provincial program results in a reduction in CMHC's own expenditure. As can be seen in Table 6.4, for a project that gets $100 per month assistance, the present cost of the AL at a 10 per cent discount rate is

TABLE 6.3

ASSISTED RENTAL PROGRAM DISTRIBUTION OF AVERAGE ASSISTANCE LOAN AND NUMBER OF UNITS BY LOCATION [1]

	Total Cost per Unit [3]	Assistance Loan per Month First Year [1]	Average Rent Charged per Unit per Month [2]	Number of Units [2]
1. Location				
Canada	27	85.25	276	44,566
Calgary	35	66.68	345	3,649
Chicoutimi-Jonquière	22	81.80	215	95
Edmonton	37	70.15	382	153
Halifax	27	93.95	335	468
Hamilton	32	n.a.	n.a.	48
Kitchener	27	97.39	269	829
London	27	87.65	272	681
Montreal	24	88.89	298	10,597
Niagara-St. Catherines	22	82.76	221	182
Ottawa-Hull	32	94.09	289	1,048
Quebec City	24	96.97	234	2,151
Regina	32	99.11	302	935
Saint John, N.B.	20	51.81	231	258
St. John's, Nfld.	24	86.88	272	704
Saskatoon	25	73.86	256	911
Sudbury	31	97.00	298	179
Thunder Bay	31	97.00	301	565
Toronto	32	93.06	320	1,233
Vancouver	35	86.79	264	3,693
Victoria	29	76.71	221	1,759
Windsor	27	96 08	251	590
Winnipeg	28	89.80	299	1,422
Cornwall	25	92.42	239	277
Drummondville	18	95.00	179	208
Guelph	25	94.00	271	202
Kamloops	34	88.28	303	122
Kingston	26	98.17	238	536
Lethbridge	29	49.00	325	17
North Bay	25	100.00	347	68
Oshawa	32	100.00	296	814
Peterborough	27	86.85	267	552
Prince George	21	40.00	236	29
St. Jean, Quebec	19	96.60	283	86
Sarnia	28	77.00	303	318
Sault Ste. Marie	35	94.00	325	41
Shawinegan	20	67.00	218	40
Sherbrooke	22	96.52	194	740
Sidney	23	70.00	223	24
Timmins	31	98.64	304	143
Trois Rivières	19	63.00	215	68
Newfoundland				
Centres 10,000-40,000	24	91.00	255	45
Under 10,000	22	83.00	219	43
Prince Edward Island				
Centres 10,000[4]	26	100.00	320	11
Nova Scotia				
Centres 10,000-40,000	19	78.14	252	132
Under 10,000	19	74.00	247	60
Towns	19	86.22	283	35
New Brunswick	20	n.a.	213	242
Quebec				
Agglomeration 10,000-40,000	19	84.16	212	780
Centres, 10,000-40,000	20	84.17	232	274
Centres under 10,000	22	69.89	253	489
Rural	19	100.00	163	241
Ontario				
Agglomeration 10,000-40,000	25	87.14	214	274
Centres, 10,000-40,000	26	84.84	252	1,157
Centres Under 10,000	24	87.48	215	351
Rural	24	100.00	193	154
Manitoba				
Centres 10,000-40,000	24	92.47	248	238
Under 10,000	25	75.14	231	74
Saskatchewan				
Agglomeration 10,000-40,000	21	80.04	217	178
Centres, 10,000-40,000	26	84.82	254	546
Centres Under 10,000	23	85.68	213	341
Alberta				
Centres 10,000-40,000	25	74.00	289	110
Centres Under 10,000	28	66.26	298	251
Rural	22	84.00	196	57
British Columbia				
Agglomeration 10,000-40,000	28	77.62	242	591
Centres, 10,000-40,000	24	51.38	266	368
Centres Under 10,000	25	79.30	286	400
Rural	28	51.84	244	395
Yukon				
Centres Over 10,000	27	72.44	304	68
Rural	25	85.00	301	23
Northwest Territories	39	n.a.	466	108
2. Dwelling Type				
Semi-Detached	36	99.75	330	330
Duplex	30	84.10	279	202
Row	35	76.80	329	3,307
Apartment	27	86.08	272	40,727

SOURCE: [1]CMHC letters of agreement on file as of July 1, 1977.

[2]CMHC mortgage approval file, as of July, 1977. Amounts in dollars.

[3]In thousands of dollars.

TABLE 6.4

ASSISTED RENTAL PROGRAM: CASH FLOW EFFECT ON BRITISH COLUMBIA SUPPLEMENTATION
HYPOTHETICAL EXAMPLES

Year	No Provincial Assistance	With Provincial Assistance			
	CMHC	CMHC[1]	Province[1]	CMHC[2]	Province[2]
	Dollars	Dollars	Dollars	Dollars	Dollars
		Cash Flow		Cash Flow	
1	1200	600	600	840	600
2	1080	600	480	840	456
3	960	600	360	840	312
4	840	600	240	840	168
5	720	600	120	840	24
6	600	600	--	720	--
7	480	480	--	576	--
8	360	360	--	432	--
9	240	240	--	288	--
10	120	120	--	144	--
11	-6600[3]	-4800	--	-7200	--
		Net Present Cost			
Discount Rate					
5 p.c.	1609	1052		858	
10 p.c.	2314	1493		1742	

[1]Total Assistance - $1,200

[2]Total Assistance - $1,440

[3]Assuming lump sum repayment in the eleventh year.

$2,314, whereas with the provincial grant, the cost of the AL to the federal government is only $1,493. The major reason for the supplementation in British Columbia is that federal assistance by itself would not be sufficient to cover the gap between costs and rents because of high land and labour costs. In fact, the average of total assistance in British Columbia is $120 per month.[1] With provincial assistance, the cost of CMHC assistance is $1,742, still lower than the $2,169 national average cost of the Assistance Loan.[2]

(ii) Ontario Supplementation

In June, 1977, Ontario signed an agreement with CMHC providing for provincial supplementation. This arrangement provides that CMHC give its assistance, to a maximum of $1,200, first. If further assistance is required, the province will provide it in the form of a grant, to a maximum of $600 per year. In the second year, assistance declines by one-tenth with the amount prorated between CMHC and the province, in proportion to initial assistance.

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[1] According to operating agreements.

[2] Seen from another perspective, these units could not have been built without provincial supplement. Thus, the presence of provincial supplementation increased the cost of the program to CMHC by $1,742 per unit.

While all ARP units in British Columbia received assistance from the province, only a portion of units will receive assistance in Ontario.[1] The CMHC local office in Toronto estimates that a maximum of 5,000 units will qualify for provincial assistance in 1978.[2] Because assistance is withdrawn on a prorated basis, the cost to CMHC would be the same as had it given the full $1,200 AL alone. As can be seen in Table 6.4, this is $2,314 per unit at a 10 per cent discount rate.

A second cost of provincial supplementation is the possibility that assistance will not be able to decline by one-tenth per year and may have to be extended to 15 years because rental income may not rise rapidly enough. These factors can add significantly to the cost to CMHC.

6.5 THE VALUE OF ARP TO THE OWNER

In Table 5.4 it was estimated that the cost of the CCA provisions, if used, were 6.4 per cent of the value of the building for masonry and 11.2 per cent for wood frame structures. In Section 6.2 of this chapter, the net value of the ARP loan was estimated at $2,169 or 9 per cent of the value of the typical unit.[3] The total subsidy is therefore 15 to 20 per cent

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[1]This occurs because provincial assistance comes in after the federal AL in Ontario, whereas the reverse is true in British Columbia.

[2]Because CMHC in October, 1977, limited its AL to $75 in all centres except Toronto and Vancouver, the Ontario supplement is paid only after the full $100 CMHC loan is given. Ontario assistance is limited to Toronto.

[3]In both cases, the 10 per cent discount rate is used.

of the value of a project. However, it would be erroneous to assume that these figures represent profit to the owner, since without assistance he might not build or buy the project at all.

In this section the ARP program is examined from the point of view of the owner. Table 6.5 describes the average ARP unit.[1] It costs $24,000 to erect the unit, of which $17,000 is for the building, and it rents for $3,252, although it is likely to be unoccupied for the first six months. Operating costs are $1,314 per annum, while principal and interest payments are $84 and $2,707 respectively, in the first year. The permitted yield on the $2,400 equity is $170 or 7 per cent. The initial AL needed to ensure this yield is $1,023.

To understand the method used to calculate the cash flow in each year, consider the first year.[2] Without any CCA or ARP program, the project will generate a net loss in the first year of $1,281.[3] With a CCA

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[1]These figures are based on observed values of ARP approvals in 1976; capital costs are rounded.

[2]See Appendix D for a detailed description of methods used to estimate cost.

[3]Gross rent ($3,252 ÷ 2) minus expenses ($1,314 + $2,707 + $84) gives a gross loss of $2,479. Since all but the principal repayment of the loss ($2,479 - $84 = $2,395) can be deducted against the income (at a 50 per cent rate) the net loss is ($2,479 - $\frac{2,395}{2}$) = $1,281.

TABLE 6.5

ASSISTED RENTAL PROGRAM OWNER'S FINANCIAL BENEFITS
BASE YEAR VALUES AND ASSUMPTIONS

Base Year Values (Dollars)	
• Rent per Year (Vacant for First Six Months)	3,252
• Operating Cost per Year	1,314
• Interest Payment, First Year	2,707
• Principal Repayment, First Year	84
• Total Cost per Unit	24,000
• Building Cost per Unit	17,000
• Equity	2,400
• Allowable Yield per Year	170
• Depreciation Rate[1]	8.75%

Assumptions

- Building sold in year 16 at original price, original owner must repay outstanding AL at that time
- Rents increase 8 per cent per annum
- Operating costs increase 12 per cent per annum
- Marginal tax rate 50 per cent
- IRL calculated as residual - $1,023 in first year
- Discount rate 10 per cent per annum

SOURCE: Appendix D.

[1]Calculated as weighted average of 10 per cent and 5 per cent class, the weight being the proportion of actual units in each class; i.e., 75 per cent and 25 per cent respectively.

program a portion of the value of the building ($1,575) can be treated as a loss and used to offset other income; the net effect is to reduce the cash flow loss to $494.[1]

With an ARP program, but no CCA, the initial cash loss is reduced by the size of the AL, $1,023, without affecting the tax loss position. The net effect is therefore a loss of $258. With both a CCA and ARP, the value of the loss with CCA ($494) is reduced by the AL to give a net gain of $529.

Table 6.6 shows the results on cash flow of carrying out the above calculations for each of the 16 years the project is held, under the assumptions of growth in rents and costs specified in the table. Since it is assumed that the property is sold in year 16 at its original price, the original owner must repay both the accumulated depreciation and the outstanding AL. In reality, the owner would probably not sell the property this soon since the burden of repayment of depreciation and AL, as well as the outstanding mortgage, would be too great.

By discounting the flows in individual years by a 10 per cent discount rate, the net present values of the cash flows, under the four possibilities, are calculated. As can be seen in Table 6.6, there is a net gain of $2,051 when both ARP and CCA are used.

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[1] $1,281 - $1,575 X 0.5 = $495. CCA is multiplied by 0.5, the marginal tax rate.

TABLE 6.6

ASSISTED RENTAL PROGRAM FINANCIAL BENEFITS TO OWNER[1]

Year	Cash Flow to Owner			
	No Program	CCA Only	ARP Only	CCA and ARP
1	-1,281	-494	-258	529
2	-422	296	498	1,217
3	-376	280	440	1,096
4	-329	269	381	980
5	-283	263	321	867
6	-238	260	260	759
7	-195	260	199	654
8	-122	261	170	553
9	-25	262	170	457
10	66	262	170	366
11	149	260	149	260
12	221	252	117	148
13	279	279	71	71
14	320	320	-8	-8
15	339	339	-77	-77
16	-63	-6,784	-7,730	-14,451
Net Present Value	-2,330	-100	-175	2,051
Simple Interest Equivalent	-8.3%	3.6%	3.2%	15.1%

[1]Assuming that the building is sold in the sixteenth year.

What rate of interest would a bond have to yield over 16 years to be equivalent to the above yields?[1] As can be seen in Table 6.6, with CCA and ARP, the bond would have to yield 15.1 per cent per annum interest, whereas with ARP only the bond would be 3.2 per cent.[2] With neither APP nor the CCA the bond would have a negative yield of -8.3 per cent. To the extent that the assumptions are valid, it is clear that without any form of assistance there would have been no investment in rental units--at least until rents rose to permit a larger positive return on equity. Even ARP or CCA would by themselves have been insufficient to encourage substantial new investment in rental construction. In contrast, the two programs together were more than sufficient to promote investment in rental construction.[3]

Because these conclusions are dependent on the assumptions, Table 6.7 shows how these yields change as a result of changes in assumptions. Thus, should rents rise by 12 per cent per annum rather than 8 per cent, the yield even without any program would be 60 per cent. Alternatively, should operating costs rise by 16 per cent rather than 12 per cent per annum, the project would yield a negative return even with ARP and the CCA.

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[1]See Appendix D for a detailed description of the method.

[2]For simplicity, interest is compounded annually.

[3]This is for the typical unit. For some units the yield is higher, for others it is lower. In addition, the ARP program allows a substantially higher loss reserve than is normal. This generates an additional subsidy but is not included in the calculation in this section.

TABLE 6.7

ASSISTED RENTAL PROGRAM: COST SIMULATION FOR RENTAL UNIT OWNERSHIP

Variables	Annual Per Cent Yield on Initial Equity in Real Terms			
	CCA and ARP	ARP Only	CCA Only	No Program
1. Base Run[1]	15.1	3.2	3.6	-8.3
2. Variations from Base Run				
a.1 Discount Rate 5 p.c.	7.8	3.1	2.3	-2.3
a.2 Discount Rate 15 p.c.	21.9	3.9	4.4	-13.6
b.1 Rents Increase 5 p.c. per annum	-1.3	-15.9	-18.0	-32.5
b.2 Rents Increase 12 p.c. per annum	73.3	67.5	66.1	60.2
c.1 Operating Costs Increase 3 p.c. per annum	36.5	27.9	27.4	18.8
c.2 Operating Costs Increase 16 p.c. per annum	-3.2	-17.8	-18.4	-33.0
d.1 CCA Class 10 p.c.	16.6	3.2	5.1	-8.3
d.2 CCA Class 5 p.c.	10.1	3.2	-1.4	-8.3
e.1 Marginal Tax Rate 65 p.c.	21.8	6.4	10.3	-5.1
e.2 Marginal Tax Rate 35 p.c.	8.4	0.0	-3.1	-11.4
f.1 Building Sold After 26 Years	15.7	1.5	5.9	-8.4
f.2 Building Sold After 12 Years	11.9	0.8	-1.3	-12.4
g.1 Property Appreciates 5 p.c. per annum	56.3	44.4	44.8	32.9
g.2 Property Depreciates 5 p.c. per annum	-4.6	-16.5	-16.1	-27.9
h.1 P & I Payments 10 p.c. Lower	18.0	7.8	10.8	0.6
h.2 P & I Payments 10 p.c. Higher	12.6	-0.5	-3.2	-16.3
i.1 Building 90 p.c. of Total Cash	17.8	3.2	6.3	-8.3

SOURCE: Calculations by Program Evaluation Unit, Corporate Planning Division, Central Mortgage and Housing Corporation, Ottawa.

[1]See Table 6.5 for assumptions of base run.

6.6 SUMMARY

This chapter estimated the cost of the ARP program. In terms of cash flow, the 25,290 approvals in 1976 will generate a cash outflow of $22 million in 1978. If the program is continued to 1981, this outflow will peak at $103 million that year.

Using a 10 per cent discount rate, the present value of the subsidy inherent in the interest-free nature of the loan is $2,169 for the typical unit. This compares with $4,338 had assistance been a grant rather than a loan. The CCA provisions, however, cost the government $1,812 per unit. Thus, the total subsidy cost for the 25,290 units approved in 1976 is $3,981 per unit or $101 million for the entire program.

With supplementation in British Columbia, the average ARP subsidy cost to the federal government was $1,742, or 20 per cent below the average national figure. Supplementation in Ontario will result in an increase in the number of subsidized units requiring additional subsidy of $2,314 per unit. In addition, with supplementation, the probability of having to extend assistance to 15 years is also increased.

From the point of view of the owner of an ARP unit, combined CCA and ARP assistance enables him to earn a 15 per cent yield on equity for the average ARP unit. With no program at all, the yield would be minus 8.3 per cent. ARP by itself would permit a yield of 3.2 per cent whereas CCA alone would permit a yield of 3.6 per cent. These yields are, however, very sensitive to the expectations of the entrepreneur regarding future increases in costs and rents.

CHAPTER SEVEN

THE IMPACT ON ARP ON SELECTED MARKETS

As mentioned in Chapter One, the increase in ARP in 1977 to 60,000 units is likely to have significant effects on the rental market. In this chapter, the nature of these effects are examined in detail. The analysis examines six major areas in order to estimate the likely effect of ARP across different types of markets. The metropolitan areas considered are: Halifax, Toronto, Winnipeg, Edmonton and Vancouver. Together these cities accounted for 40 per cent of ARP approvals to the end of July, 1977. They represent a cross-section of metropolitan areas in terms of market condition and ARP participation. Smaller centres were omitted solely because of the lack of data on vacancies and starts for such centres.

The first effect of ARP is likely to be an over-production of rental construction. By producing more rental units than the market can absorb, vacancy rates are likely to be high in the near future. This can lead to defaults and/or arrears on mortgage repayments, or to a required extension of the AL in ARP projects for longer than 10 years since the gap between costs and rents is likely to persist. Section 7.1 examines the extent to which overproduction has occurred, market-by-market, and Section 7.2 looks at defaults and arrears.

A second possible effect is the creation of artificial cycles in the construction industry. If ARP led to over-building in 1976 and 1977, it may be necessary to underbuild in 1978 and 1979 to allow market demand to catch up to supply. Such shifts will, by definition, result in changes in employment patterns in the residential construction industry. Section 7.3 will examine the possible effects on employment.

A third possible effect is the depression of rents in general. Under conditions of over-supply, owners will have to reduce rents in order to attract tenants. This downward pressure on rents will filter down from the new rental stock to the entire stock of rental accommodation. Section 7.4 presents a brief analysis of this effect.

7.1 OVERSUPPLY OF RENTAL HOUSING

Evidence of an oversupply of rental housing is manifested in a high vacancy rate, either among new units coming onto the market or, more generally, among the entire rental stock, as households move from older to newer units. Sections 7.1 (i) and (ii) examine the general vacancy rate and the vacancy rate in new rental units respectively.

Vacancy rates may not be accurate measures of the effect of ARP, however, since many of the 1977 ARP approvals have not yet come onto the market. To determine whether an oversupply is likely to occur, it is

necessary to compare the forecast supply of new rental units with the forecast demand for rental accommodation. This is by no means an easy task, but some attempt is made to quantify the relationship in Section 7.1 (iii).

(i) Evidence of Oversupply - General Vacancy Rate

Twice every year, in April and October, CMHC conducts surveys of all rental units that are over six months old.[1] Since all of the units built under FHAP - ARP would be excluded for this survey, as they are less than six months old, the results may indicate the filtering effect of ARP on the existing rental market.[2]

As can be seen in Table 7.1, vacancy rates fell significantly from 1972 to 1976 and then began to climb somewhat, although in April, 1977, they were still significantly below 1972 levels. In 1978, as units completed to the end of March, 1977, enter the universe of units surveyed, the vacancy rate is expected to rise to an average of 3 per cent. There are, however, significant differences among individual metropolitan areas. Thus, in Edmonton, the vacancy rate declined from 6.0 per cent, the highest of the

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[1] In the largest centres, a sample survey is used; in other centres all units are surveyed.

[2] This is "filtering" in the purest sense of the term. No account is taken here, for example, of the effect of conversion rates in the existing stock, or of the effect of ARP on conversion rates.

TABLE 7.1

VACANCY RATES IN PUBLICLY AND PRIVATELY INITIATED APARTMENT STRUCTURES OF SIX UNITS AND OVER SELECTED METROPOLITAN AREAS (1972-77)[1]

Location	Year							Projected Vacancy Rate[1] March, 1978
	1972	1973	1974	1975	1976		1977	
					April	October	April	
Edmonton	6.0	5.2	0.8	0.3	0.1	0.0	0.2	2.5
Halifax	1.5	2.1	2.2	2.2	2.6	1.8	2.9	3.5
Montreal	3.0	2.0	1.2	0.7	0.6	1.3	1.4	3.0
Toronto	2.3	1.4	0.9	1.5	1.2	1.0	1.0	2.0
Vancouver	0.5	0.3	0.1	0.1	0.4	0.6	1.6	3.1
Winnipeg	4.2	3.3	1.5	1.9	1.5	1.3	1.2	1.5
Weighted Averages of All Metropolitan Areas	2.7	2.1	1.2	1.2	1.1	1.3	1.5	n.a.

[1]Vacancy figures received from Statistical Services Division, CMHC.

[2]Project vacancy rate based on survey of CMHC regional offices in September, 1977.

TABLE 7.2

NUMBER OF UNITS COMPLETED AND UNOCCUPIED IN SELECTED METROPOLITAN AREAS (1974-77)

Location	Year														Proportion of Stock[1]
	1974		1975		1976		1977								
	June	Dec.	June	Dec.	June	Dec.	Jan.	Feb.	March	April	May	June	July	Aug.	Per Cent
Edmonton							302	403	406	348	532	526	274	341	
All	306	71	98	41	--	52									
Rental	--	--	--	--	--	--	27	171	176	74	159	210	231	192	0.27
Halifax															
All	14	38	43	22	--	54	34	32	61	31	23	14	25	42	
Rental	--	--	--	--	--	--	20	25	61	31	23	14	25	26	0.08
Montreal															
All	1209	1448	1585	2747	2172	1727	2340	2300	2760	2932	3612	4232	4011	3990	
Rental	--	--	--	--	--	--	2289	2154	2656	2828	3476	4096	3635	3742	0.72
Toronto															
All	1902	4796	3166	2038	3733	2692	2805	2800	2492	2303	2001	2282	2110	2466	
Rental	--	--	--	--	--	--	127	101	116	129	192	432	210	130	0.03
Vancouver															
All	375	919	1690	1700	1399	1699	1958	1712	1578	1883	1780	1993	1809	1772	
Rental	--	--	--	--	--	--	637	222	157	329	484	475	359	509	0.44
Winnipeg															
All	104	70	119	--	--	234	244	259	258	314	472	302	229	432	
Rental	--	--	--	--	--	--	234	245	244	311	469	299	229	432	0.62
All Metropolitan Areas															
All	7622	10789	9978	9825	9370	9766	11061	11316	11444	12407	12634	13874	12881	13985	
Rental	--	--	--	--	--	--	4876	4821	4938	5312	6302	7483	6580	7500	n.a.

SOURCE: CMHC Statistical Services Division, special tabulation.

[1] Ratio of rental units unoccupied in August to stock of rental units in 1974. Data on stock of rental units taken from Survey of Housing Units, CMHC, 1974.

six centres in 1972, to zero, the lowest of the cities, in October, 1976. In contrast, the rate in Halifax has risen gradually over most of the period from 1.5 per cent in 1972 to 2.6 per cent in April, 1976.

While there is little agreement on what a normal vacancy rate ought to be, CMHC permits a 3 per cent vacancy loss to be charged against income in the calculation of the size of the AL. Thus, from the perspective of vacancy rates, ARP is not expected to have a significant effect on existing housing stock in any of the centres examined, at least until April, 1978. Should the vacancy rate continue to rise past that date, the situation may become serious in the sense that too great a number of ARP units are being produced.

(ii) Evidence of Oversupply - New and Unoccupied Units

The second perspective involves the new buildings themselves: what proportion of units are likely to remain unoccupied for up to six months? As can be seen in Table 7.2, the number of rental units unoccupied almost doubled from January to August, 1977.[1] However, in none of

[1] Unfortunately, prior to January, 1977, rental units were not distinguished from condominiums. In addition, structures more than six months old are dropped from the universe of new and unoccupied units and enter the universe for the vacancy survey. The new and unoccupied figure is thus an underestimate of the true number of unoccupied rental units.

the centres except Montreal and Vancouver is the number of unoccupied units a large portion of the total stock of rental units. In Toronto, the problem is primarily unsold condominium units, mainly AHOP units, rather than vacant rental accommodation. However, many units built under ARP have not yet been completed and are not included here. As a result, these estimates of the effect of ARP may understate the extent to which problems may arise over the next year.

(iii) Evidence of Oversupply - A Long-Run Perspective

In the previous two sections, analysis was based on units already completed. Given the lags of approximately 15 months between initial designation and the stage at which the project is ready for occupancy, the effect of the ARP units approved has yet to be felt on the marketplace. Table 7.3 presents an overview of the level of production from 1973 to 1977. As can be seen in Table 7.4, there now exists a large backlog of units under construction to be completed in each of the metropolitan areas as well as in the country as a whole. Normally, as can be seen in Table 7.5, the number of units under construction is approximately equal to the annual level of new starts. Thus, the ratio of units under construction at the end of August, 1977, to total starts from January, 1976 to the end of August, 1977 would be approximately 0.6.[1] The national average is 0.66 or very close

[1]Since January to the end of August is 2/3 of the year, the expected ratio would be $1 \div (1 + (1 + 2/3)$.

TABLE 7.3

DWELLING STARTS FOR ROW AND APARTMENT UNITS IN SELECTED METROPOLITAN AREAS (1973-77)

Location	Actual					Estimated for Year
	Year					
	1973	1974	1975	1976	1977 Jan.-Aug	1977[1]
Edmonton	2,463	1,518	3,097	6,607	3,783	6,205
Halifax	2,810	1,731	1,251	1,832	916	1,271
Montreal	20,354	12,120	13,690	23,128	12,095	17,581
Toronto	25,801	20,918	15,521	17,134	10,421	16,064
Vancouver	8,235	7,258	6,264	8,360	5,379	9,837
Winnipeg	4,369	2,406	2,403	3,233	2,141	3,257
All Metropolitan Areas	97,770	68,549	66,710	90,921	53,831	83,723
All Centres Over 10,000	115,130	81,558	84,122	110,779	65,352	103,005

SOURCE: Canadian Housing Statistics, 1976, Table 13; August 1977 monthly supplement to CHS.

[1]1977 starts, Jan.-Aug., divided by the ratio of 1976 starts, Jan.-Aug., to total starts.

TABLE 7.4

ESTIMATED INCREASE IN SUPPLY OF RENTAL UNITS IN SELECTED METROPOLITAN AREAS (1976-77)

Location	Total Starts Row and Apartment Units		Total Units Under Construction	Ratio of Units Under Construction to Total Starts	Total ARP Units Designated		Additional ARP Units to be Allocated in 1977[1]	Total ARP Units Started		Total ARP Units Designated But Not Started	Ratio of ARP Units Designated and Not Started to Total Starts
	1976	1977[2]	Aug. 1977	Aug. 1977	1976	1977		1976	1977	Aug. 1977	Aug. 1977
Edmonton	6,607	3,783	7,067	0.68	93	187	2,300	55	38	187	0.02
Halifax	1,832	916	2,645	0.96	218	910	600	333	382	413	0.15
Montreal	23,128	12,095	18,907	0.54	7,239	3,084	2,000	2,605	4,989	2,729	0.08
Toronto	17,134	10,421	24,833	0.90	211	2,570	4,500	211	1,274	1,296	0.12
Vancouver	8,360	5,379	6,164	0.45	2,045	2,658	2,500	435	1,415	2,853	0.33
Winnipeg	3,233	2,141	3,045	0.57	744	1,132	1,400	758	714	434	0.41
All Metropolitan Areas	90,921	53,831	92,481	0.64	n.a.	n.a.	n.a.	7,504	14,127	n.a.	n.a.
All Canada Over 10,000 Population	110,779	65,352	111,701	0.66	n.a.	n.a.	n.a.	10,678	17,980	n.a.	n.a.
All Canada	125,000	n.a.	n.a.	n.a.	25,234	34,463	n.a.	n.a.	n.a.	n.a.	n.a.

SOURCE: CMHC Lending Division Report, August, 1977.

[1] Based on rough estimate only.

[2] All 1977 figures on starts to the end of August only.

TABLE 7.5

RELATION OF STARTS TO UNITS UNDER CONSTRUCTION
ROW AND APARTMENT UNITS, CANADA (1974-76)

	Year		
	1974	1975	1976
Starts	88,957	92,124	123,000
Under Construction at End of Year	105,675	102,510	128,215
Ratio of Under Construction to Starts	1.19	1.11	1.04

TABLE 7.6

CHARACTERISTICS OF INDIVIDUAL MARKETS

Location	Ratio of Accumulated Designations to 1976 Starts	Lending Division Designation, September 15, 1977	
		ARP Market	AHOP Market
Edmonton	0.70	Encourage production	Encourage production
Halifax	1.11	Vacancy rate rising and 1989 units under construction Exercise extreme caution	Encourage production
Montreal	0.62	Very slow absorption and rising vacancy rate, especially high rise Exercise extreme caution	Encourage production
Toronto	1.02	Encourage production	5211 AHOP units from 1975 to 1976 still unsold, mainly high rise Exercise caution
Vancouver	0.78	Exercise caution, especially in surrounding municipalities	1118 AHOP units from 1976 still unsold, mainly high rise condominiums Extreme caution
Winnipeg	0.98	Encourage production	Encourage production

to the expected rate (Table 7.4). However, in Halifax and Toronto the ratio is above one, suggesting a relatively large supply of new row and apartment units about to come on the market. In contrast, the ratio is low in Vancouver, Winnipeg and Montreal, suggesting that the new supply of row and apartment units may be excessive. In addition to the units already started, there is a large number of ARP units designated but not yet started. In Montreal, this amounts to 2,729 units and in Vancouver it is 2,853. In addition, the increase in ARP allocation for 1977, from 34,463 actual approvals at the end of August to an allowable 59,100 units for the entire year, will result in a further increase in the volume of new construction of row and apartment units. Unfortunately, these additional 24,637 units have not been allocated geographically. The figures in Table 7.4 are based on an informal estimate from field offices.

The ratio of units designated but not yet started to total starts in 1976 and 1977 is highest in Vancouver and Winnipeg, suggesting that in these cities the supply of new units is likely to be greater than would have been expected on the basis of units under construction alone.

The above discussion has concentrated on the supply of housing. For a more complete picture, it is necessary to examine the demand for rental accommodation. The Program and Market Requirements Division in CMHC is currently forecasting the future need for rental accommodation on the basis

TABLE 7.7

ESTIMATE OF ANNUAL DEMAND FOR RENTAL ACCOMMODATION IN SELECTED METROPOLITAN AREAS

Location	Annual Demographic Change--Renters[1]	Estimated Demolitions[2]	Estimated Pent-Up Demand[3]	Total Estimated Annual Demand
	Units	Units	Units	Units
Edmonton	4,629	708	637	5,974
Halifax	1,355	311	83	1,749
Montreal	14,816	5,188	4,669	24,673
Toronto	16,718	3,471	1,736	21,925
Vancouver	3,771	1,163	1,125	6,059
Winnipeg	1,568	698	496	2,762

SOURCE: [1]Special tabulation prepared by Ms. A. Divic, Program and Market Requirements Division, CMHC, September, 1977. Estimates are from 1976-85.

[2]Calculated as 1 per cent of the rental stock.

[3]Calculated as the difference between the actual vacant stock in October, 1975, and the size of the vacant stock at a 3 per cent vacancy rate. This figure is then divided by three on the assumption that it could be amortized by the end of 1978.

of past experience in fertility, mortality, migration, new household formation and tenure.[1] As can be seen in Table 7.7, it is estimated that for each year from 1976 to 1981 the demand for rental accommodation arising out of demographic changes will vary from 16,718 units in Toronto to 1,355 in Halifax.[2]

In addition to demographic change, the demolition and conversion of older rental accommodation will also generate a demand for new rental accommodation. Unfortunately, no statistics are currently available on the absolute magnitude of demolitions and conversions. For present purposes, it is estimated that 1 per cent of the rental stock is demolished or converted annually.

In many cases, the sum of demographic change and demolitions represents an underestimate of total demand since it omits any excess demand that may have existed prior to 1976. As will be recalled from Table 7.1, the vacancy rate in October, 1975, was quite low, suggesting the existence of a pent-up demand due in part to the low level of rental production in

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[1]The method is termed "cohort-survival." The final written report is still in a preliminary stage, although numerical calculations have been completed.

[2]The question of whether condominium purchasers would otherwise have rented or purchased is not addressed, partly because of a basic lack of data on the entire condominium market.

TABLE 7.8

COMPARISON OF ESTIMATED DEMAND AND SUPPLY
ON NEW ROW AND APARTMENT UNITS
FOR SELECTED METROPOLITAN AREAS (1977)

Location	Estimated Supply			Estimated Demand	Excess Supply	
	1977 Starts [1]	ARP Units Designated but Not Started	Total		Total	Proportion of Estimated Starts
Edmonton	6,205	187	6,392	5,974	418	0.07
Halifax	1,271	413	1,684	1,749	-65	-0.05
Montreal	17,581	2,729	20,310	24,673	-4,363	-0.25
Toronto	16,064	1,296	17,360	21,925	-4,565	-0.28
Vancouver	9,837	2,853	12,690	6,059	6,631	0.67
Winnipeg	3,257	434	3,691	2,762	929	0.29

[1]Prorated on an annual basis.

1974-75.[1] In Table 7.7, it is assumed that this total excess demand, as estimated by the difference between vacant stock at a 3 per cent vacancy rate and actual vacant stock, will be satisfied over a three-year period. The resultant total estimate of demand for rental accommodation varies from 1,749 units in Halifax to 24,673 units in Montreal.[2]

The final stage in estimating whether ARP is causing an excess of rental accommodation is to compare the estimated demand for rental accommodation with estimated supply of new units, including ARP units designated but not yet started. As can be seen in Table 7.8, the procedure suggests a significant excess supply in Vancouver and Winnipeg, and an excess demand in Montreal and Toronto. In the latter two cases, however, current low levels of immigration are not reflected in the estimates of demand.[3] Given the general difficulties with the data, it would be foolhardy to put too much emphasis on these results. Furthermore, these figures omit the additional units allocated but not designated. Should these units in fact be designated soon, the effect will be a large excess supply of rental accommodation in most centres.

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[1] In both 1974 and 1975, the production of apartment units was under 75,000, significantly below the 100,000 unit level that existed from 1968 to 1973.

[2] The apparent accuracy of the estimate does not imply any real accuracy. In fact, it is very difficult to estimate demand, especially when price and demand income levels do not even enter into the estimating procedure.

[3] The estimates of demand assume a high rate of immigration to metropolitan centres.

TABLE 7.9

EXCESS OF RENTS OVER COSTS AFTER TEN YEARS
HYPOTHETICAL EXAMPLES

Annual Inflation in Costs	Increase in Costs Over Initial Year	Annual AL in First Year	Total Increase in Cash Outflow for Costs and AL	Inflation in Rents Per Year					
				4 p.c.	6 p.c.	8 p.c.	10 p.c.	12 p.c.	14 p.c.
				Increase in Rents Over Initial Year (Dollars)					
				1,556	2,562	3,755	5,164	6,823	8,771
(Per Cent)	(Dollars)	(Dollars)	(Dollars)						
4	473	1,020	1,493	63	1,069	2,252	3,671	5,330	7,278
6	778	1,020	1,798	-242	764	1,957	3,366	5,025	6,973
8	1,140	1,020	2,160	-604	402	1,595	3,004	4,663	6,611
10	1,560	1,020	2,580	-1,024	-18	1,175	2,584	4,243	6,191
12	2,072	1,020	3,092	-1,536	-530	663	2,072	3,731	5,679
14	2,664	1,020	3,684	-2,128	-1,122	71	1,480	3,139	5,087

7.2 DEFAULTS AND ARREARS IN ARP

Although mortgages have been approved for 971 ARP projects to the end of August, 1977, only 313 have now entered into repayment. As a result, arrears and defaults have not yet been a major problem. Only four projects are currently in arrears for three or more months and legal proceedings have progressed against only one.[1]

Whether arrears will be a problem in the future will depend on whether market rents will rise rapidly enough to cover increasing costs, and thus permit the AL to phase out over 10 years. For the average project, monthly rent is $270, operating costs are $82 per month and average AL is $85 per month. Should rents rise by 4 per cent per annum for the next ten years, they will be $400 per month at the end of the tenth year, or $130 more than they are now. On an annual basis this amounts to an increase of $1,556 (see Table 7.9). Should costs rise by 4 per cent per annum, the annual increase in costs will be $473. If to this is added the size of the AL, i.e., $1,020 per annum, then rents would have to rise by $1,493 to cover costs. Thus, if rents rise by 4 per cent, they will have risen sufficiently to permit a total withdrawal of the AL within ten years. As

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[1]Under 1975 ARP, 256 projects are in repayment, four are in arrears and 16 in default, of which ten are in Saint John, N.B.

long as rents can rise by 8 per cent per annum and operating costs rise by less than 14 per cent per annum, it will be possible for the owner to gradually phase out the Assistance Loan. Should rents rise by 6 per cent, operating costs will have to rise by less than ten per cent to permit phasing out. Should ARP result in an over-supply of rental units and consequently a high vacancy rate, arrears may increase dramatically.

7.3 THE EFFECT OF ARP ON EMPLOYMENT

A major concern of the construction industry has been the effect of construction cycles on the overall stability of the industry. The Economic Council of Canada in a study of the industry recommended that government ought not create cycles in the construction industry. As can be seen in Table 7.3, production of row and apartment units increased significantly in 1976 and into 1977. Furthermore, in some of the centres examined, it is likely that production will have to decline in 1978 in order to prevent excessive vacancy rates and consequent defaults.

However, in looking at the effect of ARP on employment, it is necessary to take into consideration the entire construction industry and not just residential construction. In this perspective, ARP can be seen as offsetting a depression in the overall construction industry rather than generating an artificial boom in the residential construction sector. As can be seen in Table 7.10, with the exception of Edmonton total employment in construction declined from 1975 levels despite the existence of ARP.

Nevertheless, without adequate stimulation of the non-residential sector, the expected decline in new residential construction in 1978 may create substantial unemployment in the construction industry.

7.4 THE EFFECT OF ARP ON RENTS

Paradoxically, the more ARP is successful in restraining the rate of inflation in rents, the greater will be the probability of arrears and default under ARP as landlords fail to earn sufficient income to repay either the AL or the first mortgage. Unfortunately, there are no reliable estimates of the effect of an increase in supply on rents. For the United States, F. de Leeuw has estimated price elasticity of 1 per cent, although other estimates range from 0.6 to 1.75 per cent.[1] Since ARP units account for approximately 2½ per cent of the total stock of housing, the largest effect would be a 4.4 per cent decline in prices in 1977.[2] In other words, rents would rise by 4.4 per cent less than they would have done without the ARP program.

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[1] A price elasticity is the percentage change in prices resulting from a one percentage point increase in quantity. See F. de Leeuw, 'The Demand for Housing: A Review of Cross-section Evidence," Review of Economics and Statistics, Vol. 53, no. 2 (February, 1971).

[2] Total rental stock in Canada is approximately 2½ million units, while ARP approvals in 1977 will be 60,000 units.

TABLE 7.10

EMPLOYMENT INDICES IN BUILDING CONSTRUCTION FOR SELECTED METROPOLITAN AREAS (1975-77)[1]

Location	April 1975	April 1976	April 1977
Edmonton	118.8	138.3	167.9
Halifax	120.6	107.8	91.7
Montreal	111.5	117.1	89.2
Toronto	137.6	133.0	127.2
Vancouver	204.6	200.5	187.8
Winnipeg	97.6	99.4	94.3
Canada	119.8	121.2	112.7

SOURCE: Statistics Canada, Employment, Earnings and Hours, Catalogue 72-002, Table 11, July, 1977.

[1] 1961 = 100.

7.5 SUMMARY

This chapter estimated the likely effect of ARP on the housing markets of six major metropolitan areas. As of the end of August, 1977, the program has not resulted in a significant increase in vacancy rates of either new units or of older stock. However, vacancy rates in both are beginning to increase from the low levels that prevailed in 1975.

The question to be answered is whether, as new units currently designated as ARP but not yet completed come into the rental market, vacancy rates will rise to undesirable levels. Unfortunately estimates of future demand and supply are extremely difficult to calculate. With this in mind, it was estimated that Vancouver and perhaps Winnipeg will face situations of excess supply whereas Toronto and Montreal may continue to face excess demand. The latter, however, is based on the assumption of high rates of foreign immigration. The effect of the increase in allocation for ARP to 60,000 units may put all of the markets into positions of excess supply. The result would be a substantial decline in ARP activity in 1978.

It is likely that in some centres ARP has generated an excess supply of units, resulting in a likely depression in the construction of rental accommodation in the next few years. However, in 1977, non-residential construction was in a relatively depressed state. As a result, ARP should

be viewed from the perspective of the construction industry as a whole. It will be necessary to stimulate the overall construction sector in 1978 if high unemployment rates are to be prevented.

Finally, with regard to defaults and arrears, there has not been enough experience yet to draw firm conclusions. Since units rent at market price, the level of arrears will depend upon the rate of inflation in rents and operating costs, including the vacancies that may occur. It is estimated that as a result of the ARP program, rents will increase by 4.4 per cent less than they would otherwise have done.

CHAPTER EIGHT

ISSUES IN THE ARP PROGRAM

This chapter discusses several issues arising out of discussions between Lending Division at CMHC National Office and local administrators of the program.[1] In designing the program at National Office, the major concern was to generate a target number of new rental units at a minimum cost. In addition, concern for spatial equity was reflected in the establishment of identical regulations across the entire country.

From the local perspective, the concern is to have a program that can meet local needs and, where these needs vary from national norms, to be able to adapt the program accordingly. While there have been numerous specific requests for minor changes, this chapter will examine two that could have national implications:

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[1] Two other issues have been raised in the last year. Some critics of the program have stated that the benefits of ARP do not help low-income clientele. As this evaluation has demonstrated, ARP has been successful in meeting its primary goal: an increased supply of moderately-priced rental stock. To criticize ARP for not meeting a goal it was not designed for is neither fair nor valid in the present context. The possibility of massive default/arrears over time in ARP projects has also been raised. At this stage the evaluation of such a possibility is more conjectural than factual. While some discussion on this point was provided in Chapter Seven, it would be premature at this point to do any more than stress that the program requires careful monitoring.

(i) special program for small communities and for large urban areas; and

(ii) extension of ARP to existing dwellings.

These issues will be examined in detail in the following sections.

8.1 SPECIAL PROGRAM FOR SMALL AND LARGE COMMUNITIES

(i) Small Communities

The basis for calculating the AL is the difference between costs on the one hand and revenue, primarily rents, on the other. Since the size of the AL is determined prior to construction, it is possible that the estimate of rents may be too low or too high. In larger centres, where a stock of rental accommodation is already in place, it is possible to arrive at some agreement with a builder regarding what rents he might charge. In small towns, however, where there is virtually no rental, it is difficult to determine what rent can be charged. Where estimates are made, they tend to be low, especially in comparison to urban centres, because of the expectation that the units will not otherwise be rented.

The difficulty is that at lower rents the size of the AL is higher. To overcome this, two suggestions have been made: (a) allow a higher AL in smaller centres because of the lower rents; or (b) establish the AL in terms of the interest rate only and let the builder bear the risk of estimating the rent he can charge.

The first suggestion has been rejected by CMHC because of the belief that maximum assistance ought not vary by region. It is felt that there is no reason why CMHC should subsidize low rents in rural areas. In addition, average AL is not significantly different for different city size classes (Table 6.3).

The second suggestion is that assistance be defined in the same manner as is currently done under AHOP. Thus, assistance would be calculated as the difference in the principal and interest payments at the market rate and principal and interest payments at an 8 per cent rate of interest. Assistance would then decline at regular intervals of one-tenth or one-fifth per annum. Only under exceptional circumstances would assistance vary from this. Table 8.1 shows the difference in the size of the AL in the first year should such a system be used.

(ii) Large Centres

The Ontario Regional Director of CMHC has argued that the maximum floor area limits of ARP ought to be raised in larger centres, in particular in Metropolitan Toronto.[1] The basis for this argument is that:

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[1]Memorandum to Management 215, April, 1977.

TABLE 8.1

ARP AVERAGE SUBSIDY UNDER ALTERNATIVE
ASSISTANCE LOAN ARRANGEMENTS

Characteristic	ARP Under the FHAP Program	Net Present Value of Subsidy			
		Interest Reduction Loan to 8 Per Cent		Interest Reduction Loan to 7 Per Cent	
		5 Years	10 Years	5 Years	10 Years
1. National	2,177	1,079	1,353	1,401	1,757
2. By Dwelling Type					
Row	1,954	1,014	1,271	1,434	1,798
Apartment	2,189	1,077	1,351	1,390	1,743

SOURCE: 689 projects for which operating agreement and computer records could be merged.

(i) The bulk of demand for new rental units in Toronto is for bachelor and one-bedroom units; the large supply of unsold condominiums can satisfy the demand for larger multiple units

(ii) The size limits for bachelor and one-bedroom units are too low, so that builders cannot build within these limits if the project is to be entirely bachelor and one-bedroom units

(iii) The additional or marginal cost to the builder of erecting a unit consisting of a further 50 square feet is very small and does not make the unit significantly less modest. The larger size, however, does improve the marketability of the units. Thus, it would be easier to market bachelor units if they could be larger than allowed under ARP

(iv) Some municipalities (e.g. Scarborough) require minimum floor size greater than the maximum ARP sizes, especially for larger units.

Despite pressure from a number of major builders, the Corporation rejected the request, urging the municipality instead to lower its requirements. The major reasons for this decision were:

(i) So many ARP applications already exist that it is not necessary to worry about those that would not qualify

(ii) changing floor size regulations in some centres but not others, and in ARP but not MIG, would create undesirable inequities.

As argued in Chapter Four, floor area maximums have been the only formal tool in ARP to ensure that units are "modest."[1] The use of the

[1]Branch offices exercise substantial personal influence on the designs and specifications as well.

AHOP Maximum House Price has, in general, proved to be relatively ineffective since most rental units are substantially below these levels. Yet floor area maximums establish arbitrary cut-offs and may not ensure modest quality. As stated before, the preferred mechanism is to use a realistic price mechanism, which would vary with type of unit, and then let the builder/applicant determine how he can build up to these maxima in accordance with the market and taste of that area. While this would create greater difficulties in the setting of market-specific maximum prices, it also would provide substantial flexibility. This would also solve a secondary problem mentioned by Lending Division, that the AHOP price limits are beginning to be reached by three and four-bedroom townhouses under ARP.[1]

As mentioned in Chapter Five, these ARP units can be resold to a private investor at a substantial increase in price, as the benefits from the CCA become capitalized into the price of the unit. Since the resale price can exceed AHOP limits, there was some discussion of whether CMHC ought to impose AHOP price limits on resale as well. For reasons outlined in Chapter Four, it was decided that the Corporation would not interfere with resales.

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[1]Memorandum to Management #308, May, 1977.

8.2 EXTENSION OF ARP TO EXISTING RENTAL PROJECTS

A number of owners of existing rental projects have requested from CMHC that the assistance available to builders of new units under ARP be made available to them.[1] The basis of their argument is that with rising operating costs and low rents (particularly under rent control), they are unable to earn a profit. This can be an especially difficult problem in cases where substantial vacancies are present or where, because of vandalism and/or poor original workmanship frequent repairs are necessary.

The position of the Lending Division has been that ARP assistance will not be extended to existing dwellings.[2] The main argument has been that it would set an undesirable precedent. As other landlords become aware of the program, the Corporation will be flooded with requests for assistance.

Unfortunately, without some form of assistance many of these projects might default. In the Limited Dividend program alone 166 accounts are currently in arrears--amounting to 6.78 per cent of all LD accounts; in 1975, 5.70 per cent of all LD projects were in arrears (Table 8.2). In terms of value in arrears, LD accounts for $10 million or 72 per cent of the total value of arrears for accounts in which CMHC holds the first mortgage.

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[1] Currently, CMHC does not provide any insurance for existing rental units.

[2] Section 14.1 of the National Housing Act does not preclude assistance to existing dwellings.

TABLE 8.2

ARREARS AND DEFAULTS IN MULTIPLE RENTAL PROJECTS (1977)[1]

	Number of Accounts	Value ($ '000)
1. Total CMHC Portfolio of First Mortgages	4,371	--
Accounts in Arrears	272	11,861
Arrears More Than Three Months	121	10,081
Legal Action in Process	16	5,003
2. Limited Dividend Portfolio[2]	2,429	1,499,905
Arrears	166	10,257
3. ARP Portfolio--First Mortgage Held by CMHC	8	4,138
Arrears	2	6
4. Mortgage Insurance Funds Claims		
Approved Lender Claims Anticipated Next Six Months	34	38,900
Number of Units Owned by MIF	5,000	--
5. Limited Dividend Acquisitions		
Anticipated Claims Next Six Months	24	59,961
Number of Units Held by CMHC	500	--

SOURCE: CMHC Mortgage Administration, "Operations Report," August 31, 1977, CMHC Real Estate Division, "Operations Report," August 31, 1977.

[1] To August 31, 1977.

[2] LD units have uninsured first mortgages held by CMHC.

Among approved lenders, there were 57 multiple unit projects in arrears for three or more months at July 31, 1977, compared to 1,179 at July 31, 1976. The anticipated capital loss per unit sold through the Mortgage Insurance Fund is $2,300. In addition, legal costs and losses associated with a default are approximately $700 per unit. Thus, the total loss per unit acquired is $3,000. This compares to an average subsidy cost under ARP of $2,169 where the average first year AL is $85 per month. In other words, if the probability of an owner being able to succeed with the ARP loan is greater than 72 per cent, it is more cost-efficient for CMHC to subsidize the unit with an ARP loan than to let it default.[1]

Thus, the extension of ARP to existing dwellings in those situations where it is clear that without assistance the project will default, is a recommended course of action. This would mean that over the next six months approximately 2,900 units would qualify.[2] At an average first year AL of $85 per month, this would cost CMHC $3 million in AL loans. Using a ten per cent discount rate, the present value of the subsidy would be $6.4 million.

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[1]This ignores the other goal of ARP which is to produce new jobs. In contrast, LD tenants are lower income households (because of the income requirement of LD), and therefore more likely to be "in need" of ARP assistance than the ARP tenant. Also, such a policy implies the application of ARP assistance to existing units.

[2]Assuming an average of 50 units per project for each of the 34 MIF and 24 LD projects.

8.3 SUMMARY

This chapter has examined two possible modifications to the ARP program. The first, a special program for small communities, gave rise to the suggestion that the AL ought to be calculated in terms of interest write-down to an 8 per cent mortgage, in the same way the IRL is calculated under AHOP. Not only would this substantially reduce the paperwork involved in administering the program, it would also make ARP consistent with AHOP.

It is recognized that similarity in program design will not lead to compatability in program delivery. The latter can only be achieved through special effort within each branch to ensure that, when units are designated for ARP, the effect on AHOP be taken into consideration.

Related to the issue of a special program for small communities is the issue of whether maximum floor sizes ought to be modified for large urban centres. This suggestion reflects the need for the program to be flexible to meet the requirements of individual market areas. In analyzing the issue it was recommended that the use of maximum unit prices, and not maximum floor area or the AHOP MHP, would be a more flexible means of ensuring that ARP units are not overly luxurious.

The second modification relates to the extension of ARP assistance to existing rental projects. Given the current expectations that arrears

and defaults will increase substantially in the next few years, it was calculated that generally it would be more cost-effective for the Corporation to extend ARP assistance to such projects rather than to acquire them through default.

CHAPTER NINE

SUMMARY AND CONCLUSIONS

In May, 1977, an Interdepartmental Task Force[1] established the terms of reference for an evaluation of the Federal Housing Action Program. The terms of reference specified that the evaluation would include:

(a) specification and review of the program goals and how well they have been attained;

(b) assessment of the delivery mechanisms being employed;

(c) costs associated with each program; and

(d) future implications of the program in terms of costs and clients served.[2]

This chapter summarizes the results of the evaluation exercise for the Assisted Rental Program.

9.1 NATURE OF THE PROGRAM

The Assisted Rental Program provides interest-free loans to owners of new rental accommodation. The loan is designed to cover the difference

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[1]The Task Force included representatives of Treasury Board (Program Branch), Department of Finance (Economic Program and Government Finance Branch), and CMHC (Program Policy and Research Sector).

[2]Terms of Reference, Evaluation of the Federal Housing Action Program, June 7, 1977.

in the first year between costs and revenue. Thereafter, loans are given in decreasing amounts for each year, over a ten year period. After ten years, the accumulated loan normally becomes repayable and interest charges commence.

From an administrative point of view, a potential owner/builder applies to a lender for mortgage money to finance the project. He also signs an operating agreement with CMHC specifying operating costs and expenditures, and the size of the interest-free loan. To qualify for the assistance, the units in the project must be below the AHOP price limits and below prespecified maximum floor areas. Thus, the builder deals directly with the lender for mortgage financing and directly with CMHC for the interest-free loan. At the end of each year, the builder must submit to CMHC an audited statement of expenses and revenues. On the basis of this information, the size of the interest-free loan for the following year is calculated.

At the same time ARP was announced, the Minister announced the extension of Capital Cost Allowance tax shelter to the end of December, 1977. This permits an individual owner of a rental property started between November, 1974, and December, 1977, to offset losses generated by the Capital Cost Allowance against other income. While administratively not a

part of ARP, it is impossible to separate the effects of ARP from those of the CCA. Consequently, estimates of the effect of ARP include the effects of the CCA as well.

9.2 DELIVERY MECHANISMS

The evaluation examines a number of the mechanisms used in the delivery of the program. This section summarizes these mechanisms.

(i) Private Lenders' Participation

Private lenders have participated extensively in the program, particularly the trust companies and life insurance companies. As a result, CMHC has succeeded in limiting the size of its capital budget for subsidized rental accommodation to the Assistance Loan itself.

(ii) Rent Control

The program provides for no direct control on rents beyond the first year. However, should rents rise, the size of the interest-free loan in the following years will decline. In general, this should be sufficient incentive to prevent excessive rent inflation. However, for projects with a five-year term, renegotiation of the mortgage at a significantly different rate of interest from the original rate will affect the cash flow of the owner. In some cases, there may no longer be a need for an interest-free loan, and therefore this restraint on rent would no longer operate. In cases where the future rate is above the original rate, the Assistance Loan may have to be increased to ensure profitability.

Since administrative regulations prevent an increase in the size of the AL, this may result in an increase in defaults under ARP.

(iii) Resale

Because a rental project is worth more to an individual than to a corporation, there is the possibility that an original owner can resell the property at a substantial profit.[1] There is, however, little that CMHC can do to control this.

(iv) Over-Mortgaging

The report notes that there is a strong incentive for the entrepreneur to over-value the project in order to increase the size of the interest-free Assistance Loan.

(v) Audited Financial Statements

The size of the Assistance Loan each year depends on the audited financial statement which is required each year from the entrepreneur. There may be a number of problems in providing this audited statement, such as some project owners not having the required financial expertise,

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[1]This is because of allowances under the special CCA provision.

or certain cost items cannot easily be allocated to an individual project. The likely result will be that only owners capable of maintaining audited statements will be able to vary from the norm of the ARP Assistance Loan declining by one-tenth of the original amount each year.

(vi) Tenants

Unlike previous programs, ARP requires no control on tenants. The reasons for this are administrative difficulties in controlling tenancy and the fact that ARP units are rented at market rates. The typical tenant is a somewhat poorer, substantially younger Canadian, and is less likely to have children than the average Canadian.

9.3 ACHIEVEMENT OF GOALS

The primary goal of ARP is to promote the construction of new rental housing in order to increase the supply of rental units and generate employment. It is estimated that of the units for which mortgage loans were approved for ARP in 1976, 60 per cent or 15,174 units would not have been constructed without the Assisted Rental Program. These additional units generate approximately 12,500 new man-years of employment.

Another important goal of ARP is to ensure that units built under ARP are modest. To achieve this, the AHOP price limit and maximum floor area criteria were used. The former was found to be generally ineffective since almost all ARP units are priced substantially below these limits.

The restriction on floor area has been effective, with most projects being built to the maximum allowable unit size.

9.4 THE CAPITAL COST ALLOWANCE

If the CCA is used, it can generate a yield on original equity of 7.5 per cent per annum for masonry buildings or 11.1 per cent on wood frame buildings. One effect which is causing concern is the resulting bias to wood frame construction, particularly in western Canada.[1] Furthermore, as the marginal tax bracket of the individual rises, the value of the CCA rises proportionately. It is estimated that 70 per cent of all rental units built in 1976 were eligible for the CCA certificate. In 1977, the figure has risen to 85 per cent. The cost of capital cost allowances arising out of the 44,562 ARP units approved to July, 1977, could be as high as $192 million over the next ten years.

9.5 COST OF ARP

The average Assistance Loan for units under ARP was $85 per unit month. Because of the decline in interest rates at the end of 1976, the average loan on new units should decline to $60 per month. Should approvals reach 60,000 units in 1977 and thereafter remain at 25,000 per annum indefinitely, CMHC per annum cash outflow will rise to $205 million by 1994.

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[1]The recently announced CCA regulations for 1978 remove the bias by adopting a standard 5 per cent depreciation allowance regardless of building material.

Using a 10 per cent discount rate, the average subsidy per unit is $2,169 in constant 1976 dollars. Where advantage is taken of the CCA as well, the total value of the program is $3,955 per unit, approximately the same amount as would be obtained if the ARP program consisted of grant only. The total value of the subsidy excluding the CCA for the 44,562 units approved to July 31, 1976, is $98 million.

Provincial stacking in British Columbia will reduce the CMHC cost by approximately 20 per cent, while Ontario stacking will not affect the CMHC cost per unit, although it will increase the number of eligible units by approximately 5,000. It will also increase the probability that these units will either default or require an extended AL to 15 rather than 10 years because of the larger absolute size of the first-year assistance.

In calculating the value of the assistance to the owner, it is estimated that the combination of the ARP Assistance Loan and the depreciation provisions under the Income Tax Act (CCA) enables an owner to earn a 15 per cent per annum yield on equity for the average ARP unit. With no program at all, the yield would be minus 8.3 per cent. By itself, ARP would permit a yield of 3.6 per cent, whereas CCA alone would permit a yield of 3.8 per cent.

9.6 IMPACT OF ARP

The 59,000 units to be approved in 1977 are almost double the number of units approved in 1976. This large increase will have a significant effect in a number of markets, substantially increasing the vacancy rate for rental accommodation in centres such as Vancouver and Winnipeg. In other centres such as Edmonton and Toronto, the demand for rental accommodation is likely to be sufficient to absorb the new rental units. For those centres with an expected high number of vacant units, unemployment in the construction industry in 1978 is likely to be a problem unless government is able to generate employment in the non-residential sector. In addition, rents will be approximately 4 per cent lower than they would have been without the ARP program.

9.7 ISSUES

The provision of ARP assistance to small communities creates uncertainty with regard to the size of the AL because of uncertainty regarding the level of market rents. A possible solution to this would be to provide assistance in the form of an interest write-down, similar to AHOP. This would put the onus of rental ownership onto the entrepreneur rather than on CMHC. It would have the additional benefit of substantially simplifying the paperwork involved in the program.

The use of a single maximum AHOP house price has created an incentive to build bachelor and one-bedroon units. In some centres, however,

the maximum floor area limits are too low relative to local tastes. It is suggested that the use of maximum prices, adjusted for bedroom count and type of structure, would be more effective in ensuring modest quality than the current procedure.

Finally, it is recommended that ARP assistance be extended to existing dwellings for those projects that would otherwise default.

APPENDIX A

DATA SOURCES

INTRODUCTION

This appendix discusses the sources of data used in the analysis of ARP. These include:

- Project Management System
- Operating Agreements
- Mortgage Approval/Appraisal File
- Lending Division Monthly Reports
- CCA Certificates

Unfortunately, each source is maintained completely separate from the others in CMHC. For example, the size of the AL is recorded on the operating agreement but not on the mortgage file, while the type of dwelling is located in the mortgage file but not in the operating agreement. For purposes of this study, these two sources--operating agreement and mortgage approval--were merged. However, other sources were analyzed individually. In the following sections, these five data sets are described in detail.

A.1 Program Management System

Each week, branch officers fill in forms describing their activity during the week for each program.[1] They provide information on applications

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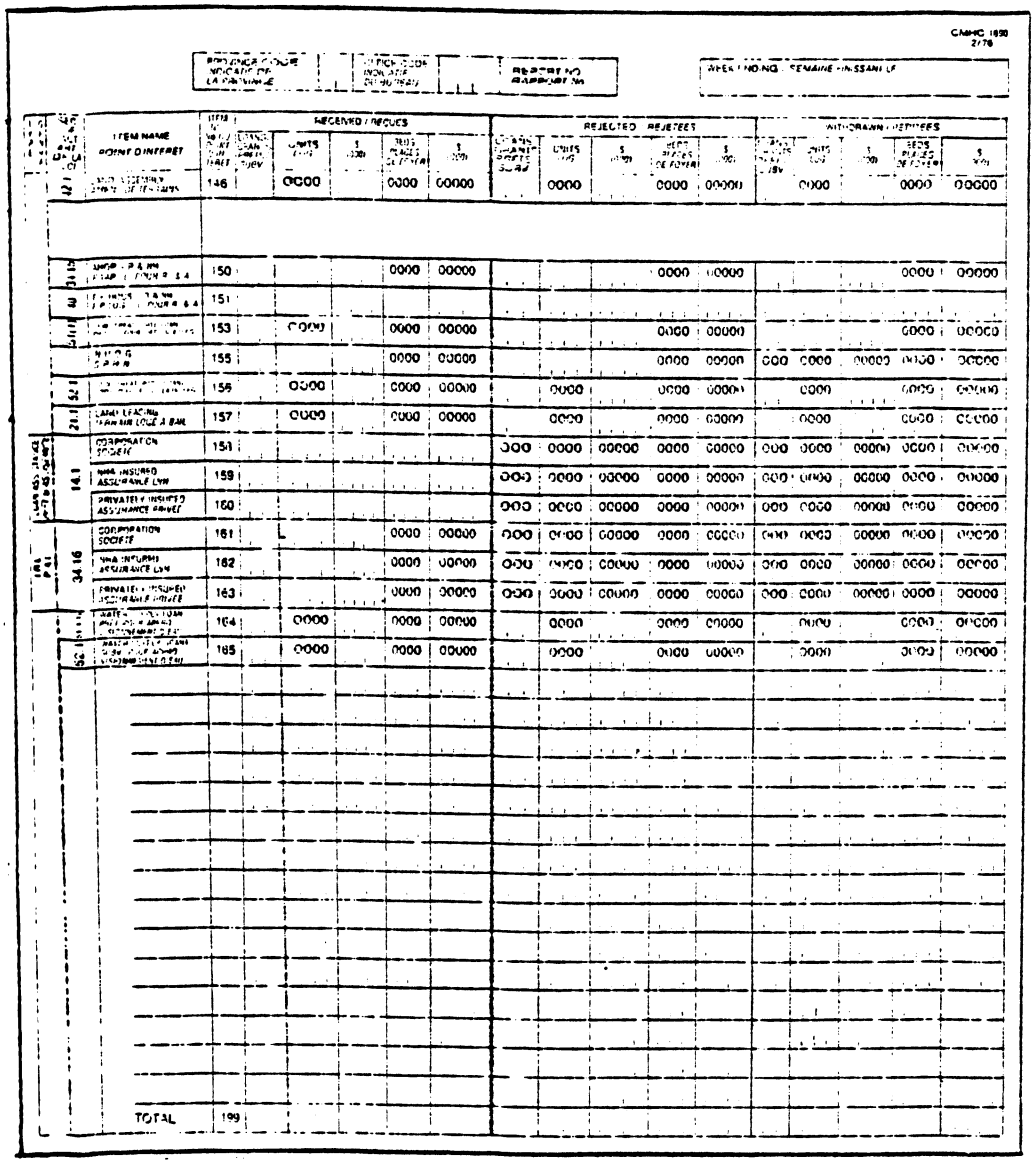
[1] See Figure A.1.

FIGURE A.1

PROGRAM MANAGEMENT SYSTEM REPORTING FORM



ITEM NAME / POINT D'INTERET	ITEM	RECEIVED / REÇUES UNITS	RECEIVED / REÇUES $ (000)	REJECTED / REJETÉES UNITS	REJECTED / REJETÉES $ (000)	WITHDRAWN / RETIRÉES UNITS	WITHDRAWN / RETIRÉES $ (000)
	146	0000	00000	0000	00000	0000	00000
	150		0000 00000		0000 00000		0000 00000
	151						
	153	0000	0000 00000		0000 00000		0000 00000
	155		0000 00000		0000 00000	000 0000	00000 00000
	156	0000	0000 00000	0000	0000 00000	0000	0000 00000
	157	0000	0000 00000	0000	0000 00000	0000	0000 00000
	158			000 0000	00000 0000 00000	000 0000	0000 0000 00000
	159			000 0000	00000 0000 00000	000 0000	00000 0000 00000
	160			000 0000	00000 0000 00000	000 0000	00000 0000 00000
	161		0000 00000	000 0000	00000 0000 00000	000 0000	00000 0000 00000
	162		0000 00000	000 0000	00000 0000 00000	000 0000	00000 0000 00000
	163		0000 00000	000 0000	00000 0000 00000	000 0000	00000 0000 00000
	164	0000	0000 00000	0000	0000 00000	0000	0000 00000
	165	0000	0000 00000	0000	0000 00000	0000	0000 00000
TOTAL	199						

in process, budget committed and units approved and applied for during the week. These data are compiled and compared to budget allocations and forecasts for the year. PMS reported 23,151 units approved under ARP in 1976. To the end of August, 1977, a further 32,791 units had been approved. These data are tabulated and printed immediately after they are received. While the data are current, they are poorly edited and provide only a rough estimate of total activity rather than accurate information on CMHC activity.

A.2 Operating Agreements

Operating agreements are signed with an entrepreneur/builder at the very early stages of a project.[1] They establish the amount of the AL and the terms under which they are provided, including operating expenses and revenues for the first year. They also specify the number and type of units and location. As of the end of January, 1977, 896 operating agreements had been signed, covering a total of 42,390 units. The average AL on these units was $83 per month.

A.3 Mortgage Approval/Appraisal

The Statistical Services Division of CMHC provides a computerized file describing each mortgage for each project.[2] The source of data for

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[1] See Table A.1 for a description of the process involved in erecting a building.

[2] Computer File N953N953.

TABLE A.1

ASSISTED RENTAL PROGRAM
STEPS INVOLVED IN PROCESSING THE APPLICATION FOR RENTAL LOANS

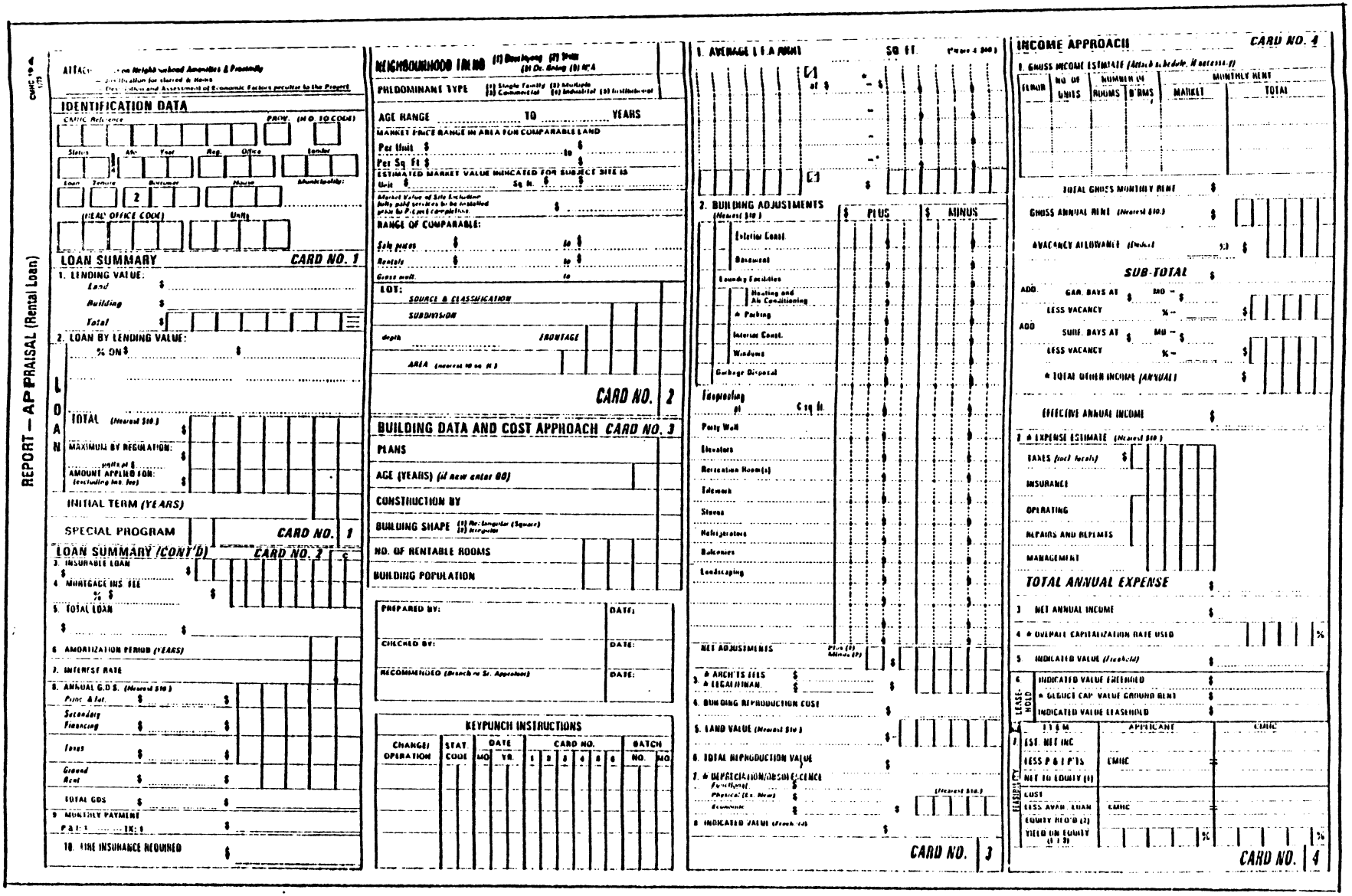
Steps	CMHC Form Completed	Form Filled by	Approximate Day on Which Issued Relative to Step 1
1. Application by Builder for Rental Loan	#1975	Builder	1
2. Application for ARP Subsidy	#1926	Builder & CMHC	1
3. Appraisal by CMHC	#19 A	CMHC	20
4. Signing of Operating Agreement	--	Builder & CMHC	30
5. Issuance of Undertaking to Insure	#530	CMHC	50
6. Signing of Mortgage	--	Builder & Lender	60
7. Recording of Appraisal Data on Computer File	--	--	85
8. CCA Certificate Issued Once Footings in Place	#1925	CMHC	100
9. Completion of Project - 80 p.c. Occupancy & Commencement of First Payment of AL	#1934	--	300

this file is the CMHC appraisal report, Form 19A. As can be seen in Figure A.2, this report covers mortgage amounts and interest rates, source and type of lot, estimated revenue and expenditure. The form is completed after the operating agreement is signed. There is, in addition, a lag of from six weeks to three months between the time the form is filled out and the time it is put into the computer file. The computer file, revised to the end of July, 1977, recorded a total of 971 projects, of which 598 represented 1976 approvals. These projects covered 44,566 units, as compared to 58,000 units for which operating agreements had been signed. The remainder are either in process or have not yet begun construction.

The Data and Systems Sector of CMHC attempts to maintain a fairly accurate file and spends a great deal of effort on editing. However, in many cases the data on the form as filled in by the branch officer are difficult to decipher and, on occasion, information is incomplete. Furthermore, adjustments to construction costs subsequent to appraisal are not always recorded, and as a result the data on the file may be incorrect. Despite the possibility of substantial error, however, this file has been used for most of the calculations in this report, since it provides the most readily accessible and comprehensive information on ARP units.

FIGURE A.2

REPORT - APPRAISAL RENTAL LOAN FORM



A.4 Lending Division

Lending Division produces a monthly report describing the level of activity in ARP as well as AHOP and general mortgage insurance. This report is based on local branch office reports combined with the commitments-to-insure.[1] Because the commitment is the first stage in the overall mortgage process, this report gives a picture of expected future activity as these commitments become operating agreements and eventually actual units. Because Lending Division requires early information on future trends, these data are hand tabulated by the local office and provide no breakdown by project size or type.[2]

A.5 CCA Certificates

To qualify for CCA offset against other income, a unit must be certified by CMHC as having commenced construction subsequent to November, 1974.[3] Copies of these certificates are sent to National Revenue, where they are filed for future reference in case of a tax audit. Copies were to be sent to CMHC as well, in order that CMHC could recover administrative costs from National Revenue. However, the proportion of forms returned to CMHC varies substantially by office. In a survey conducted by CMHC in

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[1] Form 530, See Figure A.3.

[2] See Figure A.4.

[3] See Figure A.5.

FIGURE A.3

UNDERTAKING TO INSURE REQUEST FORM

LENDER / *PRÊTEUR:* Retain last copy. Submit balance of set intact to CMHC.
Gardez la dernière copie. Soumettre le reste du jeu intact à la SCHL.

CMHC / *SCHL:* Retain parts 3 and 4. Return balance of set to lender's branch office.
Gardez les parties 3 et 4. Retourner le reste du jeu à la succursale du prêteur.

Central Mortgage and Housing Corporation / Société centrale d'hypothèques et de logement

CMHC 530

REQUEST — UNDERTAKING TO INSURE / DEMANDE — PROMESSE D'ASSURER
(pursuant to the National Housing Act / *conformément à la Loi nationale sur l'habitation*)

LENDER / PRÊTEUR (name, address / *nom et adresse*)

APPLICANT / *REQUÉRANT* (name, address / *nom et adresse*):

CROSS REFERENCE / *NUMÉRO DE RENVOI:*		CMHC ONLY SCHL SEULEMENT
LENDER'S REF. REF. DU PRÊTEUR	PROPERTY LOCATION EMPLACEMENT DE LA PROPRIÉTÉ	CMHC ACCOUNT NO. Nº DE COMPTE SCHL

LOAN PROPOSED / PRÊT PROPOSÉ

NEW CONSTRUCTION / *NOUVELLE CONSTRUCTION*
- ☐ HOME OWNERSHIP / *PROPRIÉTAIRE*
- ☐ RENTAL / *LOYER*

EXISTING HOUSING / *LOGEMENT EXISTANT*
- ☐ REFINANCE / *REFINANCEMENT*
- ☐ PURCHASE / *ACHAT*
- ☐ IMPROVE / *AMÉLIORATION*

INTEREST RATE / *TAUX D'INTÉRÊT* ________% | ________YEARS / *ANNÉES* | ______YRS. / *ANS*

INSURED / *ASSURÉ*: ☐ INSTALMENT / *PAR AVANCES* ☐ COMPLETION / *AU PARACH.*
UNINSURED / *NON-ASSURÉ*: ☐ INSTALMENT / *PAR AVANCES* ☐ COMPLETION / *AU PARACH.*

DISCOUNTS, SPECIAL FEES, EQUITY PARTICIPATION BY LENDER OR LEASEBACK ARRANGEMENTS BETWEEN LENDER AND BORROWER ARE:
ESCOMPTES, DROITS SPÉCIAUX, PARTICIPATION DU PRÊTEUR À LA MISE DE FONDS OU ENTENTES DE LOCATION DU TERRAIN ENTRE LE PRÊTEUR ET L'EMPRUNTEUR:
☐ NONE OR EXPLAIN: / *AUCUN OU EXPLIQUER:*

ENCLOSURES / PIÈCES JOINTES

(A) REQUIRED FOR ALL LOANS / EXIGÉ POUR TOUS LES PRÊTS
- ☐ 3 SETS PLANS, SPECIFICATIONS, PLOT PLANS. / *3 JEUX DES PLANS, CAHIER DES CHARGES, PLANS DU TERRAIN.*
- IF SUBMITTED PREVIOUSLY INDICATE / *SI SOUMIS ANTÉRIEUREMENT INDIQUER* — CMHC ACCOUNT NO. / Nº DE COMPTE SCHL
- 2 COPIES OF APPLICATION - LOAN / *2 COPIES DE LA DEMANDE DE PRÊT* ☐ CMHC 70 ☐ CMHC 1075 ☐ CMHC 1904
- ☐ APPLICATION FEE / *DROIT DE DEMANDE* — NO. OF UNITS / *NO D'UNITÉS* — AMOUNT ENCLOSED / *MONTANT CI-INCLUS* $
- CERTIFICATES FOR / *CERTIFICATS* ☐ WELL / *PUITS* ☐ SEPTIC TANK / *FOSSE SEPTIQUE* ☐ OTHER / *AUTRE*
- IF OTHER, SPECIFY / *PRÉCISER AUTRE:*

(B) PLUS, FOR EXISTING HOUSING AS APPLICABLE / EXIGÉ POUR LES MAISONS EXISTANTES SEULEMENT, S'IL Y A LIEU.
- ☐ 2 COPIES, LIST – IMPROVEMENTS, CMHC 1610 / *2 COPIES, LISTE – AMÉLIORATIONS, CMHC 1610*
- ☐ 1 COPY OF ACCEPTED OFFER TO PURCHASE / *1 COPIE DE L'OFFRE D'ACHAT ACCEPTÉE*
- ☐ STATEMENT (S) OF OUTSTANDING MORTGAGE (S) BALANCE(S) / *ÉTAT DU SOLDE DES HYPOTHÈQUES EN COURS.*

SIGNATURE

DATE

(FOR APPROVED LENDER / *POUR LE PRÊTEUR AGRÉÉ*)

CMHC / SCHL — AMOUNT / MONTANT | DATE | CASHIER / CAISSIER

CMHC ONLY / SCHL SEULEMENT

UNDERTAKING / PROMESSE

We hereby undertake to insure a mortgage loan on this property in accordance with and subject to the NHA, the regulations thereunder, and the conditions specified on the back of this form as they apply.

Nous nous engageons par les présentes à émettre une police d'assurance relativement au prêt consenti sur la propriété en cause, aux termes et sous réserve des dispositions de la LNH, des règlements découlant de la cité loi et des conditions énoncées au verso de la présente formule, suivant le cas.

AMOUNT OF INSURABLE LOAN / *MONTANT DU PRÊT ASSURABLE* $____________

INSURANCE FEE / *DROIT D'ASSURANCE* ________% $____________

TOTAL $____________

DATE: | MANAGER / *GÉRANT:*

CMHC ESTIMATES / ESTIMATIONS SCHL

TAXES (PER ANNUM) / *TAXES (ANNUELLES)* ____________$____________

LENDING VALUES / *VALEURS D'EMPRUNT*

NEW CONSTRUCTION / *NOUVELLE CONSTRUCTION*

LAND / *TERRAIN* ____________$____________

BUILDING / *BÂTIMENT* ____________$____________

EXISTING HOUSE / *MAISON EXISTANTE* $____________

APPROVED LENDER BRANCH / *SUCCURSALE DU PRÊTEUR AGRÉÉ*

FIGURE A.4

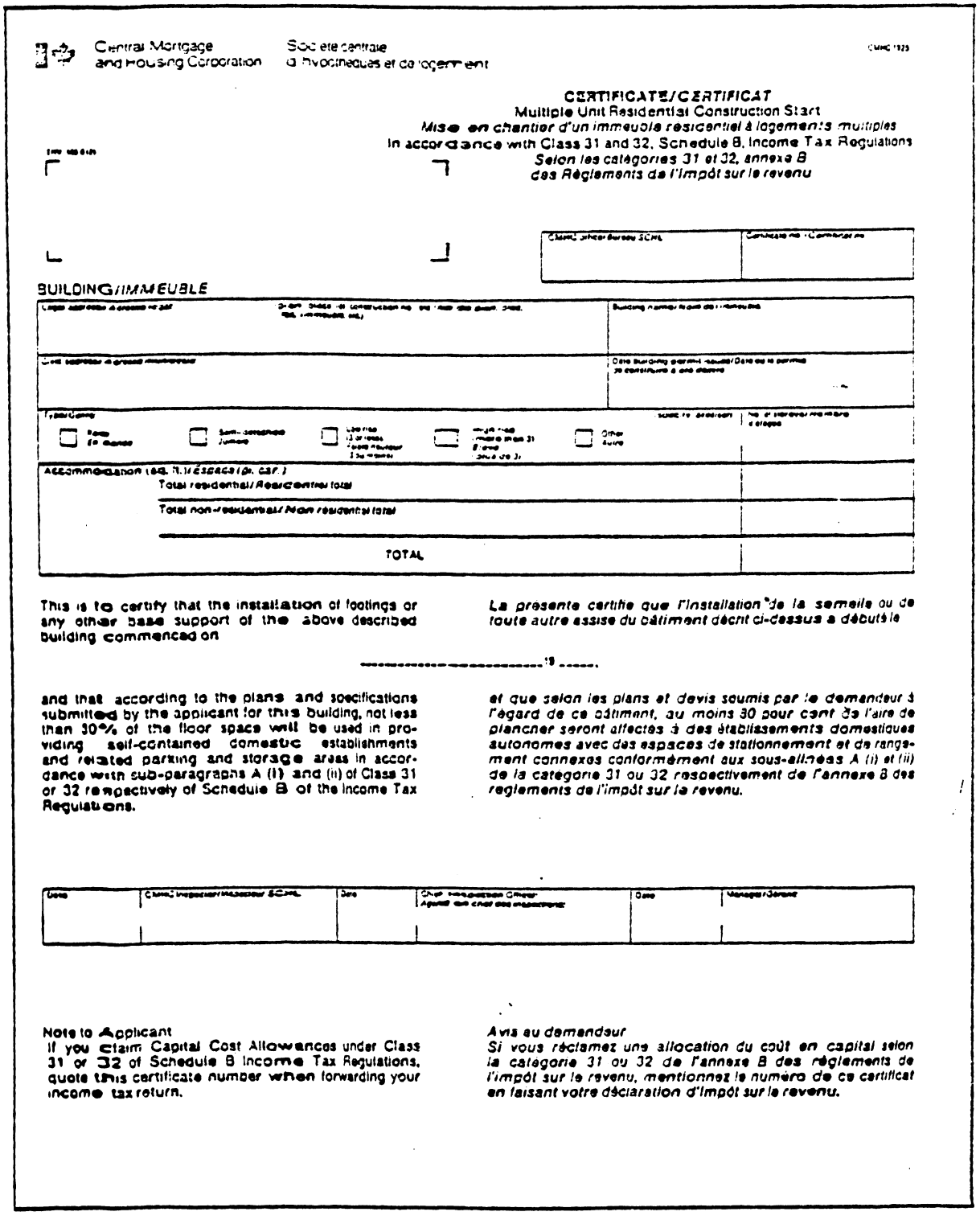
MORTGAGE INSURANCE MONTHLY ACTIVITY REPORTING FORM

ACTIVITY REPORT - MORTGAGE INSURANCE A.D.P.(P), A.H.O.P.(P) FOR MONTH August 31, 1977

LOCATION	Applications in process: New rental units	No. of projects	New homeownership units	No. of projects	Existing homeownership units	No. of projects	Total units		Vac. rate %	New rental units: loans	New rental units	Other
CANADA	2285	79	4628	697	2235	279	11155			62919	31561	5092
NEWFOUNDLAND AND St. John's	36	1	18	12	14	4	68		4.4	300	337	9
P.E.I. Charlottetown	0	0	1	9	0	4	1			162	26	0
NOVA SCOTIA	909	2	93	22	130	37	1129			872	1365	18
Halifax	929	1	79	22	102	37	[illegible]		3.0	850	1351	18
Sydney	0	0	4	0	15	0	19			22	12	0
NEW BRUNSWICK	290	2	26	7	23	5	337			1027	216	0
Moncton	0	0	0	0	5	0	5			100	0	0
St. John	0	0	6	2	11	1	17		9.2	20	4	0
Fredericton	290	2	20	5	1	2	311			557	232	0
MANITOBA Winnipeg	1165	2	95	11	152	11	1605		1.1	1390	1150	0
SASKATCHEWAN	355	5	160	81	107	29	627			1800	1358	0
Regina	81	0	16	22	89	36	185		0.6	950	847	0
Saskatoon	276	5	144	59	17	1	437			850	511	0
ALBERTA	953	5	1413	41	672	30	2032			3600	4163	2035
Edmonton	756	5	1709	38	540	30	2547		0.2	250	243	1566
Calgary	197	0	135	1	65	9	417		0.3	3060	3611	266
Red Deer	0	0	11	4	16	0	27			300	313	193
Lethbridge	0	0	19	9	11	0	30			50	131	0
Yellowknife												
BRITISH COLUMBIA	2225	29	414	269	354	16	2997			4450	5222	1106
Vancouver	1561	28	216	195	330	3	2304		1.6	1256	2976	160
Victoria	0	0	81	6	46	0	127		1.1	842	1591	591
Prince George	0	0	21	14	109	11	125			180	161	0
Kelowna	151	1	81	43	13	0	25			116	289	84
Kamloops	0	0	0	1	36	1	24			0	0	23
Cranbrook	113	0	12	5	17	1	14			60	205	103
N.W.T.	0	0	1	3	4	1	[illegible]			133	171	0
YUKON Whitehorse	0	0	3	9	5	9	[illegible]			0	0	0

FIGURE A.5

CERTIFICATE OF MULTIPLE UNIT RESIDENTIAL CONSTRUCTION START



Central Mortgage and Housing Corporation / Société centrale d'hypothèques et de logement

CERTIFICATE/CERTIFICAT
Multiple Unit Residential Construction Start
Mise en chantier d'un immeuble résidentiel à logements multiples
In accordance with Class 31 and 32, Schedule B, Income Tax Regulations
Selon les catégories 31 et 32, annexe B des Règlements de l'impôt sur le revenu

BUILDING/*IMMEUBLE*

ACCOMMODATION (eg. ft.)/*ESPACE (p. ex. pi.)*
Total residential/*Résidentiel total*
Total non-residential/*Non résidentiel total*
TOTAL

This is to certify that the installation of footings or any other base support of the above described building commenced on

La présente certifie que l'installation de la semelle ou de toute autre assise du bâtiment décrit ci-dessus a débuté le

_____, 19____.

and that according to the plans and specifications submitted by the applicant for this building, not less than 30% of the floor space will be used in providing self-contained domestic establishments and related parking and storage areas in accordance with sub-paragraphs A (i) and (ii) of Class 31 or 32 respectively of Schedule B of the Income Tax Regulations.

et que selon les plans et devis soumis par le demandeur à l'égard de ce bâtiment, au moins 30 pour cent de l'aire de plancher seront affectés à des établissements domestiques autonomes avec des espaces de stationnement et de rangement connexes conformément aux sous-alinéas A (i) et (ii) de la catégorie 31 ou 32 respectivement de l'annexe B des règlements de l'impôt sur le revenu.

Date | Date | Date

Note to Applicant
If you claim Capital Cost Allowances under Class 31 or 32 of Schedule B Income Tax Regulations, quote this certificate number when forwarding your income tax return.

Avis au demandeur
Si vous réclamez une allocation du coût en capital selon la catégorie 31 ou 32 de l'annexe B des règlements de l'impôt sur le revenu, mentionnez le numéro de ce certificat en faisant votre déclaration d'impôt sur le revenu.

February, 1977, local offices reported that approximately 1,620 certificates had been reported as issued. The Department of National Revenue reported that to the end of June, 1977, 4,882 certificates had been issued. While part of the difference is due to the different time periods, it would also appear that many regions do not keep records of certificates issued.[1]

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[1]National Revenue estimates 1,700 certificates were issued in 1977.

APPENDIX B

CASH FLOW IMPLICATIONS OF ARP

INTRODUCTION

This appendix presents the detailed cash flow implications of the Assisted Rental Program. Section B.1 examines the cash flow implications from the point of view of the individual landlord under alternative assumptions regarding repayment. In Section B.2, these estimates are extended to the 25,290 ARP approvals in 1976.[1] Finally, Section B.3 will estimate the overall cash flow implications of future ARP approvals in terms of the current budget allocations.

B.1 Cash Flow Implications for the Individual Investor

For projects approved in 1976, the average value of the AL in the first year was $85.25 per unit per month, or $1,023 per annum. If assistance declines by one-tenth of the original amount each year, the accumulated AL at the end of the tenth year would be $5,627 (see Table B.1).

Although the AL begins to accumulate interest at the then current NHA lending rate at the end of the tenth year, the borrower has a number of options for repaying the loan. These options involve repayment:

Option 1: At any time without notice or bonus.

Option 2: On an amortized basis to repay within the life of the insured loan.

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[1] Whereas PMS reported 23,151 units for 1977, the August, 1977, version of the mortgage tape identified 25,290 units for 1976.

TABLE B.1

CASH FLOW OF TYPICAL ARP RECIPIENT

Year	CMHC Disbursement of AL During Year	Accumulated AL at End of Year[1]	Stair-Step Repayment During Year	Amortization Repayment to End of 35 Years[2]
1	1,023	1,023	--	--
2	921	1,944	--	--
3	818	2,762	--	--
4	716	3,478	--	--
5	614	4,092	--	--
6	512	4,604	--	--
7	409	5,013	--	--
8	307	5,320	--	--
9	205	5,524	--	--
10	102	5,627	--	--
11	--	6,194	0	604
12	--	6,706	102	671
13	--	7,157	205	735
14	--	7,541	307	794
15	--	7,849	409	848
16	--	8,077	512	896
17	--	8,213	614	939
18	--	8,253	716	973
19	--	8,183	818	999
20	--	7,993	921	1,015
21	--	7,673	1,023	1,018
22	--	7,207	1,125	1,009
23	--	6,583	1,228	982
24	--	5,784	1,330	935
25	--	4,791	1,432	861
26	--	3,588	1,535	753
27	--	2,152	1,637	601
28	--	459	1,739	389
29	--	0	482	91

[1]From year 11 on, accumulated AL is an approximation only, assuming a 10 per cent simple interest rate.

[2]Payments that would have to be paid each year to the end of the original 35-year period in order to amortize original first mortgage.

Option 3: On a "stair-step" or accelerated basis which will require increasing monthly payments at the same annual rate that the assistance loan was reduced. For example, if assistance was decreased by $120 a year per unit, the first year repayment would be $120 on a monthly basis, the second year $240, the third year $360, etc...

Option 4: When payment level is equal to payment required to amortize loan as per Option 2 above, borrowers may opt for amortized basis. See example in Appendix "C".

Option 5: Where revenues are not sufficient to support payment levels required in Options 2 and 3 above, CMHC will accept repayment on a flexible basis that would require monthly payments towards the loan in the amount that revenue exceeds operating costs, debt service and return on equity as agreed by CMHC. When this method is used the operating agreement would remain in force and CMHC would continue to review operating statements and control return on equity.[1]

Table B.1 illustrates these repayment options for a first-year AL of $85.50 per month, on the assumption that interest rates fall to 10 per cent per annum in the tenth year and remain there for the remaining 25 years of the original amortization period of the first mortgage. Under Option 1, the borrower can repay the accumulated AL at any time. For example, at the end of year 16 he can repay to CMHC $8,077 per unit and leave the program.

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[1]CMHC General Memorandum B1067, p.7.

Under Option 2, he would amortize the loan in year 11, paying to CMHC $604 per annum for each year, for 25 more years. Option 3 would enable him to increase his repayments by $102 per year, beginning in year 11 with no repayment. Under this option, he would pay CMHC $1,739 in the 28th year, and a further $482 in the 29th year to completely amortize his loan. Option 4 would permit him to switch in year 21 from the stair-step method to the amortization period. Thus, instead of payments continuing to step up at a rate of $102 per annum, he would pay $1,018 per annum each year to the end of the original 35-year period.

B.2 Cash Flow Implications of 1976 Approvals

The cash flow estimates given in Table B.1 are for the typical investor. However, it is not possible merely to multiply this figure by the 25,290 approvals in 1976 since these approvals are spread out over the entire year rather than occurring at a single time. Furthermore, there is a lag of approximately one year between mortgage approval and initial occupancy.[1] To accommodate these two conditions, it is assumed that the assistance loans for one half of the 1976 approvals are disbursed in 1977 and the remainder in 1978.

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[1]The AL is disbursed only upon occupancy of the unit.

TABLE B.2

CASH FLOW IMPLICATIONS OF 1976 APPROVALS[1]

Year	Disbursement	Repayment[2]
1977	12.9	--
1978	24.6	--
1979	22.0	--
1980	19.4	--
1981	16.8	--
1982	14.2	--
1983	11.7	--
1984	9.1	--
1985	6.4	--
1986	3.9	--
1987	1.3	--
1988	--	1.3
1989	--	3.9
1990	--	6.4
1991	--	9.1
1992	--	11.7
1993	--	14.2
1994	--	16.8
1995	--	19.4
1996	--	22.0
1997	--	24.6
1998	--	25.8
1999	--	25.8
2000	--	25.8
2001	--	25.8
2002	--	25.8
2003	--	25.8
2004	--	25.8
2005	--	25.8
2006	--	25.8
2007	--	25.8
2008	--	25.8
2009	--	25.8
2010	--	25.8
2011	--	25.8
2012	--	25.8

[1]25,290 approvals. Dollars are in millions.

[2]Based on Option 4.

With respect to repayment, it is possible that all three possible options will be utilized, depending upon the circumstances of the owner. The most likely method, however, is Option 4, the stair-step plan switching to amortization. It is this option that has been shown in Table B.2. As can be seen, CMHC disbursements will continue to 1987, when repayment begins. In 1998, repayments level off at $23.6 million as all of the 25,290 approvals are assumed to have switched to the amortization plan.

B.3 Cash Flow Implications of Future Approvals

Corporate Planning Division has estimated that, in 1977, 60,000[1] ARP units will be approved. They then expect approvals to decline to 28,000 in 1978 and 23,000 per annum for 1979 onwards. This section estimates the cash flow implications as these approvals come on stream. To do this, it is necessary to make assumptions regarding future inflation in costs and rents and the pattern of future interest rates.

With regard to inflation, if both costs and rents rise at 8 per cent per annum, the size of the gap which the Assistance Loan is designed to fill will also grow by 8 per cent. Using the 8 per cent figure, it is therefore assumed that, without a fall in interest rates, the size of the AL on a per unit basis will grow at 8 per cent per annum.

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[1] Some parts of this evaluation use 59,100 units, a recently revised estimate, as the target for 1977.

With regard to the interest rate effect, the decline in interest rates from 11¼ per cent in early 1976 to 10¼ per cent in mid-1977 has resulted in a decline of approximately $25 per month in the size of the first-year Assistance Loan. It is assumed that from 1977 onwards interest rates will remain at this 10 per cent level.

Table B.3 indicates the cash flow implications of approvals for 1976 onward. As can be seen, should the program end after five years,[1] total cash flow will peak at $103 million in 1981. Should CMHC continue to approve 25,000 units per year up to 1993, total cash flow will approach $205 million in 1994.

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[1]Corporate Planning uses a five-year horizon for budgetary purposes.

TABLE B.3

CASH FLOW IMPLICATIONS OF FUTURE ARP APPROVALS TO 1993[1]

Year	Number of Units Approved	Year of Disbursement																
		1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994
1976	25,290	12.9	24.6	22.0	19.4	16.8	14.2	11.7	9.1	6.4	3.9	1.3	-1.3	-3.9	-6.4	-9.1	-11.7	-14.2	-16.8
1977	60,000	--	23.3	44.5	39.7	35.2	30.4	25.7	21.1	16.4	11.7	7.1	2.4	-2.4	-7.1	-11.7	-16.4	-21.1	-25.7
1978	28,000	--	--	11.7	22.4	20.0	17.7	15.3	13.0	10.6	8.3	5.9	3.6	1.2	-1.2	-3.6	-5.9	-8.3	-10.6
1979	25,000	--	--	--	10.9	20.8	18.6	16.5	14.2	12.1	9.9	7.7	5.5	3.3	1.1	-1.1	-3.3	-5.5	-9.9
1980	25,000	--	--	--	--	11.8	22.5	20.1	17.8	15.3	13.1	10.7	8.3	5.9	3.6	1.2	-1.2	-3.6	-5.9
1981	25,000	--	--	--	--	--	12.7	24.3	21.7	19.2	16.6	14.1	11.5	9.0	6.4	3.8	1.3	-1.3	-3.8
1982	25,000	--	--	--	--	--	--	13.7	26.2	23.4	20.8	17.9	15.2	12.5	9.7	6.9	4.2	1.4	-1.4
1983	25,000	--	--	--	--	--	--	--	14.8	28.3	25.3	22.4	19.3	16.5	13.5	10.5	7.5	4.5	1.5
1984	25,000	--	--	--	--	--	--	--	--	16.0	30.6	27.3	24.2	20.9	17.8	14.5	11.3	8.1	4.8
1985	25,000	--	--	--	--	--	--	--	--	--	17.3	33.0	29.5	26.2	22.5	19.2	15.7	12.2	8.7
1986	25,000	--	--	--	--	--	--	--	--	--	--	18.7	35.6	31.9	28.3	24.3	20.7	17.0	13.2
1987	25,000	--	--	--	--	--	--	--	--	--	--	--	20.2	38.5	34.4	30.5	26.3	22.4	18.3
1988	25,000	--	--	--	--	--	--	--	--	--	--	--	--	21.8	41.6	37.2	33.0	28.4	24.2
1989	25,000	--	--	--	--	--	--	--	--	--	--	--	--	--	23.5	44.9	40.2	35.6	30.7
1990	25,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	25.4	48.5	43.4	38.5
1991	25,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	27.4	52.4	46.8
1992	25,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	29.6	56.6
1993	25,000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	32.0
Total--1976-80 Approvals		12.9	47.9	78.2	92.4	104.6	103.5	89.2	75.2	60.8	47.1	32.7	18.5	4.1	-10.0	-24.3	-38.4	-52.7	-66.7
1976-93 Approvals		12.9	47.9	78.2	92.4	104.6	116.1	127.1	137.9	147.7	157.7	166.1	174.1	181.2	187.7	192.9	197.7	201.0	203.4

[1]Millions of dollars.

APPENDIX C

SELECTED TABLES

INTRODUCTION

In this appendix, selected tables showing the characteristics of ARP projects are presented. The 971 projects recorded in the Appraisal File as of July, 1977,[1] form the basis of these tables.

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[1]See Appendix A, Section A.3.

TABLE C.1

ASSISTED RENTAL PROJECTS
DISTRIBUTION BY INTEREST RATE

Rate of Interest on First Mortgage	Per Cent of Projects	Per Cent of Units
9 p.c. or Lower	0.1	0.1
9.01 - 10	0.5	0.5
10.01 - 10.50	19.3	23.5
10.51 - 11.00	11.6	13.0
11.01 - 11.50	8.1	9.9
11.51 - 12.00	51.9	46.8
12.01 - 12.50	2.4	2.0
Not Given	6.1	4.2

NOTE: In all tables, figures may not add to 100 because of rounding.

TABLE C.2

ASSISTED RENTAL PROGRAM
PROJECT DISTRIBUTION BY NEIGHBOURHOOD TYPE

Type of Neighbourhood	Per Cent of ARP Projects
Developing	83.8
Static	10.5
Declining	0.9
Not Given	4.9

TABLE C.3

ASSISTED RENTAL PROGRAM
PROJECT DISTRIBUTION BY LOT SOURCE

Source of Lot	Per Cent of ARP Projects	Per Cent of ARP Units
Single lot Privately Owned	52.0	51.7
Subdivision Development		
- Municipal	3.6	4.0
- Builder	27.0	24.8
- Province	0.5	0.5
Not Specified	16.9	18.9

TABLE C.4

ASSISTED RENTAL PROGRAM
PROJECT DISTRIBUTION BY MORTGAGE AMORTIZATION PERIOD

Period Years	Per Cent of ARP Projects	Per Cent of ARP Units
25	0.7	0.3
30	1.5	1.3
35	97.0	96.4
40	0.7	2.0

TABLE C.5

ASSISTED RENTAL PROGRAM
PROJECT DISTRIBUTION BY FIRST MORTGAGE TERM

Term Years	Per Cent of ARP Projects	Per Cent of ARP Units
5	68.9	54.9
6	0.1	--
10	18.1	22.9
15	7.3	12.5
20	0.7	1.6
25	3.9	6.7
Not Specified	1.0	1.4

TABLE C.6

ASSISTED RENTAL PROJECTS
DISTRIBUTION BY PROJECT SIZE

Number of Units in Project	Per Cent of Projects	Per Cent of Units
Under 8	3.7	0.3
8 - 14	16.4	4.1
15 - 24	29.4	12.3
25 - 49	24.0	18.8
50 - 99	14.8	23.4
100 - 149	5.9	15.6
150 - 199	3.3	12.0
200 +	2.6	13.4

TABLE C.7

ASSISTED RENTAL PROGRAM
UNIT DISTRIBUTION BY BEDROOM COUNT

Unit Type	Per Cent of Units
Bachelor	6.4
1 Bedroom	30.9
2 Bedroom	48.1
3 Bedroom	14.4
4 Bedroom	0.2

APPENDIX D

THE COST OF ARP AND CCA

INTRODUCTION

In this appendix, the procedure used to estimate the costs of the ARP loan and Capital Cost Allowance is described.

D.1 Method

To estimate the cost of ARP and CCA, the following assumptions are made, all on a per unit basis:[1]

1.	Cost of Structure	$18,000
2.	Total Cost of Project	$24,000
3.	Expected Future Increases in Value of Project	no change
4.	Mortgage	90 per cent at 11¾ per cent interest
5.	Depreciation Rate[2]	8.75 per cent
6.	Rent in First Year	$271 per month--but in first year only one-half of units rented
7.	Future Rent Increases	8 per cent per annum
8.	Costs of Maintenance, Operation and Taxes	$1,314 per year in first year
9.	Future Maintenance, Operation and Taxes Increase	12 per cent per annum
10.	Tax Bracket of Investor	50 per cent
11.	Equity	10 per cent
12.	Allowable Yield on Equity	7 per cent

[1] Based on 1976 approvals only.

[2] A weighted average of class 31 and class 32 structures.

Because the first year represents an abnormal year, insofar as the project is not fully rented, consider the second year.[1] In this year, rents are $3,512 and operating costs are $1,472; interest and principal payments are $2,791. Assuming no assistance of any sort, the owner would have:

1.	Principal and Interest	$2,791	(col. 4 and 3)
2.	Operating Cost	$1,472	(col. 2)
3.	Total Cost	$4,263	
4.	Rent Revenue	$3,512	(col. 1)
5.	Loss	$751	

This net loss, exclusive of principal repayment, can be treated as a loss offset against other income.

1.	Loss	-$751		-$751
2.	Less Principal Repayment	+ $94	(col. 4)	
3.	Loss for Tax Purposes	-$657		
4.	Offset at 50 per cent Marginal Tax Rate	$657 x 0.5 = $328	(col. 10)	+$328
5.	Net Loss	-$422	(col. 14)	-$422

[1] See Table D.1.

TABLE D.1

ASSISTED RENTAL PROGRAM
OWNER'S DETAILED COST CALCULATIONS

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
											Cash Flow			
Year	Rent	Operating Cost	Interest	Principal	Yield	Depre-ciation	ARP	Tax + CCA	No CCA	Zero CCA	ARP + CCA	ARP Only	CCA Only	No Program
1	1626	1314	2707	84	170	1575	1023	1985	1198	1198	529	-258	-494	-1281
2	3512	1472	2697	94	170	1437	920	1047	328	328	1217	498	296	-422
3	3793	1648	2686	105	170	1311	816	926	271	271	1096	440	280	-376
4	4097	1846	2673	118	170	1197	710	810	211	211	980	381	269	-329
5	4424	2068	2659	132	170	1092	604	697	151	151	867	321	263	-283
6	4778	2316	2643	148	170	996	498	589	90	90	759	260	260	-238
7	5161	2594	2626	165	170	909	394	484	29	29	654	199	260	-195
8	5573	2905	2606	185	170	830	292	384	0	-31	553	170	261	-122
9	6019	3253	2584	207	170	757	195	287	0	-91	457	170	262	-25
10	6501	3644	2559	232	170	691	104	196	0	-149	366	170	262	66
11	7021	4081	2531	260	149	630	0	111	0	-204	260	149	260	149
12	7582	4571	2500	291	221	575	-104	32	0	-256	148	117	252	221
13	8189	5119	2465	326	279	525	-208	0	0	-302	71	71	279	279
14	8844	5734	2426	365	320	479	-312	0	0	-342	-8	-8	320	320
15	9552	6422	2382	409	339	437	-416	0	0	-374	-77	-77	339	339
16	10316	7192	2333	458	333	-33442	-7667	-7116	-395	-395	-14451	-7730	-6784	-63
Present Value of Cash Flow											2055	-175	-100	-2330
Equivalent Yield											15.1 p.c.	3.2 p.c.	3.6 p.c.	-8.3 p.c.

Thus without any form of assistance, the net loss in the first year would be $422 (col 14).

With CCA provisions, the owner may offset losses generated by depreciation against other income. The value of the depreciation in the second year is $1,437 (col. 6). Therefore, the net position with CCA and no ARP is:

1.	Loss	$751		-$751 (see above)
2.	Depreciation	$1,437	(col. 6)	
3.	Total Loss Plus Repayment	$2,188		
4.	Less Principal Repayment	$94	(col. 4)	
5.	Loss for Tax Purposes	$2,094		
6.	Offset at 50 Per Cent	$1,047	(col. 8)	$1,047
7.	Net Gain			$ 296 (col. 13)

Now assume there was an ARP program only and no CCA. To calculate the ARP loan, it is necessary to subtract from gross rent, expenditure on maintenance, operation and taxes as well as mortgage repayment and an allowable yield in equity.

1. Rent			$3,512 (col. 1)
2. Operating Costs	$1,472	(col. 2)	
3. Principal and Interest	-$2,791	(col. 3 and 4)	
4. Yield	$170	(col. 5)	
5. Total Cost	$4,433		-$4,433
6. ARP/Assistance per Year			$920 (col 7)

In terms of cash flow, the owner's position is the same as that on the first example with no program except that he gets the ARP loan.

1. Net Position, No Program	-$422	
2. Plus ARP Assistance	+ $920	
3. Net Position	$498	(col 12)

Finally, consider what would happen with both CCA and ARP. In this case we add to the net position in the CCA-only assistance the value of the ARP loans.

1. Net Position, CCA Only	+$296	(col. 13)
2. Net Position with ARP Assistance	+ $920	(col. 7)
3. Total Assistance	$1,217	(col. 11)

This procedure is used for each year. However, in year 11 the ARP loan is paid back. Since it pays market interest, it makes no difference to the subsidy calculation if it is assumed that it is paid back in one lump sum or over a period. From the point of view of true cash flow, however, graduated repayment is more likely.

In year 16 the project is sold and depreciation is recaptured. The method however remains the same.

Note that without the CCA provisions CCA can only be applied against actual income for the building. In the base run, the property ceases to generate a loss in year 7. As seen in column 9, it is assumed CCA is used to offset completely any rental income until the property is sold. Had there been a zero depreciation allowable (column 10) the owner would have to pay income tax the seventh year.

To calculate net present value of the project under no program, a discount rate of 10 per cent is used. The stream of cash flow in column 14 is first divided by (1.10 to the power (n - 1)) where n is the year the cash comes in and the cash flows summed. As can be seen in the first line after the 16th year, the fourth number for the present value of the cash flow for no programs is -$2,330; this means that the net present value of the project without any assistance is -$2,330.

To calculate the equivalent yield, divide the present value of the program plus the amount of principal repaid by the original equity investment. Then use the formula below to calculate the yield:

$$Z = \frac{a}{q} - \sum_{i=1}^{n} (1.1^{-i})$$

where Z = equivalent yield
a = present value of the program's cash flow
q = original equity
n = year in which sold.