# TAX EXPENDITURES - HOUSING

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Prepared For

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By

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# EXECUTIVE SUMMARY

This study was commissioned by Canada Mortgage and Housing Corporation to evaluate the costs and benefits of selected tax expenditures in the housing area along with a discussion of the effectiveness of such expenditures.

## Multiple Unit Residential Buildings (MURB) Provision

- The MURB provision of the Income Tax Act allows investors in MURBs to deduct capital cost allowance (CCA) losses from other income for taxation purposes.

- There are estimated to have been a total of 170,000 MURB units started in Canada prior to 1981. The total MURB starts for 1981 are forecast to be approximately 25,000 units bringing the total number of MURB units to 195,000.

- The cost of the MURB provision in terms of tax expenditures in the year 1981 is estimated to be $67 million.

- On a discounted value basis, the tax expenditures associated with the expected 25,000 MURB starts in 1981 are estimated to be between approximately $50 million and $80 million (depending on the discount rate used). This averages out to between $2,000 and $3,200 per MURB unit built. On a net rental unit added basis, the cost per unit would likely be nearly double these figures.

- There is little question that MURBs were an important component of the recovery in rental construction in the mid to late 1970's. However, it appears likely that, if left to its own devices, the rental market would have begun to respond to the excess demand on its own - albeit at higher rents.

- The main beneficiaries of the MURB provision from the supply side of the market have been the developer/promoters and investors with high marginal tax rates. There is evidence that some promoters may be overvaluing projects. Investors, who tend not to be conversant with real estate matters, generally are purchasing the asset solely on its tax shelter aspect with no recognition of possible poor investment prospects due to inflated purchase prices.

- The MURB provision is not considered to be an efficient mechanism for promoting rental investment. The two main problems appear to be (a) its on-off stop-gap nature in relation to the structural problem of low market rents and high costs of rental construction; and (b) the inefficient method of disbursing the subsidy.

## Use of CCA Depreciation Rates on Rental Buildings Rather Than Actual Depreciation Rates

- Owners of depreciable property eligible for depreciation under the Income Tax Act are generally allowed to deduct depreciation expense (capital cost allowance) which exceeds actual depreciation. The tax expenditure for rental residential property is a part of a general tax expenditure providing accelerated write-offs of capital assets.

- The current rate of depreciation which is claimable on new rental residential buildings by eligible owners for tax purposes is the CCA rate of 5 percent. This is considerably in excess of the actual depreciation on rental buildings which, for the purposes of this report, is assumed to be book depreciation.

- The difference between the total CCA claimed on rental buildings and the total book depreciation is not nearly as great as might be expected. Book depreciation begins to exceed CCA around the twentieth year after depreciation commences so high depreciation on older buildings in the rental housing stock offsets the low initial book depreciation on new buildings.

- The annual cost of allowing CCA depreciation on the total stock of rental residential buildings rather than book depreciation is estimated at roughly $95 million.

## Deductibility of Soft Costs

- Developers and investors in syndicated new rental buildings are allowed to deduct soft costs (interest during construction, fees for initial leasing, etc.) from income in the taxation year they are incurred rather than having these costs capitalized in the building value and depreciated over time.

- Allowing immediate deductions of soft costs on new rental residential buildings is expected to cost the federal government approximately $116 million in 1981. The portion of this applicable to MURB projects is estimated to be $67 million.

- There are arguments both for and against the treatment of soft cost deductions by developers as tax expenditures; there is little doubt, however, that the transferability of the soft cost deductions to syndicated investors constitutes a tax expenditure.

- The ability to deduct soft costs is an important element in the economics of new rental projects destined as tax shelters. There is considerable variation, however, in the extent of soft costs deducted on various tax shelter projects.

## Deductibility of Carrying Charges on Land

- Developers are allowed to deduct from income carrying charges (basically interest and taxes) on long-term land holdings in the year in which they were incurred. Between 1974 and 1978, developers were not allowed these deductions until the land was developed.

- It seems doubtful whether the deductibility of land carrying charges is a legitimate tax expenditure. Businesses which have to hold inventories for long periods generally can deduct such carrying charges.

- The estimated tax losses due to the deduction of land carrying charges in 1981 is estimated to be $51 million.

## Reduction in Sales Tax on Building Materials and Exemption from Sales Tax of Construction Equipment and Goods in Competition with On-Site Construction

- Building materials are subject to a reduced (5 percent compared with 9 percent) federal sales tax while construction equipment and manufactured goods considered to be in competition with on-site construction work are exempted from the tax.

- The total cost of the residential construction component of these three tax expenditures in 1981 is estimated to be $223 million; the reduction in sales tax on building materials is the largest of the three at an estimated $162 million.

- These three tax expenditures have no doubt affected favourably the overall price of housing; while it is difficult to assess the size of the effect it is unlikely to be more than perhaps 2-3 percent.

## Cost Summary

Two summary tables representing the overall cost of the tax expenditures considered in this study are presented here. Table A presents the discounted value of tax losses resulting from the forecast 1981 level of MURB starts while Table B presents a summary of the annual amount of tax expenditures under each of the items covered in this report.

- Based on a 36 percent marginal tax rate - the average federal marginal tax rate for MURB investors in 1978 - the total discounted value of the stream of federal tax losses from CCA and soft cost deductions on 1981 MURB starts is estimated at $141 million (or $5,600 per unit) at a 15 percent discount rate.

TABLE A: DISCOUNTED TOTAL FEDERAL TAX LOSSES RESULTING FROM FORECAST 1981 MURB STARTS CANADA, 1981-2010*

| | Discount Rate | | |
|---|---|---|---|
| | 10% | 15% | 20% |
| Average Marginal Tax Rate of Investors | | | |
| 36% | 163 | 141 | 127 |
| 40% | 181 | 156 | 140 |
| 50% | 226 | 195 | 176 |
| 60% | 271 | 234 | 212 |

* This table is based on the combined discounted effects of CCA and soft cost deductions over the 28 year period to 2010 on the estimated 25,000 MURB starts in 1981.

Source: Estimates by Clayton Research Associates.

- The largest individual federal tax expenditure in residential construction is the reduction in sales tax on building materials which is estimated to cost $162 million in 1981.
- MURB CCA and soft cost deductions together account for $134 million in 1981.
- The use of CCA deductions on rental property rather than actual depreciation accounts for an annual tax expenditure estimated at $95 million.
- The other tax expenditures have much smaller costs.

TABLE B: THE FEDERAL TAX LOSSES ASSOCIATED WITH RESIDENTIAL CONSTRUCTION UNDER SEVEN FEDERAL TAX EXPENDITURE ITEMS CANADA, 1976-1981 ($ MILLION)

| | 1976 | 1977 | 1978 | 1979 | 1980 | 1981 |
|---|---|---|---|---|---|---|
| MURB Provision* | n/a | n/a | 49 | 61 | 65 | 67 |
| Use of CCA Rather than Actual Depreciation** | 95 | 95 | 95 | 95 | 95 | 95 |
| Deductibility of Soft Costs* | | | | | | |
| MURBs | n/a | n/a | n/a | 54 | 78 | 67 |
| Other Private Rental | n/a | n/a | n/a | 11 | 32 | 49 |
| Total | n/a | n/a | n/a | 65 | 110 | 116 |
| Deductibility of Land Carrying Charges | 0 | 0 | 0 | 31 | 44 | 51 |
| Reduction in Sales Tax on Building Materials | 188 | 203 | 233 | 142 | 147 | 162 |
| Exemption of Construction Equipment from Sales Tax | 26 | 27 | 28 | 22 | 21 | 23 |
| Exemption of Goods in Competition with On-Site Construction from Sales Tax | 47 | 46 | 49 | 36 | 35 | 38 |

* Assuming a federal marginal tax rate of 36 percent.

** This tax expenditure relates to the total stock of rental dwellings which are being depreciated.

Source: Estimates by Clayton Research Associates.

# TABLE OF CONTENTS


| | Page |
|---|---|
| EXECUTIVE SUMMARY | i |
| TABLE OF CONTENTS | vi |
| LIST OF TABLES | viii |
| INTRODUCTION | 1 |
| PART 1 - RENTAL INVESTMENT INCENTIVES | 4 |
| BACKGROUND | 4 |
| History of Federal Government Private Rental Investment Incentives | 4 |
| Program Description | 7 |
| Are They Tax Expenditures? | 13 |
| PROGRAM SIZE | 16 |
| Multiple Unit Residential Buildings (MURBs) | 16 |
| The Use of Capital Cost Allowance Depreciation Rates Rather Than Actual Depreciation Rates | 22 |
| The Deductibility of Soft Costs | 25 |
| The Cost to the Federal Government of the Combination of Deductibility of Soft Costs and CCA Claims on MURBs | 27 |
| PROGRAM ASSESSMENT | 29 |
| Multiple Unit Residential Buildings (MURBs) | 29 |
| The Use of CCA Depreciation Rates on Rental Buildings | 37 |
| The Deductibility of Soft Costs | 40 |
| ALTERNATIVES | 42 |
| PART 2 - DEDUCTIBILITY OF CARRYING CHARGES ON LAND | 44 |
| BACKGROUND | 44 |
| History of the Tax Treatment of Land Carrying Charges | 44 |
| Program Description | 45 |
| Is It a Tax Expenditure? | 45 |

Page

PROGRAM SIZE ..... 46

The Volume of Land Inventories and Carrying Charges ..... 47
The Cost to the Federal Government of the Deductibility of Land Carrying Charges ..... 48

PROGRAM ASSESSMENT ..... 49

ALTERNATIVES ..... 54

PART 3 - SALES TAX REDUCTIONS OR EXEMPTIONS FOR CONSTRUCTION MATERIALS AND EQUIPMENT 55

BACKGROUND ..... 55

History of Sales Tax Reductions and Exemptions for Construction ..... 55
Program Description ..... 57
Are They Tax Expenditures? ..... 58

PROGRAM SIZE ..... 59

Reduced Federal Sales Tax on Building Materials ..... 59
Exemption of Construction Equipment from Federal Sales Tax ..... 61
Exemption from Federal Sales Tax of Goods in Competition with On-Site Construction ..... 63

PROGRAM ASSESSMENT ..... 65

Reduction in Sales Tax on Building Materials ..... 65
Exemption of Construction Equipment from Sales Tax ..... 72
Exemption of Goods in Competition with On-Site Construction from Sales Tax ..... 74

ALTERNATIVES ..... 76

APPENDIX A - HOW A MURB WORKS AND WHAT IT COSTS ..... A-1

APPENDIX B - VOLUME AND COST ESTIMATES ..... B-1

APPENDIX C - MURB PROJECT CHARACTERISTICS ..... C-1

## LIST OF TABLES

Page

PART 1 - RENTAL INVESTMENT INCENTIVES

TABLE 1: ESTIMATED MURB STARTS, MURB CERTIFICATES ISSUED AND TOTAL ROW AND APARTMENT STARTS, CANADA, 1975-1980 (DWELLING UNITS) ..... 17

TABLE 2: ESTIMATED ANNUAL MURB FEDERAL TAX EXPENDITURES, CANADA, 1976-1981 ($ MILLION) .... 18

TABLE 3: ESTIMATED DISCOUNTED VALUE OF MURB FEDERAL TAX EXPENDITURES FROM FUTURE CCA LOSSES FOR 1981 MURB STARTS, CANADA, 1981-2010 ($ MILLION) ..... 20

TABLE 4: ESTIMATED DISCOUNTED VALUE OF MURB FEDERAL TAX EXPENDITURES FROM FUTURE CCA LOSSES FOR ALL MURBs STARTED TO THE END OF 1981, CANADA, 1981-2010 ($ MILLION) ..... 20

TABLE 5: ESTIMATED ANNUAL FEDERAL TAX LOSSES RESULTING FROM THE USE OF CCA RATHER THAN BOOK DEPRECIATION ON RENTAL RESIDENTIAL BUILDINGS, CANADA, 1976-1981 ($ MILLION) ..... 23

TABLE 6: ESTIMATED DISCOUNTED VALUE OF FEDERAL TAX LOSSES RESULTING FROM EXCESS OF CCA OVER BOOK DEPRECIATION ON 1981 PRIVATE RENTAL HOUSING STARTS, CANADA, 1981-2010 ($ MILLION) ..... 24

TABLE 7: ESTIMATED VALUE OF SOFT COSTS CLAIMED ON PRIVATE RENTAL PROJECTS, CANADA, 1979-1981 ($ MILLION) ..... 25

TABLE 8: ESTIMATED ANNUAL FEDERAL TAX LOSSES RESULTING FROM DEDUCTIONS FOR SOFT COSTS CANADA, 1979-1981 ($ MILLION) ..... 26

TABLE 9: ESTIMATED DISCOUNTED VALUE OF FEDERAL TAX LOSSES RESULTING FROM DEDUCTIONS FOR SOFT COSTS ON 1981 STARTS, CANADA, 1981-1986 ($ MILLION) ..... 27

Page

TABLE 10: ESTIMATED DISCOUNTED VALUE OF FEDERAL TAX LOSSES RESULTING FROM CCA CLAIMS AND SOFT COST DEDUCTIONS ON 1981 MURB STARTS, CANADA, 1981-2010 ($ MILLION) ..... 28

TABLE 11: TOTAL CLAIMED MURB CCA LOSSES ON PERSONAL INCOME TAX, CANADA, 1978 ..... 33

PART 2 - DEDUCTIBILITY OF CARRYING CHARGES ON LAND

TABLE 12: ESTIMATED RESIDENTIAL LAND INVENTORIES AND RELATED CARRYING CHARGES, CANADA, 1976-1981 ..... 47

TABLE 13: ESTIMATED TAX LOSSES DUE TO DEDUCTIONS OF CARRYING CHARGES ON RESIDENTIAL LAND, CANADA, 1976-1981 ..... 48

PART 3 - SALES TAX REDUCTIONS OR EXEMPTIONS FOR CONSTRUCTION MATERIALS AND EQUIPMENT

TABLE 14: ESTIMATED MATERIALS USED IN RESIDENTIAL AND NON-RESIDENTIAL CONSTRUCTION, CANADA, 1976-1981 ($ MILLION) ..... 59

TABLE 15: ESTIMATED TAX EXPENDITURES RESULTING FROM THE REDUCTION IN SALES TAX ON BUILDING MATERIALS BY TYPE OF CONSTRUCTION, CANADA, 1976-1981 ($ MILLION) ..... 60

TABLE 16: ESTIMATED VALUE OF SALES OF CONSTRUCTION EQUIPMENT TO THE RESIDENTIAL CONSTRUCTION INDUSTRY, CANADA, 1976-1981 ..... 61

TABLE 17: ESTIMATED TAX EXPENDITURES RESULTING FROM THE EXEMPTION OF CONSTRUCTION EQUIPMENT FROM SALES TAX - RESIDENTIAL CONSTRUCTION ONLY, CANADA, 1976-1981 ..... 62

TABLE 18: ESTIMATED GOODS IN COMPETITION WITH ON-SITE CONSTRUCTION ON RESIDENTIAL AND NON-RESIDENTIAL CONSTRUCTION, CANADA, 1976-1981 ($ MILLION) ..... 63

Page

TABLE 19: ESTIMATED TAX EXPENDITURES RESULTING FROM THE EXEMPTION FROM SALES TAX OF GOODS IN COMPETITION WITH ON-SITE CONSTRUCTION BY TYPE OF CONSTRUCTION, CANADA, 1976-1981 ($ MILLION) ..... 64

TABLE 20: INCREASES IN RESIDENTIAL CONSTRUCTION COSTS, CANADA, 1971-1980 ..... 68

TABLE 21: CONSTRUCTION ACTIVITY, CANADA, 1971-1980 ..... 70

TABLE 22: INDEXES OF CONSTRUCTION LABOUR COSTS AND CONSTRUCTION MACHINERY AND EQUIPMENT, CANADA, 1971-1980 ..... 73

# INTRODUCTION

This study was commissioned by Canada Mortgage and Housing Corporation to evaluate the costs and benefits of tax expenditures in the housing area along with a discussion of the effectiveness of such expenditures.

Although the concept of tax expenditures will likely be familiar to most readers of this study; a brief review is in order.

> "There are two basic ways in which governments utilize their revenue-raising powers. First they raise tax revenues and use these funds to purchase goods and services directly, to make transfer payments, or to subsidize directly certain activities of the private sector. Each of these three uses is fully reflected when government expenditures are accounted for. Second, governments can provide assistance, encouragement or relief to private-sector activities and individuals through various special provisions in the tax system. In order to provide this assistance or relief the government forgoes tax revenues, thus in a sense making an indirect expenditure through the tax system. These indirect expenditures, which generally take the form of 'special' exemptions, deductions, credits, exclusions, preferential rates, or deferrals are what are referred to as 'tax expenditures'."*

There has been an increasing awareness in recent years of the importance of tax expenditures in the Canadian Federal budgetary system. In the October 28, 1980 Budget, the Minister of Finance stated:

> "The incentives and preferences identified in the tax expenditure analysis raise important issues. They are expensive and it is incumbent on government to ensure that the incentives are effective and their cost is justified. We now have a tax system characterized by higher tax rates relieved by a complex network of incentives and tax preferences. One questions whether the economy might not be better served by a tax system with lower rates but with fewer and more selective incentives."**

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* Smith, Roger S., Tax Expenditures: An Examination of Tax Incentives and Tax Preferences in the Canadian Federal Income Tax System, Canadian Tax Foundation, page 1. (Underlining added).

** Honourable Allan J. MacEachen, Minister of Finance, The Budget, October 28, 1980, page 15.

For readers unfamiliar with the concept, two studies are recommended as background:

> Roger S. Smith, Tax Expenditures: An Examination of Tax Incentives and Tax Preferences in the Canadian Federal Income Tax System, Canadian Tax Foundation, 1979.
>
> Department of Finance, Government of Canada Tax Expenditure Account, 1979.

Seven federal housing tax expenditure items were selected for examination in this study:

- The multiple unit residential buildings (MURB) provision;
- The use of capital cost allowance (CCA) depreciation rates on rental buildings rather than actual depreciation;
- Deductibility of developers' "soft costs";
- Deductibility of carrying charges on land;
- Reduced rate of sales tax on building materials;
- Exemption of construction equipment from sales tax; and
- Exemption of goods in competition with on-site construction from sales tax.

An additional tax expenditure item, the Registered Home Ownership Savings Plan (RHOSP) deduction, is the subject of a separate study by another consultant.*

For the purposes of this study, the seven tax expenditure items have been grouped under three general umbrellas since some of the items are interrelated; however, each item is still treated individually within these general headings. The three umbrellas are:

- Rental investment incentives: comprising the subtopics of MURBs, the use of CCA and the deductibility of soft costs;
- Deductibility of carrying charges on land; and
- Sales tax reductions or exemptions for construction materials and equipment.

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* Other housing tax expenditures not considered here include the non-taxation of capital gains on principal residences and the non-taxation of imputed income on equity in owner-occupied residences.

For each of the three umbrellas, the discussion follows a progression through the following stages:

- Background
  - history of each tax expenditure program;
  - description of each program; and
  - discussion of whether each program is actually a tax expenditure.

- Program Size
  - estimates of the volume under each program; and
  - estimates of the costs of each program.

- Program Assessment
  - the rationale for each program in the initial instance;
  - the effects of each program on the housing market and its participants in relation to the program objectives;
  - the effects of abolition of each program; and
  - the relevance of each program in the 1980's.

- Alternatives
  - a review of possible cost-effective alternative programs to the extent that they exist.

This report is accompanied by a series of Appendices which contain background details of the analysis and calculations which are summarized in the report itself.

# PART 1 - RENTAL INVESTMENT INCENTIVES

Part 1 of this study investigates the operation of three interrelated items of federal tax expenditures:

- The multiple unit residential buildings (MURB) provision of the Income Tax Act which allows individuals and corporations not in the business of real estate to deduct losses created by capital cost allowances on rental property from non-rental income;
- The use of capital cost allowance (CCA) depreciation rates on rental buildings as opposed to economic depreciation rates; and
- The deductibility of developers' soft costs against taxable income for rental property investors.

These are all separate tax expenditures; however, they are interrelated. The MURB provision leads to a much wider use of the CCA provision than would be the case if investors could not deduct rental losses against non-rental income; further, if soft costs were not deductible, they would form part of the capital cost base of the property and would therefore be subject to capital cost allowance as well. Because of these interrelations, the three tax expenditures are treated simultaneously in this report.

## BACKGROUND

### History of Federal Government Private Rental Investment Incentives

Prior to the partial implementation of the Carter Commission's tax reform proposals in 1972, all taxpayers were allowed to deduct capital cost allowances on depreciable rental properties from other non-rental sources of income for the purposes of reducing taxable income. This practice was discontinued for most taxpayers in 1972 though life insurance companies or corporations whose principal business was the leasing, rental, development or sale of real property could still claim such depreciation against other income. Thus ended a tax shelter which had been widely used by professionals and other high-income individuals to reduce income taxes on their employment earnings.

Another facet of the 1972 tax reform as far as rental properties are concerned was the requirement that all taxpayers include any rental property with a capital cost of $50,000 or more which was acquired after 1971 in a separate class for capital cost allowance (CCA) purposes. This effectively eliminated taxpayers' ability to defer recapture of CCA upon the disposition of rental properties by pooling the recapture with CCA deductions on other properties. Following the 1972 reforms, there was no way, therefore, that taxpayers could either (a) claim CCA losses on rental property against other income or (b) on the sale of the property, avoid recapture of the CCA losses that had been claimed to offset rental income.

Partly due to these changes in the tax system, but particularly due to other factors such as escalating interest rates, and building costs and a sluggish rise in rents, construction of new rental housing did not keep pace with demand. As a result of this, rental markets tightened significantly by the mid-1970's.* The response on the part of the federal government was to include a specific rental housing investment incentive in a wide-ranging program to stimulate residential construction in the November, 1974 Budget:

> "Mr. Speaker ... I am particularly anxious to provide a quick and strong incentive to the construction of new rental housing units. I therefore propose to relax for a period the rule whereby capital cost allowances on rental construction could not be charged against income from other sources.
>
> Specifically, in respect of new, multiple unit residential buildings for rent, started between tonight and December 31, 1975, the capital cost allowance rule will not apply. This means that an owner of an eligible rental unit will be permitted to deduct capital cost allowance against any source of income at any time. I am confident that this measure will attract a significant amount of private equity capital into the construction of new rental housing."**

The introduction of MURBs largely restored the pre-1972 arrangement for rental projects started in the prescribed time period except that owners still had to maintain buildings in separate classes and therefore could not avoid recapture of CCA deductions. The MURB provision was subsequently extended in successive Liberal Budgets; it was finally allowed to expire by the Progressive Conservative Government at the end of 1979. The Liberal Budget of October 28, 1980 reintroduced MURBs with expiry of the provision scheduled for the end of 1981.

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* For a discussion of these other factors see Clayton Research Associates Limited, The Growing Rental Housing Shortage in Canada - Causes and Solutions, a report prepared for The Canadian Institute of Public Real Estate Companies, October, 1980, pages 2-6.

** Honourable John N. Turner, Minister of Finance, Budget Speech, November 18, 1974, page 19.

The 1974 Budget prescribed two classes of MURBs which, for CCA purposes, had varying allowable rates of depreciation:*

- Class 32 buildings (wood frame structures) were eligible for a 10 percent rate of depreciation because they were considered to have a relatively short economic life;
- Class 31 buildings (steel or concrete frame structures) were eligible for a 5 percent rate of depreciation.

From 1978, these two MURB classes were both allowed only a 5 percent depreciation rate unless it could be demonstrated that, due to the materials used, a 10 percent rate was warranted. This change was made because of evidence that developers were tailoring their buildings specifically to qualify for the 10 percent CCA rate. Also the useful life of wood-frame buildings is considerably longer than would be implied from a 10 percent annual depreciation.

The initial MURB provision was supplemented in 1975 and 1976 by successive versions of the Assisted Rental Program (ARP). ARPs replaced the old Limited-Dividend Program which had involved direct CMHC funding of private developers building low-cost rental housing. ARPs offered subsidies to private rental developers rather than direct funding. Thee subsidies were specifically aimed at offsetting the problem of negative cash flows occurring to new rental housing in the early years following completion. These negative cash flows were due to the disparity between the rent returns required to cover development costs for new projects and the relatively low rents for these projects achievable in most Canadian cities. The combination of MURBs and ARPs and the addition of some provincially-sponsored private rental housing subsidies was successful at stimulating new rental construction.

The Assisted Rental Program was discontinued in mid 1978 and replaced by CMHC's Graduated Payment Mortgage (GPM) program which is still in effect. GPM loans defer a proportion of mortgage interest payments in the early years of the loan and capitalize them into the mortgage principal outstanding. While no subsidies are involved in this program, GPMs do have a similar effect to ARPs since they reduce costs in the early years of the project when lower than economic rents must be expected.

Other than subsidized loans to non-profit and co-op housing groups, there are currently no federal government subsidy programs aimed at the provision of new rental housing. The only current federal initiatives in this area are the tax expenditures examined in this report and the (non-subsidy) GPM program.

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* The allowable CCA rates are applied to the undepreciated cost of buildings; hence, allowable CCA declines year by year along with the undepreciated cost.

## Program Description

There is considerable confusion in the minds of many observers of the rental market about how the MURB, CCA and soft cost provisions actually work. In an attempt to dispel some of this confusion, Appendix A reviews in laborious detail the various financial components of a sample MURB project, covering in turn:

- The financing of the project including capital costs, cash flow and the importance of CCA, soft costs and the GPM;
- The investor's package;
- The tax aspects of the sale of the MURB; and
- The tax losses accruing to the government from CCA and soft costs deductions.

It is recommended that readers who are unfamiliar with the detailed operation (and interrelations) of MURBs, CCA, soft costs and GPMs read Appendix A before proceeding further.

## 1. Multiple Unit Residential Buildings (MURBs)

As a general rule, losses on any rental property other than non-cash losses through CCA deductions can be deducted from a landlord's income from other sources in order to compute income for tax purposes. Such losses could (and often do) result from a situation where rental revenues are insufficient to cover the out-of-pocket costs associated with the project (e.g., operating costs and mortgage interest) but not depreciation on the building. Capital cost allowance (CCA) can be used by the landlord to reduce an excess of rental revenue over out-of-pocket costs to show a level of zero income from the project for tax purposes, but CCA cannot be used to incur a loss to offset income from other sources.

There are two exceptions to this general rule:

- Life insurance companies or corporations whose principal business is the leasing, rental, development or sale of real property; and
- Investors in MURB projects.

Both these groups can claim depreciation (CCA) losses on rental property against income from other sources in computing income for tax purposes. The difference between these two groups is that investors in MURBs can claim depreciation losses only on the MURB projects themselves whereas the companies in the real estate business (the first exception) can claim depreciation on <u>any</u> rental projects.

The depreciation that can be claimed on any asset is limited by the capital cost allowance (CCA) rate specified for that particular type of asset in the Income Tax Act. For MURBs, there is now predominantly one CCA rate for new projects (5 percent); prior to 1978 wood-frame MURBs qualified for a 10 percent CCA rate but MURBs started since then are eligible only for the 5 percent rate unless it can be clearly demonstrated that the higher depreciation is warranted.

A building qualifies as a MURB if:

a) It contains not less than two dwelling units;

b) It commenced construction (installation of footings) between November 18, 1974 and the end of 1979 or between October 28, 1980 and the end of 1981 (unless extended further);

c) Not less than 80 percent of floor space is used for self-contained domestic establishments and related areas; and

d) The owner or operator is in possession of a CMHC certificate certifying the above.

In addition, while it is not necessary that all dwelling units in the building be rental units, only those which are rental units can be included in the CCA deductions.

MURBs are an important tax shelter for individuals and companies facing high marginal tax rates. They allow such taxpayers to offset some of their income from other sources by claiming depreciation losses on the MURB. In this way, current high levels of income taxes can be deferred into the future at the same time as the real estate asset itself is being established. The MURB asset can be held by the investor in a variety of forms including ownership of the whole property, ownership of one or more dwelling units, or a partnership arrangement wherein he/she owns a share of the property as a whole or of one or more units.

## 2. The Use of CCA Depreciation Rates on Rental Buildings

As was discussed above, depreciation can be used by the owner of any rental property to reduce net rental income. However, only in the case of MURBs and buildings held by life insurance companies or companies whose principal business is real estate can depreciation losses be used to offset income from other sources in computing taxable income.

The issue with respect to CCA depreciation versus actual (in the jargon referred to as "economic") depreciation is not which best represents true costs to the property owner, it is generally understood that the CCA rate is accelerated compared to normal depreciation; the issue is whether the CCA subsidy is justified. The CCA depreciation rate on new rental buildings is a 5 percent annual deduction on the undepreciated balance.* This method of depreciation, generally called the declining balance method, results in very large depreciation deductions in the early years of a building's life and progressively smaller deductions as the building ages. This is the opposite to the sinking fund method of depreciation which is widely used by real estate companies.** With the sinking fund method of depreciation, deductions are small in the early years and get progressively larger in later years. The sinking fund method would appear to approximate much more closely the actual depreciation path of a building in real terms than does the declining balance method.

In this era of 12 percent annual inflation and rapidly rising building costs, however, it is open to question whether buildings depreciate at all in money terms. It would appear much more likely for buildings to appreciate in value (in money terms), especially in their early life.

While it is generally recognized that the basic CCA schedule for all depreciable assets (including the CCA rate applying to rental property) is accelerated compared to actual economic depreciation, there is little research on this subject in Canada.*** However, recent U.S. work suggests that actual depreciation may be as low

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* The CCA rate on wood-frame buildings prior to 1978 was 10 percent but this rate is now used for new buildings only in exceptional circumstances.

** Price Waterhouse and Company, The Real Estate Development Industry in Canada: 1976 Survey of Annual Reporting and Accounting Developments. Thirty-six of the 39 real estate companies surveyed which reported their depreciation method, used the sinking fund approach.

*** Richard M. Bird, Tax Incentives for Investment: The State of the Art, Canadian Tax Foundation, 1980, pages 6-7.

as one-third that allowed for U.S. tax purposes.* In general, the U.S. tax depreciation rate for new residential buildings is the same as the Canadian rate, so this conclusion appears equally applicable in this country as well.**

When CCA depreciation is claimed on a rental building for income tax purposes, therefore, the rate used can be considerably above the actual depreciation of the building. The owner can claim up to a maximum of 5 percent CCA depreciation on rental buildings. It should be noted that owners do not always claim the maximum CCA deduction; a lower (or zero) claim may be made in any particular year depending upon (a) whether rental income or income from other sources is sufficient to require the use of the full CCA deduction as an offsetting loss for tax purposes; and (b) whether the owner (or building) is eligible for use of CCA to offset non-rental income.

All of the CCA claimed on a building is, of course, subject to recapture as income (at full income tax rates) when the building is sold. However, this recapture can be far into the future, so in terms of present values this potential future loss to the taxpayer (revenue to the government) is likely to be relatively small compared to the stream of tax savings in the interim. The tax saved on CCA can be accurately viewed as an interest free loan from the government until ultimate recapture of the CCA when the building is sold (or deemed to be sold upon the death of the owner). Also, the owner could (and probably would) time the ultimate sale such that it may fall in a year of low income or offsetting losses from other

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* Chester C. McGuire, "Housing Depreciation and Optimal Tax Policy", National Tax Journal, December, 1979. McGuire concluded that the actual depreciation over the life of a residential building discounted at a 3 percent real interest rate is only a third of tax depreciation using a double declining balance method (pages 476-478).

The McGuire estimates support those of an earlier study. See C.R. Hulten and F.C. Wykoff, "On the Feasibility of Equating Tax to Economic Depreciation", 1978 Compendium of Tax Research, U.S. Department of the Treasury, 1978, page 91.

** The double declining balance method of tax depreciation with a 40 year building life (the guideline life for new residential structures established by the Internal Revenue Service) produces about the same tax depreciation schedule as the 5 percent declining balance method of tax depreciation in Canada.

A recent publication from the Department of Finance incorrectly stated that new rental residential buildings in the United States can be depreciated at only 4.4 percent compared to 5 percent in Canada. See Department of Finance, The Tax Systems of Canada and the United States, 1978, pages 37-38.

sources thereby either avoiding recapture completely or taking recapture in a year when his marginal income tax rate is relatively low. Another option is that the owner could spread the income across several years with an annuity.

### 3. The Deductibility of Soft Costs Against Non-Rental Income

Soft costs (or first-time costs) are expenditures incurred by the owner of a new rental property which are not related to the actual acquisition of the fixed assets, i.e., the land, building and equipment. In computing the taxable income of the owner, these costs can be deducted in full, and, unlike depreciation, they can be deducted from income from other sources whether the project is a MURB or not. Also, there is no recapture of soft cost deductions upon the eventual sale of the property. These attractive features induce owners or developers of rental properties to make the maximum use of soft costs as a tax shelter.* It is obviously in the interests of the owners to minimize the cost of the land, since it is not depreciable; also, it would be preferable to allocate as many disbursements as possible to soft costs rather than to the capital cost of building so as to achieve an immediate write-off with no recapture rather than a relatively slow 5 percent depreciation with recapture. A normal ratio of soft costs to total project costs appears to be about 20-25 percent.**

A listing of generally accepted soft costs is provided below; many of the soft costs shown here are associated largely with syndications of MURB units for tax shelter investors.***

- Mortgage Application Fee - the fee charges by the mortgage insurance company to review the application.
- Mortgage Insurance Fee - the fee charges for mortgage insurance by the mortgage insurance company is deductible.

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* The record in this regard appears to be an Abacus Cities project in Edmonton in 1978 where soft costs accounted for $30,062 of an average unit cost of $55,000 (55 percent). See Clayton Research Associates Limited, Impacts of Capital Cost Allowance Provisions on Residential Construction - Findings of a Developers' Survey, a study conducted for CMHC in September, 1978, page 33.

** See Appendix C.

*** The discussion of soft cost items presented here is based heavily on two main sources: Geoffrey D.F. Skerrett, "Tax Sheltering and Syndication of Multiple-Unit Residential Buildings", Corporate Management Tax Conference, 1977, pages 124-167, Canadian Tax Foundation; and George Mitchell, "Current Assessing Trends", Canadian Tax Journal, May-June, 1979, pages 256-264.

- Initial Leasing of Rental Units - the fee charged by the developer/promoter of the project to market the rental units during the initial rental period; a typical fee appears to be in the order of 5 percent of gross first year rentals.

- Interest During Construction - interest on interim financing and on construction mortgage advances.

- Cash Flow Guarantee - the fee charged by the developer/promoter to guarantee investors a given revenue/expense balance for a prescribed period (usually two to four years).

- Landscaping - charges for laying sod, planting trees and shrubs etc. are deductible as paid.

- Legal Fees - legal fees in connection with the preparation and review of management and operating agreements, tenants' leases and mortgage documents (legal fees relating to the acquisition of the property are not a deductible expense).

- Initial Services Fee - a fee may be levied by the developer/promoter for the provision of administrative, supervisory and management services (including a profit for himself) and for performance under the initial services agreement. The total charge must be reasonable and some of the fee is a diversion of overhead or profit from the acquisition of land or the construction of the project itself.

- Mortgage Commitment, Standby and Mortgage Processing Fees.

- Bank Servicing Fees - fees for servicing and administering the long-term mortgage financing.

- Property Taxes and Levies.

- Utilities Service Connections.

- Site Investigation Fees.

The rules regarding deductibility of soft costs were changed effective January 1, 1979 so that such costs could only be deducted in the period to which they relate (e.g., fees for the cash flow guarantee must be pro-rated over the whole guarantee period); previously, soft costs could be deducted as paid, regardless of the period to which they related. The change has significant implications for MURB investors since (a) if the investor does not get into the project at an early enough stage, he may miss some of the write-offs which would subsequently have to be added into the capital cost of the project; and (b) the first year write-off amounts will be less to the extent that soft costs now have to be spread across three or four years or longer.

As the detailed analysis of the sample MURB project in Appendix A indicates, the deductibility of soft costs is a very important feature of new rental tax shelters. The ability to write these costs off in total rather than capitalize them and write them off over the life of the project at the 5 percent annual CCA depreciation rate (plus no recapture of depreciation when the project is sold) represents a significant subsidy to rental investment on the part of the federal government.

## Are They Tax Expenditures?

The first question with regard to the three items under study is whether, in fact, they can legitimately be considered to be tax expenditures. The prime consideration here is whether each of the three provisions in fact accord special treatment to their beneficiaries which would not normally accrue to persons in similar circumstances in other areas of the economy. This is not an easy task and it has not been exhaustively covered here since the various items under study were specifically designated as tax expenditures by CMHC. Nonetheless, some observations on the matter are in order.

### 1. Multiple Unit Residential Buildings (MURBs)

MURBs clearly must be treated as a legitimate tax expenditure. They are "an exception to the general provision that losses for tax purposes arising from the application of capital cost allowances to rental property cannot be offset against other non-rental income".* The question which might be raised in this regard is whether similar provisions accorded to real estate companies are a tax expenditure as well.

### 2. The Use of CCA Depreciation Rates on Rental Buildings as Opposed to Actual Depreciation Rates

This is less clear-cut in terms of being a tax expenditure. All business assets which wear out over time are accorded a CCA depreciation rate which in many cases is greater than actual depreciation, so rental buildings are not necessarily treated as a special case in this regard. Indeed, it could be argued that the use of a 5 percent CCA depreciation rate for rental buildings appears conservative compared to the CCA depreciation rate on many other types

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* Department of Finance, Government of Canada Tax Expenditure Account, December, 1979, page 83.

of capital equipment. On the other hand, there is little doubt that the 5 percent rate overstates the actual depreciation which occurs for rental properties.* In fact, most rental buildings, at least early in their life, appreciate rather than depreciate in money terms. The Government of Canada Tax Expenditure Account considers as a tax expenditure all "excess of tax depreciation over book depreciation".** To the extent that all such excess CCA is considered a tax expenditure, clearly the CCA on rental buildings must be considered a tax expenditure as well.

### 3. The Deductibility of Soft Costs in the Year Incurred

The tax provision whereby soft costs may be written off in the year incurred rather than be capitalized is not specifically considered to be a tax expenditure according to the Government of Canada Tax Expenditure Account. Since soft costs are intended to be expenses which are not capitalized in the final asset (the rental property), allowing their deduction in the year in which they are incurred can be considered normal treatment of business expenses. There are complicating issues however:

- There appear to be abuses of the concept of soft costs with some developers inflating the amounts in order to obtain the immediate write-off rather than apply the cost to the capital costs of the building;
- Most developers capitalize soft costs in their own accounts so they evidently view them as a capital item;
- There may be some question regarding the applicability of MURB investors utilizing this soft cost write-off rather than the developer.

The issue of abuses is easily dismissed - abuses do not constitute tax expenditures (nor is the reverse true). Abuses of a provision should be dealt with by Revenue Canada in the appropriate way; they are irrelevant to a discussion of whether the provision constitutes a tax expenditure.

The fact that the developers record soft costs for their own accounts differently from how they are treated for tax purposes does not necessarily mean that the provision constitutes a tax

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* Based on the findings of the two U.S. studies referenced previously (i.e. McGuire, and Hulten and Wykoff).

** Department of Finance, Government of Canada Tax Expenditure Account, December, 1979, page 51.

expenditure either - this difference in accounting and tax treatment appears to be relatively common in the Canadian tax system. While they appear to have been used very extensively by the real estate industry, the soft cost provisions do not relate solely to that industry. The cost of borrowing money, for example, is a provision used by most businesses as an immediate write-off.

The deductibility of soft costs by developers was considered to be a tax expenditure in the United States and the rules regarding such deductibility were changed by The Tax Reform Act of 1976; in the United States soft costs (i.e., interest and property tax costs incurred during construction) now must be capitalized and written off over a fixed period. Given the proliferation of soft costs in relation to real estate development in Canada, it is considered that a strong case could be made that at least a portion of soft cost deductions would constitute a tax expenditure.

If it is considered that the deductibility of soft costs by the rental property developer constitutes a tax expenditure, then certainly the transferability of this deduction is a tax expenditure in any case. The investor is, in effect, purchasing an asset in which all costs have been capitalized in the final price; the only difference between the syndicated investor and someone purchasing an existing building is one of timing - the investor does not incur the soft costs, the developer does, and these costs are reflected in the price.

To conclude, it is considered that the deductibility of soft costs by developers could be treated as a tax expenditure but there would be arguments on both sides of the issue; the transferability of the deductibility of soft costs to investors is certainly a tax expenditure. Because of the possibility that both should be treated as tax expenditures, volume and tax loss estimates are provided for both.

## PROGRAM SIZE

This section presents estimates of the volume and costs of each of the three tax expenditure items related to rental housing. The discussion is relatively brief because it merely summarizes the detailed analysis and estimates contained in Appendix B.

### Multiple Unit Residential Buildings (MURBs)

#### 1. The Volume of MURBs

There is no generally accepted estimate of the number of MURBs started, completed or in existence in any given period. The only relatively concrete information available on MURBs is the number of MURB Certificates issued by CMHC. This is not a reliable measure of the number of MURBs, however, since many developers could have taken the precaution of obtaining a MURB Certificate whether the building was a condominium, a MURB or simply a rental property to be held by a real estate company. A MURB Certificate on a non-MURB project might, at some future date, assist in the project's sale to private investors interested in deducting CCA losses on the building against other income.

Estimates prepared in the course of this study indicate that at the end of 1980 there was a total of 170,000 MURB dwelling units either completed or under construction in Canada.* This compares with a total of 282,640 MURB Certificates issued over the 1975-1979 eligibility period and total row and apartment starts of 563,143 units in the 1975-1980 period.

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* This estimate should not be interpreted as implying that the MURB provision stimulated 170,000 additional rental starts; rather it simply means that 170,000 housing units were started with the intention of being sold or held by private investors.

TABLE 1: ESTIMATED MURB STARTS, MURB CERTIFICATES ISSUED AND TOTAL ROW AND APARTMENT STARTS CANADA, 1975-1980 (DWELLING UNITS)

| | MURB Starts | MURB Certificates Issued | Total Row and Apartment Starts |
|---|---|---|---|
| 1975-1978 | 120,000 | 206,090 | 431,778 |
| 1979-1980 | 50,000 | 76,550 | 131,367 |
| | 170,000 | 282,640 | 563,145 |
| 1981 Forecast | 25,000 | n/a | 72,000 |

Source: CMHC and estimates by Clayton Research Associates; see Appendix B, Tables B-1, B-7 and section on projected MURB starts in 1981.

As a result of the reintroduction of the MURB provision in the October 28, 1980 Federal Budget, there are expected to be approximately 25,000 MURB starts in 1981. This relatively low figure recognizes the current high financing costs and the length of time it takes for developers to assemble land, plan and assemble financing for a multiple unit rental project. The takeup will not be as slow as in 1975 because there was some anticipation of the announcement and developers and investors are more familiar with the concept. If there is no extension of the MURB provision into 1982, one can expect a repeat performance of the 1979-1980 situation when many MURB projects were issued with certificates of start in 1979 but were really started in 1980.

## 2. The Cost of MURBs to the Federal Government*

There are two ways to look at the cost of MURBs to the federal government:

- The annual tax loss due to the deductions of CCA on all MURBs during a particular year; and
- The discounted value of all of the future CCA deductions on MURBs started (or existing) in a particular year and their implications for tax revenue.

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* All of the cost estimates (i.e. lost revenues) for the tax expenditures considered in this report relate to revenue losses to the federal government only. The provinces also have revenue losses for several of the tax expenditures but these are beyond the scope of this study.

Both of these approaches have been covered in this study.

The annual tax loss due to MURBs: this tax loss has already been estimated for personal income taxes by the Department of Finance in the Government of Canada Tax Expenditure Account released in December, 1980. The estimates prepared as part of this report are based partially on the Department of Finance estimates but include a provision for corporate income tax loss as well as personal income tax loss.

Table 2 presents the Department of Finance and the Clayton Research estimates of annual MURB tax expenditures. The difference between the Clayton Research estimates and the Department of Finance estimates of federal MURB tax expenditures is due primarily to the addition of the estimated corporate tax expenditures to the Clayton Research estimate as well as different assumptions regarding the proportion of CCA comprised by equipment depreciation.*

TABLE 2: ESTIMATED ANNUAL MURB FEDERAL TAX EXPENDITURES CANADA, 1976-1981 ($ MILLION)

| | Department of Finance* | Clayton Research Estimates at Selected Marginal Tax Rates | | | |
|---|---|---|---|---|---|
| | | 36% | 40% | 50% | 60% |
| 1976 | 20 | n/a | n/a | n/a | n/a |
| 1977 | 25 | n/a | n/a | n/a | n/a |
| 1978 | 40 | 49 | 55 | 69 | 82 |
| 1979 | 45 | 61 | 68 | 85 | 101 |
| 1980 | n/a | 65 | 72 | 90 | 108 |
| 1981 | n/a | 67 | 74 | 93 | 112 |

* Personal income tax only.

Source: Department of Finance, Government of Canada Tax Expenditure Account, December, 1980 and estimates by Clayton Research Associates; see Appendix B, Tables B-8 and B-10.

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* CCA losses on equipment are fully deductible and are not regarded as tax expenditures. However, they are included in total CCA figures derived from income tax returns. The Department of Finance tax expenditure estimates appear to allocate 20 percent of total tax losses due to CCA claims to equipment and only 80 percent to buildings. The Clayton Research estimate allocates 89 percent of total tax losses due to CCA claims in 1978 to buildings (as tax expenditures) - See Appendix B, Table B-3.

These are federal tax expenditures resulting from the MURB provision. Analysis by Clayton Research of information derived from a sample of 1978 MURB claims by the Department of Finance indicated that the average marginal tax rate was about 36 percent of income before allowing for negative CCA income on rental property* but after other deductions for soft costs and other tax shelters.

At this marginal tax rate, the MURB tax expenditure amounts to an estimated $67 million in 1981, up from $49 million in 1978. If gross income were used as the base income, the appropriate marginal tax rate would no doubt be higher but it is difficult to estimate how much higher. If the effects of the deductibility of soft costs alone were negated, it is unlikely that the marginal rate would rise more than possibly 3-5 percentage points. If one assumes that the appropriate federal marginal tax rate is 40 percent, then the 1981 MURB tax losses rise to an estimated $74 million.

The Discounted Present Value of Future MURB Tax Losses: Estimates are presented here of the discounted value of future tax losses for MURBs started in 1981 and for all MURBs started under the MURB program including estimated 1981 starts. The discounted value approach is the best overall measure of MURB costs since these costs are spread over a long period of time. Future revenue losses are discounted since a dollar of loss in a future year is not equivalent to a dollar lost today.

It is estimated that 1981 MURB starts in Canada will total 25,000 units with a total depreciable value of about $650 million. The discounted 1981 value of the federal tax expenditures resulting from the future CCA losses (to the year 2010) on these 1981 starts is estimated at between $49 million and $79 million (depending on the discount rate used) at an average 36 percent marginal tax rate. This amounts to the equivalent of a MURB subsidy in the order of $2,000-$3,200 per unit payable as a lump sum grant in 1981.

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* See Appendix B, Table B-2.

TABLE 3: ESTIMATED DISCOUNTED VALUE OF MURB FEDERAL TAX EXPENDITURES FROM FUTURE CCA LOSSES FOR 1981 MURB STARTS* CANADA, 1981-2010 ($ MILLION)

| | Discount Rate | | |
|---|---|---|---|
| Marginal Tax Rates | 10% | 15% | 20% |
| 36% | 79 | 60 | 49 |
| 40% | 88 | 66 | 54 |
| 50% | 110 | 83 | 68 |
| 60% | 132 | 100 | 82 |

* MURB starts in 1981 are estimated at 25,000 units.

Source: Estimates by Clayton Research Associates; see Appendix B, Table B-13.

If higher average marginal tax rates are assumed, of course, the value of the tax expenditure increases also.

When the tax expenditures on the discounted stream of 1981 and future CCA losses on the remainder of the MURB stock are added to the above estimates for 1981 MURB starts alone, the magnitude of the total MURB subsidy becomes more apparent. At the 36 percent average marginal tax rate, the total 1981 and future discounted tax expenditures on all MURBs started by the end of 1981 are estimated to be in the $338 million to $505 million range depending on the discount rate to be used.

TABLE 4: ESTIMATED DISCOUNTED VALUE OF MURB FEDERAL TAX EXPENDITURES FROM FUTURE CCA LOSSES FOR ALL MURBS STARTED TO THE END OF 1981 CANADA, 1981-2010 ($ MILLION)

| | Discount Rate | | |
|---|---|---|---|
| Marginal Tax Rates | 10% | 15% | 20% |
| 36% | 505 | 400 | 338 |
| 40% | 561 | 444 | 376 |
| 50% | 701 | 556 | 470 |
| 60% | 841 | 667 | 564 |

Source: Estimates by Clayton Research Associates; see Appendix B, Table B-17.

To this estimate of total 1981 and discounted future tax expenditures on MURBs must be added the tax expenditures already incurred - approximately $220 million from 1976 to 1980. When all these MURB tax expenditures are totalled up, it amounts to between $560 million and $725 million for the total estimated 195,000 MURB units - this is based on the federal tax expenditure only and also does not take into account the complimentary effects of soft cost deductions in reducing average marginal tax rates.

## 3. Qualifications to the Cost Estimates

The methodology and assumptions behind the above estimates are outlined in considerable detail in Appendix B; however, it seems prudent to repeat some of the major qualifications here:

- The estimates are based on an assumption that all projects which were MURBs upon completion will continue to be MURBs; the converse is also assumed to be true - it is assumed that none of the non-MURB buildings with MURB Certificates will be converted to MURBs.

  Relaxation of this assumption would likely increase the tax expenditures due to MURBs since about 40 percent of the units which were issued with MURB Certificates are estimated to be in non-MURB uses; if the MURB provision is not extended in future years it seems likely that many of these will convert to MURB use since they will be a unique type of investment. It is considered unlikely that many MURBs would convert to non-MURB uses.

- It has been assumed that none of the MURBs will be resold or foreclosed upon so there has been no allowance for recapture of depreciation or capital gains tax in the estimates; also, of course, there has been no allowance for the higher CCA claims that would result following the sale of a MURB to a new owner.

  The effect of relaxation of this assumption is open to some question - it is a two-edged sword. There would be recapture of depreciation on a project sale; however, most investors would be sufficiently well-versed in tax procedures so as either to time the sale for a period when his taxes are low or to shelter the income from tax with another investment - say a MURB (or a non-MURB) with high soft costs. So recaptured depreciation will likely be low; on the other hand, the purchaser of the MURB will be able to commence CCA claims on the building himself, likely at a higher initial capital cost so CCA would be larger.

## The Use of Capital Cost Allowance Depreciation Rates Rather Than Actual Depreciation Rates

### 1. The Volume of Depreciation Charges on Rental Residential Buildings

The estimated values of CCA and book depreciation on the total stock of rental residential buildings are much closer than one might have thought from an initial impression. The two different methods of depreciation (CCA and the sinking fund method used by most real estate companies) result in different depreciation paths; however, after about 20 years, the sinking fund depreciation begins to exceed the CCA depreciation by ever increasing amounts. In this way, for any recent year the high book depreciation on the older stock balances the high CCA depreciation on the newer stock.

In fact, the estimates prepared as part of this study indicate that the annual increase in book depreciation is at least keeping pace with the annual increase in CCA claims. The difference between the estimated CCA losses on rental buildings and the book depreciation on the buildings was estimated to be $265 million in 1978. For the purposes of this study it has been assumed that this $265 million gap between CCA and book depreciation is applicable for each year in the 1976-1981 period.

### 2. The Cost to the Federal Government of the Use of CCA Rather Than Actual Depreciation on Rental Residential Buildings

As with CCA on MURBs alone, there are two ways of viewing the cost to the federal government of the use of CCA rather than actual depreciation:

- The annual tax loss due to the difference between CCA and book depreciation on all rental buildings during a particular year; and
- The discounted value of future differences between CCA and book depreciation on rental buildings started in a particular year and their implications for tax revenue.

Both of these approaches have been covered in this study:

The annual tax loss due to the difference between CCA and book depreciation on rental residential buildings: this tax loss is simply the amount of extra taxes that would have been paid had rental building owners not been allowed to use the $265 million excess of CCA over book depreciation as a deduction against either income from the rental property itself or other income.

Table 5 presents the estimate of these annual tax losses based on a 36 percent federal marginal tax rate. The 36 percent rate was selected since it is both the federal corporate tax rate (for medium sized and large companies) and the marginal tax rate which applied to MURB investors.

TABLE 5: ESTIMATED ANNUAL FEDERAL TAX LOSSES RESULTING FROM THE USE OF CCA RATHER THAN BOOK DEPRECIATION ON RENTAL RESIDENTIAL BUILDINGS CANADA, 1976-1981 ($ MILLION)

| Estimated Difference Between CCA and Book Depreciation | Estimated Annual Tax Loss |
|---|---|
| $265 | $95 |

Source: Estimates by Clayton Research Associates; see Appendix B, Table B-24.

The annual tax loss is estimated to be in the order of $95 million. This is a relatively crude estimate and should be treated as indicative only of the general magnitude of the tax losses.

The discounted value of future tax losses on 1981 private rental starts: estimates are presented here of the discounted value of the stream of future CCA claims on rental residential properties started in 1981 less the value of the book depreciation that would have been claimed in each year. Private rental starts in 1981 are estimated to be 47,000 units. The CCA claims on these units will exceed the book depreciation in the early life of the building, but soon after the year 2000, book depreciation will overtake CCA - by this time, however, the discounted value of any difference is minimal.

Table 6 presents the estimated discounted federal tax losses accruing to 1981 private rental starts as a result of the use of CCA rather than book depreciation. Again the federal marginal tax rate is assumed to be 36 percent; however, a range of discount rates is presented.

TABLE 6: ESTIMATED DISCOUNTED VALUE OF FEDERAL TAX LOSSES RESULTING FROM EXCESS OF CCA OVER BOOK DEPRECIATION ON 1981 PRIVATE RENTAL HOUSING STARTS CANADA, 1981-2010 ($ MILLION)

| | Discount Rate | | |
|---|---|---|---|
| | 10% | 15% | 20% |
| Discounted Difference Between CCA and Book Depreciation | 332 | 274 | 231 |
| Estimated Tax Loss at 36 Percent Marginal Tax Rate | 120 | 99 | 83 |

Source: Estimates by Clayton Research Associates; see Appendix B, Table B-26.

The discounted value of the stream of tax losses which are projected to flow from the excess of CCA over book depreciation on 1981 private rental starts is estimated to be in the $83 million - $120 million range, depending on the discount rate selected. At the preferred discount rate the present value of the future tax losses is estimated at $100 million ($99 million rounded). This amounts to approximately $2,100 for each private rental housing start in 1981.

## The Deductibility of Soft Costs

### 1. The Volume of Soft Costs

The changes in the rules regarding the deductibility of soft costs only in the year to which they relate have had a significant impact on the estimated volume of soft costs reported in any one year. Most soft costs are incurred during the construction period which normally spans two taxation years, but some MURB soft costs (e.g., cash flow guarantees) spread across anywhere up to ten years. Whereas in the years prior to 1979 these could all be deducted in the year in which they were incurred, in 1979 and subsequent years only soft costs relating to an item in a particular year are deductible in that year.

This change in the rules would have resulted in a relatively low level of soft cost claims in 1979 followed by a build-up in 1980 and 1981.

TABLE 7: ESTIMATED VOLUME OF SOFT COSTS CLAIMED ON PRIVATE RENTAL PROJECTS CANADA, 1979-1981 ($ MILLIONS)

| | MURBs | Other Private Rental Projects | Total |
|---|---|---|---|
| 1979 | 151 | 30 | 181 |
| 1980 | 216 | 90 | 306 |
| 1981 | 185 | 137 | 322 |

Source: Estimates by Clayton Research Associates; see Appendix B, Table B-28.

The figure shown for 1979 is likely an underestimate since it is based on 1979 starts only. No doubt there would have been some spillage of soft cost claims on previous years' starts in 1979 despite the fact that they would normally have all been claimed in these earlier years.

### 2. The Cost of Soft Cost Claims to the Federal Government

As with the cost of CCA to the government, there are two ways to view the cost of soft cost claims:

- The annual tax loss due to the deductions of soft costs on all rental projects (both past and present) in a particular year; and

- The discounted present value of all of the soft cost deductions resulting from the private rental starts which occurred in a particular year.

Both of these approaches have been used with soft cost deductions as well.

The annual tax loss due to soft cost deductions: these estimates were formulated by Clayton Research based on a survey of syndicated MURB project prospectuses conducted as part of this study and assumptions about the applicability of the survey results to all MURBs and other private rental projects.*

As with CCA losses, the estimated tax losses associated with the deductibility of soft costs depends on the average marginal tax rate of the taxpayer.

TABLE 8: ESTIMATED ANNUAL FEDERAL TAX LOSSES RESULTING FROM DEDUCTIONS FOR SOFT COSTS CANADA, 1979-1981 ($ MILLION)

| | MURBs | | | Total Private Rental | | |
|---|---|---|---|---|---|---|
| Marginal Tax Rates | 1979 | 1980 | 1981 | 1979 | 1980 | 1981 |
| 36% | 54 | 78 | 67 | 65 | 110 | 116 |
| 40% | 60 | 86 | 74 | 72 | 122 | 129 |
| 50% | 76 | 108 | 93 | 91 | 153 | 161 |
| 60% | 91 | 130 | 111 | 109 | 184 | 193 |

Source: Estimates by Clayton Research Associates; see Appendix B, Table B-29.

The federal corporate tax rate is 36 percent. If it is assumed that the same average federal marginal personal tax rate applies to soft cost deductions as with MURBs (36 percent - the same as corporations) then total annual federal tax losses on private rental units due to soft cost deductions are expected to total $116 million in 1981. For MURBs alone, the federal tax loss is estimated at $67 million.

The discounted value of tax losses resulting from soft cost deductions on 1981 starts: this has been broken down into the estimated MURB component and the component for other private rental starts.**

The total discounted federal tax losses on the expected future stream of soft cost deductions on 1981 starts are estimated to be in the $128 million to $137 million range - assuming the 36 percent average marginal federal tax rate.

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* See Appendix C for a presentation of the survey results.

** The discounted value of tax losses resulting from the deduction of soft costs from projects started before 1981 is not calculated.

TABLE 9: ESTIMATED DISCOUNTED VALUE OF FEDERAL TAX LOSSES RESULTING FROM DEDUCTIONS FOR SOFT COSTS ON 1981 STARTS CANADA, 1981-1986* ($ MILLION)

| | Discount Rate | | |
|---|---|---|---|
| | 10% | 15% | 20% |
| Marginal Tax Rates on MURBs | | | |
| 36% | 84 | 81 | 78 |
| 40% | 93 | 90 | 86 |
| 50% | 116 | 112 | 108 |
| 60% | 139 | 134 | 130 |
| Marginal Tax Rate on Other Private Rental | | | |
| 36% | 53 | 51 | 50 |
| All Private Rental at 36% Marginal Tax Rate | 137 | 132 | 128 |

* It is assumed that all soft cost deductions have been claimed by 1986.

Source: Estimates by Clayton Research Associates; see Appendix B, Table B-31.

This level of federal tax losses on 1981 private rental starts is equivalent to a lump sum subsidy of an average of about $2,800 for each unit. For MURBs the average unit subsidy is higher ($3,200) because soft costs claimed on MURBs generally are higher than for other private rental buildings.

## The Cost to the Federal Government of the Combination of Deductibility of Soft Costs and CCA Claims on MURBs

The estimates presented above on tax losses due to soft cost deductions on 1981 MURB starts when combined with the tax losses due to CCA claims on the same MURB provides an illustration of the magnitude of the total loss of federal tax revenue due to MURBs started in 1981.

TABLE 10: ESTIMATED DISCOUNTED VALUE OF FEDERAL TAX LOSSES RESULTING FROM CCA CLAIMS AND SOFT COST DEDUCTIONS ON 1981 MURB STARTS CANADA, 1981-2010 ($ MILLION)

| | Discount Rate | | |
|---|---|---|---|
| Marginal Tax Rates | 10% | 15% | 20% |
| 36% | 163 | 141 | 127 |
| 40% | 181 | 156 | 140 |
| 50% | 226 | 195 | 176 |
| 60% | 271 | 234 | 212 |

Source: Estimates by Clayton Research Associates; see Tables B-13 and B-31.

The appropriate average federal marginal tax rate on the combination of these two tax expenditures (if indeed they are both considered as such) would certainly be higher than the average 36 percent rate which analysis of 1978 tax data indicated was applicable to CCA losses on MURBs. If, as seems reasonable, a 40 percent rate is selected, the total discounted tax losses accruing on 1981 MURB starts are between $140 million and $181 million - an average of between $5,600 and $7,250 per unit. This level of per unit subsidy is equivalent to a 15-20 percent capital grant.

## PROGRAM ASSESSMENT

This section presents an assessment of each of the three rental investment incentives from the points of view of rationale, effects on the housing market and its participants, and relevance of the incentive in the 1980's.

### Multiple Unit Residential Buildings (MURBs)

#### 1. Rationale

MURBs were introduced first in 1974 as part of a package of federal government measures aimed at stimulating residential construction. The words of the Minister of Finance are explicit:

> "Mr. Speaker ... I am particularly anxious to provide a quick and strong incentive to the construction of new rental housing units. I therefore propose to relax for a period the rule whereby capital cost allowances on rental construction could not be charged against income from other sources.
>
> ... I am confident that this measure will attract a significant amount of private equity capital into the construction of new rental housing."*

When the MURB provision was finally allowed to expire at the end of 1979, the reason given by the new Progressive Conservative Government was:

> "The pressure on vacancy rates is not now as serious as previously. Thus, I am letting this provision expire ..."**

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* Honourable John N. Turner, Minister of Finance, Budget Speech, November 18, 1974, page 19.

** Honourable John Crosbie, Minister of Finance, Budget Speech, December 11, 1979, page 17.

Less than one year later, the MURB provision was resurrected by the new Liberal government:

> "In order to help reduce shortages of rental accommodation and provide a needed stimulus to the construction industry ..."*

Clearly, the rationale for the MURB provision is the stimulation of private rental construction activity - that was the reason for its introduction in both 1974 and 1980; also, its abolition in 1979 was justified on the basis of rental markets no longer being as tight as previously. There is little evidence that MURBs were intended to be targetted for low or moderate-income renters, or that particular types of investors were intended to benefit from the program. Introduced at a time when new rental projects were uneconomic because of low prevailing market rent levels relative to costs, MURBs were intended to stimulate rental construction by attracting private capital through the offer of a tax shelter - the source of the capital did not matter and the ultimate target group for the rental accommodation was not specified.

## 2. Effects

There can be little question that MURBs were an important component of the recovery of rental construction activity in the mid to late 1970's. While other initiatives such as ARP and (later) GPMs allied with some provincially-sponsored programs no doubt also contributed to new rental construction by lowering initial costs, the MURB provision attracted private investment capital from sources which had been cut off with tax reform in 1972.

Therefore, in terms of its initial rationale, the MURB provision must be judged to be a success.

There are, however, a number of issues which need to be raised with regard to MURBs:

- What would have happened in the rental market if MURBs had not been introduced?
- How much of the recovery in rental construction can be attributed to MURBs?
- Who has benefitted from MURBs from the supply-side point of view?
- Who has benefitted from MURBs from the tenant point of view?

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* Department of Finance, Budget Papers, October 28, 1980, page 104.

Each of these issues is dealt with separately below.

What would have happened if MURBs had not been introduced: this is a hypothetical question, but an important one.

The main reason behind the shortage of rental accommodation which prompted the introduction of MURBs in the first place was a fall off in new rental construction. This fall off was a result partially of the loss of the universal rental property tax shelter in 1972 but it stemmed mainly from the inability of new rental units to match prevailing market rents in the existing rental stock because of accelerating interest and construction costs. The problem was exacerbated by the imposition of rent controls on existing rental accommodation in markets in 1975.

The tax shelter aspect of MURBs attracted many private investors into the rental market and also provided part of the subsidies necessary to keep the rents on the newly constructed MURBs in line with the existing market rent structure. The main effects were to spur rental construction and to keep market rents below required economic (non-subsidized) rents on new units.

Without the MURB provision (or any subsidized program), rental markets would have continued to tighten to the point where little or no accommodation was available. In this climate, renters would have been eventually forced to pay the economic rent on newly constructed units or to leave the market (e.g., buy a home or move in with family or friends). If the market was not rent controlled, market rents would by now have risen nearer to economic rents and some new rental construction would have become economic again - developers would be getting the necessary return to encourage at least some of them to invest in rental properties. In rent controlled markets the adjustment would have been more difficult even though newly built units are exempt from controls. Under such conditions a two market rent structure emerges with the old rent controlled units having a low rent and no vacancies while newly completed units have high rents and higher vacancies.

The point is that, in the absence of MURBs or some other subsidy program, eventually rental markets would eventually have regained a state of equilibrium with economic rents on new units pulling the market rent structure up nearer the higher level necessary to allow a reasonable return to rental investors. This new higher rent level in the longer run would likely lead many tenants to reassess the rent/own option and probably would result in a lower overall level of demand for rental accommodation. Some low income renters would, no doubt, have suffered hardships as a result of the higher rent payments as well.

How much of the recovery in rental construction can be attributed to MURBs?: this question must be answered in terms of both the short-run and the long-run.

If a very long-run view is taken, little rental construction can be attributed to MURBs. Markets would eventually have adjusted to the economic rents required to make new units an attractive investment and a new market equilibrium would have been reached. Over the long haul then, new rental construction would have recovered without MURBs so little credit can be given to the program for raising rental starts above the levels that would have occurred in its absence - except to the extent that the resulting higher rents would have dampened rental demand to some extent.

In the short-run, however, as was noted above, there can be little doubt that MURBs were a major factor behind the higher level of rental starts in the 1975-1979 period. Because of the MURB provision (as well as the other rental incentives), rents on new projects could be competitive with those on existing projects while still allowing an attractive return to investors.

There is no reliable method of estimating the number of incremental rental housing units generated by the MURB provision in any particular year.* The combination of MURBs, ARP and deductibility of soft costs were all important components of the increase in rental starts in the 1975-1978 period.

> "The concensus of the industry is that additional rental starts occurred generally because of the availability of both ARP and MURB. Separately, they were generally not adequate to reduce the gap between market and economic rents to the extent necessary to induce private developers to commence new projects."**

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* The only estimate available to the consultant is contained in Irwin Lithwick, An Evaluation of the Federal Assisted Rental Program (1976-1977), CMHC, pages 23-29. This study estimates that about 60 percent of all units built under the Assisted Rental Program (ARP) would not have been built without ARP subsidies. Since MURBs were an important part of ARP, they are included in this estimate. This estimate should, however, by the admission of the author, "be treated with a substantial degree of caution".

** Clayton Research Associates Limited, The Growing Rental Housing Shortage in Canada - Causes and Solutions, 1980, page 12.

Who has benefitted from MURBs from the supply-side point of view? the actors on the supply-side are the developer/promoters and the high-income investors. From the perspectives of both these actors, MURBs have been beneficial.

An analysis of the 1978 personal income tax returns conducted by the Department of Finance indicates that 86 percent of the total claimed CCA losses on rental properties accrued to individuals with incomes of $25,000 and over.

TABLE 11: TOTAL CLAIMED MURB CCA LOSSES ON PERSONAL INCOME TAX CANADA, 1978

| Income of Taxpayer Before Deduction of Negative CCA ($) | $ Million | Percent |
|---|---|---|
| Under 10,000 | 1.4 | 1.0 |
| 10,000 - 15,000 | 4.5 | 3.3 |
| 15,000 - 20,000 | 6.4 | 4.6 |
| 20,000 - 25,000 | 7.5 | 5.4 |
| 25,000 - 50,000 | 36.2 | 26.2 |
| 50,000 - 75,000 | 27.3 | 19.8 |
| 75,000 - 100,000 | 17.1 | 12.4 |
| 100,000 - 200,000 | 17.0 | 12.3 |
| 200,000 and over | 20.8 | 15.0 |
| All Taxpayers With Negative CCA | 138.2 | 100.0 |

Source: Estimates by Clayton Research Associates; see Appendix B, Table B-2.

It must be suspected that the actual incomes of some of the taxpayers with indicated incomes of less than $25,000 in fact had gross incomes well above this level before deductions for soft costs, or write-offs for Canadian film investment etc. By any reasonable measure, it is clear that the vast majority of investors taking advantage of the MURB provision are high-income people.

The other actor on the supply side are the developer/promoters. These are the individuals and companies which put together a MURB project for ultimate sale to investors. Given the output of MURBs which was achieved in the 1975-1979 period and the clamour from various industry lobbies for the reinstatement of the MURB provision in the 1980 Budget, it is clear that these actors are getting their share of benefits as well.

Indeed, an examination of some of the syndicated MURB packages which have been circulated would indicate, at least on the surface, that these developer/promoters are making very large profits through the pricing of their product considerably above the price of non-MURB rental accommodation.* MURB investors appear, by and large, to be ignorant in real estate matters except for the predominant view that real estate inevitably increases in value; these investors seem primarily to be attracted by the fact that the MURB can be purchased largely (or wholly) with tax dollars so any return is adequate. Some of them may find to their regret that there is more to real estate investment than the tax shelter angle - if MURB projects fail, investors may be liable for significant recapture of claimed tax losses not to mention the loss of their initial investment.**

So, who benefits from MURBs from the supply-side point of view? Developers/promoters certainly benefit and so do investors providing the venture is sound in the first place. There are grounds for suspicion, however, that the investors' returns may be less than commonly thought due to the high initial purchase price for MURB units.

Who has benefitted from MURBs from the tenant point of view? the answer here is relatively simple - all tenants whether in MURB projects or other projects not subject to rent controls will benefit.

Given that in the absence of MURBs rental markets would have tightened and that market rents would have risen towards economic rent levels, all tenants of uncontrolled rental accommodation will have benefitted as a result of the MURB provision. If there had been no MURBs, by now most uncontrolled rental housing would have settled at higher levels of market rents.

## 3. Effects of Abolition

In large measure, the effects of abolition of the MURB provision would be the opposite of the effects noted above. Rental markets would tighten and market rents would inevitably rise towards the levels required to develop a new rental project and still make an adequate return on investment. It could be a difficult transition since markets are already very tight and many tenants could

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* For example, the average loan on a sample of 38 syndicated MURB projects surveyed as part of this study, was 75 percent. With NHA maximum rental loans set at 90 percent of project value, either developers are not utilizing their full mortgage potential or the appraised value for loan purposes is well below stated project selling prices - the latter is more likely. See Appendix C for more details on this survey.

** See Appendix A for a discussion of how MURB projects work and the procedures in the case of mortgage foreclosure.

probably not afford the rent increases that would result. The reduction in the rate of increase in rental housing demand due to affordability considerations would be reinforced by some renter households reassessing their rent/purchase decision.

New rental projects would be developed and owned primarily by real estate development companies since they can deduct CCA losses from income. Many private investors, deprived of the CCA tax shelter, would take their investment funds to other fields where tax shelters or better returns are available. In high demand areas like British Columbia and Alberta deduction of soft costs alone will be sufficient to stimulate some rental construction. Some of the older non-MURB projects which have MURB Certificates would likely be converted to MURBs as time passed - there were an estimated 112,000 of these units at the end of 1980 and they will represent a source of MURB projects in the future, albeit at little overall increase in the rental stock as a whole.*

## 4. Relevance in the 1980's

In terms of its initial rationale to reduce rental shortages and provide a stimulus to the construction industry, there is at least as much need for MURBs in 1981 as there was in 1974. However, one wonders after the experience of 5 years and 170,000 units whether MURBs are the best vehicle for solving rental shortages by spurring construction activity.

The program entails an estimated $2,000-$3,200 subsidy per MURB unit in total (on discounted future tax losses), but, on a net unit added basis, the figure is likely to be near double that. MURB investors benefit as well from the deductibility of soft costs and accelerated depreciation. Rental markets are still extremely tight. The viability and quality of some new MURB projects is suspect. Some promoters/developers appear to be making higher than normal profits at the expense of some investors who are left with a relatively poor investment.

As it is presently constituted, the MURB program does not appear to meet the rental investment needs of the 1980's. The major problems with the program are:

- Instability - MURBs are an attempt at a short-term, stop-gap answer to a long-run, structural problem in the rental market.**

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* A number of these non-MURB projects with MURB Certificates are thought to be in the hands of real estate development companies which may consider selling them to private investors. Non-MURBs which are now condominiums occupied by owner-occupants will not likely comprise a significant proportion of these conversions to MURBs.

** This has been a characteristic of the MURB provision from its introduction in late 1974 to date.

The fundamental problem in the rental market in the 1980's is the disparity between the economic unsubsidized rents which are required to make a new building work and the low prevailing market rents in most centres. Either rents on new units must be permanently subsidized in order to ensure a continuous flow of rental housing to meet the increments to rental demand or market rents must be allowed to rise to the level where entrepreneurs can achieve an acceptable profit through rental investment. It is an either/or situation - the MURB program must either be instituted as a permanent part of the rental investment scene or abolished in favour of a new subsidy program or a policy of allowing rents to find their economic market level.

- Costs - at a present value cost of $2,000-$3,200 per unit, (and double this if only the net new rental units stimulated by MURB are considered) MURBs are a significant draw on the federal treasury, not to mention the losses to provincial treasuries as well.

  These costs will last well beyond the period to which calculation of discounted cash flows apply with any significance in terms of present value. In 2010, these buildings will still be there, probably with new investors, claiming CCA deductions as a shelter against their income - a permanent source of tax revenue loss throughout their economic life.

- Inefficient Subsidy Allocation - because investors are primarily interested in MURBs as a no-cost tax shelter, and are frequently ignorant in real estate matters, they are prime candidates for exploitation by developers/promoters who are highly proficient in real estate matters. Exploitation does not occur in all MURBs, but the situation is ripe.

  Large subsidies are involved in MURBs; in some cases they are skimmed off by the developer/promoter who leaves an over-priced (and possible poorly designed and marketed) project in the hands of investors who in many cases will never see it. Some projects may fail and investors will lose money. It is not likely to be the most efficient way to encourage rental housing construction.

## The Use of CCA Depreciation Rates on Rental Buildings

### 1. Rationale

All depreciable assets in Canada are eligible for capital cost allowance deductions from income at various prescribed CCA rates - the CCA rate allowed on rental buildings (now 5 percent on the declining balance) is one of the lowest. Manipulation of these various CCA rates is a common way of extending incentives to investment in various fields though the CCA rates applicable to rental housing have not been tinkered with to any large extent in the past.* Nonetheless, it is generally recognized that the basic CCA schedule (including the rate applied to rental property) is accelerated compared to actual economic depreciation and is, therefore, an incentive aimed at promoting investment.

Beyond this general observation that CCA rates are normally above actual depreciation rates and that this appears aimed at promoting investment, there has been little in the way of a rationale offered for the use of CCA depreciation rates on rental buildings.

### 2. Effects

It is difficult to differentiate between the effects of the MURB provision and the effects of the CCA rate in general since they are closely intertwined. The MURB provision would have been of little assistance to investors if they could only use actual depreciation rates instead of the higher CCA rate. In the absence of the MURB provision, only the life insurance and real estate companies would be eligible to deduct CCA losses from non-rental income for tax purposes. Hence, many of the investors who have been attracted by the MURB provision would likely have placed their funds in other types of investments where the returns were more attractive.

In general, the effect of the use of CCA rates on the rental housing market has been to attract investment and lower the cost of housing to the tenant. The above discussion on the effects of the MURB provision on the market and its participants has application to the general use of CCA on rental buildings. Without the ability to deduct accelerated depreciation from income, investors, whether they are MURB investors or real estate companies, would find the rental market a relatively unattractive place to invest at present.

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* MURBs are an example of the use of CCA as an investment incentive; the only recent example of altered CCA rates, as far as rental properties are concerned, is the removal of the 10 percent CCA rate for wood frame structures in 1979.

Market rents are low compared to the current economic cost of new rental housing. These economic costs would rise further if investors were not able to use CCA as one means of ensuring that an adequate return flowed from rental investment.

When the general tax shelter on rental housing was abolished in 1972, a segment of the total investment in new rental housing from that time was, in effect, forbidden the use of CCA deductions. Another segment - the real estate companies - were still eligible to use CCA deductions but were either unwilling, or did not realize the potential, to expand their operations to fill the gap in new rental investment: consequently markets tightened. No doubt, if the rental markets had been left to their own devices, the returns to investment in new rental accommodation would have increased (as a result of rising rents) to the point where new investment would be encouraged again. The advent of MURBs and other rental subsidy programs together with rent controls on existing rental accommodation forestalled this situation in the mid-1970's but when and if the MURB provision is allowed to expire permanently it will arise again and a fundamental readjustment in the market will be required. Higher rents will attract new investment at the same time as they encourage some tenants to move to homeownership and the rental market will swing back towards a balance.

The fact that in a normal (non-MURB) environment, only rental investors which happen to be real estate or life insurance companies would be allowed to deduct CCA from rental income to create losses must inevitably lead to increased concentration in the industry. Small, private investors and other companies would not compete on the same footing as these companies since their costs would inevitably be higher. Equity would appear to require an all or nothing approach to this question.

## 3. Effects of Abolition

This has largely been covered already. To repeat, if CCA deductions against income were disallowed for all rental investors, the overall cost structure associated with the development of rental projects would inevitably rise. To re-establish a normal rate of return to rental investors, revenues (rents) would fall off until this adjustment occurred unless some sort of subsidy program such as ARP were substituted. The shortage of rental accommodation resulting from abolition of the CCA deductions would over the longer run promote the necessary rent increases.

Some participants in the rental market, particularly the low-income tenants, would be hurt by such a move, unless special provision were made either through increased public housing or a shelter allowance type of program. Other participants would choose to leave the rental market and purchase a home since the relative costs of rental and purchase would have changed.

## 4. Relevance in the 1980's

The use of a 5 percent declining balance capital cost allowance as a means of offsetting the actual depreciation on rental buildings is not justified since buildings generally depreciate slowly, if at all, in the early years of their lives. The only plausible reasons for allowing CCA deductions on rental property would be to encourage investment in rental properties and to keep rents lower than would be necessary if economic costs had to be covered. In this context, there is a rationale for the CCA though in its present form it discriminates in favour of some types of investors (assuming of course MURB does not continue).

An economic purist would argue that indiscriminate subsidies on rental properties such as the use of the CCA should be abolished in combination with artificial restrictions on the market such as rent controls. Rents (and hence investment returns) should be allowed to find their proper economic level through the operation of supply and demand in the free market. People who cannot compete in this free play of market forces (low-income or elderly people for example) should be given a subsidy in the form of a shelter allowance or a guaranteed minimum income. Other people who could compete but whose rent/buy decision may have been swayed by the low prevailing rent structure should through the imposition of economic rents be encouraged to reassess that decision.

This is an attractive scenario and one that would, no doubt, lead to a return to normal rental markets in the longer run. In the shorter run, however, there would be severe dislocations from the removal of CCA deductions for rental investors. Rent controls still persist in many markets; there is no shelter allowance program and there are attractive alternative investments where CCA deductions are allowed.

Removal of the CCA on rental properties would need to be part of a comprehensive program aimed at restoring economic rents while at the same time protecting disadvantaged groups. It would also need to be part of an overall overhaul of the CCA system; there would need to be a restoration of rational allocation of accelerated CCA to industries with a legitimate need for it - it should not be an indiscriminate subsidy.

## The Deductibility of Soft Costs

### 1. Rationale

Under the Income Tax Act expenses are categorized as those incurred by a taxpayer for the purpose of gaining or producing income from (a) business (a current expense) or (b) property (a capital expense). A current expense is deductible in the year it is incurred. A capital expense is capitalized into the cost base for property and is depreciated year by year at the established capital cost allowance rates (now 5 percent for new rental residential buildings).

The treatment of so-called "soft costs" on new rental residential projects arises from the general tax treatment of current and capital expenses. Items such as interest during construction and initial leasing fees (which accounted for 55 percent of total soft costs in a sample of syndicated MURB projects) under the Income Tax Act are regarded as current expenses.

There is no specific housing related rationale for the deduction of soft costs. As far as can be ascertained, this deduction has never been designated as a real estate construction subsidy, either for real estate developers deducting soft costs on their own account or for transfer of deductions by real estate developers to investors purchasing all or part of the project.

### 2. Effects

There is little doubt that the deductibility of soft costs is an important component in the economics of new private rental housing projects - whether the projects are MURBs or not. The fact that the deductions are immediate is an important factor in offsetting negative cash flow in the first few years. However, the tax shelter value of the soft cost deductions for MURBs is not as great over the long run as the ability to deduct CCA losses. There was evidence in 1980 that after the MURB provision expired, and when interest rates were lower, some syndicated rental projects (in western Canada) were proceeding with only the soft cost tax shelter.

The effect of the deductibility of soft costs is similar to that of MURBs as a whole. The overall cost of producing rental accommodation is reduced by allowing the deductibility - this reduction is inevitably reflected in the rent structure of the new units. There appears to be abuses to the deductibility of soft costs, particularly on the part of MURB promoter/developers; this arises from the designation of certain costs as immediately deductible while others must be capitalized - it is a black and white treatment of a very grey area and there are bound to be abuses because of the potential cost savings involved. The potential for abuse is multiplied when the transferability of soft cost deductions to MURB is allowed since there are more potential soft costs to be incurred.

## 3. Effects of Abolition

The effects of abolition of soft cost deductibility would be similar to the abolition of MURBs - a slowdown in rental construction and ultimately higher rents in all rental accommodation. If only the transferability of soft cost deductions from developers to investors were abolished, there would be less incentive for individuals and companies not classed as real estate corporations to invest in rental housing just as would occur if the MURB provision were abolished.

## 4. Relevance in the 1980's

Since soft costs are a necessary outlay in the process of developing a rental property, one wonders whether it would not be desirable to require soft costs to be capitalized into the building value and effect a more cost-effective measure to stimulate the production of new rental production (assuming of course this remains a goal of the federal government during the 1980's). Allowance of deductibility (and even more so for transferabililty of the deduction) of soft costs promotes abuse, and it is considered to be an inefficient program. If it is continued, the guidelines should be tightened up considerably.

ALTERNATIVES

The discussion here looks at the cost-effectiveness of the combined MURB, accelerated depreciation and soft cost deductibility measures relative to possible alternatives.

The basic purpose of the three rental housing incentives assessed in this study is to stimulate the production of private rental construction in Canada.* The incentives in no way restrict where this rental housing is built, the kinds of accommodation provided or who can live in the units. These measures supplement private market rental activity by encouraging more new rental housing to be built than would be the case in their absence.

There are a number of deficiencies in these rental incentives from a cost-effective vantage point:

- Assistance is provided to new rental units built regardless of whether these units would have been built in the absence of the incentives.

  All real estate developers and MURB investors are eligible for the three rental incentives. To the extent that rental accommodation would have been built in the absence of these incentives, developers/investors receive a gratuitous tax benefit. A more effective use of the foregone revenues would be to design a subsidy or tax expenditure program that is directed at stimulating rental projects that would not have been built without the program (admittedly this is virtually impossible to do).

- The tax shelter assistance provided is not all received by developers/builders.

  There are typically three parties involved in tax shelter rental projects: the builder/developer; the syndicator; and the investor.

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* This objective has been stated explicitly by the federal government for the MURB program and is assumed to be an implicit goal of the CCA deductions in excess of actual depreciation and the deductibility of soft costs (or at least their transferability to investors).

If the builders/developers were able to retain all of the foregone tax revenues - instead of passing a sizeable portion on to the syndicators and investors - they would have a powerful incentive to produce a greater number of new rental units (this impact is offset to the extent that the prices paid by MURB investors have been inflated beyond the market value of comparable non-MURB rental units).

- The federal government cannot control the amount of its tax expenditure commitments.

  The tax expenditure costs of the rental incentive commitments in any year (both current and future costs) is in terms of foregone revenue which is dependent upon such uncontrollable factors as the number of new rental units built, their price range and the marginal tax brackets of the purchasers.

Alternative programs which could likely achieve the objective of the rental tax expenditures more efficiently include the following:

- Replace the MURB and soft cost tax shelters with direct construction grants.

  Direct construction grants have the advantage that all of the subsidies end up in the hands of the builder/developer. None of the benefits are passed along to syndicators or investors. Consequently, more rental units should be produced out of a given amount of grant revenue since builders/developers would be recipients of larger subsidies.

- Replace the MURB and soft cost tax shelters with investment tax credit for builders/developers.

  A tax credit for builders/developers of new rental projects has the same advantage as the direct construction grant. The only difference is that it would be administered through the tax system.

- Replace the MURB and soft cost tax shelters with interest subsidies for builders/developers.

  This is yet another alternative which could be substituted for the MURB and soft cost tax shelters which would be more effective than the current measures since the need to subsidize syndicators and individual investors is again eliminated.

## PART 2 - DEDUCTIBILITY OF CARRYING CHARGES ON LAND

Part 2 of this study investigates the deductibility of carrying charges for land - the provision allowing taxpayers the immediate write-off of interest costs, property taxes, and other expenses associated with holding undeveloped land.

### BACKGROUND

#### History of the Tax Treatment of Land Carrying Charges

Historically, developers' interest costs on money borrowed to acquire or develop land and property taxes in respect of that land could be deducted from income from other sources for the purposes of computing income tax. This all changed in 1974. In the May 6, 1974 Budget, the Minister of Finance announced "several ... measures to improve the housing situation":

> "First, one tax factor which may be holding back the flow of land for housing is that a taxpayer, person or corporate, may claim against other income the carrying charges on land which is being held for future development. This sheltering of other income has lowered the financial cost of carrying undeveloped land and, therefore, reduced the pressure for early use.
>
> I am proposing that the carrying costs on land awaiting development may not be charged against other income but be taken into account only as the land is sold. This new rule for carrying charges would not apply to land which is being held primarily to earn rental income in the year, or to land which is used in the course of carrying on a business other than a real estate business. This measure, which is estimated to yield the federal government about $10 million this year, will assist in bringing land for housing onto the market more quickly."*

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* Honourable John N. Turner, Minister of Finance, Budget Speech, May 6, 1974, page 19; this Budget was defeated in the House of Commons.

This particular Budget was not passed; however, the measure was reintroduced unchanged in the November 18, 1974 Budget and passed. After intense lobbying by the land development industry, the measure was reversed in the November 16, 1978 Budget:

> "Provision is made in the Budget for the deduction of interest and property taxes on land held for development or resale by taxpayers in the ordinary course of their business ... It will provide developers an opportunity for planning more projects in Canada."*

The situation with regard to deduction of land carrying charges has not changed since the November, 1978 Budget though one might be suspicious that the reason given for the reversal of the 1974 measure does not tell the full story.

## Program Description

The program is relatively straightforward. Developers are allowed to deduct from their income for tax purposes any interest costs, property taxes or other expenses incurred in respect of holding undeveloped land. The argument over this current tax treatment is whether developers should be allowed to deduct these charges as incurred against other income since for the developers' own accounts they are capitalized into the cost of the land when it is finally developed.

## Is It a Tax Expenditure?

The Government of Canada Tax Expenditure Account considers the allowance of deductibility of carrying charges on undeveloped land to be a tax expenditure:

> "Such land holding is a form of inventory. Thus, under generally accepted accounting principles regarding inventory, and under the benchmark tax system, such carrying charges would be costs associated with the acquisition of inventory that can be deducted as a cost of sales only

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* Department of Finance, Budget Papers, November 16, 1978, page 36.

> when the land is finally sold. The current tax treatment therefore allows a tax deferral insofar as costs are recognized before the associated revenue."*

There can be little doubt that general accounting principles require that carrying charges on inventories be capitalized into the final cost of the product. However, the argument that, because of accounting practice, the deductibility of carrying costs on land is therefore a tax expenditure is less convincing.

Any business that requires the holding of inventories for long periods is allowed to deduct the carrying charges associated with those inventories from income for tax purposes. Take the wine industry for example. There are obvious similarities with land development in that large inventories must be held for extended periods at considerable cost in terms of interest charges, etc.; however, the deductibility of these charges against other income is apparently not considered by the Department of Finance to be a tax expenditure in the case of the wine industry. Why not? Because the tax system recognizes inventory carrying costs as expenses as they are incurred, not as they are capitalized on final sale. When the measure prohibiting the deduction of land carrying costs against other income was introduced in 1974, it did not bring the taxation of land inventories into conformity with the tax treatment of other inventories - precisely the opposite occurred. Special legislation was required to implement this special treatment of land inventories.

Whatever the arguments for or against the deductibility of land carrying charges, it would appear difficult to justify their identification as tax expenditures when all other enterprises with inventories are allowed to deduct associated inventory costs.

## PROGRAM SIZE

This section presents estimates of the size of land inventories, the carrying charges on the land and the costs to the federal government of allowing the deduction of carrying charges on land. The discussion is relatively brief because it merely summarizes the detailed analysis and estimates which are contained in Appendix B.

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* Department of Finance, Government of Canada Tax Expenditure Account, December, 1979, page 83.

## The Volume of Land Inventories and Carrying Charges

There is no comprehensive information available on the total value of land inventories and even less on the carrying charges on these inventories. Estimates of the land inventories were obtained by manipulation of 1978 data from Statistics Canada while the size of carrying charges was estimated using information available from the annual reports of several large real estate development companies.

TABLE 12: ESTIMATED RESIDENTIAL LAND INVENTORIES AND RELATED CARRYING CHARGES CANADA, 1976-1981

| | Estimated Residential Land Inventories ($ Million) | Estimated Percent of Carrying Charges* | Estimated Carrying Charges ($ Million) |
|---|---|---|---|
| 1976 | 1,370 | 7 | 96 |
| 1977 | 1,618 | 7 | 113 |
| 1978 | 1,844 | 7 | 129 |
| 1979 | 2,121 | 8 | 170 |
| 1980 | 2,439 | 10 | 244 |
| 1981 | 2,804 | 10 | 280 |

* This estimate is well above the 5 percent figure used by the Department of Finance in deriving its estimates.

Source: Estimates by Clayton Research Associates; see Appendix B, Table B-33.

The value of residential land inventories in Canada is estimated to be in the neighbourhood of $2.5 billion at the end of 1980 - this is based on an extrapolation of the 1978 estimate using an annual growth figure of 15 percent. The value of carrying charges is highly dependent on the rate of interest since interest charges comprise the lion's share of deductible carrying costs. These interest costs (and, consequently, carrying charges) are assumed to have risen in the period since 1978. The estimated carrying costs on residential land inventories in 1981 is $280 million - 10 percent of the value of the inventories themselves.

## The Cost to the Federal Government of the Deductibility of Land Carrying Charges

The estimated land carrying charges in Table 12 are all deductible against other income of the land developers. However, a large proportion of these companies pay no taxes - the Department of Finance estimates assume that half the carrying charges are not deducted from corporate income for this reason. For the purposes of the estimates presented in this study, it has also been assumed that half of the land carrying charges will not be deducted from income and so will not constitute a tax loss.

TABLE 13: ESTIMATED TAX LOSSES DUE TO DEDUCTIONS OF CARRYING CHARGES ON RESIDENTIAL LAND CANADA, 1976-1981

| | Estimated Carrying Charges ($ Million) | Federal Corporate Tax Rate | Tax Losses ($ Million)* | |
|---|---|---|---|---|
| | | | Estimated Possible | Half of Possible |
| 1976 | 96 | .36 | 35 | 18 |
| 1977 | 113 | .36 | 41 | 21 |
| 1978 | 129 | .36 | 46 | 23 |
| 1979 | 170 | .36 | 61 | 31 |
| 1980 | 244 | .36 | 88 | 44 |
| 1981 | 280 | .36 | 101 | 51 |

* The figures for 1976-1978 are entirely hypothetical since land carrying charges were not deductible in those years.

Source: Estimates by Clayton Research Associates; see Appendix B, Table B-34.

The tax loss to the federal government resulting from the deductibility of land carrying charges is estimated at about $50 million in 1981; this is well above the levels that would have occurred in 1976-1978 (if land carrying charges had been deductible) due primarily to the increase in interest charges in this period.

These estimates are slightly lower than those prepared by the Department of Finance in the Government of Canada Tax Expenditure Account. The Department of Finance estimates of tax expenditures were $35 million in 1979 and $40 million in 1980.*

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* Department of Finance, Government of Canada Tax Expenditure Account, 1980, page 22.

## PROGRAM ASSESSMENT

### 1. Program Rationale

The rationale for abolishing the deductibility of carrying charges on land in 1974 was very persuasive. Simply stated, the argument held that allowing such deductibility reduced the incentive for developers to develop land quickly since it lowered the cost of carrying an inventory of undeveloped land; abolition of such deductibility was intended to push developers into bringing land for housing onto the market more quickly. The increased supply, it was reasoned, would reduce the rate of increase in the price of land.

The Canadian Institute of Public Real Estate Companies (CIPREC) disputed the validity of the argument for abolishing deductibility of land carrying costs in a submission to the Federal Government. According to CIPREC, residential land shortages were the result of delays caused by municipal and provincial planning processes, not developers' reluctance to put land on the market: "increasing the effective carrying costs of land will neither bring more land to the market, nor will it lower the price of such land".* The submission also warned that small developers would be the most seriously affected: "there would be both a restriction in competition and a reduction in the flow of land for housing". CIPREC concluded that the measure would have exactly the opposite effect to that intended by the Minister of Finance - it would reduce the flow of land for housing and increase the price.

The Treasurer of Ontario also disagreed with the Federal Government initiative:

> This measure will not accelerate significantly the availability of serviced lots over the short term. Over the longer term, it may hinder careful planning and indeed, ultimately lower supply and increase the final price of such lots.**

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* Canadian Institute of Public Real Estate Companies, Submission Concerning Resolution 12 of the Ways and Means Motion of 6 May, 1974 to Amend the Income Tax Act, August, 1974, pages 8 and 9.

** Honourable Darcy W. McKeough, Treasurer of Ontario, Budget Speech, April 7, 1975.

The arguments against the 1974 Budget measure convinced the Federal Government in 1978 to re-allow the deductibility of carrying charges on land; there had been rumours that this might occur in the 1976 Budget, but these rumours were untrue. Little in the way of rationale was provided along with the announcement in the 1978 Budget:

> "It will provide developers an opportunity for planning more projects in Canada."*

While this is no doubt true, compared to the noble justification given for the abolition of such deductibility in 1974, this seems a relatively scanty rationale. Little in the way of further justification for this tax expenditure has been forthcoming since it was reinstated.

## 2. Effects

The impact of allowing as deductions mortgage interest and property taxes on land held for development or resale in the ordinary course of business will be precisely the opposite of the impact of abolition in the November 18, 1974 Budget. The impact of abolition was assessed by the Federal/Provincial Task Force on the Supply and Price of Serviced Residential Land.*

The Federal/Provincial Task Force and a supporting background study reached several conclusions on the effects of removal of the land carrying cost deduction:

- The immediate impact of non-deductibility was to raise the effective carrying costs on undeveloped land.

  > "In brief, non-deductibility of carrying costs tended to reduce cash-flow."

  If non-deductibility of carrying costs caused an immediate reduction in cash flow, then the reintroduction of deductibility would have precisely the opposite effect.

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* The Report of the Federal/Provincial Task Force on the Supply and Price of Serviced Residential Land, Down to Earth, Volume Two, pages 160-164 and Frank A. Clayton, Taxation and the Supply and Price of Serviced Residential Land, Background Study 12, xeroxed first draft reproduced by CMHC, June, 1977.

- Non-deductibility did not mean that undeveloped land carrying costs could never be deducted under the income tax - only that they could not be deducted until the land was sold or developed.

  > "For these companies (real estate corporations) it appeared at the time, the sudden withdrawal of the deduction in 1974 would cause a substantial reduction in their cash flow. In some ways, though, this initial potentially drastic impact could be short-lived. Its magnitude is partially dependent on the lag between the time land is purchased and ultimately developed and sold."

  If non-deductibility of carrying costs caused a sharp one-time reduction in cash flow followed by smaller reductions or even increases in cash flow in subsequent years, the reintroduction of deductibility would have the opposite effect.

- In the short run, it seemed highly unlikely that non-deductibility had any significant impact on the supply or price of serviced residential land.

  > "Prices were demand-determined in 1974 and 1975 in all parts of the country and in most areas, supply was constrained by the capacity of the industry and by subdivision approval processes rather than by the industry willfully withholding land."

  If non-deductibility had little effect on overall serviced land prices or supply in the short run, its reintroduction would not be expected to result in any noticeable downward pressure on land prices.

- The effects of non-deductibility are partly borne by farmers in terms of lower raw land prices in the longer run.

  > "Thus if the non-deductibility of carrying costs represents an increased cost to the firm, non-deductibility may partly result in a reduction in the prices that developers are willing to bid for raw land in the future. On a percentage basis, this reduction should be small and should not prove important in the decisions of farmers to sell."

  If non-deductibility causes some reduction in the long term price of raw land, then the reintroduction of deductibility should result in a similar sized rise in the longer term price of raw land.

- A more important long-run effect of non-deductibility is that it tends to favour the larger, well-integrated firms relative to small firms.

  > "... a number of factors have acted to cause huge increases in the financial resources needed to profitably participate in land development ... taxes are contributing to increasing the concentration of raw and serviced land ownership."

  Among these factors are the non-deductibility of carrying costs on undeveloped land, the front ending of municipal services in subdivisions and the imposition of lot levies; larger real estate companies were also in a better position to deduct losses arising from capital cost allowances on rental buildings from other sources of income including land development profits.

  The reintroduction of deductibility of carrying costs by reducing "up front" funding will help smaller land developers in a small way to compete more effectively with larger integrated development firms.

- One possible longer term effect is that non-deductibility may drive developers away from holding long-range land.

  > "To the extent that this implies that developers will give up on coherent, large-scale phased developments in favour of a series of small, non-integrated, short-run projects, the quality of new development may depreciate."

  To the extent non-deductibility reduces the attractiveness of long term land, deductibility has results in a comparable increase in the attractiveness of such land.

In general, then, the reintroduction of carrying costs on land held for development or sale as a deduction against other sources of income is not considered to have a significant effect on residential land supply or supply. It does, however, have several small scale impacts including: encouraging smaller land development firms; making long-term land more attractive; increasing the price of raw land; and, possibly, some reduction in the current supply of serviced land put on the market by the development industry.

## 3. Effects of Abolition

This has already been discussed in the previous section since the Federal/Provincial Land Task Force was assessing this option.

## 4. Relevance in the 1980's

As previously mentioned, it would appear difficult to justify the abolition of deductibility of land carrying costs as tax expenditures when firms in virtually all other industries are allowed to deduct associated inventory costs.

Deductibility should be a permanent feature of the tax system both on the grounds of equity and as an encouragement for large-scale integrated developments which are costly and require many years to complete.

ALTERNATIVES

It is virtually impossible to formulate cost-effective alternatives to the deductibility of land carrying costs since the objective of this measure has not been clearly defined by the federal government. The stated objective - to provide an opportunity for developers to plan more projects in Canada - is nebulous to say the least. Moreover, the view was previously expressed that there is considerable doubt that the deductibility of carrying costs should be considered as a tax expenditure.

# PART 3 - SALES TAX REDUCTIONS OR EXEMPTIONS FOR CONSTRUCTION MATERIALS AND EQUIPMENT

Part 3 of this study investigates three separate federal tax expenditures:

- The reduced federal sales tax on building materials to only 5 percent compared to the 9 percent charged for most manufactured goods;
- The exemption of construction equipment from federal sales tax; and
- The exemption of goods in competition with on-site construction from federal sales tax.

These three tax expenditure items are very similar with one another in terms of application, rationale and effects so they will be dealt with simultaneously in this report.

## BACKGROUND

### History of Sales Tax Reductions and Exemptions for Construction

Prior to the 1963 Federal Budget, most building materials were exempt from sales tax. From that Budget till 1974, almost all construction materials were taxed at full rates. The main exceptions over the 1963-1974 period were manufactured goods which might be considered to be in competition with on-site construction - goods such as kitchen cabinets which could be constructed either on-site or in a factory.

The Carter Royal Commission on Taxation recommended that building materials among other things be exempt from sales tax on the grounds that "all goods and services used to produce or distribute goods and services for final use by individuals should be exempt from sales tax".* However, recognizing the cost of exempting building materials from

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* Report of the Royal Commission on Taxation, Volume 5, 1966, pages 74-77.

sales tax, the Commission did not recommend their immediate exemption but suggested that such a measure "be deferred until such time as future revenues can support this objective".* In any case, the Commission considered that the exemption of building materials used in residential construction was not as urgent as exemption of building materials used to construction producer goods (e.g. plants, warehouses etc.) because of possible severe tax-on-tax where final goods and services are also taxed.

This plea, along with that of the construction industry and others, fell largely on deaf ears until the November 18, 1974 Federal Budget - the same Budget that introduced MURBs and the Registered Home Ownership Savings Plan and eliminated the deductibility of carrying costs on land awaiting development against other income as part of a wide-ranging package to stimulate residential construction and lower housing costs.

> "The issue of the sales tax on building materials has long been the subject matter of debate in this House. Up to now I have resisted reduction of this tax for two principal reasons. First, it is a costly step and governments are always confronted with hard choices among competing priorities. Second, I was concerned that such a step would overstimulate an already strong demand. The housing picture, however, has altered significantly in the last few months. As a result of these changed prospects, I propose that, effective tonight, the rate of sales tax on building and construction materials be more than cut in half to 5 per cent. This measure will cost the federal government in a full year $450 million. I am confident that this measure will add stimulus to the industry and will, at the same time, contribute to a moderation of prices for housing."**

At the same time, the sales tax on all major classes of construction equipment was abolished.

Except for the further exemption of energy-related building products such as insulation, storm windows and storm doors etc., in the 1975 Budget and an adjustment of these exemptions in 1978, the situation with regard to the sales tax on building materials and construction equipment has remained largely unchanged. The sales tax rates applying to other manufactured goods was reduced in the November, 1978 Budget to 9 percent; however, the rate applying to building materials and equipment was not adjusted.

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* Report of the Royal Commission on Taxation, Volume 5, 1966, page 77.

** Honourable John N. Turner, Minister of Finance, Budget Speech, November 18, 1974, page 18.

## Program Description

The three tax expenditure items related to the sales tax on construction materials and equipment are relatively straightforward.

### 1. Reduced Federal Sales Tax on Building Materials

All building materials are subject to a preferential sales tax rate of 5 percent compared to the normal rate of 9 percent on other manufactured goods. The reduction applies to materials such as bricks, lumber, tiles, wallboards, doors, windows, electrical wiring, heating and plumbing equipment as well as finished products such as elevators and installed kitchen and bathroom cabinets. Consumer durables such as built-in stoves, carpets and furniture are not eligible for the reduction.

Besides the more commonly thought construction materials outlined above, the reduction also applies to materials used in engineering construction projects. These include materials such as pipes for oil and gas pipelines, structural metal for electrical transmission lines and storage tanks and materials used in the construction of dams, railways, airports and port facilities.

Some energy conservation materials such as thermal insulation are exempt from the sales tax altogether but they are relatively minor in terms of costs.

### 2. Exemption of Construction Equipment from Federal Sales Tax

All sales of tractors, excavator cranes, trenchers and ditchers, graders, compactors and rollers, concrete machinery, asphalt equipment and all other construction type machinery and attachments are exempt from the 9 percent federal sales tax.

### 3. Exemption of Goods in Competition with On-Site Construction from Federal Sales Tax

Manufactured goods which could alternatively have been fabricated on a construction site are not taxed on their sale price - though, of course, the inputs are subject to the reduced sales tax on building materials. Examples of goods which fall into this category include ready-mix concrete, pre-cast concrete structures, concrete blocks, steel structures and septic tanks.

## Are They Tax Expenditures?

Before considering whether the three specific items under discussion here themselves constitute tax expenditures, it is important to consider the special tax treatment accorded the construction industry as a whole.

Unlike most other activities in which products are fabricated, the output of the construction industry is not subject to the federal sales tax. In the case of some construction activities, such as the construction of warehouses and plants, this is a sensible treatment since the construction products themselves can be considered to be inputs into the manufacture of other goods and services which will in the end be subject to the federal sales tax - taxation of the construction product in these cases would lead to pyramiding taxation. In other cases, such as residential construction, an argument could be made that the sale price of the final product should be the basis for the federal sales tax.

The apparent compromise which has been reached with regard to federal sales taxes and the construction industry is that, while output is not to be taxed, selected inputs are to be taxed, albeit at low rates. The overall amount of revenue raised by sales taxes on the construction industry is now well below what it would be if taxes were applied to output. This is not only because of the reduced tax on building materials and exemption of tax on equipment, but also because the labour and profit components of the final sales price are not taxed at all.

Therefore, a case could be made that the three tax expenditures under consideration here represent only a portion of the total tax expenditures accruing to construction. There seems to be little doubt that, for the residential construction component at least, the reduction of sales tax on building materials and the exemption of sales tax on construction equipment and goods in competition with on-site construction, are in fact tax expenditures.

## PROGRAM SIZE

This section presents estimates of the volume of goods and the costs to the federal government of each of the three sales tax related tax expenditure items. The discussion is relatively brief because it merely summarizes the detailed analysis and estimates which are contained in Appendix B.

### Reduced Federal Sales Tax on Building Materials

#### 1. The Volume of Building Materials Used in Residential Construction

The total building materials requirements of the residential construction industry are considered to represent about 39 percent of the total expenditure on residential construction; this is a slightly higher proportion than the estimated 35 percent which pertains to total non-residential construction. Based on these relative proportions, the estimated materials used in residential and non-residential construction were calculated from the estimated total expenditures on residential and non-residential construction; Table 14 presents the results of these calculations.

TABLE 14: ESTIMATED MATERIALS USED IN RESIDENTIAL AND NON-RESIDENTIAL CONSTRUCTION CANADA, 1976-1981 ($ MILLION)

| | Residential | Non-Residential | Total |
|---|---|---|---|
| 1976 | 4,941 | 7,150 | 12,091 |
| 1977 | 5,119 | 8,140 | 13,259 |
| 1978 | 5,396 | 8,411 | 13,807 |
| 1979 | 5,565 | 9,756 | 15,321 |
| 1980 | 5,372 | 10,928 | 16,300 |
| 1981 | 5,909 | n/a | n/a |

Source: Estimates by Clayton Research Associates; see Appendix B, Table B-38.

From a situation where residential construction accounted for an estimated 41 percent of total materials used in all construction in 1976, the residential component dropped to about 33 percent in 1980. Since this report is intended to cover housing-related tax expenditures, the 1981 non-residential materials requirement has not been estimated; for residential construction, the materials requirements are projected to be at about the same level as 1980 in volume terms; however, inflation is expected to drive the money value up to a total of almost $6 billion.

## 2. The Cost to the Federal Government of the Reduction in Sales Tax on Building Materials

The Department of Finance estimates of the tax expenditures resulting from the reduction in sales tax on building materials are considered to be the best available. The estimates are based on revenues from the class of manufactured goods which are subject to a 5 percent sales tax - this reduction applies only to building materials. Unfortunately, the Department of Finance estimates do not segregate the reduction in tax on materials used into residential and non-residential construction.

Since the sales tax applies only to an estimated 55-65 percent of the value of all materials used in construction as a whole, estimation of the proportion of the tax expenditures relating to residential and non-residential construction separately cannot simply be taken to be the same as their proportion of materials used - an explicit assumption must be made about the proportion of tax-subject materials used in each of the construction types. Little information was available on this matter and it was therefore assumed that the two types of construction were the same in this regard - i.e. the proportions of tax-subject and exempt materials used in both types of construction are equal.

On this basis, it is estimated that tax expenditures resulting from the reduction in sales tax on materials used in residential construction have ranged from $142-$147 million in 1979 and 1980 - the two years in which the overall federal sales tax has been 9 percent. The residential building materials tax expenditures associated with the earlier 1976-1978 period are much higher because of both a higher level of residential construction activity and the higher rate of overall federal sales tax (12 percent) in those years. The tax expenditures on residential building materials in 1981 are expected to total an estimated $162 million.

TABLE 15: ESTIMATED TAX EXPENDITURES RESULTING FROM THE REDUCTION IN SALES TAX ON BUILDING MATERIALS BY TYPE OF CONSTRUCTION CANADA, 1976-1981 ($ MILLION)

| | Residential | Non-Residential | Total |
|---|---|---|---|
| 1976 | 188 | 272 | 460 |
| 1977 | 203 | 322 | 525 |
| 1978 | 233 | 362 | 595 |
| 1979 | 142 | 248 | 390 |
| 1980 | 147 | 298 | 445 |
| 1981 | 162 | n/a | n/a |

Source: Department of Finance, Government of Canada Tax Expenditure Account, December 1980, and estimates by Clayton Research Associates; see Appendix B, Table B-39.

There is some evidence that the above estimate for residential construction may be too high. Over the 1976-1980 period there was a significant increase in the proportion of total materials used in construction which were subject to the sales tax - this, at a time when the residential proportion of total construction was declining. On the surface, this might indicate a greater incidence of sales tax on materials used in non-residential construction than on materials used in residential construction. To the extent that this is true, the figures presented in Table 15 overstate the residential component and understate the non-residential component.

## Exemption of Construction Equipment from Federal Sales Tax

### 1. The Volume of Construction Equipment Used in Residential Construction

Since the latest information available on sales of construction equipment is for the year 1977 and since these sales figures do not differentiate residential from non-residential construction, it was necessary to formulate a new set of estimates for this study. These estimates are unrelated to the Department of Finance estimates of sales of construction equipment to the industry as a whole.

TABLE 16: ESTIMATED VALUE OF SALES OF CONSTRUCTION EQUIPMENT TO THE RESIDENTIAL CONSTRUCTION INDUSTRY CANADA, 1976-1981

| | $ Million |
|---|---|
| 1976 | 215 |
| 1977 | 223 |
| 1978 | 235 |
| 1979 | 243 |
| 1980 | 234 |
| 1981 | 257 |

Source: Estimates by Clayton Research Associates; see Appendix B, Table B-42.

The value of construction equipment sales is estimated to have peaked in 1979 at $243 million and to have fallen off in 1980. The projected increase in 1981 is based on an assumed 10 percent increase in the value of construction equipment sales - the actual volume is expected to remain the same with inflation accounting for the increase.

## 2. The Cost to the Federal Government of the Exemption of Construction Equipment Used in Residential Construction from Sales Tax

It is estimated that, for residential construction alone, the tax expenditures resulting from the exemption of construction equipment from sales tax ranged between $20 million and $30 million in the 1976-1981 period.

TABLE 17: ESTIMATED TAX EXPENDITURES RESULTING FROM THE EXEMPTION OF CONSTRUCTION EQUIPMENT FROM SALES TAX - RESIDENTIAL CONSTRUCTION ONLY CANADA, 1976-1981

| | $ Million |
|---|---|
| 1976 | 26 |
| 1977 | 27 |
| 1978 | 28 |
| 1979 | 22 |
| 1980 | 21 |
| 1981 | 23 |

Source: Estimates by Clayton Research Associates; see Appendix B, Table B-43.

The drop in estimated tax expenditures in 1979 resulted from the reduction in the general sales tax rate from 12 percent to 9 percent. The decline in construction work also contributed to the drop but this was more or less offset by inflation.

## Exemption from Federal Sales Tax of Goods in Competition with On-Site Construction

### 1. The Volume of "Goods in Competition" Used in Residential and Non-Residential Construction

The Department of Finance estimates of the tax expenditures resulting from exemption of "goods in competition" were based on an exhaustive analysis of the various goods themselves. No attempt was made in this study to improve on the estimates of total "goods in competition" used in construction as a whole; however, the breakdown by type of construction was estimated.

TABLE 18: ESTIMATED GOODS IN COMPETITION WITH ON-SITE CONSTRUCTION IN RESIDENTIAL AND NON-RESIDENTIAL CONSTRUCTION CANADA, 1976-1981 ($ MILLION)

| | Residential | Non-Residential | Total |
|---|---|---|---|
| 1976 | 392 | 566 | 958 |
| 1977 | 386 | 614 | 1,000 |
| 1978 | 407 | 635 | 1,042 |
| 1979 | 403 | 708 | 1,111 |
| 1980 | 385 | 782 | 1,167 |
| 1981 | 424 | n/a | n/a |

Source: Estimates by Clayton Research Associates; see Appendix B, Table B-46.

The estimate of the residential component of "goods in competition" is based on the same methodology as that used in construction materials subject to the reduced federal sales tax (above). The residential proportion of total "goods in competition" is estimated to have declined from over 40 percent in 1976 to only about 33 percent in 1980. The 1981 residential estimate is based on a 10 percent inflation increase from 1980.

### 2. The Cost to the Federal Government of Exemption of Goods in Competition With On-Site Construction From Sales Tax

For residential construction only, the tax expenditures resulting from the exemption of "goods in competition" is estimated to be in the $35 million to $40 million range in the 1979-1981 period.

TABLE 19: ESTIMATED TAX EXPENDITURES RESULTING FROM THE EXEMPTION FROM SALES TAX OF GOODS IN COMPETITION WITH ON-SITE CONSTRUCTION BY TYPE OF CONSTRUCTION CANADA, 1976-1981 ($ MILLION)

| | Residential | Non-Residential | Total |
|---|---|---|---|
| 1976 | 47 | 68 | 115 |
| 1977 | 46 | 74 | 120 |
| 1978 | 49 | 76 | 125 |
| 1979 | 36 | 64 | 100 |
| 1980 | 35 | 70 | 105 |
| 1981 | 38 | n/a | n/a |

Source: Department of Finance, Government of Canada Tax Expenditure Account, December, 1980, and estimates by Clayton Research Associates; see Appendix B, Table B-47.

These estimates are considered to be relatively rough since they do not agree well with the estimates of total materials used - i.e. the proportion of "goods in competition" varies from year to year. They should be treated as indicative only of the general proportions.

## PROGRAM ASSESSMENT

This section presents an assessment of the three tax expenditures related to the reduction or exemption of federal sales tax on construction-related goods. The assessment is presented from the points of view of rationale, effects on the housing market and its participants, and relevance of the incentive in the 1980's. A review and assessment of the combined effects of the three tax expenditures compared to possible alternative programs is also presented.

### Reduction in Sales Tax on Building Materials

#### 1. Rationale

There appear to be a number of possible rationales behind reducing or abolishing the sales tax on building materials:

- Avoidance (or reduction) of double taxation;
- Reduction in the regressivity of the tax system;
- Reduction in housing costs; and
- Stimulation of the construction industry.

The first two were the main reasons why the Carter Royal Commission on Taxation advocated the abolition of the sales tax on building materials.* The latter two appear to be the main reasons why the reduction in sales tax on building materials actually occurred.

Avoidance of double taxation is an argument against sales taxes on goods and services which are inputs into the production or distribution of other goods and services - it is an argument which has already been elaborated (above). Briefly, since building materials are used to erect office buildings, factories and warehouses etc. which are themselves simply inputs into the process of producing or distributing goods and services, any tax placed on building materials will be pyramided in the sales taxes which would be imposed on the final good or service provided by the new building. Because of this double taxation, the Carter Commission recommended that sales taxes apply only on final goods and services - construction materials are considered an intermediate good.

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* Report of the Royal Commission on Taxation, Volume 5, 1966, pages 3-8 and 74-77.

Reduction of the regressivity of the tax system is an argument frequently put against sales taxes generally:

> "... general sales taxes are ... inequitable. This follows because it is reasonable to assume that most general sales taxes ... are ultimately borne by consumers of goods and services. Consumption expenditures are not a constant proportion of income. The proportion is lower the greater the income of the individual or family. A general sales tax on all consumer goods and services ... would therefore be regressive. It would impose relatively heavier tax burdens on those with low incomes."*

Therefore, the argument goes, goods such as shelter and food should be exempted to reduce the tax burden on the low income population. Since building materials comprise a significant proportion of the cost of housing, a sales tax on these goods is regressive.

Neither of these arguments appears to have been in the mind of the Minister of Finance when in November, 1974 he reduced the federal sales tax on building materials from 11 percent on some materials and 12 percent on others to a uniform 5 percent. The reduction was part of a series of measures aimed at stimulating construction and reducing the cost of a home.

> "I have already referred to the short-term prospects for construction of new housing. The projected weakness in this sector of our economy troubles me a great deal. It threatens to reduce employment, raise production costs and increase housing prices and rents. Even more important, a reduction in the supply of new housing could lead to a lower standard of accommodation than Canadians deserve.
>
> ... The issue of the sales tax on building materials has long been the subject matter of debate in this House. Up to now I have resisted reduction of this tax for two principal reasons. First, it is a costly step and governments are always confronted with hard choices among competing priorities. Second, I was concerned that such a step would overstimulate an already strong demand. The housing picture, however, has altered significantly in the last few months. As a result of these changed prospects, I propose that, effective tonight, the rate of sales tax on building and construction materials be more than cut in half to 5 per cent. This measure will cost the federal government in a full year $450 million. I am

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* Report of the Royal Commission on Taxation, Volume 5, 1966, pages 3-4.

> confident that this measure will add stimulus to the industry and will, at the same time, contribute to a moderation of prices for housing."*

Other measures enacted in that Budget included the introduction of the MURB provision, the abolition of the deductibility of carrying charges on land awaiting development, the introduction of the Registered Home Ownership Savings Plan and the elimination of the sales tax on construction equipment and on materials used in municipal water distribution systems.

Thus, the rationale behind the reduction in sales tax on building materials was (a) stimulation of the construction industry; and (b) reduction in housing costs - or, at least, the rate of increase in housing costs. The measure was part of a package of measures aimed at these two ends.

It is important to note, however, that the reduction was not aimed only at the residential construction industry. While it was not highlighted in the Budget Speech itself, it was clearly aimed at all construction.

> "The reduced rate will also apply to materials used in engineering construction projects such as pipe for oil and gas pipelines, high-voltage transmission lines for power utilities, and structural metal for bridges, transmission towers and oil storage tanks. In addition, materials used in the construction of dams, railways, airports and port facilities will benefit from the reduced rate."**

To the extent that the reduction in sales tax was aimed at all construction and not just residential construction, the rationale of avoidance of double taxation may also be applicable, though it was not expressly stated as such. Administration of the tax would, no doubt, also have been a factor in the application of the reduction to all construction materials not just those used in residential construction.

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* Honourable John N. Turner, Minister of Finance, Budget Speech, November 18, 1974, page 16-18.

** Department of Finance, Budget, Supplementary Information, November 18, 1974, page 10.

## 2. Effects

In terms of the stated rationale for the reduction in sales tax on building materials - the reduction in housing costs and stimulation of the construction industry - there is little in the way of empirical evidence to measure the effects.

At the time of the reduction, the Minister of Finance estimated that the sales tax on an average home amounted to $1,100, the saving was estimated at $650. This saving would represent less than 3 percent of the construction cost of an average NHA bungalow in 1974 - at a time when construction costs themselves are estimated to have risen by over 20 percent on that average NHA bungalow.*

TABLE 20: INCREASES IN RESIDENTIAL CONSTRUCTION COSTS CANADA, 1971-1980

| | Average Cost Per Square Metre NHA Bungalow | | Residential Construction Input Price Index | | New Housing Price Index | Consumer Price Index |
|---|---|---|---|---|---|---|
| | $ | Percent Increase Over Previous Year | Total | Materials | | |
| | | | Year to Year Percent Increase | | | |
| 1971 | 164.69 | 2.7 | 9.7 | 4.9 | n/a | 2.8 |
| 1972 | 176.31 | 7.1 | 10.1 | 9.8 | n/a | 4.8 |
| 1973 | 200.64 | 13.8 | 11.9 | 12.9 | n/a | 7.6 |
| 1974 | 243.48 | 21.4 | 9.3 | 9.0 | n/a | 10.9 |
| 1975 | 273.08 | 12.2 | 6.9 | 3.3 | n/a | 10.8 |
| 1976 | 296.76 | 8.7 | 11.5 | 9.9 | n/a | 7.5 |
| 1977 | 310.22 | 4.5 | 9.3 | 7.6 | 3.3 | 8.0 |
| 1978 | 325.39 | 4.9 | 9.4 | 11.4 | 2.6 | 8.9 |
| 1979 | 367.69 | 13.0 | 10.1 | 12.4 | 3.7 | 9.1 |
| 1980 | 401.91* | 10.4* | 5.2 | 3.7 | 7.9 | 10.3 |

* Average of first three quarters of 1980; the percent increase is a comparison of the average of the first three quarters of 1979 and 1980.

Source: Canada Mortgage and Housing Corporation and Statistics Canada.

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* The example of the NHA bungalow is presented here only to give a sense of proportion to the size of the possible reduction in costs. The declining proportion of total starts comprised by NHA financed dwellings renders this series less than totally reliable as an indicator of construction cost increases.

From an examination of the increase in the Statistics Canada construction price indices, it would appear that the reduction in sales tax on building materials was a significant factor in housing cost increases in 1975. There was a dramatic dip in the construction price index in 1975 compared to both 1974 and 1976 and the major factor in the temporary dip was a drop by almost two-thirds in the rate of increase in the materials price index.

It is tempting to attribute the temporary slowdown in the increase in construction materials prices to the reduction in sales tax on these materials - and it no doubt was an important factor. However, it seems unlikely that the tax measure was the only factor. The analysis of building materials presented in Appendix B indicates that only somewhere between 50 and 70 percent of the materials used in residential construction are subject to tax (before trade margins are added in); so a 6 percentage point reduction in the cost of those materials would have resulted in a decline of between 3 and 4 percent in the cost of materials used in housing, not the 6 percent apparent slowdown indicated for materials as a whole. Another reason behind the decline in the rate of increase in construction material prices would be the slump in housing starts in 1974 and 1975 which would have dampened materials manufacturers' ability to pass on cost increases to builders and ultimately to consumers.

It is unfortunate that there was no study done of the impact of the reduction of sales tax on building materials similar to the one for the exemption of clothing and footwear from sales tax.* In the case of clothing and footwear, there was little doubt that a substantial proportion of the foregone tax was reflected in lower prices. For housing, the lack of such a study necessitates a good bit of speculation regarding the actual immediate impacts on prices.

In the long run, there can be little doubt that a reduction in costs associated with construction will be reflected in prices - ultimately prices are reflective of costs plus normal profit. In the short run, however, the effect of a reduction in costs is heavily dependent on the state of the local housing market. In a soft market one would expect that there would be a corresponding drop in prices; but in a tight market such a drop would be unlikely since prices in these markets would be demand-determined, not cost-determined. Over the long haul, tight markets become soft markets and vice versa, and ultimately all prices are cost-determined so one would expect the reduction in sales tax on building materials to be reflected in house prices.

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* Department of Consumer and Corporate Affairs, Price Effects: Removal of Federal Sales Tax on Clothing and Footwear, 1975. The study indicated that retail prices declined by 5.2 percent after the removal of the tax despite a 3.5 percent increase in the supply price (without tax).

Therefore, in terms of one of the initial rationales for the reductions - lowering housing costs - the measure must ultimately be successful, though only to a very small degree in terms of overall housing prices. To the extent that final house prices are affected by the reduction in sales tax, affordability will improve; however, the overall impact on affordability is considered to be small.

In terms of the other initial rationale - stimulation of the construction industry - the case is less clearcut. There was a slight increase in housing starts in 1975 and an increase in the real value of non-residential construction expenditures; however, it is hard to conclude that this is to any significant degree a result of the reduction in sales tax on building materials.

TABLE 21: CONSTRUCTION ACTIVITY
CANADA, 1971-1980

| | Housing Starts | | Percent Increase in Construction Expenditures (Constant Dollars) | | |
|---|---|---|---|---|---|
| | 000's of Units | Percent Increase Over Previous | Residential | Non-Residential | Total |
| 1971 | 233.7 | 22.6 | 29.4 | 6.6 | 13.4 |
| 1972 | 249.9 | 6.9 | 12.8 | -1.1 | 3.7 |
| 1973 | 268.5 | 7.4 | 9.7 | 4.8 | 6.7 |
| 1974 | 222.1 | -17.3 | -0.6 | 6.1 | 3.5 |
| 1975 | 231.5 | 4.2 | -7.3 | 10.3 | 3.9 |
| 1976 | 273.2 | 18.0 | 19.2 | -5.9 | 2.4 |
| 1977 | 245.7 | -10.1 | 5.1 | 2.1 | -0.6 |
| 1978 | 227.7 | -7.3 | -3.8 | 0.8 | -0.9 |
| 1979 | 197.0 | -13.5 | -7.5 | 7.9 | 2.4 |
| 1980 | 158.6 | -19.5 | -10.5* | 0.7* | -3.0* |

* Estimate.

Source: Canada Mortgage and Housing Corporation and Statistics Canada and estimates by Clayton Research Associates.

To conclude, there is little doubt that the reduction in sales tax on building materials would impact housing prices - and hence affordability - but not likely to a significant extent. To the limited degree that affordability is improved, there would be a corresponding increase in housing demand; however, this would be marginal and would likely occur over an extended period. It is unlikely to be a significant stimulus to construction in the short run. The biggest impacts of the measure are likely to have been in terms of the reduction in the degree of double taxation because of the intermediate nature of construction (in terms of the production of final goods and services which are subject to tax) and the reduction in the regressiveness of the sales tax by the lowering of taxes on a necessity.

## 3. Effects of Abolition

A return to taxation of building materials at full sales tax rates would, of course, involve the converse of the effects of the reduction outlined above. These converse effects would be muted to the extent that the federal sales tax on other goods has been reduced to 9 percent since the reduction of the building materials tax in 1974 - so the increse would be only 4 percentage points whereas the reduction was 6-7 percentage points depending on the specific material involved.

Briefly, an increase in the sales tax on building materials could be expected to impact the cost of housing in the long run - effects in the short run would depend on the condition of the market. To the extent that house prices are affected, there would also be an impact on affordability; however, this is unlikely to be substantial.

## 4. Relevance in the 1980's

At a time when most housing market analysts are concerned about the affordability of housing (both ownership and rental), a tax expenditure aimed at providing tax relief to a significant component of housing costs is very relevant indeed. While the overall effect of the tax reduction on housing affordability levels is not considered to be large, there is an important principle involved: the regressiveness of the sales tax in terms of taxing a necessity, even at reduced rates. There are people at the margin who would be affected by an increase in the tax to normal levels - or an exemption of building materials from tax altogether.

Although it is not an issue that deserves much attention in a report dealing primarily with housing, the double taxation issue is also an important one in relation to the taxation of construction materials - as relevant in the 1980's as it was in the 1960's. There is a significant element of double taxation involved in taxing materials that ultimately are a part of the production process for other goods and services which are, in the end, subject to the same tax.

There is still a strong rationale for the preferential treatment of building materials as far as the application of the federal sales tax is concerned. Abstracting from the revenue considerations, there appears to be no cogent rationale for continuing even the reduced tax on building materials.

## Exemption of Construction Equipment from Sales Tax

### 1. Rationale

Construction equipment was exempted from sales tax in the same package of measures which included the reduction of sales tax on building materials - though, unlike the building materials reduction, it was included in the package of measures introduced but not passed, six months earlier.

Being in the same package of measures and involving the same tax, the stated rationale for the exemption of construction equipment is similar to that for reducing the tax on building materials: stimulation of the construction industry and lowering the cost of housing. These were the rationale behind all of the housing-related measures introduced in the November 1974 Budget.

In addition to this rationale, there is also a strong argument against taxing construction equipment because of the element of double taxation involved in taxing intermediate goods and also because of the regressivity of taxing goods which are involved in constructing necessities (in this case shelter).

### 2. Effects

If it was difficult to discern any measurable effects of the reduction in sales tax on building materials in terms of stimulation of the industry and lowering of final housing costs, then trying to measure the impact of the elimination of sales tax on construction equipment is hopeless. Building materials which are subject to the tax comprise somewhere between 20 and 25 percent of the total value of new housing; construction machinery and equipment purchases (including cars and trucks which are still subject to tax) comprise less than 2 percent of the total value.*

It might be expected that the reduction in sales tax might lead to a significant enough decline in the real cost of construction equipment that there might be some substitution of capital equipment for labour in marginal circumstances. However, this would be based on the assumption that the elimination of the 12 percent sales tax on construction equipment would lead to a decline in the price of these goods - or, at least, to a slowdown in the rate of increase. This was not the case.

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* These are estimates by Clayton Research Associates based on an analysis of Statistics Canada data on the components of total value of work performed by residential general building contractors and special trade contractors which specialize in housing; the estimate of the proportion of materials subject to tax is also based on the analysis in Appendix B.

### 3. Effects of Abolition

Since construction equipment makes up a very small proportion of the total costs of new residential construction, the reimposition of the sales tax would have an insignificant impact on the final price of housing.

### 4. Relevance in the 1980's

The same arguments as apply to the reduced sales tax on building materials would apply in this case as well.

## Exemption of Goods in Competition With On-Site Construction from Sales Tax

### 1. Rationale

The purpose of this exemption is to put all construction-related activities on an equal footing insofar as the federal sales tax is concerned. Since on-site construction itself is not subject to sales tax, it would be inequitable to apply the sales tax to manufacturing activities which are in competition with on-site construction; such discrimination against manufacturing activities in favour of on-site work might also lead to the promotion of inefficient construction practises despite the fact that the manufacturing process might be more cost-effective.

### 2. Effects

There are many construction related activities in the manufacturing sector which might be subject to federal sales tax if this exemption of "goods in competition" were not in existence. It is an open question how many of these would be affected if the manufacturers sales tax applied to their products. The answer would be complicated by the tax rate to be applied to the manufactured products - the reduced 5 percent tax rate or the full 9 percent rate. Whatever the magnitude of the effect, there can be little doubt that if it were not for the exemption, some of the products of manufacturing activities would be produced on-site because of the discriminating nature of the tax.

In the long-run, the effect of the exemption of "goods in competition" is to promote efficiency and lower costs in construction. Goods which are more efficiently produced in an off-site manufacturing environment are not discouraged from being produced this way and activities which are best carried out on the construction site continue to enjoy this tax-free status.

## 3. Effects of Abolition

This has largely been dealt with above.

## 4. Relevance in the 1980's

As long as construction work itself is not subject to federal sales tax, there is a clear rationale for exempting from sales tax those goods which could be fabricated off-site as well as on-site. To allow the taxation only of the off-site activity would be discriminating and would discourage efficiency.

## ALTERNATIVES

Among the reasons for levying a reduced federal sales tax on building materials and exempting construction equipment and goods in competition with on-site construction is to reduce housing costs and to stimulate construction activity. It was shown previously that while these measures work in the right direction, they really have had only a small effect on housing construction costs and construction activity. Before looking at housing-related alternatives it must also be recalled that the reduced tax rate on construction materials had other objectives as well; similarly with the exemption of goods in competition.

An option that has merit for replacing the reduced tax rate on residential building materials would be a direct capital grant to home purchasers and developers of rental projects. Any administrative problems associated with this alternative should be less than with the current measure (however, it would be almost impossible to continue to tax non-residential building materials at a reduced rate since many materials are common to both residential and non-residential construction).

# APPENDIX A - HOW A MURB WORKS AND WHAT IT COSTS

# APPENDIX A - HOW A MURB WORKS AND WHAT IT COSTS

This Appendix contains the financial details for a sample MURB. The project is not necessarily representative of all MURBs, but it does contain all of the necessary financial components to allow it to be used here as an example to illustrate the costs, receipts and subsidies involved in a MURB project.

## TABLE OF CONTENTS


| | Page |
|---|---|
| THE PROJECT | A-1 |
| Project Costs and Financing | A-1 |
| The GPM Effects | A-2 |
| Cash Flow | A-3 |
| TAXATION ASPECTS OF MURB CONSTRUCTION AND OPERATION | A-5 |
| Soft Costs | A-5 |
| Capital Cost Allowance | A-5 |
| Loss for Tax Purposes | A-6 |
| INDIVIDUAL INVESTORS' TAX SAVINGS | A-8 |
| The Investors' Package | A-8 |
| TAXATION ASPECTS OF MURB SALE | A-11 |
| Selling the MURB Project | A-11 |
| Selling a MURB Unit | A-15 |
| Foreclosure on a MURB | A-17 |
| THE GOVERNMENT ACCOUNT | A-18 |
| Capital Cost Allowance | A-18 |
| Deductibility of Soft Costs | A-19 |
| Other Deductions | A-21 |
| Overall Government Account | A-22 |
| Abolition of the Tax Expenditures | A-23 |
| Tax Losses Associated With CCA and Deductibility of Soft Costs Under Various Marginal Tax Rates and Discount Rates | A-24 |

## THE PROJECT

The MURB selected for study here is a 270 unit apartment building being developed by Pagebrook-Peel Properties Partnership in Brampton, Ontario. The building is scheduled for completion in 1981. The information contained in this Appendix is based on information from the preliminary prospectus (dated November 4, 1980) for the project.

### Project Costs and Financing

Total costs associated with the project are estimated at $12,426,000 to be financed by equity of $3,820,000 plus a mortgage totalling $8,606,000.

TABLE A-1: COST AND FINANCING INFORMATION
SAMPLE MURB APARTMENT PROJECT, BRAMPTON

| | Total $000 | Dollars Per Apartment Unit |
|---|---|---|
| **Capital Costs** | | |
| Land | 1,342 | 4,970 |
| Appliances and carpets | 432 | 1,600 |
| Building | 6,397 | 23,693 |
| Sub Total | 8,171 | 30,263 |
| **Initial Services (Soft Costs)** | | |
| CMHC Mortgage insurance fee | 106 | 394 |
| Initial Leasing | 226 | 835 |
| Legal fees relating to initial leasing and mortgage financing | 25 | 93 |
| Municipal taxes and levies | 979 | 3,628 |
| Guarantee of first mortgage | 106 | 394 |
| Cash flow guarantee | 240 | 888 |
| Landscaping | 189 | 700 |
| Mortgage application, commitment and brokerage fees | 768 | 2,843 |
| Interest and financing costs during construction and lease-up | 1,139 | 4,220 |
| Cost of public offering | 151 | 561 |
| Commission | 306 | 1,131 |
| Sub Total | 4,235 | 15,687 |
| Working Capital | 20 | 74 |
| **Total Costs** | 12,426 | 46,024 |
| Mortgage | 8,606 | 31,875 |
| Equity | 3,820 | 14,149 |
| **Total Financing** | 12,426 | 46,024 |

The cost breakdown between capital costs and initial services (soft costs) is important in terms of income tax implications - covered later in this Appendix. Soft costs are shown to account for over one-third of total project costs in this sample MURB.

The equity is to be raised through a public offering of 7,640 shares at $500 each (7,640 x $500 = $3,820,000). There is a minimum of 10 shares per unitholder so the minimum unitholder has a $5,000 equity in the project - for the purposes of this analysis all of the unitholders are assumed to be these minimum $5,000 equity people.

The mortgage is a Graduated Payment Mortgage (GPM) with a 13 percent interest rate amortized over a 40 year period.

## The GPM Effects

With the GPM, mortgage payments in the early years of the mortgage are lower than they would be for a normal mortgage - not only are no principal repayments made, but payments do not cover interest charges either. The intent, of course, is to offset the negative cash flow which would accrue to the developer in the early years of the project until income from the project rises (through rent increases) to the point where costs can be covered.

TABLE A-2: INTEREST PAYMENTS
SAMPLE MURB APARTMENT PROJECT, BRAMPTON ($000)

| | Interest Accruing on Outstanding Principal | GPM Interest Payments | Difference |
|---|---|---|---|
| 1981 | 355 | 216 | 139 |
| 1982 | 1,120 | 890 | 230 |
| 1983 | 1,149 | 934 | 215 |
| 1984 | 1,175 | 981 | 194 |
| 1985 | 1,198 | 1,030 | 168 |
| 1986 | 1,217 | 1,081 | 136 |
| 1987 | 1,232 | 1,135 | 97 |
| 1988 | 1,242 | 1,192 | 50 |
| 1989 | 1,263 | 1,252 | 11 |

The difference in these normal mortgage interest payments and actual GPM interest payments leads to a significant accumulation of new mortgage debt which must be added onto the initial principal.

TABLE A-3: MORTGAGE PRINCIPAL OUTSTANDING
SAMPLE MURB APARTMENT PROJECT, BRAMPTON

| | $000 |
|---|---|
| Initial Mortgage (1981) | 8,606 |
| Unpaid GPM Interest Accumulation (1981-1986) | 1,012 |
| Mortgage Principal Outstanding (1986) | 9,618 |
| Unpaid GPM Interest Accumulation (1986-1991) | 178 |
| Mortgage Principal Outstanding (1991) | 9,796 |

By 1986, an extra $1,012,000 will have been added to the principal through accumulated GPM interest charges.* By 1991, however, mortgage repayments exceed interest charges and the repayment of principal commences. As a result, only a relatively small amount is added to the principal in the 1986-1991 period; notwithstanding this, by 1991, a total of $1,190,000 will have been added to the principal since the initial mortgage was taken out ten years earlier.

## Cash Flow

Because of the relatively low mortgage repayments in the early years, the project is projected to be able to maintain a positive cash flow from the outset. Without GPM financing there would, no doubt, have been a severe negative cash flow in the early years.

The project is scheduled to be completed in September 1981, but only relatively little rental income is expected in this year; nonetheless, it is still projected to be enough to cover disbursements and debt service charges. The net cash flow per annum for the 1981-1989 period is projected to be $64,000, which, when compared to the initial equity invested ($3,820,000) is a paltry 1.7 percent annual return on equity. Of course, capital gains and the taxation advantages have not been taken into account as yet.

Table A-4 summarizes in detail the various cash flow components for the sample project.

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* This is slightly different from the accumulated interest shown in the difference column of Table A-2 because the figures in Table A-3 are as at September 30 of each year, while those in Table A-2 are for the calendar year.

TABLE A-4: PROJECTED CASH FLOW
SAMPLE MURB APARTMENT PROJECT, BRAMPTON
($000)

| | 1980 | 1981 | 1982 | 1983 | 1984 | 1985 | 1986 | 1987 | 1988 | 1989 | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Gross Receipts** | | | | | | | | | | | |
| Rental of Apartments and Garages and Laundry Contracts | - | 376 | 1,564 | 1,649 | 1,740 | 1,835 | 1,937 | 2,044 | 2,158 | 2,294 | 15,597 |
| Allowance for Vacancy and Bad Debts | - | (9) | (39) | (41) | (43) | (46) | (48) | (51) | (54) | (57) | (389) |
| Net Receipts | - | 366 | 1,525 | 1,608 | 1,696 | 1,790 | 1,888 | 1,993 | 2,104 | 2,236 | 15,207 |
| **Operating Expenses** | | | | | | | | | | | |
| Management | - | 18 | 76 | 80 | 85 | 89 | 94 | 100 | 105 | 112 | 759 |
| Property Taxes | - | 39 | 167 | 179 | 191 | 204 | 219 | 234 | 251 | 268 | 1,752 |
| Other Operating Expenses | - | 62 | 265 | 283 | 303 | 325 | 347 | 372 | 398 | 425 | 2,780 |
| Maintenance and Repairs | - | 15 | 63 | 68 | 72 | 77 | 83 | 89 | 95 | 101 | 663 |
| Total Operating Expenses | - | 134 | 571 | 610 | 652 | 696 | 743 | 794 | 848 | 907 | 5,955 |
| **Cash Flow Before Debt Service** | - | 232 | 953 | 998 | 1,045 | 1,094 | 1,145 | 1,199 | 1,256 | 1,330 | 9,252 |
| **Debt Service** | | | | | | | | | | | |
| Principal | - | - | - | - | - | - | - | - | - | 14 | 14 |
| Interest | - | 216 | 890 | 934 | 981 | 1,030 | 1,081 | 1,135 | 1,192 | 1,252 | 8,711 |
| Total Debt Service | - | 216 | 890 | 934 | 981 | 1,030 | 1,081 | 1,135 | 1,192 | 1,266 | 8,725 |
| **Net Cash Flow** | - | 16 | 64 | 64 | 64 | 64 | 64 | 64 | 64 | 64 | 528 |

Note: All numbers have been rounded.

## TAXATION ASPECTS OF MURB CONSTRUCTION AND OPERATION

### Soft Costs

The $4,235,000 of soft costs outlined in Table A-1 are a totally deductible expense provided they are claimed in the year in which they were incurred. According to the projected cost schedule prepared by the developer, these soft costs are spread over the first four years of the project, but most are incurred in the first year of construction.

TABLE A-5: SOFT COSTS
SAMPLE MURB APARTMENT PROJECT, BRAMPTON

| | $000 |
|---|---|
| 1980 | 2,840 |
| 1981 | 1,262 |
| 1982 | 80 |
| 1983 | 53 |
| 1984 | - |
| Total | 4,235 |

### Capital Cost Allowance

The allowable rates of capital cost allowance (CCA) are 5 percent for the building and 20 percent for equipment (appliances and carpets, etc.). Based on figures provided by the developer, the capital cost allowances for the project in its early years are presented in Table A-6.

TABLE A-6: CAPITAL COST ALLOWANCE BY COMPONENT, 1980-1989
SAMPLE MURB APARTMENT PROJECT, BRAMPTON
($000)

| | Building | | Appliances & Carpets | | |
|---|---|---|---|---|---|
| | Undep. Value | CCA | Undep. Value | CCA | Total CCA |
| 1980 | 3,200 | 160 | - | - | 160 |
| 1981 | 6,237 | 312 | 432 | 86 | 398 |
| 1982 | 5,925 | 296 | 346 | 69 | 365 |
| 1983 | 5,629 | 281 | 277 | 56 | 337 |
| 1984 | 5,348 | 267 | 221 | 45 | 312 |
| 1985 | 5,081 | 254 | 176 | 35 | 289 |
| 1986 | 4,827 | 242 | 141 | 28 | 270 |
| 1987 | 4,585 | 229 | 113 | 23 | 252 |
| 1988 | 4,356 | 218 | 90 | 18 | 236 |
| 1989 | 4,138 | 207 | 72 | 14 | 221 |
| 1990 | 3,931 | | 58 | | |
| Total | | 2,466 | | 374 | 2,840 |

Note: All numbers have been rounded.

Since the building was still under construction at the end of 1980, CCA could only be claimed on that part which was completed - estimated at $3,200,000: ($3,200,000 x .05 = $160,000 CCA).

The undepreciated value shown for 1981 is the full capital cost of the building ($6,397,000 from Table A-1) less the depreciation already claimed for 1980: ($6,397,000 - 160,000 = $6,237,000).

In subsequent years, the undepreciated value of the building diminishes progressively, as does the CCA on the building. By the end of 1989, only 8 years after completion, the building will have been depreciated for tax purposes to less than two-thirds its original value ($3,931,000 compared to $6,397,000).

Appliances and carpets are subject to a higher depreciation rate but CCA cannot be claimed on these till they are installed in 1981. After the early years, they comprise only a relatively small component of total CCA since they are nearly fully depreciated.

## Loss for Tax Purposes

Combining all of the receipts (Table A-4) and Expenses (Tables A-2 and A-4) with the soft cost (Table A-5) and CCA deductions (Table A-6) facilitates the calculation of the loss for tax purposes. It should be noted that the interest expenses are not those actually incurred under the GPM arrangement, they are the total interest accruing on the outstanding principal each year.

In the first year of construction, a very large loss can be claimed due primarily to the deductability of soft costs. Soft costs are also the largest item in the deductions allowed in the second year, but soft cost expenses tail off to insignificant in 1982 and 1983 and zero thereafter. The largest deduction in 1982 and the years following is for mortgage interest, much of it unpaid in the early years due to the GPM, but still accounted a deductible expense for tax purposes. Operating expenses account for a large and growing proportion of deductible expenses all through the period. Deductions due to CCA are smaller than these other expenses, but are nonetheless a very important component of expenses as far as tax treatment is concerned; without CCA, the loss for income tax purposes over the period 1982-1989 would be less than one-quarter that shown in Table A-7.

The loss for income tax purposes declines in successive years to 1989. Details for following years were not given in the prospectus, however, it seems clear that losses will cease soon after 1990 - probably in 1991. Revenues will continue to climb, but this will be only partially offset by rising operating costs; also mortgage interest payments will start to decline gradually as principal is repaid and CCA will continue to drop.

TABLE A-7: CALCULATION OF LOSS FOR INCOME TAX PURPOSES
SAMPLE MURB APARTMENT PROJECT, BRAMPTON
($000)

| | 1980 | 1981 | 1982 | 1983 | 1984 | 1985 | 1986 | 1987 | 1988 | 1989 | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Net Receipts from Rentals | - | 366 | 1,525 | 1,608 | 1,696 | 1,790 | 1,888 | 1,993 | 2,104 | 2,236 | 15,207 |
| Tax Deductible Expenses | | | | | | | | | | | |
| Operating Expenses | - | 134 | 571 | 610 | 652 | 696 | 743 | 794 | 848 | 907 | 5,955 |
| Mortgage Interest | - | 355 | 1,120 | 1,149 | 1,175 | 1,198 | 1,217 | 1,232 | 1,242 | 1,263 | 9,951 |
| Capital Cost Allowance | 160 | 398 | 365 | 337 | 312 | 289 | 270 | 252 | 236 | 221 | 2,840 |
| Soft Costs | 2,840 | 1,262 | 80 | 53 | - | - | - | - | - | - | 4,235 |
| Total | 3,000 | 2,150 | 2,137 | 2,149 | 2,138 | 2,183 | 2,230 | 2,278 | 2,326 | 2,392 | 22,982 |
| Loss For Income Tax Purposes | 3,000 | 1,784 | 612 | 540 | 442 | 393 | 342 | 285 | 222 | 155 | 7,775 |

Note: All numbers have been rounded.

## INDIVIDUAL INVESTORS' TAX SAVINGS

The paper losses incurred by the MURB project are only useful to investors if they have sufficient income to attract a high rate of personal income tax. As is shown below, for individuals in the 50 percent and over marginal tax bracket, the MURB can be purchased with almost no out of pocket expense at all.

### The Investors' Package

Table A-1 indicated that the investors' equity in the MURB project would be $3,820,000 of the total project cost of $12,426,000. This is a ratio of over 30 percent equity - a high figure as normal rental projects go. The minimum equity required on an NHA GPM rental project is 15 percent.

A total of 7,640 limited partnership units priced at $500 each were being sold by the developers with the minimum purchase being 10 units ($5,000). The units could either be purchased outright or in installments with accrued interest payable as well. The installments required are outlined in Table A-8.

TABLE A-8: CASH INSTALLMENTS REQUIRED FOR SAMPLE MURB APARTMENT PROJECT, BRAMPTON (DOLLARS)

| | Payment | Interest on Remainder | Total Payment |
|---|---|---|---|
| 1980 | 2,250 | 0 | 2,250 |
| 1981 | 1,050 | 413 | 1,463 |
| 1982 | 400 | 255 | 655 |
| 1983 | 350 | 195 | 545 |
| 1984 | 350 | 142 | 492 |
| 1985 | 300 | 90 | 390 |
| 1986 | 300 | 45 | 345 |
| Total | 5,000 | 1,140 | 6,140 |

An important point for the investor is that the interest on these equity payments is a tax deductible expense as well. Thus, for investors who purchase on this installment plan, the total available tax losses are even higher. Table A-9 presents the total project losses from Table A-7. The portion of this loss accruing to the smallest investor (10 units),* plus the interest losses from Table A-8, to yield the total allowable losses for each small investor.

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* The calculation of the portion of the loss accruing to the smallest investor (10 units) is total project loss divided by 764; e.g. $3,000,000 ÷ 764 = $3,927.

TABLE A-9: TOTAL LOSSES FOR INCOME TAX PURPOSES, MINIMUM $5,000 INVESTMENT SAMPLE MURB APARTMENT PROJECT, BRAMPTON

| | Loss for Total Project ($000) | Individual Investor Loss ($) | Interest on Unpaid Portion of Equity ($) | Total Reduction in Taxable Income ($) |
|---|---|---|---|---|
| 1980 | 3,000 | 3,927 | 0 | 3,927 |
| 1981 | 1,784 | 2,335 | 413 | 2,748 |
| 1982 | 612 | 801 | 255 | 1,056 |
| 1983 | 540 | 708 | 195 | 903 |
| 1984 | 442 | 578 | 142 | 720 |
| 1985 | 393 | 515 | 90 | 605 |
| 1986 | 342 | 447 | 45 | 492 |
| 1987 | 285 | 373 | 0 | 373 |
| 1988 | 222 | 290 | 0 | 290 |
| 1989 | 155 | 203 | 0 | 203 |
| Total | 7,775 | 10,177 | 1,140 | 11,317 |

Depending on the investors' tax bracket, these units can be purchased with either no outlay or a relatively small one for investors with high marginal tax rates - investors in lower tax brackets would require more substantial outlays.

Table A-10 presents a summary of the payments, tax losses and cash requirements in each year for investors in various tax brackets. These brackets differ for each province, but in Ontario (where the sample MURB project is located) in 1980 they were:

| Marginal Tax Rate | Taxable Income Range |
|---|---|
| 46.08 | $25,377 - 43,344 |
| 51.84 | $43,344 - 70,434 |
| 56.16 | $70,434 - 108,360 |
| 61.92 | $108,360 plus |

Explaining the columns in Table A-10 individually:

- Total Payments required is from Table A-8 and represents the payments necessary for purchase of the minimum number of units on the installment plan.

- Total reduction in taxable income is from Table A-9 and represents the total tax loss available to an investor with the minimum number of units purchasing on the installment plan.

- Reduction in taxes at various marginal tax rates is simply the proportion of the reduction in taxable income (from the second column) which actually accrues to investors at their marginal tax rates (e.g. $3,927 X 46.08% = $1,810).

TABLE A-10: TOTAL PAYMENTS, LOSSES AND NET CASH PAYMENT REQUIREMENTS AT VARIOUS MARGINAL TAX RATES, MINIMUM $5,000 SUBSCRIPTION SAMPLE MURB APARTMENT PROJECT, BRAMPTON (DOLLARS)

| | Total Payments Required | Total Reduction in Taxable Income | Reduction in Taxes at Various Marginal Tax Rates | | | | Cash Distribution from Project Surplus | Total Cash Surplus at Various Projected Tax Rates | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 46.08 | 51.84 | 56.16 | 61.92 | | 46.08 | 51.84 | 56.16 | 61.92 |
| 1980 | 2,250 | 3,927 | 1,810 | 2,036 | 2,205 | 2,432 | 0 | (440) | (214) | (45) | 182 |
| 1981 | 1,463 | 2,748 | 1,266 | 1,425 | 1,543 | 1,702 | 21 | (176) | (17) | 101 | 260 |
| 1982 | 655 | 1,056 | 487 | 547 | 593 | 654 | 84 | (84) | (24) | 22 | 83 |
| 1983 | 545 | 903 | 416 | 468 | 507 | 559 | 84 | (45) | 7 | 46 | 98 |
| 1984 | 492 | 720 | 332 | 373 | 404 | 446 | 84 | (76) | (35) | (4) | 38 |
| 1985 | 390 | 605 | 279 | 314 | 340 | 375 | 84 | (27) | 8 | 34 | 69 |
| 1986 | 345 | 492 | 227 | 255 | 276 | 305 | 84 | (34) | (6) | 15 | 44 |
| 1987 | 0 | 373 | 172 | 193 | 209 | 231 | 84 | 256 | 277 | 293 | 315 |
| 1988 | 0 | 290 | 134 | 150 | 163 | 180 | 84 | 218 | 234 | 247 | 264 |
| 1989 | 0 | 203 | 94 | 105 | 114 | 126 | 84 | 178 | 189 | 198 | 210 |
| Total | 6,140 | 11,317 | 5,217 | 5,866 | 6,354 | 7,010 | 693 | (230) | 419 | 907 | 1,563 |
| | | | | | Present (1980) Value at 15 Percent Annual Discount Rate | | | (540) | (27) | 358 | 874 |

Note: Brackets indicate a negative cash surplus to the investor.

- Cash distribution is the amount of the project's yearly net cash flow (Table A-4) which accrues to each investor with the minimum number of units.

- Total cash surplus requirements at various marginal tax rates is the comparison of total payments required with the reduction in taxes and the cash distribution from project surplus; for example, in 1981 the installment payment required is $1,463. Someone in the 46.08 marginal tax bracket would save $1,266 in taxes that year plus he would receive $21 of cash distribution from the project surplus. The net cash requirement for that investor would be ($1,463 - $1,266 - $21 = $176). In the two top tax brackets, there is a net cash surplus when all these components are totalled.

- The final row of the cash surplus column presents the present (1980) value of the annual surplus (or deficit) discounted at a 15 percent annual discount rate. The year 1980 was selected for the present value calculations because that is the year in which investors were offered shares in the sample project.

As Table A-10 illustrates, even if the investor has a relatively low 45 percent marginal tax rate, the out-of-pocket cost of the MURB is negligible when viewed with a ten year prospective. The higher the tax bracket, the less the investor pays for the MURB out of his pocket - for the 60 percent plus tax bracket, all of the payments in each year come, in effect, from tax savings and to a very small extent from the project's cash flow.

## TAXATION ASPECTS OF MURB SALE*

### Selling the MURB Project

When a MURB is sold, the owner is liable for recapture for taxation purposes of the claimed CCA depreciation losses and possibly to capital gains taxes as well. An example will illustrate the process:

> Assume that the building is sold at the beginning of 1990. At that time, the value of the building and equipment (appliances and carpets) will have been depreciated to $3,931,000 and $58,000 respectively.** Land cannot be depreciated so the

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* The remainder of this Appendix is based on assumptions made by the consultant. The prospectus does not speculate on future sales prices or procedures for the units.

** See Table A-6.

total undepreciated value of the package would be only $5,331,000 versus the original capital cost of $12,426,000. If the building is sold for more than this undepreciated value, there will be some capital gains and/or recaptured depreciation to be accounted for.

Since capital gains are taxed at only half of the rate of normal taxable income, it will obviously be in the interest of the seller to avoid as much recapture of claimed depreciation as possible. Table A-11 presents an example which assumes that the building is resold for $18,000,000; in this case, it is difficult to imagine any way that the seller could avoid recapture for taxation purposes of the claimed depreciation - to do so would require that the full amount of the taxable profit ($12,669,000) be claimed as a capital gain on the land, an unlikely increase of over 800 percent.

So, after ten years of claiming tax losses on the project, the day of reckoning finally arrives and the owners of the project must settle with the taxman.

In the example in Table A-11, the total mortgage principal at the time of sale is estimated at $9,832,000; this leaves a total cash equity of $8,168,000 left over from the $18 million deal. This total is less than the taxable profit of $12,669,000 which for tax purposes is comprised of assumed total recapture of depreciation on the building ($2,466,000), assumed no recapture on the depreciated equipment which will likely be substantially worn out by 1990, and the remaining $10,203,000 to be subject to capital gains tax.

TABLE A-11: FINANCIAL DETAILS RELATING TO ASSUMED SALE OF SAMPLE MURB APARTMENT PROJECT, BRAMPTON, AT BEGINNING OF 1990

| | Original Capital Cost (1980) | Undepreciated Capital Cost (Taxman's View) | Assumed Sale Value (1990) | Total Taxable Profit | Recaptured Depreciation | Capital Gain |
|---|---|---|---|---|---|---|
| | Total Building ($000) | | | | | |
| Land | 1,342 | 1,342 | 4,000 | 2,658 | 0 | 2,658 |
| Appliances and Carpets | 432 | 58 | 58 | 0 | 0 | 0 |
| Building | 6,397 | 3,931 | 13,942 | 10,011 | 2,466 | 7,545 |
| Soft Costs | 4,255 | 0 | 0 | 0 | 0 | 0 |
| Total | 12,426 | 5,331 | 18,000 | 12,669 | 2,466 | 10,203 |
| Mortgage Principal Outstanding | 8,606 | 9,832 | 9,832 | | | |
| Equity | 3,820 | -4,501 | 8,168 | | | |
| Total | 12,426 | 5,331 | 18,000 | | | |
| | Minimum $5,000 Subscription Investor (Dollars) | | | | | |
| Land | 1,757 | 1,757 | 5,236 | 3,479 | 0 | 3,479 |
| Appliances and Carpets | 565 | 76 | 76 | 0 | 0 | 0 |
| Buildings | 8,373 | 5,145 | 18,249 | 13,103 | 3,228 | 9,876 |
| Soft Costs | 5,569 | 0 | 0 | 0 | 0 | 0 |
| Total | 16,264 | 6,978 | 23,561 | 16,582 | 3,228 | 13,355 |
| Mortgage Principal Outstanding | 11,264 | 12,869 | 12,869 | | | |
| Equity | 5,000 | -5,891 | 10,691 | | | |
| Total | 16,264 | 6,978 | 23,560 | | | |

Note: All numbers have been rounded.

The actual cash position of each investor will vary depending on his marginal tax rate - Table A-12 illustrates these differences:

TABLE A-12: PROFITS, TAXES AND NET CASH POSITION FOR MINIMUM $5,000 INVESTORS AT VARIOUS MARGINAL TAX RATES ASSUMED SALE OF SAMPLE MURB APARTMENT PROJECT, BRAMPTON AT BEGINNING OF 1990 (DOLLARS)

| | Marginal Tax Rates | | | |
|---|---|---|---|---|
| | 46.08 | 51.84 | 56.16 | 61.92 |
| Profit Subject to Tax | | | | |
| Recaptured Depreciation | 3,228 | 3,228 | 3,228 | 3,228 |
| Capital Gains | 13,355 | 13,355 | 13,355 | 13,355 |
| Total | 16,582 | 16,582 | 16,582 | 16,582 |
| Tax Payable | | | | |
| Recaptured Depreciation | 1,487 | 1,673 | 1,813 | 1,999 |
| Capital Gains | 3,077 | 3,462 | 3,750 | 4,135 |
| Total | 4,564 | 5,135 | 5,563 | 6,134 |
| Total Cash Proceeds from Sale | 10,691 | 10,691 | 10,691 | 10,691 |
| Net After Taxes Proceeds | 6,127 | 5,556 | 5,128 | 4,557 |
| Present Value (1980) At 15 Percent Annual Discount Rate | | | | |
| Net After Tax Proceeds From Sale | 1,515 | 1,373 | 1,267 | 1,126 |
| Discounted Cash Surplus over 1980-1989 Period | (540) | (27) | 358 | 874 |
| Total Present Value of Investment | 975 | 1,346 | 1,625 | 2,000 |

Explaining the table section by section:

- The profit subject to tax is taken directly from Table A-11 and represents the taxman's view of the profit accruing to each $5,000 unitholder from the $18 million total sale; the figures are taken directly from Table A-11.

- The tax payable section is derived from the profit subject to tax and the marginal tax rates themselves; the capital gains are, of course, taxed at half the normal tax rate.

- Total cash proceeds from the sale is taken directly from Table A-11 and the net cash proceeds after taxes is the difference between the total cash proceeds and the total taxes payable.

- The present value of the various cash proceeds has been discounted to 1980 values since the initial investment decision had to be made in that year. The present (1980) value of the proceeds from the 1990 sale is calculated to be less than one-quarter the 1990 value at a 15 percent discount rate. The discounted cash surplus over the 1980-1989 period is taken from Table A-10; it represents the present value of the differences in initial equity payment requirements, reduced taxes and the projected cash surplus from the project in each year of the 1980-1989 period.

  The total present value of the $5,000 investment in 1980 is less than half that figure for all investors; those in the highest tax bracket come closest to half at 40 percent. As would be expected, the higher the marginal tax rate, the greater the value of the investment.

The above analysis is based on an assumed sale at a price in 1990 of $18 million; this represents an annual compounded increase in value of about 4.7 percent from the initial estimated value of $12,426,000 upon completion in 1981. In an era of 15 percent inflation, this is not a spectacular increase; however, it appears that the initial estimated value may be somewhat high. In any case, it is clear that a higher 1990 price would yield a higher proceed for both the investor and the taxman - a lower price would yield lower proceeds.

It has also been assumed for the above analysis that the investors meekly take their profit and pay their tax - such is very unlikely to be the case. There are many options open to investors to defray at least part of their taxes owed on profit from the sale; these include annuities to spread the profit over several years and investment in another MURB with high soft cost deductions in the initial year to mention only tow.

The above illustrates the case if the project as a whole is sold; however, if the investor alone sold his share, quite a different taxation situation would arise.

## Selling a MURB Unit

If an investor sells his MURB units but the whole building is not sold, the taxation implications are different. The MURB units are treated similarly to stocks so only capital gains taxes apply. The catch is that whoever purchases the units assumes the liability for recaptured depreciation. Presumably, this assumption of liability on the part of the purchaser would be reflected in the sale price of the unit, so it would be unlikely that the price per unit would be as high as it could be if the entire building were sold. An example will illustrate this process.

Assume that only one investor sells his MURB unit in the above example instead of the whole building being sold. Assume further that the same sale price ($23,500) per minimum sized unit applies in this example as in the above example. Table A-13 summarizes the procedure for determination of the taxes payable and the cash position of the investor.

TABLE A-13: CALCULATION OF TAX AND NET CASH POSITION FOR MINIMUM $5,000 INVESTORS AT VARIOUS MARGINAL TAX RATES ASSUMED SALE OF INVESTOR'S UNIT AT BEGINNING OF 1990 SAMPLE MURB APARTMENT PROJECT, BRAMPTON

| | Dollars | Origin of Figure |
|---|---|---|
| Initial Investment | 5,000 | (Table A-8) |
| Accumulated Investor Losses | 10,177 | (Table A-9) |
| Negative Balance | 5,177 | (Difference of Above) |
| Accumulated Cash Surpluses | 693 | (Table A-10) |
| Total Negative Balance | 5,870 | (Sum of Above) |
| Cash Proceeds from Sale | 10,691 | (Table A-11) |
| Taxable Capital Gain | 16,561 | (Sum of Above) |

| | Marginal Tax Rates | | | |
|---|---|---|---|---|
| | 46.08 | 51.84 | 56.16 | 61.92 |
| Taxable Capital Gain | 16,561 | 16,561 | 16,561 | 16,561 |
| Capital Gains Tax Payable | 3,816 | 4,293 | 4,650 | 5,127 |
| Cash Proceeds From Sale | 10,691 | 10,691 | 10,691 | 10,691 |
| Net Cash Proceeds After Tax | 6,875 | 6,398 | 6,041 | 5,564 |
| Present Value (1980) At 15 Percent Annual Discount Rate | | | | |
| Net Cash Proceeds After Tax | 1,699 | 1,581 | 1,493 | 1,375 |
| Discounted Cash Surplus Over 1980-1989 Period | (540) | (27) | 358 | 874 |
| Total Present Value of Investment | 1,159 | 1,554 | 1,851 | 2,249 |

The difference between the example illustrated in Table A-13 and that summarized in Table A-12 is that the investor in Table A-13 is selling his unit individually rather than as part of the whole building - as such, there is no recapture of depreciation as taxable income, the full difference between the initial price and accumulated losses plus cash surpluses and cash proceeds on the sale is treated as a capital gain for tax purposes. As was noted above, however, the value of each of the MURB units would likely be discounted to the extent that the purchase would assume the liability for recaptured depreciation if the building were ever sold.

From this analysis, it would appear doubtful that a building which has been divided into MURB investment units such as the above sample MURB would ever be sold as a whole - it would not be in the investors' interests to do so and face recapture of depreciation. Rather, the MURB investment units would likely trade individually or in groups until the building is finally demolished after its useful life is completed - with no recapture of depreciation ever.

## Foreclosure on a MURB

Another interesting sidelight on the disposition of MURBs is what happens to investors if the project fails and is taken over by the mortgage lender or insurance company. Even if there is no liability to the lender on the part of the investor, he still must answer to the taxman for his tax losses.

Assume that instead of a sale of the property at the beginning of 1990, in fact a foreclosure takes place and the unitholder is left with no holdings in the project - in fact, he still has substantial liabilities left over from the losses which have been claimed for tax purposes, but which would not in this case be fully realized from the tax department's point of view. In this case, the difference between the undepreciated capital cost of the building ($5,331,000) and the outstanding mortgage principal ($9,832,000 - see Table A-11) would be treated as either recaptured depreciation or a capital gain upon foreclosure and the investors would be liable for tax on that basis. It is perfectly conceivable (indeed likely) that if foreclosures of MURBs do occur, investors could end up losing more than their initial "equity" of $5,000 (which was rescued government taxes anyway) but could also end up substantially in debt to the government for their claimed tax losses as well.

## THE GOVERNMENT ACCOUNT

The purpose of presenting the above financial details for a sample MURB was twofold:

- To illustrate how a MURB operates in practice; and
- To demonstrate the importance of the subsidy components in making a MURB project work.

This section reviews the subsidies involved in the sample MURB and estimates their cost to the federal government.

### Capital Cost Allowance

The only difference between a MURB project and a normal rental project is the ability to deduct losses due to capital cost allowance (CCA) on the building from other income. All of the other subsidy components of the sample MURB project are available to any rental investor.

The cost to the government of the CCA on the building (or for any of the subsidies) depends on the marginal tax rate of the individual involved. Since there will be a variety of people owning units in the sample MURB, a basic assumption regarding the average marginal tax rate is required - the analysis assumes a 50 percent average marginal tax rate for all investors.

TABLE A-14: ACTUAL AND DISCOUNTED CCA AND TAX REVENUE LOSSES (ASSUMING 50 PERCENT MARGINAL TAX RATE) SAMPLE MURB APARTMENT PROJECT, BRAMPTON

| | Current Dollars ($000) | | Discounted 1980 Dollars ($000) | |
|---|---|---|---|---|
| | CCA | Tax Loss | CCA | Tax Loss |
| 1980 | 160 | 80 | 160 | 80 |
| 1981 | 312 | 156 | 271 | 136 |
| 1982 | 296 | 148 | 224 | 112 |
| 1983 | 281 | 140 | 185 | 92 |
| 1984 | 267 | 134 | 153 | 77 |
| 1985 | 254 | 127 | 126 | 63 |
| 1986 | 242 | 121 | 105 | 52 |
| 1987 | 229 | 115 | 86 | 43 |
| 1988 | 218 | 109 | 71 | 36 |
| 1989 | 207 | 104 | 59 | 30 |
| Total | 2,466 | 1,233 | 1,440 | 721 |

Note: All numbers have been rounded.

The current dollar CCA figures are taken from Table A-6; the tax savings are assumed to be half the CCA (50 percent marginal tax rate); both the CCA and the tax savings are discounted to a present value in 1980 using a 15 percent discount rate.

The discounted 1980 present value of the tax savings accruing from CCA deductions (given the above assumptions) totals $721,000 for the 1980-1989 period. At full recapture on the assumed sale of the building in 1990 (see Table A-11) the total tax accruing (at 50 percent marginal tax rate) would be $1,233,000 which would have a present value of $305,000 in 1980.

| | | |
|---|---|---|
| i.e. | Recaptured CCA (1990) | $2,466,000 |
| | Tax at 50 percent (1990) | $1,233,000 |
| | Tax Discounted to 1980 Value at 15 percent discount rate | $ 305,000 |

Thus, the 1980 present value of the CCA loss on the sample MURB from the federal government's point of view would have been $416,000 ($721,000 - $305,000) even allowing for full recapture at the time of the assumed 1990 building sale.

If the building were sold later than 1990, the loss to the government would be much higher since the discounted value of the recaptured depreciation would have diminished while the discounted value of the stream of continued CCA deductions would keep on rising.* Upon sale, of course, the new owner would also be eligible to deduct CCA, however, the present value of these deductions would likely be relatively small.

If the building were never sold and ended up being demolished, all CCA deductions would be a loss to the government since there would be no recaptured depreciation at all.

Another point to consider is that if the MURB is syndicated (as in the example), investors could avoid recapture of depreciation by never selling the building - only selling the MURB units. If this procedure were undertaken, the government would only recover half the amount shown for recaptured depreciation since the capital gains tax rules would apply.

## Deductibility of Soft Costs

Soft costs are deductible in full in the same year in which they are incurred. The discounted tax savings of the soft cost deduction (assuming the 50 percent marginal tax rate) are very large since they apply primarily in the first two years of the period.

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* For example, the discounted 1980 value of full recaptured depreciation on a sale in 1996 would be only $187,000 while the accumulated tax loss would have increased to $817,000 (discounted to 1980), a difference of $630,000.

TABLE A-15: ACTUAL AND DISCOUNTED SOFT COSTS AND TAX REVENUE LOSSES (ASSUMING 50 PERCENT MARGINAL TAX RATE) SAMPLE MURB APARTMENT PROJECT, BRAMPTON

| | Current Dollars ($000) | | Discounted 1980 Dollars ($000) | |
|---|---|---|---|---|
| | Soft Costs | Tax Loss | Soft Costs | Tax Loss |
| 1980 | 2,840 | 1,420 | 2,840 | 1,420 |
| 1981 | 1,262 | 631 | 1,097 | 548 |
| 1982 | 80 | 40 | 60 | 30 |
| 1983 | 53 | 27 | 35 | 18 |
| 1984 | - | - | - | - |
| Total | 4,235 | 2,118 | 4,032 | 2,016 |

The actual soft costs are taken from Table A-5; the tax savings are assumed to be half the soft costs (50 percent marginal tax rate); both the soft costs and the tax savings are discounted to a present value in 1980 using a 15 percent discount rate.

There is no recapture of soft cost deductions as there is with depreciation. However, in the case of the assumed sale of the project in 1990, the amount of the sale price in excess of original capital cost is subject to capital gains tax - in a sense, this capital gains tax "recaptures" the soft cost deductions as well as any appreciation in the value of the project above original total costs. The amount of capital gains tax on these "recaptured" soft costs is only $262,000 when discounted to 1980 present values.

| | | |
|---|---|---|
| i.e. | Total Soft Costs | $4,235,000 |
| | Capital Gains Tax at 50 Percent Marginal Rate (1990) | $1,059,000 |
| | Tax Discounted to 1980 Value at 15 Percent Discount Rate | $262,000 |

Thus, the 1980 present value of the soft cost deduction loss to the federal government would have been $1,754,000 ($2,016,000 - $262,000).

If the building were sold later than 1990, the loss to the government would be higher since the discounted value of the "recaptured" soft cost deduction would diminish.* If the building were never sold, the government would face the total loss of the soft cost deduction.

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* The discounted 1980 value of the "recapture" from a sale in 1996, for example, would be only $113,000.

## Other Deductions

In addition to the above CCA and soft cost deductions, there are a number of other deductions allowed from rental income in calculating tax losses from MURB's. Four deductions which are relatively straightforward are:

- Operating expenses for management, property taxes, maintenance and repairs etc. (see Table A-4);
- CCA deductions for building equipment such as carpets and appliances which do tend to depreciate relatively rapidly (see Table A-6);
- Interest payments on the loans to investors to allow them to acquire the initial equity in the project (see Tables A-8 and A-9); and
- Mortgage interest payments on the borrowed capital for the project (see Table A-4).

Another deduction available to the investors in the sample MURB is less straightforward:

- The difference between actual mortgage interest payments under the GPM loan and the interest payment that would normally accrue to the outstanding mortgage principal is also deductible as an expense for tax purposes even though it is not in fact paid.

The tax savings available over the 1980-1989 period from this deduction alone amount to a 1980 present value of $373,000 (assuming the 50 percent marginal tax rate and 15 percent discount rate).

TABLE A-16: MORTGAGE INTEREST PAYMENTS AND ACTUAL AND DISCOUNTED VALUE OF TAX REVENUE LOSSES ON UNPAID INTEREST (ASSUMING 50 PERCENT MARGINAL TAX RATE) SAMPLE MURB APARTMENT PROJECT, BRAMPTON

| | Mortgage Interest | | | Tax | Discounted 1980 Dollars ($000) | |
|---|---|---|---|---|---|---|
| | Claimed | Paid | Difference | Loss | Difference in Interest | Tax Loss |
| 1980 | - | - | - | - | - | - |
| 1981 | 355 | 216 | 139 | 70 | 121 | 61 |
| 1982 | 1,120 | 890 | 230 | 115 | 174 | 87 |
| 1983 | 1,149 | 934 | 215 | 108 | 141 | 71 |
| 1984 | 1,175 | 981 | 194 | 97 | 111 | 55 |
| 1985 | 1,198 | 1,030 | 168 | 84 | 84 | 42 |
| 1986 | 1,217 | 1,081 | 136 | 68 | 59 | 29 |
| 1987 | 1,232 | 1,135 | 97 | 48 | 36 | 18 |
| 1988 | 1,242 | 1,192 | 50 | 25 | 16 | 8 |
| 1989 | 1,263 | 1,252 | 11 | 6 | 3 | 2 |
| Total | | | | 621 | 745 | 373 |

The first three columns in Table A-16 are taken directly from Table A-2; the tax saving is calculated from the difference between interest paid (and hence legitimately deductible) and interest claimed at a marginal tax rate of 50 percent; both the difference in mortgage interest claimed and the tax savings have been discounted to 1980 present values using the 15 percent discount rate.

The tax savings accruing from the ability to deduct interest even though it is not paid is worth a significant amount to the investors - a 1980 present value of $373,000. While this represents a significant tax saving to the MURB investor, in fact, it is not a loss to the government since the lenders are liable for the interest as income even though they do not receive it.

None of these other deductions are considered in any detail in this study, they are presented here merely for completeness.

## Overall Government Account

The only two items in the sample MURB project which can legitimately be considered to be tax expenditures (or government subsidies at all) are the CCA provision and the provision to deduct soft costs. No other subsidies are involved.

Together, the CCA and soft cost tax expenditures total a 1980 present value loss to the government of about $2 million on the assumed sale of the project in 1990 - a later sale would have meant a larger loss as the discounted value of the tax receipts on recaptured depreciation or capital gains would be smaller still. In the extreme case where the building is never sold and is finally demolished, there would be no recapture of the CCA or the soft costs and the discounted loss to the government would be about $3 million.* This tax loss of $2 million to $3 million on the project works out to a loss per dwelling unit of $7,400-$11,100 in discounted 1980 terms - it is equivalent to a direct grant to the investors of an amount in that range in 1980.

The argument could, of course, be made that without the CCA and soft cost related subsidies the project would never have been built and therefore there would be no sales tax receipts on the building materials used, no income tax on the workers and companies involved in construction of the project and no capital gains tax on the proceeds of the final sale of the project. The validity or otherwise of this argument is discussed in the main body of this report.

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* The $3 million figure is based on total soft cost loss of $2 million and a projection of total CCA cost of $1 million in 1980 present value terms. The $2 million estimated loss for the 1990 sale is based on the analysis contained in the CCA and soft cost sections above.

Abolition of the Tax Expenditures

From the above analysis, it is clear that the deductibility of soft costs is the most important component of the two tax expenditures associated with the sample project. They account for a tax loss to the government of up to $2 million (discounted 1980 value) depending on when (if ever) the project is sold. CCA tax expenditures, on the other hand, account for up to $1 million (discounted 1980 value), again depending on when the project is sold.

If both programs were abolished the tax expenditure savings for this project would, of course, be up to $3 million. If the MURB-CCA program were abolished, the saving would be $1 million. If the deductibility of soft costs were abolished, however, the issue is not so clear-cut since soft costs would then likely be applied to the capital cost of the building and would thereby be eligible for CCA. Table A-17 illustrates this case.

TABLE A-17: ACTUAL AND DISCOUNTED CCA AND TAX REVENUE LOSSES (ASSUMING 50 PERCENT MARGINAL TAX RATE) WITH SOFT COSTS ADDED TO BUILDING CAPITAL COSTS SAMPLE MURB APARTMENT PROJECT, BRAMPTON

| | Current Dollars | | | Discounted 1980 Dollars ($000) | |
|---|---|---|---|---|---|
| | Building Dep. Value | CCA | Tax Loss | CCA | Tax Loss |
| 1980 | 6,040 | 302 | 151 | 302 | 151 |
| 1981 | 10,330 | 517 | 259 | 450 | 225 |
| 1982 | 9,813 | 491 | 245 | 371 | 185 |
| 1983 | 9,322 | 466 | 233 | 306 | 153 |
| 1984 | 8,856 | 443 | 222 | 253 | 127 |
| 1985 | 8,413 | 421 | 210 | 209 | 105 |
| 1986 | 7,992 | 400 | 200 | 173 | 86 |
| 1987 | 7,592 | 380 | 190 | 143 | 71 |
| 1988 | 7,212 | 361 | 181 | 118 | 59 |
| 1989 | 6,851 | 343 | 172 | 97 | 49 |
| Total | | 4,124 | 2,063 | 2,422 | 1,211 |

Note: All numbers have been rounded.

The discounted 1980 value of the stream of CCA tax losses over the 1980-1989 period when soft costs are added into the capital cost of the building is $1,211,000, an increase of 68 percent over the figure when soft costs are excluded. However, instead of facing depreciation recapture on only $2,466,000, the higher CCA means a higher recapture too:

| | | |
|---|---|---|
| i.e. | Recapture CCA (1990) | $4,124,000 |
| | Tax at 50 percent (1990) | $2,063,000 |
| | Tax Discounted to 1980 Value at 15 Percent Discount Rate | $510,000 |

This would leave the discounted 1980 value tax loss at $701,000 ($1,211,000 - $510,000).

Hence, the abolition of the deductibility of soft costs would lead to reduced overall tax expenditures, however, some of the loss would be made up in increased tax losses through CCA deductions on the addition of soft costs into the capital cost of the building.

## Tax Losses Associated With CCA and Deductibility of Soft Costs Under Various Marginal Tax Rates and Discount Rates

Table A-18 presents a summary of the discounted tax losses, recapture and net tax loss associated with the sample MURB project at various marginal tax and discount rates.

TABLE A-18: DISCOUNTED 1980 VALUE OF TOTAL TAX LOSSES AND RECAPTURE ON DEDUCTIONS FOR SOFT COSTS AND CCA AT SELECTED MARGINAL TAX AND DISCOUNT RATES SAMPLE MURB APARTMENT PROJECT, BRAMPTON, 1980-1989 AND 1980-1995 ($000)

| | 10 Percent Discount Rate | | | 15 Percent Discount Rate | | | 20 Percent Discount Rate | | |
|---|---|---|---|---|---|---|---|---|---|
| | Tax Losses | Recapture | Total | Tax Losses | Recapture | Total | Tax Losses | Recapture | Total |
| **1980-1989** | | | | | | | | | |
| 40 Percent Average Marginal Tax Rate | | | | | | | | | |
| Soft Costs | 1,637 | 327 | 1,310 | 1,613 | 209 | 1,404 | 1,591 | 137 | 1,454 |
| CCA | 674 | 380 | 294 | 577 | 244 | 333 | 502 | 159 | 343 |
| Total | 2,311 | 707 | 1,604 | 2,190 | 453 | 1,737 | 2,093 | 296 | 1,797 |
| 50 Percent Average Marginal Tax Rate | | | | | | | | | |
| Soft Costs | 2,047 | 408 | 1,639 | 2,016 | 262 | 1,754 | 1,990 | 171 | 1,819 |
| CCA | 843 | 475 | 368 | 721 | 305 | 416 | 629 | 199 | 430 |
| Total | 2,890 | 883 | 2,007 | 2,737 | 567 | 2,170 | 2,619 | 370 | 2,249 |
| 60 Percent Average Marginal Tax Rate | | | | | | | | | |
| Soft Costs | 2,456 | 490 | 1,966 | 2,419 | 314 | 2,105 | 2,387 | 205 | 2,182 |
| CCA | 1,009 | 571 | 438 | 866 | 366 | 500 | 753 | 239 | 514 |
| Total | 3,465 | 1,061 | 2,404 | 3,285 | 680 | 2,605 | 3,140 | 444 | 2,696 |
| **1980-1995** | | | | | | | | | |
| 40 Percent Average Marginal Tax Rate | | | | | | | | | |
| Soft Costs | 1,637 | 184 | 1,453 | 1,613 | 91 | 1,522 | 1,591 | 46 | 1,545 |
| CCA | 805 | 305 | 500 | 654 | 150 | 504 | 548 | 76 | 472 |
| Total | 2,442 | 489 | 1,953 | 2,267 | 241 | 2,026 | 2,139 | 122 | 2,017 |
| 50 Percent Average Marginal Tax Rate | | | | | | | | | |
| Soft Costs | 2,047 | 230 | 1,817 | 2,017 | 113 | 1,904 | 1,990 | 57 | 1,933 |
| CCA | 1,006 | 382 | 624 | 817 | 187 | 630 | 687 | 95 | 592 |
| Total | 3,053 | 612 | 2,441 | 2,834 | 300 | 2,534 | 2,677 | 152 | 2,525 |
| 60 Percent Average Marginal Tax Rate | | | | | | | | | |
| Soft Costs | 2,456 | 277 | 2,179 | 2,419 | 136 | 2,283 | 2,387 | 69 | 2,318 |
| CCA | 1,203 | 458 | 745 | 980 | 225 | 755 | 821 | 114 | 707 |
| Total | 3,659 | 735 | 2,924 | 3,399 | 361 | 3,038 | 3,208 | 183 | 3,025 |

# APPENDIX B - VOLUME AND COST ESTIMATES

# APPENDIX B - VOLUME AND COST ESTIMATES

This Appendix contains the detailed analysis and calculations behind the volume and cost estimates for the seven tax expenditure items presented in the summary report.

## TABLE OF CONTENTS


| | | Page |
|---|---|---|
| I. | MULTIPLE UNIT RESIDENTIAL BUILDINGS (MURBs) | B-1 |
| A. | VOLUME OF MURBs | B-1 |
| | STARTS AND CERTIFICATES | B-1 |
| | ESTIMATE OF MURBs IN 1978 | B-3 |
| | CCA Losses Claimed for Personal Income Tax Purposes, 1978 | B-3 |
| | Problems with Estimation of MURB Properties, 1978 | B-6 |
| | ESTIMATE OF TOTAL MURBs AT THE END OF 1980 | B-14 |
| | Starts in 1979 and 1980 | B-14 |
| | Conversions of Non-MURBs | B-15 |
| | The Estimate | B-16 |
| | PROJECTED MURB STARTS, 1981 | B-16 |
| B. | COST OF MURBs | B-17 |
| | ANNUAL TAX LOSS DUE TO MURBs | B-17 |
| | Department of Finance Estimates | B-17 |
| | Derivation of the Clayton Research Estimates of CCA Losses | B-18 |
| | Clayton Research Estimates of MURB Tax Expenditures | B-22 |
| | THE DISCOUNTED VALUE APPROACH | B-23 |
| | DISCOUNTED TAX EXPENDITURES ON 1981 MURB STARTS | B-23 |
| | CCA Losses Estimated on 1981 MURB Starts, 1981-2010 | B-23 |
| | Recapture of Depreciation | B-24 |
| | Tax Expenditure Estimate | B-27 |
| | DISCOUNTED TAX EXPENDITURES ON THE TOTAL MURB STOCK | B-28 |
| | CCA Losses on the MURB Stock, 1981-2010 | B-28 |
| | Tax Expenditure Estimate | B-31 |

Page

II. THE USE OF CAPITAL COST ALLOWANCE DEPRECIATION RATES RATHER THAN ACTUAL DEPRECIATION RATES B-33

A. VOLUME OF DEPRECIATION CHARGES ON RENTAL BUILDINGS ..... B-33

THE ALTERNATIVE METHODS OF DEPRECIATION ..... B-33
Capital Cost Allowance Method ..... B-33
Sinking Fund Method ..... B-33

CCA CLAIMS AND BOOK DEPRECIATION ..... B-36
Real Estate, Finance and Construction Companies ..... B-36
Individuals ..... B-37
Trade and Service Companies ..... B-37
Estimates of Rental Depreciation, 1978 ..... B-38
Estimates of Rental Depreciation, 1976-1981 ..... B-39

B. THE COSTS OF USING CCA RATHER THAN BOOK DEPRECIATION ..... B-40

ANNUAL TAX LOSSES DUE TO USE OF CCA RATHER THAN BOOK DEPRECIATION ..... B-40
DISCOUNTED TAX LOSSES FROM USE OF CCA RATHER THAN BOOK DEPRECIATION ON ESTIMATED 1981 RENTAL STARTS ..... B-41
Assumptions ..... B-41
Values of CCA and Book Depreciation ..... B-41
Estimated Tax Losses ..... B-43

III. THE DEDUCTIBILITY OF SOFT COSTS B-44

A. VOLUME OF SOFT COSTS ..... B-44

DWELLINGS ON WHICH SOFT COSTS WILL BE CLAIMED IN 1981 ..... B-44
Changes in The Tax Rates ..... B-44
Estimated Private Rental Starts, 1979-1981 ..... B-44
TYPICAL SOFT COST DEDUCTIONS ..... B-45
Types of Soft Costs ..... B-45
Timing of Soft Costs ..... B-45
ESTIMATED VOLUME OF SOFT COSTS, 1979-1981 ..... B-46

Page

B. COSTS OF DEDUCTIBILITY OF SOFT COSTS ..... B-47

ANNUAL TAX LOSSES DUE TO SOFT COST DEDUCTIONS ..... B-47
DISCOUNTED SOFT COST TAX LOSSES ON 1981 PRIVATE RENTAL STARTS ..... B-48
Yearly Distribution of Soft Costs for 1981 Rental Starts ..... B-48
Tax Loss Estimate ..... B-49

IV. DEDUCTIBILITY OF CARRYING CHARGES ON LAND B-50

A. THE VOLUME OF LAND INVENTORIES AND CARRYING CHARGES ..... B-50

LAND INVENTORIES ..... B-50
LAND CARRYING CHARGES ..... B-51

B. THE COST OF THE DEDUCTIBILITY OF CARRYING CHARGES ON LAND ..... B-52

THE TAX LOSS ESTIMATE ..... B-52

V. REDUCTION IN SALES TAX ON BUILDING MATERIALS B-54

A. THE VOLUME OF MATERIALS USED IN CONSTRUCTION ..... B-54

BUILDING MATERIALS SUBJECT TO TAX ..... B-54
TOTAL BUILDING MATERIALS USED IN CONSTRUCTION ..... B-55
BUILDING MATERIALS USED IN RESIDENTIAL AND NON-RESIDENTIAL CONSTRUCTION ..... B-57
The 1976-1980 Period ..... B-57
Estimates for 1981 ..... B-58

B. COSTS OF REDUCTION IN SALES TAX ON BUILDING MATERIALS ..... B-59

THE TAX EXPENDITURE ESTIMATES ..... B-59

Page

VI. EXEMPTION OF CONSTRUCTION EQUIPMENT FROM SALES TAX B-61

A. THE VOLUME OF CONSTRUCTION EQUIPMENT SALES ..... B-61

THE DEPARTMENT OF FINANCE ESTIMATES ..... B-61
ESTIMATES OF EQUIPMENT USED IN
RESIDENTIAL CONSTRUCTION ..... B-63

B. THE COST OF EXEMPTION OF RESIDENTIAL CONSTRUCTION
EQUIPMENT FROM FEDERAL SALES TAX ..... B-64

THE TAX EXPENDITURE ESTIMATES ..... B-64

VII. EXEMPTION FROM SALES TAX OF GOODS IN COMPETITION
WITH ON-SITE CONSTRUCTION B-66

A. THE VOLUME OF GOODS IN COMPETITION
WITH ON-SITE CONSTRUCTION ..... B-66

THE DEPARTMENT OF FINANCE ESTIMATES ..... B-66
"GOODS IN COMPETITION" AND TOTAL BUILDING
MATERIALS USED IN CONSTRUCTION ..... B-67
"GOODS IN COMPETITION" USED IN
RESIDENTIAL CONSTRUCTION ..... B-68

B. COSTS OF EXEMPTION OF "GOODS IN COMPETITION"
WITH ON-SITE CONSTRUCTION FROM SALES TAX ..... B-69

THE TAX EXPENDITURE ESTIMATES ..... B-69

# I. MULTIPLE UNIT RESIDENTIAL BUILDINGS (MURBs)

## A. VOLUME OF MURBs

### STARTS AND CERTIFICATES

There are no statistics available on the number of MURBs approved, started, completed or in existence in any given period. The only concrete information available on MURBs relates to the number of MURB Certificates issued by CMHC. This is not a reliable measure of the number of MURBs, however, since many developers would take the precaution of obtaining a MURB Certificate whether the building was a condominium, a MURB or simply a rental property to be held by a company involved in real estate (in which case a MURB Certificate allowing deduction of CCA losses against other income would be redundant). The MURB Certificate would be necessary as verification of the start date in case the building was ever sold to private investors interested in using CCA losses against other income.

MURB Certificates do, however, provide a ceiling against which to estimate the number of MURBs actually in existence. Table B-1 indicates that MURB Certificates for a total of 282,640 units were issued by CMHC in the 1975-1979 period for Canada as a whole with most MURBs concentrated in the final three years of the period; these are equivalent to 56.1 percent of all row and apartment starts during the total five-year period.

The excess of MURB Certificates issued over starts in 1979 is indicative of some spillover of MURBs which were actually started in 1980 but were issued a certificate by CMHC nonetheless. There is no reliable estimate of the number of 1980 starts which were issued MURB Certificates in late 1979; however, it would appear likely to be around 15,000 units.*

In 1980, there were just below 60,000 row and apartment starts - a significant drop from earlier years which itself was not unrelated to the abolition of MURBs. Preliminary estimates by CMHC indicate that about 15,000 of these were condominium units and a further estimated 14,000 were in subsidized rental projects (either CMHC or provincially subsidized); this leaves approximately 31,000 private rental units. Since some of the condominium units will have

---

* Ontario was responsible for most of the excess of MURB Certificates over actual row and apartment starts in 1979; however, at least some of this excess could have been 1979 certificates issued on starts in earlier years.

TABLE B-1: ROW AND APARTMENT STARTS
AND MURB CERTIFICATES ISSUED
BY REGION, CANADA, 1975-1979
(DWELLING UNITS)

| | Atlantic | Quebec | Ontario | Prairies | B.C. | Canada |
|---|---|---|---|---|---|---|
| **1975** | | | | | | |
| Starts | 5,836 | 21,237 | 37,756 | 13,324 | 13,971 | 92,124 |
| MURB Certificates | 949 | 1,731 | 1,497 | 1,669 | 2,671 | 8,517 |
| Difference | 4,887 | 19,506 | 36,259 | 11,655 | 11,300 | 83,607 |
| **1976** | | | | | | |
| Starts | 5,932 | 29,504 | 43,928 | 27,879 | 15,757 | 123,000 |
| MURB Certificates | 2,844 | 9,652 | 7,679 | 10,246 | 4,798 | 35,219 |
| Difference | 3,088 | 19,852 | 36,249 | 17,633 | 10,959 | 87,781 |
| **1977** | | | | | | |
| Starts | 5,641 | 25,931 | 40,867 | 31,187 | 15,322 | 118,948 |
| MURB Certificates | 5,303 | 17,350 | 22,641 | 24,761 | 12,210 | 82,265 |
| Difference | 338 | 8,581 | 18,226 | 6,426 | 3,112 | 36,683 |
| **1978** | | | | | | |
| Starts | 2,855 | 17,196 | 35,154 | 33,452 | 9,049 | 97,706 |
| MURB Certificates | 4,465 | 11,902 | 27,969 | 26,341 | 9,412 | 80,089 |
| Difference | -1,610 | 5,294 | 7,185 | 7,111 | -363 | 17,617 |
| **1979** | | | | | | |
| Starts | 2,154 | 16,440 | 20,727 | 23,542 | 8,773 | 71,636 |
| MURB Certificates | 2,385 | 13,435 | 34,815 | 20,479 | 5,436 | 76,550 |
| Difference | -231 | 3,005 | -14,088 | 3,063 | 3,337 | -4,914 |
| **Total 1975-1979** | | | | | | |
| Starts | 22,418 | 110,308 | 178,432 | 129,384 | 62,872 | 503,414 |
| MURB Certificates | 15,946 | 54,070 | 94,601 | 83,496 | 34,527 | 282,640 |
| Difference | 6,472 | 56,238 | 83,831 | 45,888 | 28,345 | 220,774 |

Source: Canada Mortgage and Housing Corporation.

received MURB Certificates (either for immediate rental of the units or to ensure flexibility in terms of future tenure of the units), it is estimated that less than 20,000 of the total of 31,000 private rental units would be non-MURB rental units.

Estimation of the total number of MURB units up to the end of 1980 and projections of 1981 starts have been undertaken using different techniques. The technique for total MURBs up to the end of 1980 involves estimating first the number of MURBs in 1978 (based on Department of Finance data), then updating this estimate to the end of 1980 based on known and perceived market trends. The estimate of the number of MURB starts for 1981 is based on an assumption about the share of total expected row and apartment starts that will be MURBs.

## ESTIMATE OF MURBs IN 1978

### CCA Losses Claimed for Personal Income Tax Purposes, 1978

The Department of Finance has undertaken an analysis of a sample of the 1978 personal income taxation returns which contained both a CCA claim and negative net rental income. By definition, these returns would have been from taxpayers who were involved with MURBs since only CCA deductions on MURBs can be used to create losses to offset other income. Table B-2 presents a summary of the pertinent information received from these sample tax returns extrapolated by the Department of Finance to be representative of the total population of taxpayers who claimed MURB CCA deductions in 1978; the table also contains estimates prepared by Clayton Research of the average CCA loss per MURB taxpayer and the total MURB CCA losses claimed on personal income tax in the 1978 taxation year.

A total of 43,220 taxpayers claimed CCA losses on rental properties in 1978 - a surprising number (well over half) had taxable incomes below $25,000 even before allowance is made for the claimed negative CCA. Looking at the number of taxpayers claiming CCA is misleading, however; most of these with incomes below $25,000 claimed only a relatively small CCA loss (less than $1,000 on average). This average CCA deduction of less than $1,000 would be well below the amount claimable on a whole dwelling unit (some of the relatively low income negative CCA claimers would likely be holders of small MURB units representing less than one dwelling unit while others own units which were under construction at the end of the

TABLE B-2: NUMBER OF TAXPAYERS CLAIMING MURB CCA LOSSES, AVERAGE AND TOTAL TAX SAVINGS AND ESTIMATES OF CLAIMED CCA LOSSES ON PERSONAL INCOME TAX CANADA, 1978

| Income of Taxpayer Before Deduction of Negative CCA ($) | Number of Taxpayers | Average Tax Savings ($) | Total Tax Savings ($000) | Estimated Average Marginal Federal Tax Rate (Percent) | Estimated Average Claimed CCA Loss ($) | Estimated Total Claimed CCA Losses ($000) |
|---|---|---|---|---|---|---|
| Under 10,000 | 2,295 | 110 | 252 | 18.5 | 595 | 1,362 |
| 10,000- 15,000 | 6,305 | 165 | 1,040 | 23.0 | 717 | 4,522 |
| 15,000- 20,000 | 9,310 | 185 | 1,722 | 27.0 | 685 | 6,378 |
| 20,000- 25,000 | 7,075 | 318 | 2,250 | 30.0 | 1,060 | 7,500 |
| 25,000- 50,000 | 10,770 | 1,109 | 11,944 | 33.0 | 3,361 | 36,194 |
| 50,000- 75,000 | 4,385 | 2,303 | 10,099 | 37.0 | 6,224 | 27,295 |
| 75,000-100,000 | 1,540 | 4,386 | 6,754 | 39.5 | 11,103 | 17,099 |
| 100,000-200,000 | 1,210 | 6,040 | 7,308 | 43.0 | 14,047 | 16,995 |
| 200,000 and over | 335 | 26,752 | 8,962 | 43.0 | 62,214 | 20,842 |
| Total | 43,220 | 1,165 | 50,331 | 36.4 | 3,197 | 138,187 |

Source: Unpublished data from the Department of Finance (first two columns) and estimates by Clayton Research Associates (final four columns).

taxation year).* It is obvious that the vast majority of CCA claims in terms of dollars are made by taxpayers with incomes above $25,000 (85 percent).

A brief explanation of each column in Table B-2 is in order:

- Income before deductions of negative CCA - the returns were grouped according to a person's taxable income taking into account all income sources but not the CCA deductions; income is after the deduction of soft costs and tax shelters other than MURB.
- Number of taxpayers is simply that - the taxpayers by income group who claimed negative CCA deductions against other income.
- Average tax savings was calculated by the Department of Finance from the taxpayers' returns - it represents the average amount of tax saved as a result of the CCA deductions.
- Average marginal federal tax rate for each income group was estimated by Clayton Research based on the 1978 tax schedule - the overall average marginal tax rate was 36 percent.
- Average claimed CCA loss was estimated by Clayton Research based on the average marginal tax rate and the average tax savings achieved by each income group.
- Total claimed CCA losses was estimated by Clayton Research by multiplying the average claimed CCA loss in each income group by the number of taxpayers in each group who claimed a CCA loss.

The total claimed CCA losses in the 1978 tax year is therefore estimated to be $138,187,000 (or, rounding, since the marginal tax rates were crudely estimated, $140 million). This is comprised of CCA on equipment (depreciable at 20 percent of the undepreciated

---

* The 5 percent allowable CCA deduction on a $23,000 MURB dwelling unit (building cost only) would be $1,150 in the first year - well above the average estimated CCA claims for taxpayers with incomes of less than $20,000. For MURBs under construction, CCA can be claimed on the completed portion only so some of the low income people might have had MURBs which were under construction.

balance) as well as on buildings (depreciable at 5 to 10 percent of the undepreciated balance depending on the structure type).*

Problems with Estimation of MURB Properties, 1978

Based on the estimated total claimed CCA losses for income tax purposes, it is possible to extend the analysis to produce estimates of the total value of the properties. The simplest way would be simply to divide the total CCA losses by .05 to arrive at the figure ($2.8 billion) and then divide by average building cost for each unit; however, there are a number of complications with this simple approach in terms of estimating the number of MURBs existing at the end of 1978:

- An accelerated depreciation rate of 10 percent was allowed on wood-frame buildings started prior to 1978;
- Some of the CCA losses would have resulted from the accelerated (20 percent) depreciation allowed on equipment in the building;
- Many of the MURBs on which CCA losses were claimed would have been under construction at the end of 1978 and, therefore, only a portion of the total value of the building could have been depreciated in 1978;
- Some of the actual CCA claims would not have been picked up in the Department of Finance figures in Table B-2 as these figures do not include CCA which offsets any positive rental income from the property;
- Some buildings would have been partly depreciated already by 1978 and CCA claims would be correspondingly low;
- Some investors would have been in a position to defer some or all of the CCA losses in a particular year if they did not need the losses because of low income from other sources; and
- Some MURBs would have been held by corporate investors which, of course, do not file personal income tax returns.

---

* This estimate of $140 million in claimed CCA losses for 1978 compares to a rough estimate of $81 million in claimed CCA losses for 1977 prepared with less detailed figures from the Department of Finance.

Each of these points is dealt with in turn below; the final result is an estimate of MURBs started in the 1975-1978 period:

Step 1: Assumption Regarding Average CCA Rate - 1978

The only available estimates of CCA rates known to the consultant are contained in An Evaluation of the Federal Assisted Rental Program (1976-1977).* The average CCA rate on ARP units was estimated in this study to be 8.75 percent; however, this was based only on projects with ARP loans as at July, 1977. It is considered that this rate would be higher than that applicable for all MURBs at the end of 1978 since it seems likely that non-ARP MURBs would have a higher proportion of non-wood-frame buildings. It has been assumed that the average CCA rate for all MURBs started prior to the end of 1978 is 7.5 percent.

Step 2: Estimates of CCA Losses Claimed for Equipment and Buildings

The Department of Finance estimates of CCA tax losses do not differentiate between CCA losses claimed for equipment (depreciable at 20 percent of the declining balance) and CCA losses claimed on buildings (assumed here to be 7.5 percent of the declining balance). Thus, it is necessary to estimate the relative proportions of each of these components if the amount pertaining to buildings alone is to be identified.

The importance of equipment in a building's CCA deductions declines in significance relatively rapidly in the early years since it is depreciable at an accelerated rate of 20 percent. The example in Table B-3 indicates that on an average MURB dwelling unit, the proportion of CCA pertaining to equipment declines from 12.3 percent in the first year to 7.3 percent by year 5.

Since MURBs were only introduced in late 1974, the oldest conceivable completed project at the end of 1978 would be 3 years old. It is considered therefore that a rate of 11 percent of CCA losses would likely be applicable to equipment depreciation on the completed MURBs in 1978; the remaining 89 percent would relate to the buildings themselves. Of course, investors cannot claim CCA losses on equipment in uncompleted buildings (unlike the completed portions of the buildings themselves); therefore, estimation of the equipment portion of the CCA losses in 1978 must await the estimation of the number of MURB units under construction at the end of 1978.

---

* Irwin Lithwick, An Evaluation of the Federal Assisted Rental Program (1976-1977), CMHC, February, 1978, page 72.

TABLE B-3: COMPOSITION OF CCA LOSSES ON TYPICAL MURB UNIT ($)

| | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 |
|---|---|---|---|---|---|
| Undepreciated Building Value | 26,500* | 24,512 | 22,674 | 20,973 | 19,400 |
| CCA Claims (7.5 Percent) | 1,988 | 1,838 | 1,701 | 1,573 | 1,455 |
| Undepreciated Equipment Value | 1,400* | 1,120 | 896 | 717 | 574 |
| CCA Claims (20 Percent) | 280 | 224 | 179 | 143 | 115 |
| Total CCA Claims | 2,268 | 2,062 | 1,880 | 1,716 | 1,570 |
| Percent of CCA | | | | | |
| Buildings | 87.7 | 89.1 | 90.5 | 91.7 | 92.7 |
| Equipment | 12.3 | 10.9 | 9.5 | 8.3 | 7.3 |
| Total | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

* Initial estimated typical building and equipment values from a survey of syndicated MURB projects (Appendix C).

Source: Estimates by Clayton Research Associates.

Step 3: Estimates of the Number and Value of MURB Projects Under Construction in 1978

Since many of the buildings on which CCA was claimed in 1978 would still have been under construction at year end, only a portion of the total building value of these projects (and none of the equipment cost) could have been depreciated for CCA losses. Therefore, the total ultimate value of MURB projects on which CCA was claimed in 1978 would be substantially greater than the value which would result from simply dividing claimed CCA by the rate of depreciation.

A guide to the likely magnitudes of the stock of MURBs completed during 1978 can be ascertained by a comparison of the estimates of total CCA losses in 1978 with those in 1977.

TABLE B-4: CCA LOSSES CLAIMED
CANADA, 1977 AND 1978

| | Estimated Total CCA Losses ($ Millions) |
|---|---|
| 1977 | 81.7 |
| 1978 | 138.2 |
| Increase | 56.5 |

Source: Table B-2 and similar estimates by Clayton Research Associates for 1977 based on more crude Department of Finance data.

If one assumes that the CCA losses on MURBs under construction at the end of each year was the same, the increase of $56.5 million in CCA losses can be roughly equated with the MURB projects completed in 1978. Based on this hypothesis, the value of these buildings would be (0.88 is used here as the building component since it is the first year following completion (see Table B-3):

CCA on buildings only: $56.5 million X 0.88 = $50 million.

Total value of buildings: $50 million ÷ 0.075 = $667 million.

The number of MURB dwelling units associated with this total building value is estimated at around 30,000 units (average building value per unit of about $22,500).* Given average construction periods of about 12 months, the estimated number of units under construction in both 1977 and 1978 would be assumed under this hypothesis to be approximately 30,000 units as well.**

---

* This is well below the estimated average building value per dwelling of $26,500 for 1978-1980 syndicated MURB starts (see Appendix C). The syndicated MURBs appear to have higher average costs overall than the unsyndicated MURBs so the overall MURB figure will be lower.

** It must be kept in mind that, at least until the beginning of 1978, wood-frame MURBs were very popular because of their accelerated depreciation rate - the construction period for these units would have been less than 12 months.

It is, however, unlikely that the initial assumption regarding the number of MURBs under construction being the same in both 1977 and 1978 is valid. The number of MURB Certificates issued in each year is approximately the same (see Table B-1), but there appears to have been considerable variation in the time frame for issuance of these Certificates from project to project so this is inconclusive evidence. Two factors which would point to the conclusion that CCA losses on MURB units under construction at the end of 1978 would have been less than losses on units under construction at the end of 1977 are:

- The CCA rate on most of the 1978 starts would have been 5 percent compared to an estimated average of 7.5 percent for previous years;* and
- Total row and apartment units under construction at the end of 1978 were 70 percent below the 1977 level.

To the extent that CCA losses on MURB units under construction at the end of 1978 were lower than those under construction at the end of 1977, the total value of completions during 1978 must be higher - say by 5,000 units to raise estimated 1978 MURB completions to about 35,000 units - all of which are assumed to have been under construction at the end of 1977.

---

* The 10 percent CCA rate for wood-frame units expired at the end of 1977 for MURBs.

Retracing the mathematics then:

| | |
|---|---|
| Value of Buildings Under Construction at end of 1977: | 35,000 units X $22,500 per unit = $790 million |
| Value of CCA Claimed on Units Under Construction at end of 1977: (assuming half the total value is claimable for CCA) | ($790 million ÷ 2) X 0.075 = $30 million |
| Value of CCA Claimed on Units Completed in 1978: | ($790 million - $30 million) X 0.075 = $57 million |
| Recall from above the difference in CCA Claims on Buildings between 1977 and 1978: | $50 million |

Estimate of Value of CCA Claimed on Units Under Construction at end of 1978:

Change in CCA = CCA on Completions + CCA on Under Construction in 1978 - CCA on Under Construction in 1977.

$50 million = $57 million + CCA on Under Construction in 1978 - $30 million

CCA on Under Construction in 1978 = $23 million

If it is again assumed that half the ultimate value of the buildings under construction is claimable for CCA purposes, and if the CCA rate is assumed to be 5.5 percent for all buildings under construction at the end of 1978 (i.e. they were predominantly either non-wood-frame or were started in 1978)*, then:

| | |
|---|---|
| Value of Buildings Under Construction at the end of 1978: | ($23 million X 2) ÷ .055 = $836 million |

Assuming a slight increase in average dwelling value:

| | |
|---|---|
| Number of Units Under Construction at the end of 1978: | $836 million ÷ $23,000 = 36,000 units |

---

* It is assumed here that either some wood-frame units started in 1977 were still under construction at the end of 1978 or, more likely, there was some spillage of 1977 MURB Certificates on wood-frame buildings to 1978 starts.

Step 4: Estimated CCA Losses on Completed Buildings, 1978

If the value of the CCA claimed on units under construction at the end of 1978 was $23 million as was estimated in the previous step, then the remaining portion from the total $140 million CCA losses in 1978 ($117 million) must pertain to completed buildings. However, this $117 million in CCA losses still covers both equipment and building depreciation. Given the analysis stemming from Table B-3, it is a relatively simple matter now to estimate the amount relating to the completed buildings only - approximately 89 percent of CCA losses on completed MURBs in 1978 was considered to relate to the buildings only, this amounts to a total of $104 million.

TABLE B-5: ESTIMATED COMPOSITION OF CCA LOSSES ON MURBs CANADA, 1978

| | $ Million |
|---|---|
| CCA on Uncompleted MURBs | 23 |
| CCA on Completed MURBs | |
| Buildings (89 Percent) | 104 |
| Equipment (11 Percent) | 13 |
| Total | 117 |
| Total CCA | 140 |

Source: Estimates by Clayton Research Associates (Tables B-2 and B-3)

Step 5: Other Complications Regarding Estimation of MURBs from CCA Claims on Personal Income Tax

The four remaining complications outlined above under the heading "Problems With Estimation of MURB Properties, 1978" are:

- The problem of underestimation of CCA losses because of some CCA losses offsetting positive rental income;
- Partial depreciation of some buildings prior to 1978;
- Deferral of CCA losses by some investors; and
- Corporate ownership of MURBs.

These all would indicate that there would be an underestimation of the total value of MURB buildings if one were simply to divide the $104 million CCA loss on completed buildings (Table B-5) by the average CCA rate for the MURBs. The problem is that little is known about the magnitude of any of them.

It appears unlikely that any one of the first three complications would in itself result in a major underestimation of MURBs; however, cumulatively, they might be more important. Therefore, the calculated CCA losses on completed MURBs in 1978 ($104 million) has been adjusted upward to $115 million (just over 10 percent) to offset this underestimation.*

The MURBs owned by corporate investors are a more difficult consideration. Virtually nothing is known about the extent of corporate ownership of MURBs to offset income from other sources. The Department of Finance has not completed its analysis but has reached the conclusion that there are relatively few corporate MURB investors. There appears to be no reason why companies could not use MURBs in the same way that individuals do; however, the conclusion reached by Clayton Research was also that these would make up a relatively small proportion of total MURBs - probably less than 10 percent. To allow for corporate MURBs, the calculated CCA losses available on completed MURBs has been adjusted upward yet again to $125 million (just over 8 percent).

Step 6: Estimates of MURB Dwelling Units
Completed and Under Construction at the End of 1978

The estimated total available CCA losses on all completed MURBs (including those completed in 1978 and in earlier years) was estimated above to be $125 million in 1978. In order to estimate the total building value on which this CCA would apply, it is necessary to select the appropriate CCA rate. It was concluded above that 7.5 percent was the applicable rate for all completed buildings covered in the 1978 returns; the total original value of these buildings is estimated to be:

Estimated Building Value
of Completed MURBs: $125 million ÷ 0.075 = $1,667 million

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* Some of the underestimation would not express itself as a CCA deduction (depreciated building value for example); however, CCA is used here only as a means to estimating first total building value and then number of MURB units.

Assuming an average original building value of $21,000 for these buildings (all started over the 1975-1977 period)* the number of completed MURB units at the end of 1978 is estimated to be:

Estimated Number of
Completed MURB Units: $1,667 million ÷ $21,000 = 80,000 units

The number of MURB units under construction at the end of 1978 on which CCA was claimed has already been estimated (above) at about 36,000 units. This is likely an underestimate since some MURB units will likely have been only just started; therefore, the estimate of the number of MURBs under construction at the end of 1978 has been rounded up to 40,000 units. Therefore, the total number of MURB units completed or under construction at the end of 1978 is estimated to be about 120,000 units.

TABLE B-6: ESTIMATE OF TOTAL MURB UNITS
CANADA, DECEMBER 31, 1978

| | Dwelling Units |
|---|---|
| Completed, 1975-1978 | 80,000 |
| Under Construction at Year End | 40,000 |
| Total MURBs | 120,000 |

Source: Estimates by Clayton Research Associates.

This estimate of MURBs either completed or under construction at the end of 1978 comprises 58 percent of the total of 206,090 MURB Certificates issued in Canada to the end of 1978.

## ESTIMATE OF TOTAL MURBs AT THE END OF 1980

### Starts in 1979 and 1980

Estimates of MURBs started in 1979 and 1980 must be based on softer information than the estimates of pre-1979 MURBs formulated above. The only information available is that of MURB Certificates: there were 76,550 MURB Certificates issued in 1979 and, of course, none in 1980, though a number of the MURBs were actually started in 1980.

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* This compares to an estimated average dwelling value of $26,500 for a sample of 1978-1980 syndicated MURB starts (see Appendix C).

It seems certain that the proportion of starts with MURB Certificates which would actually end up being MURBs (instead of owner-occupied condominiums or rental units owned by companies involved in real estate) would be higher for the 1979-1980 starts than for the pre-1979 starts. Several facts point to this conclusion:

- The program expired at the end of 1979; hence, promoters and investors had a last chance to develop a MURB property;
- Many promoters went to the trouble of obtaining MURB Certificates on units not even started; and
- The number of MURB Certificates issued declined by only 4 percent from 1978 to 1979, compared to a 27 percent drop in combined row and apartment starts.

The proportion of estimated MURB starts to MURB Certificates issued for the 1975-1978 period was 58 percent (120,000 starts ÷ 206,090 Certificates). For the 1979 Certificates this proportion is estimated to have risen to 65 percent; on this basis, the number of MURB starts relating to the 1979 Certificates would be:

Estimated MURB Starts
in 1979 and 1980: 76,550 Certificates X 0.65 = 50,000 units

Conversions of Non-MURBs

Any estimate of the number of MURB units in existence at a particular point in time must also take account of all the potential MURBs. A MURB Certificate is necessary for a project to be classified as a MURB so the population is limited; however, there are a substantial number of units for which Certificates have been issued but which are not being used as MURBs. Conversions of these potential MURBs into real MURBs must always be considered in calculations of the number of MURBs in existence in any year. Conversions of existing MURBs into non-MURBs would also be a possibility but is considered to be less likely.

For the purposes of this analysis, it has been assumed that the net change resulting from MURB conversions and de-conversions is zero for the 1979 and 1980 period. However, if the current MURB provision is allowed to expire at the end of 1981 as is currently scheduled to occur, and if it is not reintroduced in the future, many of the non-MURB projects which have MURB Certificates (either condominium projects or rental projects owned by real estate companies) may be converted to MURBs at some future date.

## The Estimate

Combining the estimated 120,000 MURBs started before 1979 with the 50,000 which are estimated to have been started in 1979 and 1980, the overall estimate of MURBs either completed or under construction at the end of 1980 is estimated to be 170,000 units.

TABLE B-7: ESTIMATED TOTAL MURB UNITS STARTED CANADA, DECEMBER 31, 1980

| | Dwelling Units |
|---|---|
| Started 1975-1978 | 120,000 |
| Started 1979-1980 | 50,000 |
| Total MURBs | 170,000 |

Source: Estimates by Clayton Research Associates.

In terms of an overall average of estimated MURB units compared to MURB Certificates issued, MURBs represent 60 percent. The other 40 percent (over 110,000 units) represent potential MURBs which are currently either condominiums or rental projects owned by real estate companies.

## PROJECTED MURB STARTS, 1981

The announcement of the reintroduction of the MURB provision in the 1980 Budget has stimulated a great deal of activity among MURB developers. There will, of course, be many MURB Certificates issued, but a large proportion of them will go to projects which were in the planning stage prior to the Budget and many of them will not be MURBs. If there is no extension of the MURB provision into 1982, a repeat of the 1979-1980 situation where many buildings which had not been started were issued with MURB Certificates can be expected.

Total row and apartment starts for 1981 have been projected by Clayton Research Associates to be 72,000 units. Assuming approximately the same numbers for condominiums in 1980 and a slight increase in total public and private (non-MURB) rental housing starts, the total number of MURB starts for 1981 has been estimated

at approximately 25,000. These are not the number of MURB Certificates which will be issued - they will be much higher, perhaps up to 45,000-50,000. If the MURB provision is not extended and the issuing of Certificates is not more tightly controlled by CMHC, there could be an additional 15,000-25,000 units on which Certificates are issued but which are not started in 1981.

## B. COST OF MURBs

### ANNUAL TAX LOSS DUE TO MURBs

#### Department of Finance Estimates

The latest data from the Department of Finance relating to the tax loss due to the MURB provision of the Income Tax Act relate to 1978. These figures as well as the Department's estimates for 1979 and 1980 are presented in Table B-8.

TABLE B-8: DEPARTMENT OF FINANCE ESTIMATED MURB FEDERAL TAX EXPENDITURES ON PERSONAL INCOME TAX CANADA, 1976-1980

| | $ Million |
|---|---|
| 1976 | 20 |
| 1977 | 25 |
| 1978 | 40 |
| 1979 | 45 |
| 1980 | n/a |

Source: Department of Finance, Government of Canada Tax Expenditure Account, December, 1980, page 22.

These estimates relate only to tax expenditures on personal income tax since the Department of Finance has not completed its analysis of MURB CCA losses from corporate taxes - the Department does believe, however, that these corporate tax losses are likely to be very small.

## Derivation of the Clayton Research Estimates of CCA Losses

The derivation of the Clayton Research estimates of tax expenditures relating to MURBs follows a number of detailed steps building on the analysis in Part A; the first steps are to establish the undepreciated value of the stock of MURBs:

1. Total CCA losses on personal income tax for 1978 were estimated (Table B-2) to have been $140 million (this includes both buildings and equipment). The amount of this total applicable to buildings alone was (Table B-5):*

| | |
|---|---|
| Completed buildings: | $104 million |
| Uncompleted buildings: | $23 million |

2. The undepreciated value of the completed MURBs prior to the CCA deduction (in 1978) is estimated to be:

   $104 million ÷ 0.075 = $1,387 million

   This was considered to be an underestimate of total undepreciated MURB completed units because of a variety of reasons. The one considered to be a major factor in terms of tax expenditures is the corporate MURB holdings; to offset these factors, the undepreciated balance is raised by 10 percent:**

   $1,387 million X 1.1 = $1,526 million

   Half of the total undepreciated values are estimated to relate to wood-frame and masonry buildings respectively:

   $1,526 million ÷ 2 = $763 million for each.

   The revised estimate of CCA losses relating to these two building values is:

| | | |
|---|---|---|
| Wood-frame: | $763 million X 0.1 = | $76 million |
| Masonry: | $763 million X 0.05 = | $38 million |
| | | $114 million |

   The undepreciated value of these buildings following deduction of 1978 CCA losses is:

| | | |
|---|---|---|
| Wood-frame: | $763 million - $76 million = | $687 million |
| Masonry: | $763 million - $38 million = | $725 million |
| | | $1,412 million |

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* CCA losses on equipment are normally allowed as deductions on any rental property whether it is a MURB or not, so equipment CCA is not considered here as a tax expenditure.

** This 10 percent increase is less than the estimate presented in Step 6 on page B-13 because this estimate relates to undepreciated value while the earlier one related to original value.

3. MURB completions in 1979 are estimated to have been approximately 40,000 units of which 10 percent are estimated to be wood-frame buildings which are still allowed the 10 percent CCA deduction. The average building value of these MURBs is estimated to be $23,000. The total value of this completed stock is therefore estimated to be:

   $23,000 X 40,000 units = $920 million

   Wood-frame (0.1 CCA):
   $920 million X 10 percent = $92 million
   Other (0.05 CCA):
   $920 million X 90 percent = $828 million
   $920 million

   Of course, $23 million has already been deducted for CCA while the buildings were under construction at the end of 1978, so the total undepreciated value of these buildings is assumed to be:

   Wood-frame:
   $92 million - $4 million = $88 million
   $828 million - $19 million = $809 million
   $897 million

4. There are estimated to have been about 35,000 real MURB starts in 1979 and perhaps 25,000 of them would have been far enough along in construction to claim a CCA loss during 1979. The estimated value of the completed portions of these buildings (assuming a total average building cost of $24,000) would be:

   $24,000 X 25,000 units ÷ 2 = $300 million

   The applicable CCA rate on these buildings would be 5 percent so 1979 CCA on these buildings would be:

   $300 million X 0.05 = $15 million

   The total undepreciated value of these buildings upon expected completion by the end of 1980 would be:

   ($24,000 X 25,000 units) - $15 million = $585 million.

5. There are estimated to have been about 15,000 MURB units under construction at the end of 1980. All of these should have reached a construction stage sufficiently advanced to claim some CCA. Assuming an average building value of $25,000 for these MURBs, the estimated value of the completed portions of these buildings would be:

   $25,000 X 15,000 units ÷ 2 = $188 million

The applicable CCA rate on these buildings would be 5 percent so 1980 CCA on these buildings would be:

$188 million X 0.05 = $9 million

The total undepreciated value of these buildings upon expected completion at the end of 1981 would be:

($25,000 X 15,000 units) - $9 million = $366 million

6. MURB starts in 1981 are expected to be 25,000 units. Given the late start likely on most of these units, it is considered unlikely that more than 10,000 of them will be in a sufficiently advanced stage of construction to claim CCA losses at the end of 1981. Assuming an average building value of $26,000 for these MURBs, the estimated value of the completed portion would be:

   $26,000 X 10,000 units ÷ 2 = $130 million

   The applicable CCA rate on these buildings would be 5 percent so 1981 CCA on these buildings would be:

   $130 million X 0.05 = $7 million

   The total undepreciated value of these buildings upon expected completion at the end of 1982 would be:

   ($26,000 X 25,000 units) - $7 million = $643 million

Table B-9 presents a summary of the results of these steps plus the estimated CCA losses for following years to allow calculation of total MURB CCA losses claimed in each year from 1978 to 1981.

<u>It must be stressed at this point that these estimates assume that there are no conversions of MURBs into non-MURBs or vice-versa and that there are no resales of MURB projects to investors which would result in recapitalization of the building value</u>.

TABLE B-9: TOTAL ESTIMATED MURB CCA LOSSES
BY PERIOD OF CONSTRUCTION OF PROJECTS
CANADA, 1978-1981

| | $ Million | | | |
|---|---|---|---|---|
| | 1978 | 1979 | 1980 | 1981 |
| Units Completed by End of 1978 | | | | |
| Wood-Frame Units: | | | | |
| Undepreciated Balance | 763 | 687 | 618 | 556 |
| CCA Losses (0.1) | 76 | 69 | 62 | 56 |
| Masonry Units: | | | | |
| Undepreciated Balance | 763 | 725 | 689 | 655 |
| CCA Losses (0.05) | 38 | 36 | 34 | 33 |
| Units Completed in 1979 | | | | |
| Wood-Frame Units: | | | | |
| Undepreciated Balance | 40* | 88 | 79 | 71 |
| CCA Losses (0.1) | 4 | 9 | 8 | 7 |
| Masonry Units: | | | | |
| Undepreciated Balance | 380* | 809 | 769 | 731 |
| CCA Losses (0.05) | 19 | 40 | 38 | 37 |
| All Units Completed in 1980 | | | | |
| Undepreciated Balance | - | 300* | 585 | 556 |
| CCA Losses (0.05) | - | 15 | 29 | 28 |
| All Units Completed in 1981 | | | | |
| Undepreciated Balance | - | - | 188* | 366 |
| CCA Losses (0.05) | - | - | 9 | 18 |
| All Units Started in 1981 | | | | |
| Undepreciated Balance | - | - | - | 130* |
| CCA Losses (0.05) | - | - | - | 7 |
| Total Estimated CCA Losses | 137 | 169 | 180 | 186 |

* Incomplete building value since projects are still under construction.

Source: Estimates by Clayton Research Associates.

## Clayton Research Estimates of MURB Tax Expenditures

In order to convert the estimates of CCA losses presented in Table B-9 into estimates of tax expenditures, it is necessary to select the appropriate marginal tax rate for MURB holders. It must be remembered here that these are only federal tax expenditures so the marginal rates, and the resulting estimates, will appear low.

Table B-10 presents estimates of the federal tax expenditure results from the MURB CCA losses presented in Table B-9. In interpreting these estimates, it should be borne in mind that the applicable marginal tax rate in 1978 was about 36 percent.

TABLE B-10: ESTIMATED MURB TAX EXPENDITURES AT SELECTED MARGINAL TAX RATES

| | 1978 | 1979 | 1980 | 1981 |
|---|---|---|---|---|
| Estimated CCA Losses | 137 | 169 | 180 | 186 |
| Tax Expenditures at Marginal Tax Rates: | | | | |
| 30% | 41 | 51 | 54 | 56 |
| 36% | 49 | 61 | 65 | 67 |
| 40% | 55 | 68 | 72 | 74 |
| 50% | 69 | 85 | 90 | 93 |
| 60% | 82 | 101 | 108 | 112 |

Source: Estimates by Clayton Research Associates.

The addition of provincial income tax would add another 12-20 percentage points onto the 36 percent average federal marginal tax rate for 1978. Of course, the addition of corporate MURB investors would not change the average marginal tax rate since the federal corporation tax rate is 36 percent (provincial corporation taxes raise the total corporate tax rate to 46-51 percent).*

Another very important point to consider in selecting the appropriate marginal tax rate is that the average 36 percent federal rate for 1978 was based on taxable incomes after deductions for soft costs, normal net (non-CCA) rental income and other tax shelters. In terms of the average marginal rate which would likely have applied if none of these other shelters were available to MURB investors, the 36 percent marginal rate in 1978 would be an understatement - likely by about 3-5 percentage points.

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* Canadian Tax Foundation, The National Finances: An Analysis of the Revenues and Expenditures of the Government of Canada, 1979-1980, 1980, pages 85-87. Small businesses of course qualify for a lower tax rate.

## THE DISCOUNTED VALUE APPROACH

Table B-10 provided federal revenue loss estimates for MURBs for particular years. The question addressed was how much revenue did the federal government give up in a single year because of the existence of MURBs. Thus the estimates show, for example, that assuming a 36 percent average marginal tax rate for MURB investors, MURB CCA cost the federal government $67 million in foregone revenues in 1981. This is not by any means the total cost of MURBs, however, since CCA losses will extend over a number of years for most MURB projects. Because a dollar tomorrow is not worth as much as a dollar today it would be inappropriate to add future revenue losses to the 1981 estimated MURB tax expenditure to derive the total costs of MURB to the federal government. Instead these future revenue losses should be discounted to determine their present day value.

Choice of an appropriate discount rate is a difficult decision (and the results of a present value analysis often depend critically on the discount rate used, especially over long time periods). The federal Treasury Board recommends the use of alternative real discount rates (5 percent, 10 percent and 15 percent) for sensitivity analysis.* It was decided that the discount rate used in the analysis here should be expressed in current rather than real terms. This is because the revenue loss estimates are current dollar figures.

Three alternative discount rates have been selected for use in the study - 10 percent, 15 percent and 20 percent. The 15 percent rate is regarded as the preferred discount rate. It includes an inflation component (10-12 percent) and a real component (3-5 percent).

## DISCOUNTED TAX EXPENDITURES ON 1981 MURB STARTS

### CCA Losses Estimated on 1981 MURB Starts, 1981-2010

It was estimated above that there will be a total of 25,000 MURB starts in 1981 but that most of these will be started late in the year with only about 10,000 of them projected to reach a stage halfway to completion by year end.

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* Treasury Board, Benefit-Cost Analysis Guide, March, 1976, page 26.

Assuming:

- An average building value of $26,000 for each of these units;
- That all of the projects are completed as at the end of 1982; and
- A CCA depreciation rate of 5 percent;

it is a relatively simple matter to calculate the CCA losses in future years. Table B-11 presents the estimated CCA losses in both current dollars and discounted dollars.

The discounted value of the stream of CCA losses to be claimed on the estimated 25,000 MURB starts in 1981 varies from $136 million to $220 million depending on the discount rate used.*

## Recapture of Depreciation

The estimates of total CCA claims presented above are based on an assumption that none of the MURBs are sold - if there are sales of either buildings or MURB investment units, there will be recaptured depreciation and capital gains to account for.** The capital gains tax implications will not be covered here since this part of the study is concerned with CCA deductions, not possible capital gains.

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* All discounted CCA losses are assumed for the purposes of this analysis to be available for deduction from other income. Information in Appendix C indicates that most MURBs begin to show a positive cash flow (with no CCA deductions) in about the seventh year; however, the CCA losses would continue to be a significant offset to other income well beyond this period. Because estimation in this area is very difficult and since the discounted value of CCA losses following say the tenth year following completion is relatively small anyway, the full discounted CCA losses are assumed to be available for deduction against other income.

** See Appendix A for a fuller discussion of the implications of selling MURB projects or units.

TABLE B-11: ESTIMATED UNDEPRECIATED VALUE AND CCA LOSSES RELATING TO 1981 MURB STARTS CURRENT AND DISCOUNTED VALUES CANADA, 1981-2010 ($ MILLION)

| | Current Dollars | | | Discounted Value of CCA Losses | | |
|---|---|---|---|---|---|---|
| | Undepreciated Value at Jan. 1 | CCA Losses | Accumulated CCA Losses | Discount Rate (Percent) 10 | 15 | 20 |
| 1981 | 130 | 7 | 7 | 7 | 7 | 7 |
| 1982 | 643 | 32 | 39 | 29 | 28 | 27 |
| 1983 | 611 | 31 | 70 | 26 | 23 | 22 |
| 1984 | 580 | 29 | 99 | 22 | 19 | 17 |
| 1985 | 551 | 28 | 127 | 19 | 16 | 14 |
| 1986 | 523 | 26 | 153 | 16 | 13 | 10 |
| 1987 | 497 | 25 | 178 | 14 | 11 | 8 |
| 1988 | 472 | 24 | 202 | 12 | 9 | 7 |
| 1989 | 448 | 22 | 224 | 10 | 7 | 5 |
| 1990 | 426 | 21 | 245 | 9 | 6 | 4 |
| 1991 | 405 | 20 | 265 | 8 | 5 | 3 |
| 1992 | 385 | 19 | 284 | 7 | 4 | 3 |
| 1993 | 366 | 18 | 302 | 6 | 3 | 2 |
| 1994 | 348 | 17 | 319 | 5 | 3 | 2 |
| 1995 | 331 | 17 | 336 | 4 | 2 | 1 |
| 1996 | 314 | 16 | 352 | 4 | 2 | 1 |
| 1997 | 298 | 15 | 367 | 3 | 2 | 1 |
| 1998 | 283 | 14 | 381 | 3 | 1 | 1 |
| 1999 | 269 | 13 | 394 | 2 | 1 | 1 |
| 2000 | 256 | 13 | 407 | 2 | 1 | - |
| 2001 | 243 | 12 | 419 | 2 | 1 | - |
| 2002 | 231 | 12 | 431 | 2 | 1 | - |
| 2003 | 219 | 11 | 442 | 1 | 1 | - |
| 2004 | 208 | 10 | 452 | 1 | - | - |
| 2005 | 198 | 10 | 462 | 1 | - | - |
| 2006 | 188 | 9 | 471 | 1 | - | - |
| 2007 | 179 | 9 | 480 | 1 | - | - |
| 2008 | 170 | 9 | 489 | 1 | - | - |
| 2009 | 161 | 8 | 497 | 1 | - | - |
| 2010 | 153 | 8 | 505 | 1 | - | - |
| Total | | | | 220 | 166 | 136 |

Source: Estimates by Clayton Research Associates; see Table B-9.

Recaptured depreciation is, however, an important issue which must be covered in a discussion of tax expenditures related to CCA (depreciation) losses. Table B-12 presents estimates of the value of the accumulated CCA losses on the projected 1981 MURB starts at various future dates - these are the amounts of recaptured depreciation which would be due if all projects were sold at that time and appraised building values at the time of sale were at least equal to the original value of the buildings. The discounted 1981 value of the recaptured depreciation for each of the years is presented also.

TABLE B-12: ESTIMATED DISCOUNTED VALUE OF RECAPTURED DEPRECIATION ON ASSUMED SALE OF ALL 1981 MURB STARTS IN SELECTED FUTURE YEARS CANADA, 1985-2010 ($ MILLION)

| | Accumulated CCA Claims | Discounted Value of Recaptured Depreciation at Selected Discount Rates | | |
|---|---|---|---|---|
| | | 10% | 15% | 20% |
| Assumed Sale in* | | | | |
| 1985 | 99 | 68 | 57 | 48 |
| 1990 | 224 | 95 | 64 | 43 |
| 1995 | 319 | 84 | 45 | 25 |
| 2000 | 394 | 64 | 28 | 12 |
| 2005 | 452 | 46 | 16 | 6 |
| 2010 | 497 | 31 | 9 | 3 |

* Sale in a particular year requires use of accumulated CCA losses in the previous year since no CCA is allowed in the year of sale.

Source: Estimates by Clayton Research Associates.

If buildings are sold early in their lives, say in 10-15 years, there is a significant recapture of depreciation; however, as time goes on, the discounted value of the depreciation recapture fades into insignificance. This is particularly so when it is realized that little, if any, of this recaptured depreciation would find its way into the pocket of the taxman. Prudent investors would ensure that they either spread the profit from the sale across many years (at low tax rates) or offset the "income" by purchasing another tax shelter - say a rental property with high soft costs to offset the depreciation recapture.

Another implication of MURB sale from the point of view of the government is that the purchaser is allowed to start deductions of CCA on the new capitalized value of the MURB. This, of course, has important implications for future tax revenues as well.

For the purposes of the tax expenditure estimates presented below, it has been explicitly assumed that no MURB sales occur so there is no depreciation recapture to consider and no increased CCA claims from MURB purchasers.

## Tax Expenditure Estimate

The tax expenditures associated with the stream of discounted CCA losses presented in Table B-11 depends, of course, on the average marginal tax rates of the MURB investors. Table B-13 presents the range of options.

TABLE B-13: ESTIMATED DISCOUNTED VALUE OF TAX EXPENDITURES RELATING TO FUTURE CCA DEDUCTIONS ON 1981 MURB STARTS AT SELECTED MARGINAL TAX RATES CANADA, 1981-2010 ($ MILLION)

| | Discount Rate | | |
|---|---|---|---|
| | 10% | 15% | 20% |
| Estimated Discounted CCA Losses | 220 | 166 | 136 |
| Tax Expenditures at Marginal Tax Rates | | | |
| 30% | 66 | 50 | 41 |
| 36% | 79 | 60 | 49 |
| 40% | 88 | 66 | 54 |
| 50% | 110 | 83 | 68 |
| 60% | 132 | 100 | 82 |

Source: Clayton Research Associates; see Table B-11.

At the average marginal tax rate (before CCA losses) prevailing in 1978 (36 percent), the discounted (1981) federal tax expenditures relating to the estimated 1981 MURB starts would be in the $49 million-$79 million range depending on the discount rate. If it is assumed that this marginal rate is artifically low because of the use of other shelters in combination with MURBs, then a higher rate (say 40 percent) would be more reasonable.

## DISCOUNTED TAX EXPENDITURES ON THE TOTAL MURB STOCK

### CCA Losses on the MURB Stock, 1981-2010

Building on the undepreciated values of the stock of MURBs from Table B-9, it is possible to estimate the stream of CCA losses on all MURBs started before the end of 1981. Because of the differences in discount rates, wood-frame MURBs with 10 percent CCA are separated from other MURBs started in the 1975-1980 period. Tables B-14 and B-15 present the information on these MURBs in a similar format to that used for 1981 MURB starts (Table B-11) - together these three tables represent the estimated 1981-2010 flow of CCA losses from the total MURB stock started by the end of 1981.

TABLE B-14: ESTIMATED UNDEPRECIATED VALUE AND CCA LOSSES RELATING TO 5 PERCENT CCA MURB UNITS STARTED BETWEEN 1975 AND 1980 CANADA, 1981-2010 ($ MILLION)

| | Undepreciated Value at Jan. 1 | CCA Losses | Discounted Value of CCA Losses | | |
|---|---|---|---|---|---|
| | | | 10% | 15% | 20% |
| 1981 | 2,308 | 115 | 115 | 115 | 115 |
| 1982 | 2,193 | 110 | 100 | 96 | 92 |
| 1983 | 2,083 | 104 | 86 | 79 | 72 |
| 1984 | 1,979 | 99 | 74 | 65 | 57 |
| 1985 | 1,880 | 94 | 64 | 54 | 45 |
| 1986 | 1,786 | 89 | 55 | 44 | 36 |
| 1987 | 1,697 | 85 | 48 | 37 | 28 |
| 1988 | 1,612 | 81 | 42 | 30 | 23 |
| 1989 | 1,531 | 77 | 36 | 25 | 18 |
| 1990 | 1,454 | 73 | 31 | 21 | 14 |
| 1991 | 1,381 | 69 | 27 | 17 | 11 |
| 1992 | 1,312 | 66 | 23 | 14 | 9 |
| 1993 | 1,246 | 62 | 20 | 12 | 7 |
| 1994 | 1,184 | 59 | 17 | 10 | 6 |
| 1995 | 1,125 | 56 | 15 | 8 | 4 |
| 1996 | 1,069 | 53 | 13 | 7 | 3 |
| 1997 | 1,016 | 51 | 11 | 5 | 3 |
| 1998 | 965 | 48 | 10 | 4 | 2 |
| 1999 | 917 | 46 | 8 | 4 | 2 |
| 2000 | 871 | 44 | 7 | 3 | 1 |
| 2001 | 827 | 41 | 6 | 3 | 1 |
| 2002 | 786 | 39 | 5 | 2 | 1 |
| 2003 | 747 | 37 | 5 | 2 | 1 |
| 2004 | 710 | 36 | 4 | 1 | 1 |
| 2005 | 674 | 34 | 3 | 1 | - |
| 2006 | 640 | 32 | 3 | - | - |
| 2007 | 608 | 30 | 3 | - | - |
| 2008 | 578 | 29 | 2 | - | - |
| 2009 | 549 | 27 | 2 | - | - |
| 2010 | 522 | 26 | 2 | - | - |
| Total | | | 837 | 659 | 552 |

Source: Estimates by Clayton Research Associates; see Table B-9.

TABLE B-15: ESTIMATED UNDEPRECIATED VALUE AND CCA LOSSES RELATING TO 10 PERCENT CCA MURB UNITS STARTED BETWEEN 1975 AND 1980 CANADA, 1981-2010 ($ MILLION)

| | Undepreciated Value at Jan. 1 | CCA Losses | Discounted Value of CCA Losses | | |
|---|---|---|---|---|---|
| | | | 10% | 15% | 20% |
| 1981 | 627 | 63 | 63 | 63 | 63 |
| 1982 | 564 | 56 | 51 | 49 | 47 |
| 1983 | 508 | 51 | 42 | 39 | 35 |
| 1984 | 457 | 46 | 35 | 30 | 27 |
| 1985 | 411 | 41 | 28 | 23 | 20 |
| 1986 | 370 | 37 | 23 | 18 | 15 |
| 1987 | 333 | 33 | 19 | 14 | 11 |
| 1988 | 300 | 30 | 15 | 11 | 8 |
| 1989 | 270 | 27 | 13 | 9 | 6 |
| 1990 | 243 | 24 | 10 | 7 | 5 |
| 1991 | 219 | 22 | 8 | 5 | 4 |
| 1992 | 197 | 20 | 7 | 4 | 3 |
| 1993 | 177 | 18 | 6 | 3 | 2 |
| 1994 | 159 | 16 | 5 | 3 | 2 |
| 1995 | 143 | 14 | 4 | 2 | 1 |
| 1996 | 129 | 13 | 3 | 2 | 1 |
| 1997 | 116 | 12 | 3 | 1 | 1 |
| 1998 | 104 | 10 | 2 | 1 | 1 |
| 1999 | 94 | 9 | 2 | 1 | - |
| 2000 | 85 | 9 | 1 | 1 | - |
| 2001 | 76 | 8 | 1 | - | - |
| 2002 | 68 | 7 | 1 | - | - |
| 2003 | 61 | 6 | 1 | - | - |
| 2004 | 55 | 6 | 1 | - | - |
| 2005 | 49 | 5 | 1 | - | - |
| 2006 | 44 | 4 | - | - | - |
| 2007 | 40 | 4 | - | - | - |
| 2008 | 36 | 4 | - | - | - |
| 2009 | 32 | 3 | - | - | - |
| 2010 | 29 | 3 | - | - | - |
| Total | | | 345 | 286 | 252 |

Source: Estimates by Clayton Research Associates; see Table B-9.

Tax Expenditure Estimate

The tax expenditures associated with the stream of discounted CCA losses presented in Tables B-11, B-14 and B-15 (the total MURB stock) is summarized in Table B-16.

TABLE B-16: ESTIMATED DISCOUNTED VALUE OF FUTURE MURB CCA LOSSES FOR ALL MURBS STARTED BY THE END OF 1981 CANADA, 1981-2010 ($ MILLION)

| | Discount Rate | | |
|---|---|---|---|
| | 10% | 15% | 20% |
| 1975-1980 Starts | | | |
| 10% CCA Buildings | 345 | 286 | 252 |
| 5% CCA Buildings | 837 | 659 | 552 |
| 1981 Starts | 220 | 166 | 136 |
| Total | 1,402 | 1,111 | 940 |

Source: Estimates by Clayton Research Associates; see Tables B-11, B-14 and B-15.

Table B-17 presents the range of options regarding marginal tax rates for each of these discounted flows of CCA losses in order to calculate the resulting tax expenditures.

TABLE B-17: ESTIMATED DISCOUNTED VALUE OF TAX EXPENDITURES RELATING TO FUTURE CCA LOSSES ON MURBS STARTED BY THE END OF 1981, SELECTED MARGINAL TAX RATES CANADA, 1981-2010 ($ MILLION)

| | Discount Rate | | |
|---|---|---|---|
| | 10% | 15% | 20% |
| Estimated Discounted CCA Losses | 1,402 | 1,111 | 940 |
| Tax Expenditures at Marginal Tax Rates | | | |
| 30% | 421 | 333 | 282 |
| 36% | 505 | 400 | 338 |
| 40% | 561 | 444 | 376 |
| 50% | 701 | 556 | 470 |
| 60% | 841 | 667 | 564 |

Source: Estimates by Clayton Research Associates; see Table B-16.

Again, it must be stressed that these estimates are based on a very stringent set of assumptions. To summarize the more critical ones:

- The base estimate of MURB numbers and values included a considerable volume of assumptions regarding average costs, depreciation rates, etc.
- It has been assumed that all those projects which were MURBs originally will continue to be MURBs - all non-MURBs will remain non-MURBs.
- There will be no sales of MURBs to other investors, i.e. no recaptured depreciation and resulting higher CCA claims on the resold building have been taken into account.

## II. THE USE OF CAPITAL COST ALLOWANCE DEPRECIATION RATES RATHER THAN ACTUAL DEPRECIATION RATES

### A. VOLUME OF DEPRECIATION CHARGES ON RENTAL BUILDINGS

#### THE ALTERNATIVE METHODS OF DEPRECIATION

There are a plethora of alternative depreciation methods available to owners of capital investments in the form of buildings and equipment and no attempt has been made here to review them all. The method in most common use by the real estate industry is the sinking fund method.* The sinking fund method is the one used in this report to reflect the difference between the actual depreciation methods used in most real estate companies' books and the capital cost allowance which the same companies use for taxation purposes.

#### Capital Cost Allowance Method

Readers of the MURB section will recall that the capital cost allowance (CCA) depreciation method when applied to new rental buildings utilizes a 5 percent rate of depreciation on the declining undepreciated balance. For example, CCA on a $100 million building would total $5 million in the first year (0.05 X $100 million), $4.75 million in the second (0.05 X $95 million), $4.51 in the third (0.05 X $90.25 million) and so on ... This declining balance method of depreciation results in very large depreciation deductions in the early years of a building's life and progressively smaller deductions as the building ages.

#### Sinking Fund Method

The sinking fund method of depreciation is the opposite of the declining balance method - under the sinking fund method, depreciation is very small in the early years but gets progressively larger in later years.

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* Price Waterhouse and Company, The Real Estate Development Industry in Canada: 1976 Survey of Annual Reporting and Accounting Developments. Thirty-six of the 39 real estate companies surveyed which reported their depreciation method used the sinking fund approach.

Conceptually, the sinking fund method is easiest to understand if one considers the depreciation in any one year to be the sum of a fixed annual contribution plus the compound interest in that year from previous contributions. Table B-18 presents an example of 5 percent sinking fund depreciation over 50 years based on the sample MURB project which was used for explanatory purposes in Appendix A. This 5 percent/50 years schedule is considered to represent the typical treatment of depreciation on buildings by the real estate industry.

TABLE B-18: SINKING FUND DEPRECIATION SCHEDULE
ASSUMING A 5 PERCENT INTEREST RATE AND A
50 YEAR ECONOMIC LIFE
SAMPLE MURB APARTMENT PROJECT
BRAMPTON, ($000)*

| | Sinking Fund Depreciation | | | |
|---|---|---|---|---|
| | Basic Annual Contribution | Interest | Annual Total | Accumulative Total |
| 1980 | 51 | - | 51 | 51 |
| 1981 | 51 | 3 | 54 | 105 |
| 1982 | 51 | 5 | 56 | 161 |
| 1983 | 51 | 8 | 59 | 220 |
| 1984 | 51 | 11 | 62 | 282 |
| 1985 | 51 | 14 | 65 | 347 |
| 1986 | 51 | 17 | 68 | 415 |
| 1987 | 51 | 21 | 72 | 487 |
| 1988 | 51 | 24 | 75 | 562 |
| 1989 | 51 | 28 | 79 | 641 |
| 1980-1989 | 510 | 131 | 641 | |
| 1990-1999 | 510 | 535 | 1,045 | 1,686 |
| 2000-2009 | 510 | 1,192 | 1,702 | 3,388 |
| 2010-2019 | 510 | 2,263 | 2,773 | 6,161 |
| 2020-2029 | 510 | 3,981 | 4,491 | 10,652 |
| Totals | 2,550 | 8,102 | 10,652 | |

* This is based on an initial project value of:

| | |
|---|---|
| Buildings: | $ 6,397,000 |
| Soft Costs: | 4,255,000 |
| Total: | $10,652,000 |

Soft costs have been capitalized here since this is common practice in the real estate industry.

Source: Estimates by Clayton Research Associates; see Appendix A.

By 1989, the total depreciation on the building (including soft costs) has totalled only $641,000 under the sinking fund method - this compares with estimated CCA deductions (on the building alone) over the same period of $2.5 million;* the soft costs (totalling $4.2 million) under CCA would, of course, have been fully deducted by 1989 as well. So, whereas for the real estate company's own purposes the property would have been depreciated by only $641,000 by 1989, for tax purposes, CCA and soft cost deductions would have totalled $6.7 million.

Table B-19 presents examples of the depreciation that would be charged on the sample MURB from Appendix A in selected years under the above sinking fund approach and under the 5 percent CCA approach.

TABLE B-19: COMPARISON OF DEPRECIATION LOSSES USING 5 PERCENT/50 YEAR SINKING FUND SCHEDULE AND 5 PERCENT CCA SCHEDULE, SELECTED YEARS SAMPLE MURB APARTMENT PROJECT, BRAMPTON ($000)

| | Sinking Fund | CCA |
|---|---|---|
| 1985 | 65 | 254 |
| 1990 | 83 | 197 |
| 1995 | 106 | 152 |
| 2000 | 135 | 118 |
| 2005 | 173 | 91 |
| 2010 | 220 | 70 |

Source: Estimates by Clayton Research Associates.

Between the fifteenth and twentieth years following completion of the building, the values of the depreciation claimed under both systems become much the same; after that, the CCA depreciation falls away while the sinking fund depreciation gradually gets larger each year.

If the soft costs had not been deducted in the first few years and had been capitalized instead, the cross-over year when both depreciation rates would have been equal would have been delayed by another approximately 5 years. This is because CCA would have been capitalized on the total value (including the soft costs).

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* See Appendix A, Table A-6.

## CCA CLAIMS AND BOOK DEPRECIATION

### Real Estate, Finance and Construction Companies

The above analysis demonstrated how CCA exceeded the sinking fund approach to depreciation in the early years; after some period (about 15-20 years) the positions are reversed and depreciation under CCA is lower than under the sinking fund method. When one looks at it from this perspective, it is not so surprising that the value of CCA claimed by real estate operators and developers, finance companies and construction companies in a particular year is only marginally higher than actual book depreciation.

TABLE B-20: CCA AND BOOK DEPRECIATION FOR REAL ESTATE OPERATORS AND DEVELOPERS, OTHER FINANCE COMPANIES AND CONSTRUCTION COMPANIES CANADA, 1977 AND 1978 ($ MILLION)

| | 1977 | 1978 |
|---|---|---|
| Real Estate Operators and Developers | | |
| CCA | 758 | 734 |
| Book Depreciation | 664 | 693 |
| Other Finance | | |
| CCA | 696 | 828 |
| Book Depreciation | 562 | 664 |
| Construction Companies | | |
| CCA | 612 | 628 |
| Book Depreciation | 587 | 602 |
| Total | | |
| CCA | 2,066 | 2,190 |
| Book Depreciation | 1,813 | 1,959 |
| Percent CCA/Book Depreciation | | |
| Real Estate | 114 | 106 |
| Other Finance | 124 | 125 |
| Construction | 104 | 104 |
| Total | 114 | 112 |

Source: Statistics Canada

The drop in the proportion of CCA to book depreciation from 1977 to 1978 is a function both of the inexorable rise in book depreciation as buildings advance in years and the fall-off in CCA because of the same advancing years as well as the drop in new construction.

## Individuals

The depreciation shown in Table B-20 would cover most of the residential rental properties held by companies; however, none of the properties held by individuals would be covered. Unfortunately, comparable information is not available for book depreciation of rental properties for individuals - CCA deductions are all that are reported. If one assumes that the same general proportion as applied to the companies in Table B-20 also applies to individual holdings of rental housing, the book depreciation can also be derived.

TABLE B-21: CCA AND ESTIMATED BOOK DEPRECIATION ON RENTAL PROPERTY, PERSONAL INCOME TAX RETURNS CANADA, 1978

| | 1978 |
|---|---|
| CCA ($ Million) | $889 |
| Estimated CCA/Book Depreciation | 112 |
| Estimated Book Depreciation ($ Million) | 794 |

Source: Revenue Canada, Taxation Statistics and estimates by Clayton Research Associates.

The estimates in Tables B-20 and B-21 would likely cover most of the rental properties on which CCA is being claimed. However, there would be an unknown commercial component as well. In order to separate the residential and commercial components, the total CCA on commercial and residential buildings must first be estimated; after this is done the relative proportions of each will be derived.

## Trade and Service Companies

The CCA and book depreciation reported by trade and service companies would consist almost totally of depreciation on commercial properties.

TABLE B-22: CCA AND BOOK DEPRECIATION FOR TRADE AND SERVICE COMPANIES CANADA, 1978 ($ MILLION)

| | 1978 |
|---|---|
| Trade Companies | |
| CCA | 1,169 |
| Book Depreciation | 1,133 |
| Service Companies | |
| CCA | 1,248 |
| Book Depreciation | 1,280 |
| Total | |
| CCA | 2,417 |
| Book Depreciation | 2,413 |
| Percent CCA/Book Depreciation | |
| Trade | 103 |
| Service | 98 |
| Total | 100 |

Source: Statistics Canada.

The CCA/book depreciation ratio for these industries is much lower than for the real estate, finance and construction industries (see Table B-20). It is considered that the service and retail industries will have a very high proportion of commercial properties so the overall real estate, finance and construction industries ratio is likely to be more representative of residential rental properties.

## Estimates of Rental Depreciation, 1978

Table B-23 presents the sum of the CCA and book depreciation from the above three tables which is considered to approximate the total of commercial and residential rental building depreciation. The table also presents the estimated residential rental CCA and book depreciation; this is derived by assuming that 45 percent of the total CCA will be residential rental - the 45 percent figure was derived from the apartment proportion of the total construction work performed on apartment and commercial buildings in the 1960's and 1970's. Since the overall commercial and residential CCA/ book depreciation ratio is considered to understate the ratio applicable to residential rental alone, the 112 percent which was derived for the real estate, finance and construction industries as a whole (see Table B-20) was used to estimate the book value depreciation from the CCA estimate.

TABLE B-23: ESTIMATED CCA AND BOOK DEPRECIATION ON RESIDENTIAL RENTAL AND COMMERCIAL BUILDINGS CANADA, 1978

| | 1978 |
|---|---|
| Total Commercial and Residential Rental ($ Million) | |
| CCA | 5,496 |
| Book Depreciation | 5,166 |
| Estimated Residential Rental Proportion of Total CCA | 45 |
| Estimated Residential Rental ($ Million) | |
| CCA | 2,473 |
| Book Depreciation | 2,208 |
| Assumed Percent CCA/ Book Depreciation | 112 |

Source: Estimates by Clayton Research Associates.

The estimated residential rental CCA and book depreciation is obviously a very crude figure and should be treated as such. However, it does provide a rough base figure from which estimates of current tax expenditures can be derived.

## Estimates of Rental Depreciation, 1976-1981

There is some evidence that the gap between the total value of CCA and book depreciation for residential rental construction has been declining. Between 1977 and 1978, for example, the gap between CCA and book depreciation for real estate operators and developers dropped significantly (see Table B-20). At the same time, the total values of each were rising at an annual rate near 9-10 percent for the 1976-1978 period. For the purposes of the estimates prepared as part of this report, it has been assumed that the gap between CCA and book depreciation remains at $265 million.*

* This implicitly assumes a greater rate of growth in book depreciation than in CCA depreciation since book depreciation is growing from a similar base.

The estimate of an annual $265 million gap between CCA and book depreciation for the 1976-1981 period as a whole is very crude and should be treated as such. It takes little account of recent trends in the construction of rental accommodation and no account of resales and recapitalization of existing rental buildings. It is presented here only as a broad approximation of the likely magnitude of the difference in CCA and book depreciation on residential rental properties.

## B. THE COSTS OF USING CCA RATHER THAN BOOK DEPRECIATION

### ANNUAL TAX LOSSES DUE TO USE OF CCA RATHER THAN BOOK DEPRECIATION

The federal tax losses resulting from the estimated difference between CCA and book depreciation claimed on residential rental properties will depend on the marginal tax rate of the owners of the rental buildings. The corporate rate is 36 percent for all firms not eligible for the lower small business tax rate and the earlier analysis on MURBs indicated that 36 percent was approximately the same marginal rate as applied to MURB investors - Table B-24 presents the estimated tax losses based on the 36 percent marginal tax rate assumption.

TABLE B-24: ESTIMATED VALUE OF ANNUAL TAX LOSSES RESULTING FROM THE USE OF CCA RATHER THAN BOOK DEPRECIATION CANADA, 1976-1981 ($ MILLION)

| Difference Between CCA and Book Depreciation | Estimated Tax Losses |
|---|---|
| $265 | $95 |

Source: Estimates by Clayton Research Associates.

The estimated loss to the federal government resulting from the use of CCA rather than book depreciation on residential rental buildings for each year during the 1976-1981 period is $95 million.

## DISCOUNTED TAX LOSSES FROM USE OF CCA RATHER THAN BOOK DEPRECIATION ON ESTIMATED 1981 RENTAL STARTS

### Assumptions

There are several assumptions which must be made in order to estimate the differences in tax losses due to the use of CCA rather than book depreciation for rental units started in 1981:

- Soft costs must not be capitalized for book value - they usually are but in this case they will be assumed to be deducted for both;
- The average rental unit value is assumed to be $26,000;
- There are forecast to be 47,000 private rental starts in 1981; the buildings will be half complete at the end of 1981 and fully completed in 1982;
- CCA deductions will commence on the completed portion in 1981. Owners of rental property will take the full CCA deduction available to them in each year; and
- The book depreciation is based on a 5 percent sinking fund over a 50 year term with depreciation to commence upon completion in 1982.

### Values of CCA and Book Depreciation

The total building value of 1981 rental housing starts is estimated to be $1,222 million of which $611 million is assumed to be completed at the end of 1981. Table B-25 presents the relevant depreciation charges for the period to the year 2010.

TABLE B-25: DEPRECIATION ON ESTIMATED 1981 PRIVATE RENTAL STARTS - CCA AND SINKING FUND METHODS CANADA, 1982-2010 ($ MILLION)

| | CCA | | | Difference in Depreciation | | | |
|---|---|---|---|---|---|---|---|
| | | | | | Discounted Value | | |
| | Undep. Value | CCA Losses | Sinking Fund Depreciation | Current Dollars | 10% | 15% | 20% |
| 1981 | 611 | 31 | 0 | 31 | 31 | 31 | 31 |
| 1982 | 1,191 | 60 | 6 | 54 | 49 | 47 | 45 |
| 1983 | 1,131 | 57 | 6 | 51 | 42 | 39 | 35 |
| 1984 | 1,074 | 54 | 7 | 47 | 35 | 31 | 27 |
| 1985 | 1,020 | 51 | 7 | 44 | 30 | 25 | 21 |
| 1986 | 969 | 48 | 7 | 41 | 25 | 20 | 16 |
| 1987 | 921 | 46 | 8 | 38 | 21 | 16 | 13 |
| 1988 | 875 | 44 | 8 | 36 | 18 | 14 | 10 |
| 1989 | 831 | 42 | 9 | 33 | 15 | 11 | 8 |
| 1990 | 789 | 39 | 9 | 30 | 13 | 9 | 6 |
| 1991 | 750 | 38 | 10 | 28 | 11 | 7 | 5 |
| 1992 | 712 | 36 | 10 | 26 | 9 | 6 | 4 |
| 1993 | 676 | 34 | 10 | 24 | 8 | 5 | 3 |
| 1994 | 642 | 32 | 11 | 21 | 6 | 3 | 2 |
| 1995 | 610 | 31 | 12 | 19 | 5 | 3 | 2 |
| 1996 | 579 | 29 | 12 | 17 | 4 | 2 | 1 |
| 1997 | 550 | 28 | 13 | 15 | 3 | 2 | 1 |
| 1998 | 522 | 26 | 13 | 13 | 3 | 1 | 1 |
| 1999 | 496 | 25 | 14 | 11 | 2 | 1 | 0 |
| 2000 | 471 | 24 | 15 | 9 | 2 | 1 | 0 |
| 2001 | 447 | 22 | 16 | 6 | 1 | 0 | 0 |
| 2002 | 425 | 21 | 16 | 5 | 1 | 0 | 0 |
| 2003 | 404 | 20 | 17 | 3 | 0 | 0 | 0 |
| 2004 | 384 | 19 | 18 | 1 | 0 | 0 | 0 |
| 2005 | 365 | 18 | 19 | (1) | 0 | 0 | 0 |
| 2006 | 347 | 17 | 20 | (3) | 0 | 0 | 0 |
| 2007 | 330 | 17 | 21 | (4) | 0 | 0 | 0 |
| 2008 | 313 | 16 | 22 | (6) | 0 | 0 | 0 |
| 2009 | 297 | 15 | 23 | (8) | (1) | 0 | 0 |
| 2010 | 282 | 14 | 24 | (10) | (1) | 0 | 0 |
| | | | | | 332 | 274 | 231 |

Source: Estimates by Clayton Research Associates.

The estimated CCA losses on the 1981 private rental starts exceed the estimated book depreciation by a wide margin in the early years; however, by the end of the century the gap has narrowed and they cross in 2004-2005. By this time though, the discounted value of the difference is insignificant.

The discounted value of the estimated excess of CCA over book depreciation is $231 million-$332 million depending on the discount rate used. At the 15 percent discount rate favoured by this study, the discounted excess is estimated at $274 million.

## Estimated Tax Losses

The estimated tax losses on the excess of CCA claims over book depreciation will, of course, depend on the marginal tax rate selected. As in the calculation in Table B-24, the 36 percent corporate tax rate seems the most appropriate.

TABLE B-26: ESTIMATED DISCOUNTED VALUE OF FEDERAL TAX LOSSES DUE TO THE EXCESS OF CCA OVER BOOK DEPRECIATION ON 1981 PRIVATE RENTAL STARTS CANADA, 1981-2010 ($ MILLION)

| | Discount Rate | | |
|---|---|---|---|
| | 10% | 15% | 20% |
| Discounted Difference Between CCA and Book Depreciation | 332 | 274 | 231 |
| Estimated Tax Loss at 36 Percent Marginal Tax Rate | 120 | 99 | 83 |

Source: Estimates by Clayton Research Associates; see Table B-25.

The estimated discounted value of the future tax losses varies from $83 million to $120 million depending on the discount rate. A round estimate of $100 million appears appropriate.

# III. THE DEDUCTIBILITY OF SOFT COSTS

## A. VOLUME OF SOFT COSTS

### DWELLINGS ON WHICH SOFT COSTS WILL BE CLAIMED IN 1981

#### Changes in The Tax Rates

Prior to 1979, rental investors were allowed to deduct soft costs as they were paid; in 1979, the policy of Revenue Canada for soft costs was changed so that soft cost fees paid can be deducted against other income only in the period to which they relate. The effect of this change in policy is the spreading of soft cost deductions over a period of 3 to 5 years (with most in the first two years) whereas previously they would normally have all been deducted in the first year.

This change also effectively means that only rental units started in 1979 or later need to be examined as part of this exercise in estimating soft cost deductions.

#### Estimated Private Rental Starts, 1979-1981

The deductibility of soft costs is not dependent on the rental property being a MURB, so all private rental starts are of interest. It will be necessary, however, to differentiate the number of MURBs since these are eligible for a wider range of soft costs than are rental properties built and managed by the same individual or company. Table B-27 presents estimates of the number of private rental starts in Canada over the 1979-1981 period.

TABLE B-27: ESTIMATED PRIVATE RENTAL STARTS CANADA, 1979-1981 (DWELLING UNITS)

| | MURBs | Non-MURBs | Total |
|---|---|---|---|
| 1979 | 35,000 | 9,000 | 44,000 |
| 1980 | 15,000 | 18,000 | 33,000 |
| 1981 | 25,000 | 22,000 | 47,000 |

Source: Estimates by Clayton Research Associates.

## TYPICAL SOFT COST DEDUCTIONS

### Types of Soft Costs

There is very little information available on typical magnitudes of soft costs claimed on rental buildings. The types of costs claimable are reasonably standard; however, there appears to be a wide variation in the importance of each type of cost among different projects.

A survey of MURB prospectuses undertaken as part of this study (Appendix C) does shed some light on the use of soft costs in MURB financing; however, information regarding the typical soft costs claims on non-MURB rental projects is not available.

The survey indicated that an average of almost $10,000 per unit was claimed as soft costs on the MURB projects surveyed; soft costs represented 23 percent of total costs which averaged just over $43,000 per unit.* The largest components of typical MURB soft costs were interest during construction and initial leasing services fees which together accounted for about 55 percent of total soft costs. It appears that all typical MURB soft cost items except for about 15 percent (of MURB soft costs) appear to be equally chargeable on non-MURBs as well - the main items not allowable on non-MURBs appear to be cash flow guarantees, promoters' commissions, etc. The typical soft costs claimed on non-MURBs, however, is likely to be less than 85 percent of typical MURB soft costs because it is considered that many (if not most) MURBs have inflated soft cost claims.

For the purposes of this study, it has been assumed that typical soft costs for MURB projects total $10,000 per unit while for non-MURBs the figure is lower at $7,000.

### Timing of Soft Costs

The survey of syndicated MURBs indicated that 80-90 percent of soft costs were claimed in the first two years (about equally divided between the years) with the remainder spread over a period extending up to 10 years in some cases.** For the purposes of the soft cost estimates presented in this study, 43 percent of MURB costs are assumed to occur in each of the first two years (86 percent for the two years together) with the remaining 14 percent spread over the next 4 years (3.5 percent per year).

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* See Appendix C, Tables C-5 and C-9.
** See Appendix C, Table C-8.

For non-MURBs soft costs are more likely to be incurred in the first two years since there is no cash flow guarantee etc. It has been assumed that 96 percent of soft costs of non-MURBs occurs in the first two years (half in each year) with the remaining 4 percent in the third year.

## ESTIMATED VOLUME OF SOFT COSTS 1979-1981

Based on the estimated private rental starts presented in Table B-27, the average soft cost figures ($10,000 for MURBs and $7,000 for non-MURBs) and timing of soft cost claims presented above, the estimated volume by year of estimated soft cost claims resulting from 1979-1981 starts was derived.

TABLE B-28: ESTIMATED VOLUME OF SOFT COSTS CLAIMED ON PRIVATE RENTAL STARTS BY YEAR OF START CANADA, 1979-1981

| | Soft Cost Claims by Year of Start ($ Million) | | | | | | |
|---|---|---|---|---|---|---|---|
| | MURBs Started in | | | Other Private Rental Started in | | | All Private Rental Starts |
| | 1979 | 1980 | 1981 | 1979 | 1980 | 1981 | 1979-1981 |
| Total Estimated Claim | 350 | 150 | 250 | 63 | 126 | 154 | 1,093 |
| Year of Soft Cost Claim | | | | | | | |
| 1979 | 151 | 0 | 0 | 30 | 0 | 0 | 181* |
| 1980 | 151 | 65 | 0 | 30 | 60 | 0 | 306 |
| 1981 | 12 | 65 | 108 | 3 | 60 | 74 | 322 |

* This is likely an underestimate as some soft costs from starts in earlier years were likely claimed in 1979 as well.

Source: Estimates by Clayton Research Associates.

Briefly explaining the derivation of the figures in Table B-28: it is estimated that total claimable soft costs on MURBs started in 1979 was $350 million (35,000 units X $10,000 per unit); of this total, $151 million (43 percent) is projected to be claimed in each of the first two years (1979 and 1980) with the remainder spread across the next 4 years (not all shown in this table). None of the 1980 or 1981 MURB starts will have soft cost claims in 1979 so only the 1979 non-MURB claims on 1979 starts would be added to obtain estimated total soft cost claims in 1979.

The 1979 figure is considered to be an underestimate because no allowance has been made for soft costs on projects started in earlier years. As was noted above, these soft costs on pre-1979 starts could all be deducted in the year of start whereas, in 1979 and later, soft costs could only be deducted in the year to which they relate. It has been assumed for this analysis that all soft costs on pre-1978 starts would have already been deducted before 1979; however, this is unlikely to be entirely true - the margin of error though should be small.

## B. COSTS OF DEDUCTIBILITY OF SOFT COSTS

### ANNUAL TAX LOSSES DUE TO SOFT COST DEDUCTIONS

The federal tax losses resulting from the estimated volume of soft cost deductions will depend on the marginal tax rate of the owners of the rental buildings. Table B-29 presents the range of options.

TABLE B-29: ESTIMATED VALUE OF TAX LOSSES RESULTING FROM SOFT COST DEDUCTIONS AT SELECTED MARGINAL TAX RATES CANADA, 1979-1981 ($ MILLION)

| | MURBs | | | Total Private Rental | | |
|---|---|---|---|---|---|---|
| | 1979 | 1980 | 1981 | 1979 | 1980 | 1981 |
| Estimated Soft Cost Claims | 151 | 216 | 185 | 181 | 306 | 322 |
| Tax Losses at Marginal Tax Rates | | | | | | |
| 30% | 45 | 65 | 56 | 54 | 92 | 97 |
| 36% | 54 | 78 | 67 | 65 | 110 | 116 |
| 40% | 60 | 86 | 74 | 72 | 122 | 129 |
| 50% | 76 | 108 | 93 | 91 | 153 | 161 |
| 60% | 91 | 130 | 111 | 109 | 184 | 193 |

Source: Estimates by Clayton Research Associates.

If the same average federal marginal tax rate as applied to MURBs in 1978 (36 percent) is assumed to relate to soft costs, then federal losses due to soft cost deductions on MURBs in 1981 are estimated at about $67 million. This is the same as the estimated 1981 tax expenditures resulting from MURBs (Table B-10). Together, these two deductions likely pull down the average federal marginal tax rate considerably - without either, the appropriate marginal rate for individual taxpayers would likely be about 40 percent; the federal corporate tax rate which would apply to most non-MURBs is 36 percent.

## DISCOUNTED SOFT COST TAX LOSSES ON 1981 PRIVATE RENTAL STARTS

### Yearly Distribution of Soft Costs for 1981 Rental Starts

The total estimated soft cost claims associated with the estimated 1981 level of private rental starts were $250 million for MURB starts and $154 million for other private rental starts.* Table B-30 presents the estimated distribution by year of these total soft cost claims.

TABLE B-30: ESTIMATED DISTRIBUTION OF SOFT COST CLAIMS ON 1981 PRIVATE RENTAL STARTS BY YEAR
CANADA, 1981-1986 ($ MILLION)

| | 1981 | 1982 | 1983 | 1984 | 1985 | 1986 | Total |
|---|---|---|---|---|---|---|---|
| Current Dollars | | | | | | | |
| MURBs | 108 | 108 | 9 | 9 | 8 | 8 | 250 |
| Other Private Rental | 74 | 74 | 6 | - | - | - | 154 |
| Total | 182 | 182 | 15 | 9 | 8 | 8 | 404 |
| Discounted Value | | | | | | | |
| 10 Percent Discount Rate | | | | | | | |
| MURBs | 108 | 98 | 8 | 7 | 6 | 5 | 232 |
| Other Private Rental | 74 | 67 | 6 | - | - | - | 147 |
| Total | 182 | 165 | 14 | 7 | 6 | 5 | 379 |
| 15 Percent Discount Rate | | | | | | | |
| MURBs | 108 | 94 | 7 | 6 | 5 | 4 | 224 |
| Other Private Rental | 74 | 64 | 4 | - | - | - | 142 |
| Total | 182 | 158 | 11 | 6 | 5 | 4 | 366 |
| 20 Percent Discount Rate | | | | | | | |
| MURBs | 108 | 90 | 6 | 5 | 4 | 3 | 216 |
| Other Private Rental | 74 | 62 | 4 | - | - | - | 140 |
| Total | 182 | 152 | 10 | 5 | 4 | 3 | 356 |

Source: Estimates by Clayton Research Associates.

* See Table B-28.

The discounted value of the estimate of soft cost claims on 1981 private rental starts varies from $356 million to $379 million depending on the discount rate. The portion of these soft cost claims attributable to MURBs is $216-$232 million - higher than the discounted value of projected CCA losses on MURBs projected to be started in 1981.*

## Tax Loss Estimate

The tax losses associated with the stream of discounted soft cost losses presented in Table B-30 depends, of course, on the average marginal tax rates of the rental property owners. Table B-31 presents the range of options for both MURBs and non-MURBs.

TABLE B-31: ESTIMATED DISCOUNTED VALUE OF TAX LOSSES RESULTING FROM SOFT COST DEDUCTIONS AT SELECTED MARGINAL TAX RATES CANADA, 1981-1986 ($ MILLION)

| | Discounted Rate | | |
|---|---|---|---|
| | 10% | 15% | 20% |
| MURBs | | | |
| Estimated Discounted Soft Cost Losses | 232 | 224 | 216 |
| Tax Expenditures at Marginal Tax Rates | | | |
| 30% | 70 | 67 | 65 |
| 36% | 84 | 81 | 78 |
| 40% | 93 | 90 | 86 |
| 50% | 116 | 112 | 108 |
| 60% | 139 | 134 | 130 |
| Other Private Rental | | | |
| Estimated Discounted Soft Cost Losses | 147 | 142 | 140 |
| Tax Expenditures at Marginal Tax Rates | | | |
| 30% | 44 | 43 | 42 |
| 36% | 53 | 51 | 50 |
| 40% | 59 | 57 | 56 |
| 50% | 74 | 71 | 70 |
| 60% | 88 | 85 | 84 |

Source: Estimates by Clayton Research Associates.

* Discounted (1981) values of the stream of CCA losses on 1981 MURB starts was projected at $136-$220 million depending on the discount rate used.

# IV. DEDUCTIBILITY OF CARRYING CHARGES ON LAND

## A. THE VOLUME OF LAND INVENTORIES AND CARRYING CHARGES

### LAND INVENTORIES

There is no readily available information on the size of land inventories held by individuals or companies involved in land development. It appears that the only data which is available in this regard is the information on inventories for real estate operators and developers. This data is not ideal for this analysis, since (a) it includes work in progress as well as raw land; (b) it covers only a portion of the total land being held for future development; and (c) it includes industrial and commercial as well as residential land.

The proportion of real estate operators' and developers' inventories which are comprised by land has been estimated at 22 percent based on unpublished Statistics Canada data on the composition of inventories in 1980. Table B-32 presents the Statistics Canada estimates of total inventories for 1976-1978 with the 22 percent adjustment to derive the land component of these inventories.

TABLE B-32: ESTIMATE OF LAND INVENTORIES HELD BY REAL ESTATE OPERATORS AND DEVELOPERS CANADA, 1976-1981

| | Total Inventories ($ Million) | Estimated Percent Land Inventory | Estimated Total Land Inventories ($ Million) |
|---|---|---|---|
| 1976 | 6,225 | 22 | 1,370 |
| 1977 | 7,353 | 22 | 1,618 |
| 1978 | 8,380 | 22 | 1,844 |
| 1979 | n/a | n/a | 2,121 |
| 1980 | n/a | n/a | 2,439 |
| 1981 | n/a | n/a | 2,804 |

Source: Statistics Canada and estimates by Clayton Research Associates.

The estimated annual increase in the value of land inventories in the 1976-1978 period (based on the above methodology) was 15 percent. The estimates for 1979 and 1980 assume a continuation of this annual growth of 15 percent.

As was noted above, the estimates presented in Table B-32 include industrial and commercial land as well as residential land held by firms classed as real estate operators by Statistics Canada. Given that there is no information available on the magnitude of either of these, it has been explicitly assumed for the purposes of the tax expenditure estimates to be presented in this report that these will cancel each other out and therefore that the estimates presented in Table B-32 represent the stock of residential land held for future development by persons and companies.*

## LAND CARRYING CHARGES

As with total land inventories, little information is available on the carrying charges related to land inventories. The Department of Finance estimates assume that 5 percent of the stock value is comprised of carrying charges - this was based on a review of information contained in the annual reports of two large public real estate development firms.

Based on a similar review of the annual reports of Costain, Carma and Daon, the figure for 1979 appeared to be about 8 percent with most (about 80 percent) consisting of interest charges. It seems certain that these carrying costs would have risen significantly in 1980 and 1981. Table B-33 presents the estimated land carrying charges for the 1976-1981 period based on an increase in charges due to interest rate increases.

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* It should be noted that the estimated stock of raw land used in the Department of Finance tax expenditure estimate for 1978 was $3.6 billion. This is double the estimate presented here because the Department of Finance used a much higher estimated ratio of land to inventory. It is considered that the estimates in Table B-32 are likely also an overestimate to the extent that they include some proportion of land under development as well as land held for future development.

TABLE B-33: ESTIMATE OF RESIDENTIAL LAND CARRYING CHARGES CANADA, 1976-1981

| | Estimated Residential Land Inventories ($ Million) | Estimated Percent of Carrying Charges | Estimated Carrying Charges ($ Million) |
|---|---|---|---|
| 1976 | 1,370 | 7 | 96 |
| 1977 | 1,618 | 7 | 113 |
| 1978 | 1,844 | 7 | 129 |
| 1979 | 2,121 | 8 | 170 |
| 1980 | 2,439 | 10 | 244 |
| 1981 | 2,804 | 10 | 280 |

Source: Estimates by Clayton Research Associates; see Table B-32.

Judging from these estimates, there has been a dramatic increase in land carrying charges over the past three years. This is partially due to the increased stock of land, but most of the increase is derived from the interest rate increases.

## B. THE COST OF THE DEDUCTIBILITY OF CARRYING CHARGES ON LAND

### THE TAX LOSS ESTIMATE

Based on the estimates presented in Table B-33, it is a relatively simple matter to derive the federal tax losses due to the deductibility of land carrying charges - the federal corporate tax rate is 36 percent.*

* No allowance is made for smaller firms which are taxed at a 25 percent rate.

TABLE B-34: ESTIMATED TAX LOSSES DUE TO DEDUCTIONS OF CARRYING CHARGES ON RESIDENTIAL LAND CANADA, 1976-1981

| | Estimated Carrying Charges ($ Million) | Federal Corporate Tax Rate | Estimated Possible Tax Losses* ($ Million) |
|---|---|---|---|
| 1976 | 96 | .36 | 35 |
| 1977 | 113 | .36 | 41 |
| 1978 | 129 | .36 | 46 |
| 1979 | 170 | .36 | 61 |
| 1980 | 244 | .36 | 88 |
| 1981 | 280 | .36 | 101 |

* The figures for 1976-1978 are entirely hypothetical since land carrying charges were not deductible in those years.

Source: Estimates by Clayton Research Associates.

Some further difficulties associated with these estimates are (a) many of the companies incurring these carrying charges will be paying no tax anyway; and (b) some account should be taken of the fact that the charges would have normally been deductible when the land is finally developed in any case.

The fact that many companies would not be paying taxes anyway was accounted for by the Department of Finance by dividing the tax loss in half; this is how the estimates are presented in the main body of this report as well.

As for the other difficulty, no attempt has been made in this analysis to discount the value of the tax benefit in the year of development to derive a real estimate of tax loss.

## V. REDUCTION IN SALES TAX ON BUILDING MATERIALS

### A. THE VOLUME OF MATERIALS USED IN CONSTRUCTION

#### BUILDING MATERIALS SUBJECT TO TAX

The estimates prepared by the Department of Finance regarding the value of tax expenditures resulting from the reduction of sales tax on building materials are considered to be the best available. The estimates are based on revenues from the class of manufactured goods which are subject to a 5 percent rather than a 9 percent sales tax. Since this reduced tax applies to building materials only, it is difficult to envisage a more reliable estimation technique.

Based on the tax expenditure estimates provided by the Department of Finance, it is possible to work back to determine the value of the materials involved.

TABLE B-35: ESTIMATES OF TAX EXPENDITURES AND VALUE OF BUILDING MATERIALS SUBJECT TO 5 PERCENT RATE CANADA, 1976-1980

| | 1976 | 1977 | 1978 | 1979 | 1980 |
|---|---|---|---|---|---|
| Sales Tax Rates (Percent) | | | | | |
| General Rate | 12 | 12 | 12 | 9 | 9 |
| Building Materials Rate | 5 | 5 | 5 | 5 | 5 |
| Reduction | 7 | 7 | 7 | 4 | 4 |
| $ Millions | | | | | |
| Tax Expenditures | 460 | 525 | 595 | 390 | 445* |
| Building Materials | 6,571 | 7,500 | 8,500 | 9,750 | 11,125* |

* Preliminary estimate prepared in late 1980.

Source: Department of Finance, Government of Canada Tax Expenditure Account, December, 1980 and estimates by Clayton Research Associates.

The estimated value of building materials to which the reduction applied was calculated by dividing the tax expenditure estimate (obtained from the Department of Finance) by the amount of the reduction in sales tax for building materials. The 1980 figures are likely overstated since they were based on preliminary estimates of construction activity during the year.

## TOTAL BUILDING MATERIALS USED IN CONSTRUCTION

Not all building materials are subject to the reduced sales tax. Some materials, such as ready-mix concrete, precast concrete structures and steel structures (covered in Part VI of this Appendix), have a significant component which is not taxed at all though some of the inputs into these materials (e.g. cement, etc.) will be subject to the sales tax. Other materials, such as gravel and sand, are not subject to tax by virtue of the fact that they cannot be considered to be manufactured. Also, for the goods which are subject to the sales tax, the 5 percent is based on the manufacturer's price, not the final retail price.

Statistics Canada estimates the total value of materials used in construction. These estimates cover the retail value of all materials used, whether they are subject to tax or not. On the basis of these estimates, it would appear that since 1976 the proportion of total value of construction materials used subject to the 5 percent sales tax rose from only 54 percent in 1976 to an estimate of over 66 percent in 1980.

TABLE B-36: ESTIMATES OF BUILDING MATERIALS SUBJECT TO 5 PERCENT SALES TAX AND TOTAL MATERIALS USED IN CONSTRUCTION CANADA, 1976-1980

| | 1976 | 1977 | 1978 | 1979 | 1980* |
|---|---|---|---|---|---|
| Building Materials Subject To 5 Percent Tax ($ Million) | 6,571 | 7,500 | 8,500 | 9,750 | 11,125 |
| Total Building Materials Used in Construction ($ Million) | 12,091 | 13,259 | 13,807 | 15,321 | 16,741 |
| Materials Subject to 5 Percent Tax as Percent of Total | 54.3 | 56.5 | 61.6 | 63.6 | 66.4 |

* Preliminary estimate.

Source: Estimates by Clayton Research Associates (Table B-35) and Statistics Canada.

There appears to be no logical explanation for the significant increase over the past 5 years in the proportion of the value of building materials which were subject to the sales tax. Though the figures for 1980 must be regarded with suspicion, there is still a marked rise in the 1976-1979 period. There were some minor revisions to the list of materials subject to tax during the period such as the reintroduction of the tax on storm windows and doors in 1978, but these are unlikely to be responsible for the increase by themselves.

Another possible explanation is that the incidence of the tax falls more heavily on materials used in the engineering types of construction than on residential construction. Over the 1976-1980 period, there was a significant reduction in the proportion of the total construction work which was performed on residential buildings and a corresponding increase in the proportion of work performed on engineering projects such as dams, roads, waterworks, etc.

TABLE B-37: PERCENT OF TOTAL CONSTRUCTION WORK PERFORMED BY TYPE OF CONSTRUCTION CANADA, 1976-1980, PERCENT

| | 1976 | 1977 | 1978 | 1979 | 1980* |
|---|---|---|---|---|---|
| Residential | 38.2 | 36.7 | 36.1 | 33.4 | 31.3 |
| Non-Residential Building | 23.6 | 22.8 | 22.1 | 24.3 | 24.5 |
| Engineering | 38.2 | 40.5 | 41.8 | 42.3 | 44.2 |
| Total | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

* Preliminary estimate.

Source: Statistics Canada.

Statistics on the detailed types of materials used by the various types of construction are not available and it is beyond the scope of this report to attempt to formulate them. For the purposes of this analysis, it is assumed that the ratio of sales tax building materials to total building materials is the same for residential and non-residential construction (non-residential includes buildings and engineering).

## BUILDING MATERIALS USED IN RESIDENTIAL AND NON-RESIDENTIAL CONSTRUCTION

### The 1976-1980 Period

An analysis of the materials component of the total value of work performed by residential general building contractors and special trade contractors which specialize in housing indicates that materials comprise roughly 39 percent of the total value of residential construction work performed. Applying this 39 percent figure to estimates of residential construction expenditures in Canada in the 1976-1980 period prepared by Statistics Canada yields estimates of the materials required for residential construction work. Subtracting this figure from Statistics Canada estimates of total materials used in construction yields an estimate of the materials used in non-residential construction for 1976-1979.

TABLE B-38: ESTIMATED TOTAL MATERIALS COMPONENT OF RESIDENTIAL AND NON-RESIDENTIAL CONSTRUCTION CANADA, 1976-1980

| | 1976 | 1977 | 1978 | 1979 | 1980 |
|---|---|---|---|---|---|
| Residential Construction | | | | | |
| Total Expenditure ($ Million) | 12,669 | 13,126 | 13,836 | 14,271 | 13,775 |
| Estimated Materials (Percent) | 39.0 | 39.0 | 39.0 | 39.0 | 39.0* |
| Estimated Materials ($ Million) | 4,941 | 5,119 | 5,396 | 5,565 | 5,372* |
| Total Building Materials Used in Construction ($ Million) | 12,091 | 13,259 | 13,807 | 15,321 | 16,300* |
| Non-Residential Construction | | | | | |
| Total Expenditure ($ Million) | 20,462 | 22,677 | 24,354 | 28,100 | 31,225* |
| Residual Materials left from Total ($ Million) | 7,150 | 8,140 | 8,411 | 9,756 | 10,928* |
| Residual Materials (Percent) | 34.9 | 35.9 | 34.5 | 34.7 | 35.0* |

* All 1980 figures except total residential construction expenditures are Clayton Research Associates estimates. The residential construction expenditure estimate is the latest one available from Statistics Canada.

Source: Statistics Canada and estimates by Clayton Research Associates.

Table B-38 presents an estimate of the breakdown of the total building materials used in construction (the total figure is from Statistics Canada except for 1980) between residential and non-residential construction in Canada in the 1976-1980 period. The estimate of materials used in non-residential construction is a residual following the subtraction of the residential construction estimate from the Statistics Canada total figure; however, the ratio of this residual estimate of materials to total expenditures for non-residential construction appears to be very stable. All of the materials figures for 1980 were estimated by Clayton Research since the latest Statistics Canada total materials estimate for 1980 was out of date; the residential materials were estimated at 39 percent of residential construction expenditures while materials used in non-residential construction in 1980 were estimated at 35 percent of non-residential construction expenditures (the average for 1976-1979).

## Estimates for 1981

Since this report is intended primarily as an analysis of tax expenditures relating to housing, only residential construction materials requirements have been projected to 1981.

Materials requirements for new residential construction work would be most closely related to the number of dwellings under construction rather than starts or completions. In this regard, 1981 is expected to be very similar to 1980 - the average number of dwellings under construction during the year is projected to be almost the same in both years.* Assuming that materials requirements for repairs and alterations remain at approximately the same level also, the only component which remains to be estimated to obtain the total value of residential construction materials required in 1981 is the average price increase - this is expected to recover from the very low 4 percent average increase in 1980 to approximately 10 percent in 1981. This is still below the overall rate of inflation due to an assumed lower rate of price increase in wood products in 1981.

Based on these assumptions, the total value of materials required for residential construction in 1981 is estimated to be $5,909 million.

($5,372 million X 1.10 = $5,909 million).

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* An analysis of Clayton Research projections of starts and completions in 1981 indicates that the average number of units under construction during the year should be about 112,000 units - this compares with 111,000 in 1980 (average of 5 quarters' under construction figures).

## B. COSTS OF REDUCTION IN SALES TAX ON BUILDING MATERIALS

### THE TAX EXPENDITURE ESTIMATES

A breakdown by type of construction of the tax expenditure estimates prepared by the Department of Finance requires some assumptions regarding the proportion of total materials used in each type of construction which are subject to sales tax. It was concluded above that the type of analysis required to substantiate such an assumption was beyond the scope of this report. Therefore, it is assumed that the relative proportions of materials subject to the tax for both residential and non-residential construction are the same - i.e. it is assumed that the Department of Finance estimates of tax expenditures are distributed between residential and non-residential construction in the same proportions as materials themselves are.

TABLE B-39: ESTIMATED TAX EXPENDITURES RESULTING FROM THE REDUCTION IN SALES TAX ON BUILDING MATERIALS TO 5 PERCENT BY TYPE OF CONSTRUCTION CANADA, 1976-1980

| | 1976 | 1977 | 1978 | 1979 | 1980 | 1981 |
|---|---|---|---|---|---|---|
| Estimated Total Materials Used ($ Million) | | | | | | |
| Residential | 4,941 | 5,119 | 5,396 | 5,565 | 5,372 | 5,909 |
| Non-Residential | 7,150 | 8,140 | 8,411 | 9,756 | 10,928 | n/a |
| Total | 12,091 | 13,259 | 13,807 | 15,321 | 16,300 | n/a |
| Estimated Percent of Total Materials Used | | | | | | |
| Residential | 40.9 | 38.6 | 39.1 | 36.3 | 33.0 | n/a |
| Non-Residential | 59.1 | 61.4 | 60.9 | 63.7 | 67.0 | n/a |
| Total | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | n/a |
| Estimated Tax Expenditures from Reduced Sales Tax ($ Million) | | | | | | |
| Residential | 188 | 203 | 233 | 142 | 147 | 162 |
| Non-Residential | 272 | 322 | 362 | 248 | 298 | n/a |
| Total | 460 | 525 | 595 | 390 | 445 | n/a |

Source: Department of Finance, Government of Canada Tax Expenditure Account, December, 1980; and estimates by Clayton Research Associates; see Tables B-35 and B-38.

The total estimated tax expenditures presented in Table B-39 are, of course, from the Tax Expenditure Account prepared by the Department of Finance and these figures must be regarded as reliable - though the 1980 figure is open to some doubt since it is an estimate, albeit one prepared late in the year.

The residential tax expenditure estimate for 1981 assumes the same ratio of tax expenditures to material used as occurred in the 1980 residential estimate.

Clearly, the majority of the tax expenditures resulting from the reduction in sales tax to 5 percent accrue to non-residential construction. The estimates presented in Table B-39 indicate that between 60 percent and 67 percent of these tax expenditures accrue to non-residential construction, but this is based on the assumption that the same proportions of materials used in residential and non-residential construction are subject to the 5 percent tax. There was some evidence presented earlier, albeit incomplete and inconclusive, that indicated that the proportion of the value of materials subject to the tax has risen in the past five years - at the same time that the proportion of non-residential construction has risen. This might indicate a higher incidence of non-residential construction building materials subject to the 5 percent tax than is the case with residential construction - if this is true, the tax expenditure estimates presented in Table B-39 overstate the tax expenditures accruing to residential construction and understate those accruing to non-residential construction.

# VI. EXEMPTION OF CONSTRUCTION EQUIPMENT FROM SALES TAX

## A. THE VOLUME OF CONSTRUCTION EQUIPMENT SALES

### THE DEPARTMENT OF FINANCE ESTIMATES

In estimating the size of the tax expenditures involved in the exemption of construction equipment from sales tax, the Department of Finance investigated the sales of all relevant machinery and equipment to the construction industry. Table B-40 presents the estimated tax expenditures and the estimated volume of construction machinery and equipment (at manufacturers' prices) to which the tax expenditures relate.

TABLE B-40: DEPARTMENT OF FINANCE ESTIMATES OF TAX EXPENDITURES RELATING TO THE EXEMPTION OF CONSTRUCTION EQUIPMENT FROM SALES TAX, SALES TAX RATES AND ESTIMATED VALUE OF CONSTRUCTION EQUIPMENT SALES (MANUFACTURERS' PRICES) CANADA, 1976-1980

| | 1976 | 1977 | 1978 | 1979 | 1980 |
|---|---|---|---|---|---|
| Sales Tax Rate (Percent) | 12 | 12 | 12 | 9 | 9 |
| $ Million | | | | | |
| Tax Expenditure Estimate | 85 | 90 | 100 | 85 | 95 |
| Construction Equipment Estimate | 708 | 750 | 833 | 944 | 1,056 |

Source: Department of Finance, Government of Canada Tax Expenditure Account, December, 1980 and estimates by Clayton Research Associates.

The estimate accords well with Statistics Canada's latest estimated total sales of construction machinery and equipment to the construction industry. The latest survey was in 1977 when an estimated 51.9 percent of the total sales of new construction machinery and equipment in Canada were made to the construction industry alone. This amounts to $850 million in retail sales value which, when markups and transportation etc. are considered, is very close to the $750 million estimate for the value of construction equipment at the manufacturing level in 1977 from Table B-40.

The estimates entail a progressive increase in the rate of sale of new construction equipment to the industry over the 1976-1980 period with increases in the same proportions as for the construction industry as a whole. Table B-41 presents the estimates for construction equipment sales along with the estimates of total construction activity presented in Part V of this Appendix.

TABLE B-41: RESIDENTIAL AND NON-RESIDENTIAL CONSTRUCTION EXPENDITURE AND ESTIMATED SALES OF CONSTRUCTION EQUIPMENT CANADA, 1976-1980

| | 1976 | 1977 | 1978 | 1979 | 1980 |
|---|---|---|---|---|---|
| Construction Expenditure ($ Million) | | | | | |
| Residential | 12,669 | 13,126 | 13,836 | 14,271 | 13,775 |
| Non-Residential | 20,462 | 22,677 | 24,354 | 28,100 | 31,225 |
| Total | 33,131 | 35,803 | 38,190 | 42,371 | 45,000 |
| Construction Equipment Estimate ($ Million) | 708 | 750 | 833 | 944 | 1,056 |
| As a Percent of Total | 2.1 | 2.1 | 2.2 | 2.2 | 2.3 |
| As a Percent of Non-Residential Only | 3.5 | 3.3 | 3.4 | 3.4 | 3.4 |

Source: Statistics Canada and estimates by Clayton Research Associates; see Tables B-38 and B-40.

The estimated proportion of construction equipment sales to total construction is remarkably stable over the period. The slight rise over 1978-1980 is likely due to the increasing relative importance of non-residential construction which tends to use more heavy equipment.

## ESTIMATES OF EQUIPMENT USED IN RESIDENTIAL CONSTRUCTION

There is no comprehensive information available on the use of sales tax exempt construction equipment by the residential construction industry. The most fruitful approach to this question appears to be an examination of the proportion of total expenditures of contractors specializing in the residential construction industry which is spent on machinery and equipment.

An analysis of the expenditures of contractors specializing in residential construction in 1978 indicates that approximately 1.7 percent of the value of work done in residential construction ends up in new machinery and equipment purchases.* Similar analyses for non-residential contractors yielded estimates of machinery and equipment purchases as high as 5.5 percent of output for highway and road contractors.

Table B-42 presents estimates of the total machinery and equipment purchases of the residential construction industry based on the application of the 1.7 percent figure (representing the proportion of output which results in purchases of construction machinery and equipment) to the estimates of total residential construction expenditure in the 1976-1981 period.

TABLE B-42: TOTAL RESIDENTIAL CONSTRUCTION EXPENDITURES AND ESTIMATED EXPENDITURES ON MACHINERY AND EQUIPMENT PURCHASED BY THE RESIDENTIAL CONSTRUCTION INDUSTRY CANADA, 1976-1981

| | 1976 | 1977 | 1978 | 1979 | 1980 | 1981 |
|---|---|---|---|---|---|---|
| Total Residential Construction Expenditures ($ Million) | 12,669 | 13,126 | 13,836 | 14,271 | 13,775 | n/a |
| Assumed Percent Spent on New Machinery and Equipment | 1.7 | 1.7 | 1.7 | 1.7 | 1.7 | n/a |
| Estimated Expenditures on New Machinery and Equipment by Residential Construction Industry ($ Million) | 215 | 223 | 235 | 243 | 234 | 257 |

Source: Statistics Canada and estimates by Clayton Research Associates; see Table B-41.

* The 1.7 percent figure was derived following a detailed analysis of Statistics Canada data on the expenditures of residential general building contractors with 86-100 percent of their business in residential construction and the expenditures of special trade contractors brought in by these residential construction specialists.

By this technique, estimated expenditures on new machinery and equipment by the residential construction industry range from $215 million in 1976 to a peak of $243 million in 1979; expenditures in 1981 are projected to total $257 million - an assumed 10 percent increase over 1980.

There are several difficulties with the above technique in terms of using the results to estimate tax expenditures:

- The values of new machinery and equipment are in retail prices, not the manufacturers' prices on which federal sales tax would be based;
- The estimates would include cars and trucks which are not exempt from sales tax; and
- The estimates do not include a provision for rented machinery and equipment used by the residential construction industry.

These three factors will cancel each other out to some extent, however, the amount of over- or under-estimation resulting from their combined effects on the estimates in Table B-42 is indeterminate. It has been assumed for the purposes of the estimates presented here that together they will have a neutral effect and that the figures in Table B-42 therefore represent the manufacturers sale price of construction equipment used by the construction industry.

## B. THE COST OF EXEMPTION OF RESIDENTIAL CONSTRUCTION EQUIPMENT FROM FEDERAL SALES TAX

### THE TAX EXPENDITURE ESTIMATES

Table B-42 presented estimates of the volume of construction machinery and equipment purchases by the residential construction industry in the 1976-1981 period. Table B-43 takes the analysis the final step with the calculation of the estimate of tax expenditures.

TABLE B-43: ESTIMATED TAX EXPENDITURES ACCRUING TO THE RESIDENTIAL CONSTRUCTION INDUSTRY FROM THE EXEMPTION OF CONSTRUCTION EQUIPMENT FROM FEDERAL SALES TAX CANADA, 1976-1981

| | 1976 | 1977 | 1978 | 1979 | 1980 | 1981 |
|---|---|---|---|---|---|---|
| Estimated Machinery and Equipment Expenditures by Residential Construction ($ Million) | 215 | 223 | 235 | 243 | 234 | 257 |
| Sales Tax Rate (Percent) | 12 | 12 | 12 | 9 | 9 | 9 |
| Estimated Tax Expenditure ($ Million) | 26 | 27 | 28 | 22 | 21 | 23 |

Source: Estimates by Clayton Research Associates.

This level of tax expenditures accounts for about 30 percent of the total estimated federal tax expenditures on new construction equipment for the construction industry in 1976 and 1977 (see Table B-40). After that, the residential proportion of the estimated total for the construction industry as a whole declines.

# VII. EXEMPTION FROM SALES TAX OF GOODS IN COMPETITION WITH ON-SITE CONSTRUCTION

## A. THE VOLUME OF GOODS IN COMPETITION WITH ON-SITE CONSTRUCTION

### THE DEPARTMENT OF FINANCE ESTIMATES

The estimates prepared by the Department of Finance regarding the value of tax expenditures resulting from the exemption from sales tax of goods in competition with on-site construction were the result of an exhaustive examination of the volumes of goods themselves and the materials that went into their manufacture. No attempt has been made in this report to improve on these estimates.

The value of the materials involved in the Department of Finance estimates can be derived by working back from the tax expenditure estimates and the sales tax rates.

TABLE B-44: ESTIMATES OF TAX EXPENDITURES AND VALUE OF GOODS IN COMPETITION WITH ON-SITE CONSTRUCTION CANADA, 1976-1980

| | 1976 | 1977 | 1978 | 1979 | 1980 |
|---|---|---|---|---|---|
| Sales Tax Rate (Percent) | 12 | 12 | 12 | 9 | 9 |
| $ Millions | | | | | |
| Tax Expenditures | 115 | 120 | 125 | 100 | 105 |
| Building Materials | 958 | 1,000 | 1,042 | 1,111 | 1,167 |

Source: Department of Finance, Government of Canada Tax Expenditure Account, December, 1980 and estimates by Clayton Research Associates.

The estimated value of building materials to which the exemption applied was calculated by dividing the tax expenditure estimate (from the Department of Finance) by the amount of the sales tax. Since the tax expenditure estimates were based on materials production estimates for 1977-1978, the 1979 and 1980 figures would be projections.

## "GOODS IN COMPETITION" AND TOTAL BUILDING MATERIALS USED IN CONSTRUCTION

Comparing the estimates of goods exempt from sales tax because they were judged to be in competition with on-site construction, with the estimates of total building materials used in residential and total construction gives an idea of the importance of the "goods in competition".

TABLE B-45: ESTIMATES OF VALUE OF GOODS IN COMPETITION WITH ON-SITE CONSTRUCTION AND TOTAL MATERIALS USED IN CONSTRUCTION AND RESIDENTIAL CONSTRUCTION CANADA, 1976-1980

| | 1976 | 1977 | 1978 | 1979 | 1980 |
|---|---|---|---|---|---|
| Value of Exempt "Goods in Competition" ($ Million) | 958 | 1,000 | 1,042 | 1,111 | 1,167 |
| Total Building Materials Used in Construction ($ Million) | 12,091 | 13,259 | 13,807 | 15,321 | 16,300 |
| "Goods in Competition" as a Percent of Total | 7.9 | 7.5 | 7.5 | 7.3 | 7.2 |
| Building Materials Used in Residential Construction ($ Million) | 4,941 | 5,119 | 5,396 | 5,565 | 5,372 |
| "Goods in Competition" as a Percent of Residential | 19.4 | 19.5 | 19.3 | 20.0 | 21.7 |

Source: Estimates by Clayton Research Associates; see Tables B-38 and B-44.

Little information is available on the final use of the "goods in competition" - it is open to question whether they are more extensively used in residential or non-residential construction. As a proportion of total materials used in construction, the "goods in competition" estimates appear to indicate a decline in importance of these goods over the 1976-1980 period. As a proportion of materials used in residential construction only, the "goods in competition" estimates indicate an increase - of course, a large proportion of the "goods in competition" will be for use in non-residential construction, so this increase would be expected given the decline in residential construction. Overall, the estimates of "goods in competition" based on the Department of Finance estimates of tax expenditures appear reasonable.

## "GOODS IN COMPETITION" USED IN RESIDENTIAL CONSTRUCTION

There is insufficient information available on the final use of "goods in competition" to make a judgment about the relative proportions used in residential and non-residential construction. In the absence of such information, it was assumed that the "goods in competition" proportions of total materials used in each type of construction are the same. Under this assumption, the proportions of total materials used in residential and non-residential construction presented in Table B-39 in Part V of this Appendix are applicable to the total estimates of "goods in competition" as well.

TABLE B-46: ESTIMATES OF "GOODS IN COMPETITION" WITH ON-SITE CONSTRUCTION BY TYPE OF CONSTRUCTION CANADA, 1976-1981

| | 1976 | 1977 | 1978 | 1979 | 1980 | 1981 |
|---|---|---|---|---|---|---|
| Estimated Percent of Total Materials Used ($ Million) | | | | | | |
| Residential | 40.9 | 38.6 | 39.1 | 36.3 | 33.0 | n/a |
| Non-Residential | 59.1 | 61.4 | 60.9 | 63.7 | 67.0 | n/a |
| Total | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | n/a |
| Estimated "Goods in Competition" Used ($ Million | | | | | | |
| Residential | 392 | 386 | 407 | 403 | 385 | 424 |
| Non-Residential | 566 | 614 | 635 | 708 | 782 | n/a |
| Total | 958 | 1,000 | 1,042 | 1,111 | 1,167 | n/a |

Source: Estimates by Clayton Research Associates; see Tables B-39 and B-44.

Once the critical assumption is made regarding the proportions of "goods in competition" relative to total materials being the same for both residential and non-residential construction, the split of the total "goods in competition" estimate is a straightforward extrapolation of the proportions of total materials used in each type of construction. The 1981 estimate is based on the expected 10 percent increase in the value of total materials used in residential construction between 1980 and 1981.*

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* See the final section of Part V-A of this Appendix for the discussion of the total materials used in residential construction.

## B. COSTS OF EXEMPTION OF "GOODS IN COMPETITION" WITH ON-SITE CONSTRUCTION FROM SALES TAX

### THE TAX EXPENDITURE ESTIMATES

Under the assumptions specified above, the estimate of the tax expenditures accruing to residential and non-residential construction are easily calculated. They are simply the sales taxes that would have applied to the materials estimates presented in Table B-46.

TABLE B-47: ESTIMATED TAX EXPENDITURES RESULTING FROM THE EXEMPTION OF GOODS IN COMPETITION WITH ON-SITE CONSTRUCTION FROM SALES TAX BY TYPE OF CONSTRUCTION CANADA, 1976-1981

| | 1976 | 1977 | 1978 | 1979 | 1980 | 1981 |
|---|---|---|---|---|---|---|
| Sales Tax Rate (Percent) | 12 | 12 | 12 | 9 | 9 | 9 |
| Estimated "Goods in Competition" Used ($ Million) | | | | | | |
| Residential | 392 | 386 | 407 | 403 | 385 | 424 |
| Non-Residential | 566 | 614 | 635 | 708 | 782 | n/a |
| Total | 958 | 1,000 | 1,042 | 1,111 | 1,167 | n/a |
| Estimated Tax Expenditures from Exemption of "Goods in Competition" ($ Million) | | | | | | |
| Residential | 47 | 46 | 49 | 36 | 35 | 38 |
| Non-Residential | 68 | 74 | 76 | 64 | 70 | n/a |
| Total | 115 | 120 | 125 | 100 | 105 | n/a |

Source: Department of Finance, Government of Canada Tax Expenditure Account, December, 1980; and estimates by Clayton Research Associates; see Tables B-44 and B-46.

The total estimated tax expenditures presented in Table B-47 are, of course, from the Tax Expenditure Account prepared by the Department of Finance - these figures are estimates as well. The yearly figures for the residential component should be taken as indicative only: the estimated annual tax expenditures for residential construction in 1976-1978 would best be interpreted as "in the $45-$50 million range"; for 1979-1981 "the $35-$40 million range".

If the assumption regarding equal proportions of "goods in competition" in each type of construction is relaxed, the tax expenditure estimates will change. If the proportion for residential construction is higher than for non-residential construction, then the tax expenditure estimate will increase accordingly. The information available on this matter was insufficient to make a judgment on relative proportions.

# APPENDIX C - MURB PROJECT CHARACTERISTICS

# APPENDIX C - MURB PROJECT CHARACTERISTICS

## TABLE OF CONTENTS


| | Page |
|---|---|
| MOST PROJECTS WERE IN ONTARIO | C-1 |
| AVERAGE COST PER UNIT OF $43,000 | C-2 |
| HIGH EQUITY REQUIRED FOR MURB PROJECTS | C-2 |
| SOFT COSTS COMPRISE 23 PERCENT OF TOTAL PROJECT COSTS ON AVERAGE | C-3 |
| MOST SOFT COSTS CLAIMED IN FIRST TWO YEARS OF CONSTRUCTION | C-5 |
| INTEREST CHARGES DURING CONSTRUCTION AND FEES FOR INITIAL LEASING SERVICES ARE THE MOST IMPORTANT SOFT COSTS | C-6 |
| MOST PROJECTS START TO SHOW A POSITIVE CASH FLOW AFTER 7 YEARS | C-7 |

Very little is known about the characteristics of MURB projects in terms of typical cost breakdowns, or equity and financing details. In an attempt to establish some of these details for typical syndicated MURB projects and also to assist in the estimation of the volume of MURBs (in Appendix B), a survey was undertaken of the syndicated MURB project prospectuses on file at the Ontario Securities Commission. Only selected details on costs, financing, project size and location were gathered, and only prospectuses issued from late 1977 to the present were examined. This Appendix summarizes briefly the results of the survey.

## MOST PROJECTS WERE IN ONTARIO

As would be expected from a survey based on information stored at the Ontario Securities Commission, most of the projects were located in the Province of Ontario. Time and budget did not allow a more extensive review which might include other provincial securities commissions.

TABLE C-1: AVERAGE UNIT COSTS AND LOCATION OF PROJECTS SURVEYED

| | Number of Projects | Number of Units | Average Number of Units Per Project | Average Unit Cost ($) |
|---|---|---|---|---|
| Ontario | 31 | 8,291 | 267 | 43,155 |
| British Columbia | 2 | 342 | 171 | 49,281 |
| Alberta | 3 | 796 | 265 | 37,706 |
| Saskatchewan | 1 | 174 | 174 | 37,781 |
| Manitoba | 1 | 183 | 183 | 63,146 |
| Total | 38 | 9,786 | 258 | 43,204 |

There is too little information available on projects in other provinces to allow any firm conclusions to be drawn regarding how representative the information might be of all syndicated MURBs in Canada. However, it has been assumed for the purposes of this report that the information obtained is generally representative of all MURB's started in the 1978-1980 period.

## AVERAGE COST PER UNIT OF $43,000

There was a considerable variation in the average unit costs of the projects surveyed. They ranged from a low of $31,000 a unit for a project located in Belleville to $63,000 a unit for a project in Winnipeg. On average, the unit costs totalled $43,204.

TABLE C-2: DISTRIBUTION OF AVERAGE UNIT COSTS (PERCENT)

| | Less Than $40,000 | $40,000-$50,000 | $50,000-$60,000 | $60,000 and over | Total |
|---|---|---|---|---|---|
| Ontario | 25.8 | 64.5 | 9.7 | 0 | 100.0 |
| British Columbia | 0 | 50.0 | 50.0 | 0 | 100.0 |
| Alberta | 100.0 | 0 | 0 | 0 | 100.0 |
| Saskatchewan | 100.0 | 0 | 0 | 0 | 100.0 |
| Manitoba | 0 | 0 | 0 | 100.0 | 100.0 |
| Total | 31.6 | 55.3 | 10.5 | 2.6 | 100.0 |
| Projects | 12 | 21 | 4 | 1 | 38 |

## HIGH EQUITY REQUIRED FOR MURB PROJECTS

Most of the MURB projects surveyed required a higher than normal equity in relation to the total project cost - the average for the 38 projects together was 25 percent equity. With NHA maximum rental loans set at 90 percent of appraised project value, either developers were not utilizing their full mortgage potential or, as is more likely the case, the appraised value for loan purposes is well below stated project costs.

TABLE C-3: AVERAGE PER UNIT EQUITY AND MORTGAGES

| | Dollars | | | Percent | | |
|---|---|---|---|---|---|---|
| | Equity | Mortgage | Total | Equity | Mortgage | Total |
| Ontario | 11,025 | 32,130 | 43,155 | 25.5 | 74.5 | 100.0 |
| British Columbia | 11,844 | 37,437 | 49,281 | 24.0 | 76.0 | 100.0 |
| Alberta | 6,884 | 30,822 | 37,706 | 18.3 | 81.7 | 100.0 |
| Saskatchewan | 9,052 | 28,730 | 37,782 | 24.0 | 76.0 | 100.0 |
| Manitoba | 16,393 | 46,752 | 63,145 | 26.0 | 74.0 | 100.0 |
| Total | 10,782 | 32,422 | 43,204 | 25.0 | 75.0 | 100.0 |

While there was considerable variation in the proportion of total project cost which was financed through equity, most projects had equity ratios in the 20-30 percent range.

TABLE C-4: EQUITY PROPORTION OF TOTAL PROJECT FINANCING (PERCENT)

| | Percent of Total Project Financing | | | | | | |
|---|---|---|---|---|---|---|---|
| | Up to 15 | 15-20 | 20-25 | 25-30 | 30-35 | 35+ | Total |
| Ontario | 0 | 0 | 61.3 | 25.8 | 9.7 | 3.2 | 100.0 |
| British Columbia | 0 | 0 | 100.0 | 0 | 0 | 0 | 100.0 |
| Alberta | 33.3 | 33.3 | 33.3 | 0 | 0 | 0 | 100.0 |
| Saskatchewan | 0 | 0 | 100.0 | 0 | 0 | 0 | 100.0 |
| Manitoba | 0 | 0 | 0 | 100.0 | 0 | 0 | 100.0 |
| Total | 2.6 | 2.6 | 60.6 | 23.7 | 7.9 | 2.6 | 100.0 |
| Projects | 1 | 1 | 23 | 9 | 3 | 1 | 38 |

## SOFT COSTS COMPRISE 23 PERCENT OF TOTAL PROJECT COSTS ON AVERAGE

Soft costs (or initial services costs) which are fully deductible from other income in the year in which they are incurred comprised an average of 23 percent of total project costs in the projects surveyed. Buildings and equipment together comprised the largest proportion of project costs (64.5 percent) while land costs made up the remaining 12.5 percent.

TABLE C-5: AVERAGE LAND, BUILDING AND EQUIPMENT AND SOFT COSTS OF PROJECTS SURVEYED (PER UNIT)

| | Land Cost | Buildings and Equipment | Soft Costs | Total Costs |
|---|---|---|---|---|
| Ontario | 5,475 | 27,729 | 9,951 | 43,155 |
| British Columbia | 6,108 | 28,351 | 14,822 | 49,281 |
| Alberta | 5,069 | 26,284 | 6,353 | 37,706 |
| Saskatchewan | 2,879 | 29,337 | 5,565 | 37,781 |
| Manitoba | 4,006 | 39,639 | 19,501 | 63,146 |
| Total | 5,390 | 27,885 | 9,929 | 43,204 |
| Percent | 12.5 | 64.5 | 23.0 | 100.0 |

Of the average per unit building and equipment costs of $27,885, approximately $1,400 was for equipment such as (appliances and carpets etc.) and the remaining $26,500 was for the building itself.

There was considerable variation among the projects in the proportion of total costs attributed to soft costs. Almost half of the projects claimed less than 20 percent of total costs for soft costs but some projects ranged as high as over 35 percent.

TABLE C-6: SOFT COST PROPORTION OF TOTAL COSTS (PERCENT)

| | Percent of Total Cost of Project | | | | | |
|---|---|---|---|---|---|---|
| | Up to 20 | 20-25 | 25-30 | 30-35 | 35+ | Total |
| Ontario | 38.7 | 12.9 | 25.8 | 12.9 | 9.7 | 100.0 |
| British Columbia | 0 | 50.0 | 0 | 50.0 | 0 | 100.0 |
| Alberta | 100.0 | 0 | 0 | 0 | 0 | 100.0 |
| Saskatchewan | 100.0 | 0 | 0 | 0 | 0 | 100.0 |
| Manitoba | 0 | 0 | 0 | 100.0 | 0 | 100.0 |
| Total | 42.1 | 13.2 | 21.0 | 15.8 | 7.9 | 100.0 |
| Projects | 16 | 5 | 8 | 6 | 3 | 38 |

The proportion of total project costs applicable to the buildings portion was also highly variable.

TABLE C-7: BUILDINGS AND EQUIPMENT PROPORTION OF TOTAL PROJECT COST (PERCENT)

| | Percent of Total Cost of Project | | | | | | |
|---|---|---|---|---|---|---|---|
| | Up to 50 | 50-55 | 55-60 | 60-65 | 65-70 | 70+ | Total |
| Ontario | 3.2 | 6.5 | 22.6 | 22.6 | 16.1 | 29.0 | 100.0 |
| British Columbia | 0 | 0 | 100.0 | 0 | 0 | 0 | 100.0 |
| Alberta | 0 | 0 | 0 | 0 | 66.7 | 33.3 | 100.0 |
| Saskatchewan | 0 | 0 | 0 | 0 | 0 | 100.0 | 100.0 |
| Manitoba | 0 | 0 | 0 | 100.0 | 0 | 0 | 100.0 |
| Total | 2.6 | 5.3 | 23.7 | 21.1 | 18.4 | 28.9 | 100.0 |
| Projects | 1 | 2 | 9 | 8 | 7 | 11 | 38 |

## MOST SOFT COSTS CLAIMED IN FIRST TWO YEARS OF CONSTRUCTION

A change in the Income Tax provision regarding deduction of soft costs was introduced in 1979 - all deductions are now allowed only in the year to which the deductions are applicable. A total of 15 of the prospectuses provided information on the projected year of deduction of the soft costs.

TABLE C-8: PROJECTED YEAR OF DEDUCTION FOR SOFT COSTS

| | Percent of Costs Deductible By Year |
|---|---|
| Year 1 | 44.5 |
| Year 2 | 42.1 |
| Year 3 | 3.8 |
| Year 4 | 2.9 |
| Year 5 | 2.6 |
| Remainder | 4.1 |
| Total | 100.0 |

Almost all of the soft costs are claimed as deductions by the end of the second year. Some projects with extended rent guarantee periods have deductions as far as 10 years following completion, but these are a minority.

## INTEREST CHARGES DURING CONSTRUCTION AND FEES FOR INITIAL LEASING SERVICES ARE THE MOST IMPORTANT SOFT COSTS

Interest charges during construction accounted for by far the largest proportion of total soft costs claimed for projects reporting a breakdown of soft costs.

TABLE C-9: BREAKDOWN OF SOFT COSTS BY TYPE OF COST*

| Soft Costs | Percent of All Soft Costs | Percent of Reporting Projects Which Incurred Cost |
|---|---|---|
| Interest During Construction | 34.2 | 100.0 |
| Initial Leasing Services Fees | 20.5 | 100.0 |
| Administration Fees | 9.7 | 65.0 |
| Cash Flow Guarantee | 6.9 | 55.0 |
| Landscaping | 4.3 | 100.0 |
| Taxes and Insurance | 4.3 | 65.0 |
| Mortgage Processing | 4.2 | 85.0 |
| Operating Expenses During Lease-Up | 3.8 | 55.0 |
| Promoter's Commission | 3.8 | 60.0 |
| Mortgage Insurance Fee | 3.3 | 100.0 |
| Legal and Accounting Fees | 1.2 | 100.0 |
| Other | 3.8 | |
| Total | 100.0 | |

* 20 out of 38 prospectuses examined included a breakdown of soft costs.

It must be borne in mind that the projects which were included in the sample were all syndicated MURB projects. Some of the soft costs claimable on syndicated projects (e.g. cash flow guarantee) will not be allowable as soft costs on non-MURBs.

## MOST PROJECTS START TO SHOW A POSITIVE CASH FLOW AFTER 7 YEARS

Only 14 of the 38 prospectuses provided sufficient detail to allow a calculation of the year in which positive cash flow from the project is anticipated. This is important since once positive cash flow commences, investors will not have the full CCA claims to deduct from other income. For 8 of the 14 projects, positive cash flow commenced in the 7th year following completion. It was not possible to establish when positive cash flow would exceed CCA deductions thereby negating any tax shelter aspect of the MURB; however, it was estimated to be about the 12th year.