Cost-Effective Housing in British Columbia: A Comparison of Non-Profit and Market Housing

Final Report

December 15, 1997

Submitted to:

Peter Larmour
BCHMC
4430 Kingsway Street, Suite 1701
Burnaby, British Columbia
V5H 4G7

Submitted by:

Ekos Research Associates Inc.

Head Office
275 Sparks St., Suite 801
Ottawa, Ontario K1R 7X9
Telephone: (613) 235-7215
Facsimile: (613) 235-8498

Survey Centre
One Nicholas St., Suite 212
Ottawa, Ontario K1N 7B7
Telephone: (613) 562-4111
Facsimile: (613) 562-0142

Quebec Division
935 Gohier St.
St-Laurent, Quebec H4L 3J4
Telephone: (514) 748-0938

Toronto Branch
145 King St. West, Suite 1000
Toronto, Ontario M5H 3X6
Telephone: (416) 214-1424

E-mail address: pobox@ekos.com

PROJECT TEAM

David M. Black	Author and Principal Investigator
Steve Pomeroy	Co-investigator
Diane Beauvais	Word Processing

ACKNOWLEDGMENTS

The research process for this study, *Cost Effective Housing in British Columbia: A Comparison of Non-Profit and Market Housing* was a complex undertaking that could not have been completed without the cooperation of a number of individuals.

The study was carried out for the British Columbia Housing Management Commission (BCHMC). **Richard Peddie** General Manager, and **Peter Stobie**, Director Corporate Services, encouraged the completion of such a study.

The author would like to thank BCHMC for their support of this project.

A number of people at the British Columbia Housing Management Commission (BCHMC) made important contributions to the execution of the study. **Peter Larmour** made many crucial suggestions. Some suggestions had to do with the location of important information. More importantly, his long association with BCHMC and British Columbia's housing markets helped the study team avoid error and do a better job. **Hanne Hindle** cheerfully helped with physical access to the information and her assistance in responding to many requests was invaluable.

Josephine Ho, Lou Stone, Susana Cogan, Sandra Reitenbach and **Roberta Peters** also provided help in tracking down information. **Jim Crisp** shared some of his experience and helped make this a better study.

The opinions, mistakes and omissions are the sole responsibility of the author and are not to be attributed to those who contributed to the study, or to the British Columbia Housing Management Commission.

TABLE OF CONTENTS

PROJECT TEAM iii

1 EXECUTIVE SUMMARY 1

2 BACKGROUND AND THEORY 3

2.1 Theory 3
2.2 Hypotheses Tested in this Study 7
2.3 Procedure and Method 9
2.4 Residual Value 12
2.5 Replacement Reserves 13
2.6 Eliminating Project Subsidies 14
2.7 Projections 16

3 INFORMATION SOURCES 17

4 THE COMPARISON OF MARKET AND ADJUSTED BREAK EVEN RENTS . 21

4.1 The Comparison 21

5 SUBSIDY COSTS 33

5.1 Examining a Stream of Subsidy Costs 34
5.2 Results of the Comparisons (Subsidies) 36
5.3 Qualitative Factors 41

6 THE NON-PROFIT VEHICLE COMPARED TO A SHELTER ALLOWANCE . 43

7 FINDINGS, CONCLUSIONS AND OBSERVATIONS 49

7.1 Findings — Rent 49
7.2 Findings — Subsidies 50
7.3 Conclusions Related to the Theoretical Literature 51
7.4 Generalizing from the Evidence 52
7.5 Observations 53
7.6 The Policy Debate 54
7.7 Endnote 55

Appendix A: Paired Comparisons
Appendix B: Net Present Value Analysis for Paired Comparisons
Appendix C: Net Present Value Analysis for Vancouver - SAFER SAMPLE
Appendix D: The Availability of Affordable Housing

CHAPTER

1 EXECUTIVE SUMMARY

There has been a longstanding debate about the most efficient and effective way for governments to house families in need. As a contribution to the debate this paper compares the cost to government housing agencies using two different vehicles (non-profit and market housing).

Previous studies of the issue have tended to rely on a variety of assumptions as a basis for long term projections. Since these studies rely on assumptions as opposed to actual data they have been subject to criticism. One concern is about which assumptions are most sensible. Another has to do with the reliability of making financial projections for 35 or 50 years.

This study takes a different approach by describing what happened to the costs for actual housing projects over a historical period in British Columbia.

The study reports on a comparison between non-profit housing rental charges and market rents for comparable buildings. The study period is 1977 to 1996 (for which actual data was collected). The study compares adjusted break even rents in non-profit projects (i.e., removes all subsidies) to market rents in comparable buildings. The report details how the comparison projects were found, the data sources and definitions

used and presents the results of the comparisons. These "paired comparisons" are presented in a series of case studies. In addition, the average costs of the non-profit vehicle are compared to an existing shelter allowance program.

The study developed a sound empirical basis to examine the relative long term cost of non-profit projects and shelter allowances on private rental units. Data was obtained for thirty-four pairs of comparable private rental non-profit projects in Vancouver, Burnaby, Richmond and Victoria. Break-even, before subsidy per unit costs on the non-profit projects were compared with the actual market rents of comparable buildings. Subsidy costs were calculated for a 30 per cent rent geared to income (RGI) household with an income at the boundary of the first quintile.

In all thirty-four comparisons the non-profit break-even rents started out higher than private rents but then rose more slowly than market rents. Assessing the resulting subsidy costs for comparable households (based on the use of a consistent 30 per cent RGI scale), the study found that, over the past two decades the non-profit vehicle has been the most effective vehicle in the cases studied here.

Comparison of the non-profit vehicle with a shelter allowance program produced similar results.

CHAPTER

2 BACKGROUND AND THEORY

2.1 Theory

There is an extensive literature on various issues surrounding cost effective program choice.[1] Much of the literature is characterized by the use of economic models of expected market behaviour or snapshot comparisons of costs at one point in time

In an ideal world governments would conduct experiments to gather evidence about program efficacy. Although this has been done for some housing programs in the United States, it is the exception rather than the rule, and there is considerable difficulty in extrapolating the results to Canada.

In the absence of deliberate experimental design carried out by governments it is sometimes possible to uncover a "natural experiment" that took place as a result of program activity. While these "natural experiments" might not meet all the

1. An intelligent and thoughtful discussion can be found in Fallis, G. on Choosing Social Policy Instruments: The Case of Non-Profit Housing, Housing Allowances or Income Assistance, *Progress in Planning*, Volume 40, Part 1, 1993, pp. 1-88.

criteria for classical randomized experimental design they often come very close to the desired ideal.

Historically, the debate about the effectiveness of using different delivery vehicles (e.g., non-profits or the market) has been difficult to resolve because of a multiplicity of program goals (about which there is disagreement — some goals being implicit and some added as the program evolves) and an absence of actual data that might be of use in assessing those program goals where there is some agreement about the purpose of the program.

For example, housing programs often have several explicit goals (e.g., to increase the supply of affordable housing and to address the housing problems of low income households). Unstated goals might include the decision to deliver the assistance to low-income households in a certain way (e.g., unit tied subsidies) because society wants the money allocated to housing to be spent on housing. This decision on how the money is spent might be taken in the full knowledge that the household might prefer to spend the money differently.[2] Finally, a government may decide to provide subsidies tied to a unit as a mechanism to control expenditures. Thus the government will provide a certain amount of money to subsidize a certain number of existing and new units because it does not think it can raise the money to fund a universal program, or is uncertain about the impact of a universal program (e.g., on participation in the labour force).

In addition to the confounding effects of other program goals cost effectiveness comparisons must deal with a host of other factors. A cursory review of three studies illustrates this.

2. Much of the literature on social justice assumes the government is trying to increase the utility level of the recipient (which is why most of the literature concludes that it is more efficient for government to give the household a lump sum cash payment). A good summary of the argument and problems with it can be found in Fallis (1993) op. cit., pages. 80-81.

A theoretical study comparing program costs was carried out for CMHC by researchers at the University of Toronto.[3] In that study rents are set in a competitive model. The price of a new or existing property is determined by the discounted value of rental income (net of operating costs and taxes) plus future capital gains on the property. The study then compares the life time cost of delivering a rent geared to income (RGI) unit via a non-profit program with the life time cost of delivering the same unit through a rent supplement program.

The main findings from this approach were as follows. The cost-effective program choice depended on local market conditions. Non-profit projects were more effective in nominal terms under the market conditions prevailing at the time of the study. When present discounted value accounting methods are used the cost differential tends to favour the rent supplement program as the cost-effective choice.

A 1993 study[4] compared the cost of housing a household in a non-profit unit to the costs of housing a household in their existing home using a shelter allowance. This study found that non-profit was more expensive in nominal terms for the entire 35 year period of the mortgage. After the mortgage was repaid non-profits became less costly on a yearly basis. However, this advantage (after year 35) and the residual value of the non-profit properties was not great enough to change the conclusion about the relative cost effectiveness of the two approaches over the entire period.

3. Hosios, A., Jump, G., Fallis, G. and Pesando, J. (1990) *Cost-Effective Program Choice: Non-Profit Housing and Rent Supplement Programs* (mimeo), Report submitted to Canada Mortgage and Housing Corporation.

4. Clayton Research Associates Ltd. (1993) *Comparison of the Long-Term Cost of Shelter Allowances and Non-Profit Housing*, a study carried out for the Fair Rental Policy Organization of Ontario.

An unpublished 1994 study carried out within CMHC[5] compared the cost of assisting households in social housing and comparable market units in four market areas (Halifax, Montreal, Toronto and Winnipeg). The study used actual costs and then calculated total costs in nominal and real dollars. The study found that market rents were lower in Winnipeg and Montreal while social housing costs were lower in Halifax and Toronto.

These three studies (1990, 1993 and 1994) approach the question of effectiveness differently. The 1990 University of Toronto study (Hosio *et. al*) uses a model of a competitive market and examines cost effectiveness under different conditions (e.g., interest rates, vacancy rates and so on). The 1993 study by Clayton Associates compares different qualities of housing units and does not examine the different program goals of government or the impact on the households involved. Madjell's 1994 study uses actual numbers for the time period of the comparison but the units are not always in the same market area nor are the numbers the actual costs of running a specific property, nor are the projects strictly comparable and so market rents are discounted by as much as 20 per cent to approximate the quality of social housing units.

This study addresses the same fundamental issue of cost-effectiveness but it does so by looking at actual cost data for units of comparable quality in the same market area, over the same time period. In other words it overcomes to some extent the limitations of the studies discussed in the previous paragraphs.

From this consideration of the theoretical discussions in the literature it is worthwhile to isolate the exact factors that this study addresses. The most important point is to underline the fact that the study compares similar units in the same market area during the same time period and similar assistance — i.e., the subsidy required to assist a household is for similar levels of adequacy, suitability and quality of unit (i.e., the

5. Majdell, D. (1994) *Social Housing Cost Comparison* (Draft Report), Canada Mortgage and Housing Corporation, mimeo.

study compares oranges with oranges). This point cannot be overemphasized since so much of the policy debate does not compare oranges and oranges. What the study does do is compare adjusted break even non-profit rents with the market rent for comparable units (e.g., with respect to market area, unit size, building type and time of construction).[6]

There are a number of things the study does not do. First, the study does not compare administrative costs of different program designs (this is a complex undertaking since program costs involve different levels of government and many of those involved work on a number of tasks and different programs and do not separate their time among programs). Second, the study does not apportion costs between and among different program goals. For example, we do not apportion some part of the costs of the non-profit program to the costs of encouraging new construction (i.e., the supply side elements of the program).

The main limitation of the study has to do with its limited coverage of different market areas. If the resources were available one would expand the study to other market areas.

2.2 Hypotheses Tested in this Study

There are four specific questions that are tested in this study. A null hypothesis is presented after each question.

6. Fallis (op. cit.) p. 48 stresses the importance of just such a comparison although he suggests it is "not likely to be possible." He suggests the need to use hedonic pricing in the absence of "units in the private market which were identical in every respect, to the non-profit units." The approach used in this study uncovered comparable projects (and units) and thus comes as close to producing what one would ideally like to have as is possible short of an experimental design which saw one contractor build two identical projects (e.g., two buildings in one complex) one of which was managed by an entrepreneur and the other by a non-profit.

I. Are non-profit adjusted breakeven rents higher than market rents for comparable units (and by extension higher than the average of all market rents for comparable units) at the time of initial occupancy?[7] In technical terms the null hypothesis is that there is no difference between market and non-profit rents for comparable buildings in the same market area at the time of construction.

II. Do non-profit rents fall relative to market rents? The null hypothesis would be that there is no change in the relative position of non-profit and market rents.

III. Does a crossover occur (i.e., is it the case that non-profit rental charges adjusted to remove any subsidy become lower than market rents on comparable units)?[8] In technical terms the null hypothesis would be that non-profit rents do not fall below market rents in comparable projects.

7. Two reasons are often given for this statement. First, non-profits are financed at 100 per cent of cost (there is often no equity) and second, non-profit societies are not as effective as entrepreneurs and do not get the best price. A more likely explanation is the fact that market rents reflect a universe of mostly older rental units, the rents for which are lower than break even rents for new construction and as a consequence private developers are able to carry a negative cash flow while non-profits have to meet their costs.

8. Two studies (an internal CMHC review of Hosio *et. al* 1990 and Clayton 1993) suggest that a crossover might occur under certain conditions around year 25 (CMHC's review of Hosio *et. al*) and after year 36 (Clayton). The 1994 Madjell study simply shows that for certain markets under certain assumptions total costs are less in Halifax and Toronto and more in Winnipeg and Montreal. The Madjell study does not present individual years and so it is not possible without further work to determine when the crossover year does occur. From comments in the Madjell paper it seems that social housing costs (described as economic rents) can start out lower than market rents and remain lower than market rents for the full period covered. A fourth study using a set of pro forma costs and assumptions about cost increases suggests that the crossover would occur after year 21. Société d'habitation du Québec. La SHQ, Propriétaire et Locataire de logements: considérations économiques et sociales. Quebec, Société d'habitation du Québec, 1990.

IV. For the cases studied, is the non-profit vehicle more cost-effective than a market vehicle over the study period (1977-1996)? Again the null hypothesis[9] would be that there is no difference in the cost-effectiveness of the two vehicles. Cost-effectiveness occurs when one vehicle is able to deliver a unit of comparable (or higher) quality at a lower cost.

Finally, the study addresses some related questions: to what extent can the study results be generalized, what factors impact the cross over and how does the study contribute to the policy debate?

2.3 Procedure and Method

This study uses the method developed for a study of cost-effectiveness carried out for the Canadian Housing Renewal Association (CHRA). During the course of the work for the CHRA the study team realized the study results could be significantly expanded for British Columbia[10].

The feasibility study for the CHRA study noted a number of complicating factors in making a comparison between two programs. Central among these are market variations and program design differences. (Each program provides a different bundle of housing and support services and each comes at a different cost.) This study overcomes these complications by focusing on the vehicles (not the vagaries of program design) through which the assistance is delivered: a non-profit vehicle and a private market vehicle. The initial subsidies which were part of the NP program were removed

9. We have used null hypothesis since this accords with traditional hypothesis testing in the social sciences where one has a sample from a larger population. If the theoretical literature on housing markets was more fully developed one could state the theoretical considerations and then show the extent to which the empirical results, do, or do not, support the theory. This approach while desirable is not feasible at this time.

10. Black, D. and Pomeroy, S. 1997, *Cost-Effective Housing: A Comparison of Non-Profit and Market Housing*, Ekos Research Associates Inc., Ottawa.

so that a standardized subsidy (needed to help low income households) can be applied equally to the two different vehicles.

The amount of the subsidy required from a government housing agency will be:

1. in the non-profit case the difference between the break-even operating cost and the rent paid by the household (i.e., the rent geared to income payment); and

2. and in the market rental the difference between the market rent and the rent paid by the household (i.e., the rent geared to income payment).

A cautious note about the definition of terms needs to be made at this point. The study compares actual market rents with break-even rents for comparable non-profit projects. There is no confusion about the term "market rents" since they are the rents charged in the open market. Non-profits have a rental charge which has been given different names by different groups. Officials in government agencies have used a number of different terms: economic rent, full recovery rent and break even rent. We avoid use of the term "economic rent" since it has a long use in the economic literature.[11] "Full recovery rent" is used by officials in housing agencies to describe the rental charge required to operate a non-profit project at break-even (i.e., on average there is no operating surplus or operating deficit) after initial subsidies have been given to the project. To minimize confusion we use the term "adjusted break even rent" to describe the rent charge which would be made if the project did not have any subsidies at the time of construction or during its operation after construction.

11. The term economic rent often occurs in the 19th century debates about the price of grain products (e.g., corn in England).

The central question to be answered by this study is whether one vehicle (market units or non-profit units) is more cost effective over time.[12] The study answers this question by identifying matched pairs of comparable properties and comparing cost differences (using actual data) over time. Cost information from financial statements was adjusted, in the case of non-profits, for unit size.

Since the objective of the study is to identify the relative effectiveness of the two alternate delivery vehicles — non-profit and market rental properties it is necessary first to eliminate any subsidy from the comparison (i.e., where it would affect the rents to be charged).

In the case of non-profits used in this study there were several different programs that provided subsidies. Assistance was provided under the National Housing Act (Section 27, formerly Section 15.1) prior to 1979 and after 1978 (Section 95, formerly Section 56.1).

Under the pre-1979 (Section 15.1) program the federal government provided two types of assistance: a ten per cent capital grant and a mortgage interest subsidy to allow the mortgage interest to be written at 8 per cent. In some cases provincial assistance was also provided. For example, in British Columbia the provincial government could provide a capital grant for 33 per cent of eligible capital costs. In some projects this was used to reduce the capital cost of the project, in others a 20 year lease of land was provided (at $1.00 per year) as equivalent to the 33 per cent contribution to capital costs.

Subsidies on projects developed after 1978 involved no subsidy to the capital cost of the project but did involve an ongoing subsidy. Some post 1978 projects

12. We use the term "vehicle: rather than program since we have removed the specific program features associated with various non-profit programs. For example, we do not consider such issues as "income mix" in the analysis.

provided some of their own equity and, if an existing project, may have had assistance from the Residential Rehabilitation Assistance Program (RRAP).

On the market side, the basis for comparison is the market rent. Although some of the properties received assistance (e.g., rent supplement and ARP), this did not have an impact on the market rent (i.e., the market set the rent).

There are two complicating factors which need to be addressed before one can compare the non-profit and the market vehicle: residual value and replacement reserves.

2.4 Residual Value

A significant difference between non-profit projects and market housing is the creation of an asset in the non-profit project (at a minimum the land could be sold for some amount of money after the mortgage was paid off). The problem is how to treat this asset in an analysis of program costs.

Almost all of the cases have 50 year mortgages (i.e., the mortgages would be retired in the period around 2025) as opposed to 35 year mortgages. Since most of the cases have mortgages which still have 25 years to run it does not seem particularly fruitful to estimate a dollar amount for the land that might (or might not) be sold in 2025 and discount it to 1997 dollars. There are two reasons this does not seem appropriate.

In some cases the land is leased, and in others it was sold on the condition that it be used for low income housing. The building itself would probably be replaced after fifty years.

A more important objection has to do with the very notion of using "residual value" in this type of analysis. Residual value is used as part of the analysis of

an investment decision. For example, if the sale of an asset will yield significant sums then this is discounted to determine the true "cost of the investment." As an element in an investment decision, residual value is something that needs to be considered. Government decisions to invest in a long term housing support mechanism (involving 35 or 50 year mortgages) would unlikely be altered by the "residual value" of the projects. Most analysts would argue that it is impossible to determine if the residual value can be realized (e.g., that the land can be sold) or that the government would reap the benefit from the sale of the land.

2.5 Replacement Reserves

Major capital repairs are handled differently in the two sectors. Non-profit projects make a regular contribution to a replacement reserve account which grows over time as it earns interest and the annual contribution is made. In general, the private sector does not accumulate such reserves and pays for major capital repairs from a combination of sources which might include other funds, rent increases and/or a refinancing of the project. The study team collected information on replacement reserves for the projects involved in these comparisons. Replacement reserve contributions in each year were excluded from calculation of adjusted break even rent for the study cases to make the comparison between the market and non market project a fair one (i.e., to remove what Hosios *et. al* — op. cit. page 23 — would refer to as a market imperfection).

All of the projects examined by the study team have accumulated substantial replacement reserves. These reserves are maintained in a separate account for each project, they increase each year as interest is earned and additional contributions are made or reduced as funds are withdrawn to replace capital items. The reserve amount

varies by project.[13] One 60 unit project had a replacement reserve of approximately $325,000 in 1994 (the last year for which information on the reserve was available).

Replacement reserves pose a similar problem to that of residual value. How should the existence of this asset be treated in this comparison of cost effectiveness? While there are substantial reserves for the projects we studied, the dollar value of the reserves is not readily available as an asset (although it would be if the project ceased to operate) and thus is not attributed in anyway in the cost comparison.

It is worth noting that the inclusion or exclusion of replacement reserves makes no difference to the study conclusions (i.e., including them in the calculation of break even rent does not change the conclusions).

2.6 Eliminating Project Subsidies

For each non-profit project we adjusted the principal and interest payments to eliminate any subsidies involved. For example, if a project received a 10 per cent capital write down, we determined the 100 per cent cost (in many cases it was given in the file, in other cases we calculated it). To eliminate the subsidy involved in an 8 per cent mortgage we determined the principal and interest payment for the full capital cost at the prevailing market interest rate (e.g., the interest rate in 1977) for the full term of the mortgage (usually 50 years). By adding the unsubsidized P and I (mortgage payments) to actual operating expenses we determined an adjusted break even rent (monthly) for

13. It is difficult to make any meaningful statement about the "average" replacement reserve without knowing the history of the reserve fund for a project and the contributions (if any) made to major repairs. For example, the replacement reserve might be modest in 1994 because $500,000 was spent on major repairs in 1993. Thus a simple statement about the average value of replacement reserves across a portfolio (while it might be accurate) is virtually meaningless. Replacement reserves range from $3,000 to $6,000 per unit for the study cases.

the project. We then compared the adjusted break even rents to market rents in a comparable project.

Consider a project which cost $1,000,000, received a 10 per cent percent federal contribution to the capital cost (i.e., $100,000) and has a fifty year mortgage for $900,000 written at 8 per cent when prevailing market rates were 10.25 per cent. The project has two separate subsidies: a one time capital contribution of $100,000 and an ongoing monthly subsidy equal to the difference between the subsidized interest (8 per cent) and the market rate of 10.25 per cent. To eliminate the two subsidies we calculated the monthly payment for the actual capital cost of the project ($1,000,000) at 10.25 per cent and added the monthly mortgage payment to the monthly operating costs to determine an adjusted breakeven rent for the non-profit (i.e., the rent which would have to be charged if the project had no subsidies). If the project received a gift of land, or a long term lease of land, the cost of the land was added to the capital cost of the project and a new mortgage payment calculated at the prevailing market rate of interest. In this way all subsidies and or gifts (federal, provincial, and charitable donations of land) were removed from the project.

Finally, we subtracted the monthly contribution for the replacement reserve thus creating the non-profit adjusted breakeven rent which is the actual breakeven cost of running the project.[14] Excluding replacement reserves does not have an impact on the results (i.e., the results are not materially different if replacement reserves are included).

14. Non-profit projects are allowed to accumulate an operating surplus. The allowable amount has varied over time increasing from $100 a unit in the late 1970s to $500 a unit in the 1990's. We did not make an adjustment for the presence of an operating surplus.

2.7 Projections

The projection of historical costs into the near future was called for in the original study for the CHRA. How the projections should be done is always a matter for discussion. Study results are presented so that the historical period is clearly separated from projections. Thus the projections can be ignored if one wishes to do so.

There are at least three ways to make projections. These include the use of some reasonable estimate of inflation and operating costs, a regression analysis, and refinement of the model developed by in the paper by Hosios *et. al.*

Appendix A presents the details of the historical record and a projection to the end of twenty-five years. Appendix A also includes a regression analysis which projects rents to the end of a thirty-five year period. Refinement of the model developed by Hosios *et. al* goes well beyond the scope of this research and is not attempted within the confines of this study.

CHAPTER

3 INFORMATION SOURCES

Because the purpose was to compare actual costs over as long a period of time as possible, cases ended up being selected because of the availability of the required information.

Market rents (for the 20 or so years of interest to this study) are available for multiple unit residential construction where owners agreed to participate in a "rent supplement" program and for units enroled in the province's Shelter Aid for Elderly Renters (SAFER) program. In some cases the project had been constructed under the Assisted Rental Program (ARP). For these projects we have construction costs, market rents and the size of the ARP assistance. Although these units benefit from rent supplement and in some cases ARP assistance, this should not materially affect the market rent. Indeed, as part of the rent supplement contracting process rents are verified as being similar to non-assisted units and are therefore deemed to be fully representative of market rent.

Information was collected from files maintained either by CMHC, BCHMC or non-profit societies. In most cases the information was found by looking at archival material (i.e., paper files) although some more recent information was obtained from electronic data bases maintained by BCHMC.

From this material it was possible to determine the year the building was constructed, the cost of the project, the market interest rate and any subsidies involved. Almost all of the information on non-profit projects came from annual financial statements prepared by accounting firms. From time to time these figures were involved in a "compliance audit" and found to be accurate and comprehensive. Although it was not the original intention of the study team to carry out a detailed review for these projects, the search for information necessarily included a comprehensive search of the files for most of the cases. This material is a rich source of information that augments the study findings and suggests some insights into a deeper understanding of the study issues. These are discussed in Chapter 6.

It is important to emphasize the "objective" nature of the financial evidence used in this study. Although the "paired comparisons" are presented as "cases" the evidence obtained about each paired comparison is completely objective. If other study teams were to examine the same archival material they would obtain the same numbers (e.g., on rent charges and original subsidies). These numbers are not in any way subjective or the result of an interview to gain "impressions" from an expert. This point is important because it has some bearing on the extent to which the study team thinks the lessons learned can be generalized to other regions and other time periods.

Information was collected in British Columbia in the following way. Almost all the necessary information is centralized in the offices of the British Columbia Housing Management Commission (BCHMC) and it was possible to search the files of all non-profit and ARP projects constructed in the lower mainland between 1977 and 1980 to determine if the appropriate information could be collected. A complete review of some 75 files was carried out. Second, it was possible to conduct a random search of SAFER files to identify units in the program from 1977-80 to the present. This yielded a random sample of 48 SAFER files used in this analysis. This had three results. First, matched pairs were identified from among 20 possible non-profit projects. Second, reviewing all the relevant files for the period 1977 to 1980 generated information which

casts some light on the dynamics of the rate of growth in non-profit and market rents. Third, the sample of SAFER files provides some insight into a shelter allowance program.

It was not possible to compensate for the fact that some market rents do not include heat while all non-profit rents do. The absence of this data tends to understate the differences between the non-profit and the market rent (i.e., some of the market rents should be increased over what is shown here). There was simply no way to generate a twenty year record that would be accurate and so we simply note the absence of the information.

These issues will be discussed in some detail after we review the comparison of market and adjusted break even rents in the next chapter and the subsidy costs to government of using a non-profit or rent supplement vehicle (Chapter 5).

Chapter 4 details the comparisons made between the two delivery vehicles.

CHAPTER

4 THE COMPARISON OF MARKET AND ADJUSTED BREAK EVEN RENTS

4.1 The Comparison

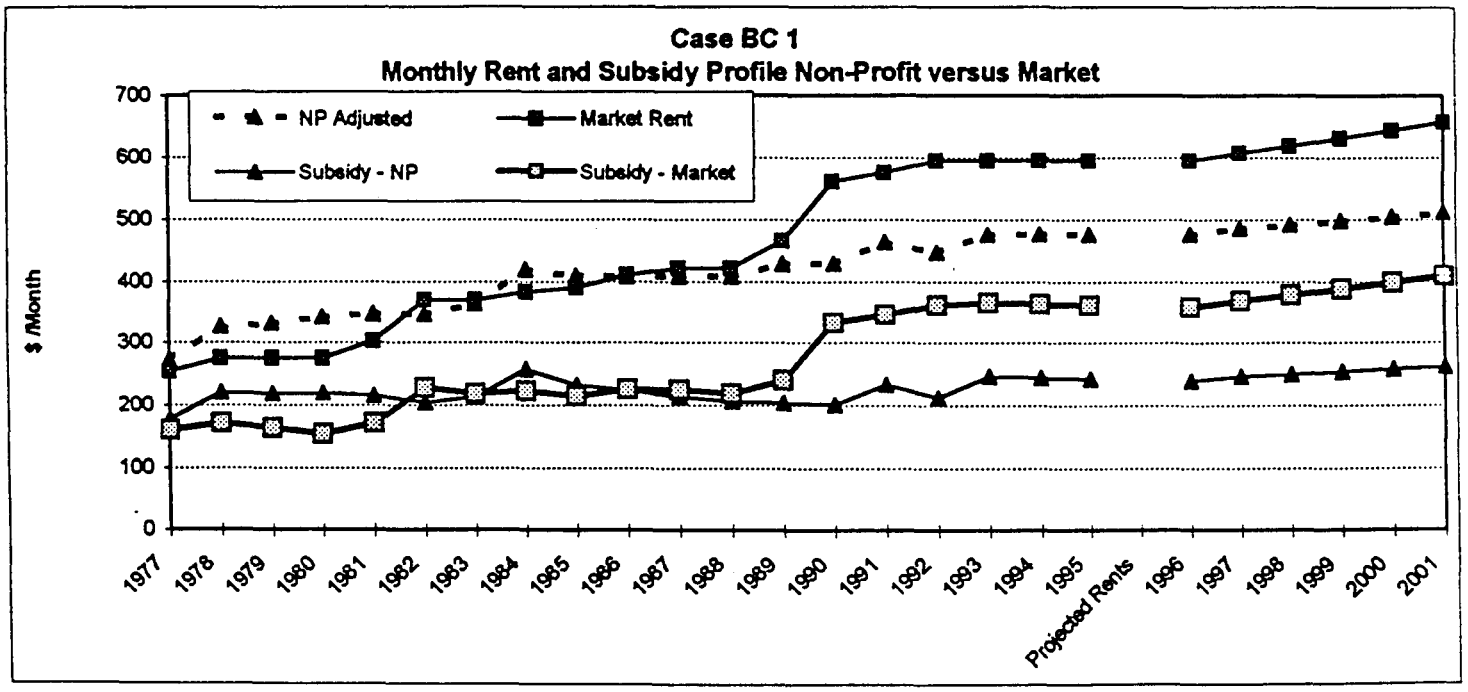
In this section of the report we present the results of ten selected paired comparisons, in as clear a format as we have been able to devise. The details of the thirty-four comparisons are presented in Appendix A, as is the raw data. Below we present a summary of the key elements for each case. Each case is presented in the same way. In this chapter we only address the question of what happens to market and adjusted break even rents for the comparisons. In the next chapter we address the question of subsidies.

Each summary chart describes the units compared (location, size, year of construction and so on). Below the description is a graph which shows two sets of comparisons. On the top half of the graph is the monthly rent for the non-profit and market project. The numbers shown to 1995 are actual numbers and there is a break in the graph for the period after 1995 to show that the period after the break the beginning of the projection period (in some cases the numbers for 1996 and 1997 are actual numbers). The bottom half of the graph shows the cost of subsidizing a household in the market or non-profit vehicle. The discussion of subsidies occurs in the next chapter.

Discussion 1

Year Occupied: Both projects occupied in 1977
Building Form: Masonry highrise
Location: Inner city
Units Compared: Bachelor units
Programs Involved: Non-profit assisted under sec 15.1; market developed under ARP

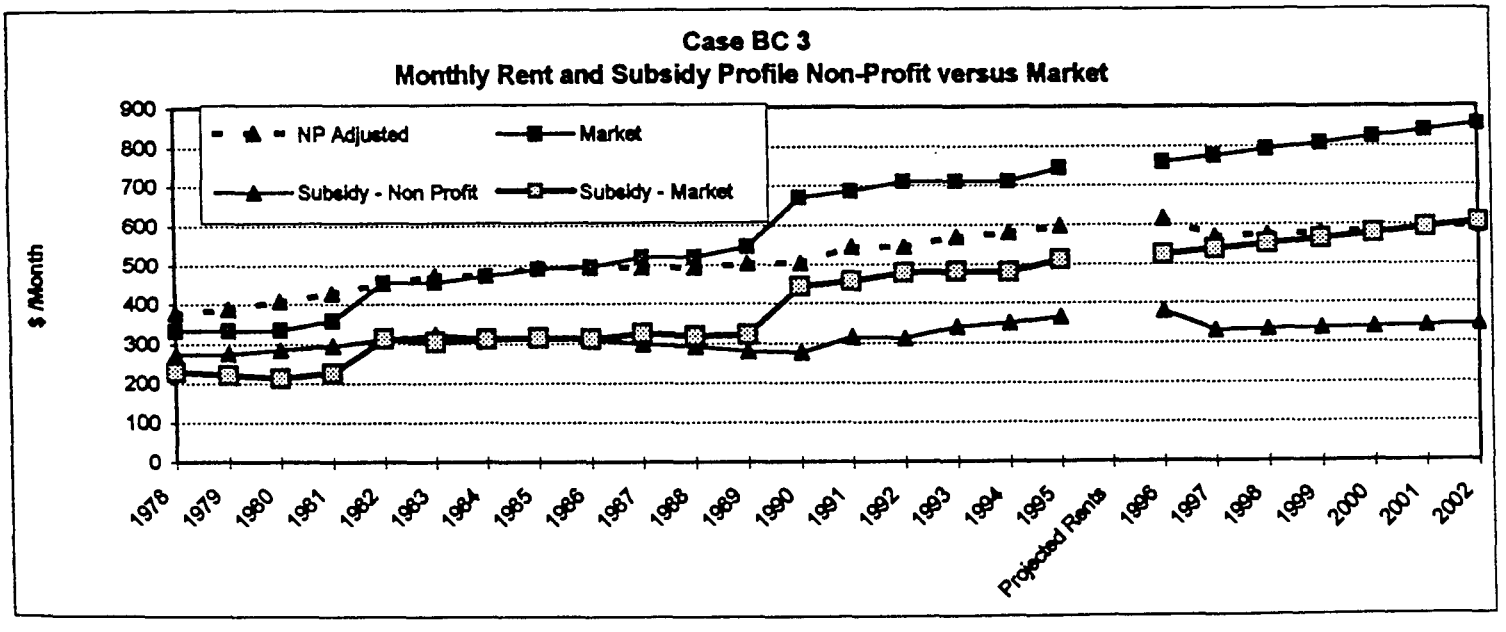
The first comparison (No. 1 in Appendix A) is of two masonry highrise projects in the inner city. The gap between the market rent and the non-profit rent is relatively small (only $17 dollars in the first year), shows some variability until 1986 when the non-profit rent becomes less than the market rent and remains less than the market rent. By 1995, the non-profit rent is some $119 below the comparable market rent.



Discussion 2

Year Occupied:	Both projects occupied in 1977, with 1978 providing first full year of data
Building Form:	Masonry highrise
Location:	Inner city
Units Compared:	One bedroom
Programs Involved:	Non-profit assisted under sec 15.1; market developed under ARP

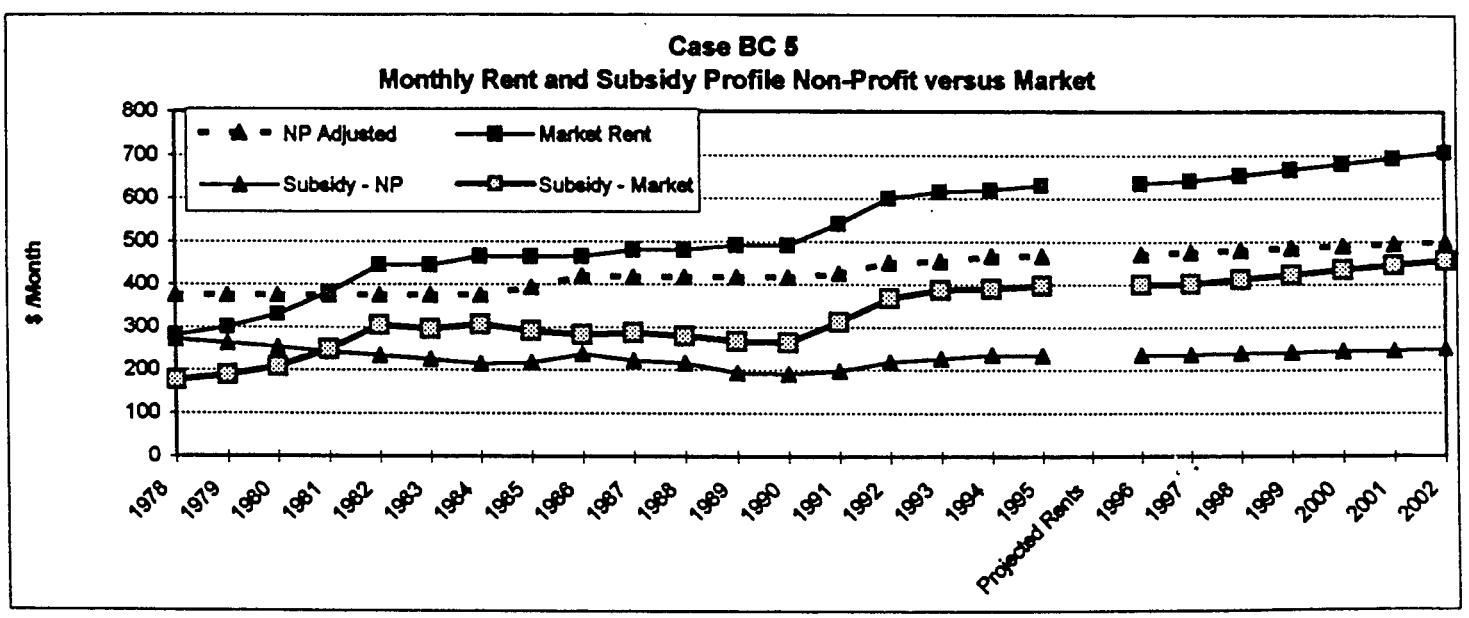
In our second discussion (No. 3 in Appendix A) the market and non-profit rents start out within $45 of each other and track each other until the 5th year when the non-profit rent falls below the market rent. The two rents move in tandem until the non-profit rent falls well below the comparison market rent and is $148 below the market rent in 1995.



Discussion 3

Year Occupied: 1978
Building Form: Three storey elevatored woodframe
Location: South Vancouver/Richmond
Units Compared: One bedroom
Programs Involved: NP sec 15.1/ARP

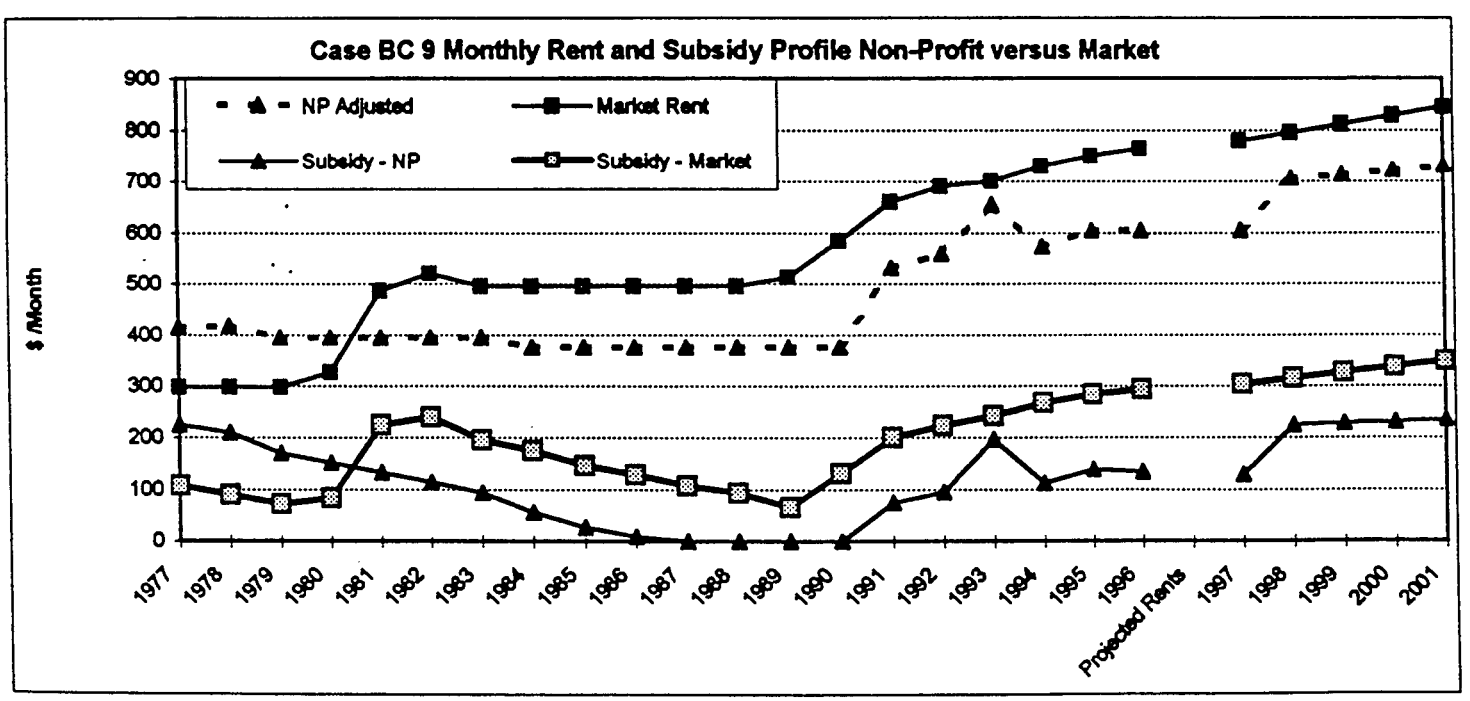
In our third comparison (No. 5 in Appendix A) the non-profit rent is higher than the market rent for the first four years and then falls below the market rent in the fifth year, remaining well below the market rent for the remainder of the comparison period. The difference (actual numbers) in 1995 is $164 a month.



Discussion 4

Year Occupied: Both projects occupied in 1977
Building Form: NP 3 storey woodframe; market stacked townhomes
Location: Old suburbs
Units Compared: Two bedroom apartment
Programs Involved: NP sec 15.1/ARP

In our fourth discussion (No. 9 in Appendix A) the non-profit rent starts out some $118 a month higher than the market rent. In the fifth year of the comparison, the non-profit rent falls below the market rent and for the rest of the study period is, with the exception of one year in which major repairs were carried out, always more than $100 a month less than the comparable market rent. In 1996 the non-profit rent is $160 less than the market rent.



Discussion 5

Year Occupied: NP 1978/market 1978

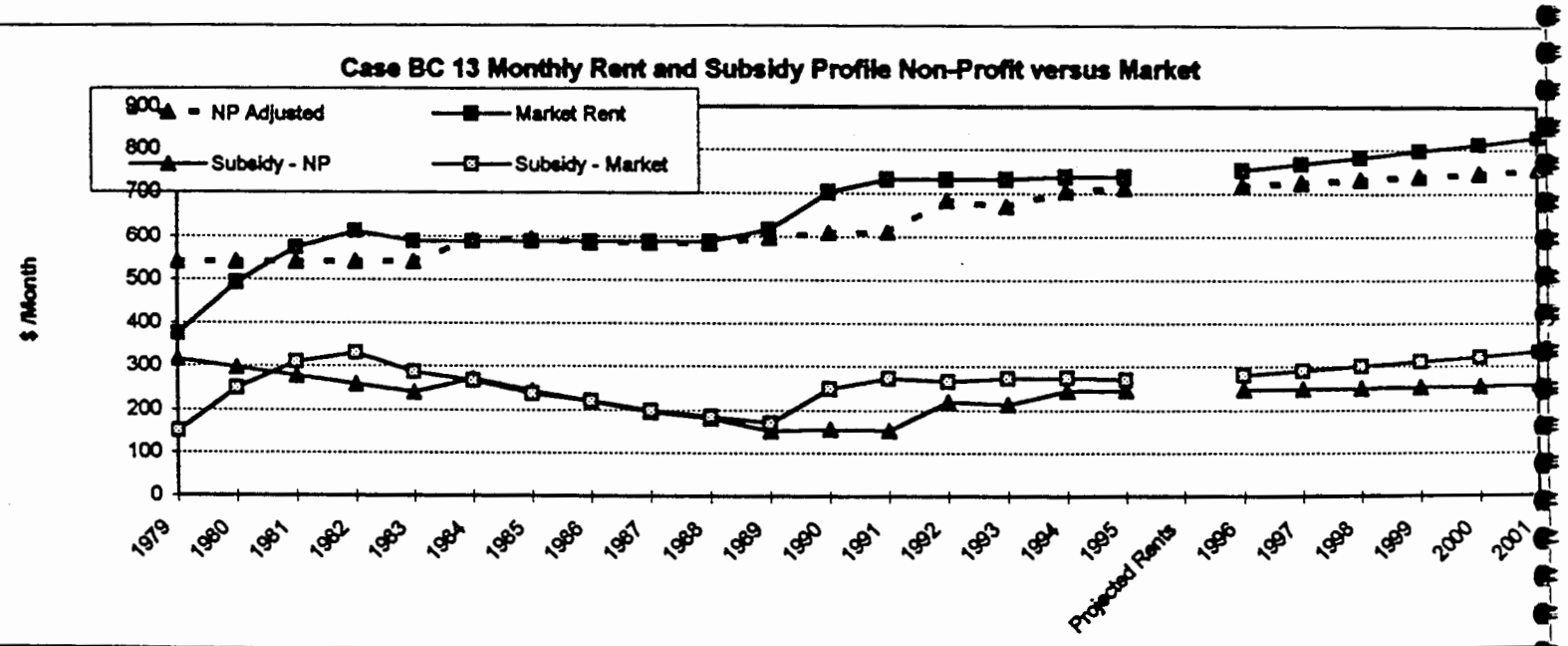
Building Form: NP townhomes/market stacked townhomes

Location: South Vancouver/Burnaby

Units Compared: Three bedroom townhouse

Programs Involved: Non-profit assisted under sec 15.1; market developed under ARP

In the fifth comparison (No. 13 in Appendix A) the non-profit rent drops below the market rent after two years of operation and in general tracks slightly below the market rent for the study period.



Discussion 6

Year Occupied: NP 1978/market 1978

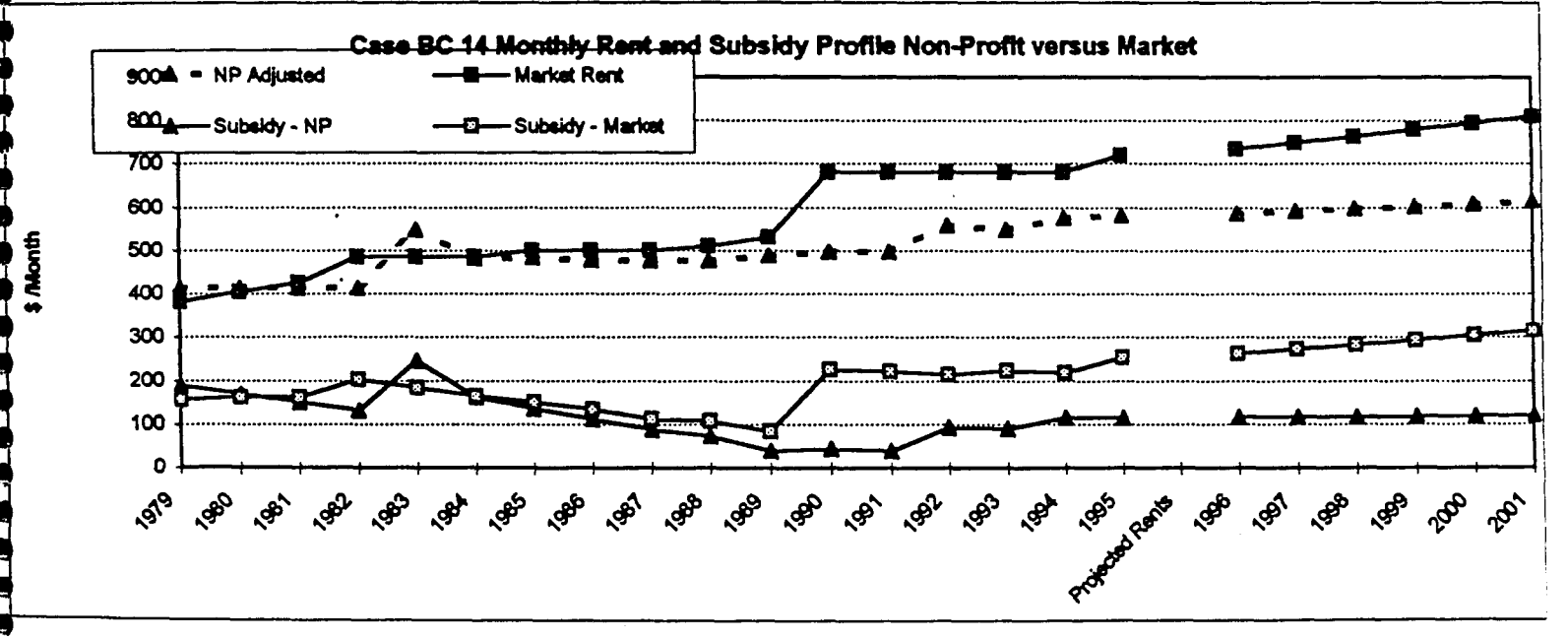
Building Form: Townhomes

Location: South Vancouver/Richmond

Units Compared: Two bedroom townhouse

Programs Involved: Non-profit assisted under sec 15.1; market developed under ARP

In the sixth comparison (No. 14 in Appendix A) the non-profit rent falls below the comparable market rent in the third year of operation. Although the different is small ($12) the difference grows to over a $100 a month in year twelve. The difference is some $139 in 1995.



Discussion 7

Year Occupied: NP 1978/market 1978

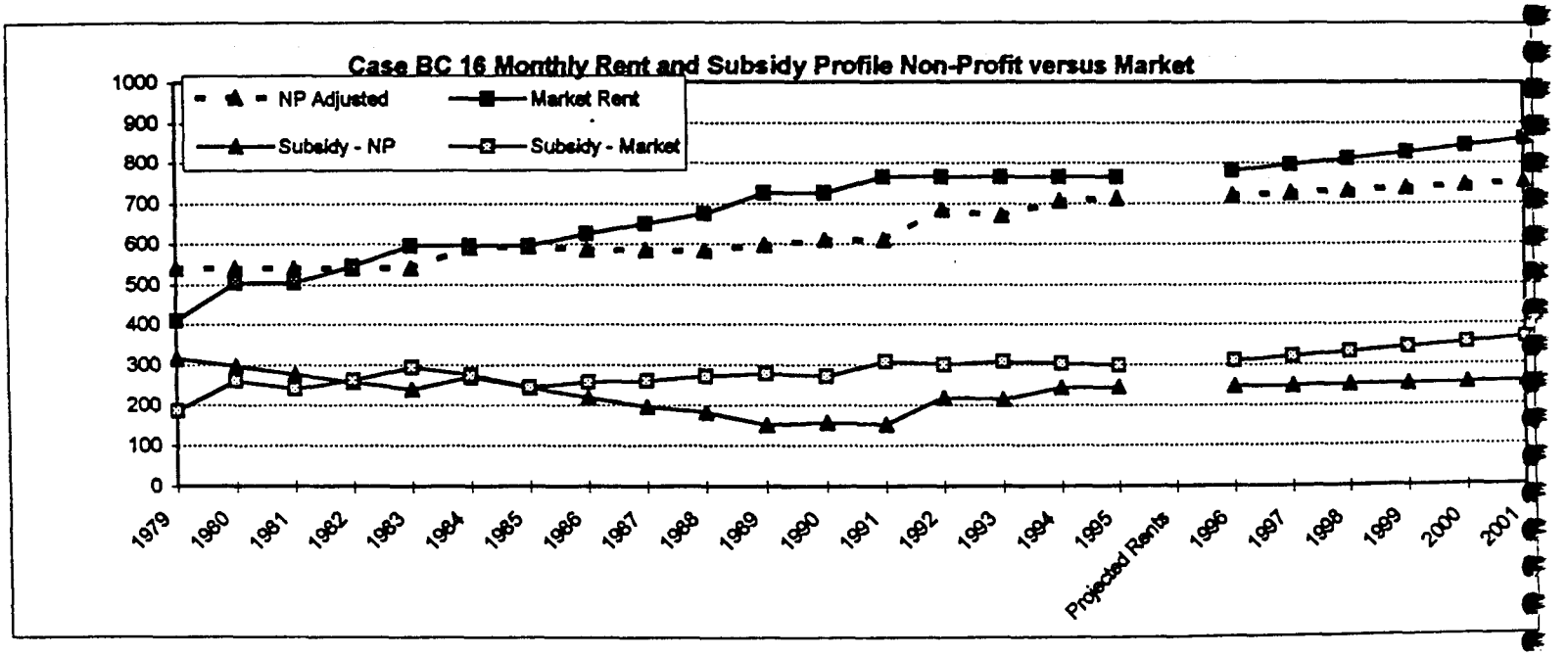
Building Form: Townhomes

Location: South Vancouver/Burnaby

Units Compared: Three bedroom townhouse

Programs Involved: Non-profit assisted under sec 15.1; market developed under ARP

In the seventh comparison (No. 16 in Appendix A) the non-profit rent falls below the market rent after three years. The difference varies considerably and ranges from $40 in 1986 to as much as $156 in 1991. The difference was $53 in 1995.



Discussion 8

Year Occupied: Both projects occupied in 1977/data not available until 1989

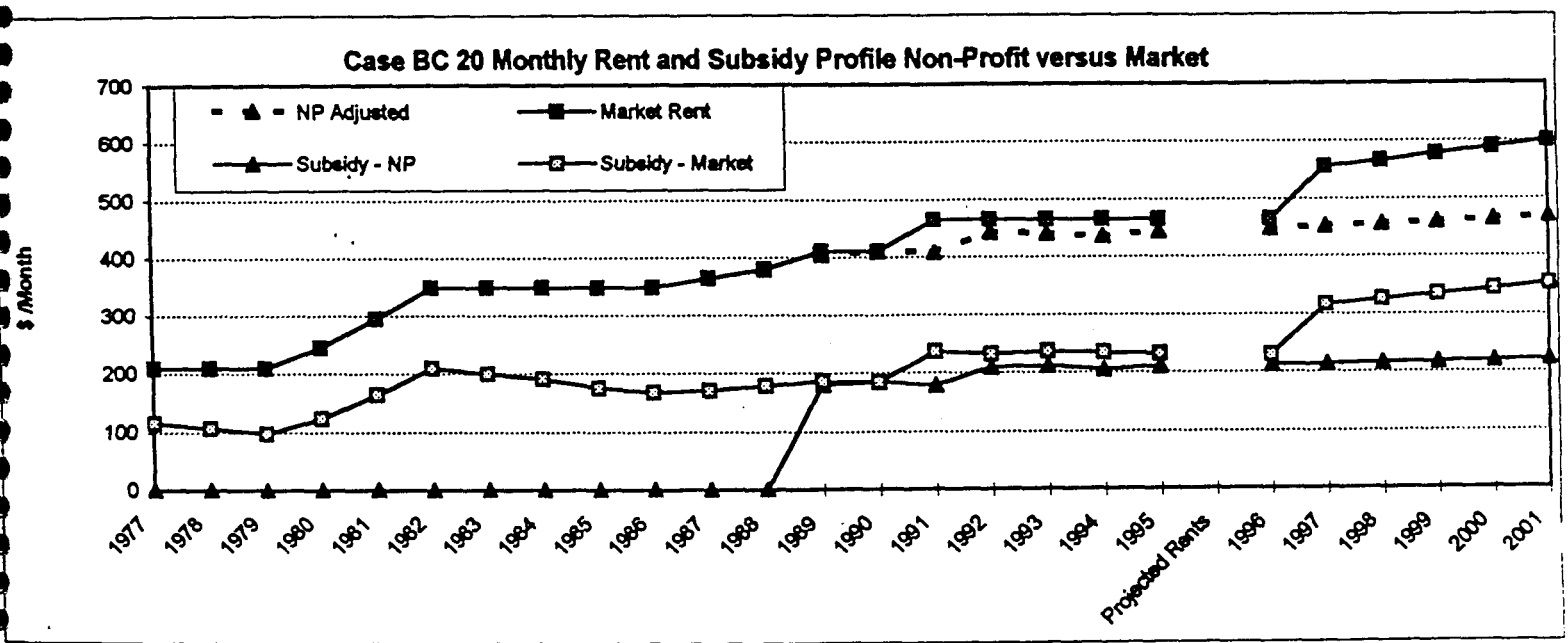
Building Form: Woodframe apartment

Location: Victoria

Units Compared: One bedroom

Programs Involved: Non-profit assisted under sec 15.1; market developed under ARP

In the eighth comparison (No. 20 in Appendix A) of one bedroom apartment units in Victoria we only have comparable information for the non-profit from 1989 to 1995. By 1989 the non-profit rent is below the market rent is below the market rent (i.e., the cross over has occurred). The differences are not great but the non-profit rent is $21 below the market rent in 1995.



Discussion 9

Year Occupied: 1978

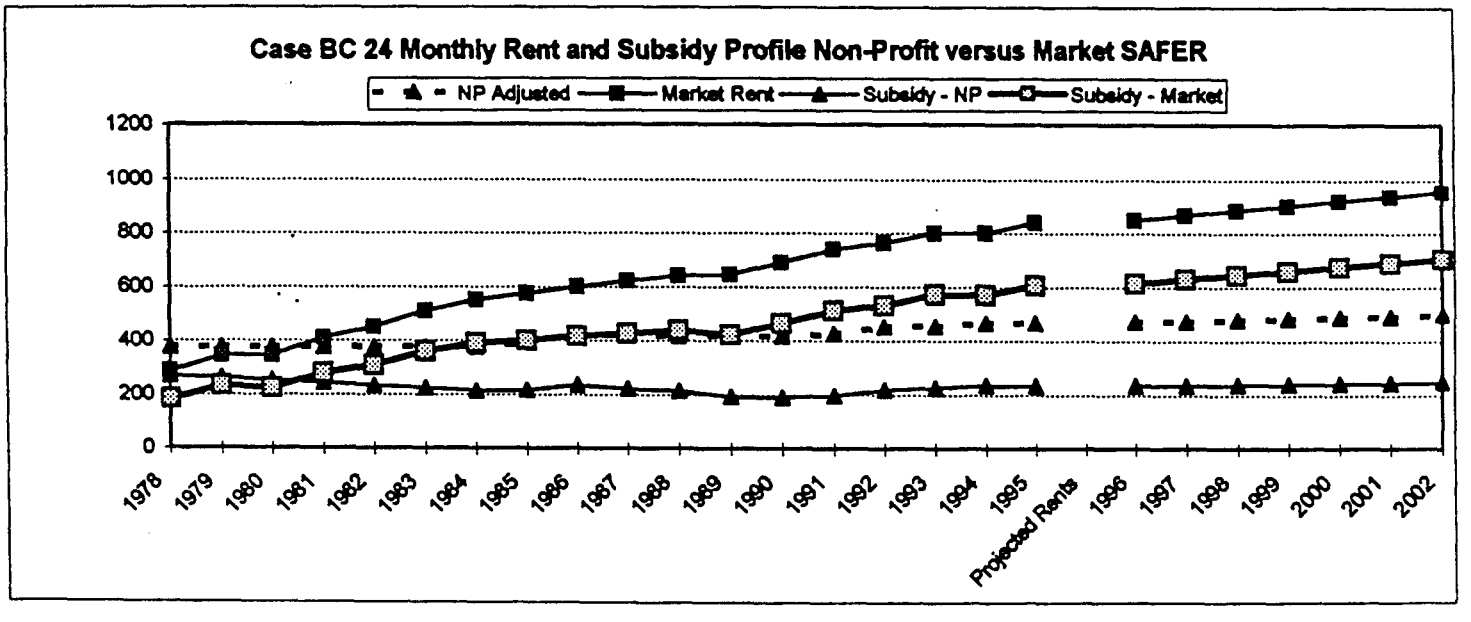
Building Form: NP: three storey elevatored woodframe/market: 17 storey highrise

Location: South Vancouver/West End

Units Compared: One bedroom

Programs Involved: NP sec 15.1/SAFER units in private apartment

The ninth comparison (No. 24 in Appendix A) has the non-profit falling below market rent in the fourth year of operation. The rent difference is only $36 in the fourth year but increases to $374 in 1995. These two projects are not matched for age and building type. They are in the same market area.



Discussion 10

Year Occupied: Both developed and occupied in the 1960s, data only available since 1978

Building Form: Masonry highrise

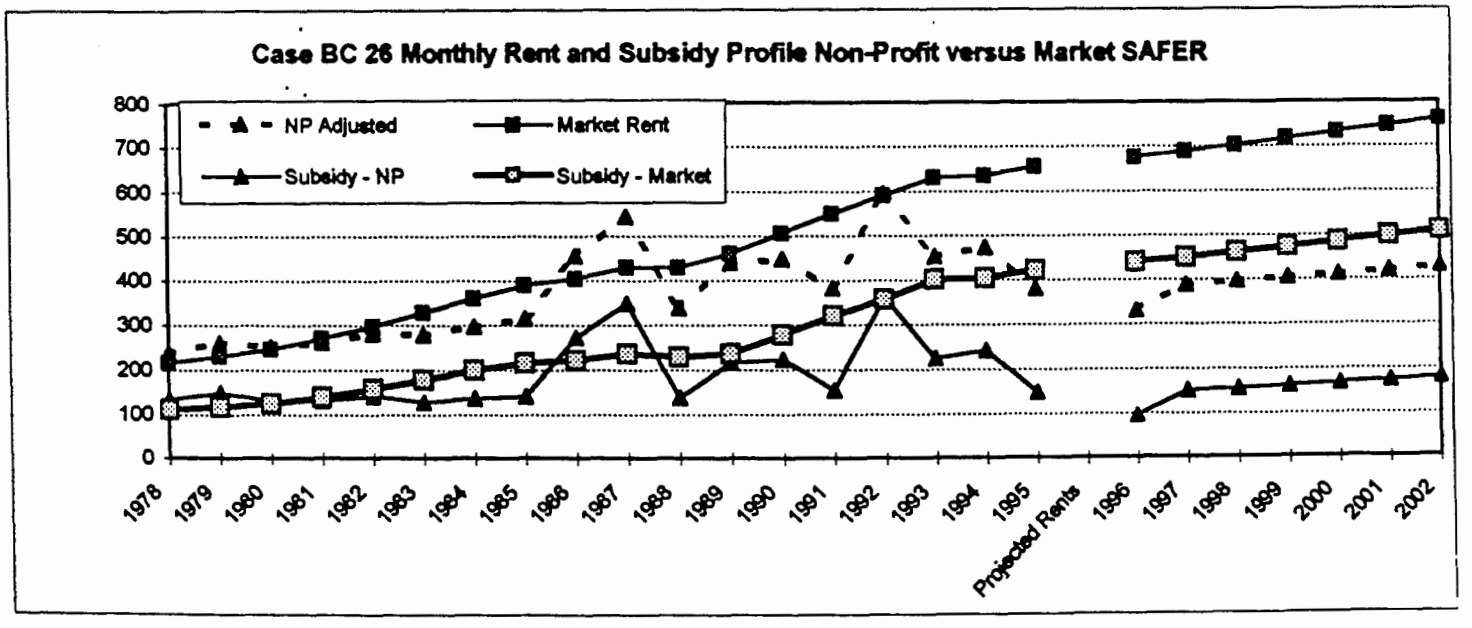
Location: Vancouver West End

Units Compared: One bedroom

Programs Involved: Sec 40 seniors/SAFER units in private apartment

The tenth comparison (No. 26 in Appendix A) is of two highrise buildings in the West End of Vancouver. The non-profit project was developed under Section 40 (later Section 79) of the NHA. The private market unit is occupied by a recipient of SAFER. These two projects are not matched for age.

Although we only have data for the period from 1978 to 1996, the non-profit rent is (on average) much lower than the market rent. In 1990, the difference was $56 and in 1996 the difference was some $346. The difference shows considerable variability since major repairs are expensed in the year they occur.



CHAPTER

5 SUBSIDY COSTS

Having established comparable rents for non-profit and market projects in the same area what are the subsidy costs for a government to assist a low-income household?

Some comparisons of subsidy costs attempt to compare different program characteristics as they might apply to different supply vehicles. For example, the costs of subsidizing a household in newly constructed non-profit projects is compared to that of subsidizing a household in older market rental units. To complicate matters, the rent geared to income charge is often different (e.g., in the non-profit the government picks up 100 per cent of the difference between what the family pays and what the unit costs as opposed to a regime where, as in many shelter allowance designs, government picks up only 70 per cent of the difference). Comparisons of these types are inherently futile since analysts are not comparing similar situations (i.e., are not comparing oranges with oranges).

To make the comparisons required by this study we assume identical households are served in both cases. The average income for households in this type of housing is not available for every year in the study period (1977-96). To create a reasonable facsimile of such a time series, the upper boundary of the first quintile of

household income as defined by Statistics Canada is used as a representative income of a potential family client. For senior citizens (bachelor and one bedroom units) we took half of this amount to approximate the lower incomes of these households. In 1988 the upper boundary of the first quintile was $16,114, somewhat higher than the mean income of households in core need ($12,000) as defined by CMHC.

Since we are interested in the subsidies over an extended period of time (25 years) we use the actual upper boundary of the first quintile for the period 1977 to 1995 for families (half this amount for seniors) and thereafter increase it one per cent per year for the full 25 year projection period. We assume the household is required to contribute 30 per cent of income to cover actual rental costs. The subsidy is the difference between the 30 per cent RGI and the market rent or the adjusted break even rent.

5.1 Examining a Stream of Subsidy Costs

Governments are interested in the ongoing costs generated by a program. Will the program become more expensive over time or will program costs even out or fall? Governments are also interested in questions about the timing of costs and often try to compare program costs over time, controlling for such things as inflation. Governments also like to know if initial costs will result in substantial long term savings and at what point these savings may occur.

Typically, estimates of program costs are projected over time. The longer the projection the less satisfying the results because everyone knows that such things as inflation rates are likely to change and no one knows exactly when or in what direction the change will occur.

In this section we present the findings from ten of the 34 comparisons. Seven different results are presented for each case. Since the numbers before 1996 (i.e.,

up to the end of 1995) are actual numbers (i.e., no projections or assumptions are involved) these are presented in nominal dollars and real dollars. To obtain real dollars the nominal dollars were inflated by the all item Consumer Price Index for the years in question. Thus the nominal sum (pre 1996) and real dollar total to end 1995 are based on historical numbers.

Since the projects start at different points in time (1977 - 1979) we projected market rents and non-profit rents to the end of a 25 year period. In most cases this involves a projection of 6 or 7 years. The details of the projection are given in Appendix A. Although we use current assumptions about inflation (2 per cent being the mid-point of the Bank of Canada's target levels) the projection period is in most cases for such a brief period of time that the projections are not very sensitive to different inflation rates.[15]

Finally, we present a figure for the estimated subsidy cost in year 25. A projection to year 25 was chosen as a compromise between making no projections at all and making projections into a distant future. We chose year 25 because it was reasonably close to the years (19 and 20) for which we have actual numbers and because it represents a convenient cut-off point.

The study results are presented in three columns: non-profit (NP), rent supplement (RS) and the difference between the two (difference). If the difference is negative non-profit is the less expensive vehicle. The graphs representing the subsidy situation are presented in the previous chapter with the rents.

15. Statistics Canada reports the consumer price index for December 1996 as 2.2 per cent higher from one year earlier.

5.2 Results of the Comparisons (Subsidies)

Discussion 1

In the first comparison (No. 1 in Appendix A) the subsidy costs (modestly) favour the non-profit to the end of 1995. The nominal difference is some $6,660 to the end of 1995.

Summary (25 Years)	NP	RS	Difference
Nominal Sum Pre 96	50335	56995	-6660
Nominal Sum Post 95	18163	27636	-9473
Nominal Total (25 Years)	68498	84631	-16133
Real $ Total to 1995	73586	77566	-3980
Real $ Value 1996 -end	16940	25762	-8822
Real $ Total (25 yrs)	90526	103328	-12802
Subsidy Difference in Year 25 Only	3148	4910	-1762

Discussion 2

In the second comparison (No. 3 in Appendix A) the non-profit vehicle is the most cost effective on all the measures for the study period.

Summary (25 Years)	NP	RS	Difference
Nominal Sum Pre 96	66343	75103	-8760
Nominal Sum Post 95	28832	47385	-18553
Nominal Total (25 Years)	95175	122488	-27313
Real $ Total to 1995	92745	99117	-6371
Real $ Value 1996-end	26674	43727	-17053
Real $ Total (25 yrs)	119419	142844	-23425
Projected Difference in Year 25 Only	4135	7266	-3131

Discussion 3

In the third comparison (No. 5 in Appendix A) subsidy costs are lower in all years but the first four. As a result the non-profit project is financially the more effective vehicle for the study period on all measures.

Summary (25 Years)	NP	RS	Difference
Nominal Sum Pre 96	48907	62863	-13956
Nominal Sum Post 95	20262	35660	-15397
Nominal Total (25 Years)	69169	98523	-29353
Real $ Total to 1995	70780	84465	-13685
Real $ Value 1996 -end	18720	32909	-14189
Real $ Total (25 yrs)	89500	117373	-27874
Subsidy Cost in Year 25 Only	2978	5476	-2498

Discussion 4

In our fourth comparison (No. 9 in Appendix A) the non-profit vehicle is the more cost-effective on all seven measures. The non-profit unit is (real dollars) $16,637 cheaper than the market unit for the period 1978 to 1995.

Summary (25 Years)	NP	RS	Difference
Nominal Sum Pre 96	21598	36902	-15304
Nominal Sum Post 95	14167	23101	-8935
Nominal Total (25 Years)	35765	60003	-24238
Real $ Total to 1995	36825	50829	-14004
Real $ Value 1996 -end	13135	21523	-8389
Real $ Total (25 yrs)	49959	72352	-22393
Subsidy Difference in Year 25 Only	2813	4189	-1376

Discussion 5

In the fifth comparison (No. 13 in Appendix A) the non-profit vehicle is the more cost-effective vehicle. Because the non-profit tracks only slightly below the market rent the differences are not as great as in some of the other comparisons. To the end of 1995 the non-profit vehicle is $3,964 cheaper than the market vehicle (real dollars).

Summary (25 Years)	NP	RS	Difference
Nominal Sum Pre 96	46408	50372	-3964
Nominal Sum Post 95	24518	30584	-6067
Nominal Total (25 Years)	70926	80956	-10031
Real $ Total to 1995	65645	68067	-2423
Real $ Value 1996 -end	22423	27896	-5473
Real $ Total (25 yrs)	88068	95964	-7896
Subsidy Difference in Year 25 Only	3233	4378	-1144

Discussion 6

In the sixth comparison (No. 14 in Appendix A) the non-profit is the more cost-effective vehicle.

Summary (25 Years)	NP	RS	Difference
Nominal Sum Pre 96	23849	35648	-11799
Nominal Sum Post 95	11449	28904	-17454
Nominal Total (25 Years)	35298	64552	-29253
Real $ Total to 1995	35016	47439	-12422
Real $ Value 1996 -end	10469	26360	-15892
Real $ Total (25 yrs)	45485	73799	-28314
Subsidy Difference in Year 25 Only	1545	4153	-2607

Discussion 7

In the seventh comparison (No. 16 in Appendix A) the non-profit is again the more cost-effective vehicle on all seven measures.

Summary (25 Years)	NP	RS	Difference
Nominal Sum Pre 96	46408	55412	-9004
Nominal Sum Post 95	24518	33631	-9113
Nominal Total (25 Years)	70926	89043	-18117
Real $ Total to 1995	65645	73683	-8038
Real $ Value 1996 -end	22423	30680	-8257
Real $ Total (25 yrs)	88068	104363	-16295
Subsidy Difference in Year 25 Only	3233	4785	-1552

Discussion 8

Because we only have a few years of data for the eighth comparison (No. 20 in Appendix A) it is not possible to compare the projects over an extended period of time. However, the non-profit unit adjusted break even rent is lower than the market rent for the study period. We estimate the non-profit subsidy cost in year 25 to be some $1,577 less than the market unit.

Summary (25 Years)	NP	RS	Difference
Nominal Sum Pre 96	n/a	n/a	n/a
Nominal Sum Post 95	15612	22835	-7223
Nominal Total (25 Years)	n/a	n/a	n/a
Real $ Total to 1995	n/a	56794	n/a
Real $ Value 1996 -end	14568	21239	-6671
Real $ Total (25 yrs)	n/a	78034	n/a
Subsidy Difference in Year 25 Only	2659	4236	-1577

Discussion 9

In the ninth comparison (No. 24 in Appendix A) the non-profit is considerably more cost effective than the market unit. The real dollar difference to the end of 1995 is $43,734. The real dollar difference for the 25 year period is estimated to be $76,162.

Summary (25 Years)	NP	RS	Difference
Nominal Sum Pre 96	48907	87967	-39060
Nominal Sum Post 95	20262	55423	-35161
Nominal Total (25 Years)	69169	143390	-74221
Real $ Total to 1995	70780	114514	-43734
Real $ Value 1996 -end	18720	51147	-32427
Real $ Total (25 yrs)	89500	165662	-76162
Subsidy Cost in Year 25 Only	2978	8484	-5506

Discussion 10

The non-profit project is the most cost-effective vehicle on all measures (No. 26 in Appendix A). To the end of 1995 (real $) it is some $11,473 less expensive than the comparable market unit.

Summary (25 Years)	NP	RS	Difference
Nominal Sum Pre 96	40975	52159	-11184
Nominal Sum Post 95	12983	39811	-26828
Nominal Total (25 Years)	53958	91970	-38012
Real $ Total to 1995	54973	66446	-11473
Real $ Value 1996 -end	11936	36736	-24800
Real $ Total (25 yrs)	66908	103181	-36273
Subsidy Cost in Year 25 Only	2146	6119	-3973

5.3 Qualitative Factors

The original study design for the CHRA called for a discussion of qualitative factors that might be considered in discussing the comparative advantage of one rental program over the other. During the design phase for that study it was recognized that the only efficient way to address this issue of quality was to use the results of a survey of tenants that was being carried out by CMHC as part of their evaluation of urban social housing programs.

A brief summary of that research can be found in the study for the CHRA.

Although the measurement of the qualitative dimensions of housing programs is difficult, on the measures used in the Canada-wide urban social housing program evaluation one can say that the results for non-profit tenants were in many cases higher than those for a comparable group of private renters or renters in rent supplement units.

During the course of this study we visited the projects and made a visual assessment of their quality. These assessments indicated no significant quality differences. Compliance audits (in the files) stated the projects were well maintained and met appropriate standards.

These results coupled with the findings (on rents and subsidies) reported in the previous chapters suggest that the non-profit vehicle and particular examples of non-profit programs can be effective and efficient while providing important contributions to dimensions measuring the quality of life.

To this point the results of our research work have been presented. We have described the pattern of rents in market and non-profit units and calculated the cost of subsidizing a household in either vehicle over the past 20 years and made cautious

estimates of the next few years. In the next chapter, we compare the non-profit vehicle to a shelter allowance.

CHAPTER

6. THE NON-PROFIT VEHICLE COMPARED TO A SHELTER ALLOWANCE

This study had its origin in the desire to compare projects matched as closely as possible. The results of these paired comparisons have been discussed in the previous two chapters. The details for all of the comparisons are presented in Appendix A.

Comparing the non-profit projects with a generalized shelter allowance program requires us to relax two conditions specified earlier. One condition was that projects be the same age and in the same market area. The second condition was that we would not examine any issues of residual value. In the discussion in this chapter these two conditions are put to one side so that we can compare a shelter allowance program with the non-profit vehicle.

Since the 34 comparison cases include some SAFER units it is possible for the 34 matched pairs to compare subsidy costs among the three program types (non-profit, rent supplement -ARP, and SAFER). The details of this comparison are presented in Appendix B. Three discount rates are used (9.5, 8.5 and 6.0 percent).[16] Net present

16. The average yield on government bonds between 1976 and 1994 was 9.64%. The average yield for the 25 and 35 year period between 1977 and 2002 (or 1977 and 2012) is hard to predict. However, it will certainly be lower than 9.64%. Accordingly a range of values is used to show the impact of different discount rates on the net present value analysis.

value calculations are made in Appendix A for 25 and 35 years without any adjustment for the realization of assets. It should be noted that the vast majority of SAFER recipients live in one bedroom units and thus the appropriate comparison for the SAFER program is one bedroom and bachelor units. Because there are only a few SAFER units in the matched pairs a larger sample of SAFER units was collected so that an average of all SAFER projects could be compared to non-profit units.

We gathered a random sample of 50 SAFER files for which reasonably complete information was available (i.e., rents were available for most of the period 1977 to 1995).

Two cases were discarded because the program participant was sharing a unit with someone else and there was uncertainty about the actual rent for the unit. For the forty-eight cases we were able to determine an average rent for SAFER (in Victoria and Vancouver) for the period 1977 to 1995 and compare this to average non-profit adjusted break even rents. The results of this analysis for Vancouver are found in Appendix C. A comparison could be carried out for Victoria but it would suffer from the fact that there are only a few non-profit projects in Victoria.

Exhibits 6.1 and 6.2 summarizing these comparisons are presented below. Exhibit 6.1, developed from material presented in Appendix B presents results for the 34 comparison cases. Exhibit 6.1 and 6.2 do not include the impact of any assets. This topic is discussed in the text which follows the two exhibits.

Exhibit 6.1
Net Present Value Comparisons (All Cases)

		25 Years			35 Years	
	9.5%	8.5%	6.0%	9.5%	8.5%	6.0%
NP	$29,764	$32,405	$40,948	$32,736	$36,316	$48,835
RS (ARP)	$32,405	$35,997	$47,001	$37,429	$42,288	$59,706
SAFER	$23,647	$26,630	$36,658	$29,196	$33,942	$51,447
NP (1 BDRM)	$25,201	$27,389	$34,452	$27,622	$30,576	$40,876

A similar table prepared from material in Appendix C, comparing a larger sample of SAFER projects with Non-Profit and Rent supplement projects in Vancouver shows the following results.

Exhibit 6.2
Net Present Value Comparisons (Vancouver)

		25 Years			35 Years	
	9.5%	8.5%	6.0%	9.5%	8.5%	6.0%
NP	$29,942	$32,640	$41,385	$33,073	$36,761	$49,695
RS (ARP)	$32,653	$35,997	$47,001	$37,429	$42,288	$59,706
SAFER	$22,170	$24,976	$34,414	$27,434	$31,914	$48,446
NP (1 BDRM)	$24,637	$26,795	$33,772	$27,082	$30,015	$40,265

The figures given in the above tables are not adjusted for the value of any assets that would be on hand if the programs were terminated (which is what a net present value analysis assumes). Thus the above figures need to be adjusted for these assets. The only program with assets that can be realized is the non-profit program. There are three types of assets: the capital value of the building, the cash on hand in the replacement reserve and the cash on hand in the operating surplus. We can consider two of these assets (the capital value of the building and the value of the replacement reserve) for which we can make a reasonable statement of their impact on a net present value

analysis.[17] Ideally, the determination of the value of these assets would be done in year 25 and 35.

While it is not possible to carry out the appraisal at this time (1997) it is possible to roughly estimate the value of the "assets" (for which we can make a reasonable estimate based on available information) which would be available if the projects were sold or disposed of after 25 or 35 years. First, the unit would have a capital value which can be estimated by the market rent the unit could generate. A second "asset" is represented by the value of the replacement reserve on hand at the day the project is disposed of. A reasonable estimate of the capital value of a one bedroom unit is $25,000 and a reasonable estimate of the available replacement reserve is $6,000. The net present value of $25,000 discounted at 9.5% for 25 years is $2,585.75. The net present value of $31,000 ($25,000 of capital and $6,000 of replacement reserve) discounted at 9.5% for 25 years is $3,206.

Applying these values to the net present values shown in Exhibit 6.1 and 6.2 results in the non-profit vehicle being more cost effective under all discount rates for 25 years and by extension it is also more cost-effective over 35 years.[18] It is worth noting that the non-profit program is more cost-effective before any consideration of assets at a six per cent discount rate for 25 years and all three discount rates when considering a 35 year period.

The graphs presented in Appendix C demonstrate two interesting lessons involved in comparing a market based program (i.e., a shelter allowance) with the non-

17. See Gitman, L. J., *Principles of Managerial Finance*, Harpers Collins, New York, 1994. In particular, Chapter 5 on *The Time Value of Money.*

18. For example, the net present value of the total program cost (before a deduction for assets) is $25,201 for a one bedroom non-profit unit. See the first column of Exhibit 6.1. Subtracting $3,206 to account for the net present value of the asset results in a final net present value of $21,995 which is less than the net present value of the SAFER program costs — $23,647.

profit vehicle. First, while it is true that the shelter allowance is cheaper in the earlier years this initial advantage disappears rapidly (as the efficiencies of the non-profit vehicle slowly gather speed). Second, the non-profit vehicle becomes considerably cheaper over time and these later savings are so great that they make the non-profit vehicle the most cost-effective over time even when one uses a net present value analysis (which is often criticized for giving too much weight to initial cost differences) to carry out the comparison.

In the next, and final, chapter we turn to a summary of the conclusions that can be drawn from this study.

CHAPTER

7 FINDINGS, CONCLUSIONS AND OBSERVATIONS

7.1 Findings — Rent

For all comparisons the non-profit adjusted break even rents are initially higher than market rents.[18] For all of the cases non-profit rents fall relative to market rents in comparable buildings.[19] For all comparisons the non-profit rents become less than market rent in a comparable building during the period under study.[20] The year in which the crossover occurs varies from the second year in one project to the 18th year in another. Most of the cross overs occur in eleven years or less.

The evidence we have gathered suggests that the "crossover" can happen much earlier than commonly supposed. The studies discussed earlier in this report, using

18. Accordingly, one would reject null hypothesis I. At the same time, it is important to note that this is not the same thing as saying that non-profit projects are more expensive than comparable newly constructed market buildings. If one adjusts the market rent (in new construction) for the ARP subsidy, the adjusted break even rent and the adjusted market rent (to take account of the subsidy) are usually within a few dollars of each other.

19. Accordingly, one would reject null hypothesis II.

20. Accordingly, one would reject null hypothesis III.

a set of reasonable assumptions, project a crossover to take place (if at all) between the 22nd and 36th year.

While there are differences among the cases the general pattern is the same in *all* cases (non-profit rents start out higher than market rents and over time fall relative to market rents). In general, the B.C. cases all crossover and the degree of difference increases by a substantial margin. For example, in 1995 (using actual data) the non-profit adjusted break even rents with one exception are between $11 and $313 per month cheaper than market rents in comparable projects.

7.2 Findings — Subsidies

Using the data one can make two conclusions about the study projects. First, one would conclude that during the study period non-profit projects on average were less expensive to subsidize than market rents when similar projects were compared.

On average, over time it is less expensive to subsidize households in non-profit projects.[21] For example, in year 25 the comparable units are some $2,220 dollars a year less costly to subsidize than comparable market units. Since the projects have a total of some 1,000 units the total savings in year 25 for these projects alone would be some $2,220,000.

21. Accordingly, one would reject null hypothesis IV.

7.3 Conclusions Related to the Theoretical Literature

In a previous chapter we mentioned four studies that used a set of reasonable assumptions to cast some light on the relative efficiency of non-profit and rent supplement (or shelter allowance) programs.

The observed results from cases reported in this study do not in general support the predictions one would make from the theoretical studies. First, the study cases show that non-profit rents do fall below market rents without making any projections into the future. Second, the crossover happens in different markets (Victoria and the lower mainland of British Columbia). Third, the crossover can occur relatively early in the life of a project (as early as the fourth year). Fourth, the differences between the non-profit rent and the market rent increase over time until they are considerable (on average more than $1,400 per year by 1995 for our comparison cases)[22].

It is not the purpose of this study to redo the theoretical literature but three comments are in order. First, as our actual cases show, there is considerable variation in the real world (e.g., the crossover year can vary from year 3 to year 14) .

These results suggest that the model developed by Hosios *et. al* and as applied in further work by CMHC should be refined. Additional work done on the model by CMHC shows the earliest a non-profit project would be cheaper than rent-supplement is year 16.[23] All of the projects discussed here become cheaper before year 16.

22. If one used regression analysis to predict the differences in year 25 the savings would be even larger.

23. Deacon, P. *Cost of a Shelter-Allowance Program in Ontario*, CMHC, Ottawa, mimeo, no date, see page 9.

It is clearly unreasonable to assume that non-profits are somehow necessarily less efficient than entrepreneurs[25]. At a minimum one would have to recognize that the entrepreneur and the non-profit manager have different goals. One is trying to maximize a rate of return and the other is trying to minimize a rental charge.

A third point has to do with the limited utility of assuming large initial differences and projecting them at constant rates (as several studies have done). This does not allow any benefit from the management of the non-profit projects or non-profit as a vehicle to show up.

7.4 Generalizing from the Evidence

For a number of reasons the study team is convinced that the results can be generalized beyond the Victoria and Vancouver (and Ottawa where a similar result was found in the earlier study for the CHRA). The logic of the argument is as follows.

First, there is considerable consistency in the data (e.g., the non-profit rents increase more slowly than market rents). Second, the comparison is as fair as possible (e.g., advantages to the non-profit such as gifts of land have been removed). Third, the search for comparable market rents resulted in the use of non-profits located in similar neighborhoods (i.e., the comparisons were not made because they favoured one vehicle or the other). Fourth, while there are differences between markets (Victoria and Vancouver) the same patterns operate. Fifth the same pattern occurs when comparing different market vehicles (e.g., non-profit with ARP and non-profit with SAFER).

Housing markets are characterized by local factors (e.g., unemployment, land costs, mobility, demographics, plant closures and so on). While there are individual

25. "Few would argue that the non-profit sector is more efficient." Fallis, G. op. cit., p. 83.

differences (e.g., between Toronto and Vancouver or Vancouver and Victoria) there is a general pattern which emerges over time as periods of recession and expansion work their effects. While circumstances will vary by market area, the strength of the pattern observed in this study suggests that a similar pattern would be observed in other markets if one collected the requisite twenty years of data.

The dynamics driving the crossover seem to involve the following considerations. The management of non-profit projects is trying to prevent rent increases. In addition, there are donations of time (e.g., by lawyers and accountants) which help keep costs down. The most important reason is probably related to the return on investment associated with market rents[25]. Although this is a complicated topic requiring a separate study, the market projects over time must provide a return on investment either as positive cash flow or as a capital gain when the project is sold or a combination of the two. Over the long term (e.g., ten to twenty years) this is probably the main difference between rents in the non-profit and market vehicles (i.e., the non-profit manager is not trying to maximize a return on an investment).

Examination of these factors should be done on an empirical basis since the evidence gathered here clearly shows that non-profit agencies can contain costs (i.e., provide accommodation at lower than market rents even when all subsidies are removed).

7.5 Observations

Although the study results rest on a small number of paired comparisons there is a considerable degree of consistency within the data which suggests that the conclusions reached here can be generalized to other market areas. There will be regional

25. The complexity of the real estate investment decision is well discussed in Jaffe, A.J. and Sirmans C.F. (1982), *Real Estate Investment Decision Making*, Prentice Hall, Englewood Cliffs.

differences but the general conclusion that non-profit projects can be less costly and that savings grow over time is extremely solid.

7.6 The Policy Debate

The policy debate about the advantages of using non-profits, rent supplements or a shelter allowance to assist households with housing needs is extremely complex. The complexity of the debate is rooted in a number of sources: history, the imprecision about the goals of housing programs, measurement problems and the different interests of various groups in society.

The findings from this study can address some aspects of the policy debate and not others. The most important contribution is a demonstration that it is possible to gather data from existing rental properties and compare a market and a non-profit vehicle and given the enormous subsidies involved (for government) an empirical study is inexpensive. Second, it is important to separate the vehicle from the design of an individual program. For example, a non-profit or shelter allowance program can be designed in many different ways and these program design differences should not obscure, as they easily can, the measurement of comparative costs.

At present, in some jurisdictions, the policy debate is about the relative cost of helping households in their existing housing as opposed to using a non-profit vehicle. To make sense of the relative costs one has to distinguish among the different goals of government housing programs and compare similar programs. If the goal is to transfer income (e.g., reduce an affordability problem) without reference to housing conditions (e.g., crowding or adequacy) then one is talking about an income transfer and the discussion should centre around the relative merits of a tax reduction or a monthly check (i.e., one is not talking about a housing program).

If the debate is about the merits of a housing program (i.e., a program to deal with affordability, suitability and adequacy) then this study can make a contribution to the debate. Where there are tight rental markets (i.e., extremely low vacancy rates) and governments wish to address supply issues at the same time as they address issues of housing need, non-profit projects can be more cost effective than subsidizing the construction of comparable market units and renting units from a private landlord. While the original study for the CHRA did not address the question of whether or not a generalized program of rent supplement or shelter allowance payments is less or more cost effective than a generalized program of support to a non-profit program, it is now possible to do so.

Traditional arguments in favour of rent supplements (and shelter allowances) have argued that households can take advantage of lower rents in existing housing units and that non-profits (by definition) are less efficient than entrepreneurs and thus even for new construction, governments would be better off using the rent supplement approach. This study casts serious doubts on both claims. The first claim assumes that households can find appropriate shelter (suitable, adequate and affordable) in the market. This assumes the units exist and are available. A recent study carried out for CMHC showed that while sufficient units exist (to house low income households) they are not available (e.g., they are occupied by households who are under consuming housing). A brief summary of this work is presented in Appendix D. Thus the claim that all low income households can be housed at average or below average market rents is (sometimes) false. The data collected for this study shows that a generalized shelter allowance such as SAFER is cheaper in the earlier years and more expensive over time.

7.7 Endnote

This study has demonstrated a number of things. First it is possible to conduct an empirical comparison of the relative cost effectiveness of two different housing vehicles. Second, the results of the empirical work contradict at least some of the

theoretical work that has addressed questions of cost effective program choice. Third, it should be possible to carry out additional empirical work which would provide information on the pattern of behaviour in different market areas. Important work needs to be done on the actual behaviour of non-profit housing agencies. What particular aspects of their operations allow them to provide accommodation (with all subsidies removed) at less than market rents?

In particular the study shows that for the comparison projects studied here, the non-profit vehicle is the most cost effective program choice. The study results rest on a solid empirical foundation which suggests that similar results would be obtained in similar markets.

The Availability of Affordable Housing

To determine the success of lower income households in accessing these lower rent units a special analysis was undertaken by CMHC in 1994.[1] Using the 1991 census data base, special tabulations were requested to identify the number of rental units by bedroom size in each city and urban centre in Canada renting at or below the average market level (the income cutoff indicator used in the CMHC core housing need model). The same data base was used to identify the number of households that require lower rent units below the same average rent threshold. This analysis found that in all CMA's in the country, for all bedroom/household sizes) there were more units available below Average rent levels than households requiring these units. However, it was also found that there were a significant number of lower income households that were not occupying these units – they were in fact occupied by higher income households.

Aggregating all centres the number of affordable rental units (i.e. below average market rent in each city) in 1991 totaled just over 1.7 million; meanwhile the number of households whose income dictated that they occupy a unit below the average rent level was only 1.25 million. There were some 830,000 households who could afford to pay more than average rent levels without exceeding 30% of income for housing; meanwhile there were 370,000 lower income households that require a below average rent unit but occupied one renting for more than the average in their city (for an appropriate sized unit for that household). In Ottawa and Vancouver , the two cities used in this analysis the percentage of lower income households occupying higher rent units were 15% and 21% respectively, despite the fact that there were significantly more units below average rent levels in the stock in both cities (41,200 and 82,400 respectively). This indicates some constraint in actually accessing lower priced units that already exist.

Another consideration is the weak landlord interest in participating in programs to assist lower income households, particularly those on assistance. The take-up of the rent supplement program in all provinces has been very low. Under the ARP program landlords had an option to contract for rent supplement for up to 25% of the units in a project. While 122,750 units were developed under the ARP program between 1975-78, only 13,012 rent supplements were made over the same period (Canadian Housing Statistics; CMHC administrative data). Under the CRSP program (1982-84) , proponents were required to offer 33 per cent of units to provinces for the rent supplement program (a federal provincial cost shared program operated by provinces). Of 24,000 CRSP units committed, only 1,526 (6 per cent) were also contracted under the Rent Supplement Program This was not entirely a reluctance on the part of landlords. In some cases, units were deemed to be too high quality and high rent and provinces chose not to exercise their option. Under the private Rent Supplement program just over 27,000 private units were contracted between 1971-85. These were typically term contracts with

1. Canada Mortgage and Housing Corporation (1994), The Private Sector as the Source of Affordable Housing, *Social Housing Consultation Working Paper No. 6*. Ottawa.

options for the landlords to renew. By 1992, only 18,765 remained active, implying some disinterest in renewal.

Finally, rents in the private sector change over time and households go on and off assistance. Households benefiting from a shelter allowance will change as will the unit that they occupy. It is likely that the rents on units actually occupied by shelter allowance clients will generally migrate to the median level.