# RESEARCH REPORT

# Mortgage Loan Insurance Assessment Report

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# MORTGAGE LOAN INSURANCE ASSESSMENT REPORT

PROGRAM EVALUATION DIVISION
CANADA MORTGAGE AND HOUSING CORPORATION

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# 1. INTRODUCTION

The purpose of this report is to propose a strategy to senior management in order to determine the appropriate focus for the evaluation of the mortgage loan insurance program. To this end, options consisting of packages of possible evaluation questions are identified in the report. Potential methodological approaches that could be used in answering these questions are also presented in annex. As background information, a description of the program is provided and a summary review of recent literature pertaining to the program is presented prior to the discussion of possible evaluation questions.

The report has been developed on the basis of an analysis of program documentation, a review of key contributions in the Canadian and American literature on mortgage loan insurance and on the basis of discussions with CMHC staff having an interest in the program as well as with representatives from federal central agencies.

## 1.1 Reasons for the Evaluation

There are several reasons for conducting an evaluation of Mortgage Loan Insurance at this time.

First, conditions in the mortgage and housing markets have changed significantly since the introduction of the program in 1954. While the program has evolved since 1954 and modifications were made to adapt it to changing market conditions, its role in light of current and prospective conditions needs to be examined.

Second, the role of public mortgage insurance has been the subject of public debate in recent years. This was the thrust of the Matthews Task Force which, in 1979, under the Conservative Government, examined the issue of whether CMHC should be privatized. More recently, the Economic Council of Canada, in its report entitled "Intervention and Efficiency", also looked at the role of public mortgage insurance. Parallel to the debate in Canada, President Reagan appointed a Commission on Housing in 1982 with a view to examining the role of the Federal Housing Administration in the provision of mortgage insurance.

Third, the Mortgage Insurance Fund has recently encountered financial problems, particularly following the AHOP and ARP experience. The appropriateness of using Mortgage Loan Insurance as a tool to meet government objectives other than those associated with the insurance itself needs to be examined. This should be viewed in the context of a potential for conflict between the objective of self-sufficiency of the MIF and the achievement of social objectives.

Fourth, public mortgage insurance is one of the most significant government programs with regard to the magnitude of risk exposure. Currently, the insurance in force under the program exceeds 33 billion dollars. Because of the size of the risk exposure to the government and in light of the liquidity and solvency problems experienced by the Mortgage Insurance Fund in recent years, there have been mounting concerns with regard to the operation of the program as well as the appropriateness of its design.

Fifth, the market share of private mortgage insurance has diminished markedly in the past two years. The reasons for reduced private sector participation and the implications of reduced competition in the mortgage loan insurance industry on the role for public mortgage insurance need to be examined.

Finally, for many of the reasons cited above, in 1981 the Cabinet Committee on Social Development directed CMHC to undertake an evaluation of public mortgage insurance, including its long-term role in the housing sector.

### 1.2 Uses of the Evaluation

There are a number of potential uses for the evaluation of mortgage loan insurance. These include:

- to assist in re-assessing the federal role in mortgage loan insurance in light of current and prospective conditions;
- to provide evidence to CMHC management on program effectiveness and the extent to which the program is achieving its objectives;
- to determine whether the current program design is an appropriate vehicle for effecting the federal role;
- to assess the impacts and effects of public mortgage loan insurance under current and prospective conditions;

- to identify opportunities for program improvements;
- to identify viable alternatives to the program and set forth a framework to assess them.

## 1.3 Scope of the Evaluation

CMHC administers three separate funds on behalf of the Government of Canada. These are: (i) the Mortgage Insurance Fund, (ii) the Home Improvement Loan Insurance Fund and (iii) the Rental Guarantee Fund. The evaluation will focus exclusively on the Mortgage Loan Insurance function of the Corporation and thereby on the Mortgage Insurance Fund (MIF). It is in that fund that premiums and fees paid by borrowers for mortgage loan insurance go and from which claims are paid to lenders for losses experienced if borrowers default. All expenses related to the operation of the program are also paid by the MIF.

As indicated, the two other funds administered by CMHC will not be the subject of this evaluation. The Home Improvement Loan Program is the subject of a separate evaluation which is currently underway. With regard to the Rental Guarantee Fund, this fund has been inactive for many years and the risk exposure to the government is now relatively limited.

## 2. PROGRAM PROFILE[1]

### 2.1 Program Description

The Public Mortgage Loan Insurance Program finds its legislative basis in Part I of the National Housing Act (NHA, 1954)[2]. Under this program, CMHC, on behalf of the Mortgage Insurance Fund (MIF), insures eligible first mortgage loans made by private approved lenders. These are private financial institutions such as chartered banks, life insurance companies, trust and loan companies, credit unions and caisses populaires authorized by the government to lend under the terms of the NHA.

The risk under the program is the borrower's default on the mortgage; this protection is granted to the lender. By shifting the risk of default from the lender to the MIF, mortgage insurance increases the attractiveness of the mortgage instrument. Further, because the insurance is tied to the mortgage and transferable with it, mortgage insurance also increases the marketability of mortgages. By making the instrument more attractive and marketable, mortgage insurance has had the effect of attracting more private funds to the mortgage market.

To some extent, there is a captive market for mortgage insurance in Canada since legislation governing lending institutions restricts most of them to maximum mortgage loans equivalent to 75 per cent of the appraised value of the property on which the loan is taken. For these institutions, any mortgage loan exceeding this limit must have the portion that

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[1] This section presents only the general features of the program. The interested reader can refer to Appendices 1 and 2 which provide more detailed information on the premium structure and on the delivery process.

[2] The program is usually referred to as "Section 6 Insurance" although Section 6 of the NHA describes only which loans are insurable.

exceeds 75 per cent insured against borrower's default. However, this does not mean that only high ratio loans are insured under the program since under some circumstances, lenders do insist on obtaining mortgage insurance on mortgage loans under the 75 per cent threshold (low-ratio loans).

To obtain the insurance protection, the borrower is charged a premium and an application fee to cover the cost of underwriting the loan. In the case of homeownership housing, the basic premium is set at one per cent for a low-ratio loan and at 1.5 per cent for a high-ratio loan. In the case of rental housing, the basic premium varies from 1.25 per cent to 2.50 per cent, according to the ratio of the insured loan to market value of the property. As indicated in Appendix 1, various surcharges can also be added to the basic premium. With regard to the application fee, a fixed amount of $100 is generally charged to the borrower, although this fee can be lower in the case of large projects.

Mortgage loan insurance helps borrowers in two ways. First, because of the insurance, a borrower can buy a home with a relatively small downpayment, he/she can repay the loan over a lengthy period of time (under the NHA, loans can be amortized over a period as long as 40 years) and thereby face smaller monthly payments and, presumably obtain a loan that entails lower borrower costs than would be the case if junior financing (a second, third...mortgage) had been secured. Second, NHA financing also provides borrowers with more liberal prepayment privileges than would be generally available under conventional financing since, under the NHA, a mortgage can be fully repaid after three years instead of after five years as specified under the Canada Interest Act.

Under most circumstances, NHA mortgage insurance provides full risk protection to the lenders. Usually, in the event of a claim, the lender,upon securing and conveying clear title of the property to the MIF will receive payment covering the principal owing when the foreclosure took place and all expenses including legal costs, accrued interest at the mortgage rate and other expenses such as hydro and heating.

The degree of risk coverage is a major distinguishing feature between NHA insurance and private insurance. Under private insurance, the lender faces more risks since a private insurer has the right to compensate the lender in either of two ways. First, as in the case of NHA insurance, a private insurer can accept title of the property from the lender and provide payment covering the principal owing and all expenses. On the other hand, a private insurer also has the right to pay 25 per cent of these amounts (20 per cent in the case of rental projects) with the lender keeping the property and facing the risks that the sale of the property may not cover all costs. This second option at the disposal of a private insurer is usually referred to as "Option B" and it serves to limit the risk exposure of a private insurer in the event of a major market disruption.

There are now only two mortgage insurers in Canada: CMHC and a private insurer, the Mortgage Insurance Company of Canada (MICC). For a few years in the 1970's, there were as many as three private insurers and their combined market share amounted to roughly two-thirds of annual mortgage loan underwriting. Currently, MICC's share represents less than 20 per cent of the insurance market.

The NHA and private insurance programs are available to a wide range of residential borrowers. NHA insurance can be obtained to finance new and existing homeownership housing; new and existing private rental projects; and new and existing social housing projects sponsored by continuing housing cooperatives and by private and public non-profit housing corporations. The financing of social housing projects has been the exclusive domain of the MIF although sponsors of these projects are allowed to obtain private insurance. This is not done primarily because of the practical difficulties that this would create to MICC in that approval from CMHC with regard to the eligibility for subsidies would have to be acquired for each of these loans.

Under NHA insurance, premiums and application fees are paid to the Mortgage Insurance Fund created under the Act and all costs and expenses incurred in operating the program as well as in settling claims are charged to the Fund.

In managing risk, mortgage insurance involves several components. These comprise underwriting activities such as risk analysis, market analysis, credit checking by lenders on behalf of the MIF, inspections and appraisals; claims avoidance and settlement operations; real estate management and property disposal; and the management of the assets of the Mortgage Insurance Fund. Details about these operations, including the criteria used to designate approved lenders under the NHA, are provided in Appendix 2.

## 2.2 Resources Allocated to the Administration of the Program

Appendix 3 provides a summary of the resources allocated to the NHA mortgage loan insurance program in 1983. The figures are expressed in staff years for the field offices and the insurance sector, including general administration.

The program in 1983 directly used 700 staff years. Insurance issuance required 455 staff years, 65 per cent of the resources; claims settlement used 64 staff years (9 per cent) and claims avoidance took 10 staff years (1 per cent). Asset administration, which includes real estate sales, necessitated some 159 staff years (23 per cent), while general administration required another 11 staff years (2 per cent). In total, including salary and overhead expenses, the cost of administering the program during 1983 amounted to 58.7 million dollars.

It would be possible, although difficult and time-consuming, to disaggregate the data presented above to show dollar expenses resulting from carrying each of the various types of operations involved in administering the program. This will be done as part of the evaluation study.

The figures quoted above exclude losses on claims experienced by the MIF. However, one should note that while in recent years losses on claims and operating expenses created substantial MIF losses, from 1954 until a few years ago, the annual growth in assets of the Fund well exceeded the cost of operation and losses on claims. In 1983, the Fund experienced a net loss of $260 million, adding to the previous accumulated loss of $253 million.

## 2.3 Evolution of the Program

A discussion of NHA mortgage loan insurance as it exists today would be incomplete without an understanding of how and why it started and without reference to its predecessor, the joint loan program and to the conditions that prevailed prior to the introduction of that program in 1935.

### 2.3.1 The Mortgage Market Prior to 1935

Prior to 1935, only those who were relatively well-off could contemplate the purchase of a home, given that by today's standards, lending practices were extremely stringent. In those days, average down payment requirements were roughly 50 per cent of the value of the property and the maximum loan-to-value ratio was legislated at 60 per cent. Blended monthly payment mortgages were not in existence prior to 1935. Instead, repayments were prescribed on a semi-annual or annual basis, with provisions for periodic payments of a fixed amount of principal, and accrued interest. Interestingly enough, ~~as~~ in today's market, mortgage terms were relatively short prior to 1935 with the common term being five years. Also as in today's market, at the end of the mortgage term, the borrower would either have to renegotiate the loan arrangements or provide a balloon payment to pay the outstanding debt in full. The practice of short-term mortgages, coupled with balloon payments at the end of the term, contributed to the substantial rise in foreclosures during the Great Depression.

### 2.3.2 The Dominion Housing Act of 1935 and the Joint Loan Program

The 1935 Dominion Housing Act marked the entry of the federal government into the mortgage field. Federal government intervention in the mortgage market in 1935 and throughout the 1940's was prompted by employment objectives as much as by housing objectives.

The emphasis on employment objectives in the 1935 Dominion Housing Act is not surprising given that the economy had not yet recovered from the Great Depression. The fact that the employment objective appeared again in the 1944 National Housing Act is also consistent with prevailing economic conditions. A major preoccupation at the time centred around the employment prospects after the war when the labour market was required to absorb military personnel returning to the labour force, as well as those displaced from the war production industry. Of course, the situation also stimulated interest in housing questions since the enforced limitation on housing production during the war and the demand for housing that would follow demobilization were likely to create a situation of severe housing shortage.

The joint loan program was thus designed to ease mortgage lending practices in order to stimulate employment through housing construction. In its initial version, the program permitted loans to a maximum loan-to-value ratio of 80 per cent of which 25 per cent was provided by the federal government. The private portion of the loan provided mainly by insurance companies, but also by trust and loan companies, had to bear a five per cent interest rate, but as the government's share was provided to the lender at a three per cent interest rate, the lender benefitted from a higher yield on his investment since borrowers were charged an interest rate of five per cent on the total loan amount. To reduce default risk to the lender, the government contracted to share losses on a fairly generous basis.

Because of its design, the program had simultaneous impacts on the supply and demand for mortgage funds. It increased the supply of funds through the direct infusion of government funds and by improving the attractiveness of the mortgage instrument through interest rate subsidies to the lender and protection against default risk. It stimulated the demand for funds by liberalizing mortgage terms and by limiting the interest rate charged to borrowers.

The joint loan program remained largely unchanged until 1954 when it was replaced by mortgage loan insurance. During its existence, the program was revolutionary in its impact on mortgage lending practices. In particular, the joint loan program had been instrumental in introducing the blended equal payment mortgage, in lengthening mortgage terms to 30 years and in raising maximum loan-to-value ratios to roughly 90 per cent soon after its inception.

### 2.3.3 The 1954 National Housing Act

In 1954, mortgage loan insurance replaced the joint loan program and housing objectives rather than employment objectives became the prime reason for government intervention in the mortgage market.

Mortgage loan insurance was introduced to ensure that the liberalization of mortgage terms achieved under the joint loan program would be maintained. However, under the new system, this would be achieved in a different way, namely by (i) facilitating the financing of high-ratio mortgages strictly with private funds and by (ii) operating the program on a self-sufficient basis rather than through the direct provision of public funds at subsidized interest rates. This had essentially been done in the United States with the Federal Housing Administration (FHA) insured mortgage program which had been in existence since the 1930's. An adaptation of the FHA model to the Canadian context thus became the policy instrument embodied in the 1954 National Housing Act.

2.3.4 Rationale for Program Self-Sufficiency

As indicated, mortgage loan insurance was designed to ensure that borrowers would continue to benefit from the liberalization of mortgage terms achieved under the Joint Loan Program but that the benefits accruing to borrowers under the new program would be provided at no cost to the government. The requirement that mortgage loan insurance be operated on a self-sufficient basis is an important element in distinguishing between the 1935 Joint Loan Program and the rationale for government intervention starting in 1954.

Prior to 1954 and for some years after 1954, funds were not flowing freely to the mortgage market. In fact, in those days, credit rationing rather than the free play of the price system was the basis upon which funds would be generally allocated to the mortgage market and to individual borrowers in the mortgage market - credit rationing being done on the basis of loan-to-value ratio in the case of individual borrowers.

Housing commentators have cited several reasons why housing credit was rationed then. Some of the reasons were:

- the preference by lenders to serve their most credit-worthy customers first;
- the inattractiveness of the mortgage instrument due to its risk characteristics;
- the long-term nature of the instrument;

. the illiquidity of the mortgage instrument;
. imperfect knowledge on the part of investors;
. price (interest rate) rigidities;
. legal and/or institutional constraints such as the constraint that prevented the chartered banks from making mortgage loans.

Because of the presence of these market imperfections, housing borrowers were unable to secure credit financing at interest rates commensurate with the risks that they presented. The introduction of NHA insurance in 1954 was aimed directly at correcting this market failure in the pricing of risk and the criteria of operating mortgage insurance on a self sufficient basis implies that the program was solely aimed at allowing borrowers to obtain financing at a price that reflected risk. This was in sharp contrast with the 1935 Joint Loan Program which had been designed to stimulate housing production and employment through (indirect) interest rate subsidies to borrowers.

Prior to 1954 and for some years even after 1954, credit rationing made the housing sector a residual market for funds which means that at any point in time, housing would only receive the amount of funds left over after other sectors of the economy had been served. Credit rationing also had the effect of making housing a counter-cyclical industry since rationing would mainly occur in periods of tight money policy when economic activity is booming while in periods of loose money policy, when the government is trying to stimulate overall economic activity, funds would flow freely to the housing sector. There are few, if any, economist who would argue that housing is still a counter-cyclical industry in the Canadian economy today and that the mortgage market is still a residual recipient of funds.

### 2.3.5 1954: The Main Legislative Changes

In order to meet the goal of ensuring an adequate supply of private funds to housing and correspondingly reducing the dependence of the housing sector on public money, two major steps were taken in 1954. First, the Bank Act was amended, allowing the chartered banks to enter the mortgage market and make NHA-insured loans. Second, to ensure that the banks would become active and significant suppliers of mortgage funds, the National Housing Act was designed primarily to meet their needs while at the same time, continuing to provide borrowers with liberal terms.

With regard to borrowers, the 1954 NHA provided them with access to high ratio loans and a statutory right to a 25-year term mortgage. To entice the banks to invest in such long-term mortgages, the mortgage insurance policy incorporated the following features:

- nearly full risk protection against default;
- a separate policy tied to each individual loan (as opposed to risk sharing with the government on a pool of mortgages);
- transferability of the policy meaning that an insured mortgage could be bought and sold; and
- the right to sell an insured mortgage to any investor subject to the mortgage being serviced by an approved lender.

These features essentially made an insured mortgage replicate a long-term risk free bond. The reasons for incorporating the features of a bond into an insured mortgage were to make the loan as marketable as possible so that an active secondary mortgage market would develop and increase further the supply of private funds by attracting other investors such as pension funds into the mortgage market. It was also felt in 1954 that an active secondary mortgage market would be essential for the participation of the chartered banks in light of what was perceived to be their need for portfolio adjustment. The theory then was that an active secondary mortgage market would allow the banks to transform their short-term liabilites (deposits) into long-term assets (mortgages) since such a market would permit them to adjust their portfolio cheaply and quickly if and when they faced liquidity problems. Of course, in the 1950's when interest rates were relatively stable, the question of interest rate risks and the resulting need for matching assets and liabilities was not a major preoccupation.

2.3.6 Mortgage Loan Insurance: Early Results

Mortgage loan insurance was not an instant success in terms of its impact in augmenting the supply of private funds. While the private sector provided most of the funds needed to finance housing construction during the first two years after the passage of the 1954 NHA, a major shortfall of funds developed in 1957 as a result of a boom in non-residential investment, thus necessitating direct CMHC lending activities on a large scale. The 1970 CMHC Annual Report contains some interesting comments about the early experience with mortgage insurance.

"Within CMHC, the housing theorists were stunned by a situation (the shortage of private funds) that seemed to deny the basic assumptions on which everyone had been working... Parliament in passing the National Housing Act 1954, had never intended that the Corporation should become a major supplier of mortgage money. Although Parliament in framing the Act allowed for such an eventuality, the purpose of the mortgage insurance arrangement was to reduce the house-building industry's dependence on public money by mobilizing private funds more effectively."(1)

To compound the problem of shortage of private funds which started in 1957, the chartered banks virtually withdrew from the mortgage market two years later.

(1) "Housing in Canada 1946-1970, A supplement to the 25th Annual Report of CMHC", pp 21.

This was due to the provision in the Bank Act which prevented the banks from making loans at an interest rate in excess of 6 per cent. The banks' withdrawal came as a result of the general rise in interest rates which by late 1959, made investment in short-term assets more attractive than mortgage lending. Given the emphasis in 1954 to encourage the chartered banks to enter the mortgage market, their rapid withdrawal from mortgage lending diminished considerably the effectiveness of mortgage loan insurance in augmenting the supply of private funds.

Starting in 1961 and until today, government's actions to increase the supply of private funds and improve mortgage market efficiency shifted back and forth from efforts to increase the liquidity of the <u>secondary</u> mortgage market to actions to improve the <u>primary</u> market through the removal of market rigidities and impediments and by broadening eligibility for NHA insurance. The sequential shift in emphasis from one market to the other is illustrated in Appendix 4 which shows a chronological list of government actions taken since 1961.

### 2.3.7 Efforts to Increase the Liquidity of the Secondary Mortgage Market

Following the banks' withdrawal from the mortgage market in late 1959, efforts were made between 1961 and 1965 to improve the liquidity of the secondary market and broaden the band of investors to compensate for the absence of the banks. To this end, CMHC was directed to hold auctions of NHA mortgages. Thirteen auctions were held between 1961 and 1965 at which $300 million of mortgages were sold, a large proportion of which ended up in pension fund portfolios.

After 1965, the emphasis shifted to improving the primary market and it was not until 1970 that attention was again devoted to the secondary market. In that year, the government created a special task force with a mandate to "explore means for increasing the access of private investors to housing finance".(1) The work of that task force resulted in the formulation of the 1973 Residential Mortgage Financing Act and the creation of the Federal Mortgage Exchange Corporation (FMEC). This Corporation was formed to act as a secondary market maker by holding a portfolio of mortgages and by being prepared to buy and sell mortgages and lend on the security of the mortgage. The FMEC was never activated.

(1) "Developing the Residential Mortgage Market - A report" Prepared by J.V. Poapst for CMHC", Volume 1, pp.1.

The thrust to improve the secondary mortgage market in order to provide lenders with a means to adjust their portfolio of long-term mortgages cheaply and quickly was consistent with the thrust of the 1954 NHA to correspondingly provide borrowers with a statutory right to a 25-year term mortgage. However, government actions over the years to promote the secondary market have had limited success for a number of reasons:

(i) because of the strong growth in assets of financial institutions resulting partly from inflation and partly from the increasing savings rate, the need to adjust portfolios as a result of liquidity problems has been minimal;

(ii) as opposed to the situation in the United States, lenders in Canada originate mortgages for their own account and because most of the large lenders operate on a national scale, the need to buy new mortgages in the secondary market is almost non-existent;

(iii) the shortening in the term-to-maturity of mortgages has greatly increased the liquidity of mortgage portfolios and correspondingly reduced the need for an active secondary mortgage market.

As a final note before closing this section, it is interesting to note that the mortgage-backed securities proposal contained in the February 15, 1984 budget represents another attempt on the part of the government to use the secondary mortgage market as a means to attract long-term mortgage funds.

### 2.3.8. Efforts to Improve the Efficiency of the Primary Mortgage Market

The thrust toward promoting the secondary mortgage market had some success in educating investors about the merits of investing in residential mortgages. However, government's actions to increase the efficiency of the primary market have had much more profound impacts in increasing the attractiveness of the mortgage instrument. Government's actions in this area included:

- shortening the term to maturity of the NHA mortgage;
- removing legislative constraints;
- broadening eligibility for the NHA mortgage; and
- removing impediments and improving the attractiveness of conventional lending.

Actions under the first category listed above - the shortening in the term-to-maturity of the NHA mortgage instrument - probably had the most significant beneficial impacts in improving the attractiveness of the mortgage instrument from the lenders' perspective. These actions -

included:

- allowing a reduction in the minimum term to 5 years in 1969;
- extending NHA insurance to 3-year term in 1978; 1-year term in 1980 and Variable Rate Mortgages in 1982.

The removal of legislative constraints was another important aspect in improving the mortgage market. In this regard, the following steps were taken:

- in 1967, the Bank Act was amended and the ceiling on bank loans was removed; and
- in 1969, the ceiling on NHA interest rates was lifted.

Various steps were also taken to broaden eligibility under the NHA and eliminate restrictions. These steps included:

- extending eligibility under the NHA to the financing of existing home-ownership housing in 1966 and to existing rentals in 1979;
- removing the loan amount maxima in 1979;
- introducing provisions to allow second mortgages to be insured under the NHA. (These provisions have not yet been enforced.)

As a result of these changes, NHA insurance has been broadened to all sub-markets in the housing sector.

Parallel to the steps taken to broaden eligibility for NHA insurance, legislative changes were made to remove impediments and improve the attractiveness of conventional lending terms. These changes included:

- . Increasing the loan-to-value ratio threshold for conventional lending from 66 2/3 percent to 75 percent (in 1964)
- . In 1967, the chartered banks were allowed to make conventional loans; and
- . In 1970, lenders were allowed to make high-ratio privately insured mortgages subject to obtaining insurance covering the portion exceeding 75 per cent of the value of the property.

There are now few rigidities left in the mortgage market - the main ones being the 75 per cent loan-to-value threshold on conventional lending and the 10 per cent limit on the banks' portfolio of conventional mortgages.

## 3. REVIEW OF RECENT LITERATURE ON PUBLIC MORTGAGE LOAN INSURANCE

The role of public mortgage insurance has been the subject of public debate in recent years. This was the thrust of the Matthews Task Force which, in 1979, under the Conservative Government, examined the issue of whether CMHC should be privatized. More recently, the Economic Council of Canada in its report entitled "Intervention and Efficiency" also looked at the role of public mortgage insurance. Parallel to the debate in Canada, President Reagan appointed a Commission on Housing in 1982 with a view to examining the role of the Federal Housing Administration in the provision of mortgage insurance. The purpose of this section is to highlight the main conclusions of these and other reports so as to provide a starting point to identify the possible questions that could be examined in the evaluation of the mortgage loan insurance program.

### 3.1 Canadian Literature: The "Matthews Report"[1]

The recommendations contained in the Matthews Report were based on the premise that the market failure which public mortgage loan insurance was designed to address - viz. the residual position of the mortgage market in the allocation of credit - has largely been corrected and thus, the mortgage market should be allowed to operate freely without government intervention. However, the authors of the report recognized that other types of market imperfections still exist - the problems of channelling funds to remote areas and that of addressing the "tilt" effect resulting from inflation - and thus noted that government intervention to address these two problems is necessary.

[1] "Report of the Task Force on CMHC", D.J. Matthews, October 1979.

With respect to the impact of inflation, the authors of the Matthews Report noted:

"Given the contribution this form of insurance has made and the uncertainty as to the nature of future impediments in the mortgage market - such as the disproportionate impact of inflation - it may be appropriate for the federal government to retain contingency powers in this area."

(Matthews Report, p.16)

Based on an analysis of current and prospective mortgage market conditions, the Matthews Task Force made the following recommendations with regard to the role of public mortgage insurance:

- "That CMHC cease writing mortgage loan insurance, except in extreme circumstances when the private market cannot supply this service in remote areas."

- "That the government provide re-insurance for the mortgage industry. Such re-insurance would be short of a government guarantee but would raise the security provided by private mortgage insurance to a level that is somewhere between that currently provided by private mortage insurance and by National Housing Act mortgage insurance. It could also be used to serve other housing needs."

(Matthews Report, p.116)

However, the authors of the report noted that some questions would have to be answered prior to implementing the task force recommendations:

> "Consideration should also be given to the market structure implication of federal withdrawal. Would such withdrawal, for example, lead to monopoly or collusion among private insurers? With proper supervision by the Superintendent of Insurance and staged privatization, this problem can reasonably be avoided but it requires careful consideration in advance."

### 3.2 Canadian Literature: The Economic Council of Canada Report [1]

Based on the analysis presented in its report, the Economic Council, like the Matthews Task Force, concluded that the market imperfection that public mortgage loan insurance was designed to address, has been corrected and thus, the need for broad government intervention is not warranted under current market conditions. Like the Matthews Task Force, the Economic Council argued that government intervention in the mortgage market should now be targetted to address two problems: (i) the shortage of funds in remote areas and

1 "Intervention and Efficiency", The Economic Council of Canada, Ottawa, 1982.

(ii) the "tilt" problem resulting from the effect of inflation.

With regard to government intervention in the mortgage market, the Economic Council made three major recommendations:

- "that CMHC gradually withdraw from the direct insurance area and offer re-insurance instead." (p. 75)

- "that governments encourage the introduction of indexed mortgages..and that CMHC offer, on a temporary basis, direct insurance of such mortgages." (p.80)

- "Government loans to native people and other persons residing in remote areas would still be required. Therefore, we recommend that governments continue to serve as lenders of last resort for borrowers who cannot otherwise obtain mortgage loans on competitive terms." (p.80)

In framing these recommendations, the Economic Council expressed the same concerns as the Matthews Task Force with regard to their implications for competition in the mortgage insurance industry. On page 75 of its report, the Economic Council stated:

> "In providing mortgage insurance, the federal government clearly performed a useful market-making function. The question now is whether, following the development of private insurance, it should abandon this field. Given the fact that there is only one private mortgage insurance company, it is desirable that NHA insurance be continued to maintain competition in a market that might otherwise be monopolized."

To increase competition in the mortgage insurance industry, the Economic Council suggested that:

> "CMHC gradually direct its activities towards re-insurance, thus opening the door to new Canadian companies or subsidiaries of foreign companies and actively encouraging their entry into the direct insurance market." (p. 75)

### 3.3 U.S. Literature: Report of the President's Commission on Housing

The most recent review of the public role of mortgage loan insurance in the U.S. is contained in the "Report of the President's Commission on Housing" which was submitted to President Reagan in April 1982. The authors of the report [1] made two important recommendations on the role of FHA insurance. These recommendations were as follows:

(1) "The Report of the President's Commission on Housing" by W.F. McKenna and C.A. Hills, Washington, 1982.

- In view of development of the private mortgage insurance industry, the Federal Housing Administration should increasingly complement, rather than compete with, the private market. FHA should provide mortgage insurance where the private market is unable or unwilling to do so, and there should be a continuing demonstration role for FHA in developing and underwriting innovative forms of mortgage instruments."

  (p.162)

- "the Federal Housing Administration should continue to insure standard unsubsidized multi-family mortgages and should perform a demonstration role with respect to innovative forms of multi-family mortgage instruments."

  (p.164)

### 3.4 U.S. Literature: The Role of Private and Public Mortgage Insurance

In addition to the three studies presented above, various authors have participated in the debate on the role of public and private mortgage insurance. In the United States, Chester Foster, Thomas Herzog and Robert Waldo have made interesting observations particularly with regard to whether mortgage insurance is a risk that the private sector can insure.

Foster and Herzog [1] have cited two reasons why governments should be involved in the provision of mortgage insurance. First, they argued that mortgage insurance serves a social purpose that cannot be met by private insurance, i.e. that of easing access to homeownership to minorities and to low and moderate income families. Second, Foster and Herzog stated that mortgage insurance involves the transfer of a fundamental risk that cannot be properly assumed by the private sector. Fundamental risk means that the hazards that affect risk are not stochastically independent and therefore cannot be diversified. In Chester's and Herzog's views, because of the presence of fundamental risks, mortgage insurance cannot be priced accurately and thus exposes private insurers to catastrophic risks.

In contrast with Foster and Herzog, Robert Waldo [2] argued that governments should not write mortgage insurance except for marginal groups of borrowers that cannot be economically served by the private sector. On the issue of whether the private sector can assume the risks related to mortgage insurance, Waldo stated that fundamental risks can be taken by the private sector by means such as re-insurance and the creation of contingency reserves.

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(1) "The Role of FHA", Mortgage Banking, November 1981, p. 29 - 39

(2) "The Role of Private Mortgage Insurance", Mortgage Banking, February 1982, p. 31 - 38.

4. EVALUATION ISSUES

As indicated in the section on the historical evaluation of the program, conditions in the mortgage market have changed significantly since 1954 when NHA insurance was introduced. The continued improvement in the efficiency of the mortgage market over the past 30 years has been the result of a number of factors, some of the key ones being:

(i) the removal of interest rate rigidities;

(ii) the elimination of institutional constraints and the resulting enlargement of the number of mortgage lenders;

(iii) the increased ability of lenders to match mortgage assets with deposit liabilities as a result of the shortening in the term maturity of mortgages; and

(iv) improved knowledge on the part of lenders and investors about the risks and rewards associated with mortgage investment resulting mainly from the lead role that NHA insurance has played over the years.

As a result of these changes, most housing commentators agree that the mortgage market has become an integral part of the capital market and can compete for funds on an equal basis with other sectors of the capital market. However, while today's mortgage market conditions are very different from those that existed in 1954, few if any housing analysts would argue that the mortgage market is now perfectly efficient. In this regard one should note that:

(i) there are still rigidities in the mortgage market as evidenced by the legislation which makes mortgage insurance compulsory for loans that exceed 75 per cent of the value of the property;

(ii) many people have argued that the private sector has failed in meeting the needs of some groups of borrowers - the main groups being those living in remote areas, and rental markets generally;

(iii) the mortgage insurance industry is a non-competitive industry with only one private supplier and as a result, government intervention in some form might be required to ensure that the mortgage loan insurance market operates efficiently.

However, the fact that the mortgage market might not be perfectly efficient today does not imply

(i) that government intervention is still needed; and

(ii) if intervention is needed, the presence of imperfections does not necessarily mean that public mortgage insurance is the most effective policy prescription under today's conditions.

### 4.1 Program Rationale Issues

The first set of evaluation issues deals with the rationale for government intervention in the mortgage market under current and prospective conditions. In particular, questions are raised with regard to the conditions under which government intervention is needed and whether these conditions exist in the mortgage market today.

#### 4.1.1 Presence of Legal Constraints

As indicated, one of the few rigidities left in the mortgage market today is the legal constraint forcing major groups of lending institutions to obtain mortgage insurance if the mortgage loan exceeds 75 per cent of the value of the property.

This restriction was designed primarily to protect the position of the depositors in the financial institutions affected and to prevent these institutions, as custodians of the savings of the public, from taking undue risks. However, the restriction has the effect of limiting these lenders in their freedom to offer high-ratio loans and to obtain a higher rate of interest than such loans would presumably command. In some sense, the 75 per cent threshold also limits the ability of mortgage borrowers to lay claim on capital market funds. This raises three questions:

(i) In light of current and prospective market conditions, is there a genuine need for mortgage insurance or is mortgage insurance an artificial product that would fade away if the 75 per cent loan-to-value restriction was removed?

(ii) Does this legal constraint still make sense today given that the need for it as a means to protect borrowers has considerably weakened with the introducton of deposit insurance?(1)

(iii) One could argue that the 75 per cent restriction prevents an optimal allocation of resources and that government intervention to offset this effect may be needed if the restriction cannot be removed. In this context, is public mortgage insurance needed as a "second best" solution to redress possible distortions created by the 75 per cent threshold? Is government intervention still needed given the availability of private insurance?

4.1.2 Unserviced Borrowers

It has been argued that public mortgage loan insurance serves client groups that private insurance reaches only partly or does not reach at all, e.g. borrowers in remote areas and rental markets generally. One of the key tasks of the evaluation will be to answer the following questions:

(1) This insurance program which is administered by the Canada Deposit Insurance Corporation, was introduced in 1967. The protection offered under the program which initially amounted to $20,000, was raised in April 1983 to $60,000.

(i) Under what conditions does government intervention to serve clients whose demands are not met by the private sector make sense and why?

(ii) If there are groups of borrowers not served by the private sector,who are these borrowers, what are their problems and why are they not served by private insurance?

(iii) Are these borrowers in a special class of risk?

(iv) Are they currently charged an MIF fee that reflects risk?

(v) What would be the premiums and application fee that they would have to pay if the NHA was restricted to serving only these borrowers?

(vi) Would there be a demand for the insurance at such premiums and application fees?

### 4.1.3 Non-Competitive Market

The mortgage insurance industry has become increasingly concentrated in recent years. Only a few years ago, there were as many as three private mortgage insurers. Presently, the industry consists of only two suppliers, CMHC and MICC and of course, if CMHC was not present, MICC would be in a monopoly situation.

In markets characterized by a non-competitive structure, government intervention to increase market efficiency might be needed. However, this is not to say that government intervention in such markets is always needed.

For example, as Fallis pointed out, a market in which there are no barriers to entry might be perfectly efficient and in the case of such markets, no government intervention might be needed. This raises the following questions:

(i) Under what conditions is government intervention needed as a means to increase market efficiency in a non-competitive industry?

(ii) Do these conditions exist in the mortgage insurance industry?

The point made by Fallis regarding the presence of barriers to entry is an interesting one and it also raises a number of questions, some of the key ones being:

(i) Given the relatively small size of the mortgage insurance market in Canada in relation to the minimal scale of operation needed by an insurer for risk diversification and viability, to what extent is the industry restricted to having an oligopolistic structure?

(ii) In markets where pure competition cannot exist, can an oligopoly be the most economically efficient organizational arrangement and in that type of market, under what conditions would there be a need for government intervention? Have these conditions prevailed in the mortgage insurance industry?

(iii) To what extent does the fact that mortgage insurance is not a growth industry (in light of declining housing requirements) discourage new firms to enter?

(iv) Is the initial investment outlay in terms of capital-reserve requirement stringent enough to discourage the entry of new firms into the industry?

(v) Does the Government of Canada guarantee attached to public insurance make the NHA product so attractive that new firms are discouraged to enter the industry by the prospects of having to compete with NHA insurance?

In much of the work that Clendening has done for CMHC, he has argued that it is necessary that the MIF be cost efficient and thereby act as a price leader in the mortgage insurance industry so as to ensure market efficiency in the provision of mortgage insurance. This raises two issues:

(i) How can the government compete fairly in the provision of a service if the public agency, in this case, the MIF, does not have to make profits, pay taxes and, is not subject to the same stringent reserve requirements as the private insurers are?

(ii) Does it make sense for the government to compete with private firms and try to entice more competition if the publicly-owned agency prices its product at cost so as to prevent the private firms from making excess profits? How could such a situation entice more competition since according to economic theory, only the presence of excess profits can result in more firms entering the industry?

### 4.1.4 Alternative Mortgage Instruments

Public mortgage loan insurance can and has been used as a tool to innovate and to facilitate the introduction of new mortgage instruments. This was the case with the Graduated Payment Mortgage. Various housing commentators (e.g. L.B. Smith and J.E. Pesando) have argued that there is a role for government intervention in this area. It can be argued that inflation for example creates a market imperfection in that high inflation and interest rates "tilt" the burden of mortgage payments towards the initial years of ownership and that the government has a role to play in facilitating the introduction of new instruments that address that problem. It can also be argued that because innovation is costly, a new product may not always be brought in by the private sector if one firm had to bear the cost of innovation and if as a result, private costs exceeded private benefits. Under those circumstances, it has been common to argue that governments should intervene if public benefits exceeded public costs.

While all this sounds fine, Fallis has argued that because of the presence of private mortgage insurance which allows for sharing and pooling the risks on new instruments, there is no need for government intervention to develop and market new types of mortgages.

This debate raises the question as to whether under current and prospective market conditions, there is a need for NHA insurance as a means to facilitate the introduction of new mortgage instruments.

4.1.5 Other Roles of Public Mortgage Insurance

Public mortgage insurance has been used to meet other government objectives. In this regard, NHA insurance has been used as a tool

(i) to assist in the delivery of social housing programs;
(ii) to improve the quality of housing and neighbourhoods, to protect the consumer and to support national energy and metrification objectives; and
(iii) to help achieve economic stabilization objectives.

The use of NHA insurance to meet these objectives raises the following questions:

(i) What is the rationale for using mortgage insurance to deliver social housing programs?

(ii) Is it relevant in light of current and prospective conditions to have consumer protection and housing quality as objectives considering for example the existence of the new home warranty programs in place, the enforcement of municipal building codes and the existence of municipal inspections? Does NHA insurance have a further incremental impact in meeting these objectives?

(iii) Considering the rigidities in the design of public mortgage loan insurance, e.g. the practical constraints in raising loan to value ratio, is NHA insurance an appropriate vehicle to achieve economic stabilization objectives?

## 4.2 Consistency of Objectives

In the foregoing section, questions were raised about (i) the possible reasons for government intervention in the mortgage market, (ii) under what conditions government intervention would be neeeded and (iii) whether these conditions exist in the mortgage market today. The possible reasons for government intervention included:

(i) addressing distortions created by legal rigidities (the 75 per cent threshold);

(ii) serving borrowers whose needs are not catered by the private sector;

(iii) increasing economic efficiency in a non-competitive market;

(iv) facilitating the introduction of mortgage contracts to address imperfections created by inflation; and

(v) helping to achieve other objectives such as housing quality, economic stabilization and assisting in the delivery of social programs.

These reasons or objectives of government intervention are the ones that are most commonly found in the literature on mortgage insurance and as it will be seen in Section 4.3, these objectives to a large extent also coincide with those that appear in official government documents. The purpose of this section is to raise questions regarding whether these different objectives can be pursued concurrently or whether for some reasons, some objectives might be incompatible with others. To think about these questions, it is useful to look at some of the possible objectives of the program in relation to the objectives of ensuring competition and of operating the program on a self-sufficient basis. In Table 1, potential conflicts between objectives are denoted by a question mark and the issues that flow from this table are presented next.

TABLE 1
Consistency of Objectives

| | Self-Sufficiency | Competition Objectives |
|---|---|---|
| Legal Rigidity | - | - |
| Unserviced Borrowers | ? | ? |
| Alternative Mortgage Instruments | ? | - |
| Delivery of Social Programs | - | - |
| Economic Stabilization | ? | ? |
| Housing Quality | ? | ? |

4.2.1 Unserviced Borrowers (Remote areas, rental housing...)

Does it make sense to try to charge the same premium to special client groups and to other groups through significant cross-subsidization

- and operate the insurance on a self-sufficiency basis?
- and encourage competition in the mortgage insurance industry?

4.2.2 Innovator Role

As a supplier of mortgage insurance, CMHC can promote innovation in the mortgage market. However, can CMHC play a role of innovator, and at the same time operate the fund on a self-sufficient basis given the risks inherent in determining the appropriate premium that should be charged on a new mortgage instrument?

4.2.3 Economic Stabilization

- How effective can public mortgage loan insurance be as a tool to stimulate housing and economic activity if it has to be operated on a self sufficient basis?

- To be an effective economic stabilization tool, public mortgage insurance must have a large share of the insurance market. Can this be reconciled with the objective of the government of promoting competition in the mortgage insurance industry.

### 4.2.4 Housing Quality

NHA mortgage insurance provides a convenient tool for the government to enforce housing quality, energy efficiency and metrification standards. However, enforcing these standards has little to do with risk assessment for mortgage insurance purposes and as a result, their enforcement by CMHC raises the cost of providing mortgage insurance. If these costs are to be recaptured by CMHC, one of two scenarios can happen. On the one hand, MICC could charge lower application fees than CMHC and thereby increase its market share. This of course would reduce the government's leverage to meet its standardization objectives. On the other hand, MICC could charge the same application fee as CMHC and under this scenario, borrowers would pay more for insurance services than they would in a purely efficient competitive market.

The issue here is whether it makes sense in an oligopolistic mortgage insurance industry for the government to try to use public mortgage insurance as a means to achieve housing quality and other social objectives.

4.3 Objective Achievements, Impacts and Effects

In the foregoing section, questions were raised regarding the rationale for the program and, in particular, concerning the conditions under which government intervention might be required and whether these conditions exist in the mortgage market today. The purpose of this section is to raise questions relating to (i) what is happening as a result of the program and (ii) whether the program is achieving what it is expected to achieve.

To evaluate a program, it is crucial of course that the results of the program be assessed in relation with what the program is intended to achieve, i.e. its objectives. Although this may sound simple, it is not the case with regard to the mortgage loan insurance program primarily because one cannot clearly establish what the government wants to achieve with the program.

In preparing this report, two major sets of objectives were found in official CMHC documents. These were extracted from (i) the 1985-86 Operational Plan and (ii) from a discussion paper prepared for Cabinet in April 1981.

In the 1985-86 Operational Plan, the objectives of the mortgage loan insurance program are stated as follows:

> "To promote the effective operation of the mortgage market and the housing market by providing leadership in mortgage insurance on a full-recovery basis, while pursuing additional objectives.
>
> Quite apart from its primary objective, however, public mortgage loan insurance has played a major role in helping achieve other public policy objectives. It has at various times in the past been a major tool of Federal public policy in helping to achieve economic objectives, through the impact of: variations in the terms of house building; consumer protection and community improvement objectives by the inspection process in achieving higher construction, siting and related standards. Since 1978, mortgage loan insurance on private loans to non-profit and cooperative housing groups eligible for Federal subsidies has also assisted in the delivery of social housing programs."

The objectives contained in the April 1981 Cabinet Discussion Paper are reproduced below:

"Continuation of public mortgage insurance permits the federal government to pursue the following objectives:

(i) Making possible the improvement of housing conditions through increasing the availability of mortgage funds by the development of a secondary market;

(ii) Supporting activities of lenders in sectors that might otherwise be neglected;

(a) remote areas

(b) low income borrowers; and

(c) modestly priced housing.

(iii) Making ownership accessible to a larger number of Canadians by permitting high ratio loans (i.e. low downpayments).

(iv) Contributing to the maintenance of housing standards.

(v) Supporting national energy objectives.

(vi) Playing a role in the development of new mortgage instruments appropriate to economic conditions.

(vii) Ensuring availability of funds for large-scale projects - in particular, rental.

(viii) Ensuring a competitive mortgage insurance industry."

A number of observations can be made about these statements of objectives. First, the two sets of objectives are not totally consistent with each other. For example, in one statement, access to homeownership is attributed to be an objective of the program, while no mention is made in the other set of objectives. Second, some of the stated objectives are relatively vague and thus difficult to interpret. This is the case for example with the word "leadership" in the statement of objectives contained in the Operational Plan. In that statement, it is not clear if "leadership" refers to CMHC taking a role of innovator in the mortgage insurance industry or whether this means CMHC as a price leader to promote the efficiency of the industry. Finally, it should be noted that some of the objectives stated in the two documents represent descriptions of what the program does rather than statements relating to what the government wants to achieve with public mortgage insurance.

The fact that there is more than one set of objectives and that these statements are relatively vague creates two dangers for the evaluation of the program. The first danger is that the program could be evaluated on the basis of an interpretation of the objectives that reflect the system of values of either the evaluation team or of the program directors involved in delivering the program rather than those of CMHC's senior management level and of the government. The second danger for the evaluation is to assess the program in relation to a set of objectives that describe what the program does rather than what the government wants it to achieve. Evaluating the program with a set of objectives that describe what the program does would make the evaluation a mere tautological statement about the success of the program. This would render the results of the evaluation useless to the clients for whom the evaluation is done.

In light of these problems, it is proposed that the first phase of the evaluation study consist of a review of the rationale for government intervention in the mortgage market in the form of mortgage loan insurance and that upon completion of this review, CMHC Management decide on the objectives upon which the program should be evaluated. Details about this proposed rationale review(1) will be provided later in the report.

4.3.1 Program Impact Issues

Normally, in an assessment report, issues that centre around the achievements of a program in relation with its objectives are dealt with separately from other impacts and effects resulting from the program. However, because in the case of mortgage loan insurance the objectives are not clearly delineated, the questions raised in this section are grouped in a different way.

(1) It should be stressed that this approach will not delay the collection and analysis of data with regard to program impacts. However, the results of the rationale review will provide the context within which the data will be analysed and conclusions made.

Instead of categorizing issues between program achievements and program impacts, the issues presented in this section are split between those that relate to the direct or expected impacts of the program and questions that pertain to whether the program has indirect or unintended effects. Chart 1 shows the likely direct and indirect impacts of the program. Direct impacts are those likely to take place as a result of the program and they tend to be self-evident. Indirect impacts, on the other hand, are those events which may not be directly attributable to the program, but may occur as a result of the program.

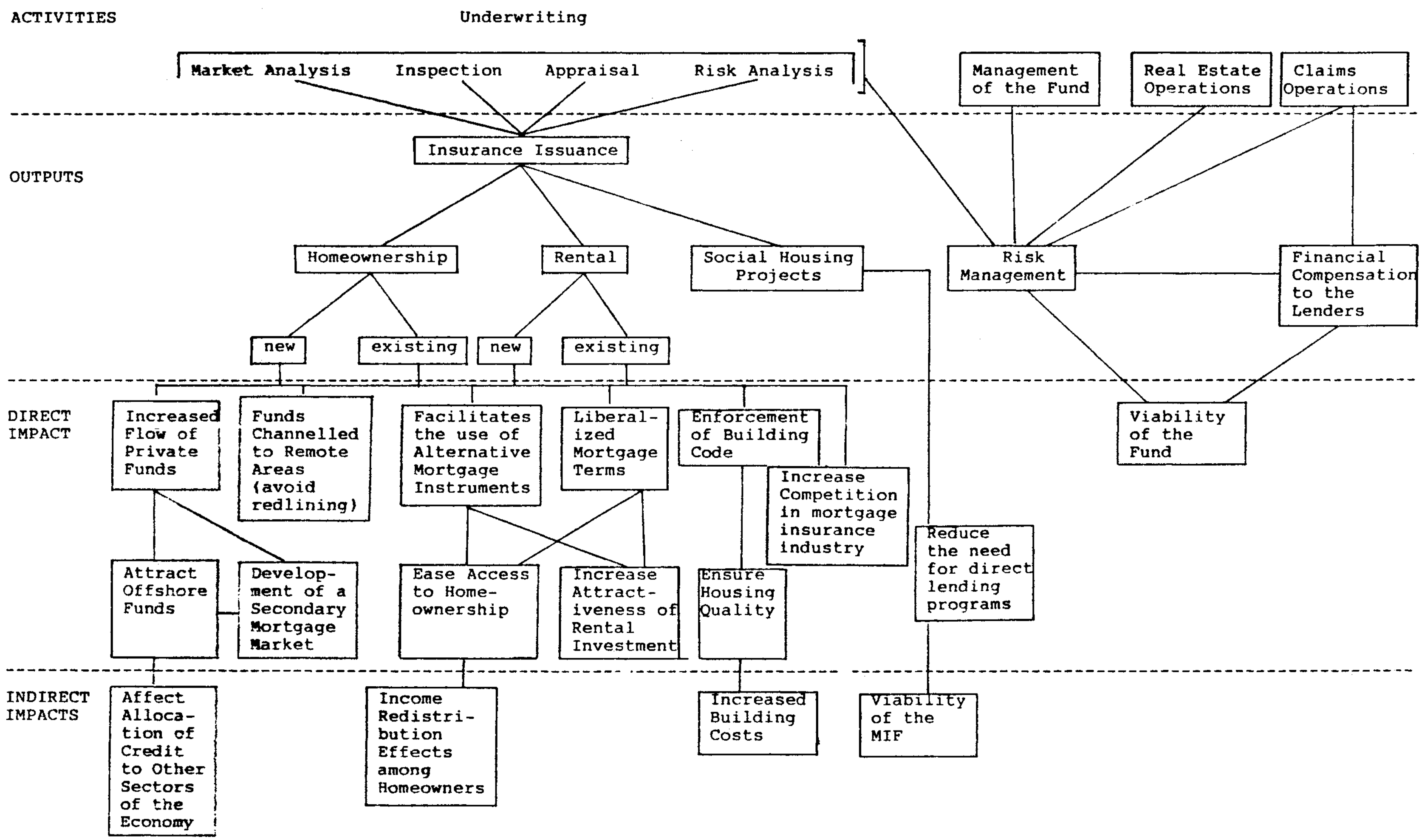
## Questions Related to the Direct Impacts of the Program

### 4.3.1 Liberalization of Mortgage Terms (Unserviced Borrowers)

Public mortgage loan insurance has had the effect of liberalizing mortgage terms by allowing borrowers to obtain high-ratio loans, amortized over a lengthy period of time and presumably at lower borrowing costs than securing junior financing would entail. However, the availability today of similar borrowing terms through the provision of private insurance raises the following questions:

- o How close a substitute are NHA insured and privately insured mortgages from the point of view of lenders and borrowers?
- o Is the Government of Canada guarantee the only distinguishing feature today between NHA insured and privately insured mortgages?
- o What is the net impact of public mortgage insurance:

CHART I


ACTIVITIES
Underwriting
Market Analysis
Inspection
Appraisal
Risk Analysis
Management of the Fund
Real Estate Operations
Claims Operations
OUTPUTS
Insurance Issuance
Homeownership
Rental
Social Housing Projects
Risk Management
Financial Compensation to the Lenders
new
existing
new
existing
DIRECT IMPACT
Increased Flow of Private Funds
Funds Channelled to Remote Areas (avoid redlining)
Facilitates the use of Alternative Mortgage Instruments
Liberal-ized Mortgage Terms
Enforcement of Building Code
Increase Competition in mortgage insurance industry
Viability of the Fund
Reduce the need for direct lending programs
Attract Offshore Funds
Develop-ment of a Secondary Mortgage Market
Ease Access to Home-ownership
Increase Attract-iveness of Rental Investment
Ensure Housing Quality
INDIRECT IMPACTS
Affect Alloca-tion of Credit to Other Sectors of the Economy
Income Redistri-bution Effects among Homeowners
Increased Building Costs
Viability of the MIF

- in easing access to homeownership?
- in increasing the attractiveness of investing in residential rentals?

4.3.2 Competition in the Mortgage Insurance Industry

Competition in the mortgage insurance industry in Canada has never attained the same degree as in the United States. In fact, in the past few years, the number of private firms in Canada has decreased from three firms to only one and the share of private insurance has declined from roughly two-thirds of the market to less than one-fifth.

- o To what extent is this due to the fact that the mortgage industry in Canada has and will continue to shrink as a result of declining housing requirements?
- o To what extent is this due to differences in competitive behaviour between the NHA and FHA?
- o To what extent has CMHC contributed to the reduction in the number of private insurers and to the decline in market share of private insurance by charging premiums that were not actuarially sound and application fees that did not reflect the true cost of doing business?

4.3.3 Self-Sufficiency of the Program

Since 1979, massive losses have been experienced by the Mortgage Insurance Fund. To what extent were these losses incurred as a result of:

- o delivering programs such as AHOP and ARP?
- o trying to meet housing quality objectives?
- o charging premiums that did not reflect risk?
- o charging application fees that did not reflect the true cost of doing business?
- o deficiencies in program operation including underwriting practices, claim avoidance and settlement and real estate administration?
- o program design features that are inappropriate under today's conditions?
- o unexpected increases in house price volatility caused by changes in demographic trends?

During the late 1970's and early 1980's, much emphasis was put by CMHC on increasing the market share of NHA insurance with a view to ensuring that the program operate on a self sufficiency basis. This raises the following questions:

- o How much insurance volume is needed to achieve risk pooling and to cover operating expenses including overhead costs given the present structure of CMHC's branch office network?
- o Does NHA insurance program operate on a self-sufficient basis within each branch office?
- o How many branch offices does CMHC need in order to operate its mortgage insurance program on a viable basis?
- o How many branch offices does CMHC need to serve borrowers in remote areas and can these offices be operated on a self sufficient basis?

4.3.4 Innovator Role

Through the introduction of the GPM, CMHC has played a role of innovator in addressing market imperfections resulting from the effect of inflation (the "tilt" problem faced by borrowers). To what extent have CMHC's efforts been fruitful in promoting new mortgage instruments?

4.3.5 Delivery of Social Programs

It has been argued that public mortgage insurance is a useful tool for the government to deliver social housing programs. This raises the following questions:

- To what extent has mortgage insurance permitted a reduction in the need for direct lending programs?
- What has been the impact on the capital market of reduced net federal government borrowing requirements?
- What is the risk exposure to the MIF resulting from insuring social housing projects?
- What measures are taken to prevent defaults under the social housing program (Section 56.1) and are these measures appropriate and cost-effective?

4.3.6 Housing Quality

- Has NHA financing had significant impacts toward a wider enforcement of the National Building Code?
- Are NHA-insured buildings of better quality than non-NHA insured buildings? Do they present less structural defects?

- Do the inspections undertaken actually improve housing construction and ensure that housing quality objectives are met?

4.3.7 <u>Mortgage Insurance as a Tool to Achieve Housing and Economic Stabilization Objectives</u>

- Mortgage loan insurance has seldom been used as a tool to achieve housing and economic stabilization objectives. However, when used for that purpose, has it shown to be an effective tool to achieve this objective? Is it a good tool for that purpose?

4.3.8 <u>Impact of NHA Insurance on the Supply of Private Funds</u>

It has often been argued that the NHA mortgage, because of its risk-free nature and marketability, is an important mechanism to ensure an adequate supply of private mortgage funds. This raises the following questions:

- What is the net contribution of the NHA mortgage in attracting private funds to the mortgage market?
- Is the privately insured mortgage a close substitute to the NHA mortgage in the primary and secondary mortgage markets?
- To what extent does the NHA mortgage attract investors as a result of the government of Canada guarantee?

- o To what extent has NHA insurance been successful in augmenting the supply of private funds through the secondary mortgage market and in particular, by attracting offshore funds? Is this attributable to the Government of Canada guarantee attached to NHA insurance or does this result from the preferential tax treatment accorded by some tax treaties?

## Questions Related to Potential Indirect or Unintended Impacts of the Program

- Potential Income Redistribution Effects

  Is the program operated in a fashion that is consistent with the objective of simply redressing a market failure in the pricing of risk or is CMHC trying to pursue income redistribution objectives through cross-subsidization of premiums and application fees?

- Potential Adverse Impacts on the Allocation of Resources to other Sectors of the Economy

  Have premiums and application fees incorporated implicit subsidies and if so, to what extent have such subsidies increased the effective demand for housing and affected the allocation of credit and resources going to other sectors of the economy?

- Impact on Building Costs

  Has the enforcement of housing standards under the program resulted in higher building costs?

4.4 Program Design and Delivery Issues

Public mortgage insurance is one of the oldest federal government programs and while some of its features, parameters and delivery process have undergone modifications over the years to adapt the program to changing conditions, many of its main design features have remained intact. For example, premiums are still collected by CMHC as an up-front fee, the lenders still receive 100 per cent protection under the program, and claims continue to be settled through a lump-sum cash payment to the lenders. The purpose of this section is to raise the following types of questions:

- Does the design of the program make sense in light of today's market conditions?
- Is the way that risk is managed appropriate?
- Can public mortgage loan insurance be improved in terms of its delivery process so that it can more efficiently achieve its objectives, including that of self-sufficiency?

Program Design Issues

### 4.4.1 Deductible

Unlike many insurance products, mortgage insurance policies do not incorporate a deductible so that the lender basically receives 100 per cent protection. This raises the following questions:

- While offering full risk protection may have been appropriate when NHA insurance was introduced, does it make sense under current conditions that all the risks be transferred to the government?
- To what extent does the absence of a deductible affect lenders' mortgage administration practices?
- Would the incorporation of a deductible be legally permissible within the context of the present legislation that forces the lenders to have a mortgage insured if the loan exceeds 75 percent of the value of the property?

### 4.4.2 Limit on Risk Exposure

Under private insurance, the risk exposure of an insurer is limited given that it can exercise "Option B" to settle a claim. However, CMHC insurance policies do not contain "Option B". This raises the following questions:

- What is the rationale for not giving CMHC the same right as given to MICC to settle claims with either "Option A" or "Option B"?
- What is the rationale for offering "Option A" given that the legislation on high-ratio lending requires only insurance on the portion of the loan that exceeds 75 percent of the value of the property?
- If the design of mortgage insurance was changed to bring in some risksharing between lenders and mortgage insurers, what would likely be the most appropriate and effective way of doing this - incorporating a deductible or putting a limit on the risk exposure of the insurer as under "Option B"?

4.4.3 Alternative to Present Claim Settlement Strategy

Claims under NHA insurance have always been settled by providing a cash lump sum payment to the lender. This is in contrast with FHA insurance in the United States which settles claims by issuing a debenture to the lender, with the debenture having basically the same yield and term-to-maturity characteristics as the defaulted mortgage.

The FHA method of settling claims is based on the recognition that claims are not randomly distributed over time, but rather occur in waves, reflecting general economic and local housing market conditions. This method of settling claims has two major advantages. First, it relieves the insurer from the necessity of maintaining large reserves in liquid form or from the necessity of quickly disposing of assets for cash as was the case when the MIF had to sell its portfolio of bonds at a loss when it was in need of cash to settle claims on AHOP and ARP projects. Second, and perhaps more importantly, the FHA method relieves the insurer from the necessity of converting immediately into cash, properties taken over in a depressed market. Instead, under the FHA claim settlement method, the properties can be taken into the balance sheet as illiquid assets and carried until market conditions are more favourable to their liquidation.

The FHA method of settling claims was considered by the architects of NHA insurance in 1954. According to Woodard, it was mainly for reasons of administrative simplicity that the method of settling claims in a lump sum cash payment was selected. This raises two questions:

- o Would the FHA method be appropriate in light of current and prospective conditions?

- o What would likely be the current financial position of the MIF if the FHA claim settlement method had been used to settle AHOP and ARP claims?

Program Delivery Issues

4.4.4 Inspections

- o How are CMHC inspections perceived by borrowers and to what extent do borrowers feel protected against construction defects when they purchase an NHA-financed house?

4.4.5 Claim Prevention Measures

- o What are the measures used to prevent claims and how effective have these measures been?

4.4.6 Real Estate Administration and Sale

- o How effective are real estate administration and sales strategies in minimizing net claims?

## 4.5 Alternatives to Public Mortgage Insurance

This last group of issues deals with whether public mortgage insurance is the best means of government intervention in the mortgage market or if alternative instruments of intervention would not be more effective to meet government objectives.

The issues presented in this section focus on two types of questions:

(i) Would other instruments of intervention be more effective than public mortgage insurance in ensuring competition and thereby increasing economic efficiency in the mortgage insurance industry?

(ii) Would direct government lending be more effective than public mortgage insurance in:

- serving special client groups
- financing social housing projects
- facilitating the introduction of new mortgage instruments

### 4.5.1 Competition in the Mortgage Insurance Industry

There are several alternatives to public mortgage insurance as a means to increase economic efficiency in a non-competitive industry. These include:

- offering re-insurance
- regulation of the industry
- "privatizing" CMHC
- removing the 75 per cent loan-to-value threshold

Re-Insurance

Both the Matthews Task Force and the Economic Council of Canada have recommended that the government gradually withdraw from mortgage loan insurance and provide re-insurance as a means to attract more firms into the industry. This raises the following questions:

- o How would re-insurance work and what would be the risk exposure to the government?

- o How effective would re-insurance likely be as a means to entice more firms to enter the mortgage insurance industry? For example, would re-insurance make possible the entry of small firms operating on a regional or even metropolitan basis?

Government Regulation

As in the case of many industries characterized by monopolistic and oligipolistic market conditions, the government could withdraw from the mortgage insurance industry and regulate instead. This raises the following questions:

- Does the maximization of social welfare require a continuation of public mortgage insurance or should public mortgage insurance be phased out and the industry be subject to existing competition laws and existing regulations governing private mortgage loan insurance?

"Privatization of CMHC"

In addition to recommending re-insurance, the Matthews Task Force also suggested that CMHC be "privatized" so as to increase the number of private firms in the industry. This raises the following questions:

- What would be the net change in social welfare if CMHC was "privatized"? What type of borrowers would be affected and to what extent?
- What would be the net benefits (or costs) of this alternative compared with other options open to the government?

Removal of the 75 Per Cent Loan-To-Value Restriction on Conventional Lending

Removing the restriction on the loan-to-value ratio is another alternative open to the government. This could lead some lenders to provide high-ratio mortgages without mortgage insurance by incorporating the risk premium into the interest rate. By allowing borrowers to choose between paying a higher interest rate or a premium for mortgage insurance, an implicit element of competition would be introduced, thus favouring increased market efficiency in the mortgage loan insurance industry.

Would the implementation of this alternative lead to an overall improvement in the efficiency of the mortgage market by forcing lenders and mortgage insurers to offer high-ratio loans at the least possible cost? Among borrowers, who would be the "winners" and "losers" under this alternative?

### 4.5.2 Direct Lending

If the government was no longer providing mortgage insurance, other means would have to be found to:

- serve groups of borrowers not served by the private sector;
- to deliver social housing programs; and
- to enable the government to play a role in facilitating the introduction of new mortgage instrument.

Direct CMHC lending would be another way of achieving these objectives. Such lending could be financed in either of two ways. First, the funds could be provided directly by the Federal Government to CMHC or alternatively, CMHC could be given the authority to issue its own bonds. The question then is whether direct CMHC lending would be a more effective means to achieve the three objectives cited above than public mortgage insurance.

With regard to the delivery of social programs, an alternative to public insurance and to direct CMHC lending would be to use private insurance directly. This could be done as evidenced by the recently-announced joint Ontario government/MICC insurance program for renovation. Still another alternative would be direct guarantees by the federal government of loans to finance social housing projects. The question is whether means such as direct loan guarantees or private insurance coupled with public re-insurance as under the Ontario/ MICC renovation program would be more effective than public mortgage loan insurance.

## 5. EVALUATION OPTIONS

In the foregoing section, specific issues that could be examined in the evaluation study were identified. The objectives of this section are (i) to group these issues into research projects (ii) to describe briefly what the Program Evaluation Division intends to do to carry these projects and (iii) to present options with regard to the scope and depth of analysis that could be given in carrying these projects. Seven possible research projects are identified in this section. These focus on the following topics:

(i) The rationale for government intervention in mortgage insurance;

(ii) the issue of unserviced borrowers;

(iii) public/private competition in the mortgage insurance industry;

(iv) the financial performance of the MIF;

(v) mortgage insurance as a means to deliver social programs;

(vi) other program impacts; and

(vii) alternatives to present program design and delivery.

### (i) Rationale Review

- Given that the objectives of the program as found in official CMHC documents are vague and ambiguous, the first task for the evaluation study will be to review the rationale for the program. This will involve examining the rationale for government intervention in mortgage insurance and identifying the conditions under which government intervention might be required.

- It is the intention of the Program Evaluation Dividion to commission a review of program rationale to four or five academics who would each prepare a report outlining their views. These four or five independent reports would provide a basis upon which the Program Evaluation Division would put together, for Management approval, a list of operational objectives against which the program could be evaluated.
- A review of program rationale would be completed by the end of October.
- It should be noted that the program rationale review will not delay the collection and analysis of data related to the impacts of the program. However, it will provide a context within which the data are interpreted and conclusions about the program are reached.

(ii) <u>Unserviced Borrowers</u>

- A second important task for the evaluation will be to assess the net contribution of public mortgage insurance in the mortgage and housing markets, in serving borrowers whose demands would not otherwise be met by the private sector. In this regard, a crucial issue to be addressed in the evaluation will be to examine whether public mortgage insurance actually addresses a problem caused by a market failure in the pricing of default risk by the private sector or whether NHA insurance only serves borrowers because of the incorporation of implicit subsidies in the application fees and in the insurance premiums.

- To perform this task, micro data on the characteristics of NHA and MICC borrowers will be needed. The feasibility of obtaining data on the characteristics of privately-insured mortgages has not been explored with MICC yet.

(iii) <u>Public/Private Competition</u>

- Another important task for the evaluation will be to examine the question of public/private competition in the mortgage insurance industry and to assess the various alternatives open to the government, and in particular:
  - whether NHA insurance should compete with or complement private insurance;
  - whether the government should consider removing the 75 percent loan-to-value restriction on conventional lending so as to provide an element of implicit competition to the mortgage insurance industry;

- whether the government should withdraw from mortgage insurance and offer re-insurance; or
- whether the government should withdraw and regulate the mortgage insurance industry.

. To analyse these issues, the Program Evaluation Division intends to commission a study to an academic with a strong background in industrial organization. On the subject of re-insurance, the Division intends to commission work to an academic to examine various possible designs that such a program could take and to estimate what re-insurance could involve in terms of risk exposure to the government as compared with the direct provision of mortgage insurance.

(iv) Self-sufficiency

. In light of the financial problems faced by the MIF, an important task for the evaluation will be to examine the extent to which the losses experienced by the MIF can be attributed to the AHOP and ARP programs and the extent to which these losses resulted from other factors.

. Much of this work will be done by the evaluation team. In addition to looking at the AHOP and ARP experience, this work will involve examining the level of insurance premiums and application fees, the impacts of changes in demographic trends and house price volatility, and the extent to which losses resulted from deficiencies in the design and delivery of the program.

(v) Delivery of Social Programs

. If the government withdrew from mortgage insurance, an important question regards the alternatives that would be open to the government to finance social housing programs. One of the alternatives of course would be for the government to resort to direct lending as a means to finance these programs. The impact that this alternative would have on government borrowing requirements and on the capital market would be examined in the evaluation.

(vi) Other Program Impacts

Another set of issues regards the impacts, both intended and unintended that the program has or may have on the housing and mortgage markets. These include the direct effects of the program

- in contributing to improvements in the quality of housing and neighbourhoods and
- in increasing the supply of funds through the secondary mortgage market

as well as the potential unintended impacts that the program may have

- in reducing the allocation of credit to other sectors of the economy through implicit premium subsidy to housing borrowers and
- in raising building costs through the enforcement of housing standards.

(vii) <u>Alternatives to Present Program Design and Delivery</u>

The final group of issues for the evaluation relates to whether there are better ways of delivering the program and whether changes could be made to the design of the program to adapt it to present and prospective market conditions.

<u>OPTIONS</u>

As indicated above, an evaluation of mortgage loan insurance could involve carrying several research projects. Howerver, given the types of issues that have been discussed in recent years (e.g. privatization, re-insurance, etc.) and in light of the questions that are raised today regarding the role of public mortgage insurance, the seven projects presented above do no all have the same priority. In selecting options, research projects were divided between those that are absolutely crucial to be performed for the evaluation to be useful to those that might have a lesser importance in the view of CMHC management and of the Government of Canada as clients for the evaluation. Given the types of issues raised in recent years and today, projects of key importance have been identified as projects (i) to (v) and thus, for the evaluation to be useful, these projects would have to be carried out indepth. As a result, the options presented below deal with the focus and depth that could be given in carrying research project (vi) "Other Program Impacts" and project (vii) "Alternatives to Present Program Design and Delivery".

5.1 Minimum Evaluation Package

Under this option, the evaluation would focus only on the first five research projects.

Cost: Part V - $250,000

Internal Resources: 2.25 staff years

Completion Date: February 1985

Advantages

- The evaluation would address all of the key issues that have been raised in recent years about public mortgage insurance.
- Officials from the Department of Finance have expressed a preference for focussing on those priority research areas.

Disadvantages

The evaluation would not provide all the information necessary to measure the total net social benefits accruing from public mortgage insurance (e.g. its effects on the quality of housing and neighbourhoods). By the same token, the evaluation would not provide sufficient information to measure the total net welfare gain or loss should the government withdraw from mortgage insurance.

This option is not recommended.

## 5.2 Options Related to Research Project (vi) on "Other Program Impacts

There are two options with regard to project (vi) and these relate to the depth of analysis that the evaluation could give in looking at issues related in particular to the impacts of the program on housing quality and on the supply of mortgage funds.

### 5.2.1 In-depth Analysis

Under this option, an in-depth analysis of these impacts would be performed based on physical inspections of NHA and Non-NHA houses and based on various surveys to measure, for example, the amount of offshore funds attracted to the mortgage market because of NHA insurance.

Additional Cost: Part V - $150,000

Internal Resources: 0.50 staff years

Completion Date: August 1985

Advantages

This would provide a high level of accuracy in measuring these impacts.

Disadvantages

This option would be costly and time-consuming. It would entail the approval of additional Part V funds well in excess of the amount that had previously been approved for the evaluation. This option is not recommended.

### 5.2.2 Analysis Based on Existing Data and Perceptual Surveys

Under this option, measurements of these impacts would be derived on the basis of existing data and from surveys of experts in the housing sector.

Additional Cost: Part V - $25,000

Internal Resources: 0.25 staff years

Completion Date: March 1985

Advantages

This option would provide reasonably accurate results and ensure a more balanced allocation of Part V and internal resources between this project and other projects that have been identified as priority.

Disadvantages

Some accuracy in measuring these impacts would be sacrificed.

This option is recommended.

## 5.3 Options Related to Research Project (vii) on "Alternatives to Present Program Design and Delivery"

The options presented in this sub-section related to whether the evaluation should focus only on measuring the extent to which deficiencies in program design and delivery may have contributed to MIF losses or whether, in addition to that, the evaluation should also explore if there are better ways of delivering the program and better designs.

### 5.3.1 Focus on Impacts on MIF

Advantages

This would focus the evaluation on the key issues and ensure that resources are not wasted if a decision was taken to withdraw from mortgage insurance.

Disadvantages

The evaluation would provide little or no useful results to implement modifications to the design and delivery of the program.

Additional Cost: None (this expenditure was included in the "Minimum Evaluation Package" described in sub-section 4.1 above)

This option is recommended.

5.3.2 <u>In-Depth Analysis: Impacts on MIF and Program Improvements</u>

<u>Advantages</u>

The evaluation could provide useful results to improve the design and delivery of the program.

<u>Disadvantages</u>

Under this option, some of the work might be irrelevant if major revisions were made to the concept of mortgage insurance. In addition, this option could lead to overlaps between the evaluation study and the work carried out by the MIF Task Force and by the Program Operation Audit.

Additional Cost: Part V - $50,000

Internal Resources: 0.5 staff years

Completion Date: July 1985

This option is not recommended.

## 5.4 Summary of Options

| Research Areas | Minimum Evaluation Package | Recommended Package | Full-Fledged Evaluation |
|---|---|---|---|
| Basic Activity | In-depth Analysis - Research Projects (i)to(v) | | |
| Analysis of "Other Program Impacts" | No Analysis | Analysis Based on Existing Data | Analysis Based on Data Derived from New Surveys |
| Program Design and Delivery Issues | Focus on Impacts on MIF Losses | Focus on Impacts of MIF Losses | Impacts on MIF Losses and research on alternatives to present program design/delivery |
| Costs | | | |
| Part V | $250,000 | $275,000 | $450,000 |
| Internal Resources | 2.25 staff years | 2.50 staff years | 3.25 staff years |
| Completion Date | February 1985 | March 1985 | September 1985 |

# APPENDIX 1

## PREMIUM STRUCTURE

## APPENDIX 1
## PREMIUM STRUCTURE*

The cost of mortgage loan insurance to the borrower is composed of two parts:

1) an underwriting fee of $100 for the first fifty units to insure and of $50 for subsequent ones; and

2) an insurance premium calculated as a percentage of the insured loan; this percentage is composed of a basic premium and of surcharges; both elements are different for homeownership and rental.

Homeownership

The basic premium for homeownership loans varies according to the loan-to-value ratio: it is 1 per cent for a loan representing 75 per cent or less of the appraised value of the property and 1.5 per cent otherwise.

However, premium surcharges, similar to the two groups, can be added to this basic premium in the following cases[1].

| | Percent of Loan Amount |
|---|---|
| - instalment loan | 0.25 |
| - non-residential part of a loan | 1.00 |
| - VRM and GPM | 0.25 |
| - instalment loan on condominium | 2.00 |

* The two premium structures presented here have recently been changed but the new structures are still not in force.

[1] The statutory maxima are 2.5 per cent for new homeownership housing and 2.0 per cent for existing homeownership.

Rental

On rental housing, the premium structure makes provision for six basic premiums chosen according to the ratio between the loan amount and a base loan. This base loan is set at 85 per cent of the market value of the property. Basic premiums are as follows:

| ratio subject loan/base loan | Percent of loan amount |
|---|---|
| Up to and including 1.00 | 1.25 |
| From 1.00 to 1.10 included | 1.50 |
| From 1.10 to 1.20 included | 1.75 |
| From 1.20 to 1.30 included | 2.00 |
| From 1.30 to 1.40 included | 2.25 |
| From 1.40 to 1.50 included | 2.50 |

Surcharges can also be added to the basic premium in the following instances[1].

| | Percent of loan amount |
|---|---|
| - instalment advances prior to completion | 0.75 |
| - instalment advances prior to full occupancy | 1.25 |
| - instalment advances for non-residential component | 1.00 |
| - GPM | 0.75 |

[1] The statutory maxima are 5.5 per cent for new rental housing and 3.5 per cent for existing rental.

# APPENDIX 2

## PROGRAM OPERATIONS

## APPENDIX 2

## Program Operations

This appendix briefly outlines the main operational features of the program. However, because it is not intended to be a state-of-the-art review of the program procedures, the reader should note that the appendix does not fully reflect the complexity of the program operations and the differences in practices that exist from office to office (regional and local). The program operation process can be divided into four components: the designation of approved lenders, underwriting, claims and real estate operations.

### Underwriting

- The delivery process is engaged by the lender who completes the form entitled "Request - Underwriting to Insure" and sends it to CMHC underwriting services. This form, with required attachments, provides all relevant information for the underwriting process.

- The underwriting approach is conditionned by the complexity of the proposal which is influenced by the elements of the proposal (e.g. type of property, loan amount, number of units, etc.), market conditions, the quality of the applicant, the local office expertise, etc.

- In the case of existing homeownership, the underwriter specifies the level of risk that the loan represents according to a series of criteria:
  - equity
  - quality of the borrower
  - quality of the property
  - market conditions

  The underwriting process for existing homeownership recognizes two levels of risk (low and high). This risk determination influences the way the application is processed.

- In the case of more complex applications, a more extensive team review is used. It involves a number of aspects: appraisal, market analysis, architecture, etc. The underwriter is the ultimate synthetiser of that information.

- Using all of this information as input, the underwriter either approves or rejects the application. This decision will be taken by a different decision level within the Corporation, according to the loan amount involved and the degree of authority given to the regional office by the national office and to the branch office by the regional office; in any case, an application for insurance on a loan of more than $500,000 will be monitored by both the regional and national offices.

- If approved, the undertaking to insure is issued and changes are processed as part of the normal course of action.

- A number of technical inspections will be performed on the building.

  - Certain inspections are done before approval or rejection: they are directed to existing buildings.

  - In the case of existing singles, the inspections' main objective is to ensure that the useful life of the dwelling is as long as the mortgage loan; low risk singles however are only appraiser-inspected so that no structural inspection is performed.

- In the case of existing multiples, the same concern exists but is complemented by the necessity for those buildings to comply to the Corporation's minimum standards. Consequently, these inspections are much more extensive than those carried out on singles. All completion loans, of which existing building loans are part, are processed in this way.

- Instalment loans are more thoroughly inspected, the conditions permitting a closer look at structural elements and an impact on how things are actually done.

- New multiples are scrutinized from the plan phase. Inspections are conducted monthly at the beginning and at the end of construction and weekly during the more important middle phase.

- New singles are not reviewed at the plan phase. They are inspected at the four compulsory phases (excavation, foundation, ready-for-lath, final) for owners-builders and for small builders. Large recognized builders are subject to a monitoring system whereby inspectors visit a selection of dwellings at varying non-compulsory stages.

- Instalment advances are approved by CMHC and the approved amount at any point in time is a function of the percentage of completed construction as estimated by CMHC's inspectors.

- If the loan is taken by a builder and simply transfered to the eventual purchaser, no change is made on the policy and no new underwriting analysis is carried out. The same rule applies to any transfer of mortgage loan.

Claims Avoidance and Settlement

- The lender is asked to periodically report on the state of his aggregate NHA-insured portfolio.

- If the borrower fails to make payments, the lender will try to make an arrangement with him. In some circumstances, CMHC may intervene in these discussions with the objective of trying to work out an arrangement and thereby avoid a claim.

- Lenders traditionally wait for a certain period before starting any legal action against a borrower in arrears: commonly two months in the case of rental loans and three months for homeownership loans. Default can be caused by factors other than arrears in payment, such as the use of a property for purposes other than those for which the mortgage was granted, or non-payment of municipal taxes. When default appears to be definite, the lender chooses the next course of action.

- In the most common case, the lender forecloses and obtains title on the property. This title is turned over to CMHC which will pay the lender the amount covering:

  - principal owing when foreclosure proceedings or other legal remedies were started;

  - other borrowers' charges such as hydro and heating;

  - interest at mortgage rate for up to a maximum of 18 months and if necessary, at mortgage rate less 2 points for an additional period not to exceed six months;

- legal costs involved in acquiring title.

CMHC must approve all costs.

- Two other cases are possible:

  - the lender can dispose of the property directly and claim the deficiency in sale; or

  - CMHC can accept assignment of the lender's mortgage which then permits the Corporation to pursue court action against the borrower and/or guarantor on the covenant.

- A claim is to be made within 45 days of the lender's acquiring title to the property or within 30 days if mortgage is assigned to CMHC or if a deficiency settlement is used.

Real Estate Management

- CMHC will thereupon either manage the property or sell it for an amount as close as possible to its appraised market value. If appropriate, CMHC will make the necessary improvements to the building in order to minimize the loss on sale.

- Small properties are sold on the market through real estate agents while large properties are offered to a limited number of potentially interested parties through a process known as "Request for Proposal" or other sales techniques.

<u>Designation of Approved Lenders</u>

- CMHC establishes standards governing the terms and conditions under which a loan is insurable. Similarly, the Corporation determines which lenders will be approved for issuing NHA insured loans, based on certain financial and management criteria.

- Companies eligible for acceptance include banks, loan, insurance, trust and other companies or corporations, trustees of trust funds, credit unions and other co-operative societies. This is providing they are authorized to lend money on the security of real or immovable property, that they have a minimum of $500,000 in unimpaired capital and are incorporated federally or provincially.

- Lenders must demonstrate that they have the resources and administrative practices in place to originate mortgages which follow the policies and procedures of the National Housing Act and National Housing Loan Regulation.

# APPENDIX 3

## RESOURCES ALLOCATED

## TO THE PROGRAM

APPENDIX 3 - RESSOURCES USED IN 1983 (STAFF YEARS)

| ACTIVITY | SUB-ACTIVITY | COSTABLE UNIT | FIELD OFFICES | OPERATIONS SECTOR | TOTAL |
|---|---|---|---|---|---|
| Insurance | Issuance (sec. 6&7) | Rental - new | 32.6 | 1.7 | 34.3 |
| | | Rental - existing | 30.0 | 1.7 | 31.7 |
| | | Homeowner - new | 127.8 | 1.8 | 129.6 |
| | | Homeowner - exis | 206.6 | 1.9 | 208.4 |
| | | Homeowner - condo | 13.4 | 1.8 | 15.2 |
| | | Non-profit & Co-op | 36.2 | 1.5 | 37.7 |
| | | Second mortgage | 0.6 | 1.7 | 2.3 |
| | | MIF init. - general | --- | --- | --- |
| | SUB-TOTAL | | 442.9 | 12.2 | 455.1 |
| | Settlement (Sec. 8) | Singles and Condos | 19.0 | 33.7 | 52.7 |
| | | Multiples | 3.7 | 5.3 | 9.0 |
| | | Non-profit & Co-op | 0.2 | --- | 0.2 |
| | | Second mortgage | 0.1 | --- | 0.1 |
| | | Direct loans | 1.2 | 0.4 | 1.6 |
| | SUB-TOTAL | | 24.2 | 39.5 | 63.7 |
| | Claims Avoidance (Sec. 8) | Singles and Condos | 0.7 | 2.5 | 3.2 |
| | | Multiples | 2.8 | 3.3 | 6.1 |
| | | Non-profit & Co-op | 0.2 | 0.1 | 0.3 |
| | | Second mortgage | 0.2 | 0.2 | 0.4 |
| | SUB-TOTAL | | 3.9 | 6.0 | 9.9 |
| SUB-TOTAL ($44,802,273) | | | 471.0 | 57.7 | 528.7 |
| Asset Administration (Sec.9) | Property Administration | Singles | 59.0 | 1.7 | 60.7 |
| | | Condos | 25.9 | 2.1 | 28.0 |
| | | Multiples | 17.8 | 4.0 | 21.8 |
| | | Non-profit & Co-op | 0.1 | --- | 0.1 |
| | | Second mortgage | 0.0 | --- | 0.0 |
| | SUB-TOTAL | | 102.7 | 7.8 | 110.5 |
| | Property Disposal | Singles and condos | 33.8 | 2.5 | 36.3 |
| | | Multiples | 5.3 | 5.4 | 10.7 |
| | | Non-profit & Co-op | 0.6 | 0.4 | 1.0 |
| | | Second mortgage | 0.4 | --- | 0.4 |
| | SUB-TOTAL | | 40.1 | 8.3 | 48.4 |
| SUB-TOTAL ($13,003,570) | | | 142.8 | 16.1 | 158.9 |

| | | | | |
|---|---|---|---|---|
| General ad-ministration (Sec. 9) | GPM Quick settl..... | 1.0 | --- | 1.0 |
| | Other mortgage adm.. | 6.2 | --- | 6.2 |
| | Other admin......... | 3.4 | 0.6 | 4.0 |
| SUB-TOTAL | | 10.6 | 0.6 | 11.2 |
| SUB-TOTAL ($871,290) | | 10.6 | 0.6 | 11.2 |
| TOTAL | | 624.4 | 74.4 | 698.8 |

# APPENDIX 4

## PROGRAM EVOLUTION

## 1954 - 1984

## APPENDIX 4
## PROGRAM EVOLUTION
## 1954-1984

<u>1954</u>
- National Housing Act - Mortgage Loan Insurance
- Bank Act amended allowing banks to make NHA loans

<u>1961 - 1965</u>: <u>Thrust to increase the liquidity of the secondary market</u> - through CMHC mortgage auctions

<u>1964 - 1970:</u> <u>Thrust to remove rigidities in the primary market</u>

1964
- The loan-to-value threshold on conventional lending was raised from 66 2/3% to 75%

1966
- The NHA maximum interest rate formula was altered
- Existing home ownership housing eligible under the NHA

1967
- The Bank Act was amended and the 6% interest rate ceiling on bank loans was removed
- The banks were allowed to enter the conventional mortgage market

1969
- The NHA interest rate ceiling was removed
- The NHA minimum term was reduced from 25 years to 5 years

1970
- The lenders were allowed to make high-ratio conventional loans - thus opening the mortgage loan insurance market to the private sector

<u>1970 - 1973:</u> <u>Thrust to Improve the Functioning of the Secondary Market</u>

1970
- Creation of the Special Project Team on New Financing Mechanisms and Institutions

1973
- Passage of the Residential Mortgage Financing Act: Creation of the Federal Mortgage Exchange Corporation - Formation of private Mortgage Investment Companies

<u>1974 - 1983</u>: <u>Thrust to improve the efficiency of the primary market</u>

1975
- Insurance of loans under AHOP and ARP - representing to some extent an attempt to correct a market imperfection created by the impact of inflation

1978 - Minimum term reduced to three years
- Insurance of GPM loans

1979 - Insurance extended to include financing of existing rentals
- ceilings on loan amount lifted

1980 - Minimum term reduced to one year

1982 - Variable Rate Mortgages eligible for NHA insurance
- Passage of provisions for insurance of second mortgages

1984 (February 15th Budget)
- Proposed amendment to the Canada Interest Act
- Mortgage-Backed Securities proporal

# APPENDIX 5

## METHODOLOGY AND APPROACHES

PROGRAM TIONALE

| ISSUES | HYPOTHESIS | POTENTIAL METHODS | DATA SOURCES |
|---|---|---|---|
| Program Rationale | Government intervention in the mortgage market in the form of public mortgage insurance makes sense under current and prospective conditions. | Determine the reasons why government intervention in the mortgage market might be required, under what conditions intervention would be required, and assess (or indicate how one could assess) if the conditions that would necessitate intervention exists or are expected to exist in the mortgage market during the balance of the 1980's and in the 1990's. | Rationale review based on a survey of selected (1)(2) academics having a sound knowledge in welfare economics. The academics will be advised to do any relevant emporical work solely on the basis of readily available data and methodologies. |
| Consistency of objectives | CMHC cannot operate the MIF on a self-sufficient basis, compete fairly with MICC, and successfully pursue social objectives. | Identify the factors, if any, which would prevent the program from meeting all of its objectives simultaneously. | This will form part of the rationale review commissioned to academics. |

1. It is proposed that a review of program rationale be commissioned to four or five academics who would each prepare a report outlining their views. These four or five independent reports would serve as a basis to identify the objectives against which the program should be evaluated.
2. The rationale review is one of several tasks to be performed in the evaluation. It will not interfere with these other tasks and many of these tasks will be performed concurrently with the rationale review.

## IMPACTS AND EFFECTS

| ISSUES | HYPOTHESIS | POTENTIAL METHODS | DATA SOURCES |
|---|---|---|---|
| The 75 Per Cent Loan-To-Value Threshold on Conventional Lending | Mortgage insurance is an artificial product created by the 75% threshold. | Estimate what would likely be the demand for mortgage insurance if the 75 per cent threshold was removed.<br><br>Estimate the extent to which lenders with large mortgage portfolios would make uninsured high ratio loans. | Caisses populaires/credit unions* lending behaviour compared with other lending institutions. NHA and MICC insurance data.<br><br>Survey of mortgage lenders. |

* The Caisses Populaires and credit unions are not subject to the 75% threshold.

IMPACTS D EFFECTS

| ISSUES | HYPOTHESIS | POTENTIAL METHODS | DATA SOURCES |
|---|---|---|---|
| Unserviced Borrowers | NHA insurance serves borrowers whose demands are not met by the private sector. | Identify those borrowers that are served by NHA insurance and not served by MICC.<br><br>Examine the socio-economic profile of "unserviced borrowers"<br><br>Identify the reasons why these borrowers are not served by MICC. | Alternative # 1:<br>NHA/MICC micro data on borrowers' characteristics.*<br><br>Alternative # 2:<br>Lenders' data on borrowers'* characteristics.<br><br>Alternative # 3:<br>Discussions with housing experts. |
| | The fact that some borrowers are not served by MICC does not reflect a market failure but results from the fact that the premiums charged by CMHC to these borrowers do not reflect risks. | Test if the experience associated with insuring loans to these borrowers is significantly different from the experience in insuring loans to other borrowers. | NHA insurance data.<br><br>Regression analysis. |
| | | Actuarial analysis to determine if the premiums reflect risk in each class of risk (e.g. urban areas, remote areas, rental housing...) | NHA insurance data. |

*Whether data on the characteristics of MICC borrowers can be obtained directly from MICC, or alternatively from the lenders, has not yet been explored.

IMPACTS AND EFFECTS

| ISSUES | HYPOTHESIS | POTENTIAL METHODS | DATA SOURCES |
|---|---|---|---|
| Unserviced Borrowers (Cont'd) | | Estimate if there are significant differences in house price volatility in remote areas as compared with urban centres and in rental markets as compared with home ownership markets. | MLS, Royal Trust, Teela data. |
| | | | Use an option-pricing model to estimate premiums. |
| | | Compare Canadian and U.S. experience and profile the groups of borrowers not served by private insurance in the two countries. | Review of U.S. literature and discussions with U.S. mortgage insurance industry experts. |
| | Some classes of borrowers are not served by MICC because the application fees charged by CMHC do not reflect the true cost of originating insurance policies. | Measure the cost of initiating insurance policies by categories of borrowers, e.g. in remote areas, for large rental loans, etc. | Work measurement study. |
| | | | NHA administrative and financial data. |

| ISSUES | HYPOTHESIS | POTENTIAL METHODS | DATA SOURCES |
|---|---|---|---|
| Competition* | Given the small size of the mortgage insurance market in Canada, the industry is restricted to having an oligopolistic structure. | Estimate minimum volume of activity needed to operate a branch office and estimate total volume of activity needed for risk diversification. | NHA administrative and financial data.<br><br>Work measurement study by CMHC branch office. |
| | | Compare Canadian and U.S. mortgage insurance industry and estimate the size of the smallest firms in each country in the past 15 years. | Annual reports of private insurance companies. |
| | Mortgage insurance industry is a "contestable" market in that there are no barriers to entry. | Identify the requirements that new firms must meet to enter the mortgage insurance industry and compare degree of "contestability" of the mortgage insurance industry with markets that are traditionally regarded as contestable. | Documentation from and discussions with the Department of Insurance.<br><br>Theoretical discussion. |
| | Private firms have been leaving the mortgage insurance industry because the market has and will continue to shrink. | Review competitive strategies available to firms in declining industries and assess the extent to which these strategies have been used in the mortgage insurance industry. | Theoretical discussion.<br><br>Discussions with mortgage market experts. |

*Much of the work related to the issue of competition will be commissioned to an academic with a strong background in industrial organization.

| ISSUES | HYPOTHESIS | POTENTIAL METHODS | DATA SOURCES |
|---|---|---|---|
| Competition (cont'd) | NHA insurance provides unfair competition to private insurance because:<br><br>i) the MIF is tax exempt<br>ii) the MIF does not have to show a profit<br>iii) the MIF is not subject to the same stringent reserve requirements as MICC<br>iv) NHA insurance offers "Option A" and<br>v) NHA insurance carries the Government of Canada guarantee. | Review and compare historical evolution of the Canadian and U.S. mortgage insurance industries.<br><br>Compare public/private competitive environments in Canada and the U.S. | Review of Canadian and U.S. literature on the mortgage insurance industry.<br><br>Discussions with Canadian and U.S. mortgage market experts.<br><br>Analyse financial implications for MIF if it had been operated under the same rules as MICC. |

## IMPACTS AND EFFECTS

| ISSUES | HYPOTHESIS | POTENTIAL METHODS | DATA SOURCES |
|---|---|---|---|
| Competition (cont'd) | In the United States, there are about 15 private insurers. In Canada, there is now only one. This is due to the difference in competitive behaviour between FHA and NHA. | Compare behaviour of FHA and NHA focusing on differences in underwriting practices. | Time series data profiling U.S. and Canadian mortgage insurance industries.<br><br>Discussion with Canadian and U.S. housing experts. |
| | The share of private insurers has declined markedly in recent years as a result of deteriorating profitability. | Examine the link between profitability and market share and assess if there are other reasons for the decline in the share of private insurers. | Financial reports of MICC. Discussions with various experts. |
| | CMHC has provided unfair competition to private insurers by charging premiums that did not reflect risk. | Actuarial analysis to determine if the premiums charged in recent years reflected risk within all classes of risks - e.g. urban areas, remote areas, rental markets, etc. | NHA insurance data |
| | CMHC has provided unfair competition to private insurers by implicitly subsidizing application fees. | Identify the various factors that affect risk and estimate whether the fees are sufficient to cover the cost of doing a proper assessment of risk. | Literature review. Work measurement study.<br>CMHC administrative and financial data. |

IMPACTS AND EFFECTS

| ISSUES | HYPOTHESIS | POTENTIAL METHOD | DATA SOURCES |
|---|---|---|---|
| Self sufficiency | Severe losses experienced in recent years were caused by the AHOP and ARP programs. | Estimate losses attributable to AHOP and ARP and estimate current financial position of MIF if such losses had not occurred. | NHA insurance data. |
| | Losses were experienced because premiums did not reflect risk and because the MIF was not operated on a sound actuarial basis. | Estimate if in the past 15 or 20 years, MIF reserves were sufficient in relation with the amount of insurance in force, the amount of unearned premiums, etc. | NHA insurance data and time-series data. |
| | Losses were experienced as a result of an unexpected increase in house price volatility. | Examine changes in house price-volatility during the past 15 to 20 years and identify the causes of changes in volatility. | Demographic data. MLS, Royal Trust, Teela data. |
| | Mortgage insurance cannot be defined as insurance in the traditional sense and therefore, there is no guarantee that a given premium structure will ensure self-sufficiency | Identify the peculiarities of mortgage insurance. | Theoretical discussion. |
| | MIF losses resulted partly from deficiencies in program operations including underwriting practices (e.g. market analysis), claims and real estate operations. | Examine MIF losses by dwelling type and geographical location, and review a sample of defaulted loans focusing on underwriting practices and claims and real estate operations. | NHA insurance data. Program audit results. In depth analysis of selected default cases. Incidence of borrowers sued under the personal covenant. |

| ISSUES | HYPOTHESIS | POTENTIAL METHODS | DATA SOURCES |
|---|---|---|---|
| Self Sufficiency (Cont'd) | Some of the key determinants of risks were not considered in pricing mortgage insurance | Identify the various factors that affect risk and examine how effectively each of these factors are scrutinized in assessing risk. | Regression (logit) analysis based on NHA insurance data. Review of literature on default risk determinants. |
| | Losses experienced by the MIF resulted partly because the application fees charged to borrowers were not sufficient to cover administrative expenses. | Measure the cost of operating the program as of today and estimate what these costs were in past years. | Work measurement study.<br><br>CMHC administrative and financial data. |
| | The rigidity and stringency of NHA underwriting practices coupled with enforcement of energy, metrification standards have created adverse selection against NHA insurance. | *Attempt to test empirically, if adverse selection, has contributed to MIF losses. | Survey of experts in the housing sector.<br><br>Discussions with program officers in regional and local offices<br><br>NHA/MICC data |
| | Under its insurance coverage, MICC has the right to exercise "Option B" to limit its risk exposure. The NHA insurance policy does not incorporate such features. The fact that MICC policies incorporate "Option B" has created adverse selection against NHA insurance. | Examine the extent to which the disappearance of the spread between NHA and conventional mortgage interest rates may reflect the presence of adverse selection. | Theoretical discussion Historical data on NHA and conventional interest rates. |

*An appropriate method might be the "cream-skimming test" developed by David L. Kaserman.

IMPACTS AND EFFECTS

| ISSUES | HYPOTHESIS | POTENTIAL METHODS | DATA SOURCES |
|---|---|---|---|
| Self Sufficiency (cont'd) | The premium structure does not reflect the various classes of risks and this exposes the MIF to "cream-skimming" by the private insurer. | Regression (logit) analysis to examine whether risk is pooled across homogeneous classes of risks. | NHA insurance data.<br><br>Theoretical discussion on the feasibility of pooling risk across heterogeneous classes of risks. |
| | Because of deficiencies in its design, NHA insurance cannot be operated on a self sufficient basis. | Compare NHA insurance program design with the FHA program and the insurance programs of U.S. private insurers. | Theoretical discussion based on literature review, programs documentation and survey of Canadian and U.S. mortgage market and insurance industry experts. |

| ISSUES | HYPOTHESIS | POTENTIAL METHODS | DATA SOURCES |
|---|---|---|---|
| Self-Sufficiency (Cont'd) | In the event of a claim, the lenders normally receive all interest accrued at the mortgage rate. For mortgages originated at low interest rates, but later renewed at high interest rates, paying the interest accrued at the mortgage rate may represent a major and unexpected expense to the MIF. | Assess impact of high interest rates on claim losses and examine if insurance premiums should be positively correlated with the contractual interest rate on the insured mortgage. | NHA insurance data |
| | In delivering social programs, the MIF is taking undue risk. For example, 100% loans are made to finance 56.1 loans. Further, municipal non-profit corporations are not charged an insurance premium to obtain NHA financing. | Assess risk exposure to MIF associated with insuring 56.1 loans. | NHA insurance data<br>Discussions with program officers in regions/branches. |

IMPACTS AND EFFECTS

| ISSUES | HYPOTHESIS | POTENTIAL METHODS | DATA SOURCES |
|---|---|---|---|
| Delivery of Social Programs | Mortgage insurance has permitted a reduction in the need for direct lending programs. | Measure value of annual approvals under Sections 56.1, 58... programs. | NHA approval data. |
| | Without mortgage insurance, net federal government borrowing requirements would be larger. | Estimate impacts on the capital market of additional government borrowings to finance social housing programmes | Flow of funds analysis<br>Theoretical discussion. |

IMPACTS EFFECTS

| ISSUES | HYPOTHESIS | POTENTIAL METHODS | DATA SOURCES |
|---|---|---|---|
| Housing Quality | NHA-insured dwellings are of better-quality and present less structural defects than MICC dwellings. | Compare quality of NHA and MICC insured dwellings | Alternative No. 1: Physical inspections of a sample of dwellings. Alternative No. 2: Survey of occupants and survey of experts. |
| | NHA insurance has had significant impacts toward a wider enforcement of the National Building Code. | Examine how widely National Building Code is currently enforced and compare with situation in the past. | Survey of housing experts. |
| | The inspections undertaken actually improve housing construction and ensure that housing quality objectives are met. | Compare NHA and MICC inspection processes and assess if NHA inspections go beyond what is required for risk assessment. | Documentation on NHA and MICC inspection processes. Survey of lenders and builders. |
| | NHA insurance is an effective tool to meet energy conservation objectives. | Energy savings resulting from the enforcement of standards under the NHA | NHA and MICC approval data.<br>Survey of occupants based on a sample of NHA and MICC insured loans. |

IMPACTS AND EFFECTS

| ISSUES | HYPOTHESIS | POTENTIAL METHODS | DATA SOURCES |
|---|---|---|---|
| Economic Stabilization | Public mortgage insurance is an appropriate and effective tool at the disposal of the government to meet economic stabilization objectives. | Review experience with using mortgage insurance as an economic and housing stabilization tool and discuss advantages and limitations of mortgage insurance to meet stabilization objectives | Theoretical discussion |

## IMPACTS ID EFFECTS

| ISSUES | HYPOTHESIS | POTENTIAL METHODS | DATA SOURCES |
|---|---|---|---|
| Innovator role | Public mortgage insurance has been used as a tool to facilitate the introduction of new mortgage instruments. | Compare NHA and MICC experience in promoting new mortgage designs. | Review experience in the past 10 years.<br>Survey of housing experts.<br>Theoretical discussion. |

IMPACTS AND EFFECTS

| ISSUES | HYPOTHESIS | POTENTIAL METHODS | DATA SOURCES |
|---|---|---|---|
| Development of the Secondary Mortgage Market | Without NHA insurance, the secondary mortgage market would be almost non-existent and as a result, the supply of mortgage funds would be reduced. | Estimate the net contribution of NHA insurance in augmenting the supply of funds through the secondary market. | Survey of NHA approved lenders to determine the value of NHA and MICC mortgages that they administer for<br>- offshore investors<br>- resident investors who do not originate mortgages for their own account |
| | | Identify the reasons why offshore residents invest in NHA mortgages i.e. whether this is because of government of Canada guarantee, special tax treatment, ... | Discussions with institutions which sell mortgages to non-residents |
| | | Identify the reasons why NHA mortgages might be more marketable than MICC insured mortgages. | Discussions with experts and compare NHA and MICC insurance contracts. |

IMPACTS D EFFECTS

| ISSUES | HYPOTHESIS | POTENTIAL METHODS | DATA SOURCES |
|---|---|---|---|
| <u>Unintended Impacts</u> | | | |
| Effects on construction costs | The enforcement of NHA standards results in higher construction costs | Hedonic regressions to determine if the price of NHA houses is significantly higher than the price of MICC-insured houses. | NHA and MICC approval data. |
| Effects on the allocation of resources to other sectors of the economy. | Implicit premium subsidies have reduced the allocation of credit to other sectors of the economy. | Estimate effects on interest rates and on non-residential investment | Econometric models and flow of fund analysis. |
| Income redistribution effects | Implicit premium subsidies have had income redistribution effects | Test if net claims (gross losses minus premiums) are randomly distributed across income groups. | NHA insurance data for homeownership loans. |
| Insurance of social housing projects | The premiums charged to insure social housing projects do not reflect risk. | Actuarial analysis based on various scenarios. | NHA data on Limited Dividend projects and other social programs. |

DESIGN AND DELIVERY

| ISSUES | HYPOTHESIS | POTENTIAL METHODS | DATA SOURCES |
|---|---|---|---|
| Deductible | The incorporation of a deductible in the insurance policy would entice the lenders to improve mortgage administration practices and claim prevention procedures. | Identify various possible designs and estimates likely claim losses. Find out what current practices of lenders are and what are the factors contributing to losses. | Data on claim losses in the casualty and property insurance industry.<br><br>Survey of private mortgage insurers operating in the United States. |
| | The incorporation of a deductible would be inconsistent with the thrust of the legislation relating to the 75% loan-to-value threshold. | Examine legal provisions relating to the 75% threshold. | Legal opinion |
| Cap on Risk Exposure | The use of "Option B" by MICC has been an effective means to reduce claim losses. | Compare NHA/MICC experience | Obtain MICC micro data. |

DESIGN DELIVERY

| ISSUES | HYPOTHESIS | POTENTIAL METHODS | DATA SOURCES |
|---|---|---|---|
| Alternative to present claim settlement strategy | In the United States, the FHA has the authority to settle claims by issuing debentures. This is a more effective method than the present way of settling claims with a cash lump sum payment. | Compare current financial position of the MIF with what would likely be the position of the fund had debentures been issued to settle claims.<br><br>Examine FHA claim settlement experience. | Simulations based on existing time series data.<br><br>Discussions with FHA officials. |

DESIGN AND DELIVERY

| ISSUES | HYPOTHESIS | POTENTIAL METHODS | DATA SOURCES |
|---|---|---|---|
| Inspections | Because of CMHC inspections, borrowers feel protected against construction defects when they purchase an NHA-financed house. | Compare perceptions of recent NHA buyers and NHA rental investors with those of buyers/investors who obtained non-NHA financing. | Survey of borrowers and of rental investors. |

DESIGN DELIVERY

| ISSUES | HYPOTHESIS | POTENTIAL METHODS | DATA SOURCES |
|---|---|---|---|
| Claim Prevention Measures | The claim prevention measures currently in place are effective in minimizing claim losses. | Compare NHA claim prevention measures with those used by MICC, by the FHA and by the private insurers in the U.S. | Documentation on the various insurance programs and discussions with mortgage insurance industry experts. |

DESIGN AND DELIVERY

| ISSUES | HYPOTHESIS | POTENTIAL METHODS | DATA SOURCES |
|---|---|---|---|
| Real Estate Administration and Sale | Real estate management and sale strategies are effective in minimizing claim losses. | Compare NHA strategies with those followed by MICC, by the FHA and by the private insurers in the United States. | Documentation on the various real estate strategies and discussions with mortgage insurance industry experts. |

ALTE ITIVES

| ISSUES | HYPOTHESIS | POTENTIAL METHODS | DATA SOURCES |
|---|---|---|---|
| Re-insurance* | Re-insurance would be an effective means of promoting competition in the mortgage insurance industry by enticing more firms to enter. | Measure and compare the extent of competition and economic efficiency in markets in which re-insurance is offered with markets in which it is not offered | Theoretical discussion and case studies<br>Survey of lenders. |
| | Re-insurance would be attractive to private insurers and could be operated on a self financing basis by the government | Estimate the net cost of a re-insurance scheme based on various designs and parameters | Simulations based on existing economic and mortgage market data |

*Much of the work on re-insurance will be commissioned to an academic having a strong background in economics as well as in the domain of insurance.

ALTERNATIVES

| ISSUES | HYPOTHESIS | POTENTIAL METHODS | DATA SOURCES |
|---|---|---|---|
| Government Regulation of the Private Mortgage Insurance Industry | Mortgage insurance could be provided in an economic efficient way solely through government regulation | Examine whether this is a practical alternative given the difficulties that the regulating agency would have in determining the price for the insurance. | Theoretical discussion. |

ALT ATIVES

| ISSUES | HYPOTHESIS | POTENTIAL METHODS | DATA SOURCES |
|---|---|---|---|
| "Privatization" of CMHC | Introducing re-insurance and "privatizing" CMHC would ensure that the mortgage insurance industry is economically efficient | Identify social benefits and costs associated with this alternative and estimate net social benefits | Theoretical discussion and case studies. |
| | | Identify practical problems associated with this alternative. | Discussions with staff in the Insurance Sector of CMHC. |
| | | Estimate financial implications (costs) for the government associated with this alternative. | MIF data |

ALTERNATIVES

| ISSUES | HYPOTHESIS | POTENTIAL METHODS | DATA SOURCES |
|---|---|---|---|
| Removing the 75 percent loan-to-value restriction on Conventional Loans | Removing the 75 percent threshold would bring an implicit element of competition to mortgage insurance and result in increased economic efficiency in the mortgage insurance industry. | Analyse implications of this alternative and estimate the net benefits that would accrue to borrowers. Identify who the "winners" and "losers" would be among borrowers. Examine the effect that this would likely have on the premium structure for mortgage insurance. | Survey of lenders to compare high ratio/low ratio lending practices by Caisses Populaires and Credit Unions with practices of other types of institutions*.<br><br>NHA data on borrowers' characteristics by type of lending institution.<br><br>Survey of experts in the housing sector. |
| | Mortgage insurance is a declining industry and removing the 75% threshold will make this declining trend even more pronounced. New firms will not enter this industry under these conditions. | Estimate the future demand for mortgage insurance with and without the 75% rule, by classes of risks. | Housing requirement projections. |

*The Caisses Populaires and Credit Unions are nto subject to the 75% threshold.

ALTERNATIVES

| ISSUES | HYPOTHESIS | POTENTIAL METHODS | DATA SOURCES |
|---|---|---|---|
| Direct Lending | Direct lending would be a better means to enable the government to play a role of innovator in facilitating the introduction of new mortgage instruments | Compare risk exposure to the government under the following three options:<br>(i) CMHC direct lending financed by borrowing from the government<br>(ii) CMHC direct lending financed by the issuance of bonds by CMHC<br>(iii) risks transferred to the government as a mortgage insurer | Theoretical discussion |
| | Direct lending would be a better means to serve groups of borrowers whose demands are not met by the private sector and to finance social housing projects | Identify those groups of borrowers, measure their total demands and estimate impacts on government borrowings and on the capital market. | NHA/MICC data to compare clientele<br>Obtain micro-data on the mortgage portfolio of selected lenders to compare NHA/MICC loans.<br>NHA 56.1 data |

ALTERNATIVES

| ISSUES | HYPOTHESIS | POTENTIAL METHODS | DATA SOURCES |
|---|---|---|---|
| Financing of Social Housing: Other Alternatives | Direct loan guarantees would be as effective public mortgage insurance to attract private funds to finance social housing projects. | Examine and assess the effectiveness of government loan guarantee programs presently used to finance non-residential investment | Theoretical discussion and case studies |
| | Private insurance coupled with re-insurance would be as effective as public mortgage insurance to finance social housing projects. | Examine Ontario government/MICC renovation program.<br><br>Assess potential risk to the government and examine practical difficulties that this alternative could entail. | Documentation and data on Ontario/MICC renovation program.<br><br>Survey of experts in the housing sector. |

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