

The Evolving Canadian Housing Finance System and the Role of Government

by Lawrence D. Jones

INTRODUCTION

In some respects the Canadian housing finance system has been modeled on concepts borrowed from Canada's giant southern neighbor, the United States. Canadian government mortgage default insurance, deposit insurance and mortgage-backed security guarantees are all based on U.S. models. However, the influences have not all been in one direction. Analysts and policymakers in the U.S. have shown considerable interest in certain Canadian housing policies; these include government provision of mortgage interest rate insurance to borrowers and policies designed to subsidize household saving for homeownership.

Despite these similarities, the Canadian and U.S. housing finance systems contain striking differences. In the U.S. rich mortgage menus provide borrowers with a wide range of choice

over how much they expose themselves to the risk of sizable interest rate increases. Over the past quarter-century, however, Canadian mortgagees have offered a comparatively restricted menu that allocates most interest rate risk to borrowers. The general absence of prepayment penalties in U.S. home mortgage loans, together with the availability of long-term loans, provides homeowners with valuable refinancing options. Canadian homeowners, on the other hand, have been limited to short-term loans with stiff prepayment penalties.

Finally, the structures of both housing finance systems are undergoing transformation. In both countries the role of portfolio lenders that specialize in housing finance is rapidly diminishing. Given the central place of mortgage securitization in the U.S., government-sponsored enterprises are coming to dominate that market. In contrast, mortgage securitization is still at an early stage of development in Canada, and a few large portfolio lenders, in the form of chartered banks, now dominate the Canadian residential mortgage market.

In this paper I review basic characteristics of the Canadian housing finance industry and the role of government in housing finance. Section II provides a brief overview of the structure of the Canadian industry. I review borrower exposure to interest rate risk, and various government and market attempts to alleviate

that risk in Section III. Section IV summarizes prepayment provisions in Canadian home loans and the determinants of prepayment and default behavior.

There has been renewed interest in savings programs targeted to homeownership. In Section V, I review Canadian savings programs. As a result of government initiative, mortgage securitization was introduced in Canada and initially grew in magnitude at a faster rate than most analysts expected. Section VI reviews the government's motivation and the securitization experience. Finally, I offer a few concluding remarks in Section VII.

THE STRUCTURE OF THE CANADIAN HOUSING FINANCE INDUSTRY

During the first decade following World War II, Canada's home mortgage financing industry consisted primarily of life insurance companies and a federal government crown corporation, the Central Mortgage and Housing Corporation, later renamed Canada Mortgage and Housing Corporation (CMHC). Some provinces also had governmental housing finance agencies that made direct loans to individuals unable to access the private market. Trust companies and mortgage loan companies played a marginal role in the market in this era, and the chartered banks were prohibited from holding mortgage loans. In this environment of limited institutional partici-

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pation, individual investors held a significant share of home mortgage loans. As late as 1970, individuals still held one-fifth of the dollar value of mortgage loans on single detached homes (Morrison, 1979).

In 1954 the National Housing Act granted CMHC the authority to provide mortgage default insurance on loans secured by new homes, and banks were permitted to originate and hold these insured NHA loans. However, bank mortgage lending was limited to NHA loans and interest rate ceilings were imposed on both NHA loans and bank loans. Under these restrictions bank mortgage lending remained relatively inconsequential through the 1950s and 1960s. The restrictions imposed on banks in part reflected concerns remaining from the default experience of the 1930s about the riskiness of mortgage loans. It appears, however, their imposition also reflected a desire to protect trust companies from bank competition in order to encourage the development of a specialized housing finance system.

As their name implies, trust companies were licensed to perform fiduciary, trusteeship and estate management functions. However, only a few of the larger companies have in fact provided these trust services. Most trust companies have operated as narrowly focused retail banks. During the 1960s they became the central feature of the specialized housing finance system in Canada with home mortgage loans accounting for nearly three-quarters of their assets. Mortgage loan companies were even more focused on home mortgage lending; however, most of these entities were subsidiaries of trust companies and banks.

With the trust companies well established, the government liberalized restrictions on bank participation. In 1966 CMHC default insurance was extended to loans on existing homes. Banking lending opportunities increased further after the creation in 1967 of Canada Deposit Insurance Corporation (CDIC) as a

federal crown corporation chartered to provide deposit insurance to banks and trust companies.¹ The Bank Act of 1967 allowed banks to originate and hold conventional (non-NHA) mortgage loans and loans collateralized by existing properties. In addition all interest rate ceilings were phased out during the 1967-69 period. During the 1970s banks became an increasingly important player in the home mortgage market. In some provinces credit unions (caisse populaires in Quebec) also developed a significant niche in this market.

Throughout this period the Canadian financial system was built on the separation of the 'four pillars,' the securities, banking, trust and insurance industries. During the 1980s several regions in Canada suffered sizable declines in real estate prices. Mortgage defaults resulted in the failure of a number of trust companies and three regional banks, drawing down CDIC's reserves.² As a result trust companies were allowed to diversify into commercial and consumer lending and the trust industry quickly retreated from its role of housing finance specialist by reducing mortgage loans to less than half of its portfolio.

This action began a general relaxation of the separation of functions expressed in the 'four pillars.' In 1987 ownership restrictions that applied to investment dealers were relaxed and several of the large securities firms were acquired by banks. A 1992 Act reduced the barriers separating banks, trust companies and insurance companies. Subsequently, three of the Big Five banks have acquired large trust companies while the other two are developing their own trust subsidiaries. Only two sizable trust companies remain independent. The insurance industry is undergoing a major consolidation and banks are establishing insurance subsidiaries.

It appears the net effect of these changes will be to concentrate substantial market power in the Big Five banks. The chartered banks already hold over half of residential mortgage debt outstanding and dominate current

mortgage lending activity. These rapid structural changes raise concerns about the degree of competition and innovation that will prevail in the home mortgage market. Competition with the banks is now largely limited to niche lenders, like credit unions and trust companies, and whatever new mortgage investors are attracted to mortgage-backed securities and their derivatives.

ALLOCATION OF INTEREST RATE RISK

As interest rates began increasing in the latter half of the 1960s, trust and mortgage loan companies became concerned about their exposure to interest rate risk. To reduce the duration gap between their assets and liabilities, they moved away from mortgage loans with terms of 25 years or more and reintroduced the five-year term loan.³ Five years was selected, in part, because the liabilities of these institutions were concentrated in fixed-rate term deposits and certificates, most of which had five-year terms. However, the five-year term also freed these lenders from offering prepayment options; the Federal Interest Act requires that loans to individuals be prepayable after five years and limits any prepayment penalty to three months' interest.⁴

In 1969 CMHC followed the market and changed the requirement that NHA-insured loans have terms of 25 years or more, to five years or more. As a result Canadian mortgagees were able to shift most of the risk of both interest rate increases and decreases to mortgagors. By 1970 58 percent of NHA loans, and likely at least as large a share of conventional loans, were short term (Unger, 1977). Soon thereafter virtually all home mortgages were 'rollovers.' These short-term loans undoubtedly contributed toward maintaining the supply of mortgage funds, likely reduced volatility in housing starts and certainly were central to the maintenance of capital positions in the key mortgage lenders. Their benefits, however, were achieved at the

cost of allocating interest rate risk and payment burdens to households.

As interest rates continued to increase through the 1970s the deposit institutions offered even shorter term loans (as short as 3 months) as well as variable-rate loans. Again CMHC followed the market and extended NHA insurance to three-year terms in 1978, one-year terms in 1980 and to variable-rate mortgages in 1982. By the beginning of the 1980s, loans with terms of more than three years were unavailable and some lenders restricted their menus to terms of one year or less. Political pressures forced governments to respond to the financing burdens of homeowners and potential homeowners. To assist renters desirous of homeownership but facing high nominal interest rates (real payment tilt)⁵, the federal government introduced the Assisted Homeownership Program (AHOP) in 1973. Under this program borrowers received monthly payments from CMHC designed to produce net monthly mortgage payments equal to those produced by an 8 percent per annum interest rate. These interest reduction loans were secured by a second mortgage; they were interest free for five years. Provinces supplemented these payments with grants to first time homeowners enrolled in AHOP. However, high ratio first mortgages plus the second mortgage debt induced high default rates in regions where house price appreciation was insufficient to produce positive homeowner equity. The program was discontinued in 1978.

Subsequently, CMHC and provincial governments encouraged other methods of dealing with the real payment burden. These included insured graduated-payment loans and experimentation with shared-appreciation mortgages. To alleviate both real payment tilt and payment uncertainty, variable-rate mortgages were usually written in a dual rate format in which interest rates were adjusted to market monthly, but mortgage payments remained constant throughout the term of three years (or less). When interest rates

declined from a mortgage rate peak of 22 percent, governments exercised moral persuasion to urge lenders to rewrite existing contracts at current rates. In the spring of 1982 the largest bank responded by reducing rates in existing contracts to 17 percent. Also, in 1982 nearly every provincial government introduced a mortgage assistance program that used grants or (usually interest free) loans to reduce net mortgage payments; both loan renewals and new loans were eligible.

In addition to provincial assistance, the Canada Mortgage Renewal Plan (CMRP) was introduced in September 1981 to provide assistance to borrowers renewing loans. This assistance took the form of grants and deferred interest options. The CMRP program was terminated in late 1983 and replaced with the Mortgage Rate Protection Program (MRPP).⁶ Under the MRPP, CMHC offers insurance protection from interest rate increases to NHA loan borrowers. However, Canada has a national capital market with essentially the same mortgage rates prevailing in all regions at any time. When interest rates increase significantly, therefore, most policyholders with loan renewals due will have claims; thus, the program is subject to serious catastrophic risk. In recognition of this fact CMHC designed a program that is (1) costly to the policyholder and (2) very restrictive in benefits.

Fair premiums on a mortgage rate insurance policy should be a positive function of (1) the loan term (2) the degree of interest rate volatility and (3) the spread between long- and short-term rates. However, CMHC established a flat premium of 1 1/2 percent of the loan amount covered regardless of loan term; the premium has not been altered since the introduction of MRPP. This premium is prohibitively costly for borrowers who select shorter term loans,⁷ that is those most likely to desire protection.

Potential claims are restricted in several ways. Coverage is limited to \$70,000 and sizable

deductibles and coinsurance features are included. In addition, no coverage is provided for the impact of interest rate increases that exceed the loan contract rate plus 12 interest points.⁸ A long period of declining interest rates following MRPP introduction, and the marketing of an expensive product with limited benefits, resulted in very little demand for these policies. To date, this has avoided the creation of a large latent liability for Canadian taxpayers. The recent sharp increase in interest rates, however, has renewed interest in MRPP. Late in 1994 the Canadian Home Builders Association asked CMHC to review the premium structure and the \$70,000 ceiling in particular.

Capozza and Gau (1984b) believed CMHC could offer less restrictive policies by hedging their interest rate risk exposure in U.S. financial futures markets. However, because U.S. and Canadian interest rate movements have been imperfectly correlated and U.S. and Canadian mortgage instruments are quite different, costly hedging of foreign exchange risk would be required, so this proposal was not well received (Brennan, 1983; Pesando and Turnbull, 1985; Sharp, 1986). As an alternative to MRPP Brennan (1983) suggested borrower interest rate risk could be alleviated without increasing lender exposure by a more imaginative design of mortgage contracts.

In particular, Brennan proposed an Average Interest Rate Mortgage (AIRM). Borrowers using this contract would split their loan principal among a number of different loan terms, each tranche including the current interest rate for the term. Renewals would be rolled over at the longest term. Since only a fraction of the loan principal would be due for renewal at any time, the impact of rate changes on payment levels and loan costs would be reduced by term diversification. One trust company adopted the Brennan concept under the label Multiple Term Mortgage, but it diluted the contract's benefit by requiring renewals to be at the short end. Recently, however, the concept has been revived in Canada Trust's

Split-Level Mortgage and the Toronto Dominion Bank's Multi-Rate Mortgage.

In the past two years some attributes of U.S. Adjustable Rate Mortgages (ARMs) have found their way into the Canadian market. Several banks and trust companies offer variable-rate mortgages (VRM) convertible to fixed-rate loans. Some have experimented with initial 'teaser' rates on these loans. In 1993 two of the major banks introduced rate caps on their VRMs. However, these are rather expensive options. The VRM rate is indexed to about 100 to 150 basis points above the bank's prime rate, and the cap is based on a margin of 150 to 250 basis points above the going five-year term rate. Consequently, some financial columnists have concluded that consumers seeking interest rate risk protection are better off choosing one of the multiple-term options (Humble, 1994).

Ever since 'rollovers' replaced long-term loans, governments have been concerned about the sparseness of choices available to consumers. In order to stimulate provision of longer term options, CMHC was authorized to sponsor mortgage-backed securities in 1986. As a result of securitization, seven-year and ten-year terms were added to the mortgage menus of many lenders. Consumers, however, did not respond to these opportunities until interest rates dropped below 10 percent. In 1991 Toronto Dominion Bank reported increased consumer interest in their ten-year NHA loans designed for borrowers seeking high-ratio (over 75 percent of house value) loans. Although some banks have added ten-year loans to their portfolios, most trust companies only originate them for securitization. Some niche companies have offered 12 1/2-year and 15-year terms, and even 20- and 25-year term loans have appeared on the market.

In principle, inflation-indexed loans provide an efficient method of alleviating lender interest rate risk exposure and the borrower real payment tilt burden. In Canada, CMHC introduced an inflation-indexed loan in 1985 to

finance cooperative housing. In 1991 the government of Canada introduced its first real return bond. Although inflation indexed deposits have not been offered, deposits indexed to stock market indices were made available in 1993. With this foundation it seems likely that inflation-indexed mortgages will become part of the mortgage menu if serious inflation concerns recur during the next few years.

PREPAYMENT AND DEFAULT RISK

When loan terms were twenty-five years or more, the Federal Interest Act ensured that home mortgage borrowers possessed a prepayment option once five years had passed, along with a prepayment penalty not to exceed three months' interest. Once the short-term rollover loan was introduced, however, typically only NHA loans contained prepayment options; during the 1970s most conventional loans included no prepayment provision whatsoever. A five-year term NHA loan can be closed to full prepayment until the third annual anniversary, after which full prepayment must be permitted with any penalty not to exceed three months' interest. NHA loans also permit penalty free partial prepayments of up to 10 percent of the original loan principal each year.

Prepayment options were introduced into conventional loans during the 1980s and have come to take several basic forms. Some loans are closed to prepayment during a portion of the loan term. Once open, these loans can be prepaid subject to a penalty fee; the most common forms of these fees seem to be the three months' interest penalty and the Interest Rate Differential (IRD) penalty. In principle, IRD penalties (known as Yield Maintenance Penalties in the U.S.) are intended to compensate a lender for interest earnings lost as a result of borrowers' refinancing at a lower interest rate. This amount should be determined by discounting future scheduled payments by the prevailing market rate that matches the remaining term on the loan.

The IRD penalty effectively removes any incentive on the part of a borrower to refinance when interest rates decline. However, many Canadian lenders use a lower rate than the appropriate mortgage rate to compute the present value; this produces a particularly costly penalty that more than compensates lenders for any lost interest. Moreover, the IRD penalties are not symmetrical; they do not produce discounts from balances owing when interest rates rise above the loan's contract rate. Indeed, many lenders appear to charge the greater of the IRD or the three months' interest penalty.⁹ Homeowners who are potentially 'ruthless refiners' presumably seek out loans with just the three months' interest penalty; this has likely been important in maintaining the NHA loan share of the market.¹⁰

Many conventional loans follow the NHA loan practice of including annual partial prepayment options. Some use the NHA rule that allows 10 percent of the original principal to be prepaid annually without penalty; however, 15 percent and 20 percent options are also available. Most of these options also allow the borrower to increase the mortgage payment annually by the same percentage. Paying off principal faster than scheduled often allows borrowers to skip one or more payments per year; this flexibility may have some value to borrowers with variable income streams.

Partial prepayment provisions allow homeowners to realize some advantage of declining market interest rates, when they occur. They are valuable options, however, only to those who are savers or receive a timely gift, bequest or other windfall. They do not benefit homeowners whose ability to take advantage of lower rates is limited to refinancing the full amount of their debt. This possibility is foreclosed to those with IRD penalties.

Partial prepayment provisions are widely used in part because Canadians cannot deduct interest in computing taxable income where

the borrowing in question is used to finance consumption. For this purpose capital expenditures to acquire or improve principal residences are treated as consumption expenditures. Therefore, the effective cost of mortgage debt is likely to exceed after-tax returns on investments available to most households. Consequently, it is commonly assumed that the optimal use of household savings is to pay down home mortgage debt, taking advantage of partial prepayment and payment increase options.

These considerations suggest that the optimal mortgage debt for Canadian homeowners is the minimum amount of debt necessary to own the optimum home given net wealth. Early studies of mortgage prepayment behavior (Fu, 1988; Zorn and Lea, 1989) provide evidence to support the hypothesis that the high after-tax cost of debt makes partial prepayments an important feature of prepayment experience. Although this behavioral response is quite plausible for relatively low-wealth households, it is less obviously correct for wealthier households. Wealthier households have the opportunity to link part of their mortgage debt (all of their debt in cases where household net worth exceeds the market value of their home) to other investments. Interest paid on borrowing used to finance most portfolio positions is deductible for tax purposes.

Jones (1993a) studies the extent to which Canadian households hold mortgage debt in excess of the minimum required. For younger Canadians (under age 40) Jones finds that about 40 percent of mortgage debt is excess; the proportion is certainly higher for older Canadians. In a subsequent paper Jones (1994a) provides evidence that the amount of excess debt held is a positive function of a household's marginal tax rate; higher marginal tax rates imply a lower after-tax cost of debt.

Investors in Canadian mortgage-backed securities are very interested in the mix between partial and full prepayments. Given the

magnitude of prepayment penalties, full liquidations depend more on household mobility than is the case in the United States. Unlike full prepayments, partial prepayments have a dramatic impact on the remaining amortization period for a mortgage pool; associated with this is an increase in the share of periodic mortgage payments that represent amortization rather than interest payments. This has a particular effect on derivatives based solely (or largely) on the interest (or amortization) portion of payments.

A Wood Gundy study (Boyce et. al. 1992) indicates that 91 percent of prepayments represent full liquidations. However, in specific months partial prepayments have accounted for up to half of total prepayments. Overall, prepayments are sensitive to the refinancing spread (contract rates less current market rates) despite the existence of sizable prepayment penalties. The response is similar to that found in the U.S., but the overall prepayment rate is lower in Canada than the U.S.

In addition to the various prepayment options, mortgagors also possess an implicit loan termination option in the form of default. During the past fifteen years several regions of Canada experienced significant declines in real estate values. These regions also experienced sizable increases in mortgage defaults that produced heavy losses in CMHC's Mortgage Insurance Fund and resulted in the demise of the private mortgage insurance industry in Canada.¹¹

A study by Jones (1993b) suggests that regional variation in default rates is, in part, attributable to differences in the enforceability of personal covenants in mortgage loans. Jones shows that the provinces of Alberta and British Columbia experienced similar large house price declines during the early 1980s, but that the default rate was two to three times higher in Alberta. This difference seems at least partly attributable to the existence of an Alberta law that prohibits enforcement of

personal covenants; in contrast, lenders in British Columbia do successfully enforce actions on these covenants.

The Alberta experience contributed significantly to the ultimate failure of the largest, and last, of the private mortgage insurers, the Mortgage Insurance Company of Canada (MICC). During the period of peak claims in Alberta, payments on Alberta loans accounted for 76 percent of claims paid by MICC, even though Alberta only accounted for one-fifth of its business. Moreover, MICC faced a severe adverse selection problem once it became clear that CMHC's NHA loans were exempt from the Alberta legislation; personal covenants were enforceable on NHA loans.

Unlike the case of mortgage interest rate insurance, regional disparities in house price behavior do provide some independence of risks to an insurer of mortgage default. Nonetheless, there is also a large component of correlation among risks, particularly since it is the combination of house price and interest rate declines that raise the likelihood of default. In this light, and in view of the claims experience of recent years, several studies have recommended that public mortgage insurance be substantially downsized, if not eliminated.¹² Given this concern, many observers were surprised by CMHC's February 1992 decision to reduce the minimum downpayment requirement on NHA loans from 10 percent to 5 percent. Initially this First Home Loan Insurance (FHLI) plan was to be a short-term program, but in 1993 it was extended to February 1999.

These low-downpayment loans were initially restricted to first-time buyers, and those who have not owned a home for five or more years. In 1994, however, the 5 percent downpayment program was extended to those who were recently divorced, had to relocate for employment purposes or lost money on their previous home. The principal motive for this program is to provide assistance to the home building industry; due to weak demographic

factors underlying household formation, housing starts are well under the levels of the seventies and eighties. However, this weak rate of household formation also means it would be unreasonable to expect any significant real price appreciation in most markets, and house price declines are a distinct risk. Since the program has been popular (296,000 households used it in the first full calendar year, 1993), CMHC is exposed to the risk of repeating the AHOP experience of the 1970s.

SAVINGS FOR HOMEOWNERSHIP

Housing tenure choice models have conventionally assumed that the decision to rent or to own depends on (1) the real user cost of owning versus renting, (2) a household's lifetime income and (3) household mobility. Recognition of the real payment tilt burden produced by fixed-nominal-rate loans introduced the possibility that nominal rates as well as real rates, and current incomes as well as lifetime incomes, matter. More recently emphasis has shifted toward the importance of current net wealth accumulation in the decision to move from rental to ownership tenure. Jones (1989, 1994b) provides evidence of the central role of current wealth in determining the likelihood that a young household in both Canada and the United States is a homeowner. Current wealth is important both because of equity downpayments that lenders require and because of the riskiness of housing as an asset.

Lea and Renaud (1994) suggest there are several credible rationales for government subsidization of savings programs where savings is targeted to homeownership. These include the proposition that it is better to subsidize saving than borrowing and that subsidizing downpayments is preferred to default insurance as a means of subsidizing lender credit risk. Recent proposals in the U.S. would expand the scope of tax-sheltered Individual Retirement Accounts to include

penalty-free withdrawals for use as downpayments by 'first-time homebuyers.'

Canada provides experience with two types of homeownership savings programs. The federal government's Registered Home Ownership Savings Plan (RHOSP) was enacted in 1974. Under this plan individual renters (each spouse in the case of a married couple) could establish a RHOSP account. Each contribution (limited to \$1,000 per annum) made to the account was tax deductible and investment earnings on funds in the account were free of income tax. Lifetime contributions were limited to \$10,000. Thus, a married couple could accumulate \$20,000 in contributions, plus earnings on these contributions, to apply penalty free to a downpayment on purchase of a home.

Engelhardt (1994a, 1994b) reports results from a careful analysis of the RHOSP experience. He concludes that RHOSP participants were wealthier and had higher incomes than nonparticipants; this suggests the individual-specific tax value of the plan was important in determining who participated. Nonetheless, he also finds that the RHOSP contributed significantly to savings and to the incidence of homeownership. Engelhardt (1994b) reports that RHOSP funds accounted for about one-third of savings by renters and 30 to 40 percent of downpayments; he estimates that the RHOSP increased the ownership rate for younger households (primary maintainers under 44) by 4.8 percentage points.

The RHOSP was terminated in 1985. Subsequently, savings plans have been introduced in Ontario and Alberta. Of central interest in recent years, however, has been the RRSP-Home Buyers Plan (RRSP-HBP) introduced by the federal government in 1992. Registered Retirement Savings Plans (RRSPs) are tax-sheltered accounts designed primarily to provide a subsidized savings option for individuals who are not covered by employer-sponsored pension plans. Contributions are

tax deductible up to a limit¹³ and earnings in RRSP accounts are not subject to income tax. Although these plans were created to provide retirement income, the RRSP-HBP permits an account holder to withdraw up to \$20,000 penalty-free for use as a downpayment in purchasing a home. If each spouse has a RRSP, a married couple could withdraw \$40,000 for this purpose. The withdrawal takes the form of an interest-free loan which must be repaid to the RRSP; the minimum repayment rate consists of fifteen annual instalments.¹⁴

There has been a substantial response to the RRSP-HBP option. In its first two years over 250,000 individuals took advantage of the plan; the average withdrawal was about \$10,000.¹⁵ The participation rate compares with annual housing starts in Canada of about 150,000. However, the impact on homeownership and the inducement to saving for homeownership were quite modest. Initially the plan was not restricted to first-time homebuyers. Since many households do not begin building their RRSP accounts until they have achieved homeownership, much of RRSP-HBP withdrawals were targeted for downpayments on 'move-up' homes¹⁶. Beginning March 2, 1994, participation was restricted to first-time buyers. Only about 32,000 individuals used the program during the remainder of 1994, and the average withdrawal declined to under \$7,700.

The initial impact of the RRSP-HBP on savings was most likely negative since it allowed substitution of past saving (in RRSP accounts) for future saving. No additional saving was induced (e.g., by initiating new RRSP accounts as savings vehicles for ownership) because the initial announcement of the Home Buyers Plan indicated it would only have a one-year life. Subsequently, it was extended for a second year. Only in March 1994 was it declared to be a 'permanent' plan.¹⁷ It is too soon to evaluate whether that permanence will translate into an increase in young households saving for homeownership in RRSP accounts.

Given the magnitude of government budget deficits, any significant increase in tax-sheltered saving may endanger the RRSP-HBP program.¹⁸

MORTGAGE SECURITIZATION IN CANADA

The Canadian housing finance industry has been dominated by large nationwide banks and trust companies that serve all regions of the country. In this environment little perceived need existed for a secondary mortgage market. Mortgage securitization has evolved as a result of the decline in the importance of specialized housing finance institutions and a policy perception that insufficient mortgage options were provided to borrowers. In particular, the federal government was concerned that the market failed to offer borrowers loans with terms of more than five years.

As a result of these concerns, the government authorized CMHC to provide timely payment guarantees of principal and interest on mortgage-backed securities (MBS) pools composed of NHA loans. These securities, which have become known as 'Cannie Maes,' were modeled on the U.S. 'Ginnie Maes.' They were first issued in 1987 and have remained the dominant form of MBS in Canada; only a few private MBS issues have been marketed.

The bulk of Cannie Mae issues have taken one of two forms: They securitize either pools of market-rate loans collateralized by single-family houses or pools of subsidized social housing loans. There have been only a limited number of securitized pools containing loans secured by multifamily housing. NHA-MBS market-rate pools must contain loans with prepayment options that are no less generous than those reviewed above for NHA loans. Social housing loans are originated by private lenders; CMHC provides default insurance, and both the federal and provincial governments operate programs to provide interest cost subsidies. Social housing loans are not prepayable; therefore, they attract investors

who are averse to prepayment risk. Initially, social housing loans comprised a sizable majority of NHA-MBS pools and most investors were individuals. Over time market-rate pools have become more important, as has participation of institutional investors.

As explained above, Canadian loans often contain sizable prepayment penalties. In most, but not all, NHA-MBS issues these penalties are passed through to investors.¹⁹ However, the penalty amounts have proved to be difficult to estimate; Goldman Sachs (Cooperman et al. 1994) reports that penalty pass-throughs only amount to 50 to 75 percent of estimated penalties due, based on issuer-specific generic prepayment provisions. This discrepancy may result from the practice of waiving or charging lower penalties in specific circumstances; for example, this is done in cases where prepayments are produced by arms-length house sales as opposed to refinancing.

Growth of NHA-MBS issues exceeded most expectations during the first several years of the program. Currently, there are about \$17 billion in NHA-MBS outstanding, which represents slightly over five percent of residential mortgage debt. However, during the last two years the growth of securitized mortgage debt has slowed markedly. The most important reason for this slowdown is that legislated changes in the National Housing Act ended the creation of MBS issues from social housing loans backed by the federal government. As of August 1993, CMHC initiated a new direct loan program for federally supported social housing; the funds are obtained from CMHC borrowing in the capital market.²⁰ At that time the federal social housing loan pools accounted for about one-third of outstanding Cannie Maes. Maturing loans will be replaced by CMHC direct loans. Only provincial social housing pools will continue to be available for securitization.

The slowed growth of MBS issues may also reflect the reduction in housing demand

produced by weak demographic underpinnings. In addition, the sharply up-sloping yield curve, prevalent in 1993 and at least part of 1994, induced more borrowers to elect quite short-term loans. These short-term loans provide good asset-liability duration matching for deposit institutions; therefore, they retain most of these originations in their portfolios. In addition, MBS issuance costs are high for pools containing loans with terms substantially less than five years.

Cannie Mae issuance costs also have been high because most issues have been quite small. Issues as large as \$100 million (Canadian) have been rare and many issues have been under \$10 million. Thus, the spread between the contract rates on loans included in MBS pools and the MBS coupon rate has been quite large.²¹ Future growth in the Cannie Mae market would benefit from larger issues marketable to foreign, as well as Canadian, investors and the development of MBS derivatives.

The most promising route to achieving both objectives may come from repackaging of a number of MBS issues into a single security. The first Collateralized Mortgage Obligation (CMO) based on NHA mortgage-backed securities was issued in April 1993. This issue was followed by five additional CMOs during 1993; five of the six issues had principal amounts in excess of \$100 million, with the largest at \$346 million. Each had a residual class in addition to sequential pay classes. The residual classes receive excess interest (the CMO coupon rates are lower than the coupons on the NHA-MBS collateral) and prepayment penalties. To attract foreign investors, these structured securities were exempt from Canadian withholding tax requirements.

In 1994 a subsidiary of Goldman Sachs packaged various NHA-MBS issues into two large CMO issues; the largest included \$543 million of securities. Among the eight tranches provided were a Principal Only (PO) tranche and a Class PIP tranche; the

latter class receives all prepayment penalties. Both of the 1994 issues were marketed to U.S. and European, as well as Canadian, investors.

CONCLUDING REMARKS

The specialized housing finance system is rapidly disappearing in Canada. It is being replaced by a mortgage industry dominated by a few large banks. In this environment the federal government is increasingly dependent on the growth of mortgage securitization to bring competition and innovation to the mortgage market. Securitization has contributed to the enrichment of mortgage menus by increasing the availability of loans with terms exceeding five years. Canadian homebuyers, however, still do not have the option of choosing loans free of prepayment penalties. The growth rate of securitization has slowed; its future appears to depend upon the ability of issuers to package securities that attract foreign investors. In the meantime, Canadian governments continue to experiment with high ratio loan plans and savings inducement programs as means of encouraging homeownership and providing support to the homebuilding industry.

NOTES

¹ There is little evidence to indicate that policymakers considered the establishment of deposit insurance and liberalization of bank, and subsequently trust company, portfolio choices as inconsistent actions. Prior to the establishment of CDIC no Canadian deposit institution had failed since 1923. Since deposit insurance was introduced in 1967 over 30 insured institutions have failed.

² CDIC was forced to exercise its option to borrow from the Treasury. Currently, CDIC is in debt to the Treasury for over \$3 billion.

³ These short-term loans typically require constant monthly payments based on amortization periods of 25 years or more.

⁴ NHA loans must be fully prepayable after three years with any penalty limited to three months' interest.

⁵ Brueckner (1993) contends that the central positive attribute of short-term and variable-rate loans is the reduced real payment tilt expected from these loans. However, these loans only partially reduced real payment tilt during the inflationary era of the 1970s.

⁶ The MRPP initiative resulted from a consulting report prepared for CMHC by Dennis Capozza and George Gau. Published versions of their proposal are available in Capozza and Gau, 1984a and 1984b.

⁷ Some idea of the level of fair mortgage rate insurance premiums can be found in the simulation results reported in Capozza and Gau (1984b). Their prototype policy is more attractive than a MRPP policy; in particular, it does not contain a coinsurance provision or a cap on interest rate coverage.

⁸ Canadian mortgage rates are usually reported as nominal rates per annum, compounded semiannually. Interest rates and spreads in this paper are to be interpreted in this manner.

⁹ Some lenders will charge the lesser of such penalties, or waive the penalty altogether, for prepayments resulting from bonafide arms-length sales of the home that secures the mortgage. Also, some loans include portability provisions that allow the borrower to transfer the loan balance and contract terms to a mortgage loan on a replacement home. In comparing prepayment penalty practices in Canada with the virtual disappearance of prepayment penalties in the U.S., it should be noted that up front 'points' are rarely charged in Canadian home loans. Discount points, which are common in the U.S., act as a form of prepayment penalty that declines with loan life.

¹⁰ NHA loans account for about 25 percent of residential mortgage debt.

¹¹ The last of the private mortgage insurers, The Mortgage Insurance Company of Canada, ceased writing business in 1993. Many analysts believe that underpricing of mortgage insurance by CMHC contributed to the inability of the private insurers to build sufficient reserves to withstand periods of high default (Boyle, 1984). Recently, GE Capital Mortgage Corporation has acquired MHC's mortgage default insurance business and apparently plans to enter into competition with CMHC.

¹² Both a federal government task force report (Matthews, 1979) and an Economic Council of Canada (1982) report recommended that CMHC cease writing mortgage insurance and limit itself to reinsurance provision. These reports were written during the period (1978 to 1985) of the highest default rates CMHC's Mortgage Insurance Fund had experienced.

¹³ For 1995 set at 18 percent of earnings up to a cap of \$14,500.

¹⁴ The first instalment is due no later than 60 days after the end of the second year following the withdrawal. Thus, the first instalment repayment of a 1995 withdrawal is due no later than March 1, 1998.

¹⁵ About one-quarter of the 1993 participants in CMHC's five percent downpayment (FHLI) program also made RRSP withdrawals under the Home Buyers Program. According to a CMHC survey, the average RRSP withdrawal by these borrowers was \$4,355 (CMHC, 1993).

¹⁶ These homeowners also have the option of using their RRSP accounts as a source for their home mortgage funds; the mortgage loan on a planholders' home is eligible for its RRSP account so long as the loan is made at market terms.

¹⁷ The announcement of the RRSP-HBP's permanent status removed the urgency of participation and no doubt contributed, along

with the restriction to first-time buyers, to the dramatic decline in participation during 1994.

¹⁸ There are social and private costs to the program associated with smaller future RRSP accounts due to lost earnings on RRSP withdrawals. Withdrawals also reduce the RRSP tax-deductible contribution limit in the year of withdrawal by the amount withdrawn.

¹⁹ To identify which practice prevails in an issue, CMHC now uses different prefixes on pool numbers where issuers retain penalty fees from the prefix used on penalty pass-through pools.

²⁰ The stated rationale for direct lending is that it will reduce the net cost to CMHC of financing social housing.

²¹ Most market-rate issues appear to have a spread of 100 to 200 basis points between the average contract rate on loans in the pool and the MBS coupon.

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