

# CANADIAN HOUSING OBSERVER 2008



*With a Feature on Housing Need*



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# CANADIAN HOUSING OBSERVER 2008

## SIXTH IN A YEARLY SERIES

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## A Message from Karen Kinsley, President of Canada Mortgage and Housing Corporation

It is my pleasure to present the *Canadian Housing Observer 2008*, Canada Mortgage and Housing Corporation's flagship publication. This 6<sup>th</sup> edition of the *Observer* provides a detailed review of housing conditions and trends in Canada, as well as the key factors behind them.

CMHC's mandate since 1946 has been to provide safe, adequate and affordable homes to all Canadians. This year's *Observer* features an innovative examination of the dynamics of core housing need, based on data from the CMHC housing cost module in the annual Statistics Canada *Survey of Labour and Income Dynamics*. This marks the first time that the movement of Canadians into and out of core housing need is examined.

The *2008 Observer* also discusses the challenges of providing housing in Canada's North and what is being done to respond to these challenges, including innovations in design and materials to improve energy efficiency, to reduce construction time and costs, to improve the stability of foundations constructed in permafrost, and to make northern housing more culturally appropriate.

We strive to make the *Observer* a "must read", a relevant and useful reference guide to a wide audience in the private, co-operative and government sectors, including housing planners, researchers and policy makers; educators and students; home builders and renovators; and housing finance and real estate professionals.

In addition to the print publication of the *2008 Observer*, a broad range of online statistical information on the housing market and housing conditions is available on CMHC's website, and these data are updated throughout the year. This includes the *Housing in Canada Online* tool, which facilitates users' electronic retrieval and analysis of national, regional and local housing data (visit [www.cmhc.ca](http://www.cmhc.ca) and follow the link to the *Canadian Housing Observer 2008*).

I would like to thank all of those who have contributed to this edition of the *Observer*. I am confident you will find it to be a wealth of information on the Canadian housing front.

Your comments and suggestions are welcome. Please address them to: *Canadian Housing Observer*, Policy and Research, CMHC, 700 Montreal Road, Ottawa, ON K1A 0P7 or [sbaynes@cmhc.ca](mailto:sbaynes@cmhc.ca).



A handwritten signature in black ink, appearing to read 'K. Kinsley'. The signature is fluid and stylized, with a large initial 'K' and a distinct 'P' at the end.

Karen Kinsley  
President, CMHC

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# The State of Canada's Housing An Overview



## Recent Trends in Housing Affordability and Core Housing Need

- The CMHC-sponsored addition of a set of housing-related questions in Statistics Canada's *Survey of Labour and Income Dynamics* (SLID) has allowed not only the cross-sectional or "point-in-time" review of urban Canadians' housing conditions for any given intercensal year (2002-2005), but also the longitudinal study or tracking of the housing conditions of the same people over time (2002-2004).
- The incidence of urban core housing need in 2005 (13.5 per cent) remained at about the same level as in 2004 (13.6 per cent), largely as a result of Canada's sustained healthy economy. Almost 8.7 million urban Canadian households either lived in, or had sufficient income to access, acceptable housing in 2005.
- In 2005, urban households in Newfoundland and Labrador, Ontario and British Columbia had the highest incidences of core housing need (at 17.2 per cent, 15.5 per cent, and 14.6 per cent, respectively), higher than the national average of 13.5 per cent. Alberta (at 8.5 per cent) had the lowest incidence of urban core housing need in the country, well below the national average.
- While cross-sectional estimates of people living in an urban household in core housing need (at about 12 per cent) tend to show a similar level of urban core housing need in any single year during 2002-2004, and apparently no change in the composition of households facing this situation, longitudinal estimates reveal that there is a significant turnover among urban Canadians experiencing core housing need over time.
- Of the about 15 per cent of urban Canadians ever in core housing need, only about one-third lived persistently (all three years) in a household in core housing need over the three-year period (2002-2004), while about two-thirds did so occasionally (for one or two years).
- Between 2002 and 2004, individuals who lived in female lone-parent families (at 54.6 per cent), renters (at 39.7 per cent), senior women living alone (at 37.3 per cent), and those who lived in Toronto (at 21.9 per cent), and Vancouver (at 20.9 per cent) were more likely than the average Canadian (at about 15 per cent) to ever (at least one year) live in an urban household in core housing need.
- More than six in 10 people living in subsidized rental accommodations who ever lived in a core housing need household did so occasionally rather than persistently.
- Those who experienced some type of transition during 2002-2004 were also more likely to ever have lived (at least one year) in an urban household in core housing need than the average Canadian. This was the case for individuals who moved between Census Metropolitan Areas or Census Agglomerations (at 25.7 per cent), those whose tenure changed (at 23.9 per cent), and those whose family type changed (at 19.2 per cent).
- The preceding analysis of the dynamic nature of core housing need shows that while about one-third of people in households in core housing need are persistently unable to access acceptable housing, the other two-thirds experience core housing need occasionally.



- A better understanding of the distinct characteristics and housing experiences of these two groups is important to the development of effective policy approaches and programs to assist those in need.

### Demographic and Socio-economic Influences on Housing Demand

- Population growth in Canada has been slightly stronger in recent years than in the last half of the 1990s, largely as a result of rising immigration. In 2006, immigrants made up 20 per cent of Canada's population, the highest share in 75 years. Although most newcomers to Canada still settled in Toronto, Montréal, or Vancouver, the geographic distribution of recent immigrants was somewhat less concentrated in 2006 than in 2001.
- Strong employment and income growth continue to bolster homeownership demand in Canada. In 2007, the unemployment rate hit the lowest level in over 30 years, and the rate of participation in the labour force reached a high for the same period.
- There is no obvious evidence however that steady employment and growing incomes made people more likely to move out of shared accommodation than in the past. Although annual household growth went up, from an average of 148,600 between 1996 and 2001, to 174,900 between 2001 and 2006, the increase largely reflected more rapid population growth.
- The strong job market and growing incomes did raise the need for new construction by helping usher in a boom in homeownership. The rate of homeownership in Canada rose from 65.8 per cent in 2001 to 68.4 per cent in 2006, the largest increase between censuses dating back to 1971. Rapid increases in the ownership rate began in the second half of the 1990s when the economy emerged from the effects of the recession in the early 1990s. Households in all stages of life were more likely to own their homes in 2006 than their counterparts in 1996.
- The rush into homeownership positioned increasing numbers of households to benefit from strong house price appreciation. The annual growth in net worth of households in real terms (i.e. after inflation) from 1999

to 2005 (at four per cent) was double that in the previous 15 years, and equity in real estate accounted for almost half of the growth. As a consequence, the large disparities in the net worth of homeowners and renters widened further.

- Changes over time in the composition of Canadian households reflect the influence of aging baby boomers, the youngest of whom entered their early forties between 2001 and 2006. Households headed by persons aged 40 and older accounted for all of the household growth in Canada over the period. Couples with children have represented a declining percentage of all households for decades, and the average size of Canadian households continues to shrink.

### Current Market Developments

- The housing market was buoyant in 2007, with starts high, sales strong, price increases at double-digit levels, and renovation spending hitting new highs.
- Housing starts edged up to 228,343 units in 2007, the second best performance in two decades. Multiple starts were particularly strong, rising 3.2 per cent to the highest level in 29 years, while single-detached starts declined by two per cent. The largest percentage increases in total starts were in Saskatchewan (61.7 per cent) and Newfoundland and Labrador (18.6 per cent). Starts in Ontario, Nova Scotia and Alberta declined.
- Strong housing demand produced seller's market conditions across most of the country, and sales of existing homes reached a new all-time record level with increases in all provinces except Alberta. The average MLS® home price reached \$307,300 in 2007, up 11 per cent from 2006. New house prices as measured by the New Housing Price Index (which measures the prices of new homes of constant size and quality) rose by 7.8 per cent.
- The national apartment vacancy rate remained virtually unchanged at 2.6 per cent in October 2007. Rent increases were moderate in most centres, but high in some that had low vacancy rates. The highest average rent increases for two-bedroom apartments in the existing stock were in Edmonton (18.8 per cent), Calgary (15.3 per cent) and Saskatoon (13.5 per cent).

- The solid performance of the housing market, strong employment and income growth, and low interest rates have contributed to strength in renovation spending in recent years. The uninterrupted growth since 1999 continued in 2007, with total spending on alterations, improvements and repairs increasing nine per cent from 2006.

## Housing Finance

- In spite of turmoil on the world stage due to the U.S. sub-prime mortgage crisis, the Canadian housing finance market continued its steady growth, with average mortgage credit outstanding rising to \$774 billion in 2007, up 11.5 per cent from 2006.
- Canada did not experience the same problems as the U.S. for a number of reasons – it has a negligible sub-prime mortgage sector; it is characterized by prudent underwriting both in the portion of the market funded by direct deposits and in its securitized sector (which is also much smaller than in the U.S.); and marginal borrowers here have not been aggressively targeted with more “exotic” mortgage instruments as they were across the United States. Further, the mandatory use of mortgage insurance in Canada for high-ratio (over 80 per cent) loans provides a second check on the quality of the loan.
- Mortgage arrears in Canada remain low. In 2007 (as in 2006), slightly more than one in 400 households (0.26 per cent) fell three or more months behind in their mortgage payments, the lowest rate since 1990. By contrast, in the U.S., delinquencies for sub-prime loans made in 2005 and 2006 are approaching 40 per cent.
- The Canadian five-year posted mortgage rate averaged 7.07 per cent in 2007, up slightly from 6.66 per cent in 2006. The spread between fixed- and variable-rate mortgages widened in 2007, resulting in an increase in the share of variable-rate mortgages to 29 per cent, up from 22 per cent in 2006, but still below the peak of 36 per cent in 2005.
- Rising house prices brought about a deterioration in the affordability of new home purchase, with the ratio of monthly mortgage payment to average after-tax household income increasing to 37 per cent in 2007 compared to 32 per cent in 2006. Even with this deterioration, housing affordability in 2007 remains at the average of the period from 1980 to 2007.
- Based on responses to CMHC’s 2007 *Mortgage Consumer Survey*, mortgage consumers are generally comfortable with their debt load. In addition, four out of 10 intend to reduce their amortization period on their next renewal, and three out of 10 have at some point made a lump sum payment on their mortgage.
- Uncertainty in credit markets, and limited funding sources for non-deposit taking institutions, fuelled institutional interest in Canada Mortgage Bonds (CMB) as a mortgage funding mechanism in 2007, contributing to a 61 per cent increase in total issuance of CMB and NHA Mortgage-Backed Securities.

## Sustainable, Healthy Communities

- Improvements in district planning and infrastructure have contributed to increasing the lifespan of Canadians by 30 years since the early 1900s. Infectious diseases, often caused and spread through unhealthy living conditions in communities, account currently for only two per cent of deaths.
- Sustainable community development can foster active lifestyles and enhance the health of residents. Approaches can include a more efficient use of land and infrastructure, a mix of land uses and housing types, transit-oriented development, brownfield redevelopment, and green space preservation.

- Appropriate urban planning can reduce automobile use, the community impacts of which go well beyond ill health caused by air pollution. The reduction of traffic in neighbourhoods has been shown to produce positive results on many fronts, including increased children's play, more social interaction, reduced noise, more walking, and collision reduction—all leading to a healthier, less stressful lifestyle.
- Sustainable approaches include regulating traffic flow to minimize stop and go movements (which increase emissions); alternative street network designs that favour pedestrian and cyclist safety; and paths to amenities separate from other traffic and pollution sources. Neighbourhoods that achieve optimal density for services and other meaningful destinations within walking or cycling distance can also significantly reduce automobile usage in residential neighbourhoods.
- Green roofs and reductions in impermeable street surfaces can improve water quality.

### Northern Housing

- There are multiple challenges to providing housing in Canada's North. These include the harsh climate, permafrost, the impacts of climate change, geographical isolation, high costs, limited transportation infrastructure, community capacity issues and diverse cultural and socio-economic influences.
- In examining the challenges and the outcomes, the Northern Housing chapter focuses on the three territories north of the 60<sup>th</sup> parallel—Yukon, the Northwest Territories and Nunavut—and the Inuit regions of Nunavik in northern Quebec and Nunatsiavut in Labrador. This total area, representing over 40 per cent of Canada's land mass, is home to about 115,000 people living in some 90 communities.
- The northern population is young and growing rapidly, especially the Aboriginal population which represents nearly 60 per cent of Northerners. Over 16 per cent of Northern households were overcrowded in 2006, compared to just over six per cent in Canada as a whole. In 2001, close to a quarter of the households were in core housing need, compared to less than 14 per cent for the country as a whole.
- The rate of homeownership is low. There is little incentive to take the risk of home purchase where there is no active housing market; i.e., outside of major centres such as Yellowknife and Whitehorse. Private rental outside these centres is also typically unavailable and rental housing is predominantly either social housing owned by territorial/provincial housing corporations, or government staff housing.
- Many communities in the North are remote and inaccessible by road, resulting in high construction costs. Building materials are transported by barge or ship during the late summer months, on seasonal ice roads or by air. The cold and long winters limit the length of the construction season and contribute to high home heating and electricity costs.
- Innovative foundation techniques, such as thermal piles and space frame foundations, have been developed to respond to the challenges of building on permafrost. Although permafrost provides a stable base as long as it remains frozen, loss of heat from underneath the house can cause melting and structural problems if the house is not elevated from the ground.
- Aboriginal people who still follow traditional lifestyles have unique housing needs. Design charrettes and consultations with local communities have resulted in house designs that are more suited to a hunting culture, including space for skinning animals at home, room for traditional large gatherings to eat country food and cold storage areas.

# Recent Trends in Housing Affordability and Core Housing Need

2

Prior to 2002, CMHC's reviews of Canadian housing conditions and core housing need (see *Acceptable Housing and Core Housing Need text box*) were for the most part based on housing data collected every five years by Statistics Canada's Census of Population which is sponsored by CMHC. In 2002, CMHC began sponsoring a housing cost module in the *Survey of Labour and Income Dynamics*

(see *SLID text box*) to complement the housing data gathered by the Census and enable the monitoring of housing conditions of Canadians during intercensal years.

The *Canadian Housing Observer 2007*<sup>1</sup> chapter on housing affordability presented the first ever detailed review of cross-sectional<sup>2</sup> single year estimates of urban<sup>3</sup> housing affordability and core housing need for intercensal years, specifically 2002-2004. SLID data<sup>4</sup> were used to assess

## Acceptable Housing and Core Housing Need

The term **acceptable housing** refers to housing that is adequate in condition, suitable in size, and affordable.

- **Adequate** dwellings are those reported by their residents as not requiring any major repairs.
- **Suitable** dwellings have enough bedrooms for the size and make-up of resident households, according to National Occupancy Standard (NOS) requirements. Enough bedrooms based on NOS requirements means one bedroom for each cohabiting adult couple; unattached household member 18 years of age and over; same-sex pair of children under age 18; and additional boy or girl in the family, unless there

are two opposite sex children under five years of age, in which case they are expected to share a bedroom. A household of one individual can occupy a bachelor unit (i.e. a unit with no bedroom).

- **Affordable** dwellings cost less than 30 per cent of before-tax household income.

Households which occupy housing that falls below any of the dwelling adequacy, suitability or affordability standards, and which would have to spend 30 per cent or more of their before-tax income to pay for the median rent of alternative local market housing that meets all three standards, are said to be in **core housing need**.

1 See [www.cmhc.ca](http://www.cmhc.ca).

2 A cross-sectional estimate refers to a snapshot of a condition at a particular time (for example, in 2002).

3 Housing conditions of households living in Census Metropolitan Areas (CMAs) and Census Agglomerations (CAs) with core populations over 100,000 and 10,000, respectively, as defined by the 2001 Census geography. SLID data for 2002-2005 are based on 2001 Census geography. Whitehorse, YK and Yellowknife, NWT are excluded as they are not part of the SLID sample. Comprising almost all of urban Canada, the cities included in this study housed 23.8 million people or nearly 80 per cent of the national population in 2001.

4 Since the SLID sample of some 30,000 households is much smaller than the 2001 Census sample which gathered data from some 2.3 million households, SLID-based estimates would have less precision than estimates based on census data. Census and SLID data are not completely comparable. Nonetheless, SLID-based estimates can provide useful high-level insights into housing trends.

housing adequacy, suitability and affordability (see definitions in *Acceptable Housing and Core Housing Need text box*) and CMHC's *Rental Market Survey* data were used to determine the income levels required to access acceptable rental housing. The first section below adds 2005 SLID-based cross-sectional estimates of urban housing affordability and core housing need to that examination.

The second section below provides the first ever review of longitudinal<sup>5</sup> estimates of core housing need. As SLID follows the same people for up to six years (see *SLID text box*), it is possible to track their housing conditions over that time, not just for a single year. From year to year, individuals and households may experience changes in their housing conditions. This section examines the dynamics of core housing need; that is, movements into and out of core housing need over 2002-2004.

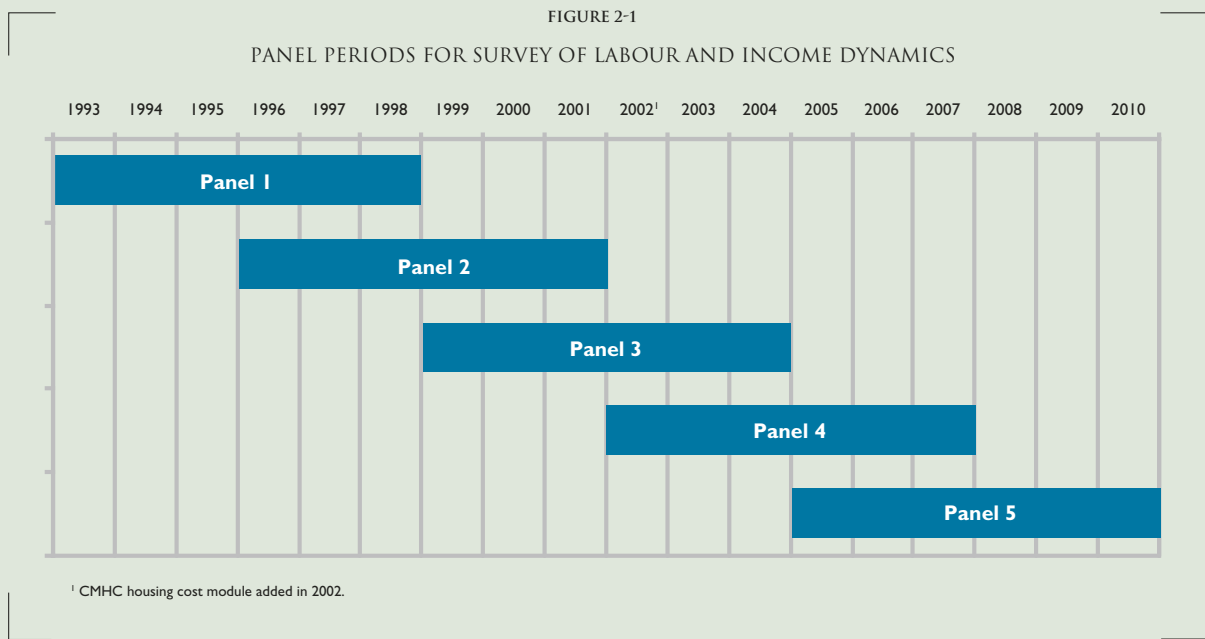
## The Survey of Labour and Income Dynamics (SLID)

SLID is a survey conducted annually by Statistics Canada to collect information on the labour and income characteristics of Canadians. SLID covers the 10 Canadian provinces but excludes those Canadians living in the territories, in institutions or collective dwellings, in military barracks and on Indian reserves. According to Statistics Canada, these exclusions amount to less than three per cent of the Canadian population (see [www.statcan.ca](http://www.statcan.ca)). SLID also excludes the homeless.

SLID collects information for two groups or panels of people who are tracked over a period of six consecutive years. Each panel comprises a sample

of about 15,000 households. A new panel begins every three years and thus the two panels overlap for three years (see *Figure 2-1*).

In 2002, a housing cost module was added to SLID as a result of CMHC sponsorship. Until then, SLID had collected only a few housing characteristics. As part of the housing cost module, over 20 housing-related questions were added to SLID. The addition of this module enables the review of most Canadians' housing conditions between censuses as well as the tracking of their housing conditions over time.



5 A longitudinal estimate is based on data collected for the same person over a period of time. This makes it possible to track, for example, that person's housing conditions over a number of years.

FIGURE 2-2  
HOUSING CONDITIONS IN CENSUS METROPOLITAN AREAS AND CENSUS AGGLOMERATIONS,<sup>1</sup>  
CANADA, 2002-2005

Year	SLID Panel	All households <sup>2</sup>		Living in acceptable housing <sup>2</sup>		Living in housing below one or more standards <sup>2</sup>			
		Total (millions)	Per cent	Total (millions)	Per cent	Able to access acceptable housing		Unable to access acceptable housing – in core housing need	
						Total (millions)	Per cent	Total (millions)	Per cent
2005	4 and 5	9.9	100	6.8	68.2	1.8	18.2	1.3	13.5
2004	3 and 4	9.6	100	6.7	69.9	1.6	16.5	1.3	13.6
2003	3 and 4	9.5	100	6.7	69.8	1.6	16.3	1.3	13.9
2002	3 and 4	9.4	100	6.6	69.7	1.5	16.4	1.3	13.9

<sup>1</sup> Household counts for CMAs and CAs do not include Whitehorse, YK and Yellowknife, NWT.

<sup>2</sup> Includes only private, non-farm, non-band, non-reserve households with incomes greater than zero and shelter-cost-to-income ratios (STIRs) less than 100 per cent. All figures are rounded.

Source: CMHC (SLID-based Housing Indicators and Data)

### 2005 urban core housing need: little change from 2004

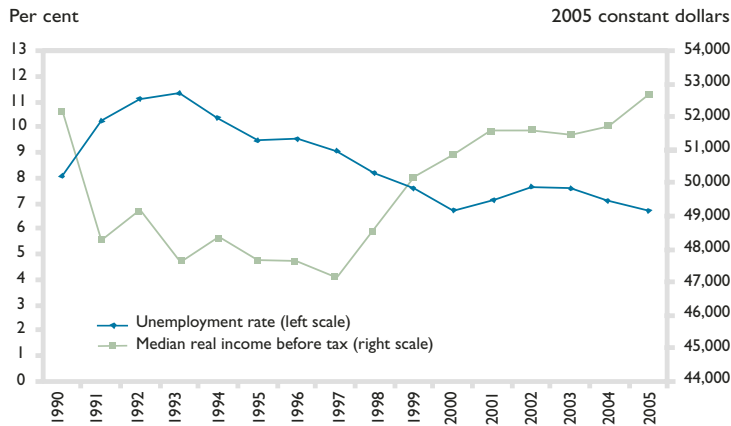
Urban core housing need changed very little from 2004 to 2005. In 2005, almost 6.8 million households<sup>6</sup> in urban Canada lived in acceptable housing (see *Acceptable Housing and Core Housing Need text box*), up very slightly from 2004 (see *Figure 2-2*). In addition, there were about 1.8 million households which, although living in housing below one or more standards, could have obtained acceptable housing in their cities at a cost of less than 30 per cent of before-tax household income. In total, 86.5 per cent of urban Canadian households either lived in, or had

sufficient income to access, acceptable housing in 2005, compared to 86.4 per cent in 2004. Although shelter costs increased in 2005, higher incomes and lower unemployment helped to keep the incidence of core housing need among urban Canadian households at 13.5 per cent, about the same level as in 2004 (13.6 per cent). Canada's economy continued to be healthy in 2005: households' median real before-tax incomes<sup>7</sup> grew from \$51,700 in 2004 to \$52,700 and the unemployment rate went below seven per cent for the first time since 2000 (see *Figure 2-3*).

6 The universe of urban households reviewed in this chapter includes only private, non-farm, non-band, off-reserve households with incomes greater than zero and shelter-cost-to-income ratios (STIRs) less than 100 per cent. Shelter costs cannot be collected for farm households as carrying costs for farm residences are not always separable from expenses related to other farm structures. Shelter costs cannot be collected for on-reserve households as it is the band that pays most of the housing costs and these costs are not always known by the occupant households. CMHC regards shelter-cost-to-income ratios of 100 per cent or more as uninterpretable and therefore households with such ratios along with those reporting zero or negative incomes are excluded from the analysis.

7 Household real incomes are adjusted for inflation and expressed in 2005 dollars.

FIGURE 2-3  
HOUSEHOLD MEDIAN REAL INCOME BEFORE TAX  
AND UNEMPLOYMENT RATE, 1990-2005



Source: Survey of Consumer Finances (1990-1995), Survey of Labour and Income Dynamics (1996-2005)

As in 2004, failing to meet the housing affordability standard was the principal reason for urban households falling into core housing need in 2005 (see Figure 2-4). Only one per cent of all urban households fell into core housing need by failing to meet the suitability and/or adequacy housing standards alone.

In 2005, female lone-parent renters had the highest incidence (at about 48 per cent) of core housing need, significantly above the national average of 13.5 per cent. One-person households (including both renters and owners) accounted for almost half (49.7 per cent) of all households in core housing need in 2005.

FIGURE 2-4  
PERCENTAGE OF URBAN HOUSEHOLDS BELOW HOUSING STANDARDS, 2004-2005

Housing standard(s) not met	Total				Able to access acceptable housing				Unable to access acceptable housing - in core housing need			
	2004		2005		2004		2005		2004		2005	
	Per cent	Cumulative Per cent	Per cent	Cumulative Per cent	Per cent	Cumulative Per cent	Per cent	Cumulative Per cent	Per cent	Cumulative Per cent	Per cent	Cumulative Per cent
Affordability only	20.1	20.1	20.8	20.8	9.2	9.2	10.1	10.1	10.9	10.9	10.8	10.8
Affordability and adequacy	1.5	21.6	1.8	22.7	0.6	9.8	0.8	10.9	0.9	11.8	1.0	11.8
Affordability and suitability	1.2	22.8	0.9	23.5	0.3	10.1	0.2	11.1	0.9	12.7	0.6	12.4
Affordability, suitability and adequacy	0.1	22.8	0.1	23.6	0.0	10.1	0.0	11.1	0.1	12.8	0.1	12.5
Suitability only	3.2	26.0	3.8	27.4	2.8	12.9	3.2	14.3	0.4	13.2	0.6	13.1
Adequacy only	3.8	29.8	4.0	31.4	3.4	16.2	3.7	18.0	0.4	13.6	0.3	13.4
Suitability and adequacy	0.2	30.0	0.3	31.7	0.2	16.4	0.2	18.2	0.0	13.6	0.1	13.5

All figures are rounded.

Source: CMHC (SLID-based Housing Indicators and Data)

## Canadian Urban Households by Income Group

Households were ranked by their before-tax nominal income (i.e. not adjusted for inflation) and divided into five equally sized groups (quintiles). Income groups for 2002-2005 were constructed using data from the *Survey of Labour and Income Dynamics*

(SLID) for urban households. For descriptive purposes, these groups are referred to as follows: low income, moderate income, middle income, upper income and high income (*see Figure 2-5*).

FIGURE 2-5  
URBAN HOUSEHOLD INCOME<sup>1</sup> GROUPS (QUINTILES), CANADA, 2002-2005

Income Group	2002 <sup>2</sup>			2003 <sup>2</sup>			2004 <sup>2</sup>			2005		
	Income range	Median shelter costs	Core housing need incidence	Income range	Median shelter costs	Core housing need incidence	Income range	Median shelter costs	Core housing need incidence	Income range	Median shelter costs	Core housing need incidence
		Median income			Median income			Median income			Median income	
		Median STIR <sup>3</sup>		Median STIR <sup>3</sup>			Median STIR <sup>3</sup>			Median STIR <sup>3</sup>		
High	\$91,898 and up	\$12,740	0.0%	\$94,659 and up	\$13,655	0.0%	\$98,182 and up	\$13,687	0.0%	\$101,391 and up	\$14,537	0.0%
		\$120,000			\$123,251			\$127,696			\$132,276	
		10.0%			10.4%			10.2%			10.3%	
Upper	\$62,265 to \$91,897	\$10,956	0.0%	\$64,501 to \$94,658	\$11,766	0.0%	\$66,065 to \$98,181	\$11,944	0.0%	\$67,545 to \$101,390	\$12,339	0.0%
		\$75,251			\$77,279			\$79,801			\$82,622	
		14.6%			15.2%			15.0%			15.2%	
Middle	\$42,000 to \$62,264	\$8,751	2.2%	\$43,174 to \$64,500	\$9,022	1.5%	\$44,272 to \$63,064	\$9,365	1.1%	\$45,519 to \$67,544	\$9,790	1.3%
		\$51,358			\$53,187			\$54,615			\$56,035	
		16.9%			17.0%			17.2%			17.7%	
Moderate	\$24,949 to \$41,999	\$7,056	13.6%	\$25,702 to \$43,173	\$7,315	12.7%	\$26,463 to \$44,271	\$7,538	12.4%	\$27,023 to \$45,518	\$8,248	11.8%
		\$33,197			\$34,289			\$35,172			\$36,010	
		21.7%			21.6%			22.0%			23.1%	
Low	up to \$24,948	\$5,731	53.7%	up to \$25,701	\$5,864	55.1%	up to \$26,462	\$6,060	54.3%	up to \$27,022	\$6,204	54.5%
		\$16,548			\$17,213			\$17,500			\$17,831	
		36.8%			37.1%			37.8%			36.7%	
ALL	NA	\$8,129	13.9%	NA	\$8,478	13.9%	NA	\$8,776	13.6%	NA	\$9,183	13.5%
		\$51,358			\$53,187			\$54,615			\$56,035	
		17.8%			18.2%			18.1%			18.5%	

1 Nominal dollars, not adjusted by inflation.

2 Revised estimates.

3 Shelter-cost-to-income ratio.

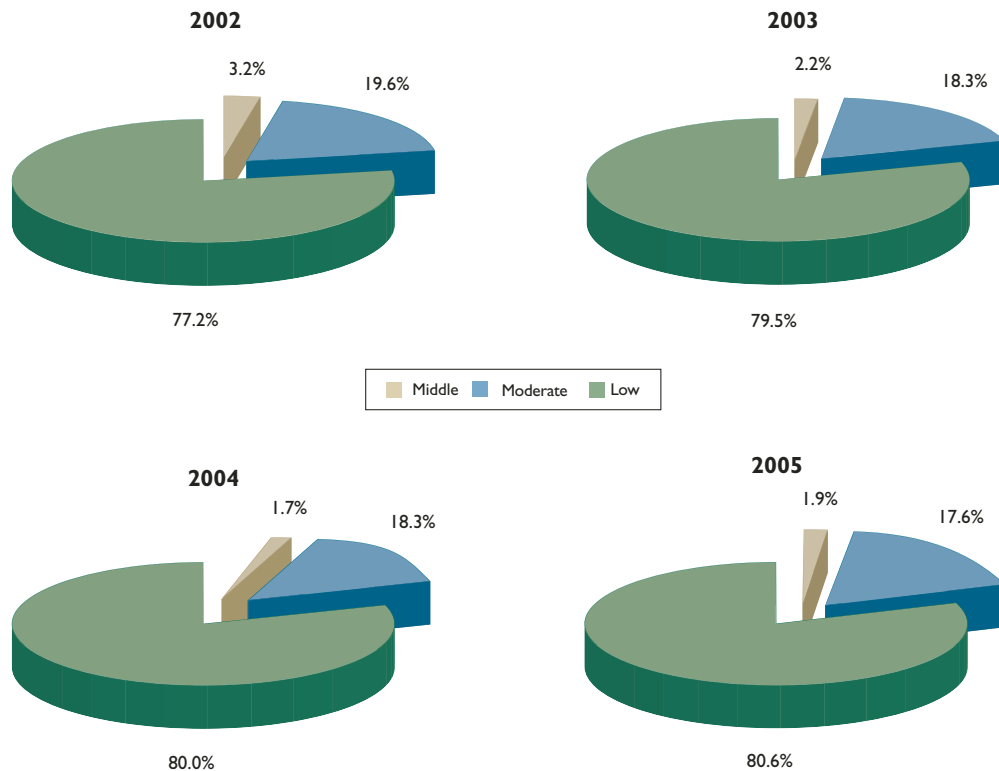
Source: CMHC (SLID-based Housing Indicators and Data)

As in 2004, core housing need in 2005 was very unevenly distributed across households with different income levels (see *Canadian Urban Households by Income Group text box*). Over half (54.5 per cent) of low-income households experienced core housing need (see *Figure 2-5*). These accounted for 80.6 per cent of all households in core housing need in 2005 (see *Figure 2-6*), a share that has been increasing since 2002. Most of the remaining households in core housing need, with an incidence of 11.8 per cent and a share of 17.6 per cent, were of moderate income.

In 2005, more than a quarter (27.8 per cent) of households renting their accommodations experienced core housing need compared to 6.2 per cent of owner households (see *Figure 2-7*).

In 2005, about six in 10 (59.6 per cent) low-income renters and over four in 10 (44.2 per cent) low-income owners were in core housing need. The incidence of core housing need among low-income owners has trended upwards, from some 39 per cent in 2002 and 2003, and their share among households in core housing need increased to almost 22 per cent in 2005, up from about 18 per cent in 2002 and 2003 (see *Figure 2-7*). While in most years low-income owners had slightly higher increases in their incomes than low-income renters, low-income owners faced much higher annual increases in their shelter costs than low-income renters. The shelter-cost-to-income ratios of low-income owners increased substantially in both 2004 and 2005, while those of low-income renters were decreasing (see *Figure 2-8*).

FIGURE 2-6  
SHARE OF URBAN HOUSEHOLDS IN CORE HOUSING NEED,  
BY INCOME QUINTILE, 2002-2005<sup>1</sup>



<sup>1</sup> There are no households in core housing need in the high and upper income quintiles.

Source: CMHC (SLID-based Housing Indicators and Data)

FIGURE 2-7  
INCIDENCE AND SHARE OF URBAN HOUSEHOLDS IN CORE HOUSING NEED,  
BY INCOME QUINTILE AND TENURE, 2002-2005

Income Quintile	Tenure	2002			2003			2004			2005		
		Share of total households (%)	Incidence of core housing need (%)	Share of total households in core housing need (%)	Share of total households (%)	Incidence of core housing need (%)	Share of total households in core housing need (%)	Share of total households (%)	Incidence of core housing need (%)	Share of total households in core housing need (%)	Share of total households (%)	Incidence of core housing need (%)	Share of total households in core housing need (%)
High	Owner	18.1	0.0	0.0	18.4	0.0	0.0	18.4	0.0	0.0	18.5	0.0	0.0
	Renter	1.9	0.0	0.0	1.6	0.0	0.0	1.6	0.0	0.0	1.5	0.0	0.0
Upper	Owner	16.0	0.0	0.0	16.2	0.0	0.0	16.4	0.0	0.0	16.5	0.0	0.0
	Renter	3.9	0.0	0.0	3.8	0.0	0.0	3.6	0.0	0.0	3.5	0.0	0.0
Middle	Owner	13.0	1.9	1.8	13.3	1.3	1.2	13.8	1.2	1.2	13.6	0.9	0.9
	Renter	7.0	2.9	1.4	6.7	1.9	0.9	6.2	1.0	0.5	6.3	2.2	1.0
Moderate	Owner	10.5	10.5	7.9	10.8	10.4	8.1	11.3	10.1	8.4	10.7	9.2	7.3
	Renter	9.5	17.1	11.7	9.2	15.4	10.2	8.7	15.4	9.9	9.4	14.8	10.3
Low	Owner	6.5	39.2	18.4	6.4	38.8	17.9	6.6	43.8	21.2	6.7	44.2	21.9
	Renter	13.5	60.8	58.8	13.6	62.8	61.6	13.4	59.5	58.8	13.3	59.6	58.6
ALL	Owner	64.2	6.1	28.1	65.1	5.8	27.3	66.6	6.3	30.8	66.1	6.2	30.1
	Renter	35.8	27.9	71.9	34.9	28.8	72.7	33.4	28.1	69.2	33.9	27.8	69.9

All figures are rounded.  
Source: CMHC (SLID-based Housing Indicators and Data)



FIGURE 2-8  
SHELTER COSTS, INCOME, AND SHELTER-COST-TO-INCOME  
RATIOS (STIR) OF LOW-INCOME HOUSEHOLDS,  
2002-2005

	Low-income renters				Low-income owners			
	2002	2003	2004	2005	2002	2003	2004	2005
Median shelter cost	\$6,212	\$6,246	\$6,385	\$6,381	\$4,672	\$5,068	\$5,267	\$5,652
Median household income	\$15,532	\$16,039	\$16,557	\$16,615	\$18,017	\$18,913	\$19,428	\$19,852
Median STIR (%)	40.5	40.6	40.0	38.6	28.1	28.1	30.7	32.5
	Per cent change from previous year				Per cent change from previous year			
Median shelter cost	NA	0.5%	2.2%	-0.1%	NA	8.5%	3.9%	7.3%
Median household income	NA	3.3%	3.2%	0.4%	NA	5.0%	2.7%	2.2%

Source: CMHC (SLID-based Housing Indicators and Data)

### Newfoundland and Labrador, Ontario and British Columbia had the highest incidences of core housing need; Alberta, Saskatchewan and Manitoba the lowest

Newfoundland and Labrador had the highest incidence of urban core housing need (17.2 per cent) in 2005 (see Figure 2-9).

At 15.5 per cent in 2005, Ontario's incidence of urban core housing need was the second highest followed by British Columbia at 14.6 per cent. All other provinces were below the national average of urban core housing need (13.5 per cent).

At 12.8 per cent in 2005, Quebec's urban incidence of core housing need was higher than in 2004 (10.8 per cent).

New Brunswick also experienced an increase in its incidence of urban core housing need, from 8.1 per cent in 2004 to 12.5 per cent in 2005.

Nova Scotia's incidence of urban core housing incidence fell from 13.5 per cent in 2004 to 10.6 per cent in 2005.

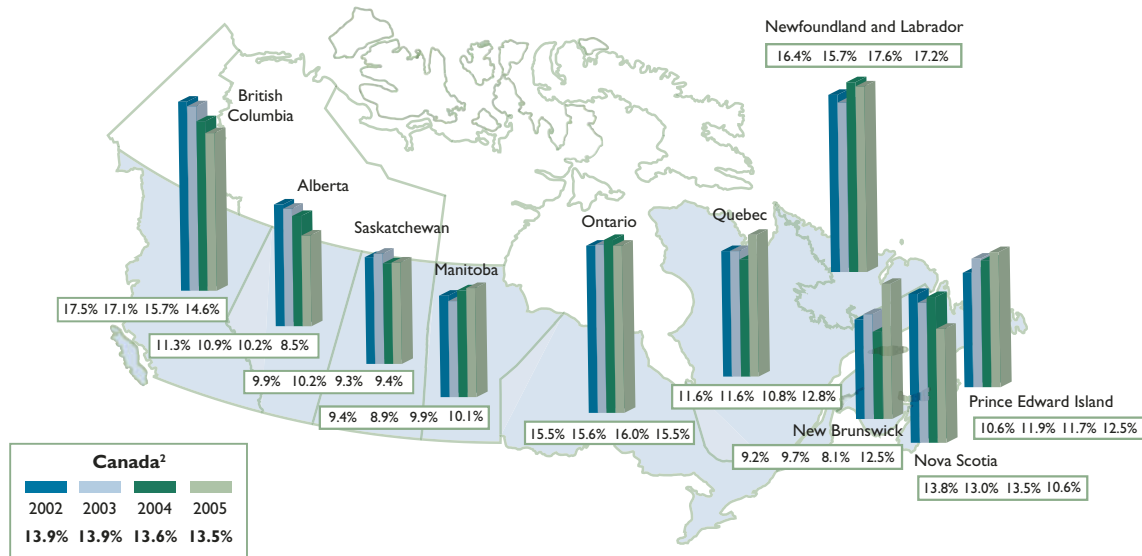
Prince Edward Island's incidence of urban core housing need went up slightly from 11.7 per cent in 2004 to 12.5 per cent in 2005.

In 2005, the Prairie provinces again experienced the lowest incidences of urban core housing need in the country. Alberta's incidence was the lowest at 8.5 per cent, followed by Saskatchewan at 9.4 per cent and Manitoba at 10.1 per cent.

### Large cities followed the provincial trend

From 2004 to 2005, large cities followed the changes of core housing need experienced in their own provinces (see Figure 2-10). Toronto's incidence of urban core housing need remained high at 18.9 per cent in 2005, just slightly down from 19.1 per cent in 2004. Montréal's incidence of core housing need was 14 per cent in 2005 (just above the national average), up from 12.1 per cent in 2004. Vancouver's incidence of core housing need was 15 per cent in 2005, down from 17.4 per cent in 2004. Ottawa-Gatineau's incidence of core housing need in 2005 (13.9 per cent) remained just above the national average. Calgary's incidence of core housing need decreased from 8.8 per cent in 2004 to 7.3 in 2005 while Edmonton's fell from 11.3 per cent in 2004 to 9.6 per cent in 2005. Winnipeg's and Regina's incidences remained at 10 per cent or below in 2005. Halifax's core housing need incidence was 10.2 per cent in 2005, down from 13.6 per cent in 2004.

FIGURE 2-9  
INCIDENCE OF URBAN<sup>1</sup> CORE HOUSING NEED BY PROVINCE, 2002-2005



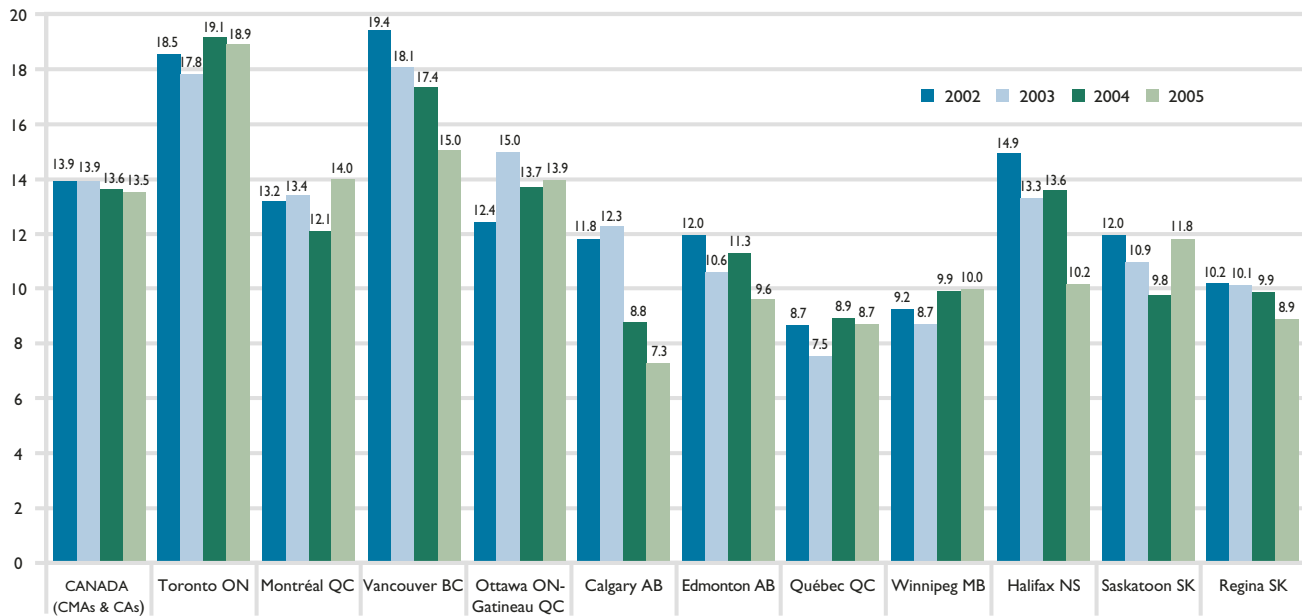
<sup>1</sup> Includes Census Metropolitan Areas and Census Agglomerations which accounted for almost 80 per cent of the Canadian population.

<sup>2</sup> Does not include Whitehorse and Yellowknife.

Source: CMHC (SLID-based Housing Indicators and Data)

FIGURE 2-10  
INCIDENCE OF CORE HOUSING NEED, SELECTED METROPOLITAN AREAS,<sup>1</sup> 2002-2005

Per cent of households in core housing need



<sup>1</sup> Only CMAs with a SLID annual sample of about 500 or more households.

Source: CMHC (SLID-based Housing Indicators and Data)

### The dynamics of urban individuals' core housing need

This section examines for the first time annual changes in housing conditions of urban individuals<sup>8</sup> using longitudinal estimates of core housing need<sup>9</sup> over the period 2002-2004.<sup>10</sup> Longitudinal estimates are based on data gathered for the same individuals over several years and make it possible to know how long those individuals lived in a certain housing condition and whether their housing conditions have changed over time. Thus, longitudinal estimates provide a different perspective than an approach based on cross-sectional estimates which indicate the housing condition of that individual or household only at a single point in time.

The estimates discussed below represent 20.7 million people living in urban areas who during 2002-2004 (i.e., all three years) were members of private, non-farm, non-band, off-reserve households whose incomes were greater than zero, and shelter-cost-to-income ratios (STIRs) lower than 100 per cent (see Figure 2-11).

### Cross-sectional versus longitudinal estimates of core housing need

SLID cross-sectional estimates show that the incidence of Canadian urban households in core housing need between 2002 and 2004 remained fairly stable at levels just below 14 per cent. At 12 per cent or just below, the incidences of core housing need during the same period were somewhat lower when using persons as the unit of analysis<sup>11</sup> (see Figure 2-12).

FIGURE 2-11  
LONGITUDINAL AND CROSS-SECTIONAL UNIVERSES, 2002-2004

	Longitudinal Universe	Cross-Sectional Universe					
	People (millions)	People (millions)			Households (millions)		
	2002-2004	2002	2003	2004	2002	2003	2004
Total <sup>1,2</sup>	30.3	30.6	30.9	31.2	12.2	12.3	12.5
After selecting people present all three years for the longitudinal universe	27.1	NA	NA	NA	NA	NA	NA
After selecting the following households: non-farm, non-band, off-reserve with household income > 0 and STIRs < 100% (all three years for the longitudinal universe)	25.4	29.5	29.7	29.9	11.6	11.7	11.9
After selecting households living in CMAs or CAs (all three years for the longitudinal universe)	20.4	24.0	24.1	24.3	9.4	9.5	9.6

<sup>1</sup> Total for longitudinal universe includes people who were present at the beginning of the panels.

<sup>2</sup> Totals for cross-sectional universe includes longitudinal people plus those (cohabitants) who have joined the households that were present at the beginning of the panels. Household counts take into account those households that form and dissolve over the course of a panel.

Source: CMHC (SLID data)

- 8 In order to interpret longitudinal data, it is necessary to use individuals as a unit of analysis instead of households. Longitudinally, it is not possible to track households as they form, change, dissolve, and disappear over time as a result of births, marriages, divorces, deaths and the comings and goings of household members. Rather, it is possible to track individuals and attach to them their corresponding household characteristics at the time (e.g., shelter costs, composition, and core housing need of the household in which the individual lived).
- 9 Longitudinal estimates of housing affordability, but not core housing need, were previously examined by Statistics Canada and CMHC (see Research Highlight “Dynamics of Housing Affordability”, January 2008 <http://www.cmhc-schl.gc.ca/odpub/pdf/65901.pdf>).
- 10 The review uses data which are part of SLID panels 3 and 4. Using 2002 to 2004 as a study period allowed the largest available sample since during these years people in panels 3 and 4 were tracked simultaneously. In 2005, panel 3 was replaced by panel 5 (see Figure 2-1).
- 11 The larger number of households with multiple members (e.g., couples with children) which are not in core housing need lower the incidence of core housing need when measured on a persons basis.

FIGURE 2-12  
CROSS-SECTIONAL ESTIMATES OF  
URBAN CORE HOUSING NEED, 2002-2004

Year	In Core Housing Need			
	People		Households	
	# (millions)	%	# (millions)	%
2004	2.8	11.4%	1.3	13.6%
2003	2.8	11.7%	1.3	13.9%
2002	2.9	12.0%	1.3	13.9%

Source: CMHC (SLID-based Housing Indicators and Data)

### People move into and out of core housing need: only 4.6 per cent were in core housing need all three years

The stability in cross-sectional levels of core housing need between 2002 and 2004 should not be interpreted to mean that there was no significant change in the composition of the group in core housing need during this period; that is, a group comprising the same people year after year. Longitudinal estimates reveal that over time there are considerable changes in who is living in households in core housing need (see Figure 2-13). Only 4.6 per cent of people *persistently* lived all three years in urban households in core housing need. People also lived *occasionally*, for two years (4.2 per cent) and for one year (6.6 per cent), in urban households in core housing need. In total, 15.4 per cent of people *ever* lived for at least one year in core housing need households over 2002-2004. The remainder, 84.6 per cent of urban Canadians, *never* lived in core housing need between 2002 and 2004.

FIGURE 2-13  
LONGITUDINAL ESTIMATES OF PEOPLE LIVING IN  
URBAN HOUSEHOLDS IN CORE HOUSING NEED,  
2002-2004

	Period in Core Housing Need				Total
	Never	Ever			
		Occasionally	Persistently		
Years in Core Housing Need	0	1	2	3	
People (millions)	17.2	1.3	0.9	0.9	20.4
Per cent	84.6%	6.6%	4.2%	4.6%	100.0%

Components may not add to total due to rounding.

Source: CMHC (SLID-based Housing Indicators and Data)

## FAST Facts

- The incidence of urban core housing need in 2005 (13.5 per cent) remained at about the same level as in 2004 (13.6 per cent).
- In 2005, urban households in Newfoundland and Labrador, Ontario and British Columbia had the highest incidences (at 17.2 per cent, 15.5 per cent, and 14.6 per cent, respectively) of core housing need, higher than the national average of 13.5 per cent.
- Although urban low-income renters continued to account for the largest share (close to 59 per cent) of all core housing need households, low-income owners made up some 22 per cent of households in core housing need in 2005.
- Longitudinal estimates show that only 4.6 per cent of urban Canadians lived persistently (all three years) in an urban household in core housing need over 2002-2004 while 10.8 per cent did so occasionally (for one or two years).
- Overall, some 15 per cent of urban Canadians ever (at least one year) lived in a household in core housing need over 2002-2004.
- Renters (at 39.7 per cent) were more likely than owners (at 6.8 per cent) to ever (at least one year) live in an urban household in core housing need over 2002-2004. This was particularly the case for those living in subsidized rental accommodations (at 60.5 per cent).
- Between 2002 and 2004, people living in female lone-parent families were the most likely (at 54.6 per cent) of any family type to ever (at least one year) live in an urban household in core housing need and half of them did so persistently (all three years).
- Toronto (at 21.9 per cent) and Vancouver (at 20.9 per cent), with their high shelter costs, had high incidences of people ever living in an urban household in core housing need.

Longitudinal estimates also show that there is a year-to-year turnover in the people affected by core housing need. While cross-sectional annual estimates indicate a seemingly stable percentage of Canadians living in core housing in each year (12 per cent or just below), longitudinal estimates show that about 15 per cent (about three percentage points more) reported ever living in an urban household in core housing need over the three-year period.

**People in owned accommodations most likely to never live in core housing need all three years, especially those without a mortgage**

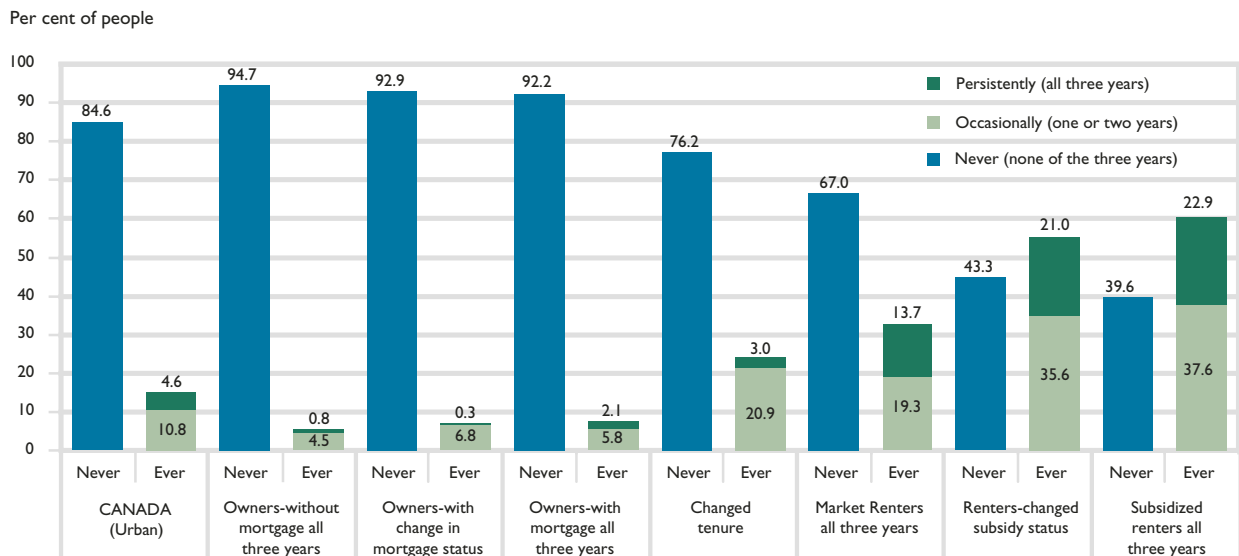
Almost 70 per cent of the tracked people lived in owner-occupied housing all three years, 2002-2004. About 93 per cent of them never lived in an urban household in core housing need over 2002-2004, compared to about 85 per cent of all Canadians. Those who were mortgage-free were even more likely to never live in core housing need (94.7 per cent), compared to 92.2 per cent of people in households with mortgages all three years (see Figure 2-14). Most of the owners who did encounter core housing need did so only occasionally (one or two years) rather than persistently (all three years).

People who were renters all three years accounted for one-fifth of those tracked. Renters were much worse off

than owners; renters were much less likely (at 60.3 per cent) to never live in an urban household in core housing need than were owners (at 93.2 per cent). In other words, renters (at 39.7 per cent) were more likely than owners (at 6.8 per cent) to ever live in a household in core housing need over 2002-2004. Those living in households paying market rents all three years fared best among those in rental housing: 67.0 per cent of them never lived in a core housing need household (see Figure 2-14). In contrast, people living in subsidized rental housing were the least likely to never live in a core housing need household (39.6 per cent). About four in 10 people, very likely living in households with the lowest incomes, avoided core housing need all three years because of their rent subsidies. Additionally, more than six in 10 people living in subsidized rental accommodations who ever lived in a core housing need household did so occasionally rather than persistently.

People who changed tenure (10 per cent of those tracked) were also relatively less likely (76.2 per cent) to never live in a core housing need household than the average Canadian (some 85 per cent). Among those who changed tenure status, 3.0 per cent lived persistently in a core housing need household while 20.9 per cent did so occasionally (see Figure 2-14). A variety of life cycle events have been related to an increased difficulty in accessing

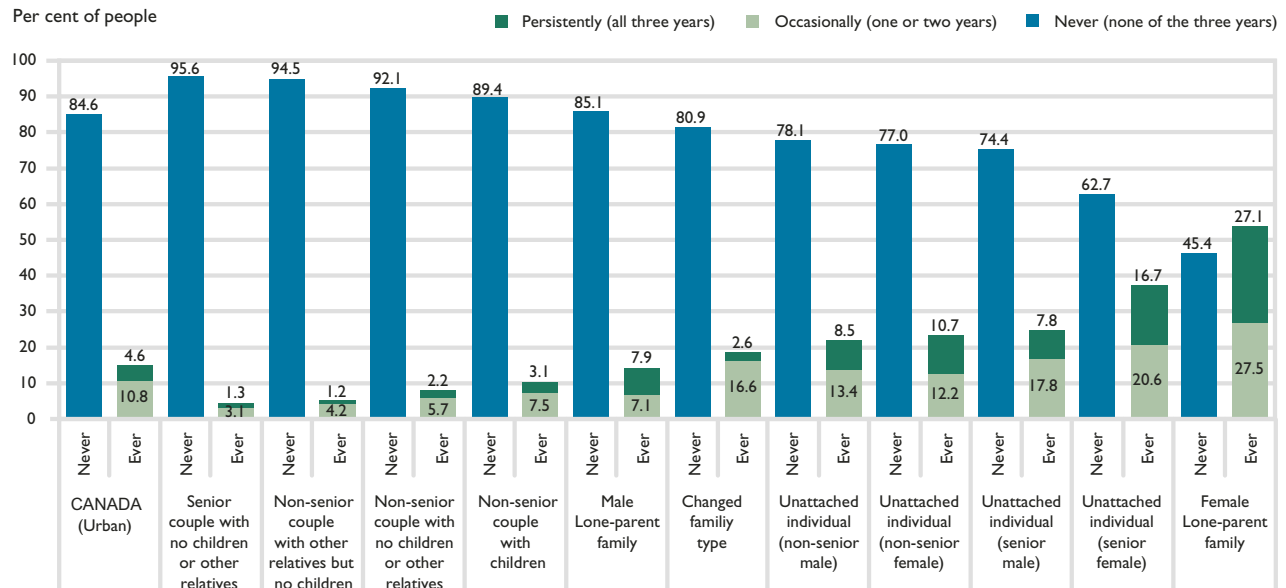
FIGURE 2-14  
PERSISTENCY OF URBAN CORE HOUSING NEED, BY TENURE,  
2002-2004



Components may not add to 100 per cent due to rounding.

Source: CMHC (SLID-based Housing Indicators and Data)

FIGURE 2-15  
PERSISTENCY OF URBAN CORE HOUSING NEED, BY SELECTED FAMILY TYPES,  
2002-2004



Components may not add to 100 per cent due to rounding.

Source: CMHC (SLID-based Housing Indicators and Data)

acceptable housing. For instance, family dissolutions or break-ups (e.g., separations, divorces) and aging or health issues may erode financial capacity and force people to move from owner-occupied to rental housing and potentially leave them in core housing need.<sup>12</sup> It is also possible that some renters who moved into homeownership experienced core housing need for one or more years as a result of income and/or shelter cost changes. Nonetheless, the longitudinal estimates suggest that individuals who changed tenure lived in a core housing need household only temporarily as almost nine in 10 did so occasionally rather than persistently.

### Couples fared relatively well and female lone-parents relatively poorly

The persistency of core housing need was strongly related to people's family arrangements. Individuals in couple households accounted for almost 60 per cent of all tracked people. Overall, individuals living in couple households were more likely to never live in a household in core housing need. Couples, especially those of working age, are

nowadays typically two-wage-earner households, or households with multiple income recipients, that have a better ability to access acceptable housing.

Those living in senior married couples, as two-person households, were the most likely (95.6 per cent) to never live in a household in core housing need (see Figure 2-15). Many of them have paid off their mortgages, reducing their shelter costs significantly.

People living in non-senior couples with other relatives but no children were slightly less likely (94.5 per cent) to never live in core housing need. With less potential of household income pooling, people in non-senior married couples with no children or relatives ranked third with 92.1 per cent of them never living in a household in core housing need (see Figure 2-15).

Though ranked fourth among urban Canadians never living in a core housing need household (89.4 per cent) (see Figure 2-15), non-senior couples with children represented the second largest group of people (nearly

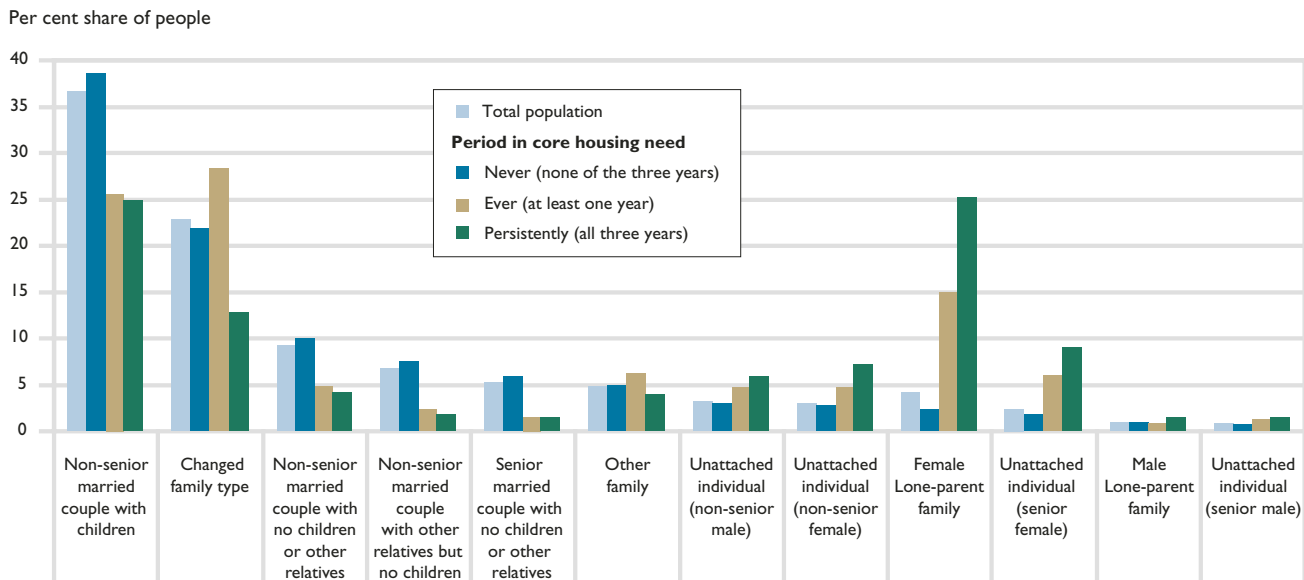
12 Helderman, A. C. (2007) 'Once a homeowner, always a homeowner? An analysis of moves out of owner-occupation'. *Journal of Housing and Built Environment*, 22:239-261.

26 per cent) among those ever living in a core housing need household because of being the most numerous group among any family type (see Figure 2-16). Their large share means that many children lived for some time in core housing need.

Individuals whose family type changed over the period of study accounted for almost 23 per cent of all tracked people. At 28.2 per cent, they were overrepresented among all who ever experienced core housing need during 2002 to 2004 (see Figure 2-16). However, it appears that their living in core housing need was for the most part temporary, as nine in 10 of those who ever lived in a core housing need household did so only occasionally rather than persistently (see Figure 2-15). Many events leading to a change in family status can impact a person's capability to access acceptable housing. Household formation (e.g., children departing their parents' home) and family dissolution (e.g., separation, divorce) can leave individuals in a more financially precarious position to access acceptable housing.<sup>13</sup>

On the opposite side of the core housing need spectrum, as one-earner households with more constrained incomes, people in one-person households and female lone-parent households were much more likely to ever live in a household in core housing need than the average Canadian. For people in one-person households, age and particularly gender were important factors. At some 31 per cent, people in senior one-person households were more likely to ever live in a core housing need household than people in non-senior one-person households (about 23 per cent). Among one-person households, senior female households were the most likely to ever live in a core housing need household (some 37 per cent) and more likely to do so persistently (see Figure 2-15).

FIGURE 2-16  
SHARES OF TOTAL POPULATION COMPARED WITH SHARES FOR EACH PERIOD  
IN CORE HOUSING NEED, BY FAMILY TYPE,<sup>1</sup> 2002-2004



<sup>1</sup> Sorted from largest to smallest shares of people in family types never living in core housing need all three years.

Source: CMHC (SLID-based Housing Indicators and Data)

13 Flatau, P., P. Hendershott, R. Watson and G. Wood (2004) 'What drives Australian housing careers? An examination of the role of labour market, social and economic determinants.' Australian Housing and Urban Research Institute (AHURI), Western Australian Research Centre, Final Report No. 68, September.

Despite some apparent improvement in their socio-economic conditions in recent decades,<sup>14</sup> people in female lone-parent households were still those most likely (at 54.6 per cent) to ever live in a household in core housing need over 2002-2004. Of those in female lone-parent families who ever lived in a household in core housing need, one-half did so occasionally (one or two years) and the other half persistently (all three years) (see Figure 2-15). People in female lone-parent families also represented the largest share (about 25 per cent) among those persistently living in core housing need (see Figure 2-16).

**Toronto and Vancouver had the largest proportions of people ever living in core housing need: Québec and Regina the lowest<sup>15</sup>**

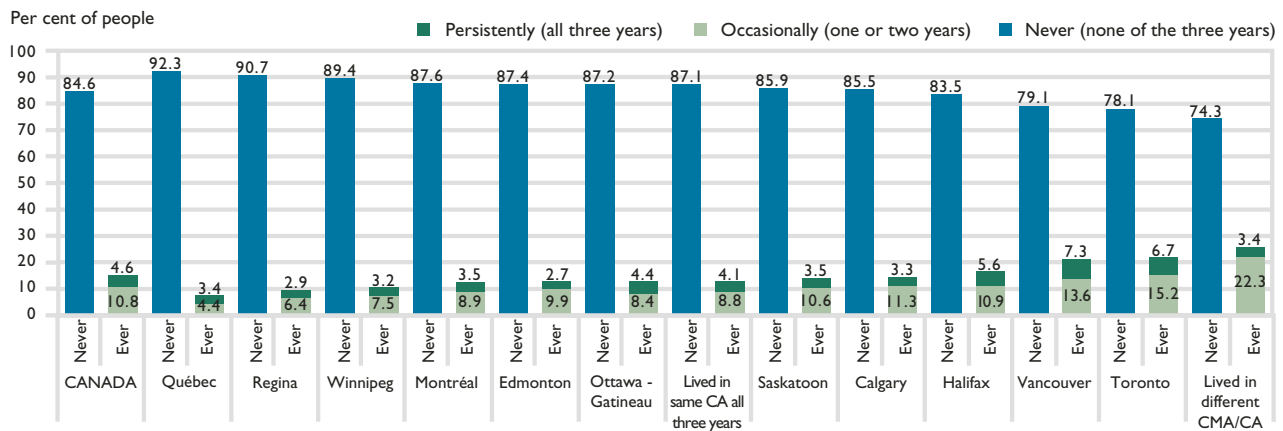
Not surprisingly due to their high shelter costs, Toronto and Vancouver were the cities with the highest proportions (21.9 per cent and 20.9 per cent, respectively) of people ever living in a household in core housing need over the study period (see Figure 2-17). People in these two cities who ever lived in a household in core housing need

accounted for almost 38 per cent of all such Canadians. Vancouver and Toronto also had the largest proportion of people persistently living in core housing need (7.3 per cent and 6.7 per cent, respectively).

People who moved between Census Metropolitan Areas (CMAs) or Census Agglomerations (CAs) over the 2002-2004 period were prone (25.7 per cent) to ever live in a household in core housing need. However, their adverse housing condition was generally transitory; of those moving into another CMA/CA and ever in core housing need, nearly 90 per cent experienced core housing need occasionally and only 10 per cent persistently. It seems that once these movers established themselves in their place of destination they tended to find acceptable housing.

There were also cities where it was very unlikely that a person would ever live in a household in core housing need. Those living in Québec, Regina and Winnipeg had the three smallest proportions of people ever living in a household in core housing need: 7.8 per cent, 9.3 per cent, and 10.7 per cent, respectively.

FIGURE 2-17  
PERSISTENCY OF URBAN CORE HOUSING NEED, BY CMA AND CA,<sup>1</sup>  
2002-2004



<sup>1</sup> Only Census Metropolitan Areas (CMAs) and category groups with a SLID annual sample of about 500 or more households.

Components may not add to 100 per cent due to rounding.

Source: CMHC (SLID-based Housing Indicators and Data)

14 Between 1980 and 2000, the gains in employment among single mothers (12.1 per cent) have been modest compared to married women (21.3 per cent). The former's aggregate growth in employment has been mostly the result of a compositional change whereby single mothers as a whole have become relatively older, attaining better educational levels, and therefore having better employment opportunities. Indeed, the annual earnings of young single mothers under the age of 40 have remained virtually unchanged and their weekly earnings actually declined between 1980 and 2000. See J. Myles, F. Hou, G. Picot and K. Myers *Why did Employment and Earnings Rise Among Lone Mothers During the 1980s and 1990s?* Research Paper, Catalogue 11F0019MIE-No.182. (Ottawa: Statistics Canada, 2006).

15 Only CMAs having a SLID annual sample of about 500 or more households were used in this analysis. Those who permanently lived in a particular CA and those who moved between CMAs or CAs during 2002-2004 are grouped into two separate categories.

## Summary

The CMHC-sponsored addition of a set of housing-related questions in SLID has allowed both the cross-sectional or “point-in-time” review of urban Canadians’ housing conditions for any given intercensal year (2002-2005) and the longitudinal study or tracking of their housing conditions over time (2002-2004).

The incidence of urban core housing need in 2005 (13.5 per cent) remained at about the same level as in 2004 (13.6 per cent), largely as a result of Canada’s sustained healthy economy. Almost 8.7 million urban Canadian households either lived in, or had sufficient income to access, acceptable housing in 2005. Urban low-income households continued to experience a high incidence (54.5 per cent) of core housing need in 2005.

Although urban low-income renters continued to account for the largest share (close to 59 per cent) of core housing need households, low-income owners made up some 22 per cent of households in core housing need in 2005.

In 2005, urban households in Newfoundland and Labrador, Ontario and British Columbia had the highest incidences (at 17.2 per cent, 15.5 per cent, and 14.6 per cent, respectively) of core housing need, higher than the national average of 13.5 per cent. Other provinces experienced levels of core housing need below the national average. Alberta (at 8.5 per cent) had the lowest incidence of urban core housing need in the country, well below the national average.

The first ever analysis of longitudinal estimates of urban core housing need has produced very interesting findings. While cross-sectional estimates of people living in a core housing need household, at about 12 per cent, tend to show a similar level of urban core housing need in any single year and apparently no change in the composition of households facing this situation, longitudinal estimates reveal that over time there is an important dynamic among those facing core housing need.

Overall, about 15 per cent of urban Canadians ever (at least one year) lived in a household in core housing need. In addition, the three percentage point difference between the cross-sectional estimates for a single year (about 12 per cent) and the longitudinal estimates over 2002-2004 (15 per cent) indicates there was a significant turnover among urban Canadians experiencing core housing need.

Of the about 15 per cent of urban Canadians ever in core housing need, only about one-third lived persistently (all three years) in a household in core housing need over the three-year period (2002-2004), while about two-thirds did so occasionally (for one or two years).

Renters (at 39.7 per cent) were more likely than owners (at 6.8 per cent) to ever live in a household in core housing need over 2002-2004. This was particularly the case for those living in subsidized rental accommodations (at 60.5 per cent). Those whose tenure changed over the period of study were relatively more prone (at 23.9 per cent) than owners to ever live in a core housing need household; however, only 3.0 per cent persistently lived in core housing need all three years.

Individuals living in female lone-parent families were the most likely (at 54.6 per cent) of any family type to ever live in an urban household in core housing need and half of them did so persistently. Despite constituting only about four per cent of all urban Canadians, they represented one-quarter of those persistently living in an urban household in core housing need over 2002-2004. Senior women living alone had the second highest incidence of urban people ever (at 37.3 per cent) and persistently (at 16.7 per cent) living in core housing need.

Toronto (at 21.9 per cent) and Vancouver (at 20.9 per cent), with their high shelter costs, had high incidences of people ever living in an urban household in core housing need. Individuals who moved between CMAs or CAs over 2002-2004 were also likely (at 25.7 per cent) to ever live in an urban household in core housing need; however, only 3.4 per cent of those who changed CMA or CA persistently lived in core housing need.

The preceding analysis of the dynamic nature of core housing need shows that while about one-third of people in households in core housing need are persistently unable to access acceptable housing, the other two-thirds experience core housing need occasionally. A better understanding of the distinct characteristics and housing experiences of these two groups is important to the development of effective policy approaches and programs to assist those in need. For those experiencing core housing need occasionally, short-term targeted assistance aimed at preventing housing need or reducing the time spent in need may be appropriate. Assisting those with persistent housing needs may require a more comprehensive long-term approach to poverty reduction that includes housing assistance. CMHC intends to continue to research the housing trajectories of those in core housing need, the profiles of those experiencing housing need on a persistent and occasional basis and the types of events associated with moves into and out of core housing need.

# Demographic and Socio-economic Influences on Housing Demand

Demographic changes alone cannot account for the substantial increase in housing construction in Canada since the mid-1990s. Strong employment gains, growing incomes and wealth, and low mortgage rates increased the numbers of prospective homebuyers, and the industry responded by building increasing numbers of new homes. The rate of homeownership rose significantly, while growth in renter households came to a halt.

In addition to economic factors, ongoing demographic changes continue to influence housing demand. The numbers of immigrants and of Aboriginal people in Canada have grown much faster than the general population. In addition, the gradual aging of Canada's population is slowly altering household composition. For example, couples with children represent a diminishing share of housing consumers, and the average size of households is shrinking.

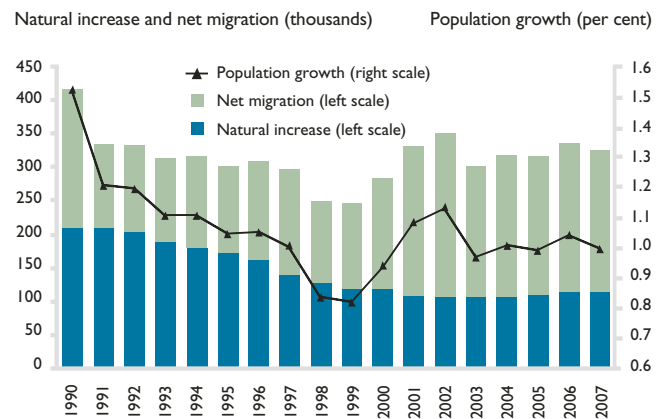
## Population growth increases despite aging population

For many years, population growth in Canada has been constrained by low fertility and advancing age. Canadians on average are getting older, and the number of births per woman—despite edging up in recent years—remains well below the level required for each generation to replace itself.<sup>1</sup> Baby boomers—the large generation born in the two decades (1946-1965) following World War II now range in age from their early forties to early sixties.

During the 1990s, as baby boomers moved ever more deeply into middle age, births fell and deaths increased. Natural increase (the difference between births and deaths) shrank by almost half (see Figure 3-1).

In spite of these constraints, population growth has been steady, even increasing slightly in recent years. After annual growth of 0.9 per cent during the five years ending June 30, 2001, Canada's population grew by 1.0 per cent annually in the next six years.<sup>2</sup>

FIGURE 3-1  
COMPONENTS OF POPULATION GROWTH,  
CANADA, 1990-2007



Data are for a 12-month period ending on June 30 of stated year.  
Net migration is the difference between population growth and natural increase.  
Natural increase is the difference between births and deaths.

Source: CMHC, adapted from Statistics Canada (CANSIM)

1 Aging refers to a shift over time in the composition of the population towards relatively older groups, as evidenced by an increase in the average or median age of the population. The total fertility rate in Canada rose from 1.49 births per woman in 2000 to 1.54 in 2005, still below the replacement level of 2.1 (The number of births required for each generation to replace itself).

2 Growth figures are based on quarterly population estimates that do not reflect findings from the 2006 Census. Statistics Canada intends to adjust population estimates once census coverage studies are completed.

### Rapid growth of immigrant population continues

The modest recent increase in population growth was largely a result of rising immigration.<sup>3</sup> Immigration to Canada averaged close to 240,000 people per year from 2001 to 2007, compared to around 210,000 from 1996 to 2001.<sup>4</sup> Immigration is on pace to surpass the total for the 1990s, which was the highest intake of any decade in the 20<sup>th</sup> century.<sup>5</sup> The net population gained through international migration now accounts for approximately two-thirds of population growth, a far cry from the early 1990s, when its share was under 40 per cent in a number of years (see Figure 3-1).

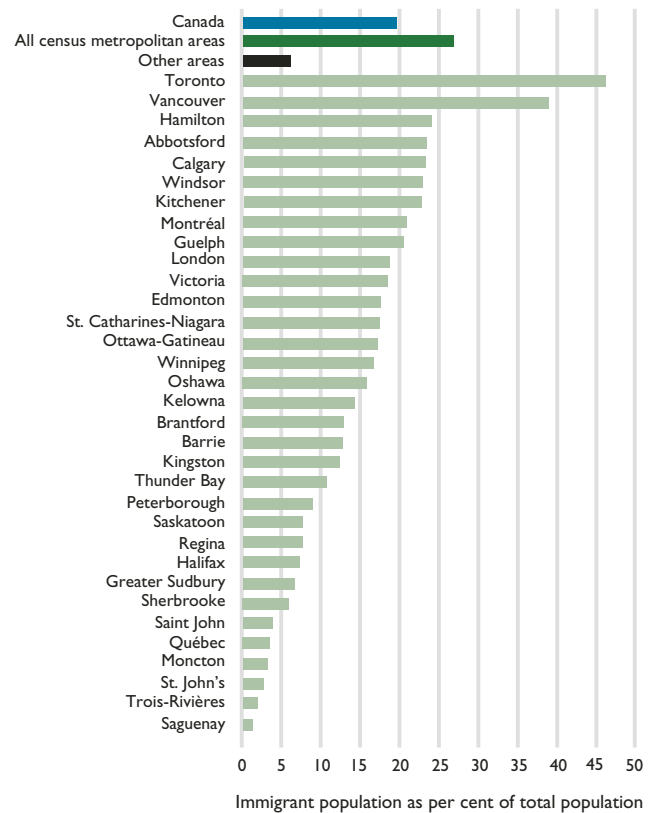
In 2006, immigrants made up 20 per cent of the population of Canada, the highest proportion in 75 years.<sup>6</sup> Immigrant shares in 2001 and 1996 were 18 and 17 per cent, respectively. During the 1990s, the number of immigrants in Canada grew at more than triple the rate of the non-immigrant population. More recently, the difference in the growth rates of the two populations was even larger. From 2001 to 2006, the immigrant population increased at more than four times the rate of non-immigrants.

The distribution of immigrants across Canada is very uneven. They are much more likely than non-immigrants to settle in large urban centres. In 2006, almost 95 per cent of recent immigrants and 90 per cent of all immigrants lived in metropolitan areas.<sup>7</sup> In contrast, only 62 per cent of non-immigrants lived in metropolitan areas.

Although the percentage of immigrants in the general population rose in almost all metropolitan areas<sup>8</sup> between 2001 and 2006, shares varied tremendously from city to city. At one extreme, immigrants made up 46 and 40 per cent, respectively, of the populations of Toronto

and Vancouver in 2006. By contrast, shares in metropolitan areas in Atlantic Canada, Quebec (excluding Montréal), Northern Ontario, and Saskatchewan were generally well under 10 per cent (see Figure 3-2).

FIGURE 3-2  
IMMIGRANT POPULATIONS,  
CANADA AND CENSUS METROPOLITAN AREAS, 2006



Population excludes institutional residents. Data are for Census Metropolitan Areas.  
Source: CMHC, adapted from Statistics Canada (Census of Canada)

3 Reduced emigration also helped boost growth.

4 Immigration figures pertain to the same periods referenced in the preceding paragraph on population growth, that is, to the five years ending June 30, 2001 and to the six years ending June 30, 2007.

5 The information on immigration levels in the 20th century comes from Feng Hou and Larry S. Bourne, *Population movement into and out of Canada's immigrant gateway cities: A comparative study of Toronto, Montreal and Vancouver*, Analytical Studies Branch research paper series Catalogue no. 11F0019MIE - No. 229 (Ottawa: Statistics Canada, 2004), p. 5.

6 *Immigration in Canada: A Portrait of the Foreign-born Population, 2006 Census*, Catalogue no. 97-557-XIE (Ottawa: Statistics Canada, 2007), p. 7.

7 The term "recent immigrants" essentially describes people who have been in Canada for five years or less. In 2006, those considered to be recent immigrants landed in Canada in the period from January 1, 2001 through May 16, 2006 (Census Day). Recent immigrants in 2001 were those who came to Canada from January 1, 1996 through May 15, 2001.

8 Brantford, Greater Sudbury, and Thunder Bay were the only metropolitan areas in which immigrants declined as a percentage of the population during this period.

One reason that immigrants tend to favour certain destinations is that social factors—the presence of family and friends who come from the same places or share the same languages or cultures—are as important as economic considerations in influencing the destinations of immigrants.<sup>9</sup> Large immigrant populations in places like Toronto, Vancouver, and Montréal therefore tend to act as magnets for further immigration.

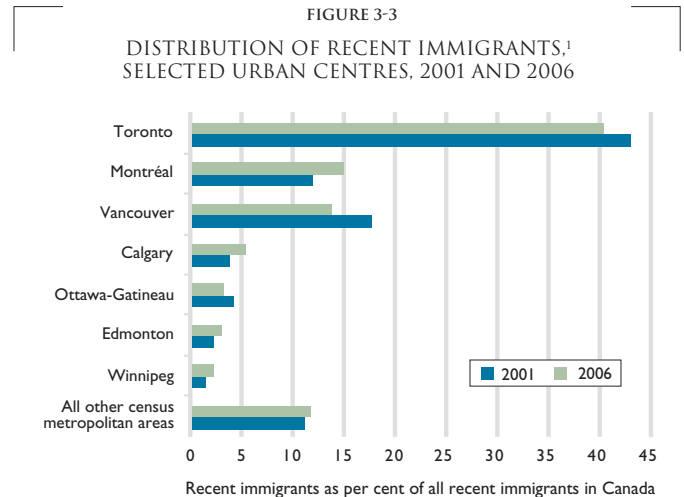
### Toronto and Vancouver attract smaller shares of immigrants

Each year, more than 70 per cent of newcomers to Canada land in Toronto, Vancouver, or Montréal. In recent years, however, the share of new arrivals going to Toronto or Vancouver decreased somewhat. In 2006, 40 per cent of recent immigrants in Canada lived in Toronto, down from 43 per cent in 2001. Percentages in Vancouver dropped from 18 to 14. Most other metropolitan areas increased their shares of recent immigrants, Ottawa-Gatineau being a notable exception (*see Figure 3-3*). Montréal recorded the biggest increase, followed by Calgary.

When they first arrive in Canada, many immigrants encounter relatively difficult housing conditions in comparison to non-immigrants. Households maintained by recent immigrants typically have lower incomes, are less likely to own their homes, are larger, are more likely to live in crowded housing, and spend higher fractions of their incomes on shelter than non-immigrant households.<sup>10</sup> Historically, the housing conditions of immigrants have improved the longer they stay in Canada.

### Strong growth of Aboriginal population reflects demographic and non-demographic influences

Aboriginal people are another fast-growing segment of Canada's population that often experiences difficult housing conditions. The relatively low incomes of Aboriginal households translate into high rates of crowding and disrepair and low rates of homeownership.



Cities ranked by 2006 share of all recent immigrants in Canada. Figure shows the seven metropolitan areas with the highest shares in 2006.

<sup>1</sup> Recent immigrants in 2006 landed in Canada between 2001 and May 16, 2006; recent immigrants in 2001 were those who landed between 1996 and May 15, 2001.

Source: CMHC, adapted from Statistics Canada (Census of Canada)

In 2006, the number of people in Canada identifying themselves as Aboriginal was almost 1.2 million, 20 per cent more than in 2001. Growth from 2001 to 2006 was over four times faster than for the non-Aboriginal population. As a result, the Aboriginal share of the total population of Canada rose from 3.3 to 3.8 per cent.

High fertility and a relatively youthful population were two factors behind the strong growth of the Aboriginal population. Demographic factors, however, cannot fully account for the increased numbers identifying as Aboriginal. More complete enumeration of reserves contributed to the higher count. So did growing awareness of Aboriginal roots and willingness to report those roots.

From 2001 to 2006, the number of Métis in Canada increased 33 per cent. Growth rates were lower for North American Indians and Inuit: 15 and 12 per cent, respectively.<sup>11</sup> The high growth of the Métis population came despite fertility rates that historically have been closer to the Canadian average than those of other Aboriginals.<sup>12</sup>

9 *Longitudinal Survey of Immigrants to Canada: Process, progress and prospects*, Catalogue no. 89-611-XIE (Ottawa: Statistics Canada, 2003), pp. 13-15.

10 A household maintainer is the person or one of the people responsible for major household payments such as the rent or mortgage.

11 Quoted growth rates for North American Indians, Métis, and Inuit exclude people who identified with more than one Aboriginal group.

12 *Projections of the Aboriginal Populations, Canada, Provinces and Territories 2001 to 2017*, Catalogue no. 91-547-XIE (Ottawa: Statistics Canada, 2005), pp. 19 and 27.

In recent years, a variety of developments, including court decisions concerning hunting rights, may have encouraged people to identify as Métis.<sup>13</sup>

Aboriginal population concentrations are highest in the North and in Manitoba and Saskatchewan. In 2006, Aboriginal people accounted for 85 per cent of the population of Nunavut, 50 per cent of the Northwest Territories, 25 per cent of Yukon, 15 per cent of Manitoba, and 15 per cent of Saskatchewan.

While concentrations in the territories are high, most Aboriginal people do not live there. With Aboriginal people making up just two per cent of its population, Ontario nonetheless had the largest Aboriginal population of any province or territory. Almost a quarter million Aboriginal people lived in Ontario in 2006, nearly five times more than in the three territories combined.

Metropolitan areas were home to more than a third (35 per cent) of Aboriginal people in 2006. Another 18 per cent lived in mid-sized cities with populations of 10,000 or more. That left 47 per cent living in small towns and rural areas.<sup>14</sup>

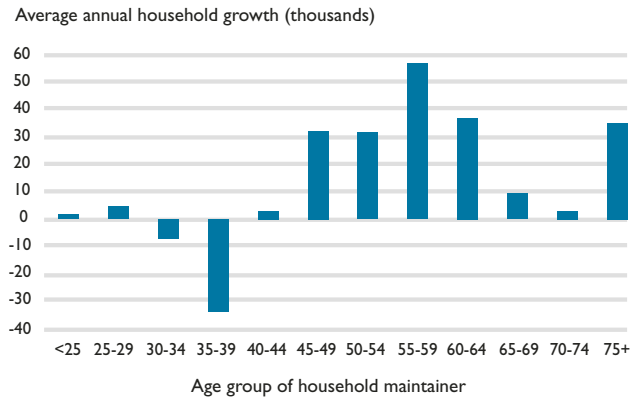
Among metropolitan areas, Winnipeg (10 per cent), Saskatoon (9 per cent), Regina (9 per cent), and Thunder Bay (8 per cent) had the highest concentrations of Aboriginal people in 2006. The largest metropolitan Aboriginal populations were in Winnipeg (68,000), followed by Edmonton (52,000) and Vancouver (40,000).

### Aging population influences composition of household growth

The gradual aging of Canada’s population is affecting the composition of households in a number of ways. For one thing, the movement of baby boomers into progressively older ages has pronounced effects on the age pattern of household growth. When the leading edge of the baby boom crosses a given age threshold, the population of the affected age group rises dramatically. Two decades later, when the last boomers depart, the population of that group falls.

From 2001 to 2006, the number of households maintained by people under the age of 40 dropped. The biggest decline occurred in the 35-39 age group as the youngest baby boomers moved into their early forties (see Figure 3-4). The strongest growth in households occurred in the 55-59 age group, the age reached by the front end of the baby boom.

FIGURE 3-4  
HOUSEHOLD GROWTH BY AGE  
OF MAINTAINER, CANADA, 2001-2006



The household maintainer is the person or one of the people in the household responsible for major household payments.

Source: CMHC, adapted from Statistics Canada (Survey of Labour and Income Dynamics)

Strong recent growth in households maintained by those aged 75 or more continued an established pattern. The number of households headed by this group tripled between 1976 and 2006. Improvements in health and increases in life expectancy contributed to the steady growth.

At the other end of the age spectrum, the number of households maintained by young adults aged 20 to 29 fell in recent decades.<sup>15</sup> Part of this decline was attributable to aging, that is, to the passage of baby boomers out of this age group. However, another factor also played a role – the increasing tendency of young adults to either stay in, or return to, their parental homes. In 2006, 43.5 per cent of young Canadians aged 20 to 29 lived with their parents.<sup>16</sup> The comparable figure for 1986 was 32.1 per cent.

13 *Aboriginal Peoples in Canada in 2006: Inuit, Métis and First Nations*, 2006 Census, Catalogue no. 97-558-XIE (Ottawa: Statistics Canada, 2008), p. 30.

14 Small towns and rural areas comprise all locations that are not Census Metropolitan Areas or Census Agglomerations (mid-sized cities).

15 In 2006, there were 25 per cent fewer households maintained by people aged 20 to 29 than in 1981.

16 *Family Portrait: Continuity and Change in Canadian Families and Households in 2006*, 2006 Census Catalogue no. 97-553-XIE (Ottawa: Statistics Canada, 2007), p. 28.

The effect of the aging of the baby boomers on the age pattern of household growth will be quite predictable. Around 2011, the leading edge of the baby boom will penetrate beyond age 65. These oldest baby boomers will raise the growth rate for households with maintainers aged 65 to 74, while those born in the 1950s will account for continuing growth in the 55-64 group. In contrast, the number of households with maintainers in their forties will drop in coming years. By 2016, even the youngest baby boomers will have left their forties behind.

### Living arrangements change over time

Aging also affects the prevalence of different living arrangements. For decades, couples with children have represented a declining share of households in Canada. In 1971, half of all households were couples with children, a fraction that had fallen to under a third by 2006 (see Figure 3-5).<sup>17</sup> Couples with children were the slowest-growing household type during this period. Their growth was restrained in part by the aging of baby boomers, who gradually moved into and then out of their child-bearing years and were replaced at those ages by smaller generations born after the end of the baby boom.

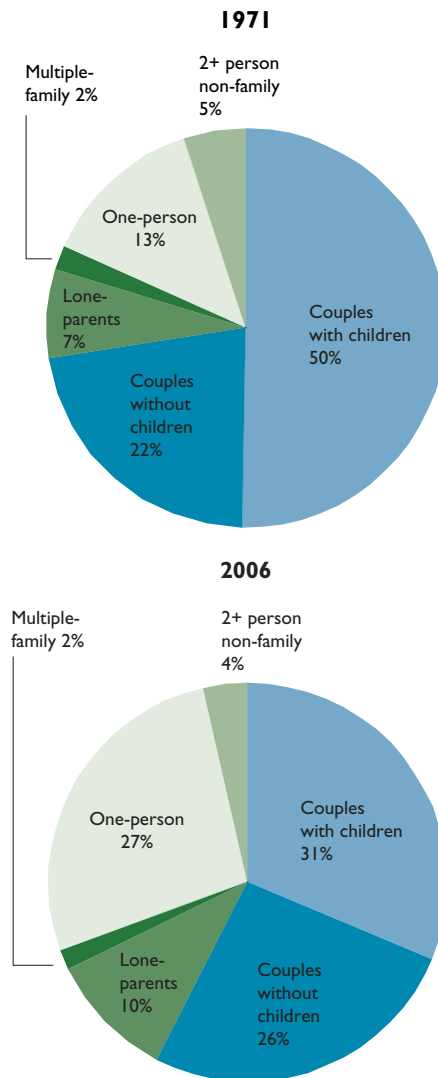
From 1971 to 2006, the fastest-growing household type was one-person households, followed by lone-parent households and couples without children. The number of people living alone quadrupled, while lone-parent households tripled their numbers. In the last ten years, growth of lone-parent households, though still somewhat above average, slowed considerably.<sup>18</sup>

Slightly more than half of the people living alone in 2006 were women, almost two-thirds (63 per cent) of them aged 55 or more. Men who lived alone tended to be younger—only about a third (36 per cent) of them were aged 55 or more.

Aging contributed to the growing numbers of couples without children and of people living alone. With advancing age, families eventually witness the departure of children from home and the death of spouses.<sup>19</sup>

In 2006, half of those living alone were aged 55 or over, and almost 60 per cent of households comprising couples without children present had maintainers aged 55 or over.

FIGURE 3-5  
HOUSEHOLDS BY TYPE, CANADA, 1971 AND 2006



Because of changes to census family definitions, household type data for 1971 and 2006, with the exception of information on one-person households, are not strictly comparable.

Source: CMHC, adapted from Statistics Canada (Census of Canada)

17 With the exception of information on one-person households, census data on household types for 2001 and 2006 are not strictly comparable to data from earlier censuses. Beginning in 2001, Statistics Canada broadened family definitions to include, among other things, people in same-sex relationships.

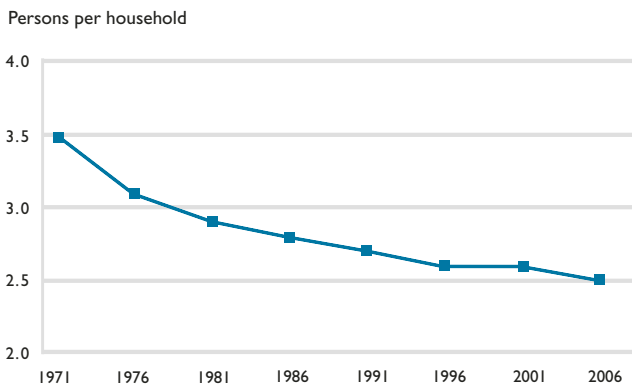
18 This slowdown occurred despite the fact that definitional changes introduced at the time of the 2001 Census acted to increase the number of lone-parents counted. See Statistics Canada, *Family Portrait: Continuity and Change*, p. 10.

19 A couple without children includes both a couple that has never had children and a couple whose children no longer live with them (so-called "empty nesters").

In the last 20 years, growth in multiple-family households accelerated. These households comprise two or more families living under the same roof. Three-generation families are included in this group. The strong growth of this group in part reflects the rising percentage of immigrants in the Canadian population. In 2001, over half of multiple-family households were maintained by immigrants. Although their numbers have more than doubled since 1986, multiple-family households are still relatively rare, accounting in 2006 for less than two per cent of all households in Canada.

Changes in household composition in recent decades resulted in a steady drop in average household size. From 3.5 persons in 1971, the average size of households in Canada shrank to 2.7 in 1991 and 2.5 in 2006 (see Figure 3-6). Reductions in household size have been smaller recently than during the 1970s and 1980s, a time when large numbers of baby boomers were leaving the family nest. Though the magnitude of changes has diminished, declines in household size remain widespread. From 2001 to 2006, the average household shrank in all but one of Canada's metropolitan areas.<sup>20</sup> Continuing modest decreases can be expected in coming years given ongoing population aging.

FIGURE 3-6  
AVERAGE HOUSEHOLD SIZE, CANADA, 1971-2006

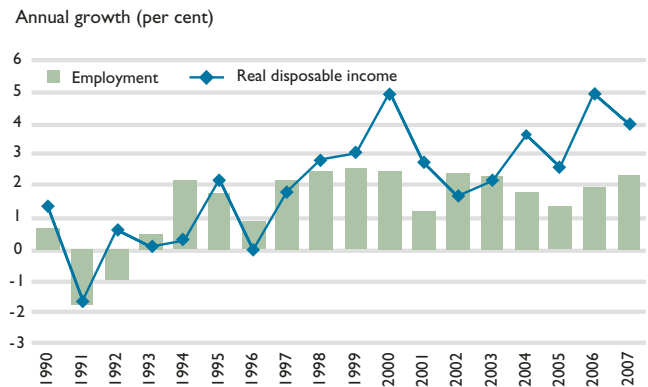


Source: Statistics Canada (Census of Canada)

### Employment growth strengthens, unemployment rate falls

Housing completions in Canada rose from lows of under 120,000 in 1995 and 1996 to over 200,000 in each of the years from 2004 to 2007. This increase took place during a time of sustained job creation and income growth. After dropping in the early 1990s, employment in Canada rose steadily in the next 15 years (see Figure 3-7). Jobs provide income and savings that raise housing demand by enabling people to move out of shared accommodation, to rent or buy homes, and even to purchase second homes or vacation homes.

FIGURE 3-7  
JOB CREATION AND REAL DISPOSABLE INCOME GROWTH, CANADA, 1990-2007



Employment growth calculated from average monthly employment during the year.  
Income growth based on quarterly average during the year.  
Real disposable income = disposable income/consumption deflator.

Source: CMHC, adapted from Statistics Canada (CANSIM)

The pace of job creation in Canada increased in 2006 and 2007. Robust job gains reduced the unemployment rate to 6.0 per cent in 2007, the lowest level in any year from 1976 to 2007.<sup>21</sup> The employment rate—the percentage of the adult population with jobs—and the rate of participation in the labour force both hit highs for the same period. Although growth in part-time employment strengthened in 2007, full-time positions continued to account for the majority (around three-quarters) of the jobs created.

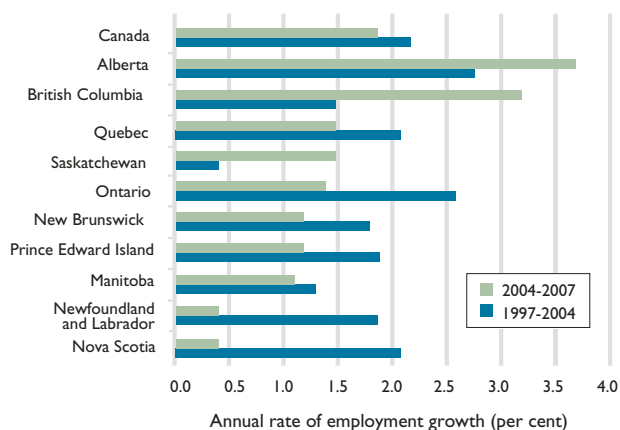
20 The exception was St. Catharines-Niagara, where household size was unchanged. See Roger Lewis, *2006 Census Housing Series: Issue 1—Demographics and Housing Construction*, Research Highlight, Socio-economic Series 08-004 (Ottawa: CMHC, 2008), p. 12.

21 Record lows and highs discussed in this paragraph are for the period from 1976 to 2007.

## Job market improves in the West

Employment growth varied significantly across provinces. From 1997 to 2007, Alberta led all provinces in job creation by a wide margin. In the three years ending in 2007, the rate of job creation strengthened in Saskatchewan, Alberta, and British Columbia and weakened in all other provinces (see Figure 3-8). Ontario, which for much of the decade was the only province other than Alberta to post above-average employment growth, saw employment growth slow significantly in recent years as jobs were lost in manufacturing,

FIGURE 3-8  
EMPLOYMENT GROWTH,  
CANADA AND PROVINCES, 1997-2007



Provinces ranked by growth in 2004-2007.  
Employment growth calculated from average monthly employment during the year.

Source: CMHC, adapted from Statistics Canada (Census of Canada)

Where labour is scarce, job creation can trigger in-migration and a consequent need for new housing. Recent employment gains in British Columbia and Saskatchewan were accompanied by rising population growth and increased housing construction.

In 2007, Saskatchewan's population grew noticeably for the first time in a decade, and housing starts rose 60 per cent, reaching the highest level since 1983. Stronger population growth in Saskatchewan came largely as a result of a reversal of longstanding population outflows to other provinces. For the first time since 1984, the number of people coming to Saskatchewan from elsewhere in Canada exceeded the number moving to other parts of the country.

## FAST Facts

- In 2006, immigrants made up 20 per cent of Canada's population, the highest share in 75 years.
- From 2001 to 2006, the population of Aboriginal people in Canada grew over four times faster than the non-Aboriginal population.
- In 2007, the unemployment rate in Canada hit a new low for the period since 1976, and employment and labour force participation rates reached new highs.
- The rate of homeownership in Canada rose from 65.8 per cent in 2001 to 68.4 per cent in 2006, the largest increase between censuses dating back to 1971.
- The large gap in the net worth of typical homeowners and renters widened further between 1999 and 2005 as homeowners benefited from strong increases in housing prices.
- The composition of Canadian households continues to change as baby boomers age. For decades, couples with children have made up a declining percentage of all households, and the average size of households has shrunk.

## Employment gains generate income growth

Growth in disposable incomes roughly paralleled the course of job creation from 1990 to 2007 (see Figure 3-7). Since 1997, household incomes have risen significantly. After adjustment for inflation, a typical, or median, Canadian household earned 16.4 per cent more after taxes in 2006 than in 1997.<sup>22</sup> Much of this growth, however, merely made up for ground lost during the recession in the early 1990s. The real income after taxes of a typical household in 2006 was just 7.0 per cent higher than in 1990.

22 A median household is typical in the sense that half of households have incomes above the median and half below the median. All income data referenced in the remainder of this section are from custom tabulations that combine data from the *Survey of Consumer Finances* (1990 through 1995) and the *Survey of Labour and Income Dynamics* (1996 and later years).

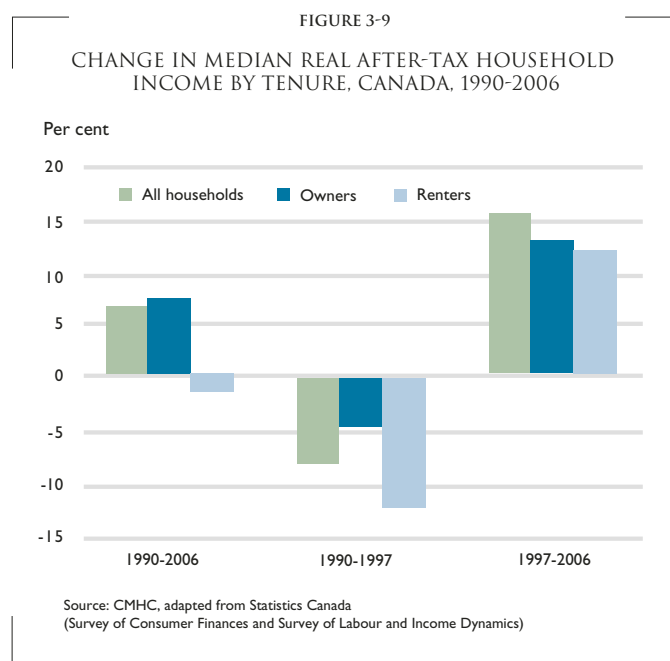
All households have not profited equally from income growth. Since 1990, incomes of the poorest households have risen very little. From 1990 to 2005, the average real income after taxes of the bottom fifth of households in Canada grew 2.7 per cent, while that of the top fifth increased 22.6 per cent, faster than any other group.

The incomes of homeowners and renters have also followed divergent paths. The real median after-tax income of owner households rose 7.6 per cent from 1990 to 2005, while that of renters fell 1.7 per cent.

During the recession of the early 1990s and its aftermath, renter incomes declined much more sharply than those of owners (see Figure 3-9). Since 1997, however, the incomes of renters and owners have grown at roughly the same pace. Because renters on average are younger than owners and hence have less experience in the labour force, their greater sensitivity to economic downturns comes as no surprise. One factor that may have dampened the recovery of renter incomes was the shift since the mid-1990s of large numbers of households out of rental units into homeownership. People who buy homes and move out of rental housing typically have higher incomes than those who continue to rent.<sup>23</sup>

### Stronger population growth boosts household growth

Household formation is a major influence on the rate of housing construction. Households form, dissolve, and change composition as people age and make adjustments to their living arrangements. Over time, the housing stock must grow to accommodate increasing numbers of households. The rate of household formation reflects a combination of demographic, social, and economic influences.



From 2001 to 2006, annual growth in households in Canada averaged 174,900, up from 148,600 between 1996 and 2001.<sup>24</sup> Though substantial, the rise was nonetheless modest in comparison to increases in housing construction.<sup>25</sup> Housing completions were about 60,000 higher per year from 2001 to 2006 than from 1996 to 2001.<sup>26</sup>

Although it might be supposed that the strong labour market in recent years boosted household formation by giving individuals and families the financial resources to enable them to live independently, there is no obvious evidence of such an effect. In fact, in most age groups Canadians were on balance slightly less likely to head households in 2006 than were their counterparts of the same age in 2001.<sup>27</sup>

23 For example, in 2002, homeowners who had moved from rental homes within the previous six years had median household incomes that were more than double the incomes of households who rented throughout the same six-year period (*Survey of Household Spending*).

24 Estimates of annual household growth obtained by taking the difference between household counts from successive censuses are approximations since censuses always miss a certain portion of the population and since this undercount varies from census to census.

25 Completions differ from household formation each year, as some households purchase second homes and as the stock of unoccupied houses varies from year to year.

26 Housing completions averaged 139,900 from 1996 to 2001 and 200,000 from 2001 to 2006 (based on totals for the third quarter of the initial year of each period to the second quarter of the last year).

27 Headship rates declined or were unchanged in most age groups between 2001 and 2006. Headship rates measure the readiness of a population to form households. They show the percentage of household maintainers in each age group. A household maintainer is the person or one of the people responsible for major household payments such as the rent or mortgage.

If growing incomes and improving job prospects had persuaded unusually large numbers of people to move out of shared accommodation and form households between 2001 and 2006, this effect should have been visible as an increase, not a decrease, in the percentage of household maintainers in each age group.<sup>28</sup>

Population growth, not behavioural changes, drove the recent increase in household formation. As discussed earlier, rising immigration gave population growth a modest boost in recent years. Without this increase in population growth, household growth from 2001 to 2006 would—all else being equal—have been roughly comparable to the growth recorded in the second half of the 1990s.

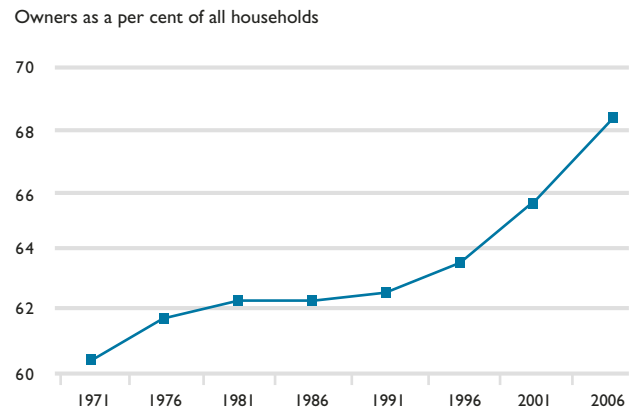
### Rate of homeownership jumps

Although the strong economy may not have had an appreciable effect on household formation, it did generate demand for new construction by spurring a substantial wave of home buying. The homeownership rate in Canada rose from 65.8 per cent in 2001 to 68.4 per cent in 2006—the largest increase between censuses dating back to 1971 (see Figure 3-10).

Rapid increases in the rate of homeownership actually began in the late 1990s when employment and income growth finally shook off the lingering effects of the recession of the early 1990s. From 1996 to 2001, the homeownership rate increased by almost as much as from 2001 to 2006. From 2001 to 2006, the ownership rate rose in all of Canada's metropolitan areas. Brantford, Ottawa-Gatineau, and Toronto recorded the largest increases (see Figure 3-11).

In addition to principal residences, increasing numbers of households also purchased second homes, vacation homes, and cottages. Between 1999 and 2005, the number of households in Canada owning such secondary homes increased by 25 per cent to 1.1 million.<sup>29</sup>

FIGURE 3-10  
HOMEOWNERSHIP RATE, CANADA, 1971-2006



Source: CMHC, adapted from Statistics Canada (Census of Canada)

FIGURE 3-11  
CHANGES IN HOMEOWNERSHIP RATES,  
CANADA AND SELECTED URBAN CENTRES, 2001-2006

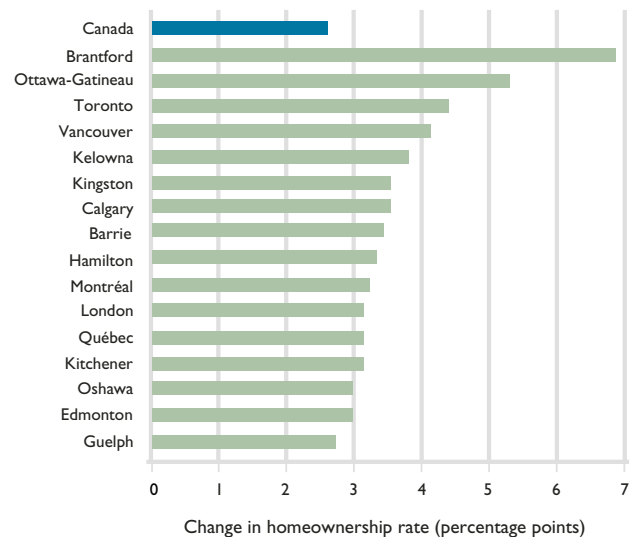


Figure displays percentage-point changes in ownership rates from 2001 to 2006 for all Census Metropolitan Areas with changes larger than the change in Canada as a whole.

Source: CMHC, adapted from Statistics Canada (Census of Canada)

28 For an expanded discussion of the sources of household growth in recent years, see Roger Lewis, *2006 Census Housing Series: Issue 1—Demographics and Housing Construction*, Research Highlight Socio-economic Series 08-004 (Ottawa: Canada Mortgage and Housing Corporation, 2008), pp. 2-3.

29 Estimates of the number of households owning second homes, vacation homes, and cottages come from the 1999 and 2005 editions of Statistics Canada's *Survey of Financial Security*.

### Renter households decline

The rush into homeownership brought growth in renter households to a halt. From 1971 to 1996, renters accounted for about a third of the total growth in households in Canada (see Figure 3-12). Renter households increased by 1.5 million during this period.

By contrast, from 1996 to 2001, the number of renter households in Canada scarcely grew at all, and in the following five years, the number dropped slightly—by about 30,000—as households left rental housing to buy homes. The vacancy rate for privately initiated rental buildings of three units or more rose from 1.7 per cent in 2001 to 2.7 per cent in 2006.

The decline in renter households was more acute in many major urban markets, especially in Ontario, than in Canada as whole. For example, in Toronto, Hamilton, and Ottawa (excluding Gatineau), the number of renters fell from 1996 to 2001 and again from 2001 to 2006.

### Demographic and economic factors boost ownership rate

Ongoing aging of the population helps account for the virtually uninterrupted climb in the homeownership rate in Canada since 1971. Because older people are more likely to own homes than younger people, rising homeownership rates are one consequence of an aging population. When baby boomers began leaving home in the 1970s, most rented. Since then, most have bought homes.

From 1996 to 2006, however, the magnitude of increases in the ownership rate suggests that factors other than aging were also at work. The change in the percentage of households owning homes went well beyond what would have been expected as a result of the gradual maturation of baby boomers. Aging of the population accounted for only about a quarter of the rise in homeownership from 2001 to 2006 and slightly under half the increase from 1996 to 2001. In other words, if the likelihood of owning a home at every age had remained fixed between 2001 and 2006, the change in the national homeownership rate would have been only about a quarter of the change that actually took place.

Because the probability of ownership in each group did not remain fixed, the rise in the percentage of households owning homes in the past decade was much larger than the change expected based on aging alone. Households at all stages of life were more likely to own their homes in 2006 than their counterparts in 1996. Ownership rates increased most for households maintained by people under the age of 35 and aged 75 or over.

During this period, a number of factors made homeownership attractive and increasingly accessible. Low and declining mortgage rates, strong employment growth and rising disposable incomes brought homeownership within reach of increasing numbers of Canadians. At the same time, rents rose substantially in many major urban centres, and vacant rental apartments were generally harder to come by than in the first half of the 1990s.

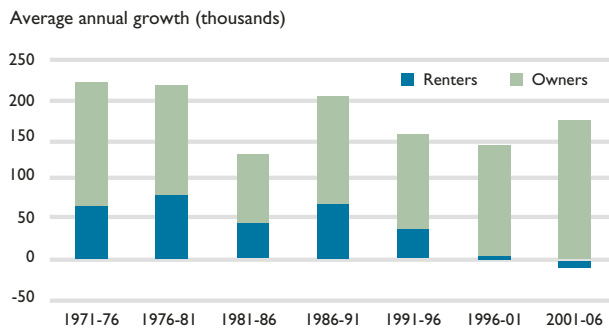
Financial market innovations also played a role in making homeownership more accessible. Mortgage insurance changes reduced downpayment requirements, longer amortization periods reduced monthly payments, and the Home Buyers' Plan, introduced in 1992, allowed first-time buyers to make tax-free withdrawals from their RRSPs to purchase homes.

### Household net worth benefits from increasing property values

Rising homeownership rates in the past decade meant that increasing numbers of households were in a position to build wealth (see *Net Worth (Wealth) text box*) through accumulating equity in their homes. Those who bought homes reaped the benefits of the strong house price appreciation that characterized most major urban housing

FIGURE 3-12

#### HOUSEHOLD GROWTH BY TENURE, CANADA, 1971-2006



Source: CMHC, adapted from Statistics Canada (Census of Canada)

markets in Canada in recent years.<sup>30</sup> Increased equity in real estate accounted for almost half of the growth in the net worth of households from 1999 to 2005.<sup>31</sup>

## Net Worth (Wealth)

In the analysis presented here, “net worth” and “wealth” are used interchangeably to mean the difference between the value of all household assets and debts.

Assets consist of private pension assets, such as Registered Retirement Savings Plans (RRSPs), Registered Retirement Income Funds (RRIFs) and employer pension plans; financial assets, such as stocks, bonds, and mutual funds; non-financial assets, including principal residences, other real estate, automobiles, and household effects; and equity in businesses owned by household members. Debts comprise mortgages, amounts owing on lines of credit, credit card and installment debt, and other debts.

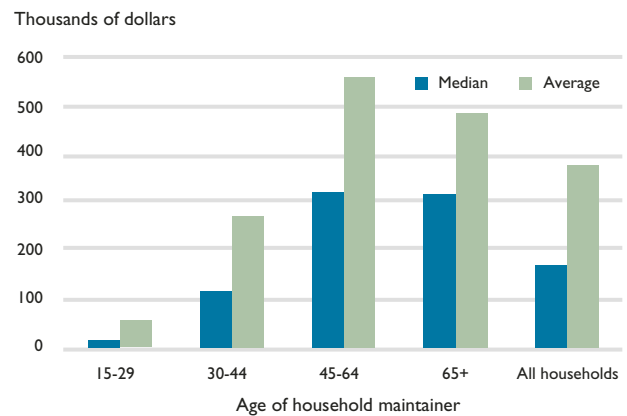
Statistics Canada conducts surveys of household net worth on an occasional basis, most recently in 2005, 1999, and 1984. The 2005 and 1999 editions of the *Survey of Financial Security* estimated the value of employer pension plan benefits, but the 1984 survey did not. Consequently, the value of these pension benefits must be excluded from 1999 estimates when making comparisons to 1984.

The income gains arising from the resurgent labour market in recent years coincided with robust growth in the net worth of Canadian households. The average net worth of households in Canada grew in real terms (i.e. after inflation) at an annual rate of better than four per cent from 1999 to 2005, compared to only about two per cent per year from 1984 to 1999.<sup>32</sup>

From 1999 to 2005, the total value of real estate equity held by households rose 60 per cent after adjustment for inflation, considerably more than the 42 per cent increase in the collective net worth of all households. As a result, the share of household net worth comprising equity in real estate increased from 32 to 37 per cent. Equity in principal residences accounted for 29 per cent of household net worth in 2005, compared to 26 per cent in 1999.

In 2005, the average net worth of households with maintainers aged 45 to 64 (\$551,000) was somewhat higher than that of senior households (\$491,000) and almost eight times that of households maintained by people under the age of 30 (\$70,000) (see *Figure 3-13*).<sup>33</sup> This pattern reflects building up of wealth during working lives and drawing down of savings during retirement. In real terms, the average net worth of households with maintainers under 30 fell slightly from 1999 to 2005. In all other age categories, average net worth increased significantly—by 25 to 30 per cent.

FIGURE 3-13  
MEDIAN AND AVERAGE NET WORTH BY AGE  
OF MAINTAINER, CANADA, 2005



The household maintainer is generally the household member with the highest income.

Source: CMHC, adapted from Statistics Canada (*Survey of Financial Security*)

30 After adjustment for inflation, average MLS® resale home prices increased at an annual rate of 5.4 per cent from 1999 to 2005 compared to 2.0 per cent from 1984 to 1999.

31 The increase in real estate equity amounted to 47 per cent of the total increase in household net worth. The increase in the market value of real estate holdings accounted for 51 per cent of the total increase in the value of household assets.

32 Because of changes over time in the asset and debt categories covered by wealth surveys, estimated growth rates for net worth are not strictly comparable across the two periods. Growth estimates for 1999 to 2005 reflect the value of employer pension plans, whereas growth estimates for the 1984-99 period do not.

33 In the *Survey of Financial Security*, the household maintainer is typically the person in the household with the highest income. Dollar amounts presented with respect to net worth are adjusted for inflation (2005 constant dollars) and rounded to the nearest \$1,000.

Real estate is an important component of the wealth of households at all stages of life, but especially for young households. In 2005, equity in real estate represented more than half of the net worth of households with maintainers under the age of 30 and nearly half of the net worth of households with maintainers aged 30 to 44. From 1999 to 2005, equity in real estate accounted for all the increase in the net worth of households with maintainers under the age of 45.<sup>34</sup>

### Disparities in net worth are large and growing

The distribution of wealth is far from even. To a certain extent, inequities are a consequence of time. Older households tend to have higher incomes than younger households and have had more time to acquire assets and to see their values grow.

Even within age groups, however, net worth varies considerably. For example, in 2005, the net worth of the typical, or median, household with a maintainer aged 45 to 64 was over 40 per cent below the average net worth in this age group (*see Figure 3-13*).<sup>35</sup> Significant gaps between medians and averages existed in all age categories. These large differences indicate that some households in each age group had much higher net worths than the typical household.

From 1999 to 2005, the real net worth of the average Canadian household increased 30 per cent, reaching \$383,000. Median net worth—the wealth of a typical household—grew more slowly (22 per cent) and was much lower (\$166,000) than the average. The slower growth of the median indicates that differences in wealth became more pronounced during this period, a continuation of the pattern of the previous 15 years.<sup>36</sup> Growing inequities in the distribution of wealth are consistent with income trends discussed earlier.

Expanding income differences also underlie substantial and growing disparities in the net worth of renters and owners. As noted earlier, the gap between the incomes of typical (median) renter and owner households has been growing, and households moving from renting to owning have tended to have higher incomes than those continuing to rent. From 1999 to 2005, the real median net worth of renter households dropped five per cent while that of owners rose 27 per cent. In 2005, owner households had a median net worth of \$327,000, renters just \$14,000. The typical, or median, homeowner went from being 18 times wealthier than the typical renter household in 1999 to 24 times wealthier in 2005.<sup>37</sup>

34 Real estate equity held by households in this age segment increased by \$212 trillion, while their total net worth grew by only \$201 trillion.

35 A median household is typical in that half of households are below the median and half above it.

36 From 1984 to 1999, average household net worth increased 36 per cent, median net worth just 11 per cent. As noted previously, net worth estimates for this period do not include the value of employer pension plans and hence are not strictly comparable to estimates presented for the 1999-2005 period.

37 These ratios were calculated using unrounded estimates of the net worth of owner and renter households. As noted elsewhere, all dollar estimates of net worth presented in this chapter have been rounded to the nearest \$1,000.

# Current Market Developments

The Canadian housing market posted another strong year in 2007. Housing starts edged higher to 228,343 units (an increase of 0.4 per cent), one of the best performances in two decades. Sales of existing homes through the Multiple Listing Service® (MLS®)<sup>1</sup> reached a new all-time record level. Strong housing demand in recent years has produced seller's market conditions across most of the country, which caused the average MLS® price to increase by 11 per cent in 2007. Renovation spending continued to trend upward and set a new record. The solid performance of the housing market, strong employment and income growth, and low interest rates have contributed to the strength in renovation spending in recent years. The national apartment vacancy rate in the rental market remained virtually unchanged at 2.6 per cent in October 2007 compared to the previous year.

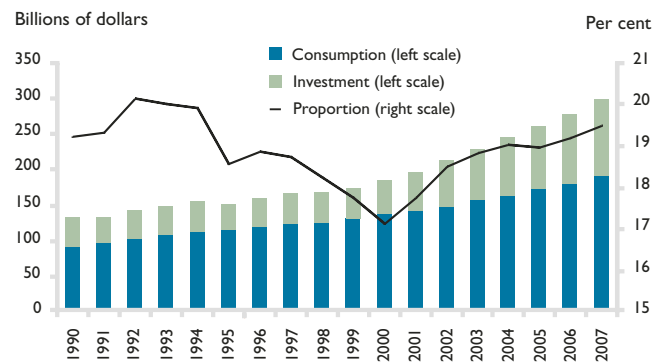
## Housing and the economy

In 2007, housing-related spending contributed close to \$300 billion to the Canadian economy (see Figure 4-1). Housing-related spending grew at a rate of 7.6 per cent (not adjusted for inflation), faster than the rate of 5.9 per cent in the rest of the Canadian economy. As a result, the proportion of gross domestic product spent on housing rose from 19.2 per cent in 2006 to 19.5 per cent in 2007, one of the highest percentages of the last 15 years.

Employment in the construction<sup>2</sup> industry increased by 6.0 per cent, while employment in all industries grew by 2.3 per cent in 2007.

A portion of housing-related spending can be categorized as ongoing consumption while the remainder represents investment. Housing-related consumption expenditures include spending on items such as rent, mortgage interest, property taxes, heating, electricity, water, insurance and routine maintenance.<sup>3</sup> Spending in this category reached

FIGURE 4-1  
HOUSING-RELATED SPENDING,  
LEVEL AND PROPORTION OF GDP,  
CANADA, 1990-2007



Source: CMHC, adapted from Statistics Canada (National Accounts)

1 MLS® is a registered trademark of the Canadian Real Estate Association (CREA).

2 Includes residential and non-residential building construction.

3 The housing-related spending of tenants is typically calculated by aggregating the rents paid. Calculating housing-related consumption spending for owner households is done as follows. Rather than calculating money spent by owners on mortgage interest, taxes, maintenance, etc., owners are treated as though they are paying an “imputed” rent to themselves. This imputed rent is based on what they would be able to charge if they rented out their dwelling to someone else. Thus, owners without mortgages are treated in the same way as owners with mortgages, and the contribution of owner-occupied housing to overall economic activity is not underestimated.

about \$190 billion, close to two-thirds of housing-related spending in 2007. Housing-related consumption has been growing steadily, and has doubled since 1991.

Housing-related investment, which represents spending on new construction,<sup>4</sup> transfer costs or fees associated with the purchase of an existing home,<sup>5</sup> and renovations that increase the value of the home (also called alterations and improvements) have increased steadily since 1998 and reached \$109 billion in 2007. New construction was close to \$52 billion or nearly half (47 per cent) of housing-related investment spending in 2007, while alterations and improvements accounted for one-third and transfer costs made up the remainder.

### Housing starts increased slightly and reached the second highest level since 1988

Housing starts in Canada grew by 0.4 per cent to 228,343 units in 2007, the second highest level in two decades (see Figure 4-2). For a sixth consecutive year, housing starts exceeded 200,000 units nationally. Gains in new construction were recorded in Saskatchewan (61.7 per cent), Newfoundland and Labrador (18.6 per cent), Manitoba (14.1 per cent), British Columbia (7.6 per cent),

New Brunswick (3.8 per cent), Prince Edward Island (1.6 per cent) and Quebec (1.4 per cent) (see Figure 4-3). The decreases recorded in Ontario (7.2 per cent), Nova Scotia (3.0 per cent), and Alberta (1.3 per cent) almost completely offset the increases in the rest of the country.

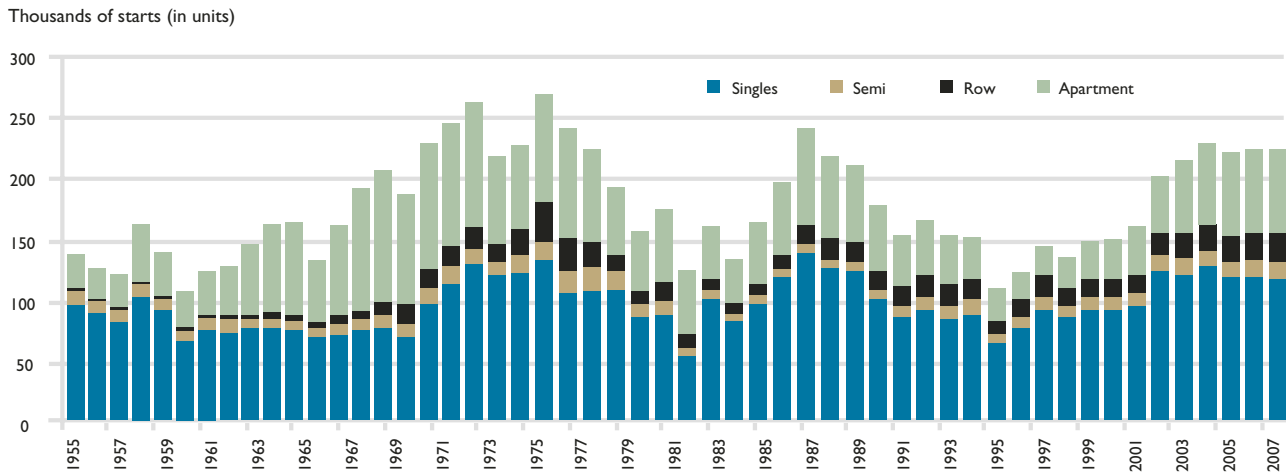
Despite financial market turbulence related to the U.S. housing market downturn, Canada's housing market continued to benefit from robust employment levels, ongoing income gains, and relatively low mortgage rates. Those factors contributed to maintaining high levels of housing starts across the country in 2007. In Alberta, high house prices, declining net migration, and weaker employment growth slightly eroded housing demand in 2007.

Across the country, starts are expected to decline slightly over 2008 and 2009. The decrease is expected to be more pronounced in Alberta, British Columbia and Saskatchewan.

### Single-detached starts declined while multiple starts increased

Single-detached starts declined by 2.0 per cent in 2007 to 118,917 units. The largest reductions were in Alberta (-11.7 per cent) and British Columbia (-6.2 per cent).

FIGURE 4-2  
HOUSING STARTS IN CANADA, 1955-2007

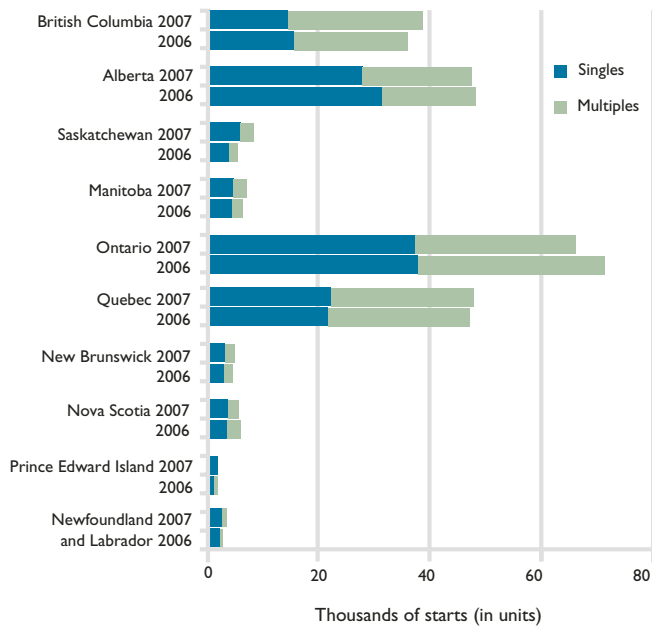


Source: CMHC (Starts and Completions Survey)

4 Includes acquisition costs such as land development charges, legal fees and building permits.

5 Includes land transfer taxes, appraisals and legal fees.

FIGURE 4-3  
HOUSING STARTS BY PROVINCE,  
2006-2007



Source: CMHC (Starts and Completions Survey)

In Ontario, single starts also decreased (-1.0 per cent). Several factors underpinned the decrease: rising land and material costs drove the prices of new homes higher, while more listings in the existing home resale markets increased choice for potential homebuyers. In addition, as rising home prices caused mortgage carrying costs to rise, an increasing number of new homebuyers considered less expensive multiple-family dwellings such as semi-detached, row homes and apartments.

The situation was quite different in Saskatchewan which registered an impressive 49 per cent increase in single home starts in 2007. The Saskatchewan economy recovered strongly from the weak pace in 2006, thanks largely to a burgeoning natural resource sector and domestic economy. Newfoundland and Labrador, Prince Edward Island and New Brunswick also recorded double digit increases in single-detached home starts.

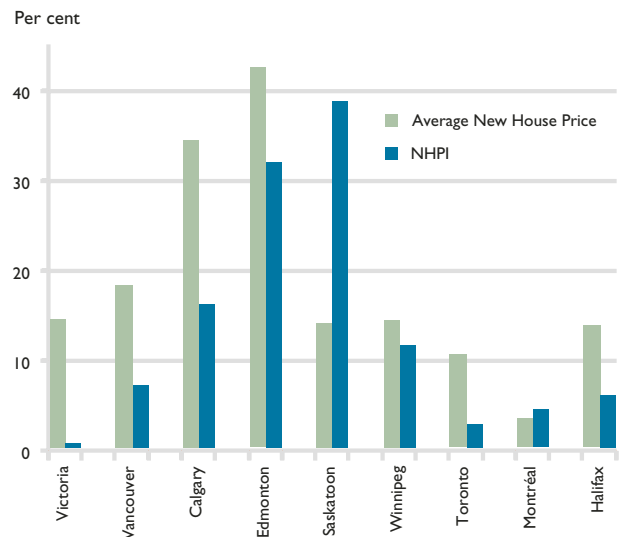
In the multiple-family housing segment, starts continued to climb in 2007, increasing by 3.2 per cent to reach a 29-year high of 109,426 units. Rising construction costs,

as well as land prices pushed builders and consumers to opt for higher density construction. As a result, multiple starts increased as a share of total starts again in 2007, to 48 per cent (versus 47 per cent in 2006). The largest growth in multiple-family housing starts was in Saskatchewan, Manitoba, Newfoundland and Labrador, Alberta, and British Columbia.

### New housing prices rose considerably in 2007

The rate of increase in the New Housing Price Index (NHPI) moderated slightly to 7.8 per cent in 2007. The NHPI is a measure of change in the prices of new homes of constant size and quality.<sup>6</sup> High demand for new housing, higher building material and labour costs, as well as increasing land values all contributed to the increase in the NHPI. The largest increases in the NHPI in 2007 occurred in Saskatchewan and Alberta. Saskatoon (38.8 per cent) and Edmonton (32.1 per cent) posted the largest increases (see Figure 4-4), while Windsor posted a decrease of 2.1 per cent.

FIGURE 4-4  
CHANGE IN AVERAGE NEW HOUSE PRICES  
AND NEW HOUSING PRICE INDEX (NHPI),  
SELECTED URBAN CENTRES, 2007



The average new house price measures actual sale prices of new houses. The New Housing Price Index measures prices of new houses of constant size and quality.

Source: CMHC (Market Absorption Survey) and adapted from Statistics Canada (CANSIM)

6 Defined so that the specifications of a home like lot size, house size, and features do not change over time.

## Market Absorption Survey

The purpose of CMHC's *Market Absorption Survey* (MAS) is to provide an indication of the demand for homeownership and rental dwellings. The survey is designed to measure the rate at which units are sold or rented after they are completed, and to collect sale prices. The term 'absorbed' means that a housing unit is no longer on the market (i.e. has been sold or rented). This usually happens when a binding contract is secured by a non-refundable deposit and has been signed by a qualified purchaser. For this purpose, the *Market Absorption Survey* follows completed dwellings until they are sold or rented.

### Geographic coverage and frequency

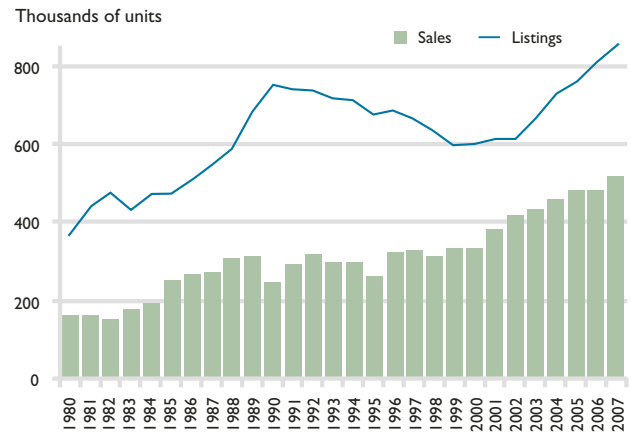
The *Market Absorption Survey* is carried out in conjunction with the *Starts and Completions Survey* in urban areas with populations in excess of 50,000. When a structure is recorded as completed, a report is also made as to whether or not a unit has been sold or rented. The dwellings are then enumerated each month until such time as absorption occurs.

CMHC's *Market Absorption Survey* is another source of information on new home prices. According to the survey, in 2007, the average new single-detached house price rose by 14.1 per cent in Canada, about double the increase in the NHPI. More expensive locations, larger homes, and homes with more features resulted in the average price rising at a faster rate than the NHPI in 2007.

### Existing home sales established a new record in 2007

In 2007, existing home sales through the Multiple Listing Service (MLS®), established a new record of 520,199 transactions (see Figure 4-5). MLS® sales increased in every province, except in Alberta where sales decreased by 3.9 per cent.

FIGURE 4-5  
RESIDENTIAL MLS® ACTIVITY IN CANADA,  
1980-2007

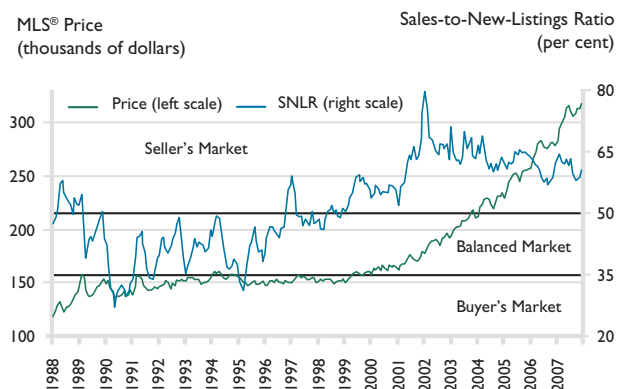


Source: Canadian Real Estate Association

### The strongest price growth was in Western Canada

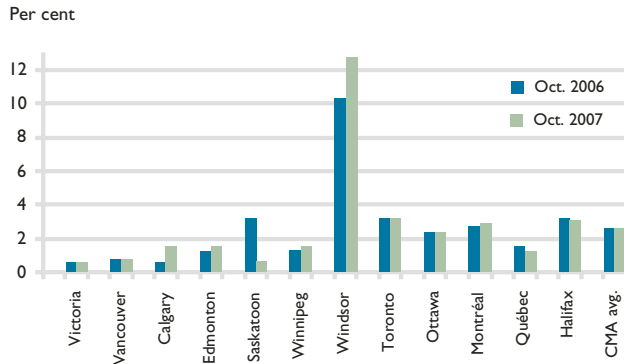
The average MLS® home price reached \$307,300 in 2007, an increase of about 11.0 per cent compared with the previous year (see Figure 4-6). This increase reflected the seller's market conditions that prevailed across most of the country. Saskatchewan, Alberta, Manitoba and British Columbia recorded the highest price increases.

FIGURE 4-6  
SALES-TO-NEW-LISTINGS RATIO AND AVERAGE MLS®  
PRICE IN CANADA, 1988-2007



Source: Canadian Real Estate Association

FIGURE 4-7  
AVERAGE PRIVATE APARTMENT VACANCY RATES,  
SELECTED URBAN CENTRES, 2006-2007



Vacancy rates are for privately initiated apartment structures of three or more units. CMA average is the weighted average of the rates in 34 Census Metropolitan Areas.

Source: CMHC (*Rental Market Survey*)

Those four provinces recorded double digit growth in the average MLS® house price in 2007. The strongest growth was in Saskatchewan where the average MLS® price increased by 32 per cent. Growth in house prices was more modest in central and eastern provinces. In Ontario, the average MLS® price increased by 7.6 per cent in 2007, while in Quebec, prices were up 7.3 per cent. In the Atlantic provinces, average MLS® price growth ranged from a low of 6.4 per cent in Prince Edward Island to a high of 7.7 per cent in New Brunswick.

### Rental vacancy rate remained stable at 2.6 per cent

The average rental apartment vacancy rate in Canada's 34 major centres<sup>7</sup> remained unchanged at 2.6 per cent in October 2007 compared to October 2006 (see *Figure 4-7*). Over this period, the vacancy rate declined in 17 of Canada's major centres, increased in 11, and remained unchanged in six. CMHC's *Rental Market Survey* covers private row and apartment structures with three or more units.

Strong employment growth, solid income gains, and high immigration levels continued to support strong demand for both ownership and rental housing. The rising gap between the cost of homeownership and renting also kept demand strong for rental accommodation.

## FAST Facts

- With a contribution of nearly \$300 billion to the Canadian economy in 2007, housing-related spending accounted for just under one-fifth of total economic activity in Canada.
- New home construction remained strong with 228,343 homes started in 2007, the sixth consecutive year that housing starts exceeded 200,000 units. The largest gains in starts were registered in Saskatchewan, Newfoundland and Labrador, and Manitoba.
- In 2007, existing MLS® home sales established a new record with 520,199 sales. MLS® sales increased in all provinces, except Alberta. The average MLS® home price increased by 11.0 per cent.
- Renovation spending reached \$49.5 billion in 2007 following the strong performance of the housing and labour markets.
- The average rental apartment vacancy rate in Canada's 34 major centres remained stable at 2.6 per cent in October 2007 compared to the previous October.
- The highest average monthly rents for two-bedroom apartments in new and existing structures were in Calgary (\$1,089), Vancouver (\$1,084), Toronto (\$1,061) and Ottawa (\$961). The lowest average monthly rents were in Trois-Rivières (\$487) and Saguenay (\$490).

These factors have put downward pressure on vacancy rates. On the other hand, strong homeownership demand, modest rental construction and competition from the condominium market put upward pressure on vacancy rates. Condominiums are a relatively inexpensive type of housing for renters moving to homeownership.

7 Major centres are based on Statistics Canada Census Metropolitan Areas (CMAs) with the exception of the Ottawa-Gatineau CMA which is treated as two centres for CMHC *Rental Market Survey* purposes.

The centres with the highest vacancy rates in 2007 were Windsor (12.8 per cent), Saint John (5.2 per cent) and Moncton (4.3 per cent). The centres with the lowest vacancy rates were Kelowna (0.0 per cent), Victoria (0.5 per cent), Greater Sudbury (0.6 per cent) and Saskatoon (0.6 per cent).

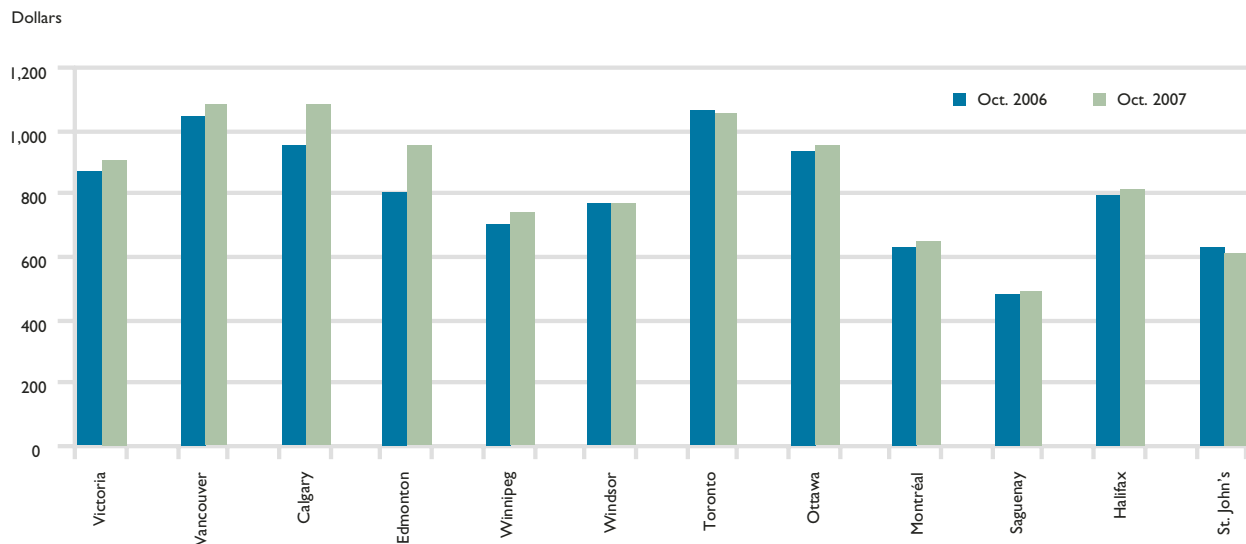
### Condominium and rental completions remained high

For the 12-month period from October 2006 to September 2007, condominium completions in all major centres remained high at 46,726 units, despite a decrease of 4.8 per cent compared to the same period one year earlier (49,085 units). Rental completions continued to add to the supply of rental dwellings. For the 12-month period ending in September 2007, rental completions (13,562 units) were up by 13.9 per cent compared to a year earlier (11,912 units).

### Rents increased moderately in most centres

The highest average monthly rents for two-bedroom apartments in new and existing structures were in Calgary (\$1,089), Vancouver (\$1,084), Toronto (\$1,061) and Ottawa (\$961), followed by Edmonton (\$958) and Barrie (\$934); the lowest were in Trois-Rivières (\$487) and Saguenay (\$490). Year-over-year comparison of rents can be slightly misleading because rents in newly built structures tend to be higher than in existing buildings. However, by excluding new structures, we can get a better indication of actual rent increases paid by tenants. The estimated average rent for a two-bedroom apartment in existing structures<sup>8</sup> went up by 3.5 per cent in the 34 major centres (see Figure 4-8). The average rent for two-bedroom apartments in existing structures increased in all major centres except St. John's, and in Windsor where the average rent in existing structures was essentially unchanged for a second consecutive year. The largest rent

FIGURE 4-8  
AVERAGE MONTHLY RENT, TWO-BEDROOM APARTMENTS IN EXISTING STRUCTURES,  
SELECTED URBAN CENTRES, 2006-2007



Average rents are for privately initiated apartment structures of three or more units.

Source: CMHC (*Rental Market Survey*)

8 This measure estimates the rent level movement. The estimate is based on structures that were common to the CMHC survey sample for both the 2006 and 2007 *Rental Market Surveys*. However, some composition effects remain; e.g. rental units renovated/upgraded or changing tenants because the survey does not collect data to such level of detail.

increases occurred in markets where vacancy rates were quite low. Rents in existing structures were up 18.8 per cent in Edmonton, 15.3 per cent in Calgary, 13.5 per cent in Saskatoon, 7.7 per cent in Greater Sudbury and 7.0 per cent in Kelowna.

### The rental apartment availability rate increased slightly in 2007

CMHC's *Rental Market Survey* found that the average rental apartment availability rate in Canada's 34 major centres increased slightly by 0.1 percentage point (to 3.7 per cent) in October 2007, compared to the previous October. A rental unit is considered available if the unit is vacant (physically unoccupied and ready for immediate rental), or if the existing tenant has given or received notice to move and a new tenant has not signed a lease. Availability rates were highest in Windsor (14.4 per cent), Saint John (6.1 per cent), and Hamilton (5.8 per cent), and lowest in Kelowna (0.4 per cent) and Victoria (1.2 per cent).

### Renovation spending continued to grow

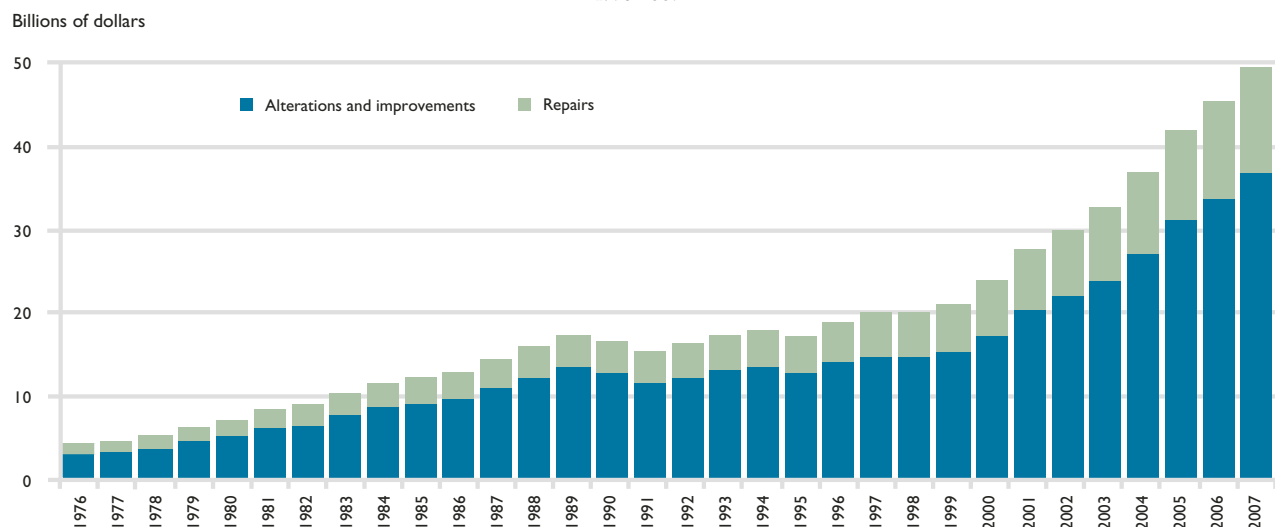
Renovation spending, which has progressed at a steady pace since 1999, continued its upward trend in 2007 (see *Figure 4-9*). The renovation market continued to benefit from the strong economic growth of recent years and the solid performance of the housing market.

High employment levels translated into steady income gains which in turn boosted consumer confidence and provided greater financial means for households to upgrade their homes. Low mortgage rates, record sales of existing homes, and high levels of housing starts in recent years also contributed to the pick-up in renovation activity. High levels of sales mean that more homebuyers are more likely to invest in renovation, which pushes the total renovation spending up.

Total renovations are a combination of alterations and improvements that raise the value of a home, and repairs and maintenance which maintain home value. Alterations and improvements grew by 9.5 per cent and reached about \$37 billion in 2007, accounting for approximately three quarters of total renovation spending. Repairs added another \$12.5 billion, bringing the spending that maintained or improved the housing stock to \$49.5 billion, an increase of 9.1 per cent compared to 2006.

Sales of existing homes are a leading indicator of renovation spending, since households generally undertake renovations within the first three years after buying a house. Thus, the high level of sales in the existing home market in recent years provided a solid foundation for renovation activity. Low mortgage rates also facilitated mortgage refinancing which is an attractive way to pay for renovations, since it allows homeowners to access some of the equity from their homes at attractive interest rates.

FIGURE 4-9  
RENOVATION ACTIVITY IN CANADA,  
1976-2007



Source: Statistics Canada, CANSIM

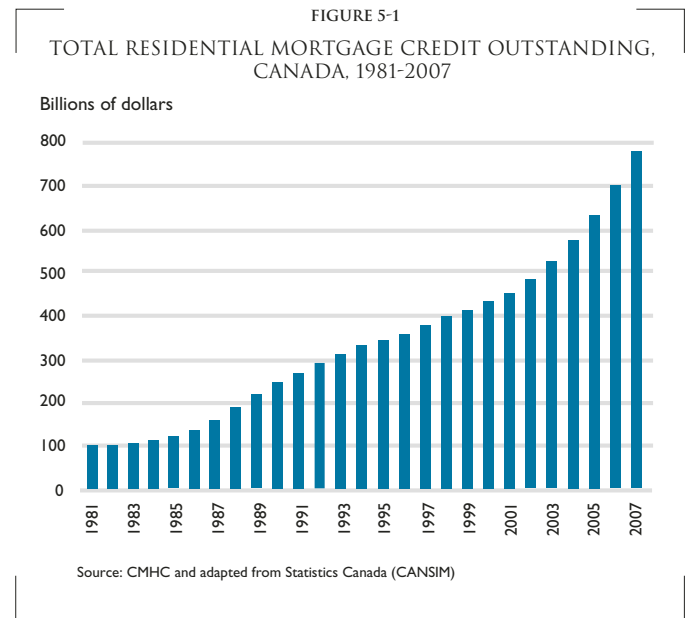
## Canada's housing finance sector and housing markets relatively unscathed by the sub-prime crisis in the United States

The eruption of the sub-prime crisis in the U.S. in 2007 made it a dramatic year for housing finance markets worldwide. It was a year, however, in which the Canadian housing finance market emerged relatively unscathed from the turmoil on the world stage, with limited effects on the Canadian housing sector. This contrasts strongly with events in the U.S., and the disruptions in the housing finance sectors in some other countries.

Total mortgage credit outstanding in Canada, driven by a strong economy, high levels of new and existing housing sales, and strong house price gains continued its steady upward trend. The annual average mortgage credit outstanding rose to \$774 billion, up 11.5 per cent from 2006. This was marginally higher than the 10.7 per cent increase between 2005 and 2006 (see Figure 5-1). The high house price gains described in Chapter 4 were reflected in a 14.9 per cent increase in the average mortgage amount approved. The value of approvals for National Housing Act (NHA) mortgages was up 10.0 per cent, while the value of conventional mortgage approvals<sup>1</sup> rose 18.4 per cent.

Other countries did not fare as well as Canada. In the United Kingdom (U.K.) the crisis brought down Northern Rock, one of the top five U.K. mortgage lenders. It was

subsequently nationalized in 2008. Australia saw serious disruption in the residential mortgage-backed securities market with issuance down nearly 90 per cent between the first and second half of 2007 (see side bar for an explanation of securitization).



In discussing Canada's relative immunity from the turbulence, the International Monetary Fund (IMF) has pointed to the maturity and sophistication of our financial system, including the structure of the housing finance market and the strength of underwriting in Canada.

<sup>1</sup> A high-ratio mortgage has a loan-to-value (LTV) ratio greater than 80 per cent and must be insured to conform to the requirements of the Bank Act. Mortgages with lower LTVs do not require insurance and are known as conventional mortgages.

The IMF's key findings<sup>2</sup> were that:

- Canada's financial system is mature, sophisticated, and well-managed. Financial stability is underpinned by sound macroeconomic policies and strong prudential regulation and supervision. Deposit insurance and arrangements for crisis management and failure resolution are well-designed.
- The major banks could withstand sizeable shocks for credit, market and liquidity risk.

### What is Securitization?

Securitization involves pooling of assets (e.g. loans), which are transferred to an *issuer* which issues securities backed by the value of the assets. Mortgage-Backed Securities (MBS) are backed with pools of mortgages, and the principal and interest payments are passed through to investors in regular monthly payments.

Securitization enables investors to invest in the mortgage market in much the same way as they would in the bond market. For mortgage lenders, it provides a source of funding to pursue operations – reducing or eliminating the dependence on retail deposits (consumer savings in the form of, for example, guaranteed investment certificates, or term deposits etc.).

In Canada, CMHC launched the *National Housing Act* Mortgage-Backed Securities Program (NHA MBS) in 1987 to increase the availability and reduce the cost of mortgages. NHA MBS are pools of amortized residential mortgages insured by CMHC or private mortgage insurers. CMHC provides a timely payment guarantee on the monthly pass through of principal and interest.

Close to 60 per cent of residential mortgage loans in the United States are securitized, compared to 21 per cent in Canada of which over 80 per cent is through CMHC sponsored MBS (Source: Bank of Canada Financial Stability Report, December 2007).

### What was behind the sub-prime crisis in the U.S.?

The U.S. sub-prime crisis was driven by lenders looking to maintain growth in a mature market, one in which affordability had declined considerably as a result of high appreciation in house prices over a number of years. To expand business, some lenders targeted those at and below the margin of home purchase affordability. The deterioration in housing affordability pushed some borrowers to high risk mortgage products and ultimately contributed to high defaults.

Supporting the expansion of sub-prime lending was the growth of complex forms of financing - in particular, collateralized debt obligations (CDOs). These are asset-backed securities based on fixed-income assets such as mortgages. Mortgage-Backed Securities (MBS) (*see side bar: What is Securitization?*) are also based on mortgages; the difference between CDOs and MBS is that CDOs are divided into "slices" with each slice having a different amount of risk associated with it, and a different precedence in terms of scheduled payments in the event of underperformance of the underlying securities. The complexity of these investment vehicles meant that buyers often did not fully understand what they were getting into – a situation conducive to imprudent underwriting.

Such a context enabled a dramatic expansion in the sub-prime sector in the United States. By 2006, the U.S. sub-prime mortgage markets had grown to around one-fifth of all mortgages written.<sup>3</sup> These sub-prime mortgages were bundled into securities to be sold as CDOs and other asset backed securities. U.S. government-sponsored agencies that usually securitize or purchase prime mortgages were in effect being largely passed over for other private-sector funding that paid higher yields on higher levels of risk.

2 IMF, Canada: Financial System Stability Assessment - Update Feb 2008, [www.imf.org/external/pubs/ft/scr/2008/cr0859.pdf](http://www.imf.org/external/pubs/ft/scr/2008/cr0859.pdf) [July, 2008].

3 Source: Mortgage Bankers Association, <http://www.mbaa.org/> [July, 2008].

### The mix of “exotic mortgage products”, sub-prime borrowers, and inadequately informed investors

Also contributing to the U.S. crisis was the increasing use of what has been widely termed “exotic mortgage products”. These are mortgage instruments designed to ease access to ownership beyond that provided by traditional mortgage products. Mortgages found to be particularly vulnerable were those designed with a “teaser” rate. This generally involved an interest rate that was fixed at up to two percentage points below market for typically two years, and then reset (i.e. raised) to the prevailing market rate, resulting in a sharp increase in payments.

The use of “exotic mortgage products” for those with good credit ratings or sound prospects can help borrowers enter the housing market earlier and tailor cash-flows more closely to their needs and expectations. However, the marketing of exotic products to sub-prime borrowers with stretched resources depended on house prices continuing to rise, mortgage interest rates remaining low and borrowers’ incomes increasing.

Unfortunately some borrowers believed that house price increases would enable them to refinance, taking more equity out to handle the increased payments when the teaser period ended, or alternatively, sell the property for a profit. Borrowers were also attracted by the tax deductibility of mortgage interest in the U.S., which encourages borrowing larger amounts rather than paying down the principal, and refinancing to use the house as collateral for consumer purchases. These borrowers may have expected interest rates to fall. However, interest rates for those facing a “reset” of their mortgage rates in 2007 were typically higher than they were in 2005 when the mortgage was originated. House prices declined in some areas and borrowers were faced with a prospect of monthly payments they could not afford, to pay back loans that were higher than the value of their homes. Inevitably mortgage delinquencies rose, many sub-prime borrowers abandoned their homes and a downward price spiral fed on itself, compounding the crisis.

### Sub-prime delinquencies for 2005 and 2006 loans approached 40 per cent

Declining property values in several regions of the U.S. and rising defaults made it difficult for lenders to recover their losses on loans and caused several sub-prime mortgage lenders to shut down or file for bankruptcy in 2007.

As defaults increased throughout 2007, prices for mortgage-backed securities plunged. The financial turmoil led to an increasing risk aversion on the part of investors and created a global liquidity crisis. Since the beginning of August 2007, central banks across the globe have worked hard to increase liquidity in financial markets to protect the solvency of financial firms linked to sub-prime lending.

Standard & Poor’s (S&P) has reported that sub-prime delinquencies were still rising as of April 2008, with the delinquency rates for 2005 and 2006 loans now approaching 40 per cent and 2007 loans likely to be even worse.

### Problems spread beyond the sub-prime market

Problems in one segment of the housing market inevitably put pressure on other housing segments. There have been cascading effects of the U.S. sub-prime crisis across its housing market and across wide segments of the economy and population.

The first quarter of 2008 saw the second consecutive national quarterly decline in the OFHEO house price index<sup>4</sup> of average house prices in the U.S., with prices dropping in 43 states, and the average house price 3.1 per cent below that of a year earlier. The S&P / Case-Shiller index, which is a composite of house purchase prices in the largest 20 cities, reported a decline in house prices of 14.4 per cent in March 2008 from a year earlier, with 11 of the 20 cities exhibiting a double-digit decrease. Housing starts in 2007 dropped by almost a quarter from 2006, to 1,353,700, and in December 2007 were at the lowest pace in 16 years. Housing starts have subsequently fluctuated around this level (as of May 2008).

4 The Office of Federal Housing Enterprise Oversight collects house price data from Fannie Mae and Freddie Mac. While this data covers all of the U.S., it includes only “conforming” mortgages, which leaves out very high-priced houses and much of the riskiest sub-prime loans – two areas which have seen some of the sharpest house price decreases.

With the sub-prime market stalled, the problems have moved upwards. Owners who might normally have sold their homes and traded up to more expensive homes could not do so. Nervous lenders and investors looked at other segments where the housing market could be vulnerable. One area giving particular cause for concern was the “jumbo” mortgage market, for mortgages above the limit beyond which the U.S. secondary market agencies (Freddie Mac and Fannie Mae) would purchase loans (\$417,000 in 2006). Funds for this market, and other market segments as well, have become scarce and costly.

### The Canadian near- and sub-prime mortgage market

Canada did not experience problems similar to those in the U.S. due to a number of fundamental differences between the two markets.

First, the Canadian sub-prime market is negligible and the near-prime market (*See text box Near-prime and Sub-prime Lending*) is substantially smaller than the U.S. sub-prime market. The near-prime market in Canada in 2007 is an estimated five per cent of mortgage originations.<sup>5</sup> Thus the quality of mortgages that are securitized is relatively higher.

#### Near-prime and Sub-prime Lending

There are no universal comprehensive definitions of prime, near-prime and sub-prime mortgages. In general, a sub-prime mortgage is one where the borrower has a weak or flawed credit history.

A near-prime mortgage, also known as an “Alt-A”, is a type of mortgage that is considered riskier than “prime” and less risky than “sub-prime”. This usually results from borrowers being unable to meet certain lending guidelines such as incomplete documentation of income or assets; or lending ratios, such as debt service or loan-to-value (LTV) ratios, exceeding policy limits.

In addition, unlike in the U.S. where mortgages are predominantly funded through the secondary market, most mortgages in Canada are funded through deposits held by lending institutions. The lower usage of securitization in Canada means that lenders have a large exposure to the mortgages that they originate, which encourages more prudent underwriting. Securitization is a useful and important part of a mortgage market, as it provides more supply and an alternative source of mortgage funds. However, problems can occur, as happened in the U.S., where the securities are backed by very risky assets and investors are inadequately informed. The Canadian mortgage securitization market typically uses high-quality assets, backed with additional credit enhancements.

Further, the mandatory use of mortgage insurance in Canada for high-ratio (over 80 per cent) loans provides a second check on the quality of the loan.

Another important difference is that some of the more exotic products available in the U.S. mortgage market, such as loans with a substantially lower teaser rate, are not common in Canada.

In Canada, there is also less incentive to underwrite risky loans in order to maintain lender volumes. While house prices continue to appreciate, the affordability issues driving the sub-prime market in the United States have not been as prevalent in Canada,<sup>6</sup> thanks in part to the strong economic fundamentals supporting the Canadian housing market.

As a result of these factors, the overall rate of mortgages in arrears in Canada remains at record lows, in stark contrast to the situation in the United States.

The Government of Canada in July 2008 announced<sup>7</sup> adjustments to the rules for government guaranteed mortgages aimed at further protecting and strengthening the Canadian housing market. The new measures, taking effect in October 2008, include setting the maximum amortization period for new government-backed mortgages at 35 years; requiring a minimum down payment of five

5 Source: Canadian Association of Accredited Mortgage Professionals (CAAMP).

6 In a study of relative affordability in 17 developed countries, the International Monetary Fund (IMF) found that Canada was one of only two countries (the other was Austria) where house prices were undervalued based on economic fundamentals (World Economic Outlook, IMF, 2008).

7 See <http://www.fin.gc.ca/news08/08-051e.html> [July, 2008].

per cent for new government-backed mortgages; establishing a consistent minimum credit score requirement; and introducing new loan documentation standards.

In summary, while the U.S. mortgage market and the housing sector have been visibly distressed since the last half of 2007 (although arrears had already been increasing for several months), the Canadian housing market has been on a different path. As described earlier, mortgage credit, house prices, and house sales continued to grow, while arrears remained at a 17 year low. Nevertheless, while mortgage products and lending did not reach the extremes as in the U.S., the crisis experienced in the U.S. market has served as a cautionary reminder to all involved in the Canadian housing finance market.

### Impacts in Canada from the sub-prime crisis in the United States

The most significant effect of the U.S. sub-prime crisis in Canada was felt through the Third Party Asset Backed

Commercial Paper (ABCP) market (*see text box: Third Party Asset Backed Commercial Paper*). As indicated, some smaller lenders that relied on ABCP have faced difficulties in raising funds. The crisis of confidence in lower quality mortgages and other asset backed securities as well as the flight to quality in the time of crisis have also increased the appetite of investors for Canada Mortgage Bonds (discussed below).

The U.S. and world credit crunch and financial market turmoil threaten Canada both because it is a drag on U.S. and world growth (and consequently Canadian economic performance), and because of its spill-over effects in tightening credit in Canada and making it difficult for non-deposit-taking lenders to raise capital. Some Canadian lenders have suspended their non-prime lending and some are dealing with large write-downs from investments in the U.S. that contained a sub-prime component.

## Third Party Asset Backed Commercial Paper

The U.S. sub-prime crisis did have impacts on Canada through the Third Party Asset Backed Commercial Paper market (ABCP). Asset backed commercial paper is an investment which is backed by packaged loans and other obligations. Issuers, which may be Special Purpose Vehicles (trusts) sponsored by banks or other financial institutions (non-banks), use them to raise short-term money to fund the loan transactions. Since ABCP is short-term and the obligations backing it are longer-term, the issuer has to be able to renew the paper when it matures. To reassure investors (often large pension funds) that they will get their money back, and also to protect themselves, the issuers contract banks (Canadian and foreign) or others to provide liquidity in the event of a market disruption.

When the sub-prime crisis broke, investors became concerned as to the quality of the loans and other obligations backing this paper. It emerged that some of the loans of the non-bank issuers were U.S. sub-prime mortgages. As a consequence, the non-bank issuers were unable to renew these ABCP (around \$35 billion), and thus could neither pay out to investors nor raise money to make further loans. They unsuccessfully turned to the guarantors, who, arguing that a “market disruption” as defined in the agreement had not occurred, would not provide liquidity (liquidity protection is in general much more limited in Canada than in the U.S. and Europe). This created a crisis for issuers, trusts, investors, and guarantors. The non-bank Canadian (ABCP) market was frozen while the players sought a solution. A restructuring plan was worked out in late 2007 to try to end the crisis. As of mid-May, 2008, there were still issues to be resolved before the plan could be implemented.

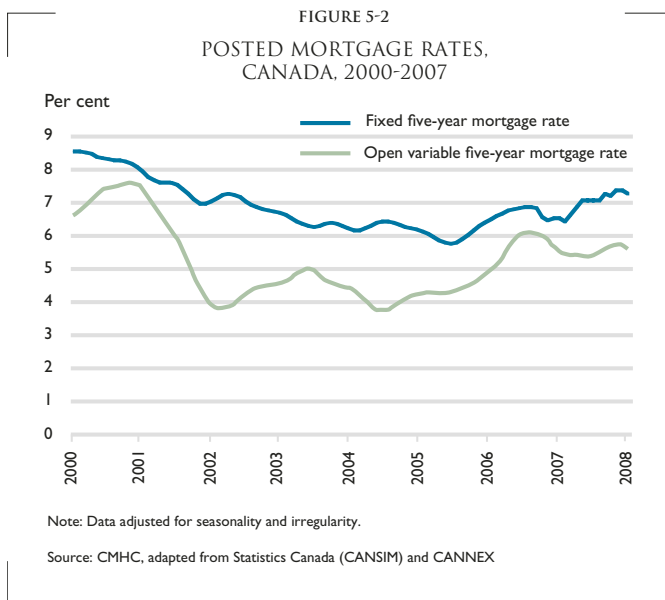
In the meantime, the impacts in Canada of the U.S. sub-prime crisis include some credit tightening among lenders, difficulties for non-deposit taking lenders that raise their money for mortgage loans in the ABCP market, and even difficulties/higher costs for banks to raise funds.

## Developments in mortgage rates in Canada

The sub-prime crisis in the United States has played a part in the interest rate decisions by the Bank of Canada in late 2007 and early 2008. After increasing the overnight lending rate by 25 basis points<sup>8</sup> to 4.5 per cent in July 2007, the Bank of Canada was expected to continue hiking short-term interest rates into the fall. However, given the concerns with respect to liquidity in financial markets, the Bank lowered the target for the overnight lending rate by a total of 150 basis points to 3 per cent by late April 2008, where it remains as of June 2008.

As well, the Bank of Canada has periodically injected money into the overnight lending market to boost liquidity within the market and to ease a potential credit crunch. The first injection of funds, \$1.6 billion, was in August 2007, and subsequent injections have occurred since, some of which have been coordinated with several other central banks.

These developments contribute to the five-year posted mortgage rate averaging 7.07 per cent in 2007, up slightly from 6.66 per cent in 2006 (see *Figure 5-2*).



## Variable-rate mortgages come back into favour in 2007

The average spread between the fixed five-year mortgage rate and open five-year variable mortgage rate increased from 96 basis points in 2006 to 157 basis points in 2007.

The widening spread between fixed- and variable-rates increased the attractiveness of variable-rate mortgages in 2007. The popularity of variable-rate mortgages had previously peaked in 2005, when 36 per cent of homeowners who obtained a new mortgage or renewed an existing one chose a variable-rate mortgage. With the spread between fixed- and variable-rates narrowing considerably in 2006 (see *Figure 5-2*), demand shifted away from variable-rate mortgages towards fixed-rate mortgages, with only 22 per cent of homeowners choosing a variable-rate mortgage in 2006. With the recent widening of the spread, this percentage rose again to 29 per cent.

## Mortgage debt to income ratio increases in 2007, but low interest rates ease the burden

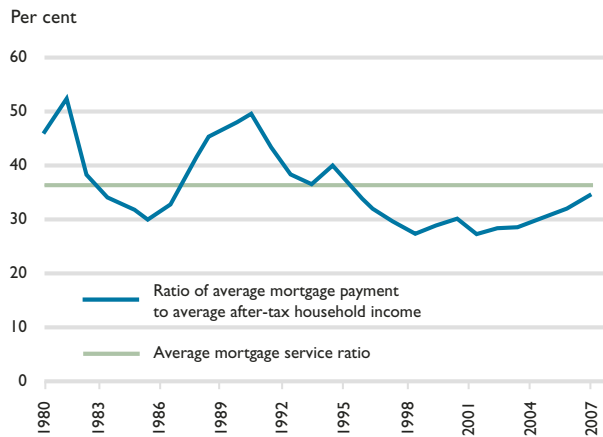
Indebtedness of Canadian households increased in 2007, with total household credit rising by 11.5 per cent. Mortgage debt accounted for 68.6 per cent of the total indebtedness. The ratio of average mortgage debt to average after-tax income reached 87 per cent in 2007, up from 83 per cent the previous year.

The affordability of home purchases deteriorated in 2007 relative to 2006 (see *Figure 5-3*). In 2007, the ratio of monthly mortgage payment<sup>9</sup> to average after-tax household income would be 37 per cent. This is higher than in 2006, where the equivalent ratio using then prevailing prices and interest rates was 32 per cent. Escalating prices, on average, considerably reduced the average affordability of home purchase. While this is a continuation of a trend over the past few years (see *Figure 5-3*) housing affordability in 2007 remains at the average of the period 1980 to 2007.

8 100 basis points equal one percentage point.

9 The average price of an existing home was \$307,265 and the prevailing five-year fixed mortgage rate was 7.07 per cent. If the mortgage payment on this house is calculated assuming that the mortgage is amortized over 25 years with a down payment of 10 per cent, the resulting monthly mortgage payment in 2007 would be \$1,949.

FIGURE 5-3  
AVERAGE MORTGAGE SERVICE RATIO,<sup>1</sup>  
CANADA, 1980-2007



<sup>1</sup> Average mortgage payment calculated using the average Multiple Listing Service<sup>®</sup> price, the fixed five-year mortgage rate and a 10 per cent down payment.

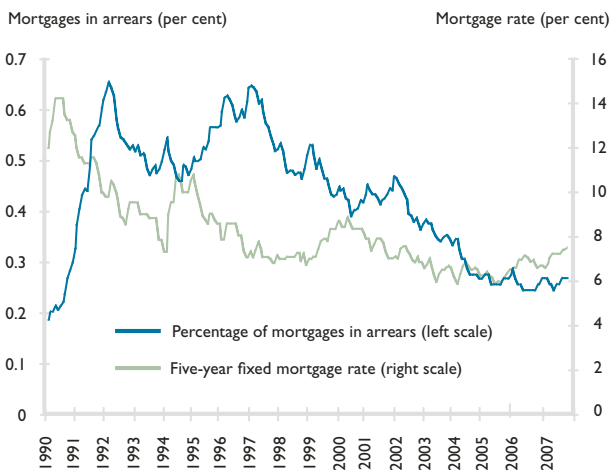
Source: CMHC, adapted from Statistics Canada (CANSIM, unpublished data) and CREA (MLS<sup>®</sup>)

As indicated earlier, mortgage arrears remain low, and in 2007 (as in 2006), slightly more than one in 400 households (0.26 per cent) fell three or more months behind in their mortgage payments, the lowest rate since 1990 (see Figure 5-4).

**Canadian consumers generally satisfied with the mortgage industry and confident about the housing market**

CMHC's *Mortgage Consumer Survey* (see text box) found that six out of 10 households feel that the Canadian mortgage industry is stable, despite the turmoil in the United States, and only 14 per cent have any major concerns regarding its stability. In spite of the events in the U.S. housing market in 2007, Canadian real estate is considered by 70 per cent of respondents to be as good an investment as it was two years ago.

FIGURE 5-4  
MORTGAGE RATES, ARREARS,  
CANADA, 1990-2007



Source: Canadian Bankers Association, Statistics Canada (CANSIM)

Relationships with financial institutions remain very important to mortgage consumers. The proportion of mortgage consumers that stayed with their previous lender was highest for renewers at 83 per cent in 2007, compared to 81 per cent in 2006. The proportion of refinancers that stayed with their previous lender rose in 2007 to 71 per cent, up from 66 per cent in 2006, while the proportion of repeat purchasers that stayed with their previous lender remained fairly consistent in 2007 at 64 per cent. As had been found in previous years, most mortgage consumers (67 per cent) in 2007 felt a personal relationship with their service representative was essential when negotiating their mortgage.

The majority of those switching to another financial institution did so because they felt they were getting a better rate or deal. Of those who switched lenders to get a better rate/deal, four out of 10 did so for a rate reduction of 100 basis points or fewer. Similarly, the main reasons given by respondents for staying with an existing lender included feeling they were getting a good rate or deal combined with client service related factors.

## CMHC Mortgage Consumer Survey

Since 1999 the CMHC *Mortgage Consumer Survey* has been conducted annually to provide insights into the changing attitudes and behaviours of Canadian mortgage consumers.

The survey is based on a national sample of 1,404 active mortgage consumers who have recently undertaken a mortgage transaction. In 2007, the survey focused on actual purchasers and did not include “prospective” purchasers as it had in previous years.

For the purpose of this study active mortgage consumers are defined as:

- *First-time purchasers*: Have purchased their first home in the last 12 months and took out a mortgage.
- *Repeat purchasers*: Previously owned a home and have purchased a home in the last 12 months and took out a mortgage.
- *Mortgage renewers*: Renewed their mortgage in the last 9 months.
- *Mortgage refinancers*: Have refinanced their home in the last 12 months.

### **Borrowers are increasingly shopping around for the best deal on their mortgage**

According to the survey, most purchasers shop around to research their options; 77 per cent looked around for a better deal in 2007, up from 70 per cent in 2006. Of those purchasers who decided to shop for a better rate, almost half (45 per cent) found one, and of these mortgage consumers, six out of 10 gave their original lender the opportunity to match the better offer. The increase in shopping around, to some extent, may be due to the competitive mortgage environment, higher uncertainty about future rates, and the larger number of options available.

### **Consumers are comfortable with their debt load, and their mortgage choice**

The large majority of mortgage consumers (88 per cent) across Canada have confidence in their ability to meet their mortgage and other debt commitments. A similar proportion of purchasers (89 per cent) are confident that their current mortgage choice was their best option.

### **Over three-quarters of purchasers intend to pay off their mortgage as quickly as possible**

Seventy-eight per cent of purchasers intend to pay off their mortgage as quickly as possible, while over half (57 per cent) intend to use any extra money to pay down the principal when possible.

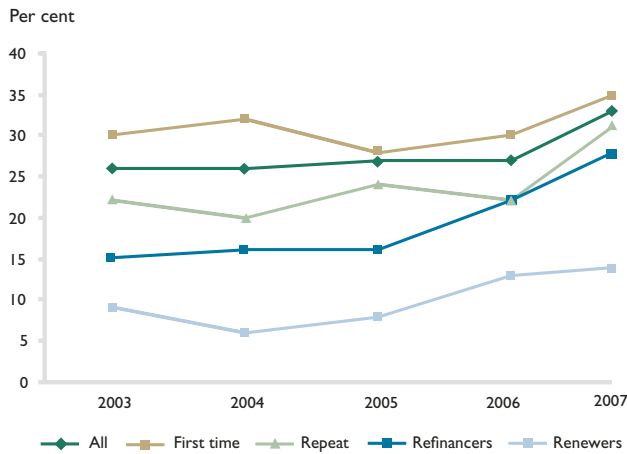
Mortgage consumers are serious about reducing their mortgage debt and their attitudes toward debt are reinforced by their actions. More than eight out of 10 purchasers who have weekly and biweekly payments are on accelerated schedules, while four out of 10 purchasers intend to reduce their amortization period upon their next renewal. As well, three out of 10 purchasers have at some point made a lump sum payment on a mortgage.

On the other hand, there is a small proportion (25 per cent) of mortgage consumers who have an interest in mortgage features that minimize payments, giving them better cash flows.

### **Brokers continue to make inroads**

2007 was a good year for mortgage brokers. Broker share of originations in most segments showed gains in 2007. These are most significant within the purchase segment, which increased from 27 per cent in 2006 to 33 per cent in 2007 (*see Figure 5-5*). Ninety per cent of those recently using a broker felt that their broker listened to their needs, gave them a good understanding of the choices available, and found the best financing arrangements to meet their needs.

FIGURE 5-5  
USE OF BROKERS BY TYPE OF BORROWER,  
2003-2007



Source: CMHC Mortgage Consumer Survey, 2003 to 2007

## Canada Mortgage Bonds

In 2001, CMHC introduced Canada Mortgage Bonds (CMB). CMB are a mortgage-backed security that offers a bond-like payment stream for investors. They eliminate the prepayment and cashflow risks of typical mortgage investments, as they offer regular monthly interest payments and a single repayment of principal at maturity. Canada Mortgage Bonds are issued by Canada Housing Trust (CHT) to investors. The CHT uses the proceeds of the bonds to buy mortgages, packaged into NHA MBS, from financial institutions. The majority of NHA MBS are sold into the CMB program. As with NHA MBS, CMB are guaranteed as to the timely payment of interest and principal by CMHC and constitute a direct and unconditional obligation of the Government of Canada.

Funds raised through the sale of the Canada Mortgage Bonds provide low cost funding to both large and small lenders, allowing them to make more lower cost mortgages available to Canadians. CMB also provide a safe place for investors to invest.

## FAST Facts

- Average mortgage credit outstanding rose to \$774 billion in 2007, up 11.5 per cent from the previous year. The average mortgage amount approved was up close to 15 per cent.
- In the United States, sub-prime delinquencies were still rising as of April 2008, with the delinquency rates for 2005 and 2006 sub-prime loans approaching 40 per cent.
- Mortgage arrears in Canada remain low, and in 2007 (as in 2006), slightly more than one in 400 households fell three or more months behind in their mortgage payments, the lowest rate since 1990.
- The five-year posted mortgage rate averaged 7.07 per cent in 2007, up slightly from 6.66 per cent in 2006.
- In response to liquidity concerns in the last half of 2007, the Bank of Canada lowered its target for the overnight lending rate by a total of 150 basis points (to 3 per cent), between July 2007 and April 2008.
- The spread between fixed and variable rate mortgages widened in 2007, resulting in an increase in the share of variable rate mortgages to 29 per cent, up from 22 per cent in 2006, but still below the peak of 36 per cent in 2005.
- Total issuance of Canada Mortgage Bonds and NHA Mortgage-Backed Securities was up 61 per cent in 2007. Outstanding CMB totalled \$136 billion as of the end of June 2008.

### **Issuance of Canada Mortgage Bonds and NHA Mortgage-Backed Securities increased sharply in 2007**

Uncertainty in credit markets fuelled institutional interest in Canada Mortgage Bonds (CMB) as a mortgage funding mechanism in 2007. In particular, for non-deposit-taking institutions that rely on securitization for their lending, other funding sources were limited or very expensive.

These factors, along with buoyant housing markets, contributed to a 61 per cent increase in total issuance of CMB and NHA Mortgage-Backed Securities. Of the \$58 billion total, \$35.7 billion were CMB, while the remaining \$22.3 billion were NHA MBS. Also in 2007, two CMB maturities were successfully completed (i.e. the bonds reached maturity and were closed) for a total of \$12.6 billion.

The strength in CMB continued into 2008, with first quarter issuance of \$11 billion, followed by another \$12.5 billion in June. For the first time, this issuance included three tranches, including a reopening of a shorter-dated 3-year issue. The \$12.5 billion size represents record issuance at a quarterly offering for the CMB Program. With this issue, outstanding CMB total just over \$136 billion. This liquidity provided by the CMB program contributes to the stability of mortgage funding supply in the Canadian housing finance market.

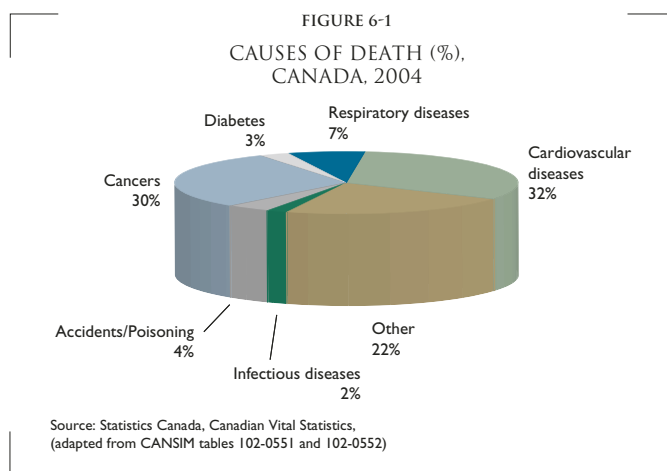
# Sustainable, Healthy Communities

Canada is one of the most urbanized countries in the world and today, over 80 per cent of Canadians live in urban areas. Many Canadian cities, and the larger metropolitan regions in particular, are experiencing the challenges associated with continued growth and expansion. This presents opportunities to address these challenges in a variety of innovative ways. Planning and developing new neighbourhoods and addressing change within existing neighbourhoods in a more sustainable way offers a means to reduce negative environmental, social and economic impacts and create healthier and more liveable places. Sustainable community development characteristics include more efficient use of land and infrastructure, a mix of land uses and housing types, creating connected and walkable neighbourhoods, transit-oriented development, green space preservation and brownfield redevelopment.<sup>1,2</sup>

This chapter focuses on the links between these sustainable community planning approaches and the health and well-being of the people who live there. It examines the ways in which population health concerns such as traffic congestion, collisions, noise, and poor air or water quality are linked to urban planning and development. It also highlights some planning approaches that are leading to reduced automobile dependence, more active lifestyles involving walking and cycling, social interaction and improved well-being.

## The urban environment and community health

Towns and cities can contribute in positive or negative ways to the health of their citizens. Today, Canadian cities generally provide a foundation for healthy living, free from overcrowding, infectious diseases, fire, factory noise or foul smells, and cities provide full sanitation services. Over the last century, neighbourhood and district planning along with improvements in house construction, sanitation and increased personal living space, as well as other technological and medical advances, have helped reduce infectious diseases as a leading cause of death to only two per cent of the total (see Figure 6-1).



1 See previous *Canadian Housing Observers* for discussions of intensification, brownfield redevelopment and transit-oriented development.

2 Brownfields are sites that have been contaminated by industrial or commercial uses and that have the potential to be remediated. With remediation, the redevelopment of brownfields for residential uses offers significant opportunities to revitalize older neighbourhoods, lower municipal infrastructure costs, and manage growth.

These universal health-enhancing attributes, have contributed to a rise in the average life expectancy in Canada, at birth, from 48.5 years in 1901 to 80.2 years in 2004.<sup>3</sup> Currently, most people expect a long, healthy, enjoyable and productive life.

This was not always the case. As Canadian cities grew in the 19th century, they often experienced major fires or outbreaks of contagious diseases that were exacerbated by overcrowding. The Industrial Revolution, that continued throughout the 19th century and into the 20th, brought prosperity and wealth along with disturbing noise from factories, trams, trains and horse-drawn carriages, and foul air from factories, coal steam engines, open sewers and accumulating garbage. Infrastructure and regulations to deal with these unhealthy conditions were either non-existent or inadequate.

Where we live, work, shop and play, how we commute, the opportunities to socialize and form friendships, all these are influenced by the way we plan neighbourhoods and districts.

### Sustainable Community Planning

Good planning addresses population health concerns such as:

- Poor air quality.
- Contaminated water.
- Sedentary lifestyles.
- Noise pollution.

Each of these is discussed below.

### Air quality

Road-based transportation is a principal cause of poor air quality. About 40 per cent of road-based transportation emissions can be attributed to personal transport. In turn, commuting to work constitutes 30 per cent of total personal travel.

### Solutions to improve air quality

There are local actions that can make a difference. For example:

- Restricting traffic through neighbourhoods limits a local source of pollution and achieves the triple objective of better air quality, decreased noise and increased safety.
- Regulating traffic flow through one-way streets, traffic light synchronization and other traffic management measures helps reduce emissions. A steady, smooth traffic flow minimizes car emission levels, whereas stop-and-go movement considerably increases emissions per kilometre driven.
- By making city streets safer for pedestrians and cyclists and increasing the interconnections with walking trails and bike paths, local car trips—and the pollution they generate—can be displaced by biking and walking.
- New districts have the option of site planning that protects residents from direct exposure to local pollutants by completely or partially separating paths to amenities such as schools, shopping and recreation from traffic and other pollution sources. False Creek in Vancouver, British Columbia; Pineglen in Guelph, Ontario; and Erin Mills in Toronto, Ontario are examples. These kinds of site plans are becoming increasingly prevalent in Canada, the U.S. and Europe. Paths and bikeways are designed to be continuous, and to intersect or overlap with car traffic lanes only infrequently. Some of these are strictly recreational while others serve a double purpose of recreation and commuting.
- New or redeveloped neighbourhoods—including “brownfield” developments—that achieve the optimal density for services and other meaningful destinations within walking or cycling distance also displace car trips and thereby reduce a local generator of pollution.

3 Statistics Canada, Death—Shifting Trends: Health Reports, Vol. 12, No. 3 Catalogue 82-003 (Ottawa: Statistics Canada, 2001) and *The Daily*. Statistics Canada (Ottawa: Minister of Industry, December 20, 2006).

- Existing and particularly new buildings can now be built to have substantially reduced emissions attributable to heating and cooling. New voluntary standards and demonstration projects, such as the CMHC EQuilibrium™ Sustainable Housing Demonstration Initiative<sup>4</sup> show the potential.
- Green barriers that reduce noise (see below) are also carbon sinks. Vegetation in urban areas can contribute significantly by removing some pollutants from the local surrounding air, thereby improving air quality.
- Telecommuting, walking and bicycling free up road space and have lower environmental impact than using motorized vehicles.

There are large differences among Canadian cities in the percentages of people using public transit for commuting (see Figure 6-2), from over 20 per cent in Toronto and Montréal to under five per cent in half of Canada's 33 Census Metropolitan Areas (CMAs). The average for all Canadian CMAs is about 11 per cent. Between 2001 and 2006, this percentage increased slightly overall, but some cities, such as Vancouver and Calgary, had significant increases. In places where walking, biking and

transit use go up and the number of car trips goes down, it is more likely that local and regional transportation-generated pollutants will decrease and therefore air quality will improve.

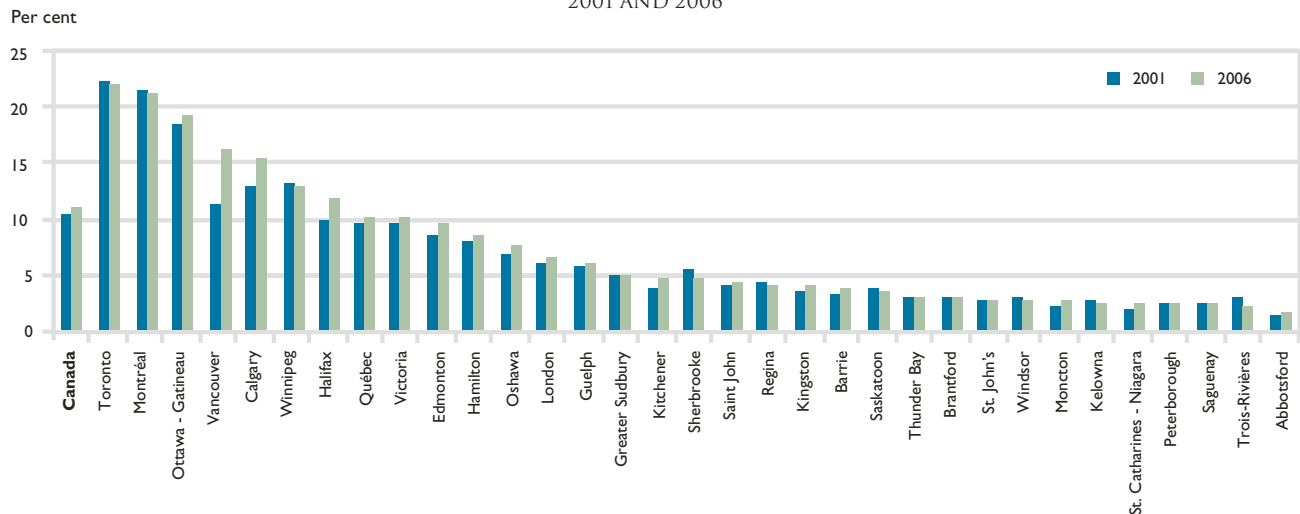
### Water quality

Today, of course, removing or controlling biological agents of disease from urban water supplies is a well-established practice in Canada. Storm water runoff is still a concern, as rainwater picks up pollutants on its way to the sewers and local water sources, and can cause flooding when there is heavy rain.

### Solutions to improve water quality

Since the late 1990s, planners have been looking at ways to reduce impermeable surfaces and replace them with ones that absorb rather than repel water runoff. Because this approach relies on the earth's natural filtration properties, it is characterized as a "hold and filter" rather than "pipe and treat" approach. It involves reducing impermeable surfaces to what is absolutely essential and, where available, using new permeable materials for surfaces such as parking lots, driveways, lanes and sidewalks.

FIGURE 6-2  
THE PERCENTAGE OF THE WORKFORCE<sup>1</sup> USING PUBLIC TRANSIT FOR COMMUTING, BY CMA,  
2001 AND 2006



<sup>1</sup> Includes the employed labour force 15 years old and older that have a usual place of work or that have no fixed workplace address.

Source: Statistics Canada, Census of Canada (Cat. Nos. 97F0015XCB2001002 and 97-561-XCB2006012).

4 See [www.cmhc-schl.gc.ca/en/en\\_001.cfm](http://www.cmhc-schl.gc.ca/en/en_001.cfm).

The growth in the number of large buildings with green roofs that absorb and retain water (see Figure 6-3), and the creation of rain gardens that combine recreational and water filtration uses are two hallmarks of “hold and filter” approaches that are increasing in acceptance among planners and building professionals. The greening of roofs has additional environmental benefits such as reducing cooling loads of individual buildings and contributing to the reduction of the heat island effect in central city areas. The plant material is known to filter air pollution and the green roof provides additional valuable space.

FIGURE 6-3  
GREEN ROOF ON CITY OF WATERLOO  
MUNICIPAL BUILDING, WATERLOO, ONTARIO



Credit: Flynn Canada Ltd.

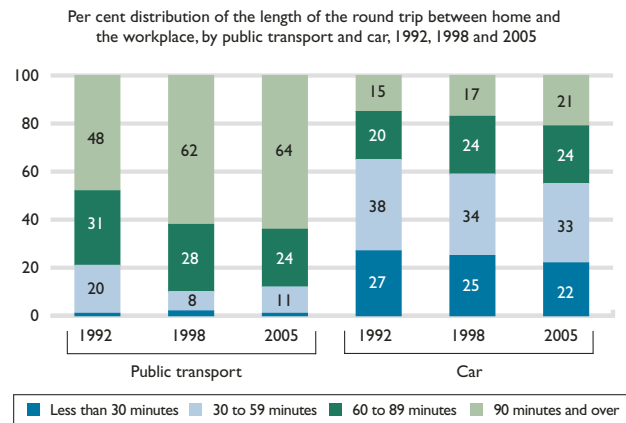
But equally important, once again, is the configuration of the transportation grid. Streets are the largest contributor of impermeable surface area to neighbourhoods and districts. They account for as much as 65 per cent of the total impermeable surface, but alternatives to the standard grid can substantially reduce this percentage. The elimination of vehicular cross-connections reduces the amount of asphalt and increases the possibilities for green space. Furthermore, pedestrian connections need not be conventional (and impermeable) concrete sidewalks; they can be natural footpaths or constructed from absorptive materials.

### Sedentary lifestyles

Our reliance on the private automobile as the primary mode of travel within our communities has contributed to inactive lifestyles.

The average duration of the round trip between home and the workplace by both public transport and car is getting longer (see Figure 6-4).

FIGURE 6-4  
TRIP DURATION



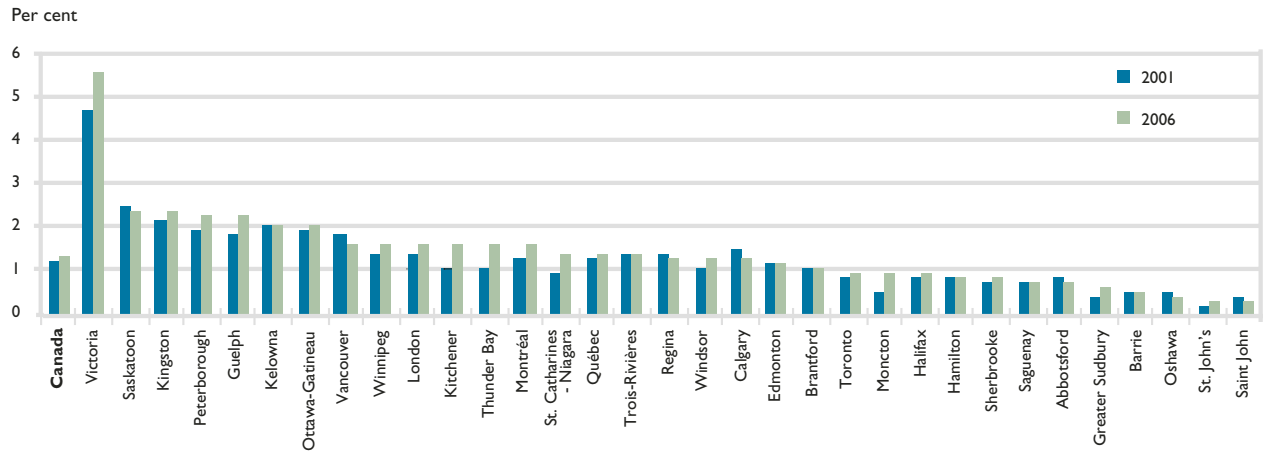
Source: Statistics Canada, General Social Survey, 1992, 1998 and 2005.

### Solutions to promote a more active lifestyle

Planning can encourage opportunities for commuting on foot or by bicycle. Walking more depends on neighbourhood walkability (which in turn depends on density), the perception of safety, and having a mix of types of development (residential, commercial, etc.). Walking is more attractive when there are many and varied conveniences within walking distance and good transit service. Although suburbs traditionally have less of both, intensification of older suburbs is occurring and many municipalities are revisiting their transit plans to include development around transit stations that includes a variety of uses. Unlike earlier suburban plans, new developments tend to encourage pedestrian connectivity. This can have a measurable impact on the amount of walking and biking.<sup>5</sup>

5 Comparing Canadian New-urbanist and Conventional Suburban Neighbourhoods, CMHC, forthcoming.

FIGURE 6-5  
THE PERCENTAGE OF THE WORKFORCE<sup>1</sup> COMMUTING BY BICYCLE, BY CMA, 2001 AND 2006



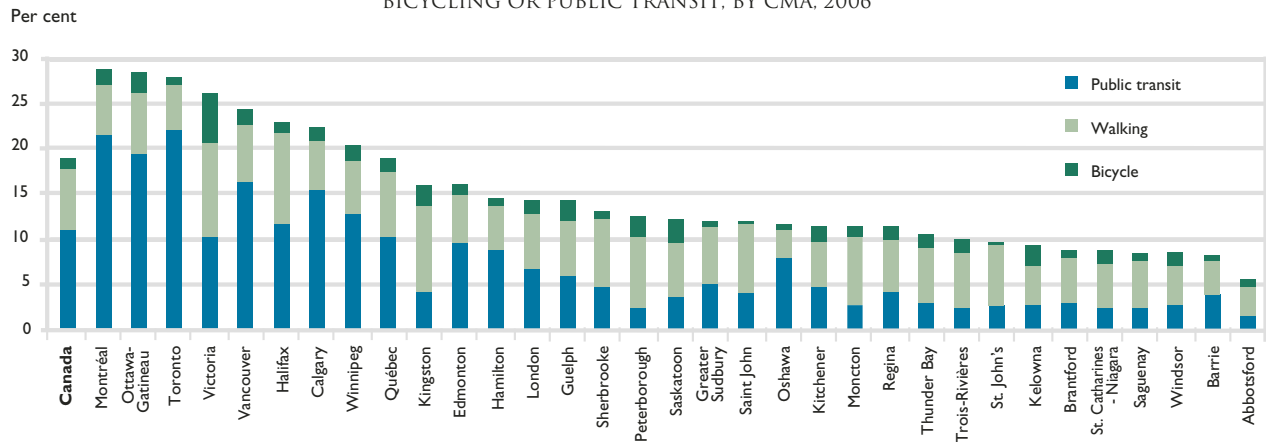
<sup>1</sup> Includes the employed labour force 15 years old and older that have a usual place of work or that have no fixed workplace address.

Source: Statistics Canada, Census of Canada (Cat. Nos. 97F0015XCB2001002 and 97-561-XCB2006012).

Bicycling is used very little for commuting in Canada, averaging only about one per cent of such trips for all Census Metropolitan Areas in 2006, and ranging from almost six per cent in Victoria to under 0.5 per cent in Saint John (see Figure 6-5). However, over 25 per cent of the populations of Montréal, Toronto, Ottawa-Gatineau, and Victoria chose public transit, bicycling or walking to get to work (see Figure 6-6).

If potential cyclists perceive that measures being taken are reducing their risk, cycling will increase. Bicycles provide convenient transportation to medium distance destinations. Planning bicycle routes through existing districts can be challenging, as streets planned for motorized transport have left little room for bicycles. Still, remedial measures (see below) can be effective.

FIGURE 6-6  
THE PERCENTAGE OF THE WORKFORCE<sup>1</sup> COMMUTING BY WALKING, BICYCLING OR PUBLIC TRANSIT, BY CMA, 2006



<sup>1</sup> Includes the employed labour force 15 years old and older that have a usual place of work or that have no fixed workplace address.

Source: Statistics Canada, Census of Canada (Cat. Nos. 97F0015XCB2001002 and 97-561-XCB2006012).

In new developments where planning is not constrained by existing street patterns, more fundamental innovations, such as dedicated bikeways and alternative street plans are possible.

### Adjusting traditional traffic patterns

Adjusting the road grids of two districts in Vancouver and one district in each of the cities of Burnaby and New Westminster, for example, produced substantial reductions in the frequency of collisions ranging from 18 to 60 per cent.<sup>6</sup> These adjustments included physical changes to the roads such as full and partial closures and traffic management measures such as stop signs.

### Traffic calming

Increasingly, Canadian cities have been applying traffic calming measures to their neighbourhoods and districts in order to create a safer environment for both adults and children. This trend has lately intensified, particularly in central cities. There are currently numerous initiatives across Canada to abate traffic in existing neighbourhoods. These include modifications such as speed bumps and traffic circles as well as strategic street closures in residential neighbourhoods (see Figure 6-7).

### Dedicated bikeways

While modifications like traffic calming and cyclist-controlled stop lights on existing streets can make them more bicycle friendly, more extensive adaptations and innovations are required to enable this mode of transportation to function well with reduced risk. Ideally, distinct bicycle paths should be separated from the road pavement. In Metro Vancouver, for example, interurban paths for both cyclists and pedestrians have been constructed under the SkyTrain (elevated transit) guideway, thus using a single right of way for three modes of transportation.

Plans for new neighbourhoods increasingly include bicycle trails and paths, separate from the streets, that serve mostly

FIGURE 6-7  
TRAFFIC CALMING MEASURE  
IN WEST VANCOUVER



Source: CMHC

as recreational routes, and occasionally also as a means for daily commuting to work and other destinations. Insofar as these trails are separate, they match cyclists' preferences and reduce collision risk.

### Right of way

Giving more right of way to bicycles by providing more road space and greater say in the movement priority at intersections (e.g. bike activated traffic lights distinct from the conventional lights) encourages cycling.

### Redesigning the Grid

New research shows the possible safety benefits of road network designs that favour the pedestrian and the cyclist. A study at the University of British Columbia shows that networks based on partially discontinuous vehicular paths can be up to five times safer than the current city average incidence of collisions and up to seven times safer than the inherited pure grid network.<sup>7</sup>

The Fused Grid is a residential street network developed by CMHC that shares these safety features.<sup>8</sup> It has been explored and applied in some Canadian cities, such as Stratford, ON; Calgary, AB and Fort McMurray, AB.

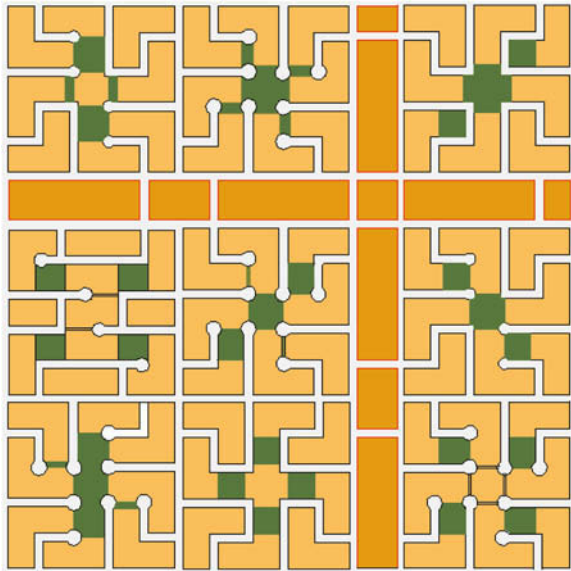
6 Sany Zein, et al: Safety Benefits of Traffic Calming. *Transportation Research Record, Journal of the Transportation Research Board*, Volume 1578, (Washington, D.C.: Transportation Research Board of the National Academies, 1997).

7 Gordon R. Lovegrove and Tarek Sayed, Using Macrolevel Collision Prediction Models in Road Safety Planning Applications, *Transportation Research Record, Journal of the Transportation Research Board*, No. 1950, (Washington, D.C.: Transportation Research Board of the National Academies, 2006) pp. 73-82.

8 Ibid.

The Fused Grid (see Figure 6-8) allows regional through-traffic to flow freely along arterial roads on the periphery of the grid while limiting vehicle access to neighbourhood residential streets, making them safer and more attractive for cycling and walking.<sup>9,10</sup> Saddleton, a recently approved subdivision plan in Calgary, follows this principle.

FIGURE 6-8  
THE FUSED GRID



Source: *Applying Fused Grid Planning in Stratford, Ontario*, Research Highlight, Socio-economic Series 04-038, (Ottawa: CMHC, 2004) p. 1.

Fundamentally rethinking street design in this way can have far-reaching implications that extend beyond reducing the number and severity of collisions to addressing several of the other negative impacts of transportation on city life.

### Noise pollution

A national survey in 2005 found seven per cent of Canadians over 15 years of age (about 1.8 million people) to be highly annoyed by traffic noise.<sup>11</sup>

Arterial roads and highways, part of a district's road network, generate noise levels between 55 and 75 decibels (dB). Average traffic noise levels along the edges of busy arterial roads and highways can often reach 75 to 80 decibels adjusted (dBA),<sup>12</sup> while maximum levels from passing heavy trucks and buses and motorcycles can reach 90 to 100 dBA. Sleep disturbance can start as low as 35 dBA and louder noise (55 dBA and higher levels) increases the range and impact of negative effects.

### Solutions to reduce noise

Noise abatement options will differ for new versus existing districts. Reductions depend on lowering the amount of traffic and its speed, avoiding variations in speed, increasing the distance of residences from the noise source, using natural or man-made barriers and, finally, improving the sound insulation of the residential building itself. Some of these measures will obviously be more easily implemented in planning new developments, but cities can take steps to mitigate noise pollution in existing neighbourhoods as well.

### Existing districts

Existing neighbourhoods, particularly in central areas, are more compact, have higher densities and often continuous "walls" of buildings on both sides of the street. The street network is often laid out in a grid. Each of these characteristics can accentuate noise generation, and there are trade-offs involved in trying to modify them.

#### ■ *Altering Traffic Flow*

The traditional grid layout invariably means slower traffic flow. Slower traffic can enhance safety, but at the same time the higher frequency of intersections in a grid layout increases the amount of acceleration/deceleration and therefore the potential for noise. For this reason traffic circles can prove to be more effective in reducing noise than speed humps, which actually increase the number of times vehicles have to slow down and speed up.<sup>13</sup>

9 Giving Pedestrians an Edge—Using Street Layout to Influence Transportation Choice, CMHC Research Highlight, Socio-economic Series 08-013, (Ottawa: CMHC, July 2008).

10 Taming the Flow—Better traffic and safer streets, CMHC Research Highlight, Socio-economic Series 08-012, (Ottawa: CMHC, July 2008).

11 D.S. Michaud et al, Noise Annoyance in Canada, Noise & Health, Volume 7, Issue 27, (London, UK: 2005) pp. 37-47.

12 Decibels (dB) and decibels adjusted (dBA) both measure noise levels.

13 L Frank, S Kavage and T Litman, Promoting public health through smart growth: building healthier communities through transportation and land use policies and practices, 2006.

FIGURE 6-9  
TRAFFIC CIRCLE



Credit: City of Vancouver

By contrast, small traffic circles, such as those used for local intersections in some Vancouver, Portland and Seattle neighbourhoods, permit a smooth, steady flow of traffic while helping to reduce noise (see Figure 6-9).

Countering the grid's inherent tendency to produce grid-lock, cities have made extensive use of one-way streets to improve traffic flow. This reduces the number of crossing streams (i.e., turning opportunities) at intersections. This measure has the potential to increase speeds—a result desirable on collectors and arterials but undesirable on local streets. Conventional traffic calming measures like traffic circles in residential areas can slow through traffic, but more extensive changes along the lines of the Fused Grid model would go even further in reducing vehicle noise.

Residential street closures and cul-de-sacs can sometimes prove annoying to drivers who are used to a conventional grid system, but they reduce stress and noise for local residents.

#### ■ *Densification and Redevelopment*

While higher densities can mean more resident cars, they can also support more services within walking distance. Again, it is easier to plan for optimal density and a mix of uses in new developments, but even

in existing neighbourhoods as opportunities for redevelopment and densification emerge, it is possible to create open or enclosed interior courts that distance their users from street noise. This is true of pedestrian shopping streets in central districts such as Sparks Street in Ottawa. As well, mid-rise apartments and housing projects that provide interior courtyards create spaces and gathering places for residents to socialize. Internal spaces do create their own acoustic environment, but their noises are generally the familiar ones of human interaction—low in intensity and subject to social controls, similar to street noise before the car.

#### **New districts**

##### ■ *Planning for Optimal Density*

It is easier in planning new districts to balance conflicting design requirements to achieve a quiet neighbourhood.

As the volume of traffic relates to population densities of a district, a balanced threshold could be reached where a neighbourhood's density meets other planning requirements, such as supporting transit for example, while maintaining low noise levels. Determining an optimal density that limits the negative impacts of crowding but maintains the positive aspects of a well-functioning district is difficult. One study of European cities found such density to be 180 square meters per person. For comparison, Toronto has an average of 260 square meters per person and Barcelona 60 square meters per person.<sup>14</sup>

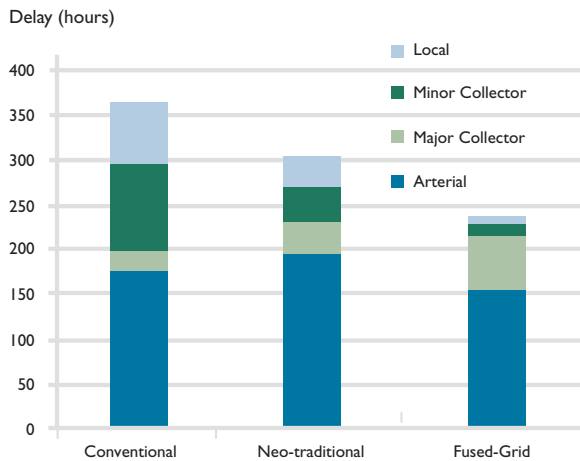
##### ■ *Using the Fused Grid*

In new neighbourhoods, a plan that allows district traffic to move smoothly at the perimeter of a group of residential blocks can alleviate the intensity of noise by keeping the noise further away from neighbourhood homes and sheltered by commercial, institutional and recreational uses that are not as susceptible to noise disturbance, particularly at night. Again, the Fused Grid model (see Figure 6-8) offers that possibility. A traffic modelling study<sup>15</sup> found that traffic would move more smoothly over a road network

14 Rudolf Hartog, *Europe's Ageing Cities*, 2005.

15 Taming the Flow—Better traffic and safer streets, CMHC Research Highlight, op. cit.

FIGURE 6-10  
TOTAL TRIP DELAY BY TYPE OF ROAD  
AND URBAN DESIGN



Source: *Taming the Flow—Better Traffic and Safer Neighbourhoods* Research Highlight Socio-economics Series 08-012 (Ottawa: CMHC, 2008).

designed according to the Fused Grid model (see Figure 6-10), and only local traffic would travel through its neighbourhoods. It also showed an 11.3 per cent increase in the likelihood of a home-based trip being walked and a potential 23 per cent decrease in local vehicle kilometres travelled, further reducing local noise generation.<sup>16</sup> To reinforce walking and cycling habits, however, walking and biking paths should be maintained at the same level of service as sidewalks and paved roads, including snow removal in the winter.

#### ■ Green Buffers and Other Barriers

Along arterials, measures are generally introduced at the site plan level. Increasing distance from the noise source, for example, by the use of green buffers between the road pavement and buildings, helps reduce noise intensity.

Trees and other vegetation can help attenuate noise through reflecting and absorbing sound energy. One estimate suggests that a 7 dB noise reduction is achieved for every 33 m (108 ft.) buffer of trees. Other field tests show perceived loudness reduced by 50 per cent by wide belts of trees and soft ground. A wide belt is not always practical in an urban situation.

## FAST Facts

- Life expectancy in Canada has increased by about 30 years since 1901.
- A street network that gives priority to pedestrians can increase the likelihood of a trip being walked by 11.3 per cent and in the odds of meeting the recommended levels of physical activity by 25.9 per cent.
- Children spend about 50 per cent more time playing outdoors in cul-de-sacs than on other streets.
- The growth in the number of large buildings with green roofs and the creation of rain gardens are increasing in acceptance among planners and building professionals.
- Small traffic circles, such as those used for local intersections, permit a smooth, steady flow of traffic while helping to reduce noise.

Commonly used man-made noise barriers are effective in reducing noise but create an unpleasant, monotonous environment for drivers (see Figure 6-11). Another strategy, particularly for central city districts, is the sinking or tunnelling of highways crossing a city (see Figure 6-12). The noise source is effectively suppressed leaving an improved acoustical space above.

FIGURE 6-11  
EXAMPLE OF A NOISE BARRIER



Source: CMHC

16 Giving Pedestrians an Edge—Using Street Layout to Influence Transportation Choice, op. cit.

FIGURE 6-12  
SUNKEN HIGHWAY IN  
CENTRAL PHILADELPHIA



Source: CMHC

### Better street design

Studies show a correlation between how streets are laid out and lifestyle choices. An extensive Swiss study found that half of five-year-old children who lived on a street “where traffic is a nuisance and menace to children at play” never played outside, and only 10 per cent played outside for more than two hours a day, mostly when they had the chance to use a playground.

A recent U.S. study compared neighbourhoods for physical activity and found that children play about 50 per cent more on cul-de-sacs than other streets, which is indicative of the perceived safety of this street type.<sup>17</sup> Similarly, researchers in Australia found increased physical activity by children who live on cul-de-sacs.<sup>18</sup>

Living in places where children are able to play safely in the street is associated with increased familiarity with neighbours. The Swiss study also noted that parents of children who go out least—mostly those who live on streets with more traffic—had fewer social contacts with other parents and were therefore less able to meet child-care needs.

This points to another potentially disruptive effect of street traffic. Fast traffic on heavily travelled roads that bisect neighbourhoods can sever the social connections that are the basis of community. On the other hand street layouts that facilitate pedestrian contact can foster those connections. In this case the “connectivity” of the pedestrian network does not imply just physical access but the opportunity for the kind of human interaction that is essential to social development and personal mental health.

Making contact with nature is an effective de-stressor, as is physical activity.<sup>19</sup> CMHC research has found that the first most valued attribute for families who chose to live downtown was the nearby park.<sup>20</sup> Green space, in addition to the contributions it can make to noise abatement and improved air and water quality, is also a key element in maintaining the well-being of city dwellers.

The list of planning solutions that has emerged from this examination of contemporary urban health challenges contains powerful ways to confront multiple issues (*see Figure 6-13*).

All of these initiatives share a common tendency to optimize the use of open space, moderate the impact of traffic, reduce vehicle use and encourage walking, cycling or transit use. Specific measures will depend on the local context and apply differently in new and existing districts, but all have the potential to produce healthier neighbourhoods, and therefore healthier cities “by design”.

17 Susan Handy, *Neighborhood Design and Children’s Outdoor Play: Evidence from Northern California*, forthcoming.

18 Jenny Veitch et al., *Where do children usually play? A qualitative study of parents’ perceptions of influences on children’s active free-play*, *Health & Place* Vol. 12 Issue 4, 2005 pp. 383-493.

19 Rachel Kaplan, Stephen Kaplan, and Robert L. Ryan; *With people in mind: design and management of everyday nature*, (Washington, D.C.: Island Press, 1998).

20 Robert Gifford, *Families Living Downtown: Challenges and Benefits*, (Ottawa: CMHC, 2008).

FIGURE 6-13  
PLANNING SOLUTIONS

Initiative or Solution	Addresses
Traffic control and calming	Noise pollution
	Air quality
	Stress (for both drivers and pedestrians)
Alternative street design (Fused Grid)	Pedestrian and cyclist safety
	Noise pollution
	Air quality
	Water quality (more permeable area)
	Physical health (encourages walking)
	Mental health/social development
Green space, water retention	Noise pollution
	Air quality
	Water quality
	Stress and mental health
Optimal development density and mixed use	Air quality (fewer and/or shorter car trips)
	Physical health (encourages walking)
Bicycle/pedestrian infrastructure	Air quality (fewer and/or shorter car trips)
	Pedestrian and cyclist safety
	Noise pollution (traffic reduction)
	Physical and mental health

# Northern Housing

The North has always captured the imagination of Canadians. It is a place of incredible beauty and many superlatives—the tallest mountain, the longest river, the longest summer days and longest winter nights, a land of extreme cold, and one of the most sparsely populated areas of the world.

For many Canadians, the North may seem distant and remote. Increasingly, however, national and international attention is being directed to the North with its world-class diamond mines, oil and natural gas exploration and production, the potential of multi-billion dollar natural gas pipelines and a vibrant and growing tourism industry. Concern over global warming has also focused attention on the North, with the potential of an ice-free Northwest Passage as early as 2012 and increased international traffic through Canadian waters.

Home to Aboriginal people for centuries, the North has attracted people from all over the world who now make their home in this remote part of the country. Some come for the adventure, some for economic opportunities and some for the opportunity to experience a true “last frontier”. For those who chose to live in the North, securing adequate, suitable and affordable housing can be a challenge, especially in the more remote and isolated communities.

FIGURE 7-1  
IQALUIT, NUNAVUT



This is the highest the sun rises in winter in Iqaluit.  
Credit: CMHC

This chapter takes a look at the North, the people who live there and their housing conditions. It explores the challenges of building housing in a part of the country faced with extreme conditions due to harsh climate, impacts of climate change, high costs, limited transportation infrastructure and some community capacity issues. It also looks at the initiatives taken to respond to these challenges, including some of the technical responses and funding arrangements in place to create housing that meets the needs of the people who live there and the rigours of the Northern environment.

FIGURE 7-2  
THE CANADIAN NORTH



The four regions of Nunavut, Nunavik, Nunatsiavut and Inuvialuit in the Mackenzie Delta/Beaufort Sea area of the Northwest Territories make up the *Inuit Nunaat, the Inuit Homeland*.

## The North

For the purposes of this chapter, the North is defined as the three territories north of the 60<sup>th</sup> parallel—Yukon, the Northwest Territories and Nunavut, as well as the Inuit region of Nunavik in northern Quebec and the Inuit region in Labrador, known as Nunatsiavut (see Figure 7-2). Taken together, these areas make up over 40 per cent of Canada's land mass. Nunavik is located north of the 55<sup>th</sup> parallel in the province of Quebec and includes 14 isolated Inuit settlements on the shores of Ungava Bay, Hudson Strait and Hudson Bay. Nunatsiavut is the Inuit area in northern Labrador and includes five communities along the coast. The four regions of Nunavut, Nunavik, Nunatsiavut and Inuvialuit in the Mackenzie Delta/Beaufort Sea area of the Northwest Territories make up *Inuit Nunaat, the Inuit Homeland*.

## The North is a land of opportunity and a land of challenges

To the majority of Canadians who have never travelled “North of 60” or visited the remote regions of Nunavik (see Figure 7-3) or Nunatsiavut, the North is not well known. To those who have ventured north and have met the people and experienced the lure of the land and its unparalleled majesty and beauty, it is an unforgettable experience. To the Aboriginal people who have grown up in the North and have stewarded the land for centuries, it is their only homeland. To non-Aboriginal people born in the North or those who have adopted the North as their home, it is a place of adventure and opportunity, a place that shapes them, much more than they could ever shape the land. To housing researchers, technicians, and designers it is a place where technology and culture intertwine, a testing ground for adapting technologies and products for use in cold climates.

The North is not a homogeneous region—it is a diverse area with a culturally diverse population living in widely differing circumstances.

FIGURE 7-3  
HOUSING IN NUNAVIK, QUEBEC



Credit: CMHC

### The North is a place of rapid change and transformation

The North is a place of rapid change and transformation—economically, socially, environmentally and politically. The resource industries in the North are booming. Two diamond mines are in full operation, with a third scheduled to open in the near future. Petroleum exploration continues in the Beaufort Sea and Mackenzie Delta area and a natural gas pipeline down the Mackenzie Valley is awaiting completion of regulatory and environmental reviews.

The North has experienced massive social change over the past 50 years. Modern transportation and communications have brought the world to the North and the North to the world. Formalized education and job opportunities have impacted the lifestyles of Northern Aboriginal people and many of them have moved from living on the land (hunting, fishing and gathering) to working for wages.

Land claim agreements between the federal government and First Nations and Inuit in many areas of the North have shaped new directions for self-government. The division of the Northwest Territories in 1999 led to the creation of Canada's newest territory, Nunavut.

On December 1, 2005, Labrador Inuit celebrated the beginning of the Nunatsiavut Government. As a regional ethnic government in Newfoundland and Labrador, the Nunatsiavut Government has many of the responsibilities and rights of other governments, such as planning for sustainable economic development, protecting and preserving Inuit culture and implementing social programs on behalf of Inuit beneficiaries.

Climate variation has significant impacts on the housing sector. The permafrost<sup>1</sup> is melting, causing settling problems and structural damage to buildings, roads and other infrastructure. The warmer temperatures are impacting the use of winter roads and ice roads, reducing the already narrow window of time for transporting building materials to isolated communities.

### The Population

#### The North is sparsely populated and home to about 115,000 people

In spite of its huge geographical area, the North is home to only 0.3 per cent of Canadians. The total population of the three territories in 2006 was just over 100,000. Nearly half the population lives in the three territorial capitals of Whitehorse, Yellowknife (*see Figures 7-4 and 7-5*) and Iqaluit. The remaining 58 per cent is spread out over 88 communities, many of which are remote and inaccessible by road.

FIGURE 7-4  
OLDER HOUSING IN TUKTOYAKTUK,  
NORTHWEST TERRITORIES



Credit: CMHC

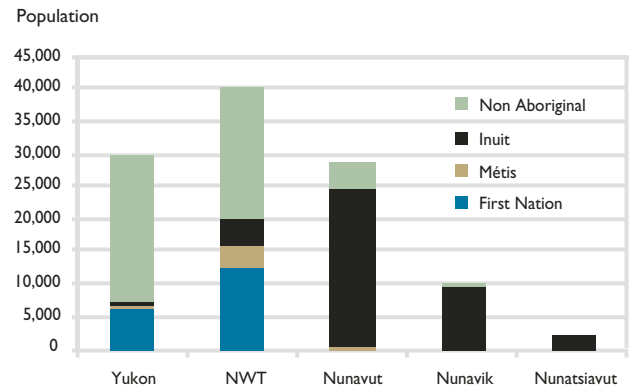
1 The term permafrost is used to describe any ground that has been below freezing for more than one year.

FIGURE 7-5  
YELLOWKNIFE, NORTHWEST TERRITORIES



Credit: Patrick Kane

FIGURE 7-6  
POPULATION OF CANADA'S NORTH, 2006



Source: CMHC, adapted from Statistics Canada (Census of Canada unpublished data)

The population of the North is growing rapidly, increasing by over nine per cent between 2001 and 2006, with the Northwest Territories and Nunavut growing at approximately twice the rate of Canada as a whole (11 per cent and 10 per cent, compared to just over five per cent). The growth rate in Yukon was lower, at just under six per cent. Nunavik, the largest of the Inuit regions outside the territories, had a population of 10,784 in 2006, an increase of 12 per cent from 2001 and Nunatsiavut had 2,414 residents in 2006, a decline of eight per cent from 2001<sup>2</sup> (see Figure 7-6).

### Nearly 60 per cent of the population is Aboriginal

In 2006, 57 per cent of the population was First Nations, Métis or Inuit (see Figure 7-6). The proportion of Aboriginal to non-Aboriginal varies across the North, with Yukon having the lowest proportion at 25 per cent. In the Northwest Territories, one-half of the population is Aboriginal with the majority being First Nations and the balance split between Métis and Inuit (the latter living primarily in Inuvialuit). Nunavut, Nunavik and Nunatsiavut all have 85 per cent or more Inuit.

### The population is young, especially the Aboriginal population

The median age of the Northern population is much lower than that of Canada as a whole. Only Yukon, with a median age of 38.4 is close to the national median of 39.5. Nunavik has the youngest population, with a median age of 19.6, followed by Nunavut at 23.1, Nunatsiavut at 27.8 and the Northwest Territories at 31.2.

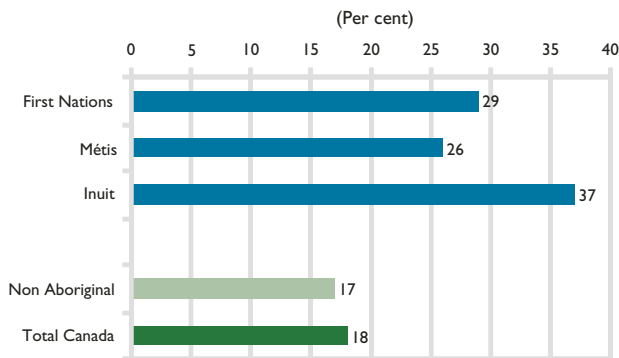
The Aboriginal population in the North, especially the Inuit, is very young. Over one-third (37 per cent) of Inuit are under 15, compared to 17 per cent of the non-Aboriginal population, and 18 per cent of the Canadian population as a whole. One-half of Inuit are under age 25. While not as young as Inuit, the First Nations and Métis population are also much younger than the non-Aboriginal population (see Figure 7-7).

In Nunavut, the birth rate in 2006/2007 was the highest in Canada (24.1 births per 1,000), more than double the national rate.<sup>3</sup> The Northwest Territories had the second highest rate in the country at 16 births per 1,000.

2 Statistics Canada cautions that comparisons with 2001 data may be misleading in Nunatsiavut due to boundary changes between the 2001 and 2006 Censuses.

3 *Births and birth rate, by province and territory*, Catalogue no. 91-213-X (Ottawa: Statistics Canada, 2007).

FIGURE 7-7  
POPULATION UNDER AGE 15 IN THE NORTH, 2006



Source: CMHC, adapted from Statistics Canada (Census of Canada unpublished data)

## The housing situation in the North

### Households are much larger, especially in Nunavut and Nunavut

In 2006, there were more persons per household in Northern communities than in the rest of the country. Average household size was largest in Nunavut, at 4.1 persons per household, well above the size of the average Canadian household of 2.5 persons. In the Northwest Territories, the average size was 2.9, in Nunatsiavut, 3.5 and in Nunavut, 3.7. Only in Yukon was the average household size of 2.4 persons close to the Canadian average (see Figure 7-8).

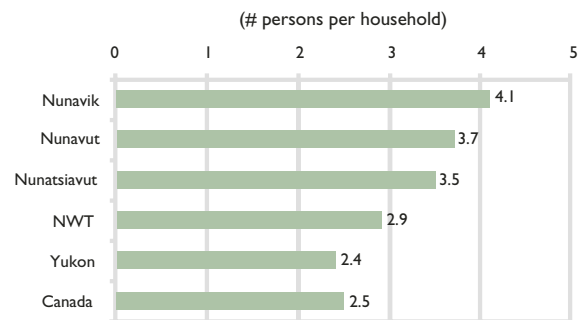
Overall, there were fewer single-person households in the North. The exception, again, was Yukon where nearly 31 per cent of households consisted of people living alone, above the national average of approximately 27 per cent. Nunatsiavut had the smallest percentage of single-person households at just over 14 per cent. Nunavut, Nunavut and the Northwest Territories also had fewer single-person households than the national average (18.5 per cent, 18.3 per cent and 21.6 per cent, respectively).

Many households in the North consist of more than one family. This is especially true in Inuit communities where close to one in six households in Nunavut and one in eight households in Nunavut are multi-family households. This is much higher than in Canada as a whole where less than one in fifty households consists of multiple families. In the North, single individuals and lone-parent families often live with their parents or relatives. One of the reasons for this is the high cost of housing and another is the shortage of housing in many communities. In Nunavut, the territorial government is projecting a need for between 253 and 305 new housing units per year, just to meet the growth in population.<sup>4</sup>

### There is very little private rental housing

Outside of Whitehorse and Yellowknife, there is very little private rental housing. In Yukon and the Northwest Territories, only Whitehorse and Yellowknife are considered to be “market housing” communities.<sup>5</sup> The average apartment vacancy rate in Yellowknife<sup>6</sup> in April 2008 was 0.6 per cent and in Whitehorse<sup>7</sup> the vacancy rate was 4.1 per cent as of March 2008. While there is some private rental housing in Iqaluit, there is not enough to constitute a rental market. There are no communities with active rental markets in Nunavut, Nunavut or Nunatsiavut.

FIGURE 7-8  
AVERAGE HOUSEHOLD SIZE, ALL HOUSEHOLDS, 2006



Source: CMHC, adapted from Statistics Canada (Census of Canada unpublished data)

<sup>4</sup> *Nunavut Ten-Year Inuit Housing Action Plan*, (Iqaluit, Nunavut: Government of Nunavut and Nunavut Tunngavik Inc., September 2004).

<sup>5</sup> Luigi Zanasi, December 2006. *Expiry of federal funding for Social Housing: Implications for the Territorial Housing Corporations*, p. 20.

<sup>6</sup> Rental Market Report Yellowknife Highlights (Ottawa: CMHC, Spring 2008).

<sup>7</sup> Yukon Rent Survey (Yukon: Yukon Bureau of Statistics, March 2008).

Most communities outside the major centres do not have an economic base. The majority of rental housing is either government staff housing or social housing, as there is also very little private non-profit housing. There is a large stock of social housing in the North, including First Nations housing in Yukon. In Nunavik, nearly all the housing is social housing. In Nunavut, social housing represents 73 per cent of the rental stock. In the Northwest Territories, excluding Yellowknife, social housing represents 63 per cent of the rental stock and in Yukon, excluding Whitehorse, it accounts for 53 per cent.<sup>8</sup>

**The rate of homeownership is lower than in southern Canada**

Although the territorial housing corporations, the Société d'habitation du Québec in Nunavik and the Newfoundland and Labrador Housing Corporation in Nunatsiavut have supported Northerners to access homeownership through assistance programs, the rate of homeownership is still low, compared to the rest of Canada.

In all areas of the North, homeownership rates in 2006 were lower than in Canada as a whole where 68 per cent of households were homeowners. Yukon had the highest homeownership rate in the North at just under 64 per cent,

followed by Nunatsiavut at 61 per cent and the Northwest Territories at nearly 53 per cent. The homeownership rate was the lowest in Nunavik where only 2.5 per cent of households owned their homes, followed by Nunavut at 23 per cent (see Figure 7-9).

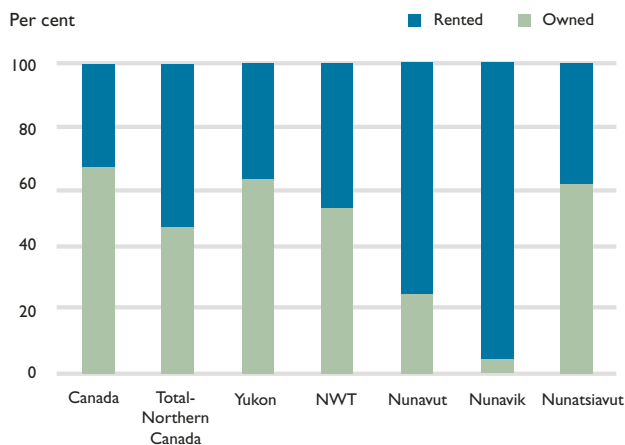
**There is a higher incidence of core housing need**

In 2001, close to a quarter of households in the North (23.3 per cent) were in core housing need (see text box *Acceptable Housing and Core Housing Need*), compared to 13.7 per cent for Canada as a whole. In Nunavut and Nunavik, nearly 40 per cent of households were in core housing need and in Nunatsiavut, just over 30 per cent.

Overall, just over one-third of Aboriginal households in the North were in core need in 2001, almost three times the level for non-Aboriginal households (see Figure 7-10).

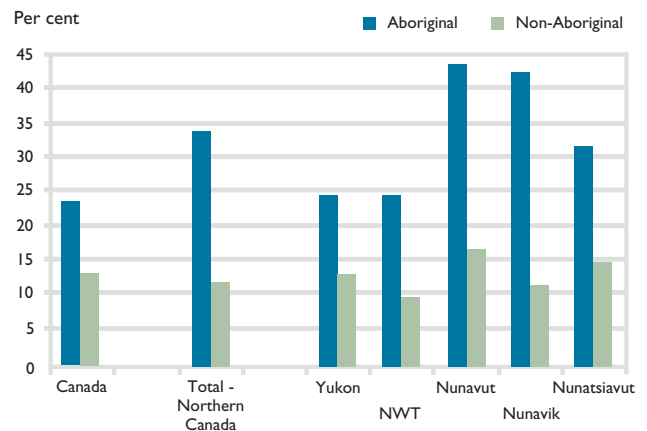
In 2004, 14 per cent of households in the Northwest Territories and 39 per cent of households in Yukon in core housing need reported adequacy problems.<sup>9</sup> In Nunavut, adequacy is also a problem, but suitability is even more of a problem with many households living in overcrowded conditions.<sup>10</sup>

FIGURE 7-9  
HOUSING TENURE, ALL HOUSHOLDS, 2006



Source: adapted from Statistics Canada, 2006 Community Profiles

FIGURE 7-10  
PERCENTAGE OF HOUSEHOLDS IN CORE HOUSING NEED, 2001



Source: CMHC (census-based housing indicators and data)

8 Luigi Zanasi, op. cit p. 9.

9 Northwest Territories Housing Corporation and Northwest Territories Bureau of Statistics, March 2004. 2004 NWT Community Survey: Community Needs Overall Results.

10 Luigi Zanasi, op. cit.

## Acceptable Housing and Core Housing Need

The term **acceptable housing** refers to housing that is adequate in condition, suitable in size, and affordable.

- **Adequate** dwellings are those reported by their residents as not requiring any major repairs.
- **Suitable** dwellings have enough bedrooms for the size and make-up of resident households, according to National Occupancy Standard (NOS) requirements. Enough bedrooms based on NOS requirements means one bedroom for each cohabiting adult couple; unattached household member 18 years of age and over; same-sex pair of children under age 18; and additional boy or girl in the family, unless there are two opposite

sex children under five years of age, in which case they are expected to share a bedroom. A household of one individual can occupy a bachelor unit (i.e. a unit with no bedroom).

- **Affordable** dwellings cost less than 30 per cent of before-tax household income.

Households which occupy housing that falls below any of the dwelling adequacy, suitability or affordability standards, and which would have to spend 30 per cent or more of their before-tax income to pay for the median rent of alternative local market housing that meets all three standards, are said to be in **core housing need**.

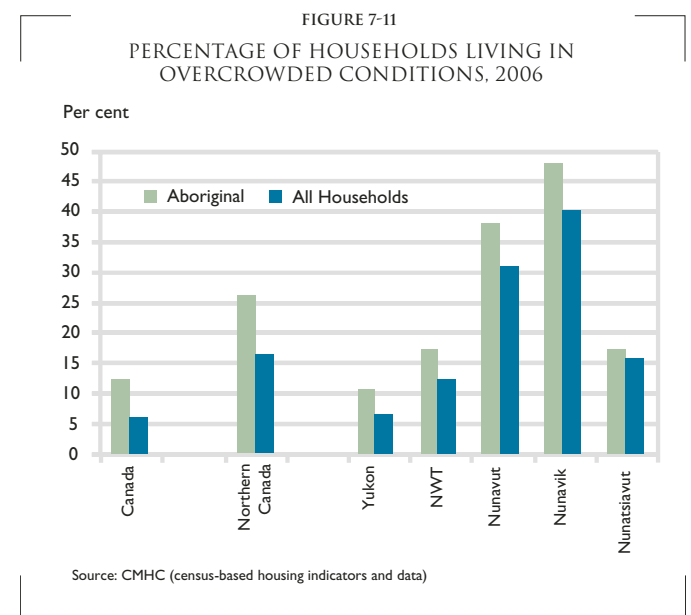
### Overcrowding in Nunavik and Nunavut

In the North, over 16 per cent of households lived in overcrowded dwellings in 2006. According to the National Occupancy Standard, a dwelling is of suitable size if it has one bedroom for each cohabitating adult couple; unattached household member 18 years of age and over; same-sex pair of children under age 18; and additional boy or girl in the family, unless there are two opposite sex siblings under 5 years of age, in which case they are expected to share a bedroom. A household of one individual can occupy a bachelor unit (i.e. a unit with no bedroom). If the dwelling has fewer bedrooms than the household requires then it is considered to be crowded.

This compares to just over six per cent in Canada. In Nunavut, 31 per cent of households lived in overcrowded housing and in Nunavik, 40 per cent of households were overcrowded (see Figure 7-11).

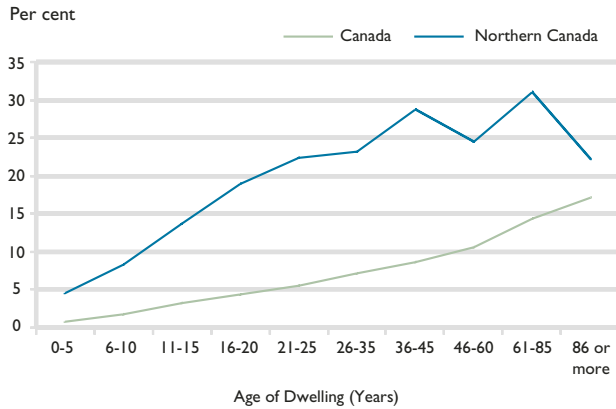
### The challenges of providing housing in the North

The overcrowded housing conditions and the rapidly growing population are driving the need for more housing in the North. The combination of geographic, climatic, social and economic factors creates multiple challenges in responding to this need. The geography and climate,



complicated by climate change, present physical challenges due to limited transportation infrastructure, permafrost conditions and a harsh climate, along with overcrowding which contributes to premature aging of the dwelling, and relatively large need for major repairs (see Figure 7-12).

FIGURE 7-12  
 PERCENTAGE OF DWELLINGS REQUIRING  
 MAJOR REPAIRS, BY AGE OF THE DWELLING,  
 CANADA AND NORTHERN CANADA, 2006



Source: CMHC, adapted from Statistics Canada (Census of Canada unpublished data)

In 2006, 18.6 per cent of households in the North were in need of major repair compared to 7.5 per cent in Canada. The high cost of building and operating housing make housing unaffordable for a large portion of the population without government support and intervention.

**The Northern geography creates challenges for transportation of materials and supplies**

Many small communities in the North are remote and inaccessible by road. Building materials and supplies must be shipped in from southern Canada or from major centres in the North as they are not available locally. Supplies are sent once a year by barge or ships (see Figure 7-13) during the late summer months or, in some communities, by seasonal ice roads (see Figure 7-14) in the winter or by air. The remote geography and existing infrastructure often make the transportation of materials and supplies difficult and expensive.

The seasonal transportation systems drive the construction process for most Northern communities. In Nunavut, construction of housing is a two-year process—the building materials are shipped in one year and stored over the winter, ready for construction to begin the following year.

This adds significantly to the cost of construction with the need for interim financing to pay for materials and also adds to the risk of materials being damaged or stolen.

FIGURE 7-13  
 SEA LIFT, IQALUIT, NUNAVUT



Credit: CMHC

FIGURE 7-14  
 ICE ROAD



Credit: Northwest Territories Housing Corporation

**The harsh climate and permafrost present construction challenges**

The winters in Canada's North are long (up to eight months a year in some communities) and temperatures go below -40 degrees Celsius. The cold climate limits the construction season, dictates the need for building materials that can withstand extreme temperatures and contributes to high home heating and electricity costs. North of the tree line, strong winds, gusting up to 160 kilometres per hour can create huge snowdrifts, banking the snow up and over houses and other buildings

(see Figure 7-15). A slightest crack in the exterior of the building allows freezing air to enter the home, adding to the heating costs.

FIGURE 7-15  
SNOW AT HOME ENTRANCE,  
ARVIAT, NUNAVUT



Credit: CMHC

The permafrost, covering large areas of the North, presents challenges to foundation designs. Although permafrost provides a very stable foundation as long as it remains frozen, any melting of the permafrost can cause serious settlement problems and structural damage to the

building. Houses must be built on piles or gravel pads so the loss of heat from the base of the house does not melt the permafrost below.

The existence of permafrost makes it impossible to install piped water or sewer systems in the ground. In Iqaluit and Inuvik, above ground, heated “utilidors” have been constructed to provide water and sewer systems for some of the housing in the community (see Figure 7-16). However, in most communities in the far North, water needs are met through water delivery trucks and sewage is removed by sewage trucks.

### Climate change effects on the housing sector

Warmer temperatures can melt the permafrost, destabilizing buildings, roads and other infrastructure (see Figure 7-17). In Sanikiluaq, a small community in Nunavut, the permafrost has completely melted, damaging foundations and destabilizing houses. Although most of the Arctic coastline is not considered to be in danger of rising sea levels, parts of the Beaufort Sea coast, including the outer Mackenzie Delta and Tuktoyaktuk Peninsula, are an exception.<sup>11</sup> In the small community of Tuktoyaktuk, Northwest Territories, water levels are already rising, impacting the safety of buildings.

FIGURE 7-16  
UTILIDOR IN INUVIK, NORTHWEST TERRITORIES



Credit: Maurice Smith/Nickle's New Technology Magazine

FIGURE 7-17  
EFFECTS OF MELTING PERMAFROST  
ON BUILDINGS IN DAWSON CITY, YUKON



Credit: CMHC

11 *Climate Change Impacts and Adaptation: A Canadian Perspective*. [online] (Ottawa, Natural Resources Canada, 2004). Available: [http://www.adaptation.nrcan.gc.ca/perspective/summary\\_8\\_e.php](http://www.adaptation.nrcan.gc.ca/perspective/summary_8_e.php). [July, 2008].

Warmer temperatures will affect the transportation system by reducing the narrow window of time available for travel on winter roads and ice roads, adding to the cost of transporting building materials to those communities dependent upon the winter road system.

### **A shortage of skilled labour in many Northern communities**

There has always been a shortage of skilled labour in the remote Northern communities and construction crews have been flown in from southern Canada or other areas of the North. The cost of transporting and accommodating construction crews from outside the community adds to the high cost of construction.

### **The high costs and limited employment opportunities, especially in small communities, create economic challenges—for Northerners and for their governments**

The cost of living in the North is significantly higher than in southern Canada. In 2007, a typical food basket for a family of four for one week costs between \$195 and \$225 in southern Canada and between \$350 and \$450 in the North.<sup>12</sup> A study of housing costs in the Northwest Territories in 2005 shows that average annual utility costs in most communities were more than double the Canadian average (\$4,328 compared to \$2,140).<sup>13</sup> The cost of home heating has substantially increased over recent years and is expected to continue to climb over the foreseeable future, due to high global demand for fuel oil and tight supplies.

In the larger centres where private rental housing is available, the rents are high. Average rent in 2007 for a two-bedroom unit in Yellowknife was \$1,364<sup>14</sup> and in Iqaluit, \$2,104,<sup>15</sup> compared to \$647<sup>14</sup> in Montréal or \$958<sup>14</sup> in Edmonton.<sup>16</sup> In Yukon, the average rent of \$700<sup>17</sup> for a two-bedroom unit was closer to rent levels in southern Canada.

Construction costs are high. The Nunavut Housing Corporation reports construction costs per square metre in Nunavut of more than three times those in southern Canada for comparable homes.<sup>18</sup> The Société d'habitation du Québec reports a similar ratio for the cost of construction in Nunavik compared to the rest of Québec.<sup>19</sup>

While average weekly earnings are higher in the North than in southern Canada, the difference is not enough to compensate for the higher cost of living. Unemployment rates are also higher in the North, especially in Inuit regions—18 per cent in Nunavut in 2006, and 32 per cent in Nunatsiavut. Consequently, median total personal incomes are significantly lower in these two regions than in Canada as a whole. Median total personal income in Nunavut was \$20,982 in 2005, which is 18 per cent lower than the Canadian median of \$25,615. In Nunatsiavut, median total personal income in 2005 was \$18,763.

Northern residents are also more dependent on government transfer payments for their income, with almost one-third of total personal income<sup>20</sup> in 2005 coming from this source in Nunavut and one-quarter in Yukon, compared to just over one-seventh for Canadians as a whole.<sup>21</sup>

12 Revised Northern Food Basket - Highlights of Price Survey Results for 2006 and 2007. [online] (Ottawa, Indian and Northern Affairs Canada), Available: <http://www.ainc-inac.gc.ca/ps/nap/air/hpsr0607-eng.asp>. [July, 2008].

13 *Spending patterns in Canada*, Cat. No. 62-202-XWE (Ottawa: Statistics Canada, 2007) Table 2.

14 Average rents are for privately initiated apartment structures of three or more units.

15 Average rents include all types of rented units.

16 *Northern Housing Outlook*, (Ottawa: CMHC, 2007) and *Canadian Rental Market Survey*, (Ottawa: CMHC, 2007).

17 Average rents are for apartment structures with four or more units.

18 Government of Nunavut and Nunavut Tunngavik Inc., op. cit.

19 Société d'habitation du Québec, *Housing in Nunavik*, (Gouvernement du Québec, November 2001).

20 Personal income does not take into account the value of fish or wildlife harvested for food for personal consumption.

21 Indian and Northern Affairs Canada, *Northern Indicators 2006*, [online], Available: <http://www.ainc-inac.gc.ca/pr/sts/ni06-eng.asp> [July, 2008].

The high costs and low average incomes translate into high operating deficits for the territorial social housing portfolios. For instance, in the fiscal year 2005-2006, the total annual expenses for social housing in Yukon, including capital and upgrading costs was \$8,447,776. Income from rents and subsidized mortgage payments was \$2,746,971, leaving a shortfall of \$5,700,805, or \$8,638 per unit. In the Northwest Territories, for the same year, the net deficit was \$19,475 per unit and in Nunavut, it was \$28,899.<sup>22</sup> As there is a large stock of social housing, these per unit deficits translate to large operating deficits for the social housing portfolio in the North. The territorial governments spend relatively more on housing than their provincial counterparts.<sup>23</sup>

### **Obtaining mortgage financing can be a challenge due to land tenure complications**

There are many different forms of land tenure in the North, some of which can be mortgaged and some not. Land claim agreements reflect the traditional Aboriginal view that land cannot be bought and sold, and, in some instances, do not allow the land to be mortgaged. For instance, the Gwich'in Settlement Lands in the Northwest Territories cannot be mortgaged or given as security for a loan.

In the Northwest Territories, there are six forms of land tenure. In addition to private ownership and land claims areas, there are Commissioners' Lands, Federal Lands, Indian Affairs Branch Lands and Indian Reserves. In Nunavut, there are at least three forms of tenure in addition to private ownership, and in Yukon, there are four.

The preferred forms of land tenure for securing mortgage financing from banks or other institutions are fee simple (i.e. private land ownership) or long-term leasehold. Much of the land in the North does not neatly fit into these categories, severely limiting access to mortgage financing, and thereby limiting homeownership. This impacts the take-up of government-funded homeownership assistance programs. For instance, the Northwest Territories Housing Corporation (NWTHC) is finding it a challenge to deliver all its Affordable Housing Trust units (see below) due to land tenure issues.

### **Responding to the challenges**

Developing sustainable responses to these complex challenges is a difficult task. The federal, territorial and provincial governments have responded to the need for government intervention and have funded social housing and homeownership programs in the North since the early 1950s. Initially provided through the Department of Indian Affairs and Northern Development (DIAND), then through joint-agreements with territorial/provincial housing corporations and CMHC, and, more recently, through funding from the territorial/provincial governments and the federal Northern Housing Trust and Aboriginal Housing Trust,<sup>24</sup> thousands of houses have been constructed.

### **Government funding for Northern Housing**

In May 2006, the federal government allocated funding for three new housing trusts – the Northern Housing Trust, the Affordable Housing Trust and the Aboriginal Housing Trust.

### **The Northern Housing Trust provides \$300 million for housing in the three territories**

A total of \$300 million was set aside under the Northern Housing Trust to increase the supply of affordable housing in the North. Fifty million each was allocated to the Northwest Territories and Yukon, with \$200 million allocated to Nunavut, in recognition of its particularly urgent housing needs.

The Nunavut Housing Trust Initiative will fund the construction of 725 housing units across the territory, by 2010. Every one of the 25 communities in Nunavut is scheduled to receive new housing. In addition to the new construction, funding will also be used to build capacity in the trades by training approximately 35-40 new tradespeople. The territorial government is committed to breaking down construction contracts into components to increase the opportunity for local contractors to secure contracts to provide the labour component. In the past, contracts have often been issued on the basis of “supply, ship and erect”, making it difficult for small local contractors to compete.

22 Zanasi, op. cit. pp. 13-15.

23 Zanasi, op. cit. pp. 13-15.

24 See Department of Finance Canada <http://www.fin.gc.ca/fin-eng.html> [June 3, 2008].

The Northwest Territories government matched the federal contribution of \$50 million. The combined \$100 million is expected to fund the construction of over 500 new units during 2007-10. Some of these will be delivered through the Northwest Territories Housing Corporation's homeownership programs and others will replace older public housing units.

The Yukon government allocated 65 per cent of the funds (\$32.5 million) from the Northern Housing Trust to First Nations for their own housing priorities. The balance is being used to support other residential projects, including a 30-unit housing complex in Whitehorse to reduce waiting lists for social housing, particularly for women.

### **The Affordable Housing Trust provides \$800 million to increase the supply of affordable housing**

The \$800 million is being allocated over the three-year period 2006/07 to 2008/09 and distributed to all provinces and territories on a per capita basis. The three territories will receive a total allocation of \$2.58 million over the three years. Quebec will receive \$187.4 million and Newfoundland and Labrador will receive \$12.6 million. The funding is intended to be used to relieve short-term pressure including transitional and supportive housing. Provinces and territories have the flexibility of drawing down the funds as they need them.

### **The Aboriginal Housing Trust provides \$300 million for off-reserve Aboriginal housing**

In May 2006, the federal government also established the Aboriginal Housing Trust. Three hundred million dollars is being distributed from this fund to the provinces based on their share of the Aboriginal population living off-reserve. Quebec will receive \$38.2 million and Newfoundland and Labrador, \$8.2 million. The Aboriginal Housing Trust funds are not available to the three territories, for which the Northern Housing Trust was created (see above).

### **Federal funding put in place for an integrated Northern strategy**

In the 2007 Speech from the Throne, the federal government announced an integrated northern strategy with four priorities:

- Strengthening Canadian sovereignty in the Arctic.
- Protecting the fragile Northern environment.
- Promoting economic and social development.
- Improving and devolving governance, so that Northerners have greater control over their economic and political destinies.

A \$120 million trust fund was created to support initiatives in the three territories to advance the objectives of the Northern Strategy, with \$40 million allotted to each territory.

### **New funding allocated to provide community infrastructure in the North**

In February and March 2008, framework agreements were announced that provide each of the three territories with over \$240 million for infrastructure investment to 2014. The funding comes from three sources: the Building Canada Fund, base funding of \$25 million (available to all provinces and territories) and gas tax funding. The investment will be used to address core infrastructure needs in the territories, including public transportation corridors, bridge replacement, airports, regional marine facilities and improving infrastructure for essential community services such as water, wastewater and green energy alternatives.

### **Nunavik receives \$140 million for new housing**

Nunavik is currently in the third year of a five-year, \$140 million agreement for the construction of 275 housing units. This agreement between the Government of Canada, the Government of Quebec and the Inuit of Nunavik follows on the heels of the James Bay and Northern Quebec Agreement (JBNQA). The \$140 million costs are funded in equal parts by the Quebec government and the Government of Canada. The Government of Canada is financing the construction of housing and Quebec is underwriting operating deficits related to housing units for a 20-year period. Makivik Corporation, the Inuit development corporation, is the principal contractor for the construction of the housing, while the Kativik Municipal Housing Bureau will become the owner and manager of the units, once construction is completed.

## The Northwest Territories Housing Corporation consolidates its homeownership support programs

In 2007, the Northwest Territories Housing Corporation unveiled *Housing Choices*, a consolidated program designed to foster self-reliance and assist residents of the Northwest Territories to become successful homeowners. *Housing Choices* includes four programs:

- STEP - Solutions to Educate People (education and counselling to prepare qualifying applicants for homeownership, including financial skills, the process of purchasing a home and basic home maintenance skills).
- HELP - Homeowner Entry Level Program (transition program for people who may wish to become a homeowner but aren't able to do so on their own).<sup>25</sup>
- PATH - Providing Assistance for Territorial Homeownership (assistance in the form of a forgivable loan to construct or purchase a modest home).
- CARE - Contributing Assistance for Repairs and Enhancement (financial assistance to homeowners to make necessary home repairs).

*Housing Choices* offers a simplified and flexible program structure to improve access and support for successful homeownership.

### Responding to technical challenges

Often referred to as “matchboxes” due to their compact size, the early Northern housing of the 1950s often had no electricity or running water, providing only basic shelter from the elements. In the 1960s and 1970s the quality of housing improved considerably but fell short in addressing issues specific to the northern environment and lifestyles. Based on southern designs and technology, some of these houses developed structural deficiencies, requiring expensive structural upgrading to extend their life expectancy.<sup>26</sup>

Thanks to research initiatives by universities, circumpolar agencies, governments, CMHC and other agencies with an interest in the North, the housing built today has improved technological standards that are better suited to the harsh climatic conditions of the North, with designs that better reflect the cultural needs of the people of the North. Research and monitoring of pilot projects has resulted in features such as improved foundation designs to withstand permafrost conditions, enhanced ventilation systems to improve indoor air quality, high performance building envelopes, and the design of culturally appropriate housing for First Nations and Inuit communities. CMHC, Natural Resources Canada, the Canadian Circumpolar Institute in Alberta, the Cold Climate Housing Research Centre in Fairbanks, and other agencies continue to conduct research in the North with a focus that has broadened over the years from an emphasis on energy conservation to include the design and construction of healthy, sustainable housing designed to meet the needs of the occupants.

Some of the progress made is described below.

### Innovations in design and materials improve energy efficiency of housing

The search for ways to reduce housing costs by improving energy efficiency continues in the North. Highly insulated double-wall construction systems and triple-glazed windows with insulated fibreglass frames are examples of improvements that have enhanced building envelope performance. Whatever approaches are used, an emphasis is placed on innovation, adaptability and careful consideration of local capacity in installation and use. Installation requirements designed for the south may need to be revised to fit the context of extreme northern conditions.

An example of an approach that addresses some of the challenges of building in the North is the use of structural insulated panels (SIPs) (*see Figure 7-18*). SIPs can be used for floors, walls and roofs. They typically consist of two panels (skins) of oriented strand board (OSB) sandwiching a core of rigid foam insulation. The panel gets its strength from the integral connections between the OSB and the foam acting as a structural element.

25 Assistance is provided through a lease on a NWT HC home to those eligible. Those assisted contribute 20 per cent of their gross income toward rent and shelter costs (power, water delivery, etc). After successfully completing a two-year period those assisted are eligible to receive an equity contribution towards the purchase of a home (see [http://www.nwthc.gov.nt.ca/pgm\\_HELP.html](http://www.nwthc.gov.nt.ca/pgm_HELP.html)) [July, 2008].

26 Royal Commission on Aboriginal Peoples, 1996. [http://www.ainc-inac.gc.ca/ch/rcap/sg/si40\\_e.html](http://www.ainc-inac.gc.ca/ch/rcap/sg/si40_e.html).

The technology is not new, being first used in 1950, but its use in building in the Canadian North is relatively recent. Successful testing and evaluation of the use of SIPs for building in Canadian Arctic communities was initially carried out in the late 1990s in Naujaat,<sup>27</sup> an Inuit settlement on the shore of Hudson Bay in Nunavut. The evaluation and subsequent use have shown a wide range of advantages in using SIPs to address Arctic building challenges compared to traditional wood frame construction:

FIGURE 7-18  
BUILDING WITH STRUCTURAL  
INSULATED PANELS (SIPS)



Credit: CMHC

- **Time-saving:** a weather-tight structure can be put together in a few days, allowing interior work to continue irrespective of the weather.
- **Ease of use:** techniques are easy to learn, so the need for skilled tradespeople is reduced.
- **Comfort:** the system can be relatively air tight, thereby reducing drafts.
- **Reduced construction cost:** labour hours are reduced and material cost is competitive.
- **Reduced operating costs:** heating cost for the Naujaat house for a 13 month period was 25 per cent less than for similar homes in the community.
- **Reduced financing costs:** interim financing costs can be reduced as the possibility of an immediate start to construction eliminates the need for storing materials over the winter.
- **Withstanding challenges due to settling:** the structure is more resistant to the twisting and torquing of the foundation during the seasonal freeze-thaw cycle.

## CMHC's *About Your House* North Series<sup>1</sup>

The *About Your House* North series is specifically designed around day-to-day Northern solutions as well as innovative building practices for cold climate conditions. This series complements the CMHC research reports on Northern housing.<sup>2</sup> The series includes:

- Building with Structural Panels in Repulse Bay (Naujaat, Nunavut).
- Snowshoe Inn, Fort Providence Co-Generation Model.
- Eagle Lake Healthy House.
- Arctic Hot Roof Design.
- How to Prevent Plumbing and Heating Vent Stack Freeze-Up.
- Fancoil Integrated Combination Heat and Domestic Hot Water Systems.

1 See: [http://www.cmhc-schl.gc.ca/en/ab/noho/noho\\_023.cfm](http://www.cmhc-schl.gc.ca/en/ab/noho/noho_023.cfm).

2 See: <http://www.cmhc-schl.gc.ca/en/corp/li/horetore/rerelisu/index.cfm>.

27 Building with Structural Panels - Repulse Bay, *About Your House*, North Series 1, (Ottawa: CMHC, 2001).

## Innovative foundation designs respond to the challenges of building on permafrost

Innovative foundation techniques have been developed in the North to respond to the challenges of building on permafrost. Although permafrost provides a stable foundation as long as it remains frozen, the loss of heat from the house can cause melting and serious settlement problems. Approaches to address this in Arctic communities include:

**Building on piles:** Steel or wooden piles, protruding up to 1.5 m (5 ft.) above the ground can provide sufficient cold air circulation under the house to keep the permafrost frozen. The piles can be driven in with a pile driver, after a channel in the permafrost has been created with a steam jet. Ideally, piles are left undisturbed for up to a year until firmly wedged in the permafrost.

**Thermal piles:** A *thermal pile* is a unique foundation pile in which a refrigeration system draws warmth from the earth, thereby helping to stabilize the permafrost, and keep it frozen during warmer weather.

**Wood cribbing on a gravel pad:** A gravel pad, 0.9 m (3 ft.) or more deep, is used to level the site, insulate the ground and provide drainage. The house is supported above the pad on small piles of wood timbers organized horizontally on top of each other (see Figure 7-19). One advantage of this method is its low cost. Ground heaving can be addressed by adjusting the height of the cribbing through the use of wood wedges or screw-jacks (annually if necessary).

FIGURE 7-19

WOOD CRIBBING ON A GRAVEL PAD,  
DAWSON CITY, YUKON



Credit: CMHC

The low elevation of a crib foundation reduces the number of steps or the length of a wheelchair ramp required to enter the house (potentially a significant cost saving) and better addresses cultural preferences to be close to the ground.

**Screw-jack footings on a gravel pad:** The Northwest Territories Housing Corporation uses screw-jack type footings on gravel pads instead of wooden cribbing. This type of foundation allows for easy adjustment if there is some seasonal movement in the gravel pad. As they are less bulky than wooden cribbing, screw-jack footings minimize the obstruction underneath the house, allowing more air movement and reducing the potential for snow build-up on the leeward side of the house. Screw-jack footings are manufactured in the Northwest Territories.

**Space frame foundations:** These foundations consist of a network of interconnected structural steel (or alloy) members, which form a frame supporting the house (see Figure 7-20). The load and stresses on the foundation are distributed evenly through the framework, increasing the structural integrity of the building. However, space frame foundations are much more costly and result in higher elevation of the house above ground level. They are used more commonly in areas with problem soils or in multiple unit dwellings. In the latter, space frame foundations reduce the possibility of breaches in the fire separation (a construction assembly that acts as a barrier against the spread of fire), that could occur with differential movement.

FIGURE 7-20

AWARD WINNING NUNAVUT  
HOUSING CORPORATION FIVE-PLEX  
ON A SPACE FRAME FOUNDATION



Credit: CMHC

## Nunavut Charrette

Examples of priorities and concerns:

- Allow for the lifestyles of two seasons.
- A place within the house for large groups to get together to eat country food.
- Accommodate differing needs of young and old in an extended family.
- A partially heated area to sew skins and make small crafts.
- Different storage and living areas (cold, cool and warm).
- Mechanical rooms are too tiny, noisy, and difficult to clean.
- Require wind studies before issuing permits to avoid snowdrift problems, which could block home access and interfere with combustion venting systems (furnace flues).

Some of the design features selected to respond to these and other priorities:

- Two entrances (summer and winter) oriented for local conditions.
- A large central open space (living room, dining room and kitchen) with room for groups to eat country food.
- A cold storage area to accommodate skin clothing.
- A “cool room” for sewing and preparing skins.
- A large laundry tub for soaking skins.
- An isolated mechanical room with easy access off the main entrance for maintenance.
- Allowances for easily constructing additional rooms.

### The search for culturally appropriate housing continues

Aboriginal people in the North who still follow traditional lifestyles have different housing needs than people in southern Canada and they relate to their domestic space differently. Southern homes are not designed for a hunting culture, for skinning animals at home, or for the traditional large gatherings to eat country food.<sup>28</sup> To address these traditional needs, Northern house design must take into account cultural considerations as well as the other northern challenges discussed above.

Over the years, territorial housing corporations have held design consultations with Aboriginal residents to determine their specific housing needs. Recently, two design charrettes were organized by Canada Mortgage and Housing Corporation to provide cultural input into the design for demonstration houses in two Northern communities. They were held with the Inuit in Arviat, Nunavut (*see Nunavut Charrette text box*) and with the Tr'ondëk Hwëch'in First Nation in Dawson City, Yukon.

The goal of the demonstration projects is to incorporate the cultural and lifestyle needs of the community in the design of the house.

FIGURE 7-21  
TR'ONDËK HWËCH'IN HOUSING  
IN DAWSON, YUKON



Credit: CMHC

28 Country food is food obtained from hunting or fishing.

The charrettes involved the participants in identifying their cultural goals, what they liked about their housing, what they wanted to change, what the critical community housing issues were, and what could be done to improve their housing conditions. On the basis of this, they identified building performance and design needs that matched their lifestyles. The designs for two versions of the Northern Sustainable House were carried out. The designs are transferable to other parts of the North with similar cultural needs. Construction of the Tr'ondëk Hwëch'in/CMHC Northern Sustainable House has been completed.

### The Northern Sustainable House

The Northern Sustainable House near Dawson is a one-storey, 141 m<sup>2</sup> (1,519 sq. ft.) residential structure completed in early 2008 (see Figures 7-22 and 7-23).

FIGURE 7-22

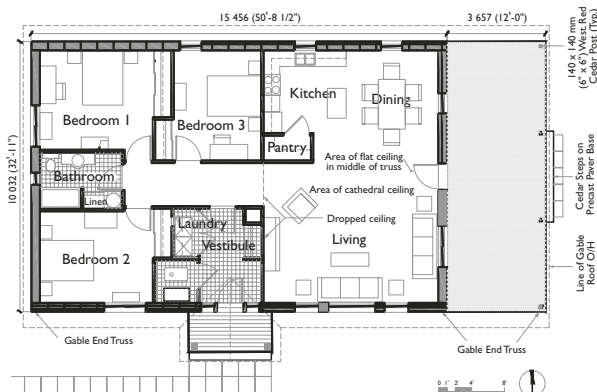
TR'ONDËK HWËCH'IN/  
CMHC NORTHERN SUSTAINABLE HOUSE



Credit: CMHC

FIGURE 7-23

FLOOR PLAN OF TR'ONDËK HWËCH'IN  
NORTHERN SUSTAINABLE HOUSE



Credit: CMHC

## FAST Facts

- The North, comprising Yukon, the Northwest Territories, Nunavut, Nunavik, and Nunatsiavut, represents over 40 per cent of Canada's land mass and is home to about 115,000 people.
- In Nunavut, construction of housing is a two-year process—the building materials are shipped in one year and stored over the winter, ready for construction to begin the following year.
- Although permafrost provides a very stable foundation as long as it remains frozen, any melting of the permafrost can cause serious settlement problems and structural damage to the building.
- In the Northwest Territories, the average annual utility costs in most communities in 2005 were more than double the Canadian average (\$4,328 compared to \$2,140).
- Many communities in the North are remote and inaccessible by road. Building materials are shipped in once a year from southern Canada by barge, ship or winter roads.
- Housing built in the North today has improved technology based on years of research and includes innovative foundation designs enhanced ventilation systems, high-performance building envelopes and culturally-appropriate designs for First Nations and Inuit communities.

The house was designed in a partnership between Canada Mortgage and Housing Corporation and the Tr'ondëk Hwëch'in First Nation, with the participation of the Yukon Housing Corporation (YHC). It was erected by the local construction company of the Tr'ondëk Hwëch'in First Nation. The intent of the design and construction of the home was to create a prototype for, and to promote the construction of, northern housing that is both highly energy-efficient and culturally acceptable to the occupants and the community.

The design addresses concerns raised at the charrette:

- sun shading in summer;
- protection from winds and heavy snow in winter;
- proper ventilation for good indoor air quality and to prevent moisture buildup;
- household size;
- privacy needs;
- space for items such as computers;
- lot size and building siting, to provide a southern orientation to maximize the passive solar heating in winter;
- the possibility of using innovative construction methods, such as structural insulated panels (SIPs) which are a composite building material in which a thick layer of polystyrene or polyurethane foam is sandwiched between two layers of structural board;
- the need to provide more storage space inside and outside the house;
- affordability and energy efficiency; and
- design and construction techniques transferable throughout the Yukon and other parts of the North.

FlexHousing™<sup>29</sup> design features that have been incorporated into the Northern Sustainable House are:

- the design and construction of porches that can be easily converted into additional bedrooms or other living space;
- the installation of 90 mm (36 in.) interior doors and the incorporation of adequate turning area for wheelchair accessibility throughout the home;
- the installation of electrical outlets and switches at a height easily reached from a wheelchair; and,
- grading of the lots to provide ground level access to the houses at the front entrance.

In addition to these features, the Northern Sustainable House includes a larger, more open concept living room/dining room/ kitchen area to provide space for family gatherings, an important cultural feature identified by the design charrette participants.

### Energy modelling

Energy modelling of the building envelope and mechanical and electrical systems was carried out with Natural Resources Canada's (NRCan's) HOT2000 building energy simulation program. For further information on NRCan's HOT2000 Program, go to [www.nrcan.gc.ca](http://www.nrcan.gc.ca) and search under HOT2000. Successive iterations of the house design were evaluated to ensure that the overall energy performance goals of the house (to exceed the Model National Energy Code of Canada for Houses (MNECH) by 50 per cent) would be achieved. For further information on this Code, go to [www.nationalcodes.ca](http://www.nationalcodes.ca) or [www.nrc.gc.ca](http://www.nrc.gc.ca) and search under MNECH.

The modelling predicted a reduction of 54 per cent in energy consumption of the Northern Sustainable House near Dawson in comparison to the same house designed to meet the requirements of the MNECH. Overall, the total annual energy consumption of the house is 168 KWH/m<sup>2</sup> of floor area. The estimated annual energy cost savings were estimated to be approximately \$3,000 in comparison with the estimated costs associated with the base case house designed to meet the MNECH.

### Performance monitoring and occupant survey

When the Northern Sustainable House near Dawson was completed early in 2008, CMHC began monitoring the energy use during occupancy for a period of one year. The information gathered will be assessed to determine the extent to which the energy consumption meets the 50 per cent reduction compared with the MNECH baseline. The monitored energy consumption will also be compared with the energy consumption of similar Tr'ondëk Hwëch'in houses that use conventional construction techniques. It is anticipated that this will demonstrate the cost/benefit relationships between reduced energy consumption and increased construction costs.

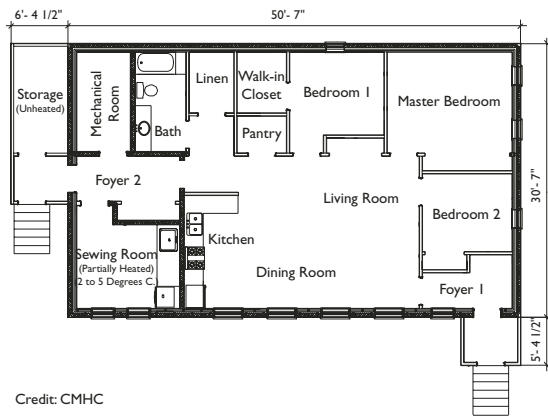
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29 For more information on FlexHousing™ go to [www.cmhc.ca](http://www.cmhc.ca), keyword "FlexHousing".

Several key indoor air quality parameters will also be monitored. In addition, CMHC will interview residents to determine their perceptions of the house, its energy efficiency, indoor air quality and comfort, ease of maintenance, and the overall functionality of the house.

Construction of the Nunavut Housing Corporation/CMHC Northern Sustainable House is now being planned (See Figures 7-24 and 7-25).

FIGURE 7-24  
FLOOR PLAN  
NUNAVUT HOUSING CORPORATION/  
CMHC NORTHERN SUSTAINABLE HOUSE



Credit: CMHC

**Nunavut Housing Corporation receives CMHC's Best Practices in Affordable Housing Award**

In 2006, an innovative five-plex housing design created by the Nunavut Housing Corporation was awarded CMHC's Best Practices in Affordable Housing Award (See Figure 7-20).

FIGURE 7-25  
COMPUTER GENERATED INTERIOR VIEW  
OF THE NUNAVUT HOUSING CORPORATION/  
CMHC NORTHERN SUSTAINABLE HOUSE



The house features a large central combined living and kitchen area for the family and large groups to get together.

Credit: Nunavut Housing Corporation

The design, based on extensive community consultations, addresses the unique cold-weather challenges of building in the North. Construction innovations include higher insulation values, heating from a centralized boiler with individual Heat Recovery Ventilators (HRVs) in each unit, and the use of lighter steel studs that save on shipping costs. Design innovations include heated porches, large open living spaces, larger kitchen cupboards, and a room with separate outdoor access for preparing country food. Many of the 725 units being constructed by the Nunavut Housing Corporation under the Nunavut Housing Trust Initiative will be built with this design.

FIGURE 7-26  
HOUSING IN ARVIAT, NUNAVUT



Credit: Nunavut Housing Corporation

## Housing in the World's Other Northern Regions

### The circumpolar countries

There are seven other countries whose land mass extends far North into the Arctic: United States (Alaska), Denmark (Greenland), Iceland, Norway, Finland, Sweden, and the Russian Federation. The inhabitants of these regions face similar challenges in building housing adapted to the harsh climate and in coping with climate change.

### The indigenous peoples

Indigenous peoples are found in the arctic portion of all of these regions except Iceland. About 155,000<sup>1</sup> Inuit persons live in Canada, Greenland, Alaska and the Russian Federation. The indigenous people of the far north of Norway, Finland and Sweden and the contiguous area of the Russian Federation are the Sámi, whose traditional lifestyle is reindeer herding (an estimated 10 per cent still depend on it). They number between 50,000 and 100,000.<sup>2</sup>

### Housing conditions

Relatively poor housing conditions are common for Inuit across all of their regions. In the U.S., as is the case in Canada, the 2005 *Alaska Housing Needs Assessment Survey* found that the high cost of construction and the lack of skilled tradespeople act as barriers to developing adequate housing. The populations most in need of housing there are identified as Alaska Native households, rural households and low-income households. Affordability is a serious problem.

Sámi areas in Europe were heavily bombed during World War II causing wholesale destruction of homes. There is currently no wide disparity between their housing (or those of others in the North) and those of residents in the southern parts of their respective countries.

### Comparative studies

The *Survey of Living Conditions in the Arctic* (SLiCA) is an international cooperative effort funded by the circumpolar countries, including Canada. Data are available for a number of indicators comparing conditions in Canada's North (regions of Inuit Nunaat), Greenland, Chukotka in the Russian Federation, and Alaska; however, comparability is difficult to achieve, and the authors caution about the dangers of misinterpretation.

The data suggest that Canada's Inuit may be somewhat less likely to be in housing in need of major repair than those in the other arctic regions studied, and may also have more rooms in their dwellings. However, waiting periods for housing appear to be considerably longer in Canada. Attachment to local community is stronger for Canada's Inuit, who are less likely to have considered moving away from the community in the last 5 years than those in Alaska or Greenland.<sup>3</sup>

### Testing and certification for building products for the circumpolar world

The Cold Climate Housing Research Center (CCHRC) in Alaska (an industry-based research facility) plans to implement a "Certified Alaska Tough" certification for building products suitable for circumpolar regions around the world.<sup>4</sup> In Canada, the Government of Yukon has been working on the development of a cold climate research centre coupled with an innovation cluster (including training, and research and development), a major focus of which will be the technology of building.<sup>5</sup>

1 Estimate from Inuit Circumpolar Council (Canada) Annual Report.

2 Estimate from Norway Cultural Profile, [http://www.culturalprofiles.net/norway/directories/norway\\_cultural\\_profile/-2067.html](http://www.culturalprofiles.net/norway/directories/norway_cultural_profile/-2067.html) [July, 2008].

3 Birger Poppel, Jack Kruse, Gérard Duhaime, Larissa Abryutina. 2007. SLiCA Results. Anchorage: Institute of Social and Economic Research, University of Alaska Anchorage <http://www.arcticlivingconditions.org/> [July, 2008].

4 See <http://www.cchrc.org/> [July, 2008].

5 For further information see <http://www.yukoncoltech.com/> [July, 2008].

## Housing in the World's Other Northern Regions (continued)

### Sharing building knowledge

The common challenges of building in the North have fostered an interest in sharing knowledge, experience and practice among circumpolar nations. In November 2007, CCHRC and the University of Alaska Fairbanks hosted an international conference on circumpolar housing and infrastructure issues, with CMHC as a partner. The various presentations are documented on the CCHRC website.<sup>6</sup>

### Expanding use of geothermal energy

The use of geothermal heating approaches is expanding in circumpolar countries. In Iceland, close to 90 per cent of the housing is now heated with geothermal energy. The geothermal heat is used to warm up fresh water which is then used directly for central heating.<sup>7</sup> While Iceland's circumstances are unique, given its high level of naturally occurring and accessible geothermal resources, the potential in Canada's North has recently been demonstrated through a feasibility study completed for the city of Yellowknife. The study found that there is enough geothermal energy in a local abandoned gold mine to heat 1,600 to 2,000 homes and reduce greenhouse gas emissions by 24,000 tons per year.<sup>8</sup>

### An example of a low energy house from Greenland

The low-energy house in Sisimiut (*see Figure 7-27*) is an example of sustainable building practices in Greenland. Energy-saving features of the house include:

- more insulation than usual in the wall, floor and roof constructions,
- low-energy windows, developed especially for Arctic conditions,
- a ventilation system that features heat recovery—developed especially for Arctic conditions,
- solar energy for heating rooms and water.

The house was completed in 2005 and currently functions as a research laboratory. Work is underway to examine how the low-energy materials chosen affect the interior climate and humidity levels.

FIGURE 7-27  
LOW-ENERGY HOUSE IN SISIMIUT



Credit: Arctic Technology Centre, Technical University of Denmark

6 See <http://www.cchrc.org/> [July, 2008].

7 Ministry of Industry, Energy and Tourism, Reykjavik, 2005 [online] <http://eng.idnadarraduneyti.is/minister/speeches/nr/1680> [July, 2008].

8 Con Mine geothermal heat could heat 2,000 Yellowknife homes: study, 2008 [online] For more information, go to <http://www.cbc.ca/canada/north/story/2008/05/16/con-geo.html> [July, 2008].

## Yukon leads the way with green housing in the North

The Yukon Housing Corporation (YHC) is leading the way in promoting green building standards in the North with its *GreenHome* Program, in operation since 1999. Certified *GreenHome* provide healthy living environments for the occupants, produce less greenhouse gas emissions and have lower energy costs than traditionally constructed houses. *GreenHome* benefits the Yukon housing industry by requiring a minimum of 75 per cent of the building materials to be purchased in Yukon and requiring the house to be constructed by a Yukon builder. An owner of a certified *GreenHome* can apply for a Green Mortgage at a preferred interest rate with no mortgage insurance fee as the homes are self-insured by YHC.<sup>30</sup>

YHC has also been progressive in setting design standards for persons with limited mobility through its “Accommodating Homes Standard” developed in the 1990s. YHC incorporates this standard into many of its housing units. Initiatives such as these are increasingly important in Yukon, as anecdotal evidence suggests more and more people are choosing to remain in the North when they retire, rather than relocating to southern Canada, as was common practice in the past.

## Conclusions

Governments at all levels are cooperating to provide resources to address Northern housing needs. Technological innovations have overcome some of the challenges and resulted in improved foundation designs, enhanced ventilation systems, high performance building envelopes and building materials more suited to the harsh Northern winters. Design charrettes and consultations with Aboriginal communities have resulted in culturally-appropriate house designs that are transferable to other communities in the North. Through cooperation among governments, northern residents and our circumpolar neighbours, Canada is making progress in addressing the challenges of building better housing in the North.

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<sup>30</sup> See [http://www.housing.yk.ca/green\\_home\\_programs.html](http://www.housing.yk.ca/green_home_programs.html) [July, 2008].

Appendix  
Key Housing  
Statistics

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TABLE 1  
**Housing Market Indicators, Canada, 1998–2007**

	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
<b>Construction</b>										
Starts, total	137,439	149,968	151,653	162,733	205,034	218,426	233,431	225,481	227,395	228,343
Starts, single	86,431	92,190	92,184	96,026	125,374	123,227	129,171	120,463	121,313	118,917
Starts, multiple	51,008	57,778	59,469	66,707	79,660	95,199	104,260	105,018	106,082	109,426
Semi-detached	10,043	11,096	11,530	11,883	13,584	13,644	14,297	13,477	14,358	14,432
Row	15,287	14,895	15,247	15,166	18,482	20,343	22,067	22,134	20,963	23,281
Apartment	25,678	31,787	32,692	39,658	47,594	61,212	67,896	69,407	70,761	71,713
Starts by Intended Market: <sup>1</sup> Total	116,793	127,103	131,052	142,280	179,124	191,911	204,389	193,471	195,024	193,744
Homeownership	82,892	89,189	92,283	95,125	123,106	121,890	124,678	114,008	113,743	112,730
Rental	6,531	9,276	10,155	14,681	18,841	19,939	20,343	17,210	18,518	18,605
Condo	27,351	28,434	28,319	31,986	36,798	49,212	58,852	60,251	61,817	61,595
Other	19	204	295	488	379	870	516	2,002	946	814
Completions, total	133,941	140,986	145,873	151,936	185,626	199,244	215,621	211,242	215,947	208,889
<b>Resale Market</b>										
MLS <sup>®</sup> sales (units) <sup>2</sup>	314,569	335,490	334,375	381,484	419,242	435,070	460,790	483,927	484,027	520,740
MLS <sup>®</sup> sales/new listings (per cent) <sup>2</sup>	49.6	56.3	55.9	62.7	68.5	65.7	63.5	63.9	60.3	61.6
<b>Available Supply</b>										
Newly completed and unabsorbed homes <sup>3</sup>	15,079	14,230	13,587	10,509	10,251	11,392	14,392	13,654	15,430	15,673
Single and semi-detached	6,877	6,304	6,319	5,291	4,755	5,092	5,797	5,064	5,820	6,319
Row and apartment	8,202	7,926	7,268	5,218	5,496	6,300	8,595	8,590	9,610	9,354
Rental vacancy rate (per cent) <sup>4</sup>	4.0	3.2	2.2	1.7	2.1	2.6	2.9	2.8	2.7	2.6
Rental Availability rate (per cent) <sup>4</sup>	NA	NA	NA	NA	NA	NA	3.9	4.0	3.7	3.7
<b>Housing Costs</b>										
MLS <sup>®</sup> average price (\$) <sup>2</sup>	152,365	158,145	163,992	171,743	188,754	207,111	226,337	249,165	276,883	307,263
New Housing Price Index (per cent change) <sup>5</sup>	0.9	0.9	2.2	2.7	4.1	4.8	5.5	5.0	9.7	7.7
Consumer Price Index (per cent change) <sup>6</sup>	1.0	1.7	2.7	2.5	2.3	2.8	1.9	2.2	2.0	2.1
Construction materials cost index (per cent change)	-0.3	4.5	-0.5	0.4	1.9	1.3	6.7	0.0	1.0	0.1
Construction wage rate index (per cent change) <sup>5</sup>	0.6	2.5	3.8	2.2	1.0	2.4	1.4	1.8	4.0	5.1
Owned accommodation costs (per cent change) <sup>6</sup>	0.1	1.1	2.6	2.8	1.7	3.0	2.8	3.1	4.1	4.9
Rental accommodation costs (per cent change) <sup>6</sup>	1.1	1.0	1.1	1.6	2.0	1.5	1.0	0.8	1.0	1.5
Average rent (\$): <sup>4</sup>										
Bachelor	432	448	469	490	504	516	523	529	547	563
One-bedroom	544	560	582	607	627	638	646	659	676	699
Two-bedroom	616	628	648	672	694	704	720	732	755	772
3+ bedroom	680	697	720	752	775	788	807	816	853	863
<b>Demand Influences</b>										
Population on July 1 (thousands) <sup>5</sup>	30,157	30,404	30,689	31,021	31,373	31,676	31,995	32,312	32,649	32,976
Labour force participation rate (per cent) <sup>5</sup>	65.1	65.5	65.8	65.9	66.9	67.5	67.5	67.2	67.2	67.6
Employment (per cent change) <sup>5</sup>	2.5	2.6	2.5	1.2	2.4	2.4	1.8	1.4	1.9	2.3
Unemployment rate (per cent) <sup>5</sup>	8.3	7.6	6.8	7.2	7.7	7.6	7.2	6.8	6.3	6.0
Real disposable income (per cent change) <sup>5</sup>	2.9	3.0	5.0	2.8	1.7	2.2	3.9	2.6	5.5	4.1
1-year mortgage rate (per cent)	6.50	6.80	7.85	6.14	5.17	4.84	4.59	5.06	6.28	6.9
3-year mortgage rate (per cent)	6.77	7.37	8.17	6.88	6.28	5.82	5.65	5.59	6.45	7.09
5-year mortgage rate (per cent)	6.93	7.56	8.35	7.4	7.02	6.39	6.23	5.99	6.66	7.07
Net migration <sup>5</sup>	131,768	135,427	174,769	232,741	243,675	196,872	210,189	206,980	222,737	211,627
<b>Housing in GDP (\$ millions)<sup>5</sup></b>										
Rent imputed to owners	76,751	79,346	82,586	86,014	90,313	94,459	99,112	103,784	109,824	117,267
Rent paid by tenants	27,223	28,173	29,059	30,092	31,491	32,829	34,133	35,435	37,137	39,262
Total housing-related spending in GDP <sup>6</sup>	166,882	174,382	184,460	196,585	213,241	228,484	245,794	261,018	278,079	299,668
Total consumption-related spending (including repairs)	124,150	129,025	135,618	141,225	147,315	155,449	162,461	170,825	179,133	190,442
Total residential investment	42,732	45,357	48,842	55,360	65,926	73,035	83,333	90,193	98,946	109,226
New construction (including acquisition costs)	21,106	22,321	23,676	25,931	33,242	37,045	42,541	44,318	48,146	52,081
Alterations and improvements	14,904	15,661	17,549	20,632	22,089	24,209	27,100	30,270	33,693	37,026
Transfer costs	6,722	7,375	7,617	8,797	10,595	11,781	13,692	15,605	17,107	20,119

1 Housing units in centres 10,000+.

2 MLS<sup>®</sup> is a registered trademark of the Canadian Real Estate Association.

3 Housing units in centres 50,000+ for which construction has been completed but which have not been rented or sold.

4 In privately initiated apartment structures with at least 3 units.

5 Statistics Canada (CANSIM).

6 CMHC, adapted from Statistics Canada (CANSIM).

Source: CMHC (Starts and Completions Survey, Market Absorption Survey, Rental Market Survey); CREA (MLS<sup>®</sup>); Bank of Canada (mortgage rates); Statistics Canada (CANSIM and custom tabulation of construction materials cost index).

For additional data, please refer to the CMHC website: [www.cmhc.ca](http://www.cmhc.ca)

TABLE 2  
**Total Housing Starts, Canada, Provinces and Metropolitan Areas,  
 1998–2007 (units)**

	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
<b>Canada</b>	<b>137,439</b>	<b>149,968</b>	<b>151,653</b>	<b>162,733</b>	<b>205,034</b>	<b>218,426</b>	<b>233,431</b>	<b>225,481</b>	<b>227,395</b>	<b>228,343</b>
<b>Provinces</b>										
Newfoundland and Labrador	1,450	1,371	1,459	1,788	2,419	2,692	2,870	2,498	2,234	2,649
Prince Edward Island	524	616	710	675	775	814	919	862	738	750
Nova Scotia	3,137	4,250	4,432	4,092	4,970	5,096	4,717	4,775	4,896	4,750
New Brunswick	2,447	2,776	3,079	3,462	3,862	4,489	3,947	3,959	4,085	4,242
Quebec	23,138	25,742	24,695	27,682	42,452	50,289	58,448	50,910	47,877	48,553
Ontario	53,830	67,235	71,521	73,282	83,597	85,180	85,114	78,795	73,417	68,123
Manitoba	2,895	3,133	2,560	2,963	3,617	4,206	4,440	4,731	5,028	5,738
Saskatchewan	2,965	3,089	2,513	2,381	2,963	3,315	3,781	3,437	3,715	6,007
Alberta	27,122	25,447	26,266	29,174	38,754	36,171	36,270	40,847	48,962	48,336
British Columbia	19,931	16,309	14,418	17,234	21,625	26,174	32,925	34,667	36,443	39,195
<b>Metropolitan Areas</b>										
St. John's	741	807	935	1,029	1,350	1,604	1,834	1,534	1,275	1,480
Halifax	1,739	2,356	2,661	2,340	3,310	3,066	2,627	2,451	2,511	2,489
Moncton	623	817	906	938	1,550	1,435	1,151	1,191	1,416	1,425
Saint John	278	296	346	374	397	580	516	501	565	687
Saguenay	502	305	296	336	596	435	347	464	485	685
Québec	1,845	1,814	2,275	2,555	4,282	5,599	6,186	5,835	5,176	5,284
Sherbrooke	590	645	515	589	857	1,070	1,355	1,076	1,305	1,318
Trois-Rivières	599	380	337	324	619	635	874	919	1,017	1,197
Montréal	10,293	12,366	12,766	13,300	20,554	24,321	28,673	25,317	22,813	23,233
Gatineau	1,244	1,185	1,224	1,659	2,553	2,801	3,227	2,123	2,933	2,788
Ottawa	3,615	4,447	5,786	6,251	7,796	6,381	7,243	4,982	5,875	6,506
Kingston	486	656	659	707	810	1,131	872	683	968	880
Peterborough	304	383	292	294	423	547	514	619	437	540
Oshawa	1,759	2,463	2,874	2,561	3,490	3,907	3,153	2,934	2,995	2,389
Toronto	25,910	34,904	38,982	41,017	43,805	45,475	42,115	41,596	37,080	33,293
Hamilton	3,627	3,923	3,108	3,365	3,803	3,260	4,093	3,145	3,043	3,004
St. Catharines - Niagara	1,319	1,485	1,230	1,134	1,317	1,444	1,781	1,412	1,294	1,149
Kitchener	2,549	2,821	3,509	3,537	4,130	3,955	3,912	3,763	2,599	2,740
Brantford	357	377	485	475	700	458	482	534	409	589
Guelph	966	1,003	1,297	993	1,138	994	1,420	951	864	941
London	2,027	1,773	1,713	1,607	2,604	3,027	3,078	3,067	3,674	3,141
Windsor	1,938	2,387	2,382	2,157	2,490	2,237	2,287	1,496	1,045	614
Barrie	1,930	2,722	2,043	2,445	2,739	2,368	2,435	1,484	1,169	980
Greater Sudbury	165	199	173	191	298	306	388	400	477	587
Thunder Bay	224	232	154	211	197	211	287	227	165	249
Winnipeg	1,575	1,772	1,317	1,473	1,821	2,430	2,489	2,586	2,777	3,371
Regina	537	573	615	626	651	889	1,242	888	986	1,398
Saskatoon	1,137	1,273	968	900	1,489	1,455	1,578	1,062	1,496	2,380
Calgary	12,495	10,600	11,093	11,349	14,339	13,642	14,008	13,667	17,046	13,505
Edmonton	5,947	6,655	6,228	7,855	12,581	12,380	11,488	13,294	14,970	14,888
Kelowna	851	880	928	1,103	1,591	2,137	2,224	2,755	2,692	2,805
Abbotsford	536	566	405	418	1,038	1,056	1,083	1,012	1,207	1,088
Vancouver	11,878	8,677	8,203	10,862	13,197	15,626	19,430	18,914	18,705	20,736
Victoria	964	1,340	872	1,264	1,344	2,008	2,363	2,058	2,739	2,579

Source: CMHC (Starts and Completions Survey)

For additional data, please refer to the CMHC website: [www.cmhc.ca](http://www.cmhc.ca)

TABLE 3

### MLS® Total Residential Sales, Canada, Provinces and Metropolitan Areas, 1998–2007 (units)

	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
<b>Canada</b>	<b>314,569</b>	<b>335,490</b>	<b>334,375</b>	<b>381,484</b>	<b>419,242</b>	<b>435,070</b>	<b>460,790</b>	<b>483,927</b>	<b>484,027</b>	<b>520,747</b>
<b>Provinces</b>										
Newfoundland and Labrador	2,288	2,437	2,593	2,808	3,014	3,238	3,265	3,211	3,537	4,471
Prince Edward Island	1,125	1,184	1,206	1,234	1,306	1,404	1,500	1,449	1,492	1,769
Nova Scotia	8,052	8,827	8,577	9,441	10,243	9,221	8,887	10,948	10,697	11,857
New Brunswick	3,908	4,376	4,524	4,779	5,089	5,489	5,979	6,836	7,125	8,161
Quebec	45,192	49,792	54,160	62,351	68,161	67,130	69,296	70,649	72,520	80,338
Ontario	138,479	148,659	147,158	162,318	178,058	184,457	197,353	197,140	194,930	213,379
Manitoba	10,762	10,867	10,612	11,440	11,108	11,523	12,098	12,761	13,018	13,928
Saskatchewan	8,068	8,053	7,552	7,971	7,933	7,698	8,172	8,312	9,140	12,054
Alberta	43,383	42,684	43,311	48,989	51,042	51,334	57,460	65,866	74,350	71,430
British Columbia	52,910	58,084	54,179	69,554	82,737	93,095	96,385	106,310	96,671	102,812
<b>Metropolitan Areas</b>										
St. John's	2,288	2,437	2,593	2,808	3,014	3,238	3,265	3,211	3,537	4,471
Halifax	5,129	5,853	5,610	6,212	6,687	5,813	5,516	6,698	6,462	7,261
Moncton	1,321	1,412	1,491	1,666	1,763	1,861	2,028	2,341	2,561	2,849
Saint John	1,353	1,530	1,484	1,510	1,505	1,636	1,612	1,901	1,852	2,253
Saguenay	933	1,043	1,219	1,362	1,436	1,557	1,617	1,572	1,922	2,004
Québec	6,363	6,570	7,311	8,204	8,771	7,965	8,065	8,906	9,073	9,694
Sherbrooke	1,628	1,764	1,971	1,951	2,178	2,304	2,586	2,598	2,627	2,717
Trois-Rivières	1,035	1,213	1,279	1,363	1,532	1,492	1,588	1,554	1,677	1,782
Montréal	31,468	35,325	37,269	43,486	47,913	47,436	48,564	49,506	50,106	56,151
Gatineau	2,306	2,708	3,582	4,549	4,518	4,600	4,634	4,733	4,788	5,205
Ottawa	9,552	11,334	12,692	12,240	12,894	12,877	13,457	13,300	14,003	14,739
Kingston	2,500	2,728	2,838	3,274	3,646	3,651	3,764	3,464	3,517	3,725
Peterborough	2,217	2,707	2,521	2,691	2,873	2,851	2,980	2,847	2,714	2,880
Oshawa	7,073	7,370	7,282	8,085	8,520	9,025	9,816	9,232	9,354	10,217
Toronto	55,360	58,957	58,349	67,612	74,759	79,366	84,854	85,672	84,842	95,164
Hamilton	10,017	10,543	10,347	11,334	12,482	12,807	13,176	13,565	13,059	13,866
St. Catharines - Niagara	5,794	5,863	5,207	5,488	5,951	6,174	6,722	6,698	6,410	6,668
Kitchener	4,365	4,695	4,569	4,816	5,253	5,310	5,931	6,147	6,115	7,031
Brantford	1,693	1,792	1,730	1,887	2,044	1,986	2,281	2,204	2,139	2,305
Guelph	2,108	2,222	2,170	2,430	2,656	2,768	2,918	2,932	2,859	3,088
London	6,562	6,864	6,616	7,503	8,290	8,412	9,238	9,133	9,234	9,686
Windsor	4,676	4,692	4,616	4,741	4,938	5,381	5,832	5,661	5,047	4,987
Barrie	3,096	3,374	3,318	3,594	4,063	4,311	4,657	4,675	4,397	5,017
Greater Sudbury	1,693	1,744	1,825	1,937	2,031	2,191	2,500	2,726	2,762	2,754
Thunder Bay	1,311	1,301	1,279	1,354	1,599	1,662	1,447	1,358	1,750	1,902
Winnipeg	9,748	9,770	9,465	10,215	9,881	10,201	10,797	NA	NA	NA
Regina	2,886	2,781	2,612	2,792	2,817	2,640	2,785	2,730	2,953	3,957
Saskatoon	3,010	3,039	2,758	2,987	2,941	2,848	2,999	3,246	3,430	4,446
Calgary	20,554	20,197	19,828	22,512	24,706	24,359	26,511	31,569	33,027	32,176
Edmonton	13,727	13,594	14,189	16,079	15,923	16,277	17,652	18,634	21,984	20,427
Kelowna	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Abbotsford	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vancouver	19,612	22,944	21,244	28,732	34,909	39,022	37,972	42,222	36,479	38,978
Victoria	4,981	5,063	4,863	6,410	7,069	7,581	7,685	7,970	7,500	8,403

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The geographic definitions used by CREA differ from those used by Statistics Canada.

Source: CREA (MLS®)

For additional data, please refer to the CMHC website: [www.cmhc.ca](http://www.cmhc.ca)

TABLE 4

### MLS® Average Residential Price, Canada, Provinces and Metropolitan Areas, 1998–2007 (dollars)

	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
<b>Canada</b>	<b>152,365</b>	<b>158,145</b>	<b>163,992</b>	<b>171,743</b>	<b>188,754</b>	<b>207,111</b>	<b>226,337</b>	<b>249,165</b>	<b>276,883</b>	<b>307,265</b>
<b>Provinces</b>										
Newfoundland and Labrador	91,514	94,359	99,525	104,376	113,081	119,822	131,499	141,167	139,542	149,258
Prince Edward Island	79,577	82,138	82,884	87,696	94,964	101,745	110,815	117,238	125,430	133,457
Nova Scotia	97,015	102,628	109,839	115,485	126,669	136,292	146,033	159,221	168,614	180,989
New Brunswick	85,948	88,072	91,624	95,947	100,129	105,858	112,933	120,641	126,864	136,603
Quebec	103,947	107,501	111,296	115,820	130,403	151,881	171,099	184,583	194,024	208,240
Ontario	167,112	174,049	183,841	193,357	210,901	226,824	245,230	262,949	278,364	299,544
Manitoba	86,419	86,423	87,884	93,192	96,531	106,788	119,245	133,854	150,229	169,189
Saskatchewan	87,577	91,396	94,047	98,310	101,297	104,995	110,824	122,765	132,078	174,405
Alberta	132,905	139,621	146,258	153,737	170,253	182,845	194,769	218,266	285,383	356,235
British Columbia	212,046	215,283	221,371	222,822	238,877	259,968	289,107	332,224	390,963	439,123
<b>Metropolitan Areas</b>										
St. John's	91,514	94,359	99,525	104,376	113,081	119,822	131,499	141,167	139,542	149,258
Halifax	114,025	118,522	128,003	134,106	148,737	162,486	175,132	189,196	203,178	216,339
Moncton	85,790	87,388	89,065	92,438	99,942	104,577	113,096	124,088	128,547	140,032
Saint John	87,087	88,731	93,697	97,348	103,544	106,473	116,836	119,718	128,202	140,544
Saguenay	72,619	75,803	77,166	80,213	83,982	87,870	93,243	100,891	109,561	124,893
Québec	85,883	88,091	90,079	93,354	102,627	117,586	129,149	141,485	148,657	164,976
Sherbrooke	87,369	89,258	93,269	98,167	105,938	118,348	138,473	152,886	163,586	170,984
Trois-Rivières	69,384	68,698	69,571	70,144	75,363	81,960	90,728	99,010	104,673	117,416
Montréal	112,516	116,218	121,544	125,744	142,603	166,930	189,050	203,720	215,659	229,902
Gatineau	90,353	90,989	92,338	99,990	112,971	130,526	150,264	156,591	163,539	178,372
Ottawa	143,914	149,626	159,511	175,972	200,711	219,713	238,152	248,358	257,481	273,058
Kingston	124,787	126,803	129,639	132,048	144,413	159,694	175,821	195,757	212,157	222,300
Peterborough	117,065	120,576	129,810	135,099	149,350	169,326	188,624	206,270	213,469	231,596
Oshawa	163,369	169,568	179,241	186,448	204,103	219,341	237,084	252,606	258,362	265,620
Toronto	216,795	228,372	243,249	251,508	275,887	293,308	315,266	336,176	352,388	377,029
Hamilton	153,628	158,162	164,168	172,567	183,442	197,744	215,922	229,753	248,754	268,857
St. Catharines - Niagara	121,981	126,155	129,390	133,715	144,720	154,559	170,452	182,443	194,671	202,314
Kitchener	143,104	146,495	157,317	164,548	177,559	188,905	205,639	220,511	237,913	252,429
Brantford	120,005	122,871	130,433	133,009	143,456	154,805	166,885	182,470	198,716	209,151
Guelph	154,321	161,579	169,287	176,156	190,187	196,844	215,511	236,140	245,676	262,186
London	131,299	131,254	135,857	137,717	142,745	153,637	167,344	178,910	190,521	202,908
Windsor	132,328	135,839	137,453	140,206	149,656	151,524	159,597	163,001	164,123	163,215
Barrie	146,066	152,667	161,545	166,719	182,235	197,843	215,275	232,045	244,394	258,999
Greater Sudbury	109,622	105,093	109,262	107,774	110,826	117,359	122,866	133,938	150,434	182,536
Thunder Bay	110,099	112,315	109,811	110,532	109,930	111,927	112,404	121,183	122,064	123,237
Winnipeg	86,838	86,614	88,553	94,214	98,054	108,812	121,925	NA	NA	NA
Regina	85,425	90,181	94,518	96,943	100,751	104,419	111,869	123,600	131,851	165,613
Saskatoon	104,776	109,822	112,567	116,472	118,999	125,191	132,549	144,787	160,577	232,754
Calgary	157,353	166,110	176,305	182,090	198,350	211,155	222,860	250,832	346,675	414,066
Edmonton	114,527	118,871	124,203	133,441	150,165	165,541	179,610	193,934	250,915	338,636
Kelowna	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Abbotsford	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vancouver	278,659	281,163	295,978	285,910	301,473	329,447	373,877	425,745	509,876	570,795
Victoria	217,886	221,126	225,731	225,727	242,503	280,625	325,412	380,897	427,154	466,974

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The geographic definitions used by CREA differ from those used by Statistics Canada.  
Source: CREA (MLS®)

For additional data, please refer to the CMHC website: [www.cmhc.ca](http://www.cmhc.ca)

TABLE 5  
**Residential Mortgage Credit by Lending Institutions, Canada,  
 1998–2007 (billions of dollars)**

	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
Chartered Banks	232.2	241.0	262.1	279.1	306.6	329.5	352.4	378.0	405.6	442.1
Trust & Mortgage Loans Co.	22.4	19.9	6.1	5.2	5.5	6.0	6.8	7.9	7.9	8.5
Life Insurance Co. Policy Loans	20.0	18.1	17.8	17.2	16.8	15.8	15.4	14.7	14.6	15.2
Finance Companies, Non-Depository Credit Intermediaries and Other Institutions	31.5	29.8	28.1	26.8	26.0	26.5	27.5	28.5	30.3	30.9
Pension Funds	7.8	7.9	8.7	9.3	9.0	9.1	9.6	10.6	11.7	13.3
NHA Mortgage-backed Securities	17.9	23.5	30.8	34.6	39.3	49.8	68.5	87.0	109.6	138.1
Credit Unions & Caisses Populaires	52.2	53.3	55.4	58.0	63.3	69.1	76.6	84.6	93.7	102.2
Special Purpose Corporations (Securitization)	11.0	18.7	22.5	18.1	15.0	14.9	14.9	16.8	21.8	25.4
<b>Total Outstanding Balances</b>	<b>395.0</b>	<b>412.2</b>	<b>431.5</b>	<b>448.3</b>	<b>481.5</b>	<b>520.7</b>	<b>571.7</b>	<b>628.1</b>	<b>695.2</b>	<b>775.7</b>

Annual estimates have been calculated by averaging monthly residential mortgage credit data and therefore will differ from end-of-year estimates.

Components may not add up to totals due to rounding.

Source: CMHC (MBS), Statistics Canada (CANSIM)

For additional data, please refer to the CMHC website: [www.cmhc.ca](http://www.cmhc.ca)

TABLE 6  
**NHA and Conventional Residential Mortgage Loans Approved by Lending Institutions,  
 New and Existing, by Type of Lender, Canada, 1998–2007 (millions of dollars)<sup>1</sup>**

	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
<b>Chartered Banks</b>										
New	10,072.6	11,195.3	10,619.5	13,082.2	17,880.6	18,865.2	20,237.0	21,118.0	20,078.5	19,775.7
Existing	45,054.0	49,033.3	43,597.4	64,504.6	79,646.6	95,498.4	113,957.8	124,718.7	132,516.8	153,028.4
Total	55,126.6	60,228.6	54,216.9	77,586.8	97,527.2	114,363.6	134,194.8	145,836.7	152,595.3	172,804.1
<b>Trust Companies</b>										
New	746.2	846.8	909.9	816.4	643.1	442.0	723.1	875.0	848.3	745.8
Existing	5,135.4	3,815.0	3,183.6	3,274.9	3,196.6	3,641.4	5,207.1	6,850.8	5,835.6	7,807.6
Total	5,881.6	4,661.8	4,093.6	4,091.3	3,839.7	4,083.4	5,930.2	7,725.8	6,683.9	8,553.4
<b>Life Insurance &amp; Other Companies</b>										
New	1,245.5	1,439.1	2,107.4	2,706.9	4,197.1	3,398.5	4,050.5	5,130.0	5,381.7	5,680.5
Existing	9,461.8	11,991.8	14,507.4	10,796.6	14,748.5	16,043.0	19,991.5	23,464.0	24,766.2	31,211.1
Total	10,707.3	13,430.8	16,614.7	13,503.5	18,945.6	19,441.5	24,042.0	28,594.0	30,147.9	36,891.6
<b>Total</b>										
New	12,064.3	13,481.2	13,636.8	16,605.5	22,720.8	2,705.7	25,010.6	27,123.0	26,308.5	26,202.0
Existing	59,651.2	64,840.0	61,288.4	78,576.1	97,591.7	115,182.8	139,156.4	155,033.5	163,118.6	192,047.1
Total	71,715.5	78,321.2	74,925.2	95,181.6	120,312.5	137,888.5	164,167.0	182,156.5	189,427.1	218,249.1

<sup>1</sup> Mortgage approval data are gross and may not fully capture lending activities of credit unions, caisses populaires, other smaller institutions and privately-insured loans.

Components may not add up to totals due to rounding.

Source: CMHC (NHA loan approval system and Conventional Lending Survey)

For additional data, please refer to the CMHC website: [www.cmhc.ca](http://www.cmhc.ca)

TABLE 7

### NHA and Conventional Residential Mortgage Loans Approved by Lending Institutions, New and Existing, by Type of Lender and Type of Dwelling, Canada, Provinces and Territories, 2007 (millions of dollars)<sup>1</sup>

	Chartered Banks			Trust Companies			Life Insurance and Other Companies			Total		
	New	Existing	Total	New	Existing	Total	New	Existing	Total	New	Existing	Total
<b>Canada</b>												
Single-detached	12,785.2	119,466.1	132,251.3	342.3	5,985.2	6,327.5	2,620.6	19,722.9	22,343.5	15,748.1	145,174.2	160,922.3
Multiple Dwellings	6,990.6	33,562.5	40,553.1	402.1	1,822.5	2,224.6	3,059.0	11,488.4	14,547.4	10,451.7	46,873.4	57,325.1
Total	19,775.8	153,028.6	172,804.4	744.4	7,807.7	8,552.1	5,679.6	31,211.3	36,890.9	26,199.8	192,047.6	218,247.4
<b>Newfoundland and Labrador</b>												
Single-detached	206.3	1,439.9	1,646.2	7.0	81.0	88.0	36.9	281.8	318.7	250.2	1,802.7	2,052.9
Multiple Dwellings	15.5	96.4	111.9	1.1	4.0	5.1	5.9	34.6	40.5	22.5	135.0	157.5
Total	221.8	1,536.3	1,758.1	8.1	85.0	93.1	42.8	316.4	359.2	272.7	1,937.7	2,210.4
<b>Prince Edward Island</b>												
Single-detached	42.8	310.2	353.0	2.9	40.7	43.6	4.0	55.2	59.2	49.7	406.1	455.8
Multiple Dwellings	7.4	40.9	48.3	**	2.2	2.2	1.4	5.0	6.4	8.8	48.1	56.9
Total	50.2	351.1	401.3	2.9	42.9	45.8	5.4	60.2	65.6	58.5	454.2	512.7
<b>Nova Scotia</b>												
Single-detached	335.4	2,912.4	3,247.8	9.2	198.1	207.3	51.6	602.6	654.2	396.2	3,713.1	4,109.3
Multiple Dwellings	206.8	539.2	746.0	8.9	27.9	36.8	120.4	205.0	325.4	336.1	772.1	1,108.2
Total	542.2	3,451.6	3,993.8	18.1	226.0	244.1	172.0	807.6	979.6	732.3	4,485.2	5,217.5
<b>New Brunswick</b>												
Single-detached	213.6	1,706.0	1,919.6	7.3	159.3	166.6	57.6	556.0	613.6	278.5	2,421.3	2,699.8
Multiple Dwellings	42.4	188.8	231.2	3.6	15.2	18.8	19.0	75.1	94.1	65.0	279.1	344.1
Total	256.0	1,894.8	2,150.8	10.9	174.5	185.4	76.6	631.1	707.7	343.5	2,700.4	3,043.9
<b>Quebec</b>												
Single-detached	1,378.8	12,253.8	13,632.6	37.6	982.4	1,020.0	785.1	3,997.1	4,782.2	2,201.5	17,233.3	19,434.8
Multiple Dwellings	1,031.0	6,034.3	7,065.3	28.5	197.7	226.2	867.4	3,607.1	4,474.5	1,926.9	9,839.1	11,766.0
Total	2,409.8	18,288.1	20,697.9	66.1	1,180.1	1,246.2	1,652.5	7,604.2	9,256.7	4,128.4	27,072.4	31,200.8
<b>Ontario</b>												
Single-detached	5,350.3	52,890.0	58,240.3	105.9	2,178.6	2,284.5	733.0	7,367.9	8,100.9	6,189.2	62,436.5	68,625.7
Multiple Dwellings	2,365.2	12,553.6	14,918.8	77.3	808.1	885.4	947.7	3,838.3	4,786.0	3,390.2	17,200.0	20,590.2
Total	7,715.5	65,443.6	73,159.1	183.2	2,986.7	3,169.9	1,680.7	11,206.2	12,886.9	9,579.4	79,636.5	89,215.9
<b>Manitoba</b>												
Single-detached	287.6	2,728.0	3,015.6	24.3	399.0	423.3	98.9	930.3	1,029.2	410.8	4,057.3	4,468.1
Multiple Dwellings	23.7	312.1	335.8	**	23.5	23.5	12.6	98.8	111.4	36.3	434.4	470.7
Total	311.3	3,040.1	3,351.4	24.3	422.5	446.8	111.5	1,029.1	1,140.6	447.1	4,491.7	4,938.8
<b>Saskatchewan</b>												
Single-detached	350.2	2,919.0	3,269.2	34.6	334.6	369.2	101.3	536.4	637.7	486.1	3,790.0	4,276.1
Multiple Dwellings	66.5	364.2	430.7	3.4	33.6	37.0	18.9	78.2	97.1	88.8	476.0	564.8
Total	416.7	3,283.2	3,699.9	38.0	368.2	406.2	120.2	614.6	734.8	574.9	4,266.0	4,840.9
<b>Alberta</b>												
Single-detached	3,069.3	20,473.5	23,542.8	101.3	953.9	1,055.2	530.2	2,938.1	3,468.3	3,700.8	24,365.5	28,066.3
Multiple Dwellings	1,400.4	5,517.5	6,917.9	90.2	432.3	522.5	629.2	1,633.2	2,262.4	2,119.8	7,583.0	9,702.8
Total	4,469.7	25,991.0	30,460.7	191.5	1,386.2	1,577.7	1,159.4	4,571.3	5,730.7	5,820.6	31,948.5	37,769.1
<b>British Columbia</b>												
Single-detached	1,521.0	21,504.0	23,025.0	12.2	636.0	648.2	219.5	2,446.6	2,666.1	1,752.7	24,586.6	26,339.3
Multiple Dwellings	1,819.7	7,692.5	9,512.2	189.1	273.9	463.0	436.5	1,910.0	2,346.5	2,445.3	9,876.4	12,321.7
Total	3,340.7	29,196.5	32,537.2	201.3	909.9	1,111.2	656.0	4,356.6	5,012.6	4,198.0	34,463.0	38,661.0
<b>Yukon, N.W.T. and Nunavut</b>												
Single-detached	29.9	329.3	359.2	**	21.6	21.6	2.5	10.9	13.4	32.4	361.8	394.2
Multiple Dwellings	12.0	223.0	235.0	0.0	4.1	4.1	**	3.1	3.1	12.0	230.2	242.2
Total	41.9	552.3	594.2	0.0	25.7	25.7	2.5	14.0	16.5	44.4	592.0	636.4

<sup>1</sup> Mortgage approval data are gross and may not fully capture lending activities of credit unions, caisses populaires, other smaller institutions and privately-insured loans.

\*\* Not available—Suppressed by Statistics Canada to meet the confidentiality requirements of the Statistics Act.

Components may not add up to totals due to rounding.

Source: CMHC (NHA loan approval system and Conventional Lending Survey)

For additional data, please refer to the CMHC website: [www.cmhc.ca](http://www.cmhc.ca)

TABLE 8  
**Ownership Rates, Canada, Provinces, Territories and Metropolitan Areas,  
 1971–2006 (per cent)<sup>1</sup>**

	1971	1976	1981	1986	1991	1996	2001	2006
<b>Canada</b>	<b>60.3</b>	<b>61.8</b>	<b>62.1</b>	<b>62.1</b>	<b>62.6</b>	<b>63.6</b>	<b>65.8</b>	<b>68.4</b>
<b>Provinces and Territories</b>								
Newfoundland and Labrador	80.0	80.6	80.6	80.1	78.6	77.1	78.2	78.7
Prince Edward Island	74.3	76.6	75.7	74.0	73.6	72.1	73.1	74.1
Nova Scotia	71.2	72.4	71.5	71.6	70.6	70.4	70.8	72.0
New Brunswick	69.4	71.8	73.4	74.2	74.1	73.8	74.5	75.5
Quebec	47.4	50.4	53.3	54.7	55.5	56.5	57.9	60.1
Ontario	62.9	63.6	63.3	63.6	63.7	64.3	67.8	71.0
Manitoba	66.1	66.4	65.8	65.5	65.8	66.4	67.8	68.9
Saskatchewan	72.7	75.5	72.9	70.1	69.9	68.8	70.8	71.8
Alberta	63.9	64.8	63.1	61.7	63.9	67.8	70.4	73.1
British Columbia	63.3	65.3	64.4	62.2	63.8	65.2	66.3	69.7
Yukon	50.2	49.3	52.7	55.7	57.6	58.5	63.0	63.8
Northwest Territories <sup>2</sup>	24.7	25.0	22.6	27.6	31.5	38.6	53.1	52.8
Nunavut <sup>2</sup>	NA	NA	NA	NA	NA	NA	24.2	22.7
<b>Metropolitan Areas</b>								
St. John's	66.6	68.9	69.5	68.3	67.1	67.5	69.5	71.5
Halifax	53.2	55.7	55.6	58.3	58.0	59.9	61.7	64.0
Moncton	64.1	66.1	68.2	69.3	69.5	69.2	68.6	70.1
Saint John	52.0	56.8	59.6	61.6	63.4	65.6	67.4	70.0
Saguenay	55.5	60.3	62.0	61.5	60.9	60.8	62.3	63.3
Québec	43.8	46.6	50.9	52.9	53.6	54.9	55.5	58.6
Sherbrooke	43.9	48.0	49.4	50.1	49.2	50.2	51.9	53.5
Trois-Rivières	50.3	53.0	55.6	55.4	54.5	55.5	57.3	57.6
Montréal	35.5	38.4	41.9	44.7	46.7	48.5	50.2	53.4
Gatineau	58.6	59.7	59.1	59.2	59.8	61.5	62.4	67.5
Ottawa	50.1	50.1	51.4	50.0	54.4	58.2	61.4	66.7
Kingston	55.1	57.7	59.3	59.7	59.4	61.2	63.9	67.4
Peterborough	71.7	71.0	68.6	70.0	68.8	69.4	71.6	72.7
Oshawa	69.0	70.0	68.8	70.2	70.1	71.4	75.6	78.6
Toronto	55.4	56.7	57.3	58.3	57.9	58.4	63.2	67.6
Hamilton	63.9	63.8	63.4	64.6	64.6	65.2	68.3	71.6
St. Catharines - Niagara	72.2	72.9	71.6	72.0	71.4	70.7	73.2	74.6
Kitchener	60.8	60.4	60.8	61.9	61.5	62.4	66.7	69.8
Brantford	69.2	68.1	66.6	66.4	66.1	67.4	66.8	73.7
Guelph	64.5	62.4	61.2	62.5	61.8	62.1	68.4	71.2
London	60.1	59.5	58.0	57.8	57.6	60.0	62.8	65.9
Windsor	70.4	69.9	68.0	67.2	68.4	68.6	71.8	74.3
Barrie	70.0	72.8	71.6	72.4	71.5	71.7	77.3	80.7
Greater Sudbury	57.6	62.2	64.3	64.4	63.8	62.6	65.8	66.9
Thunder Bay	73.6	72.0	69.4	69.0	68.4	69.7	71.9	72.9
Winnipeg	59.6	59.2	59.1	60.8	62.0	63.9	65.5	67.2
Regina	60.9	66.2	65.4	65.7	66.2	66.0	68.2	70.1
Saskatoon	61.3	65.7	61.8	59.9	61.0	61.4	65.0	66.8
Calgary	56.5	59.2	58.4	57.9	60.6	65.5	70.6	74.1
Edmonton	57.1	58.1	57.9	57.1	59.2	64.4	66.3	69.2
Kelowna	70.8	73.0	71.5	67.1	71.1	72.4	73.5	77.3
Abbotsford	74.7	75.5	72.2	70.4	72.6	71.5	71.1	73.5
Vancouver	58.8	59.4	58.5	56.3	57.5	59.4	61.0	65.1
Victoria	61.5	61.2	59.8	59.2	61.1	62.1	63.1	64.7

<sup>1</sup> Ownership rates are computed as owners divided by total of all tenure types. Census Metropolitan Area data for 1971–1986 are based on 1986 CMA boundaries.

All other data for Census Metropolitan Areas have not been adjusted for boundary changes.

<sup>2</sup> In 1996 and prior years, the Northwest Territories included Nunavut.

Source: CMHC, adapted from Statistics Canada (Census of Canada)

For additional data, please refer to the CMHC website: [www.cmhc.ca](http://www.cmhc.ca)

TABLE 9  
**Rental Vacancy Rate, Canada, Provinces and Metropolitan Areas,  
 1998–2007 (per cent)<sup>1</sup>**

	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
<b>Canada</b>	<b>4.0</b>	<b>3.2</b>	<b>2.2</b>	<b>1.7</b>	<b>2.1</b>	<b>2.6</b>	<b>2.9</b>	<b>2.8</b>	<b>2.7</b>	<b>2.6</b>
<b>Provinces</b>										
Newfoundland and Labrador	14.9	10.8	5.7	3.2	3.0	3.3	4.1	4.6	4.1	2.1
Prince Edward Island	7.0	5.4	3.3	2.7	2.8	3.7	4.2	4.4	5.3	4.1
Nova Scotia	5.9	4.2	4.2	3.3	3.0	2.6	3.0	3.4	3.3	3.2
New Brunswick	6.1	4.3	3.1	4.1	4.2	4.3	5.3	5.0	6.0	5.3
Quebec	5.3	3.8	2.2	1.3	1.2	1.3	1.7	2.0	2.5	2.6
Ontario	2.6	2.1	1.6	1.7	2.7	3.5	4.1	3.8	3.4	3.3
Manitoba	3.9	3.2	2.2	1.4	1.4	1.6	1.4	1.9	1.6	1.5
Saskatchewan	1.6	1.7	2.2	3.5	3.9	4.1	5.3	4.5	3.3	1.2
Alberta	1.4	2.4	1.3	1.1	2.3	3.7	4.6	3.1	0.9	1.6
British Columbia	5.0	5.0	3.6	2.6	3.1	3.1	2.4	1.9	1.2	1.0
<b>Metropolitan Areas</b>										
St. John's	15.4	9.2	3.8	2.5	2.7	2.0	3.1	4.5	5.1	2.6
Halifax	5.5	3.6	3.6	2.8	2.7	2.3	2.9	3.3	3.2	3.1
Moncton	5.8	3.8	1.7	1.6	2.3	2.9	5.0	4.7	5.6	4.3
Saint John	7.3	5.2	3.4	5.6	6.3	5.2	5.8	5.7	6.8	5.2
Saguenay	4.8	4.9	4.4	4.4	4.9	5.2	5.3	4.5	4.1	2.8
Québec	5.2	3.3	1.6	0.8	0.3	0.5	1.1	1.4	1.5	1.2
Sherbrooke	7.3	7.6	4.7	2.3	1.8	0.7	0.9	1.2	1.2	2.4
Trois-Rivières	8.5	7.9	6.8	4.7	3.0	1.5	1.2	1.5	1.0	1.5
Montréal	4.7	3.0	1.5	0.6	0.7	1.0	1.5	2.0	2.7	2.9
Gatineau	6.7	4.4	1.4	0.6	0.5	1.2	2.1	3.1	4.2	2.9
Ottawa	2.1	0.7	0.2	0.8	1.9	2.9	3.9	3.3	2.3	2.3
Kingston	5.4	3.4	1.8	1.5	0.9	1.9	2.4	2.4	2.1	3.2
Peterborough	4.9	4.4	3.2	3.7	2.6	1.4	1.7	2.8	2.8	2.8
Oshawa	2.0	1.7	1.7	1.3	2.3	2.9	3.4	3.3	4.1	3.7
Toronto	0.8	0.9	0.6	0.9	2.5	3.8	4.3	3.7	3.2	3.2
Hamilton	3.2	1.9	1.7	1.3	1.6	3.0	3.4	4.3	4.3	3.5
St. Catharines - Niagara	4.6	3.2	2.6	1.9	2.4	2.7	2.6	2.7	4.3	4.0
Kitchener	1.5	1.0	0.7	0.9	2.3	3.2	3.5	3.3	3.3	2.7
Brantford	5.2	2.5	2.9	1.8	2.1	3.2	1.7	1.8	2.3	2.9
Guelph	1.6	0.5	0.7	1.0	2.7	3.9	3.3	3.6	2.8	1.9
London	4.5	3.5	2.2	1.6	2.0	2.1	3.7	4.2	3.6	3.6
Windsor	4.3	2.7	1.9	2.9	3.9	4.3	8.8	10.3	10.4	12.8
Barrie	1.0	1.0	0.5	0.9	1.4	3.3	3.0	2.1	2.8	3.2
Greater Sudbury	9.4	11.1	7.7	5.7	5.1	3.6	2.6	1.6	1.2	0.6
Thunder Bay	9.3	7.5	5.8	5.8	4.7	3.3	5.0	4.6	4.9	3.8
Winnipeg	4.0	3.0	2.0	1.4	1.2	1.3	1.1	1.7	1.3	1.5
Regina	1.7	1.4	1.4	2.1	1.9	2.1	2.7	3.2	3.3	1.7
Saskatoon	0.8	0.9	1.7	2.9	3.7	4.5	6.3	4.6	3.2	0.6
Calgary	0.6	2.8	1.3	1.2	2.9	4.4	4.3	1.6	0.5	1.5
Edmonton	1.9	2.2	1.4	0.9	1.7	3.4	5.3	4.5	1.2	1.5
Kelowna	4.0	2.0	1.2	1.1	1.7	1.4	1.0	0.5	0.6	0.0
Abbotsford	7.4	6.7	3.7	2.4	2.0	2.5	2.8	3.8	2.0	2.1
Vancouver	2.7	2.7	1.4	1.0	1.4	2.0	1.3	1.4	0.7	0.7
Victoria	3.8	3.6	1.8	0.5	1.5	1.1	0.6	0.5	0.5	0.5
<b>Average of Metropolitan Areas<sup>2</sup></b>	<b>3.4</b>	<b>2.6</b>	<b>1.6</b>	<b>1.1</b>	<b>1.7</b>	<b>2.2</b>	<b>2.7</b>	<b>2.7</b>	<b>2.6</b>	<b>2.6</b>

<sup>1</sup> In privately initiated apartment structures with at least three units.

<sup>2</sup> Prior to 2002, Kingston and Abbotsford are not included in the average of metropolitan areas.

Prior to 2007, Moncton, Peterborough, Brantford, Guelph, Barrie, and Kelowna are not included in the average of metropolitan areas.

Source: CMHC (*Rental Market Survey*)

For additional data, please refer to the CMHC website: [www.cmhc.ca](http://www.cmhc.ca)

TABLE 10  
**Average Rent for Two-Bedroom Apartments,  
 Canada, Provinces and Metropolitan Areas, 1998–2007 (dollars)<sup>1</sup>**

	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
<b>Canada<sup>2</sup></b>	<b>616</b>	<b>628</b>	<b>648</b>	<b>672</b>	<b>694</b>	<b>704</b>	<b>720</b>	<b>732</b>	<b>755</b>	<b>772</b>
<b>Provinces</b>										
Newfoundland and Labrador	490	489	510	530	538	563	571	578	585	575
Prince Edward Island	529	531	538	561	566	585	603	612	631	648
Nova Scotia	603	609	621	645	669	684	711	726	760	777
New Brunswick	503	510	515	530	543	556	576	586	609	619
Quebec	486	491	495	513	531	553	572	591	607	616
Ontario	761	785	829	863	883	886	898	903	919	924
Manitoba	566	574	581	596	612	633	650	669	692	721
Saskatchewan	507	522	529	546	554	564	572	577	596	656
Alberta	607	633	651	701	734	745	754	765	866	1,008
British Columbia	746	742	753	772	795	806	821	844	885	922
<b>Metropolitan Areas</b>										
St. John's	513	517	552	575	589	607	618	634	635	614
Halifax	631	637	648	673	704	720	747	762	799	815
Moncton	531	538	560	561	578	588	611	612	636	643
Saint John	452	457	460	483	492	504	520	526	556	570
Saguenay	428	428	438	439	440	457	459	472	485	490
Québec	513	511	518	538	550	567	596	621	637	641
Sherbrooke	433	434	437	446	456	471	495	505	515	529
Trois-Rivières	411	403	413	419	431	436	457	474	488	487
Montréal	499	506	509	529	552	575	594	616	636	647
Gatineau	529	534	544	573	599	639	663	660	667	662
Ottawa	754	783	877	914	930	932	940	920	941	961
Kingston	653	658	679	709	727	768	785	807	841	856
Peterborough	669	680	683	698	718	728	775	797	818	822
Oshawa	726	745	778	799	819	845	852	855	861	877
Toronto	881	916	979	1,027	1,047	1,040	1,052	1,052	1,067	1,061
Hamilton	662	698	719	740	765	778	789	791	796	824
St. Catharines - Niagara	617	634	653	680	695	704	722	736	752	765
Kitchener	641	660	697	722	750	754	765	811	824	829
Brantford	617	614	639	653	665	675	684	722	712	749
Guelph	686	702	736	764	801	823	829	830	839	848
London	637	639	657	683	705	736	758	775	790	816
Windsor	680	696	736	738	769	776	776	780	774	773
Barrie	774	788	830	881	877	934	920	909	906	934
Greater Sudbury	623	612	619	620	647	651	655	668	706	749
Thunder Bay	647	647	654	657	657	672	679	689	696	709
Winnipeg	574	582	588	605	622	645	664	683	709	740
Regina	525	547	549	568	581	589	602	607	619	661
Saskatoon	516	529	541	558	567	576	580	584	608	693
Calgary	707	739	740	783	804	804	806	808	960	1,089
Edmonton	551	576	601	654	709	722	730	732	808	958
Kelowna	638	642	645	663	680	697	723	755	800	846
Abbotsford	633	630	632	645	650	672	684	704	719	752
Vancouver	870	864	890	919	954	965	984	1,004	1,045	1,084
Victoria	722	728	731	751	771	789	799	837	874	907

1 In privately initiated apartment structures with at least three units.

2 Only includes provincial data.

Source: CMHC (Rental Market Survey)

For additional data, please refer to the CMHC website: [www.cmhc.ca](http://www.cmhc.ca)

TABLE 11  
**Occupied Housing Stock by Structure Type and Tenure,  
 Canada, 1996–2006 (dwelling units)**

	1996				2001				2006			
	Owned	Rented	Band	Total	Owned	Rented	Band	Total	Owned	Rented	Band	Total
<b>Total</b>	<b>6,877,780</b>	<b>3,905,145</b>	<b>37,125</b>	<b>10,820,050</b>	<b>7,610,390</b>	<b>3,907,170</b>	<b>45,415</b>	<b>11,562,975</b>	<b>8,509,780</b>	<b>3,878,500</b>	<b>49,180</b>	<b>12,437,470</b>
Single-detached house	5,488,620	597,480	34,280	6,120,380	5,972,985	620,950	41,135	6,635,065	6,329,200	507,550	43,210	6,879,965
Semi-detached house	337,005	164,580	505	502,090	395,460	169,585	800	565,850	452,965	141,385	1,265	595,615
Row house	259,690	278,125	545	538,365	340,870	276,140	995	618,010	439,175	254,335	1,635	695,145
Apartment detached duplex	164,720	286,620	155	451,495	154,385	258,210	165	412,760	335,835	329,075	290	665,200
Apartment building that has five or more storeys	157,395	822,075	-	979,470	213,205	836,440	10	1,049,655	288,800	824,045	120	1,112,965
Apartment building that has fewer than five storeys	318,645	1,709,375	305	2,028,325	386,165	1,696,730	510	2,083,410	507,850	1,779,910	540	2,288,300
Other single-attached house	17,525	22,005	25	39,555	16,850	24,945	50	41,845	18,865	18,810	65	37,735
Movable dwelling	134,175	24,885	1,310	160,370	130,470	24,165	1,750	156,385	137,085	23,385	2,055	162,535

Components may not add up to totals due to rounding.

Source: Statistics Canada (Census of Canada)

For additional data, please refer to the CMHC website: [www.cmhc.ca](http://www.cmhc.ca)

TABLE 12  
**Dwelling Condition by Tenure and Period of Construction,  
 Canada, 2006**

Tenure and Period of Construction	Total Occupied Dwellings	Dwelling Condition					
		In Need of Regular Maintenance Only		In Need of Minor Repairs		In Need of Major Repairs	
		Number	Per Cent	Number	Per Cent	Number	Per Cent
<b>Total</b>	<b>12,437,470</b>	<b>8,168,615</b>	<b>65.7</b>	<b>3,339,840</b>	<b>26.9</b>	<b>929,020</b>	<b>7.5</b>
1945 or before	1,595,320	762,690	47.8	581,265	36.4	251,365	15.8
1946-1960	1,812,525	1,015,315	56.0	604,185	33.3	193,020	10.6
1961-1970	1,753,170	1,063,480	60.7	538,205	30.7	151,480	8.6
1971-1980	2,421,395	1,519,130	62.7	728,125	30.1	174,140	7.2
1981-1985	1,028,180	683,185	66.4	287,310	27.9	57,690	5.6
1986-1990	1,055,955	731,520	69.3	277,380	26.3	47,055	4.5
1991-1995	894,860	681,245	76.1	183,835	20.5	29,775	3.3
1996-2001	820,365	714,630	87.1	90,655	11.1	15,085	1.8
2001-2006	1,055,690	997,405	94.5	48,875	4.6	9,405	0.9
<b>Owned</b>	<b>8,509,780</b>	<b>5,676,230</b>	<b>66.7</b>	<b>2,298,875</b>	<b>27.0</b>	<b>534,675</b>	<b>6.3</b>
1945 or before	1,060,535	499,255	47.1	403,100	38.0	158,180	14.9
1946-1960	1,160,095	656,330	56.6	397,650	34.3	106,115	9.1
1961-1970	984,120	601,045	61.1	312,590	31.8	70,485	7.2
1971-1980	1,604,445	991,945	61.8	508,190	31.7	104,305	6.5
1981-1985	672,220	437,465	65.1	202,845	30.2	31,910	4.7
1986-1990	790,550	538,940	68.2	221,565	28.0	30,045	3.8
1991-1995	682,990	520,955	76.3	144,010	21.1	18,030	2.6
1996-2001	679,780	598,930	88.1	71,615	10.5	9,235	1.4
2001-2006	875,045	831,370	95.0	37,310	4.3	6,365	0.7
<b>Rented</b>	<b>3,878,500</b>	<b>2,481,730</b>	<b>64.0</b>	<b>1,025,705</b>	<b>26.4</b>	<b>371,065</b>	<b>9.6</b>
1945 or before	534,520	263,415	49.3	178,095	33.3	93,010	17.4
1946-1960	651,595	358,905	55.1	206,365	31.7	86,320	13.2
1961-1970	766,470	462,205	60.3	225,060	29.4	79,205	10.3
1971-1980	810,100	526,490	65.0	218,340	27.0	65,265	8.1
1981-1985	348,675	244,830	70.2	82,495	23.7	21,350	6.1
1986-1990	257,565	191,455	74.3	53,235	20.7	12,880	5.0
1991-1995	203,240	158,790	78.1	36,635	18.0	7,815	3.8
1996-2001	132,515	113,470	85.6	15,845	12.0	3,200	2.4
2001-2006	173,820	162,165	93.3	9,630	5.5	2,020	1.2
<b>Band</b>	<b>49,185</b>	<b>10,650</b>	<b>21.7</b>	<b>15,255</b>	<b>31.0</b>	<b>23,275</b>	<b>47.3</b>
1945 or before	275	30	10.9	65	23.6	175	63.6
1946-1960	830	80	9.6	170	20.5	585	70.5
1961-1970	2,580	240	9.3	555	21.5	1,785	69.2
1971-1980	6,850	695	10.1	1,595	23.3	4,565	66.6
1981-1985	7,290	885	12.1	1,970	27.0	4,435	60.8
1986-1990	7,835	1,125	14.4	2,580	32.9	4,130	52.7
1991-1995	8,625	1,495	17.3	3,195	37.0	3,935	45.6
1996-2001	8,070	2,230	27.6	3,195	39.6	2,650	32.8
2001-2006	6,820	3,870	56.7	1,930	28.3	1,015	14.9

Components may not add up to totals due to rounding.

Source: Statistics Canada (Census of Canada)

For additional data, please refer to the CMHC website: [www.cmhc.ca](http://www.cmhc.ca)

TABLE 13  
**Household Growth Canada, Provinces, Territories and Metropolitan Areas,  
 2001–2006**

	2001	2006	Growth (per cent)	Avg. Annual Growth
<b>Canada</b>	<b>11,562,975</b>	<b>12,437,470</b>	<b>7.6</b>	<b>174,899</b>
<b>Provinces and Territories</b>				
Newfoundland and Labrador	189,045	197,185	4.3	1,628
Prince Edward Island	50,795	53,135	4.6	468
Nova Scotia	360,025	376,845	4.7	3,364
New Brunswick	283,820	295,960	4.3	2,428
Quebec	2,978,110	3,189,345	7.1	42,247
Ontario	4,219,410	4,555,025	8.0	67,123
Manitoba	432,550	448,780	3.8	3,246
Saskatchewan	379,675	387,145	2.0	1,494
Alberta	1,104,100	1,256,200	13.8	30,420
British Columbia	1,534,335	1,643,150	7.1	21,763
Yukon	11,365	12,610	11.0	249
Northwest Territories	12,565	14,235	13.3	334
Nunavut	7,175	7,855	9.5	136
<b>Metropolitan Areas</b>				
St. John's	64,831	70,663	9.0	1,166
Halifax	144,435	155,138	7.4	2,141
Moncton	47,180	51,593	9.4	883
Saint John	48,262	49,107	1.8	169
Saguenay	62,197	64,315	3.4	424
Québec	296,490	316,533	6.8	4,009
Sherbrooke	75,800	82,747	9.2	1,389
Trois-Rivières	59,580	63,893	7.2	863
Montréal	1,426,582	1,525,629	6.9	19,809
Ottawa-Gatineau	417,385	449,031	7.6	6,329
Kingston	58,334	61,978	6.2	729
Peterborough	43,471	46,667	7.4	639
Oshawa	104,203	119,028	14.2	2,965
Toronto	1,634,755	1,801,071	10.2	33,263
Hamilton	253,083	266,377	5.3	2,659
St. Catharines - Niagara	150,874	156,386	3.7	1,102
Kitchener	153,277	169,063	10.3	3,157
Brantford	44,904	47,847	6.6	589
Guelph	44,219	48,775	10.3	911
London	174,085	184,946	6.2	2,172
Windsor	117,712	125,848	6.9	1,627
Barrie	52,404	63,877	21.9	2,295
Greater Sudbury	63,143	65,076	3.1	387
Thunder Bay	49,545	51,426	3.8	376
Winnipeg	271,639	281,745	3.7	2,021
Regina	76,653	80,323	4.8	734
Saskatoon	88,944	95,257	7.1	1,263
Calgary	356,407	415,592	16.6	11,837
Edmonton	356,517	405,311	13.7	9,759
Kelowna	59,877	66,925	11.8	1,410
Abbotsford	51,022	55,948	9.7	985
Vancouver	758,713	817,033	7.7	11,664
Victoria	135,601	145,388	7.2	1,957

Data for 2001 are based on 2006 Census Metropolitan Area boundaries. Between 2001 and 2006, CMA boundaries changed in Moncton, Québec, Sherbrooke, Montréal, Ottawa-Gatineau, Peterborough, Brantford, London, Winnipeg, and Calgary.

Metropolitan data are census-based estimates of dwellings occupied by usual residents, which were released by Statistics Canada on March 13, 2007. National, provincial, and territorial data are census-based household counts.

Components may not add up to totals due to rounding.

Source: Statistics Canada (Census of Canada)

For additional data, please refer to the CMHC website: [www.cmhc.ca](http://www.cmhc.ca)

TABLE 14  
**Households by Type and Tenure,  
 Canada, 1971–2006**

	1971	1976	1981	1986	1991	1996	2001	2006
<b>Total Households</b>								
All household types	6,034,505	7,166,095	8,281,535	8,991,670	10,018,265	10,820,050	11,562,975	12,437,470
Family households	4,928,130	5,633,945	6,231,485	6,634,995	7,235,230	7,685,470	8,155,560	8,651,330
One-family households	4,807,010	5,542,295	6,140,330	6,537,880	7,118,660	7,540,625	7,951,960	8,421,050
Couples with children	3,028,315	3,266,655	3,523,205	3,604,045	3,729,800	3,853,800	3,857,620	3,902,390
Couples without children	1,354,970	1,759,510	1,948,700	2,130,935	2,485,115	2,608,435	2,910,180	3,242,530
Lone parents	423,725	516,125	668,425	802,905	903,745	1,078,385	1,184,165	1,276,130
Multiple-family households	121,120	91,655	91,160	97,115	116,575	144,845	203,600	230,280
Non-family households	1,106,375	1,532,150	2,050,045	2,356,675	2,783,035	3,134,580	3,407,415	3,786,130
One person only	810,395	1,205,340	1,681,130	1,934,710	2,297,060	2,622,180	2,976,880	3,327,045
Two or more persons	295,980	326,810	368,915	421,965	485,975	512,400	430,535	459,085
<b>Owners</b>								
All household types	3,636,925	4,431,230	5,141,935	5,580,875	6,273,030	6,877,780	7,610,385	8,509,780
Family households	3,220,840	3,918,915	4,465,250	4,755,765	5,240,405	5,626,670	6,145,835	6,737,530
One-family households	3,124,275	3,842,355	4,390,265	4,677,435	5,145,490	5,511,500	5,985,695	6,550,125
Couples with children	2,095,895	2,488,795	2,807,650	2,868,915	2,975,720	3,083,980	3,148,020	3,268,070
Couples without children	820,960	1,106,650	1,267,930	1,445,650	1,765,205	1,954,540	2,239,700	2,581,035
Lone parents	207,420	246,910	314,685	362,870	404,565	472,980	597,970	701,020
Multiple-family households	96,560	76,560	74,985	78,330	94,910	115,170	160,140	187,405
Non-family households	416,085	512,320	676,690	825,110	1,032,630	1,251,110	1,464,555	1,772,240
One person only	299,805	391,475	539,200	668,270	848,310	1,050,520	1,307,170	1,590,125
Two or more persons	116,285	120,850	137,490	156,845	184,325	200,595	157,380	182,115
<b>Renters</b>								
All household types	2,397,580	2,734,860	3,139,595	3,368,485	3,718,525	3,905,145	3,907,170	3,878,500
Family households	1,707,290	1,715,035	1,766,240	1,845,340	1,972,740	2,028,420	1,972,310	1,874,090
One-family households	1,682,735	1,699,940	1,750,065	1,828,435	1,952,400	2,000,890	1,933,895	1,837,590
Couples with children	932,420	777,860	715,555	715,655	740,235	752,150	690,815	616,430
Couples without children	534,015	652,860	680,770	679,600	717,520	650,285	666,775	657,110
Lone parents	216,310	269,220	353,745	433,180	494,645	598,450	576,290	564,050
Multiple-family households	24,555	15,095	16,170	16,900	20,340	27,530	38,415	36,500
Non-family households	690,290	1,019,825	1,373,355	1,523,145	1,745,785	1,876,725	1,934,860	2,004,410
One person only	510,595	813,865	1,141,935	1,260,065	1,445,450	1,566,635	1,662,845	1,728,725
Two or more persons	179,695	205,960	231,425	263,085	300,330	310,095	272,015	275,685

Total household counts for 1986-2006 include households in on-reserve (1986) or band housing (1991, 1996, 2001, 2006) and are therefore larger than the sum of owners and renters.

Because of changes to the definition of census family, household-type data for 2001 and 2006—except for one-person households—is not strictly comparable to data from earlier censuses.

Components may not add up to totals due to rounding.

Source: Statistics Canada (Census of Canada)

For additional data, please refer to the CMHC website: [www.cmhc.ca](http://www.cmhc.ca)

TABLE 15  
**Households by Age of Maintainer and Tenure,  
 Canada, 1971–2006**

	1971	1976	1981	1986	1991	1996	2001	2006
<b>Total Households</b>								
15-24	413,570	584,270	674,825	535,945	466,225	437,460	447,165	456,625
25-34	1,262,315	1,678,965	2,036,370	2,124,040	2,219,995	2,045,210	1,792,025	1,782,270
35-44	1,250,530	1,339,425	1,589,410	1,971,475	2,363,020	2,630,170	2,747,615	2,591,890
45-54	1,172,285	1,305,650	1,370,800	1,412,515	1,666,415	2,102,365	2,509,625	2,829,775
55-64	955,825	1,079,005	1,215,890	1,327,005	1,379,945	1,434,725	1,659,775	2,130,820
65-74	627,395	763,350	905,740	1,021,305	1,168,255	1,280,605	1,324,885	1,387,285
75+	352,590	415,430	488,490	599,385	754,405	889,510	1,081,880	1,258,805
<b>Total</b>	<b>6,034,505</b>	<b>7,166,095</b>	<b>8,281,535</b>	<b>8,991,670</b>	<b>10,018,265</b>	<b>10,820,050</b>	<b>11,562,975</b>	<b>12,437,470</b>
<b>Owners</b>								
15-24	57,750	111,125	127,180	88,815	64,625	61,670	70,990	96,380
25-34	541,240	866,895	1,064,390	1,029,220	1,043,470	936,020	837,010	914,485
35-44	838,995	949,750	1,142,890	1,374,245	1,606,665	1,741,120	1,844,450	1,797,405
45-54	851,190	970,265	1,037,395	1,062,030	1,246,970	1,555,580	1,868,280	2,135,865
55-64	682,985	775,350	894,035	989,245	1,041,660	1,093,570	1,276,610	1,654,860
65-74	432,440	504,665	595,650	695,155	824,185	936,610	997,030	1,056,105
75+	232,330	253,190	280,405	342,175	445,450	553,210	716,015	854,680
<b>Total</b>	<b>3,636,925</b>	<b>4,431,230</b>	<b>5,141,935</b>	<b>5,580,875</b>	<b>6,273,030</b>	<b>6,877,780</b>	<b>7,610,390</b>	<b>8,509,780</b>
<b>Renters</b>								
15-24	355,820	473,150	547,645	443,735	399,360	372,805	373,060	357,010
25-34	721,070	812,075	971,985	1,083,920	1,168,780	1,098,795	943,670	857,475
35-44	411,535	389,670	446,520	588,310	750,085	879,555	890,540	781,090
45-54	321,095	335,390	333,405	343,705	415,175	540,525	633,160	683,720
55-64	272,845	303,655	321,860	332,095	335,185	337,020	378,015	469,565
65-74	194,955	258,685	310,095	321,750	342,100	341,440	324,590	327,400
75+	120,260	162,240	208,080	254,975	307,840	335,010	364,135	402,240
<b>Total</b>	<b>2,397,580</b>	<b>2,734,860</b>	<b>3,139,595</b>	<b>3,368,485</b>	<b>3,718,525</b>	<b>3,905,145</b>	<b>3,907,170</b>	<b>3,878,500</b>
<b>Avg. Household Size</b>	<b>3.5</b>	<b>3.1</b>	<b>2.9</b>	<b>2.8</b>	<b>2.7</b>	<b>2.6</b>	<b>2.6</b>	<b>2.5</b>

Total household counts for 1986-2006 include households in on-reserve (1986) or band housing (1991, 1996, 2001, 2006) and are therefore larger than the sum of owners and renters.

Components may not add up to totals due to rounding.

Source: Statistics Canada (Census of Canada)

For additional data, please refer to the CMHC website: [www.cmhc.ca](http://www.cmhc.ca)

TABLE 16  
**Real Median Household Income After-Tax  
 Canada, Provinces and Metropolitan Areas, 1998-2006  
 (2006 constant dollars)**

	1998	1999	2000	2001	2002	2003	2004	2005	2006
<b>Canada</b>	<b>41,900</b>	<b>43,600</b>	<b>44,100</b>	<b>45,500</b>	<b>45,600</b>	<b>45,400</b>	<b>45,800</b>	<b>46,800</b>	<b>47,600</b>
<b>Provinces</b>									
Newfoundland and Labrador	34,900	35,600	36,200	36,900	37,100	37,500	37,400	37,900	39,900
Prince Edward Island	36,200	35,800	36,600	37,000	38,500	39,800	40,200	41,500	42,000
Nova Scotia	36,300	38,500	38,700	40,000	39,000	38,500	40,300	40,600	41,700
New Brunswick	37,400	39,700	39,400	40,000	39,300	38,900	38,800	39,000	39,900
Quebec	35,900	37,800	38,200	39,100	39,800	39,900	39,800	40,000	40,500
Ontario	47,300	50,200	51,100	51,700	52,200	52,000	51,700	52,500	52,600
Manitoba	39,700	40,400	40,300	41,600	41,200	41,800	42,200	43,300	43,400
Saskatchewan	36,500	38,400	38,900	41,400	40,400	40,900	40,700	42,100	43,800
Alberta	46,700	48,100	49,300	53,200	52,800	51,800	55,100	56,300	60,000
British Columbia	43,600	43,500	42,900	43,900	44,100	44,300	45,900	47,500	48,900
<b>Metropolitan Areas</b>									
St. John's	41,700	41,500	44,200	45,900	40,600	41,300	42,000	42,800	42,700
Halifax	45,500	42,600	42,600	44,700	42,600	41,400	44,000	43,800	44,300
Saint John	43,000	40,600	41,600	43,500	42,700	42,500	43,100	41,100	44,400
Saguenay	35,900	38,900	40,800	39,400	38,100	36,000	37,000	38,000	38,300
Québec	38,300	41,800	41,100	40,500	45,300	43,500	44,000	42,800	42,800
Sherbrooke	26,800	27,700	31,200	30,700	36,000	38,700	39,200	37,200	36,900
Trois-Rivières	36,600	35,200	35,800	36,000	37,800	34,600	36,900	32,800	32,700
Montréal	35,900	37,500	38,600	40,600	41,600	42,700	42,400	41,500	42,400
Ottawa-Gatineau	45,500	49,300	53,300	52,100	55,000	54,600	57,500	54,100	53,900
Kingston	52,300	49,300	51,600	51,900	47,900	50,400	51,700	44,100	46,600
Oshawa	52,000	54,800	56,000	56,800	57,000	61,100	58,600	59,100	55,900
Toronto	52,500	55,900	57,100	59,100	56,900	57,700	56,200	56,500	56,000
Hamilton	51,500	56,500	57,300	58,000	57,900	56,800	56,000	53,400	57,300
St. Catharines - Niagara	44,900	47,900	48,000	51,400	52,900	53,800	52,600	48,000	49,000
Kitchener	49,000	49,600	49,600	52,900	50,600	51,100	51,700	50,100	52,300
London	44,600	46,200	47,000	47,900	46,300	45,500	45,900	50,900	52,400
Windsor	51,900	50,400	53,900	52,000	52,700	52,700	52,400	51,800	53,800
Greater Sudbury	40,200	43,900	46,800	44,800	43,700	42,200	42,700	46,400	47,100
Thunder Bay	53,700	50,700	49,900	53,800	47,500	49,100	50,400	50,100	51,100
Winnipeg	43,000	42,600	42,300	44,400	44,100	45,100	46,600	45,800	44,900
Regina	45,500	45,600	48,700	50,800	50,300	48,000	47,100	50,900	51,800
Saskatoon	38,600	39,800	40,200	42,600	43,500	45,600	44,300	42,800	45,200
Calgary	50,800	49,900	53,600	58,300	58,300	54,400	59,400	57,700	63,600
Edmonton	46,700	49,400	50,300	55,200	51,900	55,000	55,500	56,500	58,500
Abbotsford	43,400	45,200	41,200	44,600	43,000	41,300	43,100	51,600	51,200
Vancouver	47,400	45,700	47,000	47,300	47,400	49,000	48,800	50,100	53,900
Victoria	40,800	39,400	39,000	42,800	44,500	42,700	44,600	45,500	45,100

All data are rounded to the nearest \$100.

Source: Statistics Canada (Survey of Consumer Finances - 1990-1995; Survey of Labour and Income Dynamics - 1996-2006)

For additional data, please refer to the CMHC website: [www.cmhc.ca](http://www.cmhc.ca)

TABLE 17

## Home Equity and Net Worth by Tenure and Age Group, Canada, 1999 and 2005 (2005 constant dollars)

Age Group <sup>2</sup>	Renters <sup>1</sup>		Owned with a Mortgage		Owned without a Mortgage		All Owners		All Households	
	Median	Average	Median	Average	Median	Average	Median	Average	Median	Average
<b>Equity in Principal Residence<sup>3</sup></b>										
<b>2005</b>										
<b>All ages</b>	0	0	84,000	120,000	175,000	228,000	121,000	169,000	58,000	110,000
Less than 65	0	0	81,000	119,000	180,000	232,000	110,000	158,000	48,000	101,000
65 years or over	0	0	NA	NA	168,000	222,000	160,000	212,000	100,000	149,000
<b>1999</b>										
<b>All ages</b>	0	0	58,000	83,000	138,000	173,000	92,000	125,000	37,000	78,000
Less than 65	0	0	58,000	82,000	144,000	183,000	82,000	117,000	30,000	72,000
65 years or over	0	0	78,000	101,000	136,000	159,000	127,000	153,000	81,000	104,000
<b>Net Worth<sup>4</sup></b>										
<b>2005</b>										
<b>All ages</b>	14,000	69,000	219,000	378,000	525,000	764,000	327,000	552,000	166,000	383,000
Less than 65	11,000	54,000*	216,000	377,000	561,000	826,000	289,000	530,000	141,000	359,000
65 years or over	40,000*	147,000	355,000	404,000	491,000	670,000	462,000	638,000	309,000	491,000
<b>1999</b>										
<b>All ages</b>	14,000	71,000	169,000	284,000	402,000	599,000	257,000	430,000	136,000	296,000
Less than 65	12,000	58,000	166,000	279,000	439,000	659,000	229,000	412,000	114,000	276,000
65 years or over	43,000	132,000	278,000	407,000	355,000	511,000	349,000	501,000	245,000	382,000

All dollar figures are rounded to the nearest \$1,000.

1 Includes households occupying their homes rent free.

2 Age of the highest income earner in the household. Where owners and renters are both present, refers to the owner with the highest income.

3 Home equity is the value of the principal residence less any outstanding mortgages.

4 Includes the value of employer pension plan benefits. Net worth is the difference between a household's assets and its liabilities.

NA - Not available. Suppressed by Statistics Canada to meet the confidentiality requirements of the Statistics Act.

\* Use with caution.

Source: CMHC, adapted from Statistics Canada (*Survey of Financial Security*)

For additional data, please refer to the CMHC website: [www.cmhc.ca](http://www.cmhc.ca)

TABLE 18  
**Households in Core Housing Need, Canada, Provinces,  
 Territories and Metropolitan Areas, 1991–2001**

	1991		1996		2001	
	Households in Core Housing Need	Incidence of Core Housing Need	Households in Core Housing Need	Incidence of Core Housing Need	Households in Core Housing Need	Incidence of Core Housing Need
	(000's)	(%)	(000's)	(%)	(000's)	(%)
<b>Canada<sup>1</sup></b>	<b>1,270.0</b>	<b>13.6</b>	<b>1,567.2</b>	<b>15.6</b>	<b>1,485.3</b>	<b>13.7</b>
Newfoundland and Labrador	24.6	14.5	26.3	14.8	26.6	14.6
Prince Edward Island	5.6	13.4	6.1	13.4	6.2	12.9
Nova Scotia	42.1	13.6	48.1	14.9	51.6	15.2
New Brunswick	39.4	16.2	34.7	13.6	30.0	11.2
Quebec <sup>1</sup>	360.0	14.5	426.7	16.3	352.4	12.5
Ontario	408.0	11.9	594.3	16.1	599.7	15.1
Manitoba	50.5	13.9	55.0	14.7	45.4	11.6
Saskatchewan	45.4	14.9	39.7	12.6	37.2	11.5
Alberta	105.8	12.8	100.8	11.3	106.3	10.5
British Columbia	182.5	15.6	229.0	17.4	223.7	15.8
Yukon	1.5	16.3	2.0	19.2	1.6	15.8
Northwest Territories	4.5	28.9	4.7	25.4	2.1	17.4
Nunavut	NA	NA	NA	NA	2.7	38.8
<b>Census Metropolitan Areas<sup>2</sup></b>	<b>852.6</b>	<b>14.4</b>	<b>1,063.3</b>	<b>16.7</b>	<b>1,033.4</b>	<b>14.7</b>
St. John's	7.6	14.2	8.6	15.0	8.4	13.5
Halifax	16.4	14.4	20.1	16.6	22.4	16.3
Saint John	6.1	14.0	6.4	14.3	5.2	11.2
Saguenay	5.7	10.6	7.4	13.3	6.6	11.2
Québec	32.9	13.6	40.0	15.3	34.6	12.3
Sherbrooke	8.0	15.2	9.2	16.2	7.6	12.0
Trois-Rivières	7.7	15.0	8.8	16.3	7.3	12.9
Montréal	200.3	17.1	238.3	19.0	189.0	14.1
Ottawa-Gatineau	37.8	11.3	54.9	15.0	54.5	13.7
Gatineau	8.8	11.0	12.7	14.3	10.9	11.0
Ottawa	29.0	11.4	42.2	15.2	43.6	14.5
Kingston <sup>3</sup>	5.5	11.2	8.0	15.5	8.3	15.0
Oshawa	8.6	10.8	11.8	13.1	12.0	12.0
Toronto	176.3	13.5	269.7	19.3	295.5	19.1
Hamilton	22.9	10.8	33.6	15.0	33.0	13.7
St. Catharines-Niagara	14.0	10.8	19.8	14.5	18.5	12.9
Kitchener	12.7	10.3	18.2	13.5	17.2	11.6
London	16.5	11.9	23.1	15.7	21.6	13.2
Windsor	11.2	12.1	13.9	13.9	14.4	12.8
Greater Sudbury	6.5	11.8	9.0	15.2	7.4	12.4
Thunder Bay	4.9	10.9	6.2	13.2	5.6	11.9
Winnipeg	35.4	14.6	38.0	15.3	28.1	10.8
Regina	10.1	14.8	8.6	12.2	7.4	10.1
Saskatoon	13.3	17.7	10.6	13.4	9.0	10.7
Calgary	32.0	12.1	32.3	11.1	38.3	11.2
Edmonton	36.5	12.6	33.3	11.0	36.7	10.9
Abbotsford <sup>3</sup>	4.0	10.9	6.2	14.3	5.5	11.5
Vancouver	111.1	19.1	122.4	19.0	122.3	17.3
Victoria	18.1	15.9	19.2	15.7	17.1	13.4

1 Estimates of core housing need in the Nunavik region of Quebec have been updated based on revised information on housing costs and core need income thresholds in this non-market area. As a result, small adjustments have been made to the 2001 estimates of core housing need presented for Quebec and Canada in this table.

2 A Census Metropolitan Area (CMA) is an area consisting of one or more adjacent municipalities situated around a major urban core with a population of at least 100,000. The CMA total represents all the CMAs in Canada at the time of each census. Note that it is adjusted neither for changes in CMA boundaries nor for changes in the number of CMAs between census years.

3 Kingston and Abbotsford were not CMAs in 1991 and 1996 and therefore their data are not included in the CMA total for these years.

These data, from the Census of Canada, apply to all non-farm, non-band, non-reserve private households reporting positive incomes and shelter cost-to-income ratios less than 100 per cent.

Income data collected by the Census of Canada refer to the calendar year preceding the census, while shelter cost data give expenses for the current year. Shelter-cost-to-income ratios are computed directly from these data, that is, by comparing current shelter costs to incomes from the previous year.

Acceptable housing is defined as adequate and suitable shelter that can be obtained without spending 30 per cent or more of before-tax household income. Adequate shelter is housing that is not in need of major repair. Suitable shelter is housing that is not crowded, meaning that it has sufficient bedrooms for the size and make-up of the occupying household. The subset of households classified as unable to access acceptable housing is considered to be in core housing need.

Components may not add up to totals due to rounding.

Source: CMHC (census-based housing indicators and data)

For additional data, please refer to the CMHC website: [www.cmhc.ca](http://www.cmhc.ca)

TABLE 19  
**Characteristics of Households in Core Housing Need, Canada, 2001**

	All Households		Renters		Owners	
	Households in Core Housing Need	Incidence of Core Housing Need	Households in Core Housing Need	Incidence of Core Housing Need	Households in Core Housing Need	Incidence of Core Housing Need
	(000's)	(%)	(000's)	(%)	(000's)	(%)
<b>All Households</b>	<b>1,485.3</b>	<b>13.7</b>	<b>1,011.5</b>	<b>28.3</b>	<b>473.8</b>	<b>6.6</b>
<i>Components:</i>						
<i>Below Affordability Standard Only</i>	<i>1,069.4</i>	<i>9.9</i>	<i>731.7</i>	<i>20.5</i>	<i>337.7</i>	<i>4.7</i>
<i>Below Suitability Standard Only</i>	<i>73.6</i>	<i>0.7</i>	<i>58.3</i>	<i>1.6</i>	<i>15.3</i>	<i>0.2</i>
<i>Below Adequacy Standard Only</i>	<i>74.5</i>	<i>0.7</i>	<i>25.2</i>	<i>0.7</i>	<i>49.3</i>	<i>0.7</i>
<i>Below Multiple Housing Standards</i>	<i>267.8</i>	<i>2.5</i>	<i>196.4</i>	<i>5.5</i>	<i>71.5</i>	<i>1.0</i>
<b>Household Type</b>						
Senior-led	393.2	16.9	243.9	36.2	149.3	9.0
Family	78.1	6.1	33.7	17.0	44.4	4.1
Non-Family	315.1	29.8	210.1	44.2	105.0	18.0
Individuals Living Alone	310.1	30.7	207.3	45.0	102.8	18.7
Female	248.6	32.9	166.9	47.4	81.6	20.3
Male	61.5	24.0	40.4	37.1	21.2	14.4
Non-Senior-led	1,092.1	12.9	767.6	26.4	324.5	5.8
Family	676.4	10.5	437.7	26.7	238.7	5.0
Couples with Children	257.1	7.4	140.7	22.5	116.3	4.1
Couples without Children	110.2	6.0	64.4	13.0	45.8	3.4
Lone-Parent Families	294.3	31.8	224.7	46.3	69.6	15.8
Female	264.2	35.0	205.0	49.1	59.2	17.6
Male	30.2	17.6	19.7	29.2	10.5	10.0
Non-Family	415.7	20.3	329.9	26.1	85.8	11.0
Individuals Living Alone	368.5	21.7	291.8	28.3	76.7	11.5
Female	187.3	23.9	145.5	30.7	41.8	13.5
Male	181.1	19.9	146.3	26.3	34.9	9.8
Individuals Sharing with Others	47.2	13.4	38.1	16.2	9.1	7.8
<b>Aboriginal Status</b>						
Non-Aboriginal Household	1,414.1	13.5	955.3	27.9	458.8	6.5
Aboriginal Household	71.3	24.0	56.2	37.7	15.1	10.2
Status Indian	35.7	28.0	29.6	40.8	6.1	11.1
Non-Status Indian	13.6	23.7	10.5	36.7	3.1	10.7
Métis	24.7	19.2	18.1	33.3	6.6	8.9
Inuit	4.7	35.8	3.8	43.3	0.9	20.3
<b>Period of Immigration</b>						
Non-immigrants	1,045.7	12.4	726.3	26.1	319.4	5.6
Immigrants	425.6	18.3	272.6	36.0	153.0	9.8
Prior to 1976	162.2	13.3	84.2	33.3	78.0	8.0
1976 - 1985	59.3	16.5	37.6	32.5	21.7	8.9
1986 - 1990	52.3	21.5	36.1	35.4	16.2	11.4
1991 - 1995	70.7	26.2	48.9	36.6	21.8	16.0
1996 - 2001	81.1	36.0	65.8	43.1	15.3	21.2

Estimates of core housing need in the Nunavik region of Quebec have been updated based on revised information on housing costs and core need income thresholds in this non-market area. As a result, small adjustments have been made to the 2001 estimates of core housing need presented for Canada in this table.

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