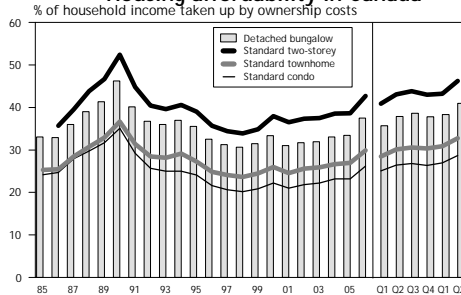


HOUSING AFFORDABILITY

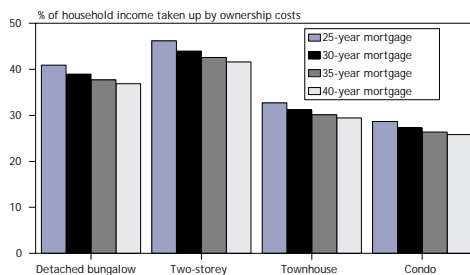
September 2007

CHART 1
Housing affordability in Canada



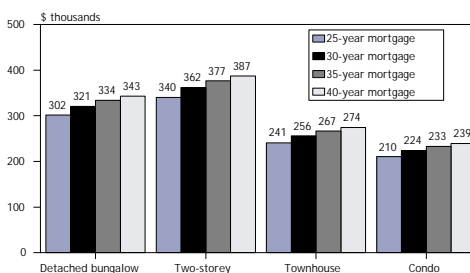
Source: Statistics Canada, Royal LePage, RBC Economics Research

CHART 2
Housing affordability amortization scenarios



Source: Statistics Canada, Royal LePage, RBC Economics Research

CHART 3
Housing price amortization scenarios



Source: Statistics Canada, Royal LePage, RBC Economics Research

Derek Holt
Assistant Chief Economist
(416) 974-6192
derek.holt@rbc.com

Amy Goldbloom
Economist
(416) 974-0579
amy.goldbloom@rbc.com

Housing affordability hit on all sides

▲ Increases in house prices, mortgage rates, utilities and property taxes all combined in the second quarter to deliver a severe hit to housing affordability. By a slim margin, the portion of before-tax household income going towards home ownership costs suffered one of its largest and most broadly based quarterly deteriorations in the current housing cycle stretching back to the mid-1990s.

▲ Affordability deteriorated in every housing class we track, in every province and in every major city. In two short quarters, Saskatchewan has set a new affordability record concentrated in Saskatoon.

▲ Albertans now pay a higher share of their country-leading incomes on average than Ontarians across most housing types, although Torontonians still pay sizeably more than Calgarians and Edmontonians for a two-storey home. Alberta is still, however, avoiding British Columbia's stressed affordability conditions.

▲ Housing market conditions from Manitoba eastward are not a cause for concern, but conditions in Saskatchewan, Alberta and British Columbia warrant caution given the speed of the massive turnaround in affordability in several key cities. The economic fundamentals are supportive, but have been priced in fairly aggressively. In our view, a continued cooling in the pace of price gains and an ongoing pull back in sales-to-listings ratios lie in the cards in these cities.

▲ Longer amortization mortgage products are a large and growing share of monthly mortgage originations, particularly in the high ratio mortgage segment. This development has unfolded within the past year and a half as the market has gone from standard 25-year options towards 30-, 35- and 40-year mortgages.

▲ Because our affordability calculations assume a standard 25-year conventional mortgage in order to allow for a common benchmark over time and across markets, the result is that the share of household income going towards home ownership costs is likely overestimated for some entrants in today's market.

▲ Chart 2 controls for this by recalculating the Canada-wide average share of household income going to home ownership costs assuming 30-, 35- and 40-year mortgage options for each of the four housing classes that we follow. The result is sizeable enough to roll the clock backwards to late 2005 or early 2006 affordability conditions, on average, nationwide, but only pushes potential affordability back a quarter or two quarters in the most heated cities in western Canada.

▲ Chart 3 depicts possible scenarios of the significant impact of the adoption of longer amortization mortgage products on housing prices in terms of what is affordable with a 25% downpayment at a five-year posted mortgage rate. Beyond prices, the impact of longer amortization will lift housing starts and resales compared to what would otherwise have been the case in 2007-08.

Vancouver – Trends still point to moderation ahead

Housing affordability deteriorated across all four main housing segments in the second quarter due to higher house prices and mortgage rates that offset a dip in utilities. Market conditions in Vancouver have loosened up during the year, but conditions remain tilted in favour of a seller's market and are still supportive of fairly strong price gains. The annual pace of house price growth has slowed during the year from the 18%-20% range to the 10%-12% range. A rising mortgage rate environment compounded with these price gains led to an affordability slide in all four home segments. Even though the trends are gradually shifting to a slower pace and are signalling some moderation ahead, the near-term result is another hit to already-stretched affordability conditions. The newfound ability to extend amortization temporarily offsets affordability pressures in the Vancouver market. For example, an average mortgage payment on a two-storey home in Vancouver is \$3230 per month. By extending that mortgage from a 25-year term to a 40-year term, monthly mortgage payments are reduced by roughly \$400.

Calgary and Edmonton – Another hit to affordability

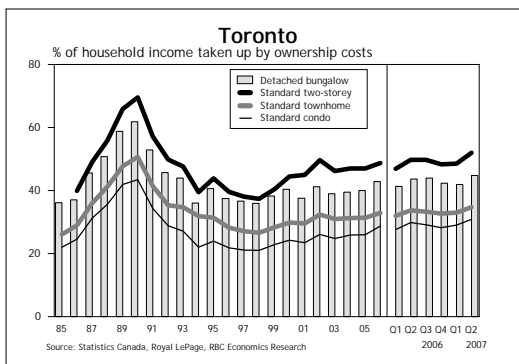
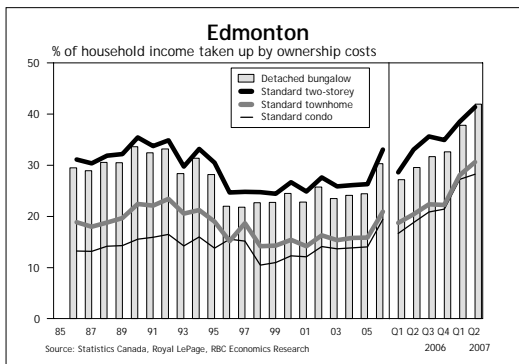
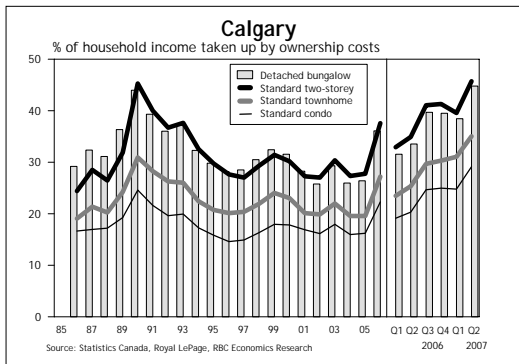
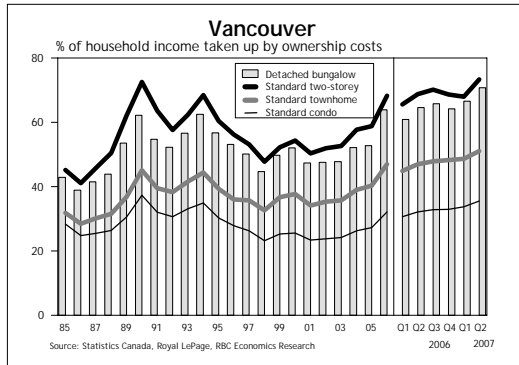
Both cities underwent a significant erosion in affordability conditions across all housing types as house price gains continued to outstrip income gains. Affordability levels in Calgary are now comparable to levels reached in the late 1980s at the peak of the housing market bubble and this has sparked some concern about the sustainability of prices. In Edmonton, detached, two-storey and townhomes bore the brunt of the affordability squeeze, while the slide in condo affordability was relatively modest. Edmonton's affordability levels had already surpassed peaks reached in the late 1980s in prior quarters. There is also concern that this market may be in unsustainable territory. Part of the price escalation in these markets is justified by economic fundamentals that have forced a re-pricing based on value. Job markets are tight and wages, although running at a softer pace than last year, are still healthy. But caution is now warranted because we anticipate a significant slowdown in the pace of resale activity, new home construction and price gains in the coming year. Many properties have likely overshot their true value and will return to a pace of growth closer in line to the fundamentals.

Sharpest quarterly deterioration since 1994 in Toronto

Housing affordability slid across all four housing segments in the second quarter due to sizeable gains in house prices, higher mortgage rates and higher utility costs. Outside the core Toronto area hot pockets that are driving double-digit price growth and bidding wars, broader Toronto housing market conditions are healthy and roughly balanced. It is also important to keep in mind that housing affordability is still comfortably below levels reached in the late 1980s. The bigger risk to affordability conditions is the potential for higher property taxes towards the end of the decade after the current freeze on property value assessments is lifted in 2008. The combination of potentially higher city tax rates and a jump in property assessment levels through higher market values of homes could pose a more significant challenge to affordability conditions from 2009 onwards.

Ottawa has sharpest affordability fall-off in a year

Ottawa participated in the nationwide hit to affordability conditions in the second quarter as rising mortgage rates, house price growth and higher utility bills affected conditions. The deterioration came after three fairly stable quarters.



Although the pace of price growth has picked up modestly in 2007 compared to last year, price gains are still running in line with income gains. Slightly tighter demand conditions will be supportive of continued healthy price gains through the remainder of 2007.

Montreal — Market softness still evident

Housing affordability softened across every housing segment due to higher house prices, mortgage rates, utilities and taxes. However, Montreal's housing market remains one of the softest among the big cities. The pace of house price gains began to moderate toward the end of 2005. During the last two years, annual price growth has been bouncing around the 3%-4% range for all types of homes. Despite some weak spots in the local economy, incomes — buoyed by solid job markets — are growing at a healthy clip. The ability of incomes to keep pace with house price gains has helped keep the Montreal market in balanced territory.

Regional overviews

Atlantic — Affordability deteriorates across all segments

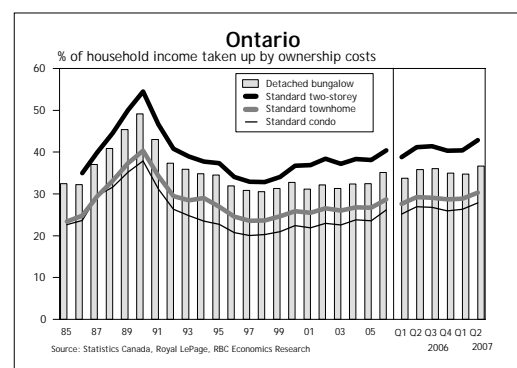
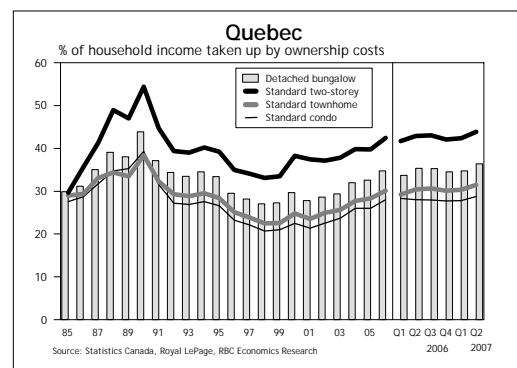
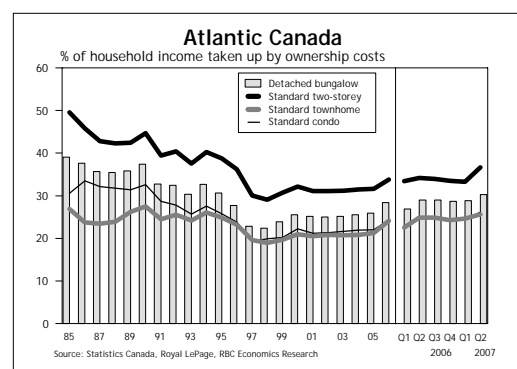
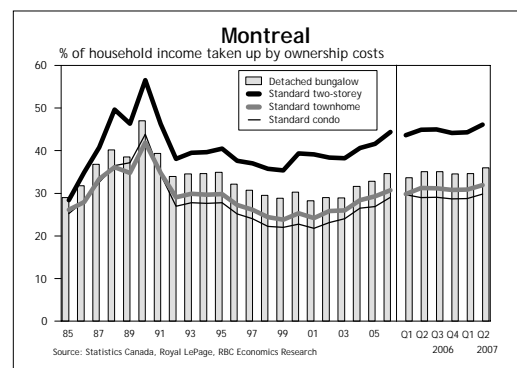
While all home segments witnessed a sizeable affordability deterioration, it was the two-storey and condo segments that saw the sharpest erosion. Robust house price gains alongside a rising mortgage rate environment created pricier second-quarter housing conditions. There now appears to be some slack evident in St. John's housing market. Markets in Halifax, and even more so in Saint John's, remain tight and supportive of strong house price gains. The hit to affordability in the last few months has created challenging conditions. The arrival of extended amortization mortgages, however, changes the near-term dynamics of the region's housing markets. For example, a two-storey home under our 25-year amortization assumption currently accounts for roughly 37% of median pre-tax household income in the region. A 40-year mortgage drops this by roughly four percentage points to 33%.

Quebec — Stabilizing after a soft landing

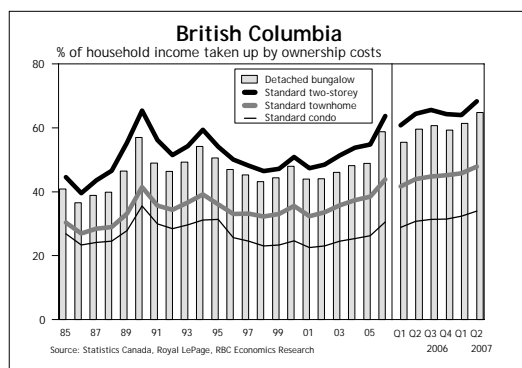
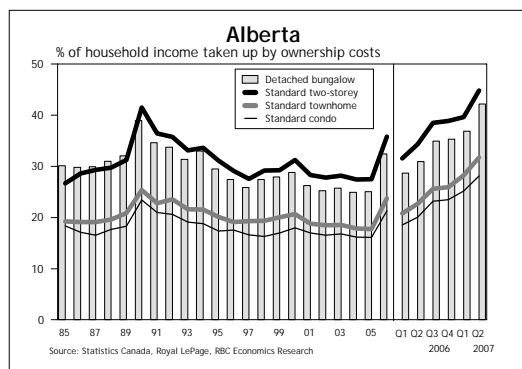
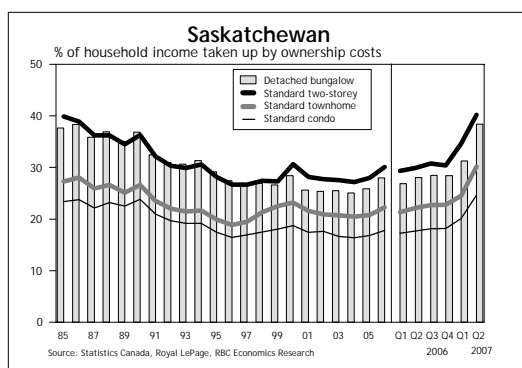
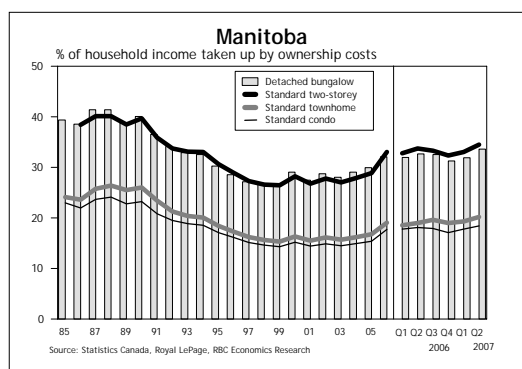
Affordability eroded across all four home segments in the province, despite only a modest increase in house prices, because mortgage rates, utilities and taxes all went up. The market has softened gradually during the past two years. The orderly slowdown has seen the annual pace of house price gains cool off and stabilize in the 4%-5% range. The sales-to-listings ratio has averaged just under 0.6 so far this year, signalling a market that is roughly in balance in terms of supply and demand conditions. Decent economic fundamentals, however, are still a support for housing markets. Job growth is running at a healthy 2% pace this year and incomes are keeping pace with gains in house prices.

Ontario — Sharp erosion, but tame relative to the west

The province underwent a sharp deterioration in affordability in the second quarter due to higher prices, mortgage rates and utility bills. But, a look at historical affordability numbers in Ontario should help calm nerves that the province may be at risk of a significant correction. Unlike many of the western provinces, affordability — measured as the share of income required to service basic home-ownership costs — remains comfortably below levels reached in the late 1980s just before the major housing market crash. What further complicates this stage



Regional overviews



of the housing cycle is the impact of extended amortization products in extending affordability. Under our standard assumptions, mortgage payments for an average condo run at roughly \$1058 per month. Extending a mortgage by five years shaves off roughly \$70 in monthly mortgage payments, an additional five-year extension shaves off a further \$45 off payments and extending to the full 15 years leads to a further \$30 drop in monthly payments.

Manitoba's housing heats up, but still most affordable

In line with the nationwide second-quarter theme, Manitoba's housing affordability eroded as a result of rising mortgage rates and a pick-up in the pace of house price gains. The deterioration marked the worst quarterly deterioration in more than a year. However, Manitoba has managed to avoid the severe affordability stresses prevailing in neighbouring Saskatchewan, Alberta and British Columbia. The pace of price gains did pick up in the second quarter, but incomes are also growing at a healthy clip. Supply and demand conditions are healthy but do not point to an overly tight market.

Saskatchewan's 50% price gain crunches affordability

The province jumped into the spotlight at the start of the year as an influx of migrants caught housing supply off guard. The momentum continued into the second quarter and the pace of annual price gains soared into double-digit range. Affordability deteriorated by roughly 20% across each of the home segments, marking the worst quarterly deterioration on record. There were no signs in the second quarter that prices are letting up just yet, but shortages of new listings appear to be easing. Current prices are starting to weigh on demand and softer demand should feed through to cooler price gains ahead.

Alberta – Now less affordable than Ontario

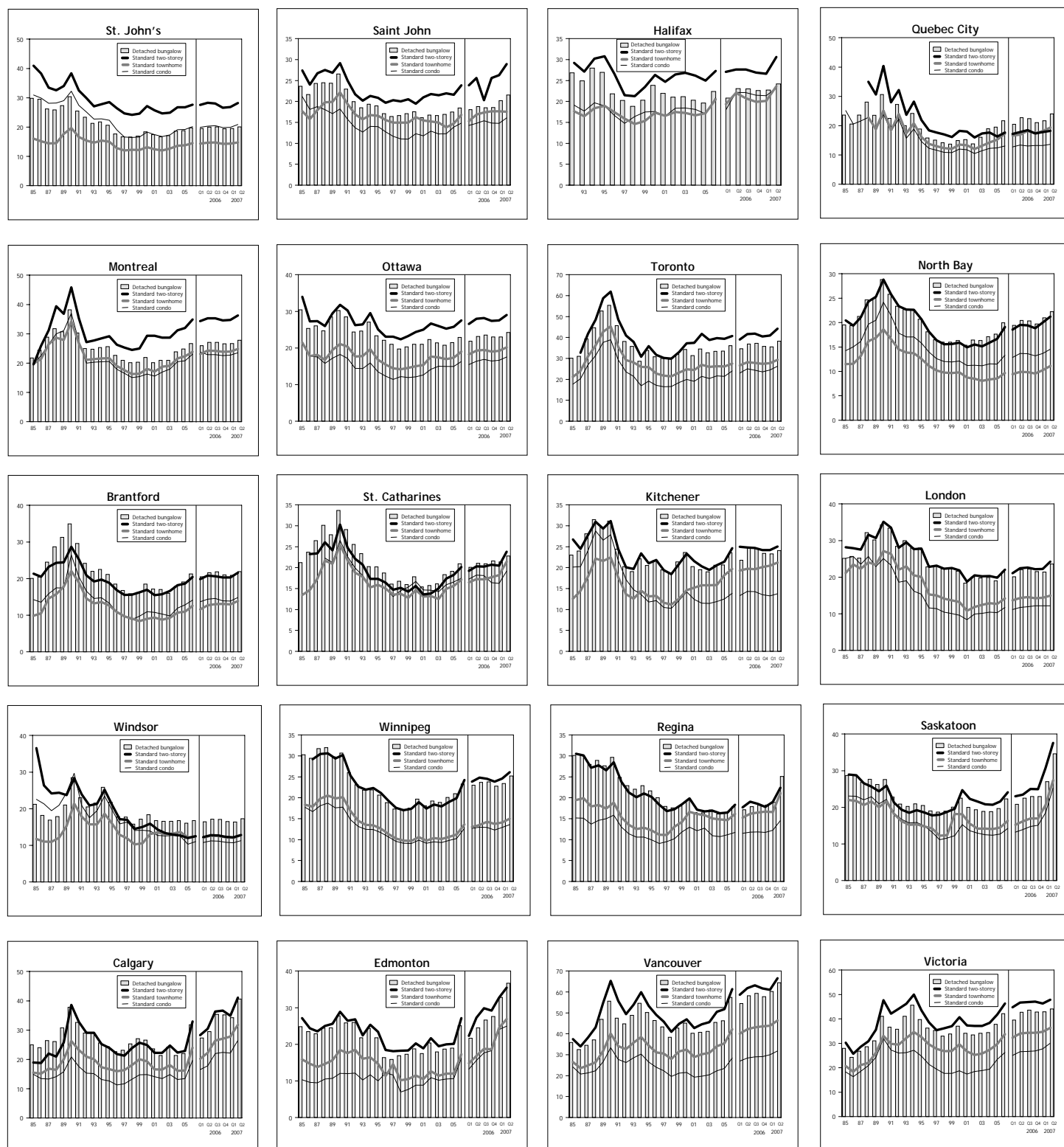
The province suffered a deep erosion in affordability conditions this quarter as markets took multiple hits from rising mortgage rates, hefty house price gains, higher utility costs and a modest up-tick in property taxes. All combined, these factors led to an across-the-board double-digit deterioration that make Alberta's two-storey and detached homes less affordable than their Ontario and Quebec counterparts. While affordability levels still remain comfortably better than conditions in British Columbia, the continuing slide is flashing warning signs. House prices have been growing at a pace well above incomes and, within a fairly brief period, this has created stressed affordability conditions. The fundamentals driving housing markets across Alberta are still supportive of healthy housing markets going forward, but we expect the market to continue to pull off from its current pace of resale activity, price gains and new home construction.

British Columbia – Prospective homeowners squeezed

Conditions across the province turned even more unaffordable in the second quarter as rising mortgage rates and house prices squeezed out prospective homebuyers from the market. Earlier in the year, there had been some relief in the two-storey home segment as the pace of price gains moderated. However, these improvements were reversed in the second quarter and all four home segments reported an erosion in affordability conditions. Here, too, the advent of long amortization products is changing the cyclical dynamics of the market. For example, by opting for a 40-year mortgage instead of a 25-year mortgage, the affordability level on a two-storey B.C. home drops from 68% of income down to 61%.

Mortgage carrying costs by city

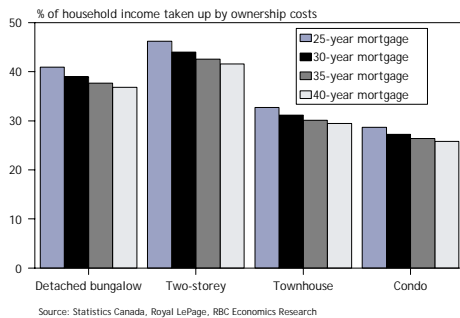
Our standard housing affordability measure captures the proportion of median pre-tax household income required to service the cost of a mortgage, including principal and interest, property taxes and utilities; the modified measure used here includes the cost of servicing a mortgage, but excludes property taxes and utilities due to data constraints in the smaller CMAs. This measure is based on a 25% down payment and a 25-year mortgage loan at a five-year fixed rate and is estimated on a quarterly basis. The higher the measure, the more difficult it is to afford a house.



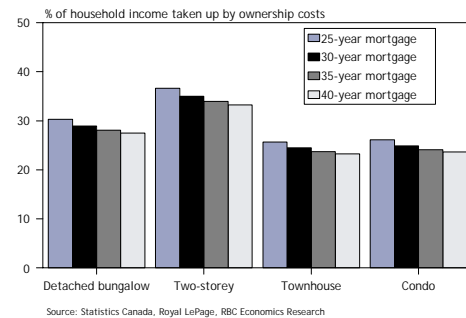
Source: Statistics Canada, Royal LePage, RBC Economics Research

Housing affordability amortization scenarios

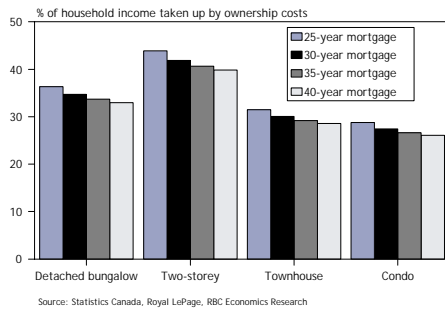
Canada housing affordability



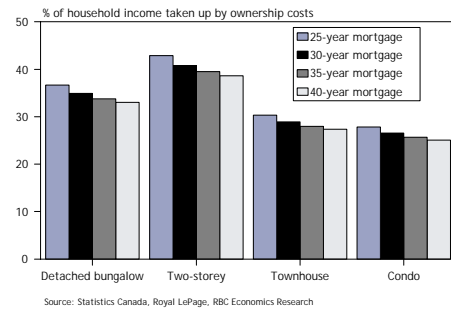
Atlantic housing affordability



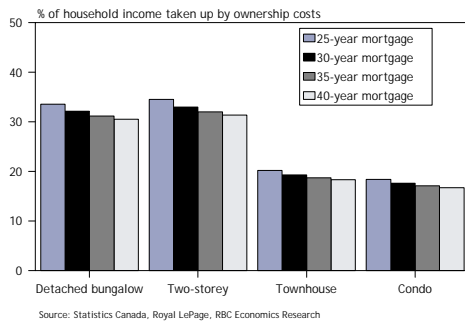
Quebec housing affordability



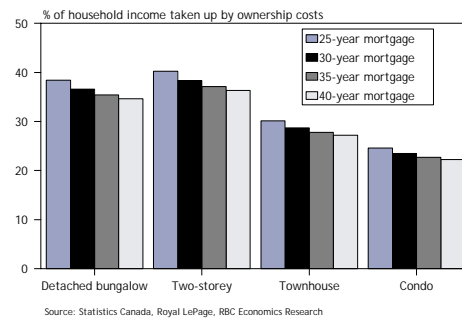
Ontario housing affordability



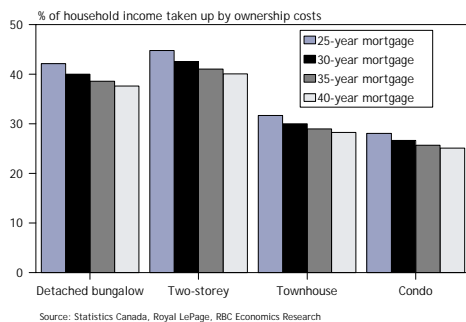
Manitoba housing affordability



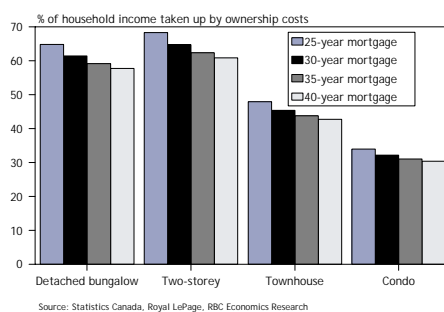
Saskatchewan housing affordability



Alberta housing affordability

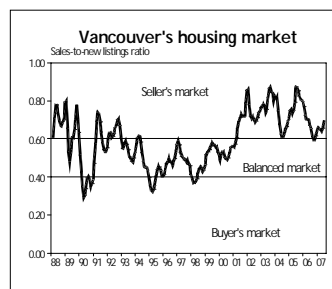
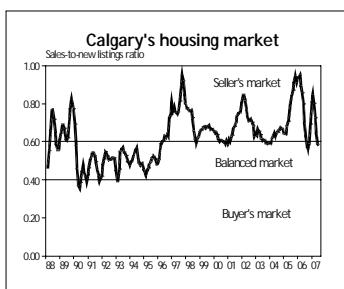
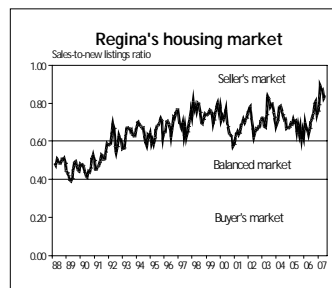
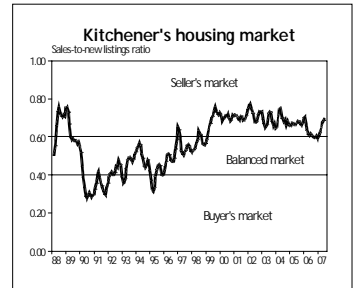
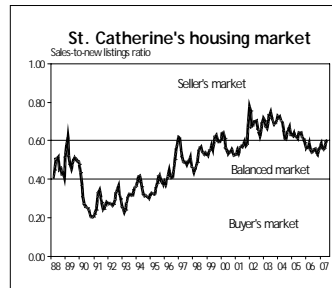
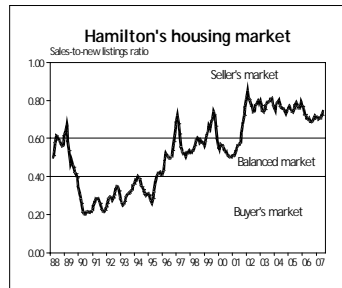
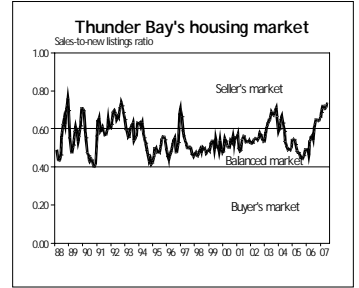
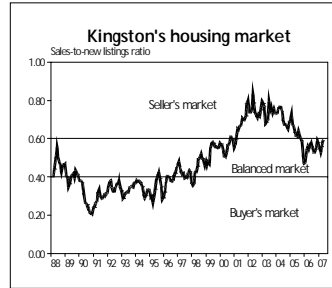
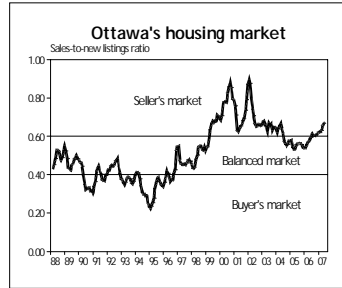
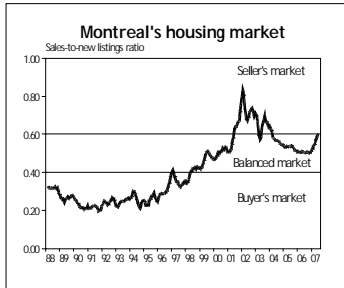
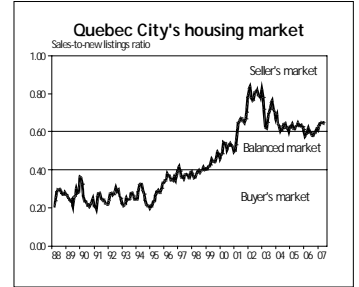
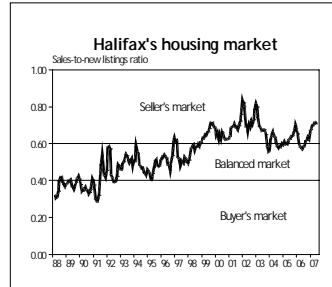
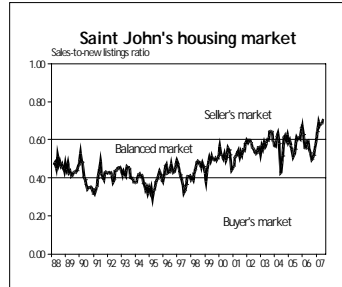
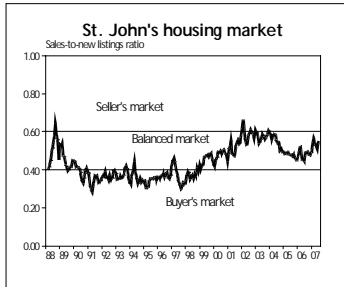


British Columbia housing affordability



Source: Statistics Canada, Royal LePage, RBC Economics Research

Resale housing market conditions in Canada's metro cities



Source: Canadian Real Estate Association, RBC Economics Research

Housing affordability summary tables

Detached bungalow

Region	Average Price		Qualifying Income (\$) Q2 2007	Affordability Measure (%)	
	Q2 2007 (\$)	Y/Y % ch.		Q1 2007 (rev)	Q2 2007
Canada*	301,754	11.8	72,425	38.3	40.9
British Columbia	502,172	10.6	110,704	61.4	64.8
Alberta	401,163	46.0	89,866	36.9	42.2
Saskatchewan	255,500	52.2	62,188	31.3	38.4
Manitoba	207,026	9.3	54,889	31.9	33.6
Ontario	294,577	4.9	72,183	34.8	36.6
Quebec	215,452	4.7	55,886	34.8	36.4
Atlantic	171,531	8.9	44,165	28.9	30.3
Toronto	411,224	5.0	95,909	42.0	44.8
Montreal	226,453	3.9	58,232	34.6	36.0
Vancouver	589,916	11.3	128,822	66.6	70.7
Ottawa	264,017	6.0	67,745	29.9	31.2
Calgary	459,889	41.1	100,988	38.5	44.8
Edmonton	389,667	53.5	88,529	37.8	41.9

Standard two-storey

Region	Average Price		Qualifying Income (\$) Q2 2007	Affordability Measure (%)	
	Q2 2007 (\$)	Y/Y % ch.		Q1 2007 (rev)	Q2 2007
Canada*	340,341	11.0	81,785	43.2	46.2
British Columbia	525,562	7.5	116,608	64.0	68.2
Alberta	420,470	39.3	95,465	39.6	44.8
Saskatchewan	263,972	49.7	65,140	34.6	40.2
Manitoba	214,560	8.2	56,397	33.1	34.5
Ontario	346,499	7.1	84,416	40.4	42.9
Quebec	258,846	4.0	67,402	42.4	43.9
Atlantic	206,806	12.5	53,401	33.3	36.6
Toronto	475,625	7.3	111,345	48.6	52.0
Montreal	295,331	4.1	74,659	44.3	46.1
Vancouver	609,092	8.1	133,584	68.0	73.3
Ottawa	316,222	5.0	79,717	35.2	36.8
Calgary	465,678	38.2	103,043	39.6	45.7
Edmonton	376,060	33.0	87,377	38.5	41.4

Standard townhouse

Region	Average Price		Qualifying Income (\$) Q2 2007	Affordability Measure (%)	
	Q2 2007 (\$)	Y/Y % ch.		Q1 2007 (rev)	Q2 2007
Canada*	240,992	12.7	57,913	30.9	32.7
British Columbia	369,652	10.9	81,863	45.8	47.9
Alberta	303,032	49.9	67,564	28.2	31.7
Saskatchewan	197,000	52.1	48,781	24.5	30.1
Manitoba	123,158	14.2	32,972	19.3	20.2
Ontario	244,467	6.5	59,764	28.8	30.3
Quebec	186,973	5.8	48,390	30.4	31.5
Atlantic	146,243	6.9	37,381	24.6	25.6
Toronto	315,608	5.2	74,203	33.0	34.7
Montreal	202,048	3.5	51,717	30.8	31.9
Vancouver	424,713	10.5	93,059	48.7	51.1
Ottawa	220,006	6.1	56,968	25.2	26.3
Calgary	360,778	46.6	79,014	31.1	35.1
Edmonton	285,500	63.8	64,636	28.1	30.6

Standard condo

Region	Average Price		Qualifying Income (\$) Q2 2007	Affordability Measure (%)	
	Q2 2007 (\$)	Y/Y % ch.		Q1 2007 (rev)	Q2 2007
Canada*	210,474	12.3	50,692	27.0	28.7
British Columbia	258,210	12.8	58,021	32.3	34.0
Alberta	265,321	50.7	59,840	25.2	28.1
Saskatchewan	161,650	56.9	39,854	20.1	24.6
Manitoba	111,581	7.5	30,064	17.8	18.4
Ontario	226,925	6.1	54,900	26.4	27.9
Quebec	170,709	4.5	44,194	27.8	28.8
Atlantic	152,000	8.5	38,059	24.5	26.1
Toronto	282,296	5.8	66,034	29.0	30.9
Montreal	191,816	4.4	48,330	28.8	29.8
Vancouver	291,415	12.4	64,654	33.7	35.5
Ottawa	191,429	8.4	48,279	21.3	22.3
Calgary	300,078	52.1	65,621	24.8	29.1
Edmonton	265,000	64.2	59,661	27.2	28.3

* Population weighted average

Source: Royal LePage, Statistics Canada, RBC Economics Research

How RBC's housing affordability measures work

RBC Economics Research's housing affordability measures show the proportion of median pre-tax household income required to service the cost of mortgage payments (principal and interest), property taxes and utilities on a detached bungalow, a standard two-storey home, a standard town house and a standard condo (excluding maintenance fees).

The qualifier 'standard' is meant to distinguish between an average dwelling and an 'executive' or 'luxury' version. In terms of square footage, a standard condo has an inside floor area of 900 square feet, a town house 1,000 square feet, a bungalow 1,200 square feet and a standard two-storey 1,500 square feet.

The measures are based on a 25% down payment and a 25-year mortgage loan at a five-year fixed rate and are estimated on a quarterly basis for each province and for Montreal, Toronto, Ottawa, Calgary and Vancouver metropolitan areas.

The measures use household income rather than family income to account for the growing number of unattached individuals in the housing market. The measure is based on quarterly estimates of this annual income, created by

annualizing and weighting average weekly earnings by province and by urban area. (Median household income is used instead of the arithmetic mean to avoid distortions caused by extreme values at either end of the income distribution scale. The median represents the value below and above which lie an equal number of observations.)

The housing affordability measure is based on gross household income estimates and, therefore, does not show the impact of various provincial property tax credits, which can alter relative levels of affordability.

The higher the measure, the more difficult it is to afford a house. For example, an affordability measure of 50% means that home ownership costs, including mortgage payments, utilities and property taxes, take up 50% of a typical household's pre-tax income.

Qualifying income is the minimum annual income used by lenders to measure the ability of a borrower to make mortgage payments. No more than 32% of a borrower's gross annual income should go to "mortgage expenses"—principal, interest, property taxes and heating costs (plus maintenance fees for condos).