RBC ECONOMIC RESEARCH

HOUSING TRENDS AND AFFORDABILITY

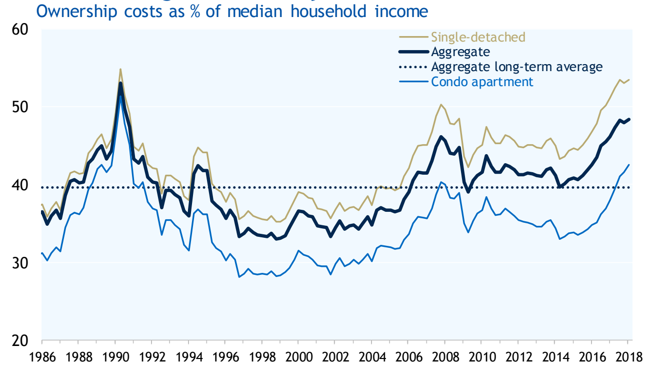
July 2018

Higher interest rates take a bite out of affordability in the first quarter

- **Short-lived reprieve.** RBC's main affordability measure for Canada in the first quarter reversed the slight improvement it saw late last year.
- **Higher interest rates were the main culprit.** A third-straight rise in mortgage rates boosted ownership costs, which outpaced household income gains.
- **Affordability is a major issue in two of Canada's largest markets.** It's at crisis levels in Vancouver and poses a tremendous challenge for many Toronto-area buyers despite improving in the past two quarters.
- **Modest deterioration in most markets.** Still, outside Vancouver, Victoria and Toronto, the weight of ownership costs generally remains in line with historical norms.
- **Unlikely to get any easier.** The prospect of more interest rate hikes in the period ahead poses material risk of further affordability erosion in Canada. The odds of this ultimately occurring will also depend on the degree to which household income increases.

RBC Housing Affordability Measures - Canada

Ownership costs as % of median household income



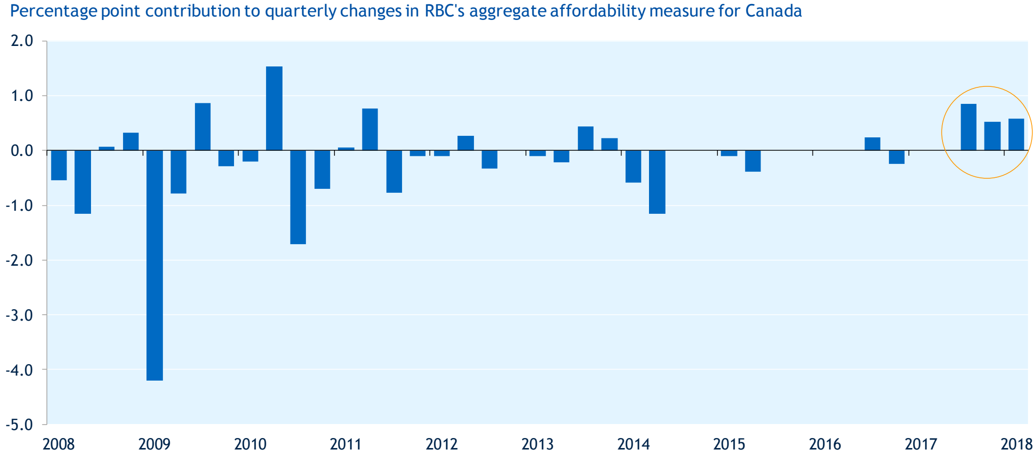
The share of income a household would need to cover ownership costs (in %)

Canada	Vancouver	Calgary	Edmonton	Toronto	Ottawa	Montreal
48.4	87.8	43.0	28.0	74.2	36.6	43.7

First quarter 2018

Mortgage rates had boosting effect on ownership costs in the past three quarters

Percentage point contribution to quarterly changes in RBC's aggregate affordability measure for Canada



Source: Brookfield RPS, Royal LePage, Statistics Canada, Bank of Canada, RBC Economics Research

Interest rates now working against affordability

Well, the winning streak for housing affordability in Canada ended… at just one quarter! RBC's aggregate affordability measure for Canada rose by 0.4 percentage points to 48.4% in the first quarter of 2018 (an increase represents a loss of affordability). This rise entirely reversed the slight 0.3 percentage point decline recorded in the previous quarter—the first decline in 10 quarters. Higher mortgage rates were the main factor returning RBC's measure to a multi-decade high. It wasn't the first time mort-

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gage rates increased—they also did so in the previous two quarters. However, a drop in home prices (centered in the Greater Toronto Area) won the day in the fourth quarter which trimmed ownership costs modestly over that period. This wasn't repeated in the first quarter as aggregate prices remained flat relative to the fourth quarter and therefore provided no offset to rising mortgage rates. Only a modest gain in household income helped out a little. The three successive quarterly increases in mortgage rates marked a significant turning point after they trended downward and contributed positively to affordability during for of the past decade. The likelihood of further interest rate increases in the period ahead is poised to make the affordability situation even more challenging for some of Canada's markets.

Oh no, appreciating prices are slamming affordability again in Vancouver… and Victoria

Because they apply from coast to coast, higher interest rates pressured affordability in all markets across Canada. In Vancouver, though, a re-acceleration of home prices in the past three quarters amplified the effect. These factors returned affordability to a sharply deteriorating track after a short period of reprieve in late-2016 and early-2017. Homeownership costs reached their highest levels on record in the first quarter of 2018—considered by many as crisis levels. While the situation isn't as extreme as it is in Vancouver, Victoria continued to experience marked deterioration in affordability in the first quarter.

Upside to a cooler market: Toronto area sees second-straight affordability improvement

Toronto, along with Winnipeg, were the only markets that we track where it became a little more affordable to carry the costs of owning a home last quarter. The main reason was that home prices fell enough in both markets to counteract the effect of higher interest rates. In the case of the Toronto area, the mortgage stress test that came into effect in January added further downward pressure on property values—which were still adjusting to last year's Fair Housing Plan implemented by the Ontario government. This represented the second-consecutive improvement in affordability in the area. There's still a long way to go before Toronto homebuyers enjoy meaningful relief though. In Winnipeg, the price dip reflected significant slowing in market activity in the past two quarters.

Modest erosion doesn't alter fair affordability position of the majority of markets across the country

With prices generally remaining flat or appreciating only moderately from the previous quarter, rising interest rates caused affordability to erode modestly in the majority of markets across Canada in the first quarter. For Saskatoon, Ottawa, Halifax and St. John's the increase in RBC's measure was the largest in more than a year. Yet, this shouldn't raise too many concerns at this stage because the level of the measure for each of these markets remains close to its historical average—indicating that any affordability-related stress isn't abnormally high. On the other hand, some degree of stress may be building in the Montreal market following a third-straight rise in its measure, which reached its highest point since 2011.

Rising rates likely to dominate the effects of growing household income and stable home prices

To be sure, interest rates will continue to be key to the outlook for housing affordability in the year ahead. Our view is that the Bank of Canada will proceed with a series of rate hikes that will raise its overnight rate from 1.25% currently to 2.25% in the first half of 2019. This would have the potential to stress housing affordability significantly. We estimate that, everything else remaining constant, a 100-basis-point increase in mortgage rates would lift RBC's aggregate affordability measure for Canada by about 4 percentage points. On the positive side, growing household income will provide some offset. A recent pick-up in wage gains bodes well in that regard. Cooler housing markets and a leveling-off of property values in some areas also could help a bit, albeit to a limited extent. The bottom line is that we don't expect affordability conditions to get any easier in Canada in the period ahead. At best they will remain unchanged. Most likely, though, they will become more challenging.

British Columbia

Victoria – Potential sellers finding it unaffordable to *sell*?

Soaring prices in the past two and a half years seriously hampered homebuyers' ability to own a property in Victoria. The share of household income required to cover the costs of ownership of a typical home ballooned from 48% in mid-2015 to 62.7% in the first quarter. Contrary to basic rules of economics, rapidly-rising prices didn't attract more sellers into the market in the first quarter. The number of properties listed for sale actually fell by 22%. It could be that current owners simply can't afford to sell given how expensive their next housing options are. Whether the case or not, the reality is that demand-supply conditions continue to be tight in the Victoria market, which maintains upward pressure on prices and keeps affordability on a deteriorating course. RBC's aggregate measure has now risen for 11 straight quarters in the area.

Vancouver area – In a bad (affordability) place

It's increasingly hard to dismiss concerns that housing *un*affordability is at crisis levels in Vancouver. RBC's aggregate measure for the area last quarter set yet another all-time high for any market in Canada (87.8%). And things could get worse if—or when—interest rates rise further. Clearly, current price levels are an impossibly high hurdle for many would-be buyers to clear. Home resale activity plunged by 25% in the first quarter. In part this reflected the new stress test but extremely poor affordability no doubt played a prominent role. The recent cooling in the market may take (upward) pressure off prices in the coming months though this is unlikely to do much to ease affordability tensions.

Alberta

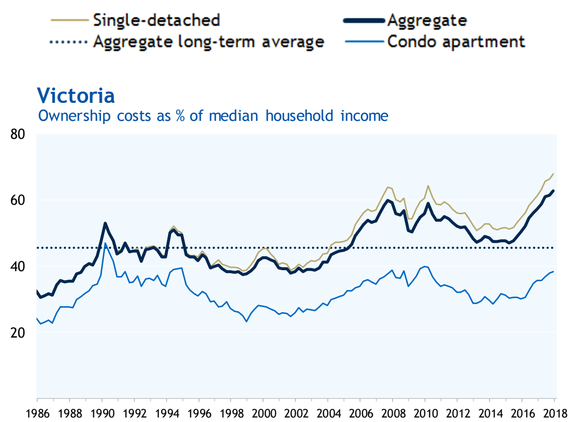
Calgary – Not as rosy as it used to be

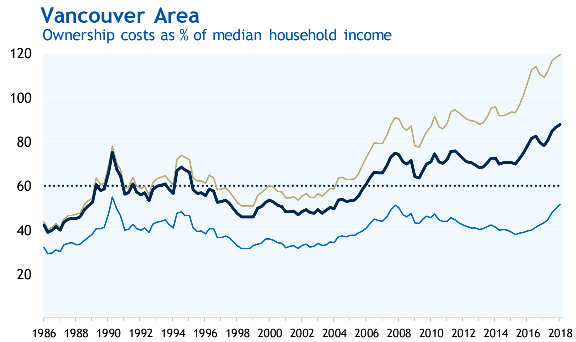
Housing affordability hasn't been a real issue for close to 10 years in Calgary but the picture isn't quite as rosy as it was just three years ago. Tough economic times first undermined local buyers' ability to own a property as household income fell during the provincial recession of 2015-2016. More recently, rising interest rates drove ownership costs higher despite home prices largely stagnating in the area. RBC's aggregate measure for Calgary tracked a slight upward trend since 2015, including in the first quarter when it rose by 0.5 percentage points to 43.0%. This still shouldn't be a big issue though buyers now also have to contend with the new stress test. These factors contributed to a 10% drop in home resales in the first quarter.

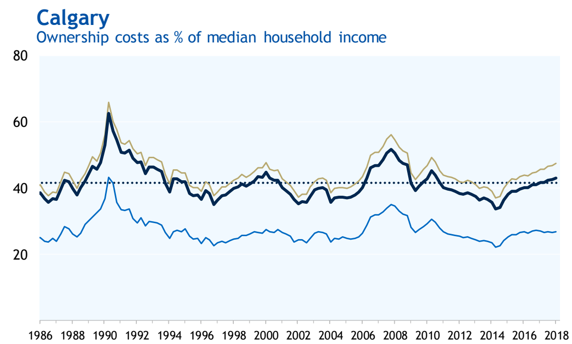
Edmonton – Stress test drawing more attention than good affordability

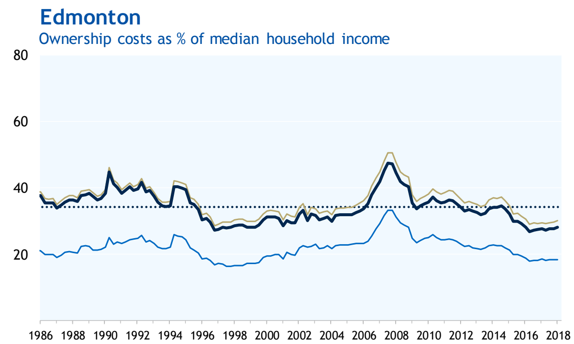
Affordability trends remained more stable at more attractive levels in Edmonton than in Calgary in recent years. This continued to be the case in the first quarter despite some modest deterioration—RBC's aggregate measure for Edmonton rose by 0.4 percentage points to 28.0%.Yet buyers probably pay much more attention to the new stress test than the level of affordability judging by the significant market volatility since the fall. Home resales surged late last year prior to the stress test coming into effect and then plunged in the first few months of 2018. We expect that continued recovery in Alberta's economy will provide support for the market to rebound later this year.

RBC Housing Affordability Measures



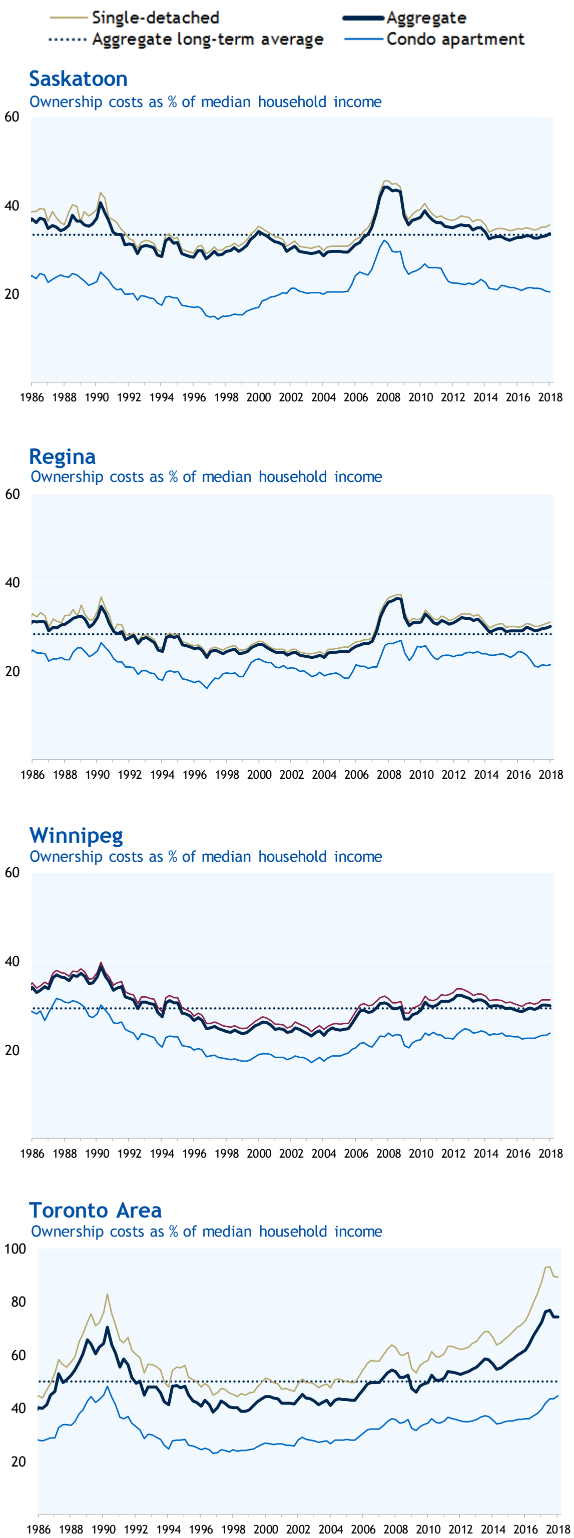






Source: RPS, Statistics Canada, Bank of Canada, Royal LePage, RBC

RBC Housing Affordability Measures



Source: RPS, Statistics Canada, Bank of Canada, Royal LePage, RBC

Saskatchewan

Saskatoon – Affordability is not the issue

The biggest challenges facing Saskatoon's housing market are soft demand and plentiful inventories—not affordability. RBC's aggregate measure has been stuck at neutral levels for the past three years. And the 0.7 percentage-point increase recorded in the first quarter didn't change any of this. All it did was to lift the measure to 33.7%, almost bang-on the long-run average of 33.3% for the area. Sluggish local job market weighed significantly on buyers' minds in recent years, although the area's unemployment rate eased somewhat since the middle of last year. Further improvement may eventually stimulate demand and help rebalance the market—which continues to favour buyers at this stage.

Regina – Market still has the blues despite neutral affordability

Weak demand and relatively high inventories are also the most prominent issues facing the Regina market. As in Saskatoon, affordability has been generally stable at neutral levels over the past several years. RBC's aggregate measure inched 0.3 percentage point higher to 30.0% in the first quarter—just marginally above the historical average of 28.3%. The new stress test, higher interest rates and enduring stagnation in the local labour market weighed significantly on homebuyer demand in early 2018. Home resales fell by more than 5% and prices continued to drift lower in the first quarter.

Manitoba

Winnipeg – Cooler market keeps it affordable to own a home

Winnipeg was one of only two markets on our list (the other being Toronto) that saw a small improvement in affordability in the first quarter. RBC's aggregate measure for the area dipped by 0.2 percentage points to 29.9%. A second-consecutive easing in home prices helped lower the ownership bar in the area—not that this bar was problematic to begin with. RBC's measure has trended close to its long-run average since 2014. The Winnipeg market cooled over the past two quarters after reaching historically high levels of activity in 2016 and early 2017. Buyers gained more pricing power as a result.

Ontario

Toronto area – Make that two quarters of relief in a row

Well, it looks like policy interventions at the federal and provincial levels have had some success at bringing affordability relief to Toronto-area buyers. RBC's aggregate measure has now eased for two quarters in a row—albeit just barely. The measure inched lower by 0.1 percentage points in the latest period. While this is progress, there's still a very long way to go before affordability is meaningfully restored given that Toronto's measure remains at a sky-high 74.2%. The scope for further relief is limited, unfortunately. Home prices are poised to turn slightly higher near term after declining modestly in the past two quarters. Prices will get support from balanced demand-supply conditions, which will prevail despite much cooler resale activity.

Ottawa – Slight affordability erosion is a by-product of a vibrant market

A gradual erosion of affordability in Ottawa has been a by-product of a vibrant housing market over the past year and a half supported by a strong economy and positive demographic trends. A run-up in home resale activity tightened demand-supply conditions markedly last year. It put sellers in the driver's seat for the first time since early 2010. Sellers continue to hold the upper hand so far this year despite home resales declining by more than 12% in the first quarter. Part of this decline reflected volatility caused by the new mortgage stress test. Yet prices remain on an accelerating trajectory at this stage. The rate of price increase was in fact one of the strongest among the markets that we track over the first quarter. This led to RBC's aggregate affordability measure rising by 0.6 percentage points to 36.6% in the latest period—still close to historical norms.

Quebec

Montreal area – Not problematic yet but ownership costs keep rising

Montreal's housing market continues to show all-round, solid momentum and steadily rising prices in the early part of 2018. The flipside, though, is that it's becoming less and less affordable to own a home in the area. RBC's aggregate measure last quarter rose for the ninth time in the past 11 quarters. The latest increase of 0.4 percentage points took the measure to a seven-year high of 43.7%. The increasing deviation from the long-run average hints that there's the potential for affordability tensions to build in the Montreal area—especially in the single-detached segment where sellers are calling the shots. That being said, there are few signs that buyers are overly fussed by affordability issues at this point. The new stress test is likely to be a bigger consideration for them.

Quebec City – Flat all-round

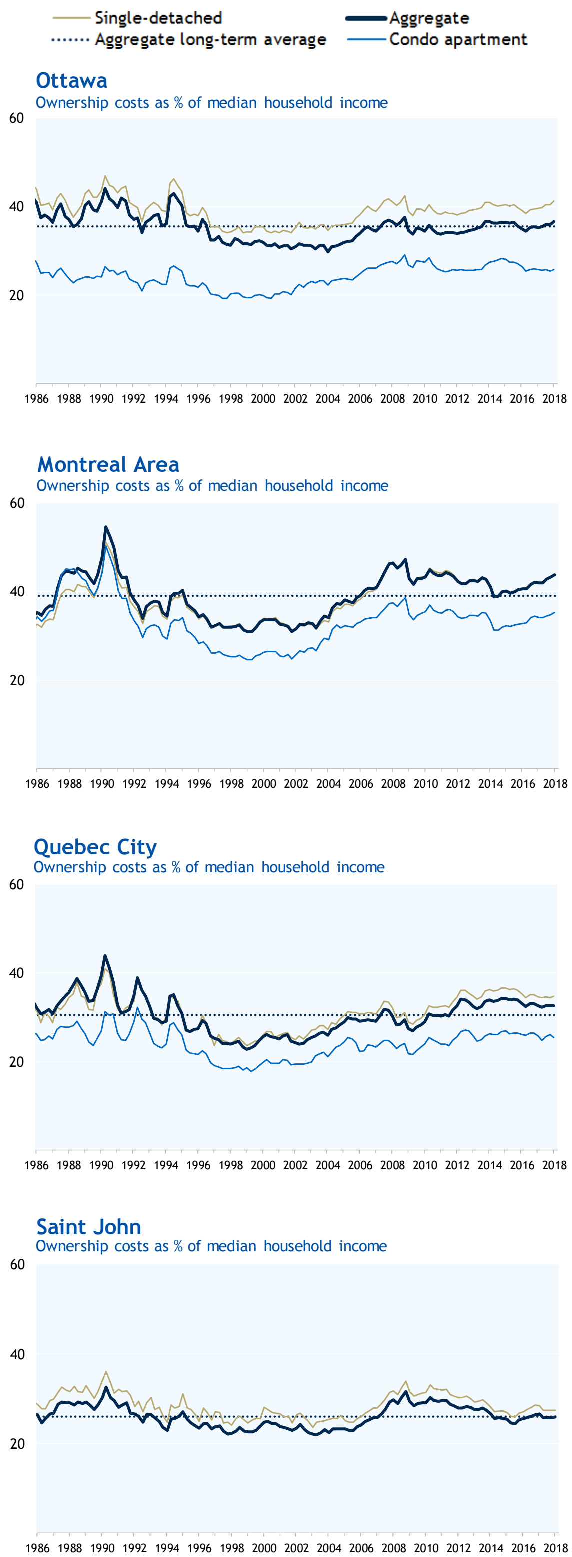
It was still a buyer's market in the Quebec City area in the first quarter as flat resale activity did little to address persisting high inventory issues. This left prices unchanged relative to the fourth quarter and up just marginally from a year ago. Affordability trends in the area have been very stable since early 2017. RBC's aggregate measure barely budged in the first quarter, rising by just 0.1 percentage points—relative to both the quarter-ago and year-ago quarters. Nonetheless, the weight of ownership costs could be a factor dampening homebuyer demand. At 32.6% in the latest period, RBC's measure continues to be modestly above normal levels for the area.

Atlantic Canada

Saint John – Dip in activity unlikely to be caused by affordability issues

Not even the fact that Saint John is one of Canada's most affordable housing markets provided immunity against the volatility generated by the new mortgage stress test. After reaching a nine-year high in 2017, home resales fell markedly in the area since the stress test was implemented in January. The decline eased demand-supply conditions somewhat though not enough to disturb the generally balanced position that prevailed through last year. Thus not enough to take away support for prices. Ownership costs rose slightly in the first quarter. RBC's aggregate measure advanced by 0.2 percentage points to 25.9%—the lowest level among the markets that we track. It's unlikely that affordability poses a major issue for most Saint John buyers.

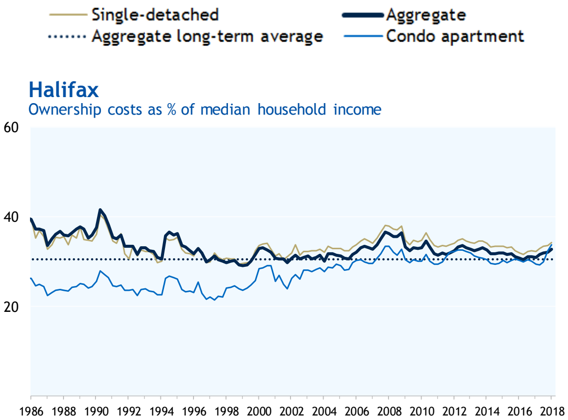
RBC Housing Affordability Measures



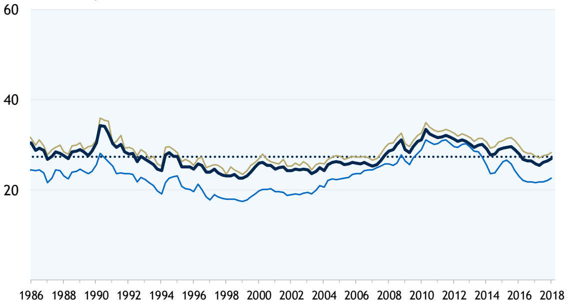
Source: RPS, Statistics Canada, Bank of Canada, Royal LePage, RBC

RBC Housing Affordability Measures

Halifax
Ownership costs as % of median household income



St. John's
Ownership costs as % of median household income



Source: RPS, Statistics Canada, Bank of Canada, Royal LePage, RBC

Halifax – Showing impressive resilience

Halifax has been one of the few markets in Canada that showed some resilience against the new mortgage stress test this year. Market activity in the area barely skipped a beat in the first quarter. Resales inched lower by just 1.2%—a fraction of the 13% drop recorded at the national level. Moreover, demand-supply conditions continued to tighten somewhat as fewer homes were put up for sale. It could be that a spurt of job creation this year and solid population growth kept bringing a steady stream of buyers to market. And relatively attractive affordability could be a factor too though there's some deterioration in that regard over the past year. RBC's aggregate measure rose by a total of 1.8 percentage points since the first quarter of 2017, including a 0.6 percentage point advance in the latest quarter. Nonetheless, the value of 32.7% for measure is still below the long-run average of 33.2% and well short of the national average of 48.4%.

St. John's – Rise in prices isn't the start of a new trend

Home prices in St. John's rose in the first quarter for only the third time in the past two and a half years. This looks more like a fluke to us than the start of a new trend because there continues to be so much inventory out there relative to demand. St. John's clearly remains a buyer's market at this stage. This spells for greater odds of property devaluation than appreciation in the near term. The surprising price rise in the first quarter eroded affordability somewhat. RBC's aggregate measure increased by 0.6 percentage points to 27.0% but this shouldn't be cause for concerns. The area's affordability still compares favourably against the majority markets in Canada. The bigger issues for buyers continue to be a sputtering provincial economy and uncertain job prospects.

How the RBC Housing Affordability Measures work

The RBC Housing Affordability Measures show the proportion of median pre-tax household income that would be required to service the cost of mortgage payments (principal and interest), property taxes, and utilities based on the average market price for single-family detached homes and condo apartments, as well as for an overall aggregate of all housing types in a given market.

Current home prices are sourced from RPS, and established from sales prices from monthly transactions, which are filtered to remove extreme values and other outliers.

The aggregate of all categories includes information on prices for housing styles not covered in this report (semi-detached, row houses, townhouses and plexes) in addition to prices for single-family detached homes and condominium apartments. In general, single-family detached homes and condo apartments represent the bulk of the owned housing stock across Canadian markets.

The affordability measures are based on a 25% down payment, a 25-year mortgage loan at a five-year fixed rate, and are estimated on a quarterly basis for 14 major urban markets in Canada and a national composite. 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 lays an equal number of observations.)

The RBC Housing Affordability Measure is based on gross household income estimates and, therefore, does not show the effect of various provincial property-tax credits, which could alter relative levels of affordability.

The higher the measure, the more difficult it is to afford a home. 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.

Summary tables

Aggregate of all categories

Market	Price			RBC Housing Affordability Measure			
	Q1 2018 ($)	Q/Q % ch.	Y/Y % ch.	Q1 2018 (%)	Q/Q Ppt. ch.	Y/Y Ppt. ch.	Avg. since '85 (%)
Canada	504,100	0.0	4.5	**48.4**	0.4	2.3	39.7
Victoria	783,100	1.3	8.3	**62.7**	1.2	5.5	45.5
Vancouver area	1,158,300	0.9	10.8	**87.8**	1.5	9.5	60.0
Calgary	506,300	-0.2	2.0	**43.0**	0.5	1.3	41.5
Edmonton	407,300	0.0	0.3	**28.0**	0.4	0.4	34.3
Saskatoon	369,800	0.1	-0.8	**33.7**	0.7	1.1	33.3
Regina	329,200	-0.3	-0.8	**30.0**	0.3	0.9	28.3
Winnipeg	301,900	-1.0	1.1	**29.9**	-0.2	0.8	29.4
Toronto area	848,100	-1.3	1.3	**74.2**	-0.1	1.7	50.1
Ottawa	407,600	1.2	4.3	**36.6**	0.6	1.4	35.5
Montreal area	405,000	0.7	4.8	**43.7**	0.4	1.7	39.0
Quebec City	293,100	0.0	0.6	**32.6**	0.1	0.1	30.5
Saint John	204,200	0.1	-4.3	**25.9**	0.2	-0.6	26.1
Halifax	318,600	0.1	2.9	**32.7**	0.6	1.8	33.2
St. John's	312,900	0.7	-0.4	**27.0**	0.6	1.2	27.4

Single-family detached

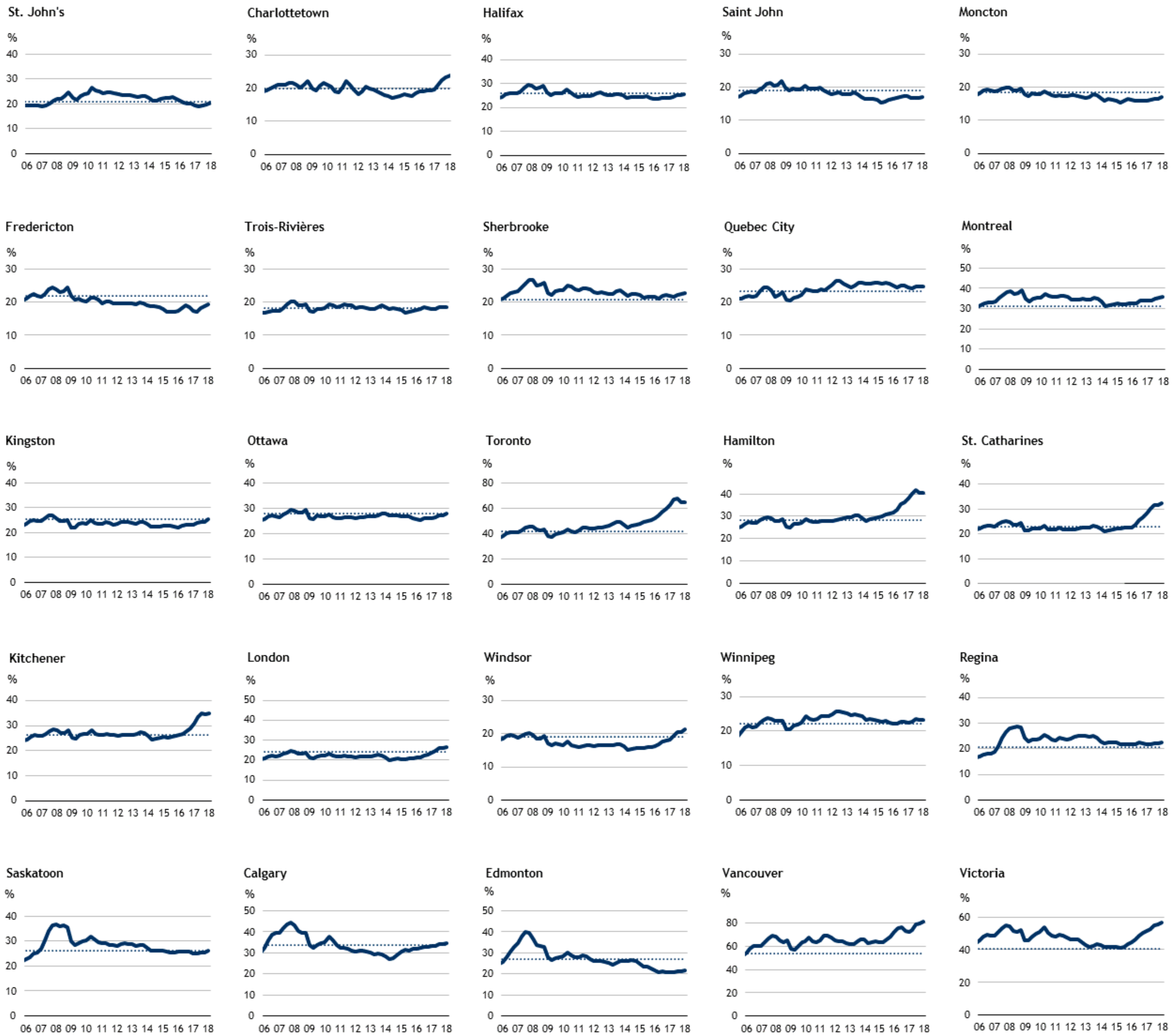
Market	Price			RBC Housing Affordability Measure			
	Q1 2018 ($)	Q/Q % ch.	Y/Y % ch.	Q1 2018 (%)	Q/Q Ppt. ch.	Y/Y Ppt. ch.	Avg. since '85 (%)
Canada	555,100	-0.1	4.2	**53.5**	0.4	2.4	42.3
Victoria	845,600	1.6	9.5	**67.8**	1.5	6.6	47.6
Vancouver area	1,598,100	0.1	7.5	**119.3**	1.1	10.0	70.5
Calgary	558,900	0.3	3.1	**47.4**	0.7	1.8	44.5
Edmonton	433,300	0.1	0.4	**30.0**	0.4	0.5	36.2
Saskatoon	383,800	-0.6	-0.3	**35.6**	0.5	1.2	34.9
Regina	329,700	-0.3	-0.5	**31.1**	0.4	1.0	29.2
Winnipeg	307,700	-0.6	1.5	**31.2**	-0.1	1.0	30.6
Toronto area	1,028,600	-1.3	0.8	**89.3**	-0.2	1.8	58.1
Ottawa	454,200	1.3	4.8	**41.2**	0.8	1.7	39.1
Montreal area	394,600	0.3	5.6	**43.8**	0.3	1.9	38.1
Quebec City	304,100	0.5	0.7	**34.7**	0.2	0.1	31.2
Saint John	209,600	-0.8	-5.8	**27.5**	0.1	-0.9	28.5
Halifax	327,200	0.2	3.6	**34.3**	0.6	2.1	33.7
St. John's	320,200	0.0	-2.5	**28.3**	0.5	0.8	28.7

Condominium apartment

Market	Price			RBC Housing Affordability Measure			
	Q1 2018 ($)	Q/Q % ch.	Y/Y % ch.	Q1 2018 (%)	Q/Q Ppt. ch.	Y/Y Ppt. ch.	Avg. since '85 (%)
Canada	456,600	1.7	12.5	**42.5**	1.0	4.5	34.5
Victoria	464,300	1.1	6.6	**38.4**	0.6	2.7	31.8
Vancouver area	657,100	3.0	19.2	**51.4**	1.8	8.3	39.6
Calgary	289,400	-0.5	-3.4	**26.7**	0.2	-0.3	27.3
Edmonton	247,200	-2.0	-3.2	**18.3**	0.0	-0.2	22.0
Saskatoon	210,200	-3.5	-9.8	**20.5**	-0.2	-0.8	21.5
Regina	231,200	-1.0	-3.3	**21.4**	0.1	0.2	21.9
Winnipeg	245,300	2.5	3.9	**23.8**	0.5	1.1	22.7
Toronto area	495,300	1.7	14.4	**44.6**	1.0	5.1	31.9
Ottawa	290,300	0.1	-0.8	**25.7**	0.3	0.0	24.4
Montreal area	331,700	0.8	3.4	**35.2**	0.4	1.1	33.1
Quebec City	238,300	-3.8	-2.0	**25.4**	-0.7	-0.4	24.1
Saint John	n/a	n/a	n/a	**n/a**	n/a	n/a	n/a
Halifax	353,400	2.5	12.9	**33.7**	1.2	4.3	27.3
St. John's	270,800	0.5	-0.4	**22.5**	0.5	0.9	23.3

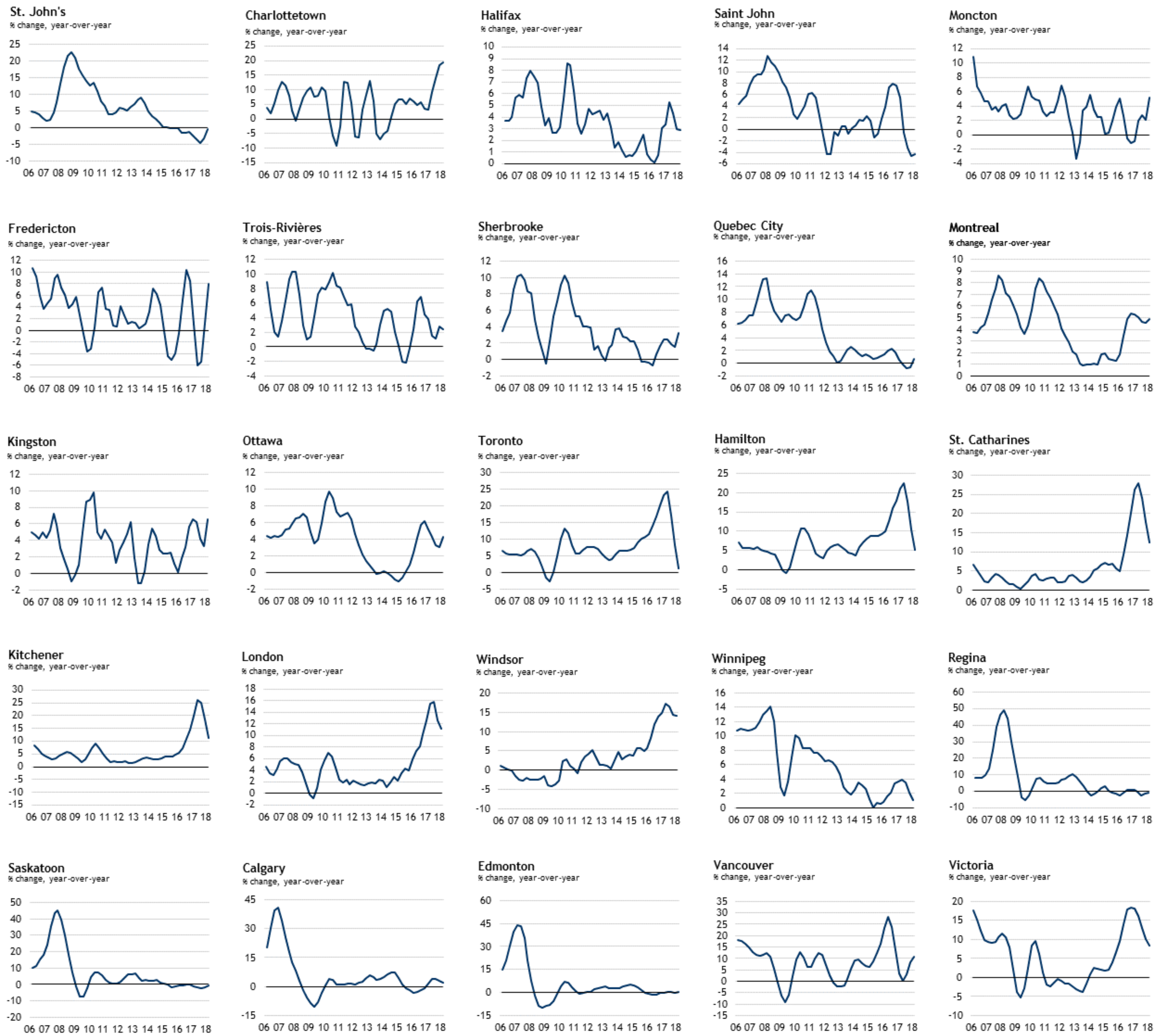
Mortgage carrying costs by city

Our standard RBC Housing Affordability Measure captures the proportion of median pre-tax household income required to service the cost of a mortgage on an existing housing unit at market prices, 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 constraint in the smaller CMAs. This measure is based on a 25% down payment, 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.



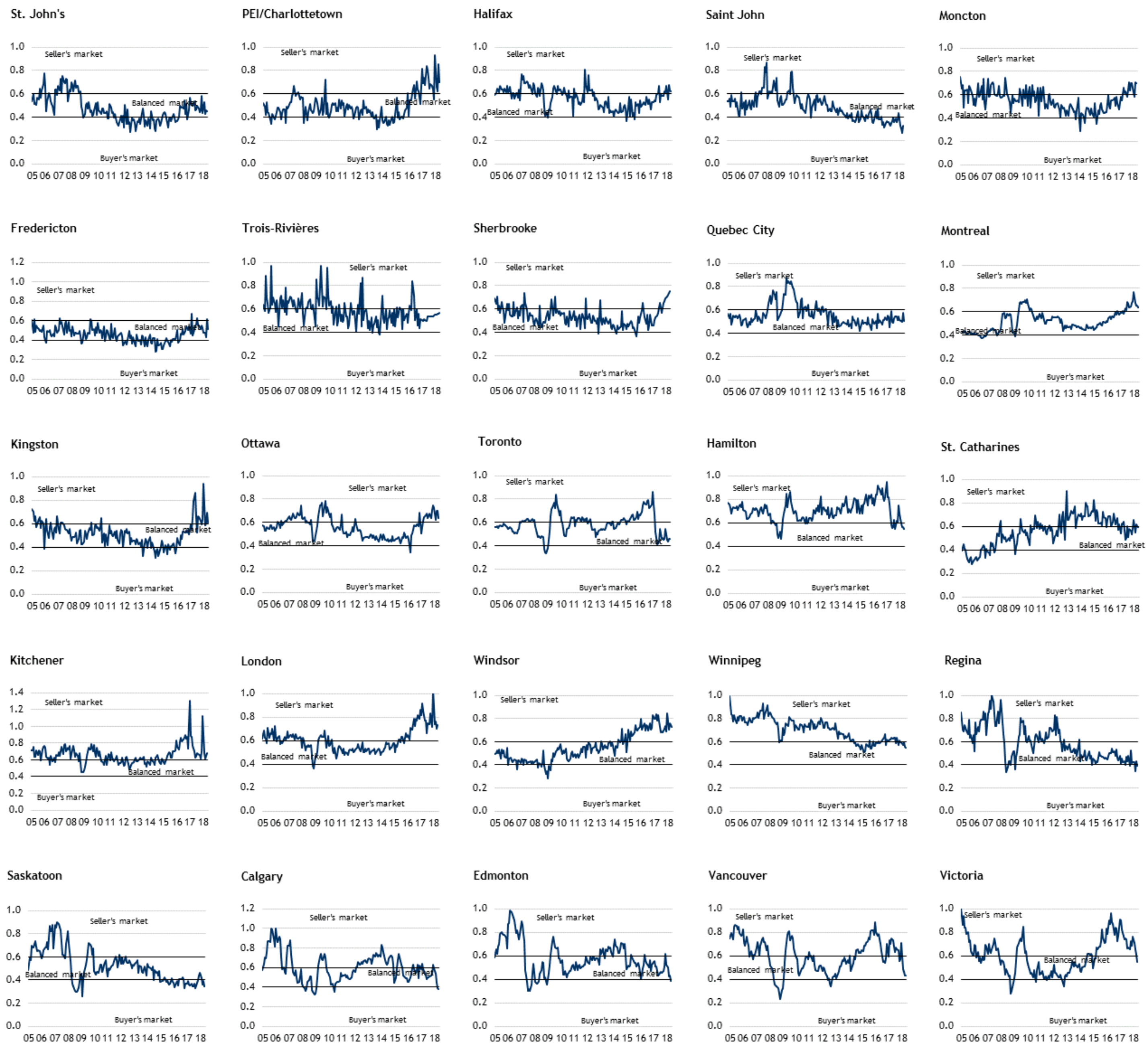
The dashed line represents the long-term average for the market.

Aggregate home price



Source: RPS, RBC Economics Research

Home sales-to-new listings ratio



Source: Canadian Real Estate Association, RBC Economics Research