

Home affordability improved in Q2 2020

By Kyle Dahms & Alexandra Ducharme

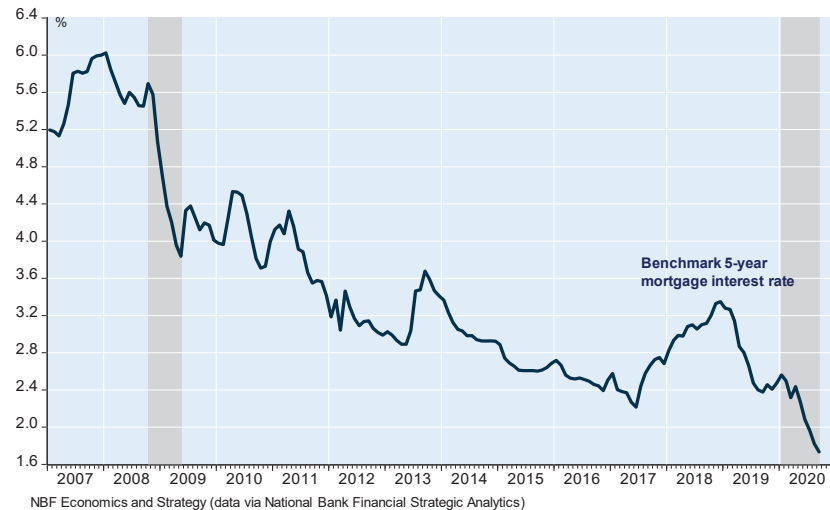
Housing affordability in Canada's large urban centres improved in the second quarter of 2020 after having deteriorated in the two prior quarters. Higher incomes helped in Q2 but the largest portion of the improvement came in the form of lower interest rates. Indeed, the latter declined 19 basis points in the quarter, reflecting the easing from the central bank. Combined, income and mortgage rates were more than enough to offset the increase in home prices. Still, the decline in interest rates on a quarterly average basis does not completely reflect the change in 5-year mortgage rates since the beginning of the COVID-19 pandemic. The February to June decline in mortgage interest rates was a much more significant 41 basis points. Looking ahead, the preliminary data for rates shows additional improvements in the third quarter of the year (cumulatively they are down over 70 bps). While we expect this to help affordability, home prices should remain resilient based on the latest resale market data showing record sales volumes. Homebuyers have rushed back to the market after having delayed purchases and are now being offered record-low interest rates. Once pent-up demand is exhausted, the Canadian housing market will still have to face high levels of unemployment and reduced household formation due to lower immigration.

HIGHLIGHTS:

- In the second quarter of 2020, Canadian housing affordability improved following back to back deteriorations. The mortgage payment on a representative home as a percentage of income (MPPI) fell 0.67 point after a 0.14-point increase in Q1'20. Seasonally adjusted home prices increased 2% in Q2'20 from Q1'20; the benchmark mortgage rate (5-year term) declined 19 basis points; while median household income rose 1.4%.
- Among the ten markets covered, affordability deteriorated only in Ottawa-Gatineau in the second quarter. All other markets showed an improvement with Victoria, Vancouver and Calgary leading the advance (see chart on the right). Vancouver remained at its most affordable level since 2016. Countrywide, affordability improved in both the condo (-0.4pp) and non-condo (-0.9pp) segments. See detailed statistics on page 12.

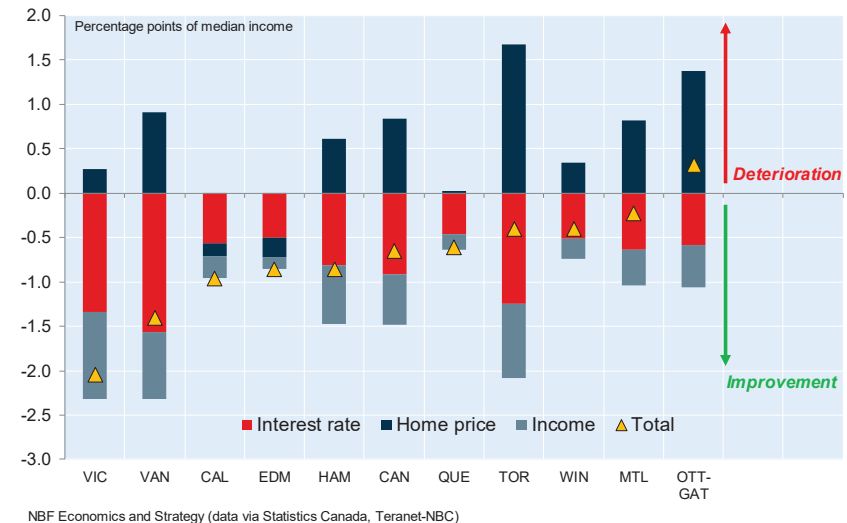
Canada: Mortgage interest rates have hit an all-time low

Benchmark 5 year market mortgage rate (Last data : September 9, 2020)



Canada: Q2 change in housing affordability in 10 metropolitan areas

Q/Q change in mortgage payment on median-price home (25-year amortization, 5-year term)



Toronto

Toronto's housing affordability improved in both the non-condo and condo segments in the second quarter. Indeed, lower interest rates combined with an increase in income contributed to improve the affordability in Canada's largest city. Home prices for all dwellings rose +2.9% q/q, with a +3.4% increase in the condo segment and a +2.8% increase in the non-condo segment. All told, still on a q/q basis, housing affordability improved -0.4, with an even larger improvement on a y/y basis (-1.8pp), which remains less than the progress of the composite average. *See tables page 12.

| Mortgage payment as a % of income (MPPI) | | | | |
|--|--------------|---|--------|-----|
| Non-Condo | 60.7% | ▼ | - 0.5% | Q/Q |
| Condo | 37.6% | ▼ | - 0.1% | Q/Q |



**Non-
Condo**

\$977,687
Price of the representative home in the metropolitan market

\$202,152
Household annual income needed to afford the representative home

103
Months of saving required for the down payment (saving rate of 10%)

29.9%
Premium for buying compared to the national urban composite



Condo

\$606,138
Price of the representative condo in the metropolitan market

\$127,451
Household annual income needed to afford the representative condo

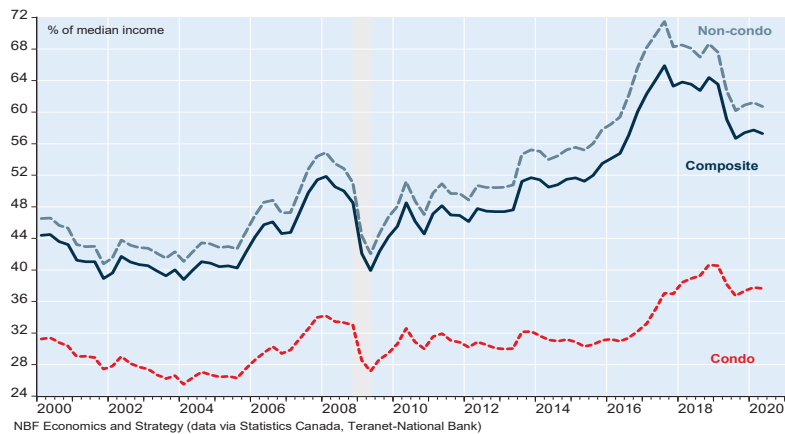
51
Months of saving required for the down payment (saving rate of 10%)

6.3%
Premium/discount for buying compared to renting a two-bedroom condo in the GTA

Toronto : Perspective on housing affordability

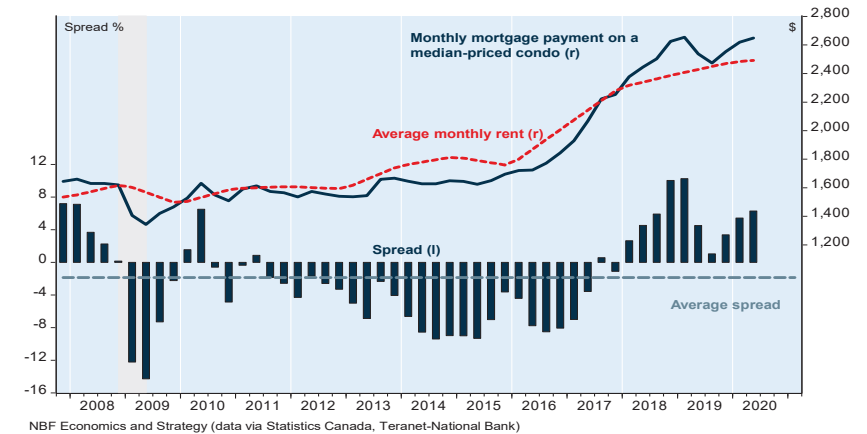
Monthly mortgage payment on median home price (25 year amortization, 5-year term)

TORONTO



Toronto: Buying compared to renting

Premium/discount for buying compared to renting a two-bedroom condo



Montreal

In Montreal, affordability as measured by the MPPI slightly improved for all segments (-0.2pp) in the second quarter. Improvements occurred in the non-condo segments (-0.3pp), while the MPPI remained stable in the condo sector. For all dwellings, even if the increase in income was lower than the increase on home prices during the quarter (+2.8%), lower interest rates contributed to improve the affordability in the city. *See tables page 12.

| Mortgage payment as a % of income (MPPI) | | | | |
|--|--------------|---|--------|-----|
| Non-Condo | 31.6% | ▼ | - 0.3% | Q/Q |
| Condo | 24.4% | ▶ | 0.0% | Q/Q |



Non-Condo

\$407,557

Price of the representative home in the metropolitan market

\$86,493

Household annual income needed to afford the representative home

36

Months of saving required for the down payment (saving rate of 10%)

-45.8%

Premium for buying compared to the national urban composite



Condo

\$314,022

Price of the representative condo in the metropolitan market

\$66,643

Household annual income needed to afford the representative condo

28

Months of saving required for the down payment (saving rate of 10%)

9.7%

Premium/discount for buying compared to renting a two-bedroom condo in Montreal

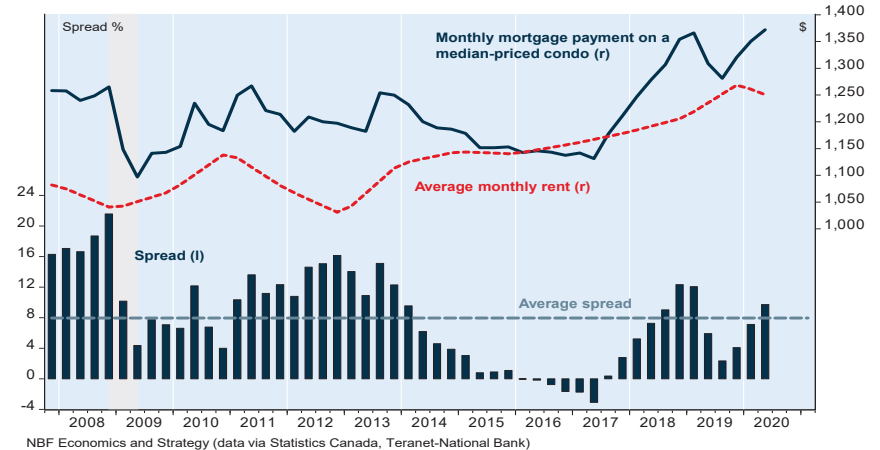
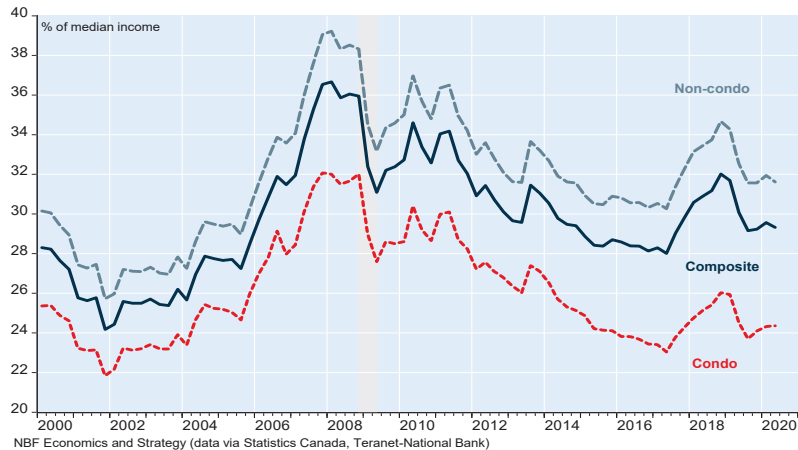
Montreal : Perspective on housing affordability

Monthly mortgage payment on median home price (25 year amortization, 5-year term)

Montreal: Buying compared to renting

Premium/discount for buying compared to renting a two-bedroom condo

MONTREAL



Vancouver

Vancouver's housing affordability as quantified by the MPPI* improved for both the condo segment and the non-condo sector (-0.5 pp and -1.9pp respectively). The mortgage payment for the non-condo portion decreased -1.1% during the quarter and requires an 86.6% share of the median household pre-tax income to service. For the aggregate, home prices increased moderately (+1.3%), below the urban composite. Affordability for all dwelling thus improved -1.4pp this quarter on the back of higher incomes and lower interest rates more than offsetting the rise in home prices. *See tables page 12.

| Mortgage payment as a % of income (MPPI) | | | | |
|--|--------------|---|--------|-----|
| Non-Condo | 86.6% | ▼ | - 1.9% | Q/Q |
| Condo | 42.8% | ▼ | - 0.5% | Q/Q |



Non-Condo

\$1,280,595
Price of the representative home in the metropolitan market

\$228,860
Household annual income needed to afford the representative home

397
Months of saving required for the down payment (saving rate of 10%)

70.2%
Premium for buying compared to the national urban composite



Condo

\$632,198
Price of the representative condo in the metropolitan market

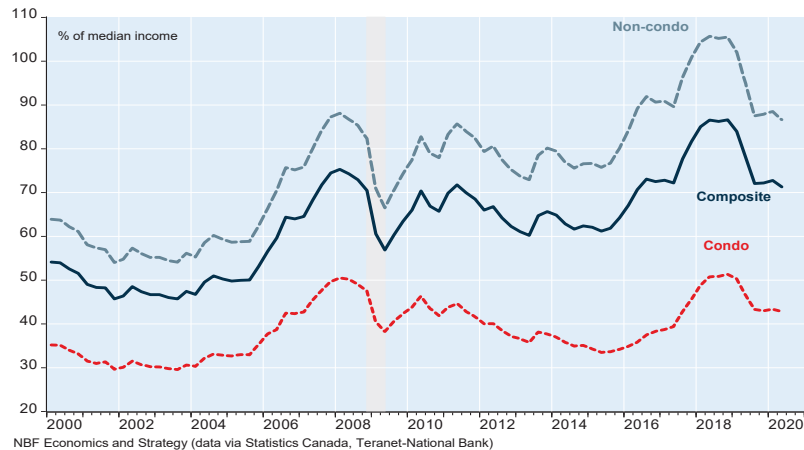
\$132,690
Household annual income needed to afford the representative condo

59
Months of saving required for the down payment (saving rate of 10%)

35.3%
Premium/discount for buying compared to renting a two-bedroom condo in Vancouver

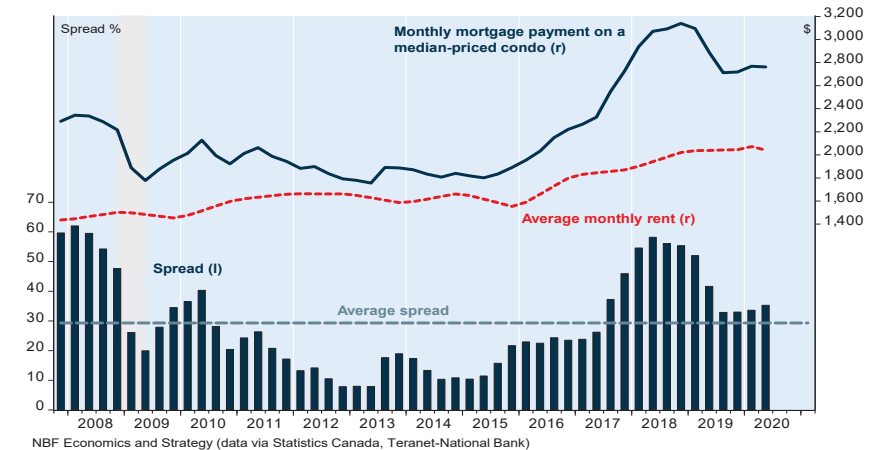
Vancouver : Perspective on housing affordability

Monthly mortgage payment on median home price (25 year amortization, 5-year term)



Vancouver: Buying compared to renting

Premium/discount for buying compared to renting a two-bedroom condo



Calgary

Calgary saw the MPPI* equally improved for both the non-condo and condo segments (MPPI* down -1.0pp). Home prices were down on both a quarterly (-0.5%) and an annual (-1.1%) basis. This decline, combined to higher incomes and lower interest rates, improved the affordability of all dwellings by -0.9pp for the quarter. The MPPI* for all dwelling now stands at 25.5%, the lowest value on record for this city. *See tables page 12.

| Mortgage payment as a % of income (MPPI) | | | | |
|--|--------------|---|--------|-----|
| Non-Condo | 29.0% | ▼ | - 1.0% | Q/Q |
| Condo | 15.1% | ▼ | - 1.0% | Q/Q |



Non-Condo

\$484,705
Price of the representative home in the metropolitan market

\$102,866
Household annual income needed to afford the representative home

33
Months of saving required for the down payment (saving rate of 10%)

-35.6%
Premium for buying compared to the national urban composite



Condo

\$252,031
Price of the representative condo in the metropolitan market

\$53,487
Household annual income needed to afford the representative condo

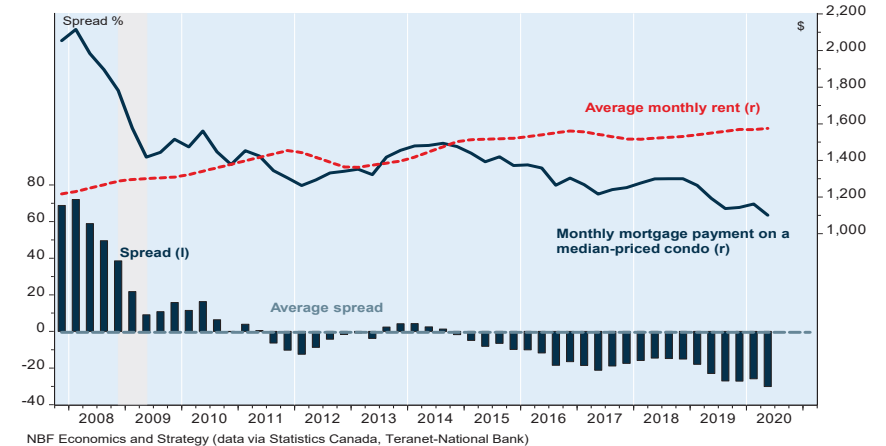
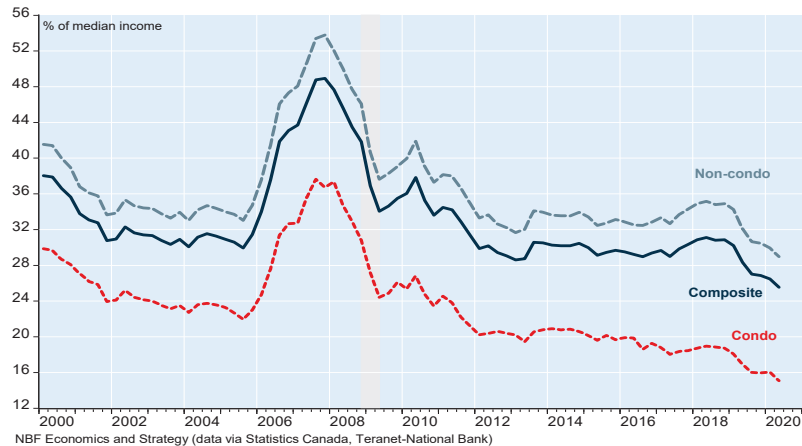
17
Months of saving required for the down payment (saving rate of 10%)

-30.1%
Premium/discount for buying compared to renting a two-bedroom condo in Calgary

Calgary : Perspective on housing affordability
Monthly mortgage payment on median home price (25 year amortization, 5-year term)

Calgary: Buying compared to renting
Premium/discount for buying compared to renting a two-bedroom condo

CALGARY



Edmonton

With Calgary, Edmonton was the only city in which home prices decreased during the quarter (-0.9%). This, combined to higher incomes and lower interest rates, caused the MPPI* to decrease -0.8pp for all dwellings in the quarter. There was an improvement of affordability for both the non-condo (-0.9pp) and the condo (-0.7pp) segments. Looking at the annual perspective, even with a slower than average growth in revenues, the MPPI* for the composite fell by -2.4pp, in line with the urban composite, due to declining home prices. *See tables page 12.

| Mortgage payment as a % of income (MPPI) | | | | |
|--|-------|---|--------|-----|
| Non-Condo | 24.1% | ▼ | - 0.9% | Q/Q |
| Condo | 12.6% | ▼ | - 0.7% | Q/Q |



Non-Condo

\$412,213
Price of the representative home in the metropolitan market

\$87,481
Household annual income needed to afford the representative home

28
Months of saving required for the down payment (saving rate of 10%)

-45.2%
Premium for buying compared to the national urban composite



Condo

\$216,021
Price of the representative condo in the metropolitan market

\$45,845
Household annual income needed to afford the representative condo

14
Months of saving required for the down payment (saving rate of 10%)

-30.5%
Premium/discount for buying compared to renting a two-bedroom condo in Edmonton

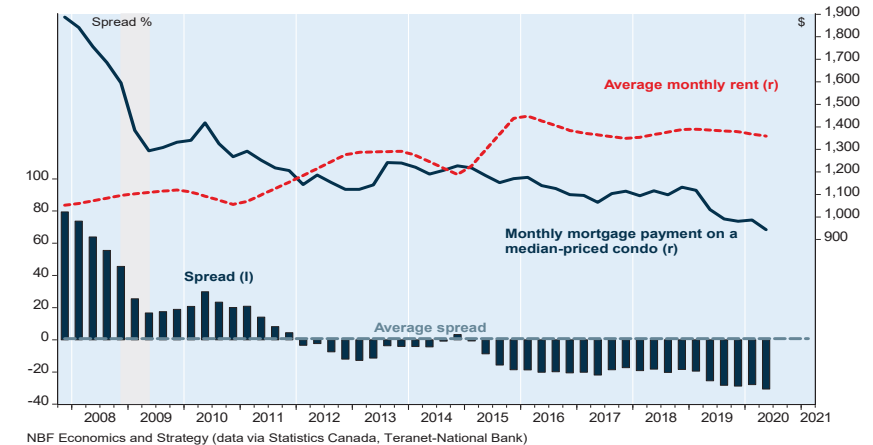
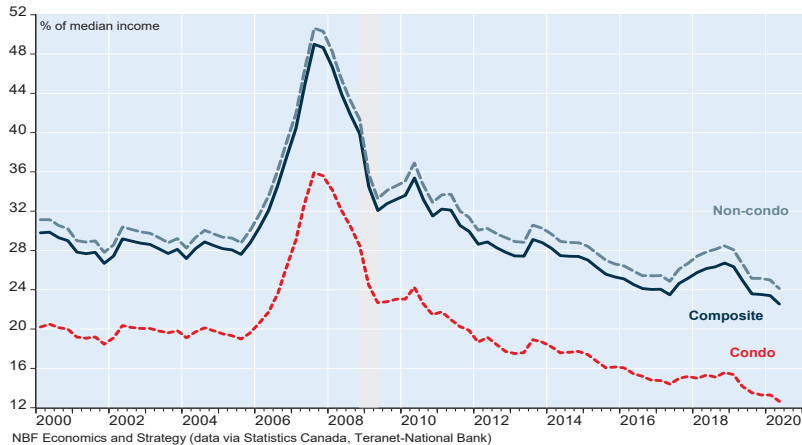
Edmonton : Perspective on housing affordability

Monthly mortgage payment on median home price (25 year amortization, 5-year term)

Edmonton: Buying compared to renting

Premium/discount for buying compared to renting a two-bedroom condo

EDMONTON



Ottawa/Gatineau

Ottawa-Gatineau was the only market in which housing affordability did not improve in the quarter. The MPPI* slightly increased in the condo segment (+0.1pp), and in the non-condo sector (+0.3pp), for a +0.3pp increase for all dwellings. The increase in income and lower interest rates were not enough to outweigh the increase in home prices (+5.1%), which was the highest among all urban areas. All told, even if the MPPI did not improve in the quarter, it was still down -0.3pp from a year ago. *See tables page 12.

| Mortgage payment as a % of income (MPPI) | | | | |
|--|--------------|-----|-------------|-----|
| Non-Condo | 29.4% | ▲ + | 0.3% | Q/Q |
| Condo | 18.5% | ▲ + | 0.1% | Q/Q |



Non-Condo

\$495,563

Price of the representative home in the metropolitan market

\$105,170

Household annual income needed to afford the representative home

34

Months of saving required for the down payment (saving rate of 10%)

-34.1%

Premium for buying compared to the national urban composite



Condo

\$312,186

Price of the representative condo in the metropolitan market

\$66,253

Household annual income needed to afford the representative condo

21

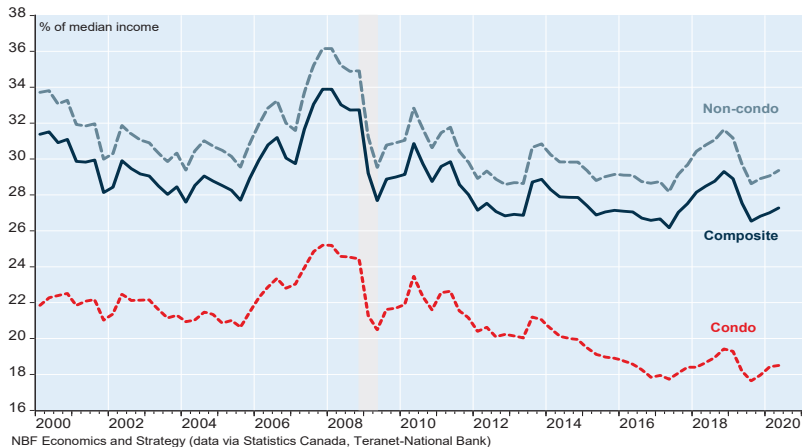
Months of saving required for the down payment (saving rate of 10%)

-17.4%

Premium/discount for buying compared to renting a two-bedroom condo in Ottawa/Gatineau

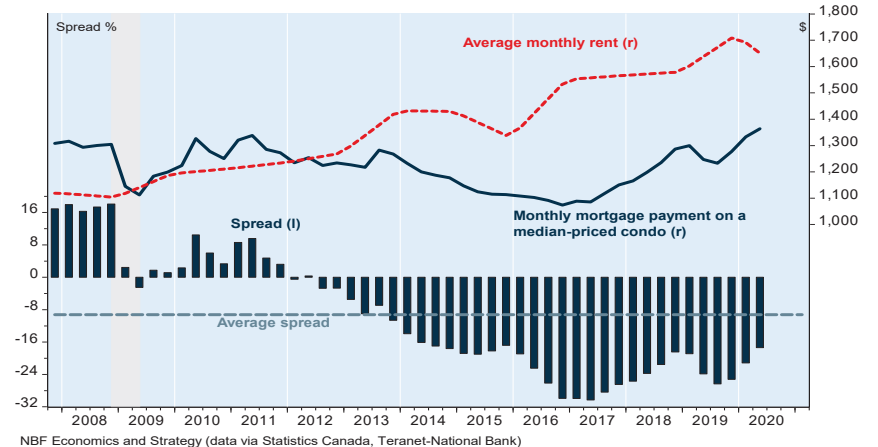
Ottawa/Gatineau : Perspective on housing affordability

Monthly mortgage payment on median home price (25 year amortization, 5-year term)



Ottawa/Gatineau: Buying compared to renting

Premium/discount for buying compared to renting a two-bedroom condo



Quebec City

Canada's most accessible market got even more affordable in the quarter for the second time in a row. Quebec city's MPPI* improved for non-condo dwellings (-0.7pp) and the condo (-0.1pp) segment. This improvement can be attributed to steady home prices combined to higher revenues and lower interest rates. For all dwellings, the MPPI was down -0.6pp during the quarter at 20.8%, 2 percentage points lower than the 20 year average in the city. *See tables page 12.

| Mortgage payment as a % of income (MPPI) | | | | |
|--|--------------|---|--------|-----|
| Non- Condo | 21.4% | ▼ | - 0.7% | Q/Q |
| Condo | 15.6% | ▼ | - 0.1% | Q/Q |



**Non-
Condo**

\$292,449

Price of the representative home in the metropolitan market

\$62,064

Household annual income needed to afford the representative home

24

Months of saving required for the down payment (saving rate of 10%)

-61.1%

Premium for buying compared to the national urban composite



Condo

\$213,705

Price of the representative condo in the metropolitan market

\$45,353

Household annual income needed to afford the representative condo

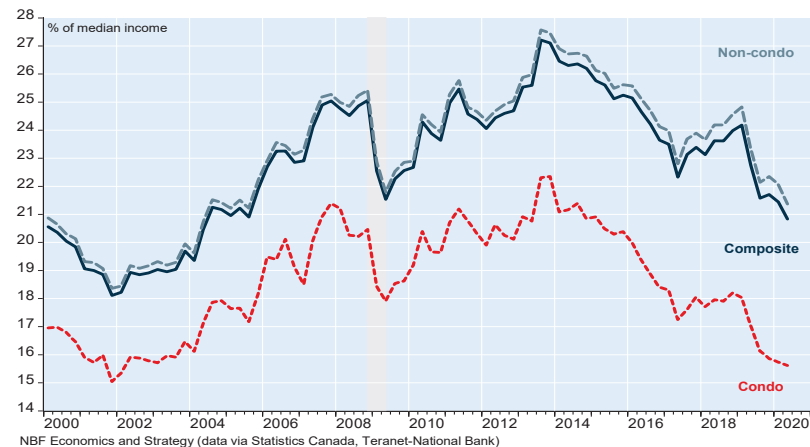
18

Months of saving required for the down payment (saving rate of 10%)

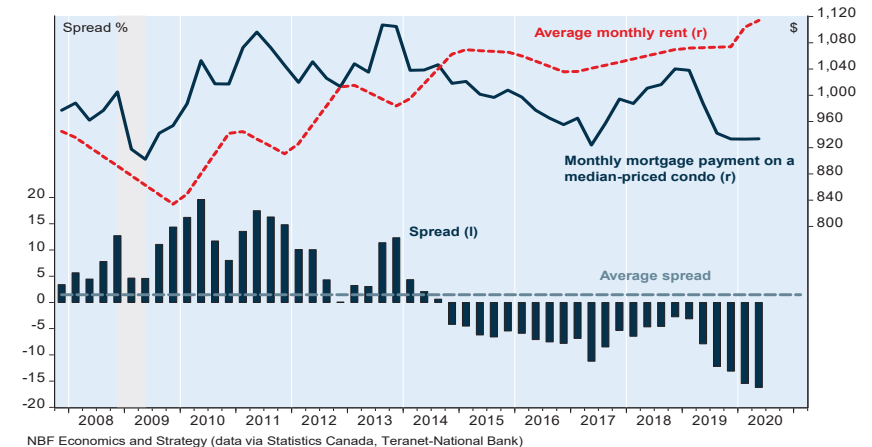
-16.2%

Premium/discount for buying compared to renting a two-bedroom condo in Quebec City

Quebec city: Perspective on housing affordability
Monthly mortgage payment on median home price (25 year amortization, 5-year term)



Quebec City: Buying compared to renting
Premium/discount for buying compared to renting a two-bedroom condo



QUEBEC CITY

Winnipeg

Winnipeg saw its affordability improve in the second quarter of the year. Indeed, the MPPI* declined 0.3pp in the condo sector and -0.4pp in the non-condo sector. For the aggregate of all dwellings, home prices increased 1.4% on a quarterly basis, lower than the composite average, while income improved at a slower pace than the Canadian average. This, combined to lower mortgage rates, resulted in a -0.4pp decline of the MPPI* for all dwellings, slightly below the urban composite improvement. *See tables page 12.

| Mortgage payment as a % of income (MPPI) | | | | |
|--|--------------|---|--------|-----|
| Non-Condo | 23.8% | ▼ | - 0.4% | Q/Q |
| Condo | 16.6% | ▼ | - 0.3% | Q/Q |



Non-Condo

\$329,538

Price of the representative home in the metropolitan market

\$69,935

Household annual income needed to afford the representative home

27

Months of saving required for the down payment (saving rate of 10%)

-56.2%

Premium for buying compared to the national urban composite



Condo

\$230,301

Price of the representative condo in the metropolitan market

\$48,875

Household annual income needed to afford the representative condo

19

Months of saving required for the down payment (saving rate of 10%)

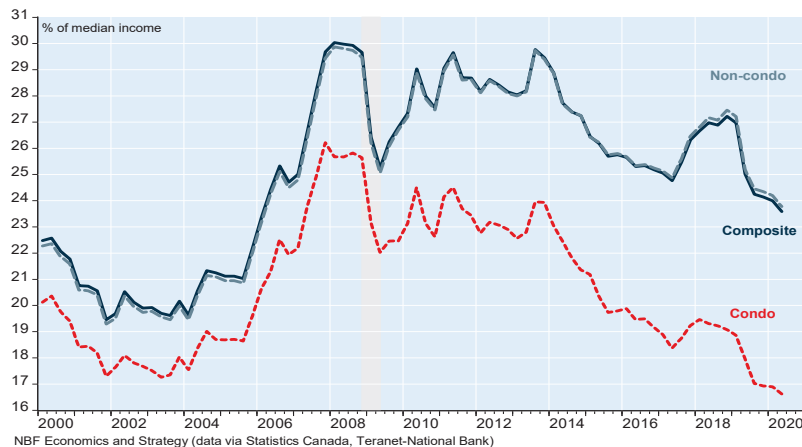
-28.9%

Premium/discount for buying compared to renting a two-bedroom condo in Winnipeg

Winnipeg: Perspective on housing affordability

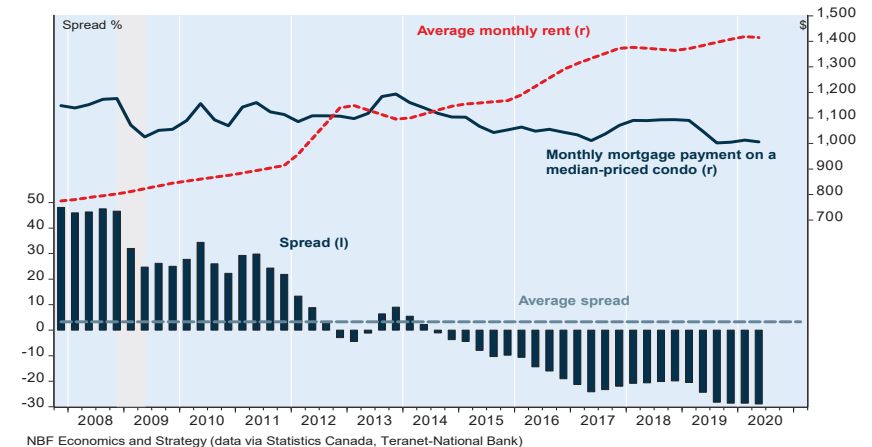
Monthly mortgage payment on median home price (25 year amortization, 5-year term)

WINNIPEG



Winnipeg: Buying compared to renting

Premium/discount for buying compared to renting a two-bedroom condo



Hamilton

In Hamilton, the MPPI* for both the non-condo and condo segments showed an improvement in affordability of -1.0pp and -0.4pp respectively. For the aggregate of all dwellings, home prices rose 1.6% in the quarter, but with the increase in revenues and lower mortgage rates the MPPI decreased by 0.9pp in Q2. The mortgage payment requires a 37.1% share of the median household pre-tax income to service, below the urban composite but above the 20 year average in Hamilton. *See tables page 12.

| Mortgage payment as a % of income (MPPI) | | | | |
|--|--------------|---|--------|-----|
| Non-Condo | 39.3% | ▼ | - 1.0% | Q/Q |
| Condo | 29.7% | ▼ | - 0.4% | Q/Q |



**Non-
Condo**

\$654,152

Price of the representative home in the metropolitan market

\$137,104

Household annual income needed to afford the representative home

56

Months of saving required for the down payment (saving rate of 10%)

-13.1%

Premium for buying compared to the national urban composite



Condo

\$494,232

Price of the representative condo in the metropolitan market

\$104,887

Household annual income needed to afford the representative condo

34

Months of saving required for the down payment (saving rate of 10%)

13.2%

Premium/discount for buying compared to renting a two-bedroom condo in Hamilton

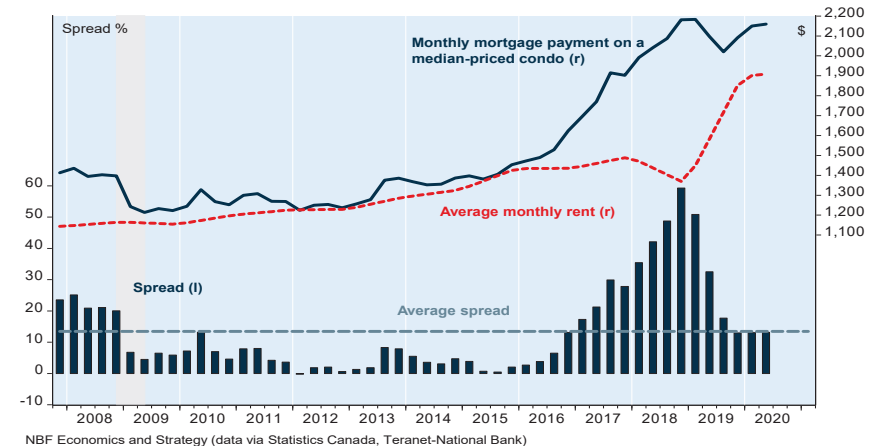
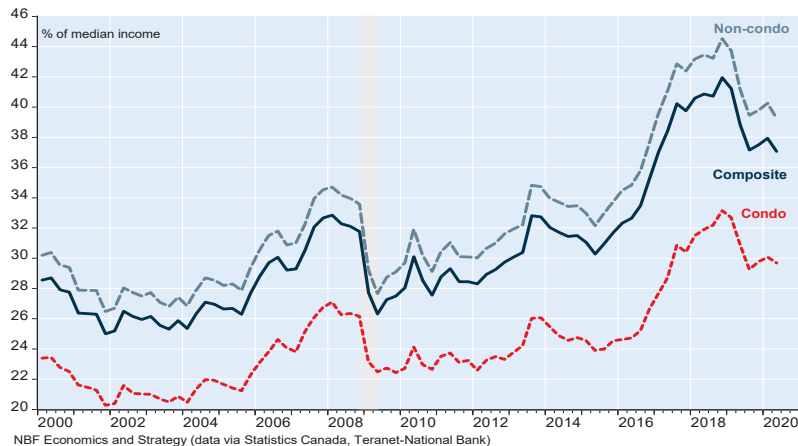
Hamilton: Perspective on housing affordability

Monthly mortgage payment on median home price (25 year amortization, 5-year term)

Hamilton: Buying compared to renting

Premium/discount for buying compared to renting a two-bedroom condo

HAMILTON



Victoria

Victoria was the market in which affordability of all dwellings improved the most in the quarter, with a 2.0pp decline of the MPPI*. This improvement can be seen by a decrease of the MPPI* in both the condo (-1.5pp) and the non-condo (-2.1) sectors. This important improvement is due to a slow increase in home prices (+0.4%) combined to higher revenues and lower mortgage rates. The quarterly amelioration brings back the MPPI below its 20 year average, although Victoria remains more expensive than the urban composite. *See tables page 12.

| Mortgage payment as a % of income (MPPI) | | | | |
|--|--------------|---|--------|-----|
| Non-Condo | 63.2% | ▼ | - 2.1% | Q/Q |
| Condo | 36.8% | ▼ | - 1.5% | Q/Q |



Non-Condo

\$862,115

Price of the representative home in the metropolitan market

\$178,916

Household annual income needed to afford the representative home

103

Months of saving required for the down payment (saving rate of 10%)

14.6%

Premium for buying compared to the national urban composite



Condo

\$501,881

Price of the representative condo in the metropolitan market

\$106,490

Household annual income needed to afford the representative condo

42

Months of saving required for the down payment (saving rate of 10%)

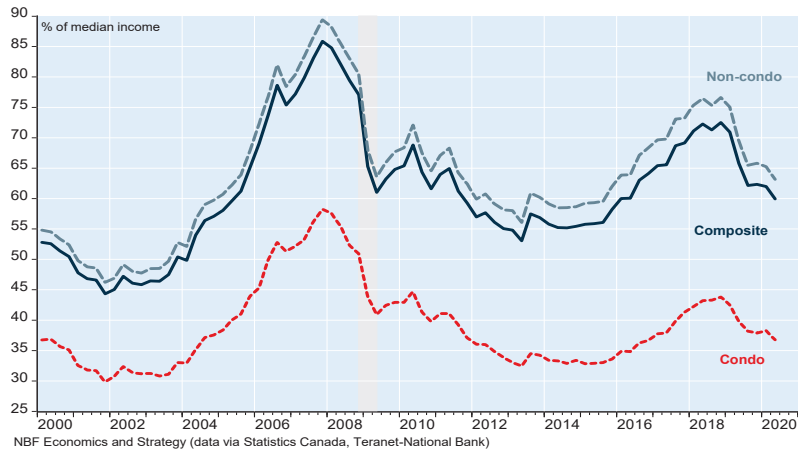
36.6%

Premium/discount for buying compared to renting a two-bedroom condo in Victoria

Victoria: Perspective on housing affordability

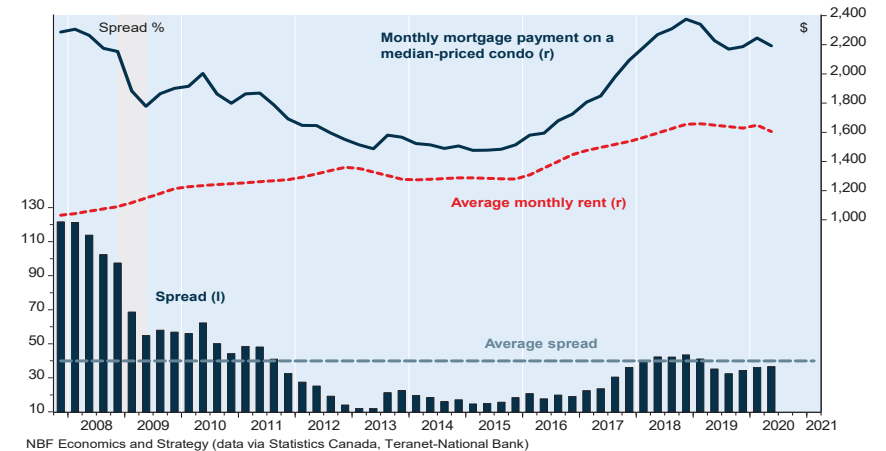
Monthly mortgage payment on median home price (25 year amortization, 5-year term)

VICTORIA



Victoria: Buying compared to renting

Premium/discount for buying compared to renting a two-bedroom condo



Housing affordability statistics

Table 1

| | A | B | C | D | E | F | G | H | I | J | K | L | M | N |
|------------------------|-------------------|--------------|--------------|------------------|-------------------------------|-----------------|--------------------------|---------------------------------|--------------|--------------|-----------------|--------------------------|----------------------|----------------------------|
| All dwellings | Median home price | Q/Q % change | Y/Y % change | Downpayment \$ | Downpayment: Months of saving | Avg. Since 2000 | Monthly mortgage payment | Mortgage payment as % of income | Q/Q diff. PP | Y/Y diff. PP | Avg. Since 2000 | Qualifying annual income | Median annual income | Home-ownership rate (2016) |
| Urban Composite | \$ 600,483 | 2.0 | 5.4 | \$ 35,048 | 55.9 | 35.2 | \$ 2,623 | 41.8 | -0.7 | -2.5 | 40.0 | \$ 126,314 | \$ 75,302 | 68% |
| Toronto | \$ 922,652 | 2.9 | 8.8 | \$ 67,265 | 95.6 | 48.0 | \$ 4,031 | 57.3 | -0.4 | -1.8 | 48.6 | \$ 191,087 | \$ 84,432 | 66% |
| Montreal | \$ 378,005 | 2.8 | 9.0 | \$ 18,900 | 33.6 | 25.2 | \$ 1,651 | 29.3 | -0.2 | -0.8 | 29.8 | \$ 80,221 | \$ 67,578 | 56% |
| Vancouver | \$ 1,053,878 | 1.3 | 0.8 | \$ 210,776 | 326.5 | 94.7 | \$ 4,604 | 71.3 | -1.4 | -6.6 | 63.2 | \$ 188,343 | \$ 77,478 | 64% |
| Calgary | \$ 426,980 | -0.5 | -1.1 | \$ 21,349 | 29.2 | 26.9 | \$ 1,865 | 25.5 | -0.9 | -2.8 | 33.1 | \$ 90,615 | \$ 87,667 | 73% |
| Edmonton | \$ 385,263 | -0.9 | -2.1 | \$ 19,263 | 25.8 | 24.0 | \$ 1,683 | 22.5 | -0.8 | -2.4 | 29.8 | \$ 81,762 | \$ 89,566 | 70% |
| Ottawa/Gatineau | \$ 460,355 | 5.1 | 12.8 | \$ 23,018 | 31.2 | 24.3 | \$ 2,011 | 27.3 | 0.3 | -0.3 | 28.9 | \$ 97,698 | \$ 88,471 | 67% |
| Quebec | \$ 285,120 | 0.1 | 0.0 | \$ 14,256 | 23.8 | 19.6 | \$ 1,246 | 20.8 | -0.6 | -1.9 | 22.8 | \$ 60,509 | \$ 71,742 | 60% |
| Winnipeg | \$ 326,885 | 1.4 | 3.7 | \$ 16,344 | 27.0 | 21.5 | \$ 1,428 | 23.6 | -0.4 | -1.4 | 25.1 | \$ 69,372 | \$ 72,657 | 67% |
| Hamilton | \$ 617,247 | 1.6 | 8.3 | \$ 36,725 | 50.5 | 27.5 | \$ 2,696 | 37.1 | -0.9 | -1.7 | 30.8 | \$ 129,684 | \$ 87,282 | 70% |
| Victoria | \$ 818,025 | 0.4 | 2.9 | \$ 56,802 | 95.3 | 56.2 | \$ 3,574 | 59.9 | -2.0 | -5.8 | 61.2 | \$ 170,051 | \$ 71,538 | 63% |

Table 2

| | A | B | C | D | E | F | G | H | I | J | K | L | M | N | O |
|------------------------|-------------------|--------------|--------------|------------------|-------------------------------|-----------------|--------------------------|---------------------------------|--------------|--------------|-----------------|-------------------|------------------|----------------------------|----------------------|
| Condo | Median home price | Q/Q % change | Y/Y % change | Downpayment \$ | Downpayment: Months of saving | Avg. Since 2000 | Monthly mortgage payment | Mortgage payment as % of income | Q/Q diff. PP | Y/Y diff. PP | Avg. Since 2000 | Qualifying income | Median income | Home-ownership rate (2016) | Monthly average rent |
| Urban Composite | \$ 431,630 | 2.2 | 6.1 | \$ 21,581 | 34.4 | 24.7 | \$ 1,886 | 30.0 | -0.4 | -1.6 | 29.3 | \$ 91,602 | \$ 75,302 | 9% | \$ 1,949 |
| Toronto | \$ 606,138 | 3.4 | 10.6 | \$ 35,614 | 50.6 | 27.3 | \$ 2,648 | 37.6 | -0.1 | -0.6 | 31.2 | \$ 127,451 | \$ 84,432 | 15% | \$ 2,491 |
| Montreal | \$ 314,022 | 3.8 | 11.0 | \$ 15,701 | 27.9 | 21.9 | \$ 1,372 | 24.4 | 0.0 | -0.2 | 26.1 | \$ 66,643 | \$ 67,578 | 11% | \$ 1,250 |
| Vancouver | \$ 632,198 | 2.0 | 1.3 | \$ 38,220 | 59.2 | 34.3 | \$ 2,762 | 42.8 | -0.5 | -3.7 | 38.8 | \$ 132,690 | \$ 77,478 | 22% | \$ 2,041 |
| Calgary | \$ 252,031 | -3.2 | -2.3 | \$ 12,602 | 17.2 | 18.8 | \$ 1,101 | 15.1 | -1.0 | -1.9 | 23.6 | \$ 53,487 | \$ 87,667 | 14% | \$ 1,575 |
| Edmonton | \$ 216,021 | -2.2 | -3.2 | \$ 10,801 | 14.5 | 15.7 | \$ 944 | 12.6 | -0.7 | -1.5 | 20.0 | \$ 45,845 | \$ 89,566 | 12% | \$ 1,359 |
| Ottawa/Gatineau | \$ 312,186 | 4.5 | 15.8 | \$ 15,609 | 21.2 | 17.5 | \$ 1,364 | 18.5 | 0.1 | 0.3 | 21.0 | \$ 66,253 | \$ 88,471 | 9% | \$ 1,650 |
| Quebec | \$ 213,705 | 2.2 | 0.1 | \$ 10,685 | 17.9 | 15.9 | \$ 934 | 15.6 | -0.1 | -1.4 | 18.6 | \$ 45,353 | \$ 71,742 | 9% | \$ 1,114 |
| Winnipeg | \$ 230,301 | 1.5 | 1.7 | \$ 11,515 | 19.0 | 17.4 | \$ 1,006 | 16.6 | -0.3 | -1.3 | 20.7 | \$ 48,875 | \$ 72,657 | 6% | \$ 1,414 |
| Hamilton | \$ 494,232 | 2.6 | 9.1 | \$ 24,712 | 34.0 | 21.2 | \$ 2,159 | 29.7 | -0.4 | -1.2 | 24.6 | \$ 104,887 | \$ 87,282 | 11% | \$ 1,908 |
| Victoria | \$ 501,881 | -0.2 | 4.2 | \$ 25,188 | 42.3 | 32.1 | \$ 2,193 | 36.8 | -1.5 | -3.1 | 39.1 | \$ 106,490 | \$ 71,538 | 14% | \$ 1,605 |

Table 3

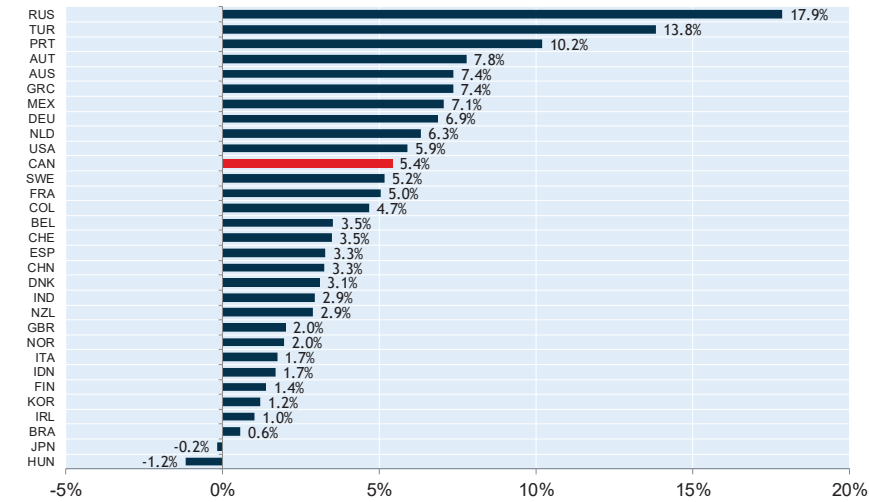
| | A | B | C | D | E | F | G | H | I | J | K | L | M | N |
|------------------------|-------------------|--------------|--------------|------------------|-------------------------------|-----------------|--------------------------|---------------------------------|--------------|--------------|-----------------|-------------------|------------------|----------------------------|
| Other dwellings | Median home price | Q/Q % change | Y/Y % change | Downpayment \$ | Downpayment: Months of saving | Avg. Since 2000 | Monthly mortgage payment | Mortgage payment as % of income | Q/Q diff. PP | Y/Y diff. PP | Avg. Since 2000 | Qualifying income | Median income | Home-ownership rate (2016) |
| Urban Composite | \$ 752,534 | 1.9 | 5.3 | \$ 50,253 | 80.1 | 46.5 | \$ 3,288 | 52.4 | -0.9 | -3.2 | 50.0 | \$ 156,884 | \$ 75,302 | 59% |
| Toronto | \$ 977,687 | 2.8 | 8.6 | \$ 72,769 | 103.4 | 51.9 | \$ 4,271 | 60.7 | -0.5 | -2.0 | 51.7 | \$ 202,152 | \$ 84,432 | 52% |
| Montreal | \$ 407,557 | 2.6 | 8.7 | \$ 20,378 | 36.2 | 27.0 | \$ 1,780 | 31.6 | -0.3 | -0.9 | 31.9 | \$ 86,493 | \$ 67,578 | 45% |
| Vancouver | \$ 1,280,595 | 1.1 | 0.6 | \$ 256,119 | 396.7 | 133.6 | \$ 5,594 | 86.6 | -1.9 | -8.2 | 75.9 | \$ 228,860 | \$ 77,478 | 42% |
| Calgary | \$ 484,705 | -0.1 | -0.9 | \$ 24,235 | 33.2 | 29.9 | \$ 2,117 | 29.0 | -1.0 | -3.1 | 36.7 | \$ 102,866 | \$ 87,667 | 59% |
| Edmonton | \$ 412,213 | -0.7 | -1.9 | \$ 20,611 | 27.6 | 25.2 | \$ 1,801 | 24.1 | -0.9 | -2.5 | 31.2 | \$ 87,481 | \$ 89,566 | 57% |
| Ottawa/Gatineau | \$ 495,563 | 5.2 | 12.5 | \$ 24,778 | 33.6 | 26.0 | \$ 2,165 | 29.4 | 0.3 | -0.4 | 30.9 | \$ 105,170 | \$ 88,471 | 58% |
| Quebec | \$ 292,449 | -0.2 | 0.0 | \$ 14,622 | 24.5 | 19.9 | \$ 1,278 | 21.4 | -0.7 | -2.0 | 23.2 | \$ 62,064 | \$ 71,742 | 51% |
| Winnipeg | \$ 329,538 | 1.4 | 3.8 | \$ 16,477 | 27.2 | 21.5 | \$ 1,440 | 23.8 | -0.4 | -1.4 | 25.1 | \$ 69,935 | \$ 72,657 | 61% |
| Hamilton | \$ 654,152 | 1.5 | 8.3 | \$ 40,415 | 55.6 | 29.6 | \$ 2,858 | 39.3 | -1.0 | -1.9 | 32.6 | \$ 137,104 | \$ 87,282 | 60% |
| Victoria | \$ 862,115 | 0.5 | 2.6 | \$ 61,212 | 102.7 | 59.8 | \$ 3,766 | 63.2 | -2.1 | -6.3 | 64.3 | \$ 178,916 | \$ 71,538 | 49% |

NBF Economics and Strategy (data vis Statistics Canada, Ternate-NBC, CREA)

Global perspective on housing affordability

World: Perspective on home price growth

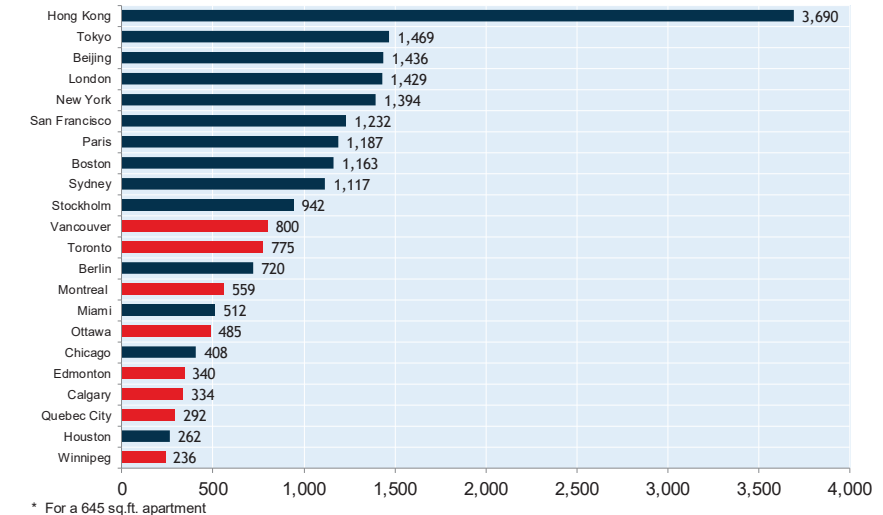
Home price percentage change year over year (Last data available)



NBF Economics and Strategy (Data via OECD)

World: Home prices do not seem extreme in Canada

Price per square feet in USD for downtown living* (June 2020)



* For a 645 sq.ft. apartment
NBF Economics and Strategy (as of June 15 2020)

Methodology

The National Bank Housing Affordability Report measures housing affordability in 10 major census metropolitan areas (CMAs) and summarizes the results in a weighted-average composite of the 10 CMAs. We track the **condo market**, **other dwellings** (single detached, semi-detached) and the **market as a whole**.

We measure two hurdles for the purchase of a home. First, a household must save the **down-payment** amount. We measure this requirement as the number of months a median-income household will require to save for the minimum cash down payment (CMHC insured mortgage) of the representative home at a savings rate of 10% of its pre-tax income. We evaluate the representative home using the Teranet–National Bank House Price Index for the market in question to calculate the home price for months before and after the median home price measured by the 2016 Census. For **median household income** in each CMA, we take the Statistics Canada annual data up to 2013. For subsequent months, we extend the series using average weekly earnings growth as a proxy and apply a Hodrick–Prescott filter to smooth short-term fluctuations.

The second hurdle for the purchase of a home is the monthly mortgage payment. We measure this as the monthly payment on a median-priced home assuming a 25-year amortization period and a 5-year term. The resulting amount is presented as a percentage of income calculated as described above (sometimes referred as **MPPI**). Note that we do not take the down payment into account in this calculation because there is an opportunity cost in a household's use of these funds for that purpose. Also, we do not wish policy changes in this regard to affect our indicator over time. We also calculate the income needed to purchase the median property assuming that a household devotes 32% of its pre-tax income for a mortgage payment at the posted rate (defined as **qualifying income** and is adjusted for the down-payment). For the condo market, we also compare the monthly mortgage payment to the average rent for a two-bedroom condo in the same market. We calculate that rent from annual CMHC data, updated to the current month by the rent component of the Consumer Price Index. Note that data in the report was seasonally adjusted when necessary.

Economics and Strategy

Montreal Office

514-879-2529

Stéfane Marion

Chief Economist and Strategist

stefane.marion@nbc.ca

Paul-André Pinsonnault

Senior Economist

paulandre.pinsonnault@nbc.ca

Kyle Dahms

Economist

kyle.dahms@nbc.ca

Matthieu Arseneau

Deputy Chief Economist

matthieu.arseneau@nbc.ca

Marc Pinsonneault

Senior Economist

marc.pinsonneault@nbc.ca

Jocelyn Paquet

Economist

jocelyn.paquet@nbc.ca

Angelo Katsoras

Geopolitical Analyst

angelo.katsoras@nbc.ca

Toronto Office

416-869-8598

Warren Lovely

Chief Rate Strategist, Economics and Strategy

warren.lovely@nbc.ca

Taylor Schleich

Associate, Rates Strategist, Economics and Strategy

taylor.schleich@nbc.ca

General

This Report was prepared by National Bank Financial, Inc. (NBF), (a Canadian investment dealer, member of IIROC), an indirect wholly owned subsidiary of National Bank of Canada. National Bank of Canada is a public company listed on the Toronto Stock Exchange.

The particulars contained herein were obtained from sources which we believe to be reliable but are not guaranteed by us and may be incomplete and may be subject to change without notice. The information is current as of the date of this document. Neither the author nor NBF assumes any obligation to update the information or advise on further developments relating to the topics or securities discussed. The opinions expressed are based upon the author(s) analysis and interpretation of these particulars and are not to be construed as a solicitation or offer to buy or sell the securities mentioned herein, and nothing in this Report constitutes a representation that any investment strategy or recommendation contained herein is suitable or appropriate to a recipient's individual circumstances. In all cases, investors should conduct their own investigation and analysis of such information before taking or omitting to take any action in relation to securities or markets that are analyzed in this Report. The Report alone is not intended to form the basis for an investment decision, or to replace any due diligence or analytical work required by you in making an investment decision.

This Report is for distribution only under such circumstances as may be permitted by applicable law. This Report is not directed at you if NBF or any affiliate distributing this Report is prohibited or restricted by any legislation or regulation in any jurisdiction from making it available to you. You should satisfy yourself before reading it that NBF is permitted to provide this Report to you under relevant legislation and regulations.

National Bank of Canada Financial Markets is a trade name used by National Bank Financial and National Bank of Canada Financial Inc.

Canadian Residents

NBF or its affiliates may engage in any trading strategies described herein for their own account or on a discretionary basis on behalf of certain clients and as market conditions change, may amend or change investment strategy including full and complete divestment. The trading interests of NBF and its affiliates may also be contrary to any opinions expressed in this Report.

NBF or its affiliates often act as financial advisor, agent or underwriter for certain issuers mentioned herein and may receive remuneration for its services. As well NBF and its affiliates and/or their officers, directors, representatives, associates, may have a position in the securities mentioned herein and may make purchases and/or sales of these securities from time to time in the open market or otherwise. NBF and its affiliates may make a market in securities mentioned in this Report. This Report may not be independent of the proprietary interests of NBF and its affiliates.

This Report is not considered a research product under Canadian law and regulation, and consequently is not governed by Canadian rules applicable to the publication and distribution of research Reports, including relevant restrictions or disclosures required to be included in research Reports.

Housing Affordability Monitor

Economics and Strategy

UK Residents

This Report is a marketing document. This Report has not been prepared in accordance with EU legal requirements designed to promote the independence of investment research and it is not subject to any prohibition on dealing ahead of the dissemination of investment research. In respect of the distribution of this Report to UK residents, NBF has approved the contents (including, where necessary, for the purposes of Section 21(1) of the Financial Services and Markets Act 2000). This Report is for information purposes only and does not constitute a personal recommendation, or investment, legal or tax advice. NBF and/or its parent and/or any companies within or affiliates of the National Bank of Canada group and/or any of their directors, officers and employees may have or may have had interests or long or short positions in, and may at any time make purchases and/or sales as principal or agent, or may act or may have acted as market maker in the relevant investments or related investments discussed in this Report, or may act or have acted as investment and/or commercial banker with respect hereto. The value of investments, and the income derived from them, can go down as well as up and you may not get back the amount invested. Past performance is not a guide to future performance. If an investment is denominated in a foreign currency, rates of exchange may have an adverse effect on the value of the investment. Investments which are illiquid may be difficult to sell or realise; it may also be difficult to obtain reliable information about their value or the extent of the risks to which they are exposed. Certain transactions, including those involving futures, swaps, and other derivatives, give rise to substantial risk and are not suitable for all investors. The investments contained in this Report are not available to retail customers and this Report is not for distribution to retail clients (within the meaning of the rules of the Financial Conduct Authority). Persons who are retail clients should not act or rely upon the information in this Report. This Report does not constitute or form part of any offer for sale or subscription of or solicitation of any offer to buy or subscribe for the securities described herein nor shall it or any part of it form the basis of or be relied on in connection with any contract or commitment whatsoever.

This information is only for distribution to Eligible Counterparties and Professional Clients in the United Kingdom within the meaning of the rules of the Financial Conduct Authority. NBF is authorised and regulated by the Financial Conduct Authority and has its registered office at 71 Fenchurch Street, London, EC3M 4HD. NBF is not authorised by the Prudential Regulation Authority and the Financial Conduct Authority to accept deposits in the United Kingdom.

U.S. Residents

With respect to the distribution of this report in the United States of America, National Bank of Canada Financial Inc. ("NBCFI") which is regulated by the Financial Industry Regulatory Authority (FINRA) and a member of the Securities Investor Protection Corporation (SIPC), an affiliate of NBF, accepts responsibility for its contents, subject to any terms set out above.

To make further inquiry related to this report, or to effect any transaction, United States residents should contact their NBCFI registered representative.

This report is not a research report and is intended for Major U.S. Institutional Investors only.

This report is not subject to U.S. independence and disclosure standards applicable to research reports.

HK Residents

With respect to the distribution of this report in Hong Kong by NBC Financial Markets Asia Limited ("NBCFMA") which is licensed by the Securities and Futures Commission ("SFC") to conduct Type 1 (dealing in securities) and Type 3 (leveraged foreign exchange trading) regulated activities, the contents of this report are solely for informational purposes. It has not been approved by, reviewed by, verified by or filed with any regulator in Hong Kong. Nothing herein is a recommendation, advice, offer or solicitation to buy or sell a product or service, nor an official confirmation of any transaction. None of the products issuers, NBCFMA or its affiliates or other persons or entities named herein are obliged to notify you of changes to any information and none of the foregoing assume any loss suffered by you in reliance of such information.

The content of this report may contain information about investment products which are not authorized by SFC for offering to the public in Hong Kong and such information will only be available to, those persons who are Professional Investors (as defined in the Securities and Futures Ordinance of Hong Kong ("SFO")). If you are in any doubt as to your status you should consult a financial adviser or contact us. This material is not meant to be marketing materials and is not intended for public distribution. Please note that neither this material nor the product referred to is authorized for sale by SFC. Please refer to product prospectus for full details.

There may be conflicts of interest relating to NBCFMA or its affiliates' businesses. These activities and interests include potential multiple advisory, transactional and financial and other interests in securities and instruments that may be purchased or sold by NBCFMA or its affiliates, or in other investment vehicles which are managed by NBCFMA or its affiliates that may purchase or sell such securities and instruments.

No other entity within the National Bank of Canada group, including National Bank of Canada and National Bank Financial Inc, is licensed or registered with the SFC. Accordingly, such entities and their employees are not permitted and do not intend to: (i) carry on a business in any regulated activity in Hong Kong; (ii) hold themselves out as carrying on a business in any regulated activity in Hong Kong; or (iii) actively market their services to the Hong Kong public.

Copyright

This Report may not be reproduced in whole or in part, or further distributed or published or referred to in any manner whatsoever, nor may the information, opinions or conclusions contained in it be referred to without in each case the prior express written consent of NBF.

Disclaimer: Teranet - National Bank House Price Index

The index data and related information and materials ("Index Data") are protected by copyright law, both individually and as a collective work or compilation, and by trade-mark law, and other applicable laws. National Bank of Canada ("NBC") and Teranet Enterprises Inc. ("Teranet") grant to you a limited non-exclusive, non-transferable license to view, copy and print this report, provided that all copies that you make must be solely for your non-commercial, personal use, and must retain all copyright and other notices that are required. Except as provided in the previous sentence, you may not (for either commercial or non-commercial use) use, distribute, sell, modify, transmit, revise, reverse engineer, republish, post or create derivative works (where applicable) of any content of this report without the prior written permission of Teranet and National Bank (who are referred to collectively herein as the "Index Data Providers"). Without limiting the generality of the foregoing, the Index Data and other Index Data Provider intellectual property contained in this report may not be used as a basis for any financial instruments or products (including, without limitation, passively managed funds and index-linked derivative securities), or used to verify or correct data in any other compilation of data or index, or used to create any other data or index (custom or otherwise), without the Index Data Providers' prior written permission. You acknowledge and agree that you will not acquire any rights or licenses in the content of this report. The Index Data is for informational purposes only, and the user of the information contained in the Index Data assumes the entire risk of any use made of the Index Data. You understand and agree that the Index Data is provided "as is" and neither NBC nor Teranet warrants the accuracy, completeness, non-infringement, originality, timeliness or any other characteristic of the Index Data. The Index Data is not an offer or recommendation to buy or sell or a solicitation of an offer to buy or sell any security or instrument or to participate in any particular trading strategy. Further, none of the Index Data is intended to constitute investment advice or a recommendation to make (or refrain from making) any kind of investment decision and may not be relied on as such. Reproduction, redistribution or any other form of copying or transmission of the Index Data without the Index Data Providers' prior written consent is strictly prohibited. Without limiting the generality of the foregoing, the Index Data and other Index Data Provider intellectual property may not be used as a basis for any financial instruments or products (including, without limitation, passively managed funds and index-linked derivative securities), or used to verify or correct data in any other compilation of data or index, or used to create any other data or index (custom or otherwise), without the Index Data Providers' prior written permission. In no event shall any of NBC, Teranet, their respective affiliates, any of their or their direct or indirect information providers nor any other third party involved in, or related to, compiling, computing or creating any of the Index Data (collectively, the "Index Data Provider Parties") have any liability to any person or entity for any damages, whether direct, indirect, special, incidental, punitive, consequential (including, without limitation, loss of use, lost profits or revenues or any other economic loss) arising in any manner out of your use or inability to use any of the Index Data contained in this report, even if such party might have anticipated, or was advised or notified of, the possibility of such damages.