

Housing affordability worsens again in Q3 2018

By Matthieu Arseneau & Kyle Dahms

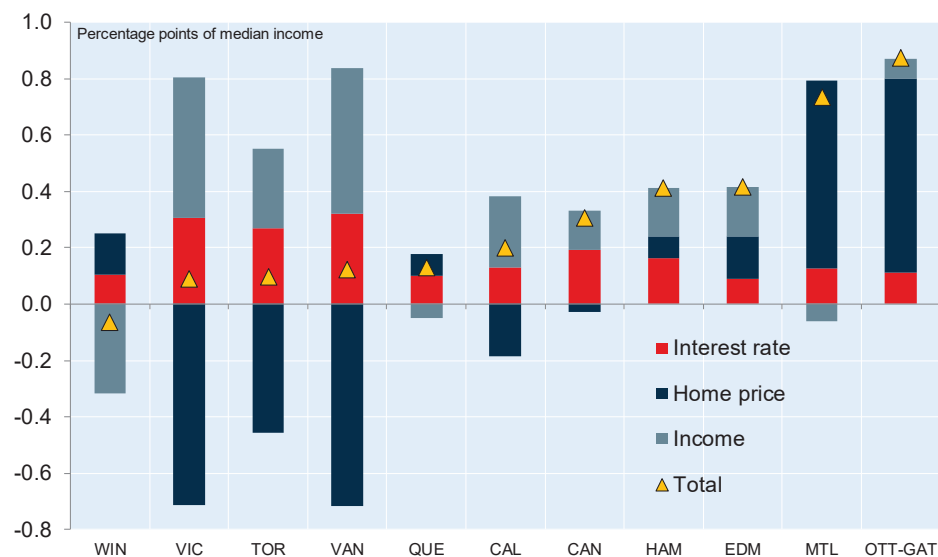
In Q3, affordability worsened in no less than 9 out of ten urban markets which explains the 13th consecutive deterioration of our urban composite index. Expensive housing markets such as Vancouver and Toronto slowed down markedly in 2018 and home prices even declined in Q3 due to the combined effect of rising mortgage rates (up for a fifth consecutive quarter) and macro prudential measures. Despite lower home prices, homebuyer affordability failed to improve as wages were down in those markets (left chart). Elsewhere, Montreal and Ottawa-Gatineau experienced the sharpest deteriorations in affordability among urban centers in Q3 but for another reason: home prices surged respectively by 2.1% and 2.5% Q/Q. These markets appear to be unaffected by rising interest rates and tighter credit standards as shown by resale market conditions being strongly tilted in favor of sellers. Looking at the national picture, while a significant portion of home buyers have been priced out of single-family homes, demand is currently strong for condos as shown by prices rising 6.8% over the past year (non-condo prices are flat). As a result, the affordability deterioration was more pronounced in this segment (vs. non-condo) in each of the last four quarters (right chart).

HIGHLIGHTS:

- Canadian housing affordability deteriorated for a thirteenth consecutive quarter in Q3. The mortgage payment on a representative home as a percentage of income (MPPI) rose 0.3 points after a 0.3-point rise in Q2. Seasonally adjusted home prices edged down 0.1% in Q3 from Q2; the benchmark mortgage rate (5-year term) rose 4 basis points; and median household income fell 0.3% (-1.1% annualized, the first decline in over 2 years).
- The worst deteriorations were in Ottawa/Gatineau (+0.9 points) and Montreal (+0.7 points). The only market showing an improvement was Winnipeg (-0.1 points). The situation worsened slightly in Calgary (+0.2), Toronto (+0.1) and Vancouver (+0.1).
- Countrywide, affordability worsened in the condo segment (+0.9 point) while it improved in the non-condo (-0.2 point) portion.
- The time required to save for the down payment on a representative home at a savings rate of 10%, edged up from 57.2 to 57.3 months, between Q2 and Q3 2018.

Canada: Q3 change in housing affordability in 10 metropolitan areas

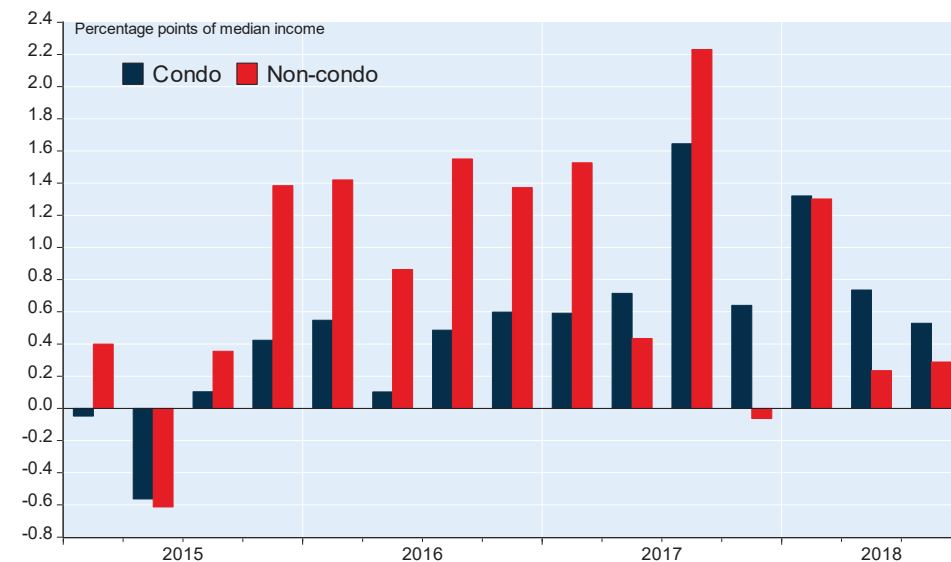
Q/Q change in mortgage payment on median-price home (25-year amortization, 5-year term)



NBF Economics and Strategy (data via Statistics Canada, Teranet-NBC)

Canada: Affordability deteriorating more in the condo segment recently

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



NBF Economics and Strategy (data via Statistics Canada, Teranet-National Bank, CREA)

Housing Affordability Monitor

Economics and Strategy

Toronto

Toronto's housing affordability improved for the non-condo segment in the third quarter. That said, condos became less affordable in the same period. With non-condo ownership being unattainable for most households, a spillover could be headed towards the relatively more affordable condo segment. Prices for condos were up on a q/q (+1.7%) and y/y (+6.1%) basis. All in all, including home price increases for the condo segment and rising interest rates, the composite for all dwellings showed a tiny deterioration in the MPPI* for the quarter (+0.1pp). *See tables on page 12 for more information.

Mortgage payment as a % of income (MPPI)				
Non-Condo	72.8%	▼	- 0.2%	Q/Q
Condo	42.8%	▲	+ 1.0%	Q/Q



Non-Condo

\$887,025

Price of the representative home in the metropolitan market

\$159,289

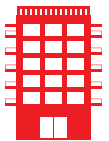
Household annual income needed to afford the representative home

109

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

24.4%

Premium for buying compared to the national urban composite



Condo

\$521,239

Price of the representative condo in the metropolitan market

\$93,602

Household annual income needed to afford the representative condo

46

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

7.0%

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

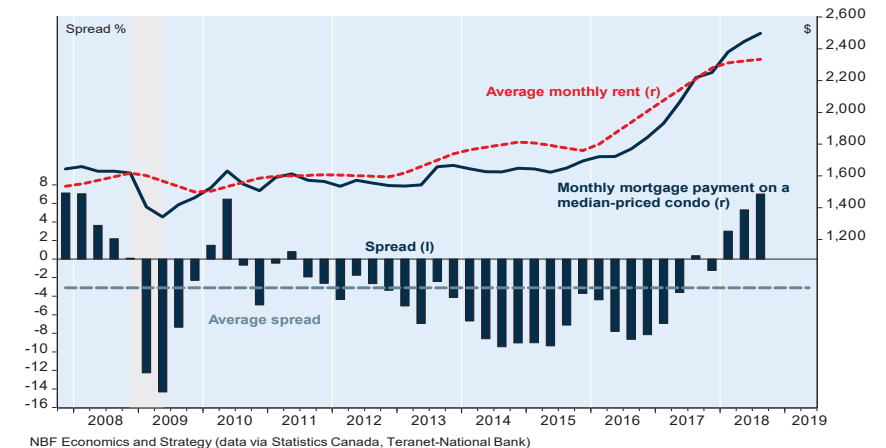
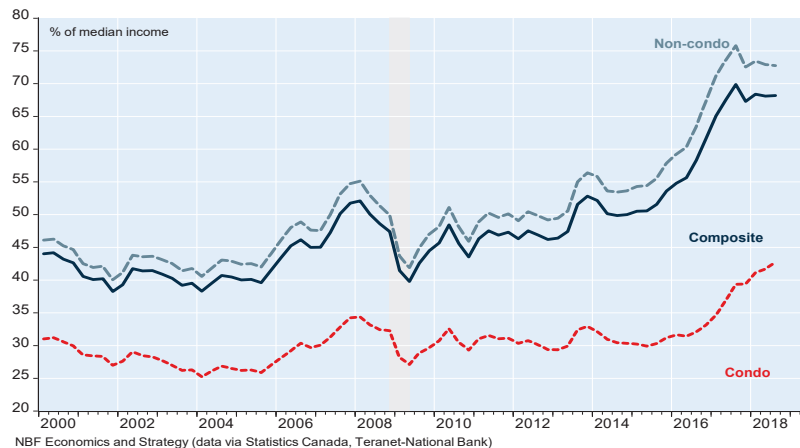
Toronto : Perspective on housing affordability

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

Toronto: Buying compared to renting

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

TORONTO



Housing Affordability Monitor

Economics and Strategy

Montreal

In Montreal, affordability as measured by the MPPI declined for both the condo (+0.6pp) and non-condo (+0.8pp) segments. The housing market is getting hotter in this comparatively affordable city. Accordingly, for the aggregate of all dwellings, the MPPI* reached 32.7%, its highest level since Q3 2011. Montreal experienced the second worst deterioration among the 10 urban centers covered in the report. On a yearly basis, home prices have risen by 5.3%, outpacing income growth which progressed 1.4% in the same period. *See tables on page 12 for more information.

Mortgage payment as a % of income (MPPI)				
Non-Condo	35.4%	▲ +	0.8%	Q/Q
Condo	26.6%	▲ +	0.6%	Q/Q



Non-Condo

\$362,214

Price of the representative home in the metropolitan market

\$65,045

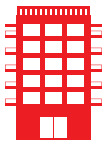
Household annual income needed to afford the representative home

37

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

-49.2%

Premium for buying compared to the national urban composite



Condo

\$272,214

Price of the representative condo in the metropolitan market

\$48,883

Household annual income needed to afford the representative condo

28

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

9.8%

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

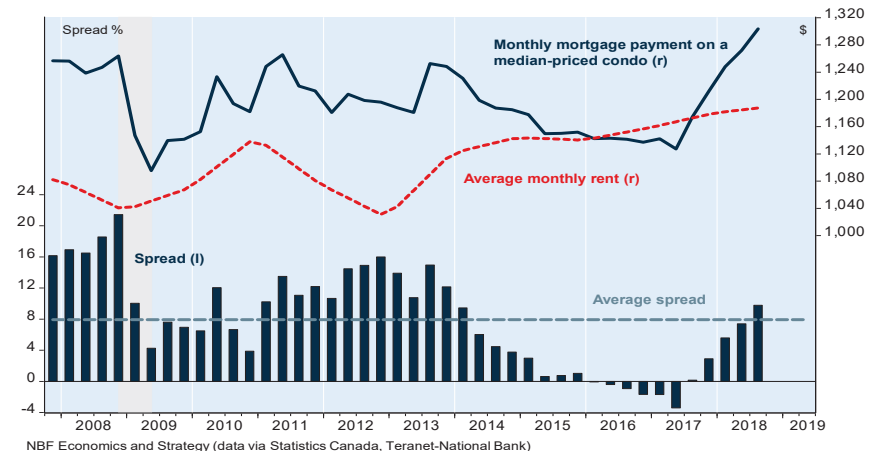
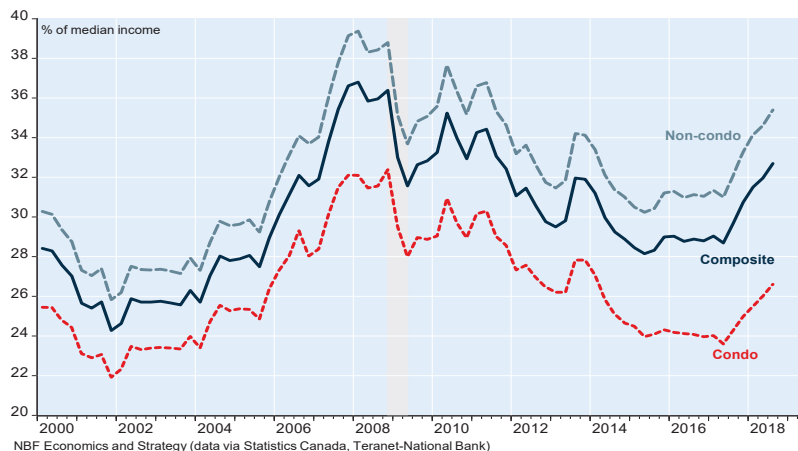
Montreal : Perspective on housing affordability

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



Housing Affordability Monitor

Economics and Strategy

Vancouver

Vancouver's housing affordability as quantified by the MPPI* deteriorated for the condo sector (+0.3%, a 13th consecutive deterioration) in the third quarter. A mortgage payment for the non-condo segment would require almost the totality of the total median household income (98.5%) to service. This percentage rose this quarter (+0.1pp) on the back of rising interest rates and falling income growth. Home prices were down 0.9 in the last quarter but rose a countrywide-high 6.9% over the past year. *See tables on page 12 for more information.

Mortgage payment as a % of income (MPPI)				
Non-Condo	98.5%	▲ +	0.1%	Q/Q
Condo	47.8%	▲ +	0.3%	Q/Q



Non-Condo

\$1,327,085

Price of the representative home in the metropolitan market

\$238,313

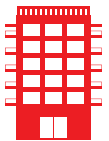
Household annual income needed to afford the representative home

411

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

86.1%

Premium for buying compared to the national urban composite



Condo

\$644,330

Price of the representative condo in the metropolitan market

\$115,706

Household annual income needed to afford the representative condo

61

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

62.0%

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

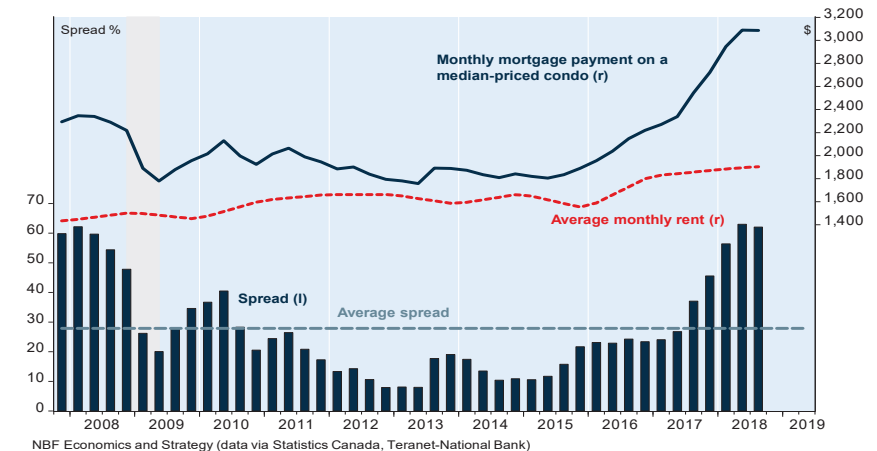
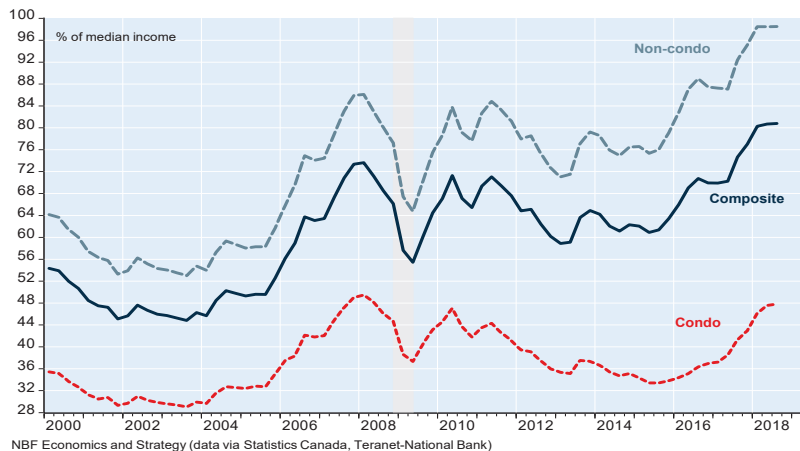
Vancouver : Perspective on housing affordability

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

VANCOUVER



NBF Economics and Strategy (data via Statistics Canada, Teranet-National Bank)

NBF Economics and Strategy (data via Statistics Canada, Teranet-National Bank)

Housing Affordability Monitor

Economics and Strategy

Calgary

In Calgary, the MPPI* for both the non-condo and condo segments showed a deterioration in affordability of +0.2pp and +0.3pp respectively. That said, on an annual basis, the city composite experienced a decrease of 0.6 % in housing prices and a 1.1 % improvement in income. The 53-bps hike for mortgage rates overwhelmed the potential improvement in housing affordability. While Calgary is still affordable on a relative basis, our composite is at its worst since 2011. *See tables on page 12 for more information.



**Non-
Condo**

\$501,759

Price of the representative home in the metropolitan market

\$90,104

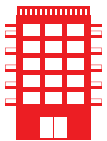
Household annual income needed to afford the representative home

39

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

-29.6%

Premium for buying compared to the national urban composite



Condo

\$273,971

Price of the representative condo in the metropolitan market

\$49,199

Household annual income needed to afford the representative condo

21

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

-13.7%

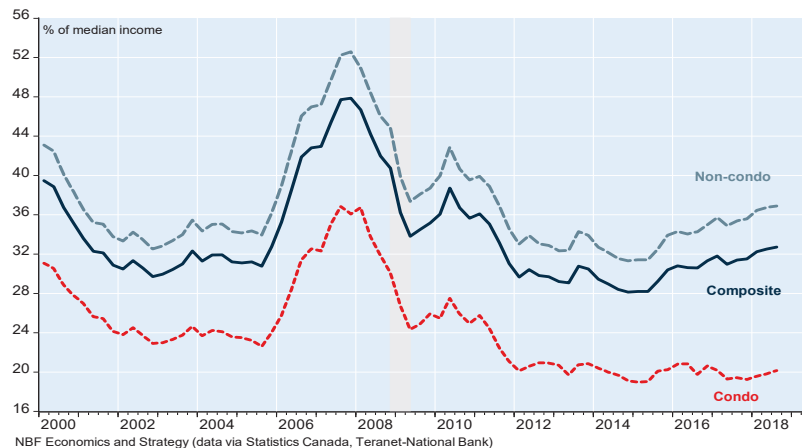
Premium/discount for buying compared to renting a two-bedroom condo in Calgary

Mortgage payment as a % of income (MPPI)				
Non-Condo	36.9%	▲ +	0.2%	Q/Q
Condo	20.1%	▲ +	0.3%	Q/Q

Calgary : Perspective on housing affordability

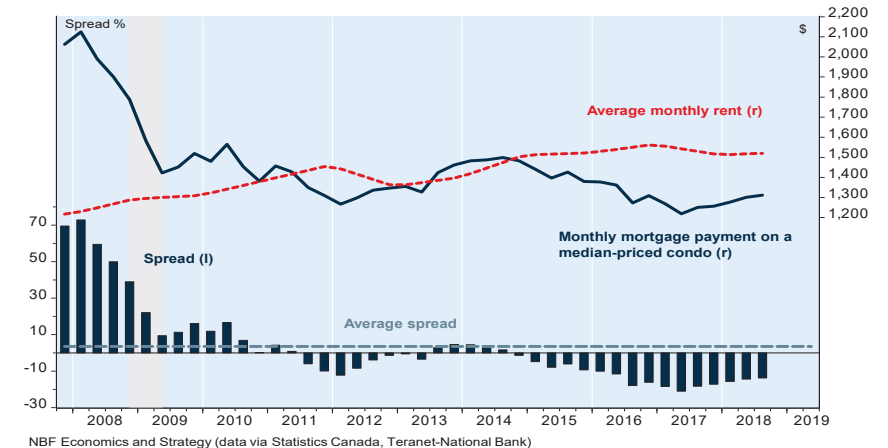
Monthly mortgage payment on median home price (25 year amortization, 5-year term)

CALGARY



Calgary: Buying compared to renting

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



Housing Affordability Monitor

Economics and Strategy

Edmonton

Edmonton saw a deterioration in affordability for non-condos (+0.5pp) and an improvement in the condo (-0.1pp) segment. Edmonton remains the most affordable city in the covered markets. Moreover, the 26 (non-condo) and 14 (condo) months of savings required for the down payment are the lowest amongst its peers. On an annual basis, the MPPI* for the composite increased by 0.9-points. That deterioration was less severe comparatively to our urban composite. *See tables on page 12 for more information.



**Non-
Condo**

\$429,031

Price of the representative home in the metropolitan market

\$77,044

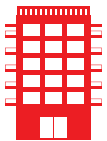
Household annual income needed to afford the representative home

25

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

-39.8%

Premium for buying compared to the national urban composite



Condo

\$228,536

Price of the representative condo in the metropolitan market

\$41,040

Household annual income needed to afford the representative condo

14

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

-19.2%

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

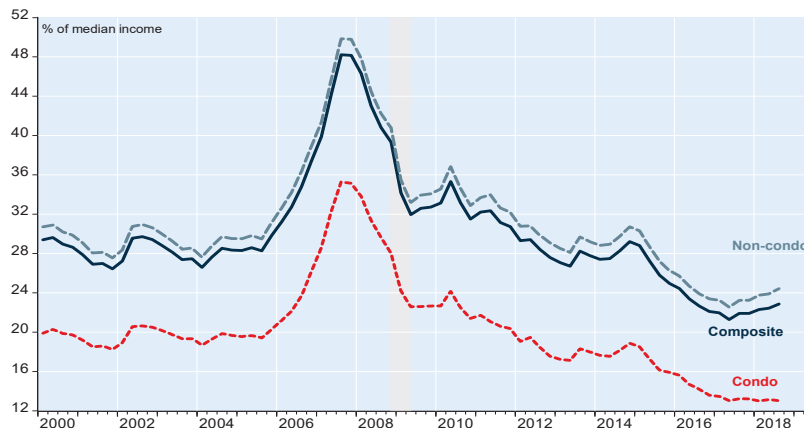
Mortgage payment as a % of income (MPPI)

Non- Condo	24.4%	▲	+	0.5%	Q/Q
Condo	13.0%	▼	-	0.1%	Q/Q

Edmonton : Perspective on housing affordability

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

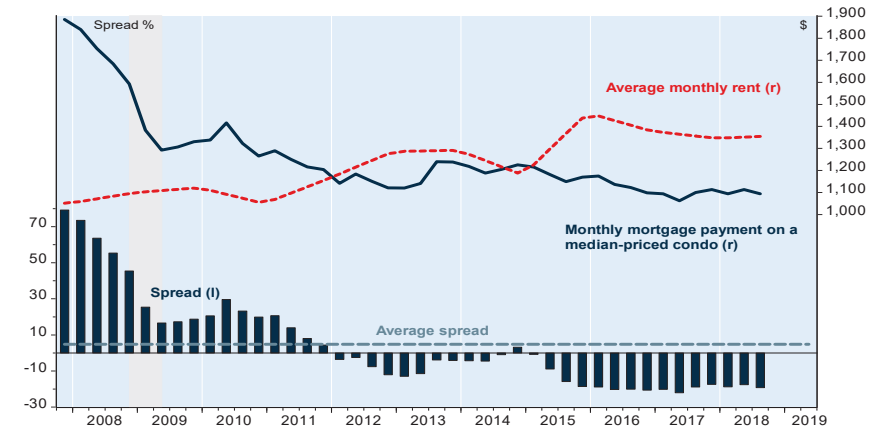
EDMONTON



NBF Economics and Strategy (data via Statistics Canada, Teranet-National Bank)

Edmonton: Buying compared to renting

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



NBF Economics and Strategy (data via Statistics Canada, Teranet-National Bank)

Housing Affordability Monitor

Economics and Strategy

Ottawa/Gatineau

In Ottawa-Gatineau, the MPPI* for both the non-condo and condo segments showed a deterioration in affordability of +0.9 pp and +0.7pp, respectively. A rise in home prices for both segments of the market was the most significant contributor to the quarterly decline. For the aggregate of all dwellings, this was the fifth consecutive quarter of worsening for affordability (the largest among its peers), with a MPPI which rose 2.3pp from a year ago. Income grew at a respectable 3.1% on a yearly basis but was not enough to offset the increase in home prices and interest rates. *See tables on page 12 for more information.

Mortgage payment as a % of income (MPPI)				
Non-Condo	31.0%	▲ +	0.9%	Q/Q
Condo	18.7%	▲ +	0.7%	Q/Q



Non-Condo

\$423,657

Price of the representative home in the metropolitan market

\$76,079

Household annual income needed to afford the representative home

32

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

-40.6%

Premium for buying compared to the national urban composite



Condo

\$255,563

Price of the representative condo in the metropolitan market

\$45,893

Household annual income needed to afford the representative condo

20

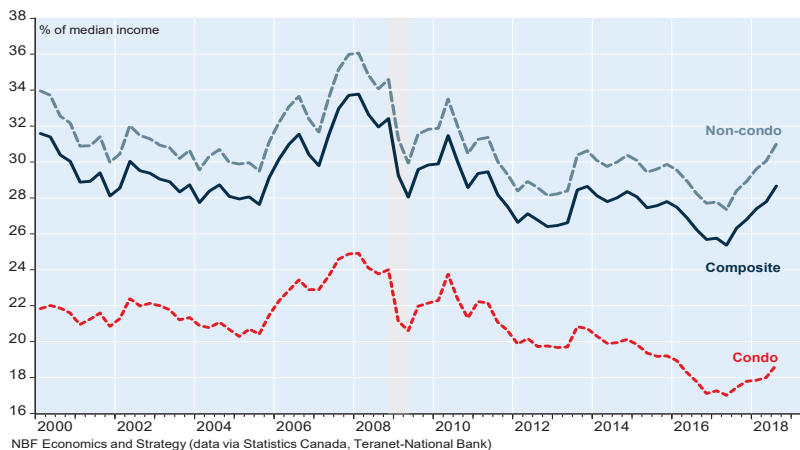
Months of saving required for the down payment (saving rate of 10%)

-22.4%

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

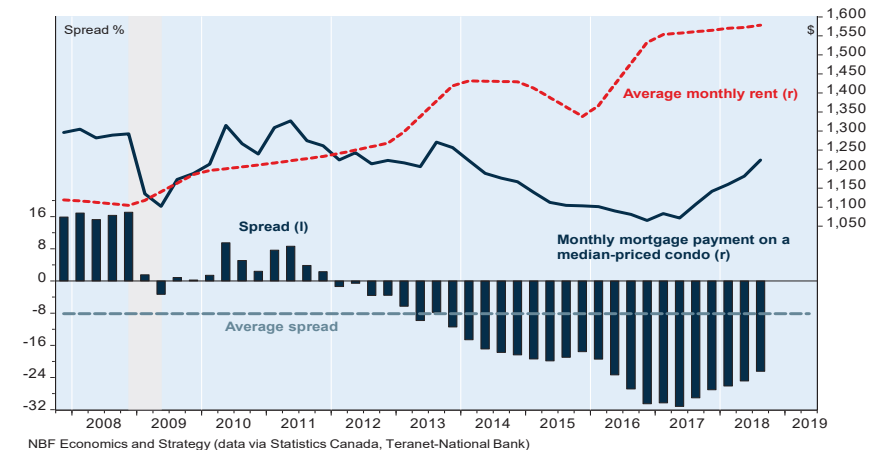
Ottawa/Gatineau : Perspective on housing affordability

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



Housing Affordability Monitor

Economics and Strategy

Quebec City

Canada's second most affordable market became slightly less accessible in the quarter. Quebec's MPPI* saw a deterioration in affordability (+0.1pp) for both the non-condo and condo segments. On a yearly basis for the composite of all dwellings, the MPPI rose 1.2-points, marking a fourth annual increase (the longest stretch since 2013). This decline in housing affordability can be partly attributed to a 53 bps increase of the mortgage rate as income and prices have not changed that much, rising 1.4 % and 0.4 % respectively. *See tables on page 12 for more information.

Mortgage payment as a % of income (MPPI)				
Non-Condo	26.5%	▲ +	0.1%	Q/Q
Condo	19.8%	▲ +	0.1%	Q/Q



Non-Condo

\$284,968

Price of the representative home in the metropolitan market

\$51,174

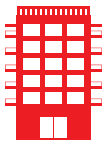
Household annual income needed to afford the representative home

28

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

-60.0%

Premium for buying compared to the national urban composite



Condo

\$212,456

Price of the representative condo in the metropolitan market

\$38,152

Household annual income needed to afford the representative condo

21

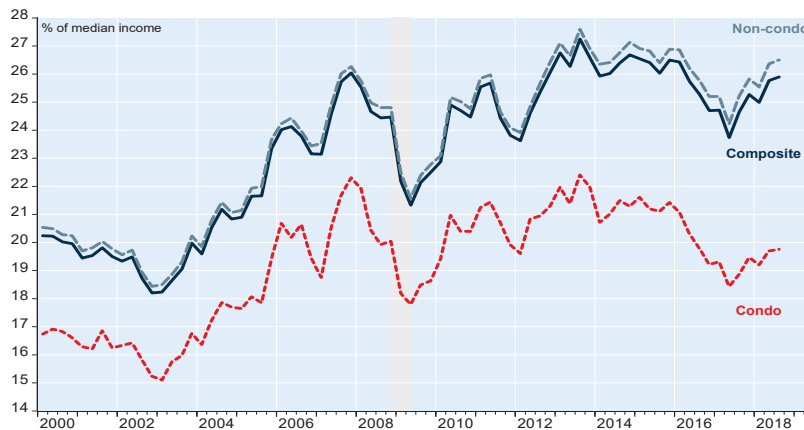
Months of saving required for the down payment (saving rate of 10%)

-3.5%

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

Quebec city: Perspective on housing affordability

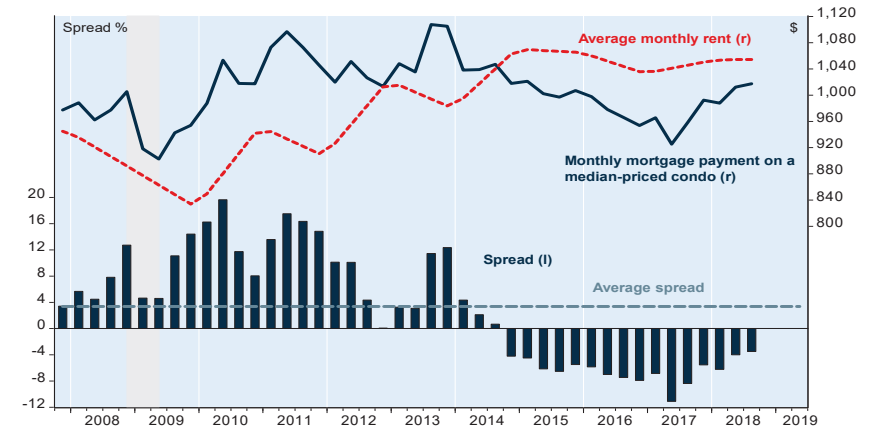
Monthly mortgage payment on median home price (25 year amortization, 5-year term)



NBF Economics and Strategy (data via Statistics Canada, Teranet-National Bank)

Quebec City: Buying compared to renting

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



NBF Economics and Strategy (data via Statistics Canada, Teranet-National Bank)

QUEBEC CITY

Housing Affordability Monitor

Economics and Strategy

Winnipeg

Winnipeg was the only market to have shown an improvement in housing affordability in Q3. Indeed, the MPPI* showed an amelioration in affordability for the non-condo (-0.1pp) and condo (-0.2pp) segments. For the aggregate of all dwellings, the MPPI fell for another quarter (0.1-point) after a 0.2-point decline in Q2. That said, the MPPI was up 1.5-points in the year as a 2.2% increment in income was more than offset by an increase of the mortgage rate and a progression of home prices. *See tables on page 12 for more information.

Mortgage payment as a % of income (MPPI)				
Non-Condo	26.6%	▼	- 0.1%	Q/Q
Condo	18.9%	▼	- 0.2%	Q/Q



Non-Condo

\$321,103

Price of the representative home in the metropolitan market

\$57,663

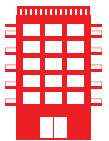
Household annual income needed to afford the representative home

28

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

-55.0%

Premium for buying compared to the national urban composite



Condo

\$228,913

Price of the representative condo in the metropolitan market

\$41,107

Household annual income needed to afford the representative condo

20

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

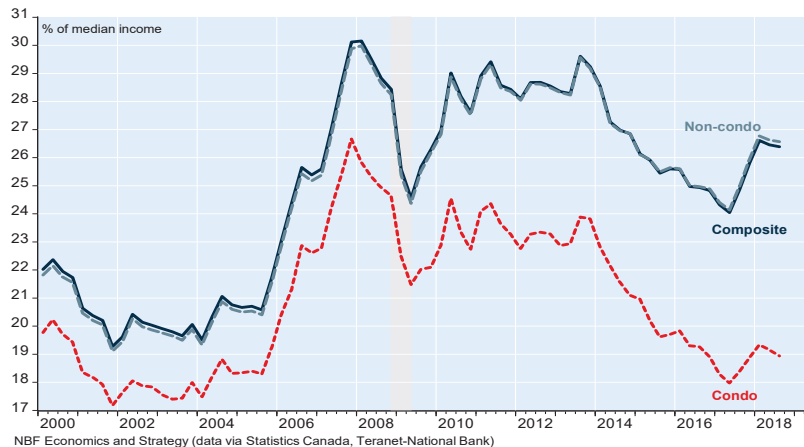
-21.5%

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

Winnipeg: Perspective on housing affordability

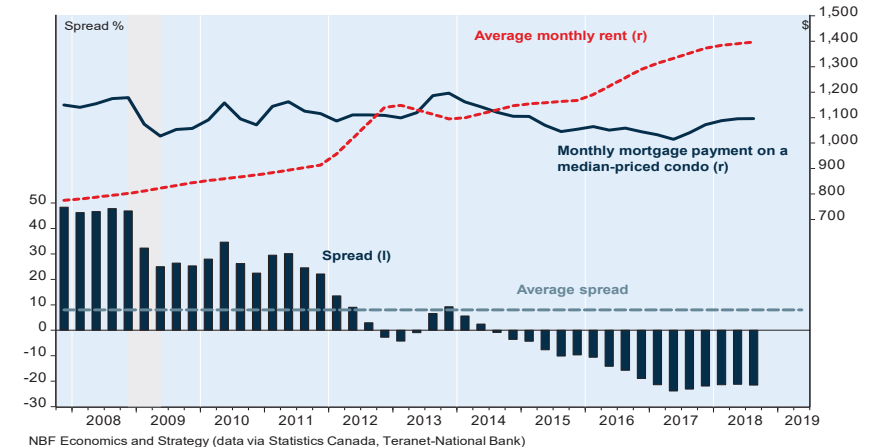
Monthly mortgage payment on median home price (25 year amortization, 5-year term)

WINNIPEG



Winnipeg: Buying compared to renting

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



Housing Affordability Monitor

Economics and Strategy

Hamilton

In Hamilton, the MPPI* for both the non-condo and condo segments showed a deterioration in affordability of +0.4pp and +0.8pp respectively. For the aggregate of all dwellings, the MPPI rose by 0.4-point in Q3, reaching its highest since at least 2000 (41.8 %). That being said, the MPPI was up only 0.9-points from a year earlier, more modestly than the 1.9 point for our urban composite. This can be credited to prices declining by -0.3% y/y combined with income rising by 3.5% over that same period. *See tables on page 12 for more information.

Mortgage payment as a % of income (MPPI)				
Non-Condo	44.3%	▲ +	0.4%	Q/Q
Condo	33.2%	▲ +	0.8%	Q/Q



Non-Condo

\$583,456

Price of the representative home in the metropolitan market

\$104,775

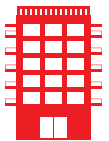
Household annual income needed to afford the representative home

53

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

-18.2%

Premium for buying compared to the national urban composite



Condo

\$436,528

Price of the representative condo in the metropolitan market

\$78,390

Household annual income needed to afford the representative condo

35

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

38.1%

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

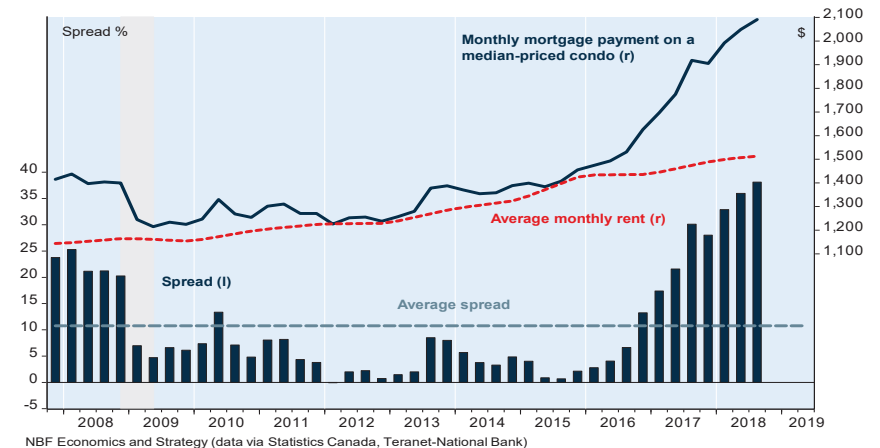
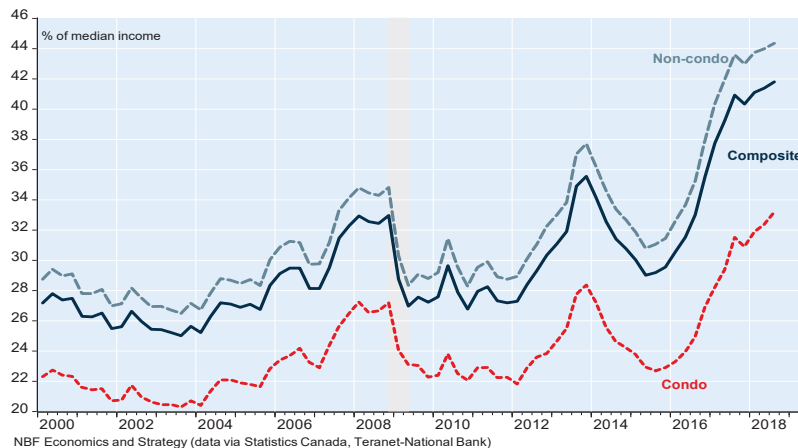
Hamilton: Perspective on housing affordability

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



Housing Affordability Monitor

Economics and Strategy

Victoria

Victoria experienced a deterioration in affordability with the MPPI* showing an improvement for non-condos (-0.2pp) and a significant worsening for the condo (+1.2pp) segment. For the composite of all dwellings, the MPPI rose by 0.1-point in Q3 up to 77.4 %. Affordability in Victoria now stands at its worst since Q2 of 2008. It was up 4.6-points from a year earlier as a result of higher rates and an increase in home prices (+5.0%) which more than offset the growth in income (+4.7%). *See tables on page 12 for more information.

Mortgage payment as a % of income (MPPI)				
Non-Condo	81.6%	▼	- 0.2%	Q/Q
Condo	47.3%	▲	+ 1.2%	Q/Q



Non-Condo

\$834,906

Price of the representative home in the metropolitan market

\$149,929

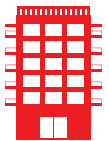
Household annual income needed to afford the representative home

119

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

17.1%

Premium for buying compared to the national urban composite



Condo

\$483,325

Price of the representative condo in the metropolitan market

\$86,794

Household annual income needed to afford the representative condo

49

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

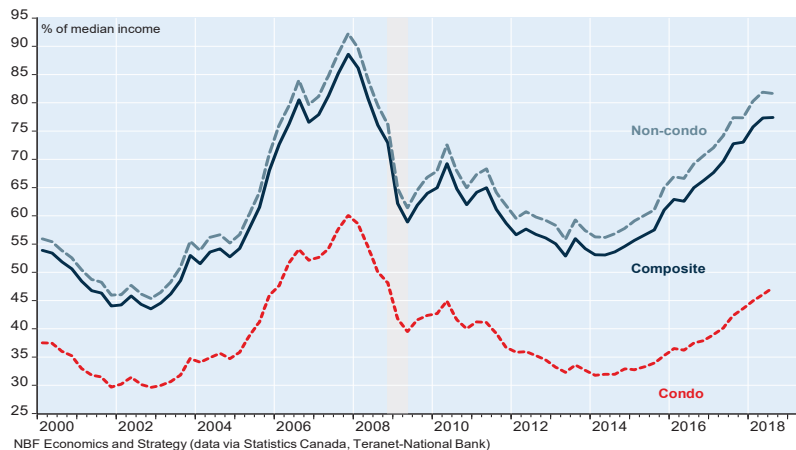
47.9%

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

Victoria: Perspective on housing affordability

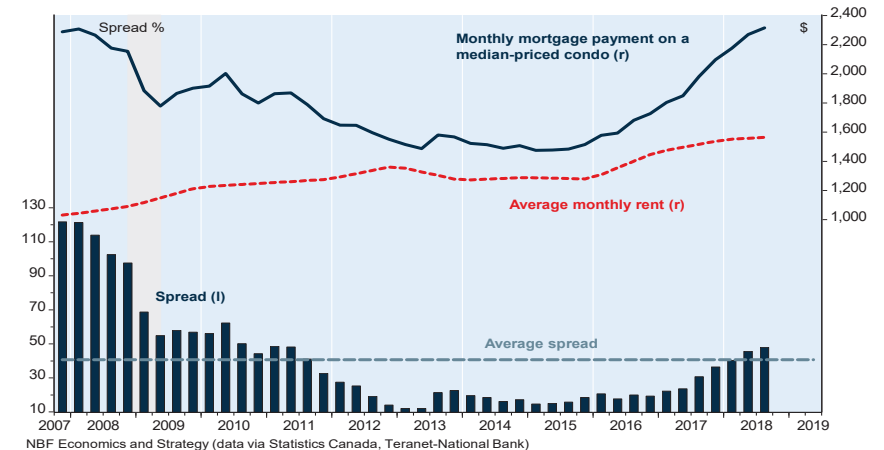
Monthly mortgage payment on median home price (25 year amortization, 5-year term)

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
All dwellings	Median home price	Q/Q % change	Y/Y % change	Downpayment: Months of saving	Avg. Since 2000	*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)	Monthly mortgage payment
Urban Composite	\$ 567,536	-0.1	0.7	57.3	33.5	49.0	0.3	1.9	39.7	\$ 101,916	\$ 66,527	68%	\$ 2,718
Toronto	\$ 831,218	-0.7	-4.7	99.6	44.3	68.2	0.1	-1.7	47.8	\$ 149,267	\$ 70,056	66%	\$ 3,980
Montreal	\$ 334,616	2.1	5.3	34.1	24.7	32.7	0.7	3.0	30.1	\$ 60,089	\$ 58,804	56%	\$ 1,602
Vancouver	\$ 1,088,798	-0.9	6.9	337.5	70.3	80.8	0.1	6.1	60.7	\$ 195,522	\$ 77,429	64%	\$ 5,214
Calgary	\$ 444,788	-0.6	-0.6	34.2	26.9	32.7	0.2	1.3	33.8	\$ 79,873	\$ 78,140	73%	\$ 2,130
Edmonton	\$ 401,616	0.7	-0.5	23.9	23.4	22.9	0.4	0.9	30.0	\$ 72,121	\$100,965	70%	\$ 1,923
Ottawa/Gatineau	\$ 391,898	2.5	5.9	29.9	23.6	28.7	0.9	2.3	28.9	\$ 70,376	\$ 78,579	67%	\$ 1,877
Quebec	\$ 278,497	0.3	0.4	27.0	19.6	25.9	0.1	1.2	23.4	\$ 50,012	\$ 61,796	60%	\$ 1,334
Winnipeg	\$ 318,942	0.6	2.3	27.6	20.7	26.4	-0.1	1.5	24.9	\$ 57,274	\$ 69,457	67%	\$ 1,527
Hamilton	\$ 549,921	0.2	-0.3	47.6	25.5	41.8	0.4	0.9	29.9	\$ 98,753	\$ 75,606	70%	\$ 2,633
Victoria	\$ 791,503	-0.9	5.0	110.6	52.9	77.4	0.1	4.6	61.2	\$ 142,135	\$ 58,765	63%	\$ 3,790

Table 2

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
Condo	Median home price	Q/Q % change	Y/Y % change	Downpayment: Months of saving	Avg. Since 2000	*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 mortgage payment	Monthly average rent
Urban Composite	\$ 401,990	0.9	6.8	36.3	23.9	34.7	0.5	3.2	29.2	\$ 72,188	\$ 66,527	9%	\$ 1,925	\$ 1,829
Toronto	\$ 521,239	1.7	6.1	46.5	25.7	42.8	1.0	3.4	30.7	\$ 93,602	\$ 70,056	15%	\$ 2,496	\$ 2,333
Montreal	\$ 272,214	2.1	4.7	27.8	21.6	26.6	0.6	2.3	26.4	\$ 48,883	\$ 58,804	11%	\$ 1,304	\$ 1,187
Vancouver	\$ 644,330	-0.5	14.4	61.1	31.3	47.8	0.3	6.5	37.5	\$ 115,706	\$ 77,429	22%	\$ 3,086	\$ 1,904
Calgary	\$ 273,971	0.5	-1.0	21.0	19.1	20.1	0.3	0.7	24.4	\$ 49,199	\$ 78,140	14%	\$ 1,312	\$ 1,520
Edmonton	\$ 228,536	-2.1	-6.2	13.6	15.6	13.0	-0.1	-0.2	20.2	\$ 41,040	\$100,965	12%	\$ 1,094	\$ 1,354
Ottawa/Gatineau	\$ 255,563	3.2	4.2	19.5	17.0	18.7	0.7	1.3	21.0	\$ 45,893	\$ 78,579	9%	\$ 1,224	\$ 1,578
Quebec	\$ 212,456	0.1	0.2	20.6	16.1	19.8	0.1	0.9	19.2	\$ 38,152	\$ 61,796	9%	\$ 1,017	\$ 1,054
Winnipeg	\$ 228,913	-0.3	-0.6	19.8	17.1	18.9	-0.2	0.6	20.9	\$ 41,107	\$ 69,457	6%	\$ 1,096	\$ 1,396
Hamilton	\$ 436,528	1.6	2.8	34.6	20.1	33.2	0.8	1.7	24.0	\$ 78,390	\$ 75,606	11%	\$ 2,090	\$ 1,514
Victoria	\$ 483,325	1.6	10.2	49.3	31.2	47.3	1.2	4.9	39.2	\$ 86,794	\$ 58,765	14%	\$ 2,314	\$ 1,565

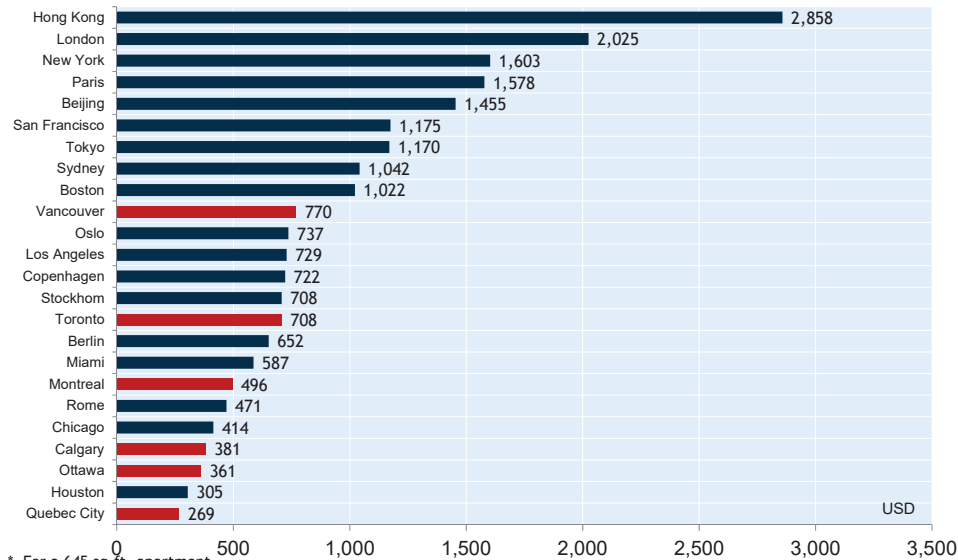
Table 3

	A	B	C	D	E	F	G	H	I	J	K	L	M
Non-condo	Median home price	Q/Q % change	Y/Y % change	Downpayment: Months of saving	Avg. Since 2000	*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 mortgage payment
Urban Composite	\$ 712,957	-0.2	-0.2	83.5	43.6	61.6	0.3	1.8	49.6	\$ 128,030	\$ 66,527	59%	\$ 3,414
Toronto	\$ 887,025	-1.0	-6.3	109.1	47.8	72.8	-0.2	-3.0	50.9	\$ 159,289	\$ 70,056	52%	\$ 4,248
Montreal	\$ 362,214	2.1	5.4	37.0	26.5	35.4	0.8	3.3	32.1	\$ 65,045	\$ 58,804	45%	\$ 1,735
Vancouver	\$ 1,327,085	-1.0	5.3	411.3	105.0	98.5	0.1	6.1	72.7	\$ 238,313	\$ 77,429	42%	\$ 6,355
Calgary	\$ 501,759	-0.7	-0.5	38.7	29.8	36.9	0.2	1.5	37.3	\$ 90,104	\$ 78,140	59%	\$ 2,403
Edmonton	\$ 429,031	1.0	0.3	25.5	24.6	24.4	0.5	1.2	31.3	\$ 77,044	\$100,965	57%	\$ 2,055
Ottawa/Gatineau	\$ 423,657	2.4	6.1	32.3	25.3	31.0	0.9	2.6	30.9	\$ 76,079	\$ 78,579	58%	\$ 2,029
Quebec	\$ 284,968	0.3	0.5	27.7	19.9	26.5	0.1	1.3	23.7	\$ 51,174	\$ 61,796	51%	\$ 1,365
Winnipeg	\$ 321,103	0.6	2.6	27.7	20.7	26.6	-0.1	1.6	24.8	\$ 57,663	\$ 69,457	61%	\$ 1,538
Hamilton	\$ 583,456	0.0	-0.7	52.9	27.3	44.3	0.4	0.8	31.7	\$ 104,775	\$ 75,606	60%	\$ 2,794
Victoria	\$ 834,906	-1.3	4.2	119.4	56.2	81.6	-0.2	4.3	64.3	\$ 149,929	\$ 58,765	49%	\$ 3,998

Global perspective on housing affordability

World: Home prices do not seem extreme in Canada

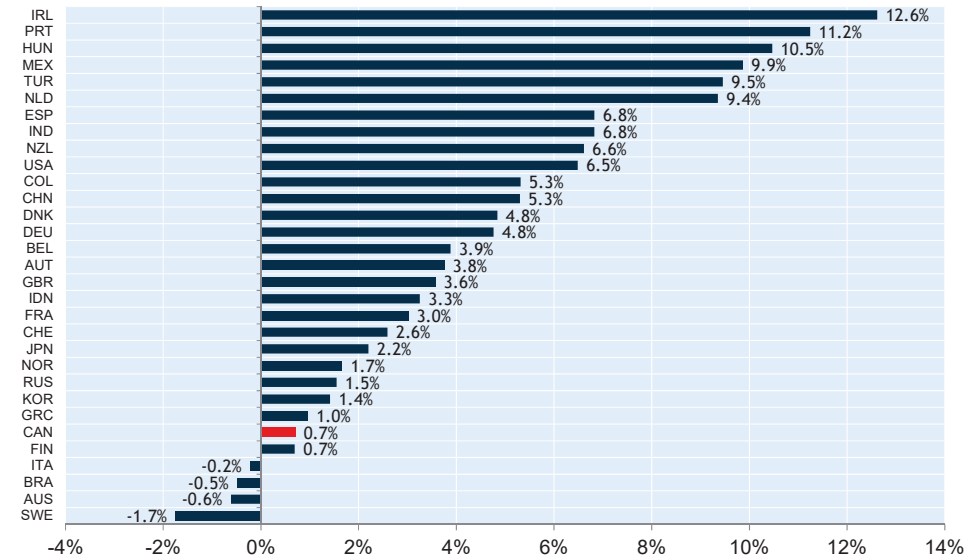
Price per square foot in USD for downtown living* (summer 2018)



* For a 645 sq.ft. apartment
NBF Economics and Strategy (as of May 14, 2018)

World: Perspective on home price growth

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



NBF Economics and Strategy (Data via OECD)

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.

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 household devote 32% of its pre-tax income for mortgage payment (defined as **qualifying income**). 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.

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Housing Affordability Monitor

Economics and Strategy

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