

## Interest rates raise the bar for home ownership in Q4 2018

By Matthieu Arseneau & Kyle Dahms

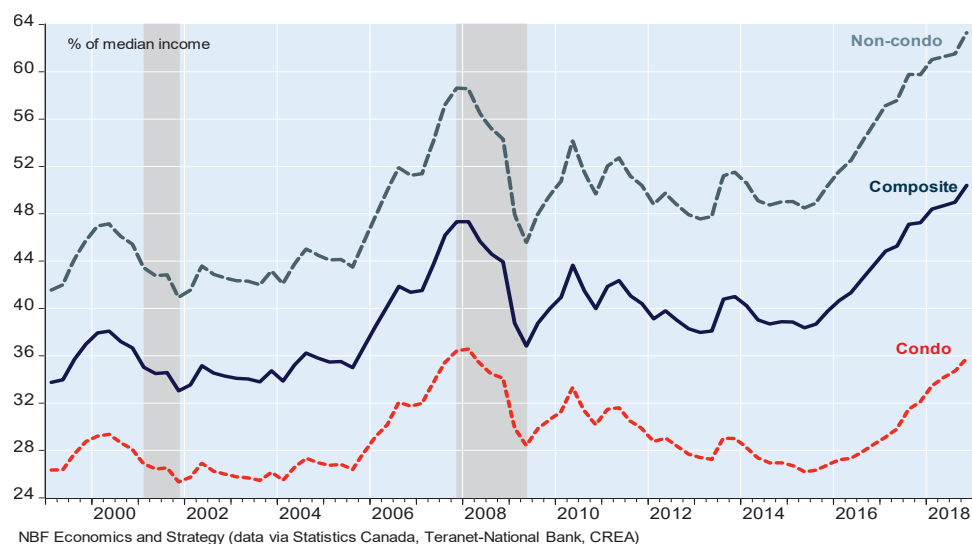
In Q4, affordability worsened for a 14th consecutive quarter as measured by the urban composite index. All but two markets experienced a deterioration stemming from a 20-basis points increase for residential mortgage rates, hitting harder the priciest markets in the country (see table on page 12 for more details). Financing costs were up for a sixth consecutive quarter which marked the longest streak of rises since the period of '99-'00. In Vancouver, home prices are decreasing but it did not prevent affordability to deteriorate further amid higher interest rates and declining median annual income. In this city, our measure for the non-condo segment have crossed the psychological threshold of 100% as it would now require 101.5% of pre-tax median household income to pay for a representative home. In other words, this segment is even more out of reach for a median income family. As it is the case in Vancouver, both segments at the national level experienced a significant deterioration over the past 3 years but the magnitude of the worsening has been less pronounced for condos (left chart) which could explain why prices are still running at a solid pace in 2018 (+6.2% y/y vs. 1.2% for non-condos). That being said, a moderation in the condo segment should not be ruled out in 2019 as stiff competition is now coming from the rental apartment option (right chart).

### HIGHLIGHTS:

- Canadian housing affordability deteriorated for a fourteenth consecutive quarter in Q4 2018, posting the largest one quarter deterioration in over a year. The mortgage payment on a representative home as a percentage of income (MPPI) rose 1.4 points after a 0.3-point rise in Q3. Seasonally adjusted home prices increased 0.9% in Q4 from Q3; the benchmark mortgage rate (5-year term) rose 20 basis points; while median household income rose 0.2% (a tepid 1.7% on a year over year basis).
- The worst deteriorations in affordability in Q4 were in Victoria (+4.0 points), Toronto (+3.0 points) and Vancouver (+2.2 points). The only markets showing an improvement were Calgary (-0.3 points) and Edmonton (-0.1 points). Countrywide, affordability worsened in both the condo segment (+1.0 point) and the non-condo (+1.8 point) portion. (See chart on the right)
- The time required to save for the down payment on a representative home at a savings rate of 10% rose to 340 months in Vancouver, to 102 months in Toronto, and to 34 months in Montreal in Q4 2018. Edmonton and Calgary, on the other hand, experienced declines to 23 and 33 months, respectively.

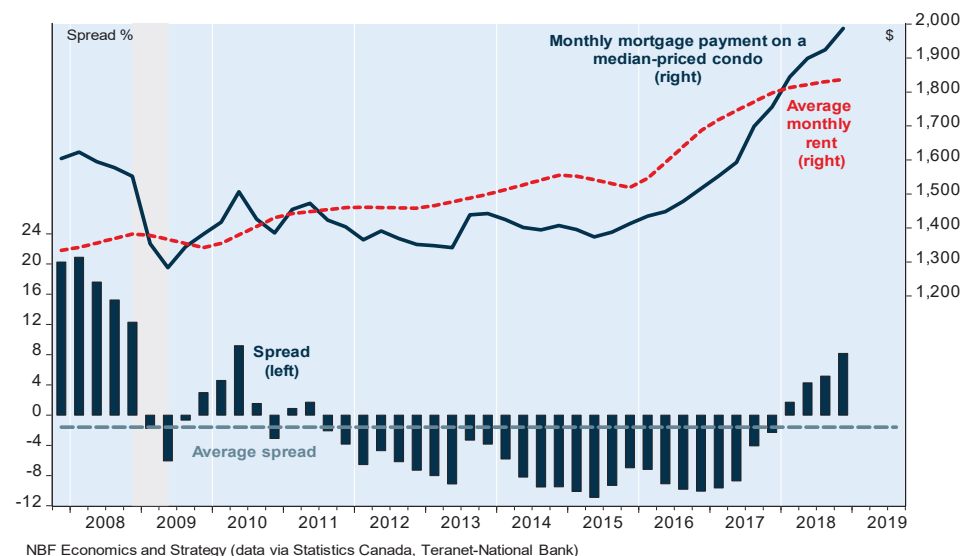
### Canada : Perspective on housing affordability by segment

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



### Canada: Renting is now cheaper than buying

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



## Toronto

Toronto's housing affordability deteriorated for both the condo and non-condo segments in the fourth quarter. With non-condo ownership being unattainable for most households, the relatively more affordable condo segment has taken the brunt of the impact with affordability worsening 5.5pp in the last year. Home prices for condos were up on a q/q (+2.9%) and y/y (+9.4%) basis. All in all, including home price increases for the condo segment and rising interest rates, the composite for all dwellings showed a significant deterioration in the MPPI\* for the quarter (+3.0pp, the largest deterioration in almost 2 years). \*See tables on page 12 for more information.

Mortgage payment as a % of income (MPPI)				
Non-Condo	<b>75.8%</b>	▲	+	3.2% Q/Q
Condo	<b>45.0%</b>	▲	+	2.3% Q/Q



**Non-Condo**

**\$902,916**

Price of the representative home in the metropolitan market

**\$165,755**

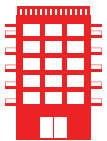
Household annual income needed to afford the representative home

**112**

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

**25.6%**

Premium for buying compared to the national urban composite



**Condo**

**\$536,082**

Price of the representative condo in the metropolitan market

**\$98,413**

Household annual income needed to afford the representative condo

**49**

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

**12.0%**

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

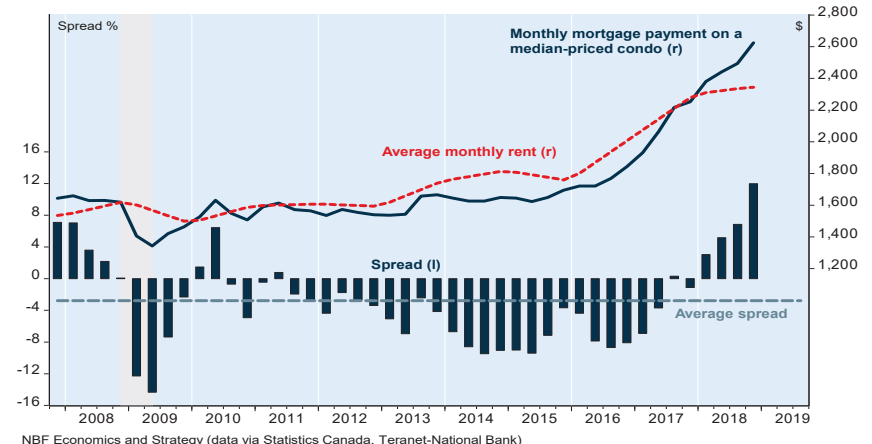
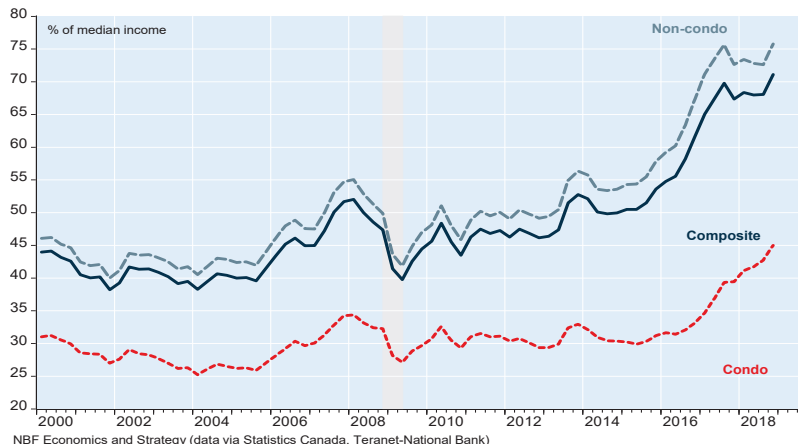
### Toronto : Perspective on housing affordability

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**



## Montreal

In Montreal, affordability as measured by the MPPI declined for both the condo (+0.8pp) and non-condo (+1.1pp) segments. The housing market has gotten hotter in this comparatively affordable city. Accordingly, for the aggregate of all dwellings, the MPPI\* reached 33.7%, its highest level since Q3 2011. On a yearly basis, home prices have risen by 5.1%, outpacing income growth which progressed 1.9% in the same period. \*See tables on page 12 for more information.

Mortgage payment as a % of income (MPPI)				
Non-Condo	<b>36.5%</b>	▲ +	1.1%	Q/Q
Condo	<b>27.4%</b>	▲ +	0.8%	Q/Q



**Non-Condo**

**\$369,234**

Price of the representative home in the metropolitan market

**\$67,783**

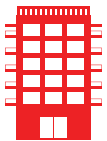
Household annual income needed to afford the representative home

**37**

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

**-48.6%**

Premium for buying compared to the national urban composite



**Condo**

**\$276,889**

Price of the representative condo in the metropolitan market

**\$50,831**

Household annual income needed to afford the representative condo

**28**

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

**13.9%**

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

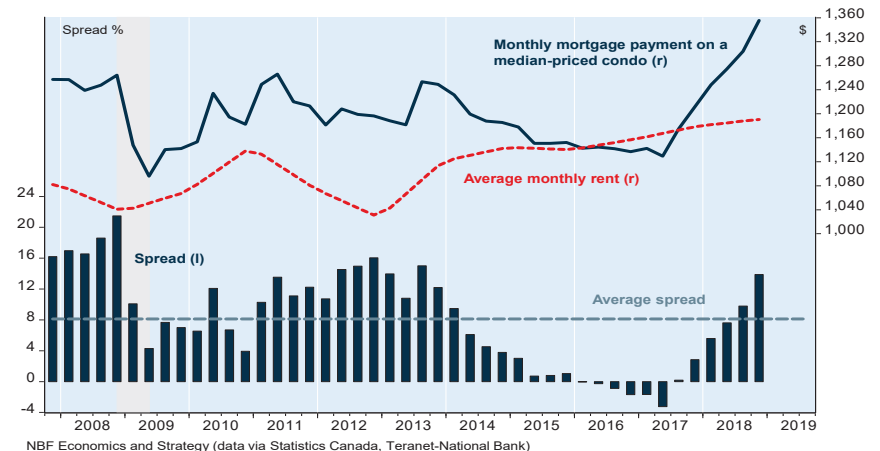
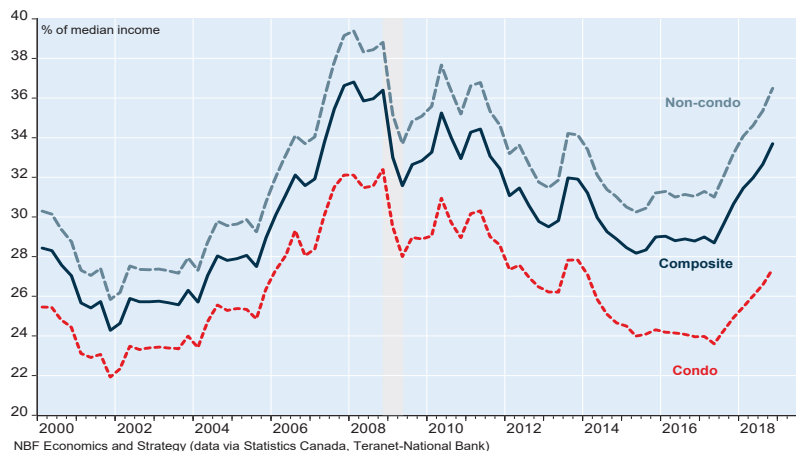
### Montreal : Perspective on housing affordability

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 in the fourth quarter (+1.3%, a 14th consecutive deterioration). A mortgage payment for the non-condo segment now requires more than the totality of the median household pre-tax income (101.5%) to service. This percentage rose this quarter (+2.7pp) on the back of rising interest rates and falling income growth. Home prices were down 0.7 in the last quarter but rose 1.8 % over the past year. \*See tables on page 12 for more information.



**Non-  
Condo**

**\$1,318,768**

Price of the representative home in the metropolitan market

**\$242,096**

Household annual income needed to afford the representative home



**Condo**

**\$638,842**

Price of the representative condo in the metropolitan market

**\$117,277**

Household annual income needed to afford the representative condo

### Mortgage payment as a % of income (MPPI)

<b>Non- Condo</b>	<b>101.5%</b>	<b>▲</b>	<b>+</b>	<b>2.7%</b>	<b>Q/Q</b>
<b>Condo</b>	<b>49.2%</b>	<b>▲</b>	<b>+</b>	<b>1.3%</b>	<b>Q/Q</b>

**415**

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

**83.5%**

Premium for buying compared to the national urban composite

**61**

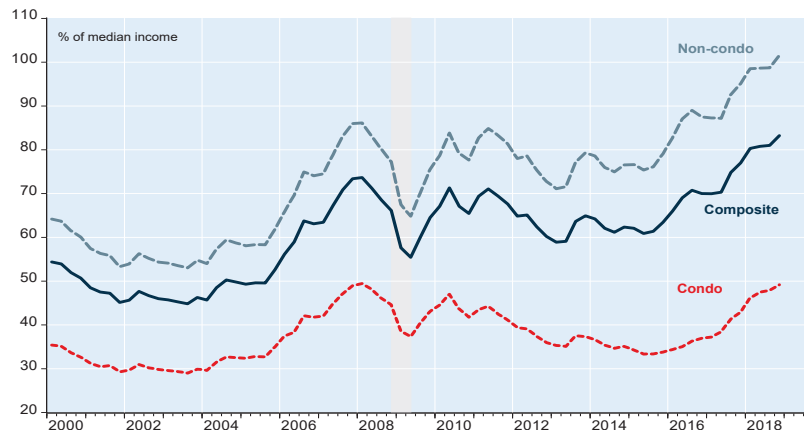
Months of saving required for the down payment (saving rate of 10%)

**63.5%**

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

### Vancouver : Perspective on housing affordability

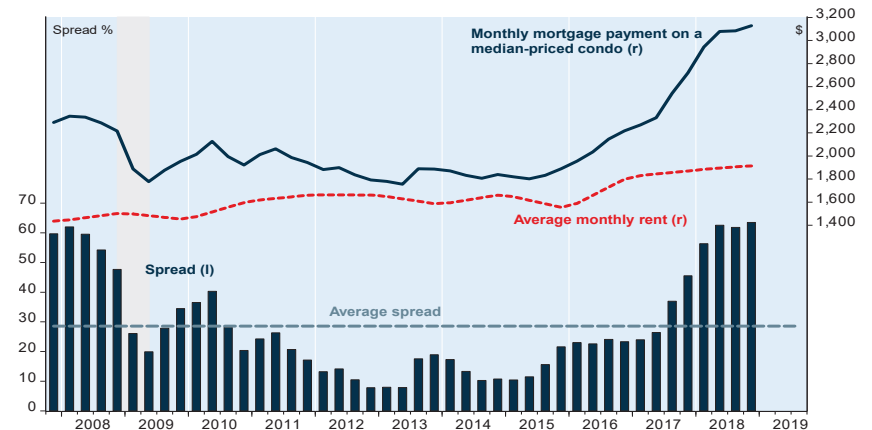
Monthly mortgage payment on median home price (25 year amortization, 5-year term)



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

### Vancouver: 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)

**VANCOUVER**

## Calgary

Calgary was the only city to show an improvement in the MPPI\* for both the non-condo (-0.3pp) and condo (-0.4pp) segments despite the 20-bps hike for mortgage rates. Indeed, on an annual basis, the city composite experienced a decrease of 2.2 % in housing prices and a +1.4 % improvement in income. While Calgary has become more affordable on a relative basis, the slowdown in home prices is indicative of economic woes in the province. \*See tables on page 12 for more information.

Mortgage payment as a % of income (MPPI)				
Non- Condo	<b>36.6%</b>	▼	- 0.3%	Q/Q
Condo	<b>19.7%</b>	▼	- 0.4%	Q/Q



**Non-  
Condo**

**\$494,689**

Price of the representative home in the metropolitan market

**\$90,814**

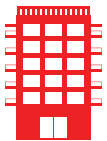
Household annual income needed to afford the representative home

**37**

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

**-31.2%**

Premium for buying compared to the national urban composite



**Condo**

**\$266,107**

Price of the representative condo in the metropolitan market

**\$48,851**

Household annual income needed to afford the representative condo

**20**

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

**-14.5%**

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

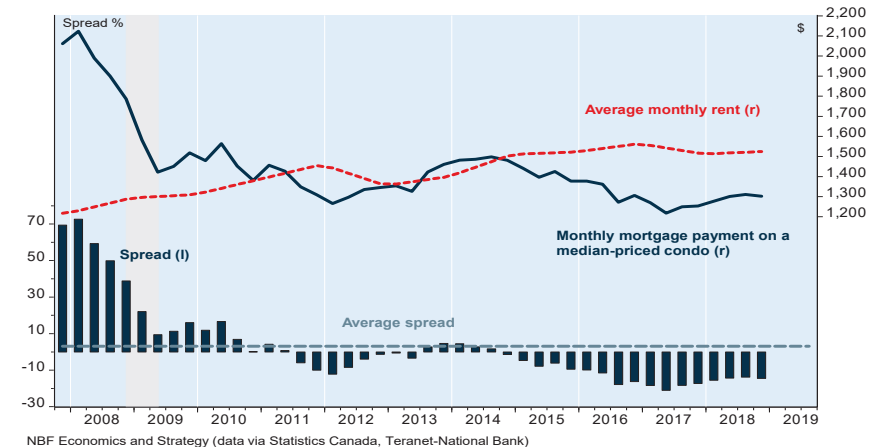
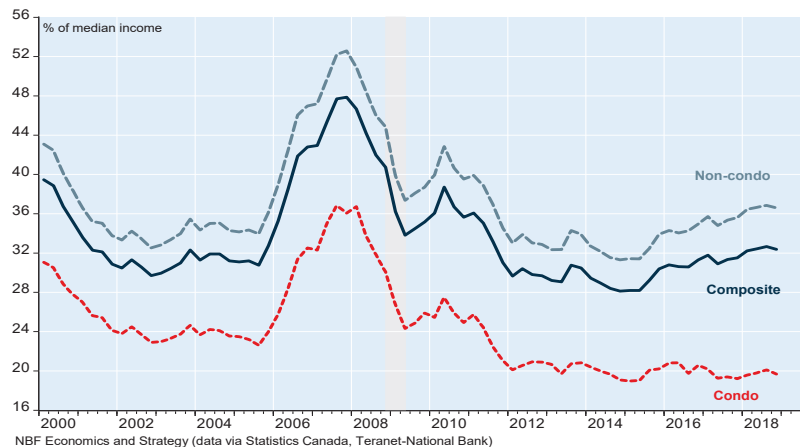
### Calgary : Perspective on housing affordability

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**



# Housing Affordability Monitor

Economics and Strategy

## Edmonton

Edmonton was the only other market to post an improvement in affordability for the composite index. While the city did see a deterioration in affordability for condos (+0.2pp), there was an improvement in the non-condo (-0.1pp) segment. As Edmonton remains the most affordable city in the covered markets, the 25 (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 0.8-points. That deterioration was much less severe comparatively to our urban composite. \*See tables on page 12 for more information.



**Non-  
Condo**

**\$422,508**

Price of the representative home in the metropolitan market

**\$77,563**

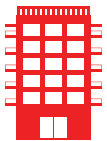
Household annual income needed to afford the representative home

**25**

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

**-41.2%**

Premium for buying compared to the national urban composite



**Condo**

**\$231,117**

Price of the representative condo in the metropolitan market

**\$42,428**

Household annual income needed to afford the representative condo

**14**

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

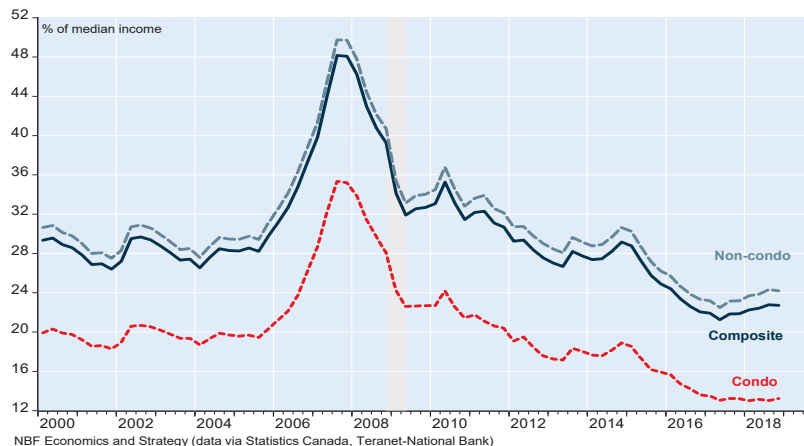
**-16.5%**

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)

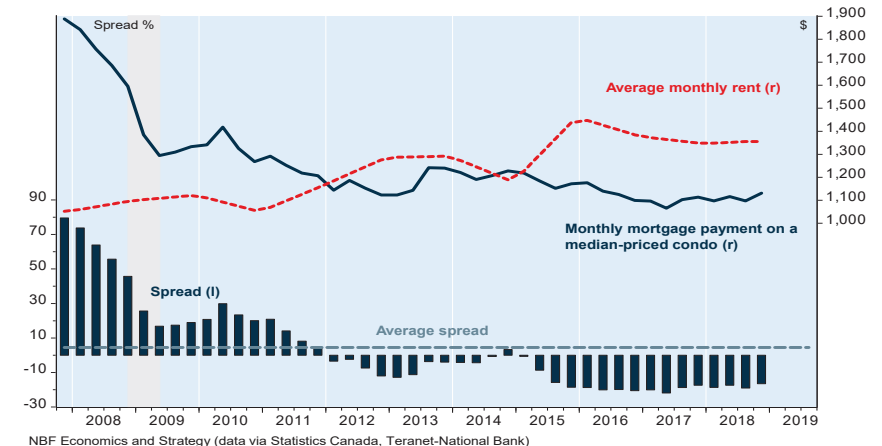
**EDMONTON**



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)



## Ottawa/Gatineau

In Ottawa-Gatineau, the MPPI\* for both the non-condo and condo segments showed a deterioration in affordability of +1.0 pp and +0.8pp, 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 sixth consecutive quarter of worsening for affordability, with a MPPI which rose 2.8pp from a year ago. Income grew at 2.1 % 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	<b>32.0%</b>	▲ +	1.0%	Q/Q
Condo	<b>19.5%</b>	▲ +	0.8%	Q/Q



**Non-Condo**

**\$428,595**

Price of the representative home in the metropolitan market

**\$78,680**

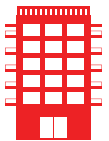
Household annual income needed to afford the representative home

**33**

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

**-40.4%**

Premium for buying compared to the national urban composite



**Condo**

**\$261,454**

Price of the representative condo in the metropolitan market

**\$47,997**

Household annual income needed to afford the representative condo

**20**

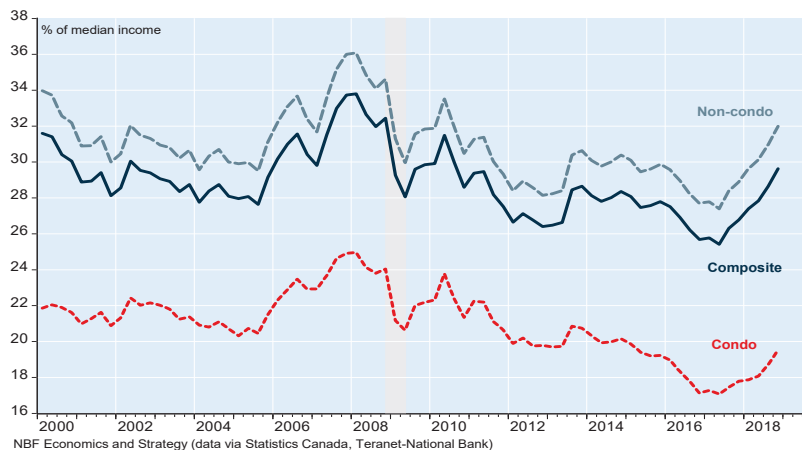
Months of saving required for the down payment (saving rate of 10%)

**-19.3%**

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

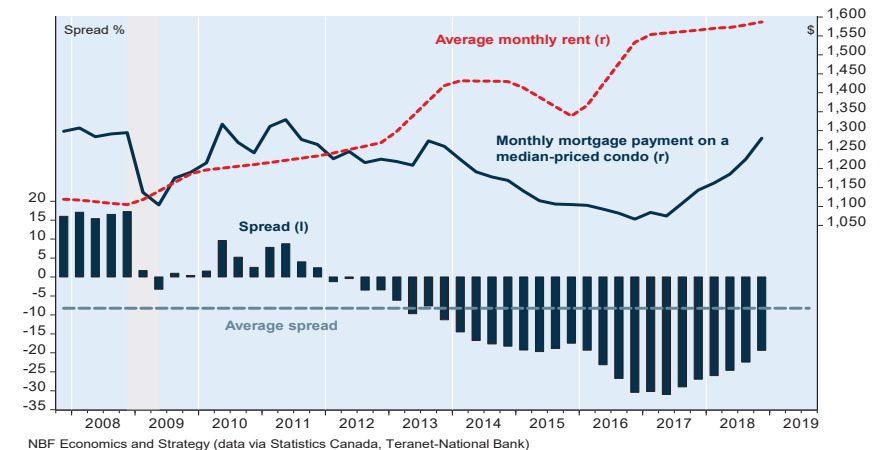
### Ottawa/Gatineau : Perspective on housing affordability

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 second most affordable market became slightly less accessible in the quarter. Quebec city's MPPI\* saw a deterioration in affordability for both the non-condo (+0.5pp) and condo (+0.2pp) segments. On a yearly basis for the composite of all dwellings, the MPPI rose 1.1-points, marking a fifth annual increase (the longest stretch since 2013). This decline in housing affordability can be partly attributed to a 57 bps increase of the mortgage rate as incomes were up 1.9% while home prices were flat in the year leading to the quarter. \*See tables on page 12 for more information.



**Non-  
Condo**

**\$286,491**

Price of the representative home in the metropolitan market

**\$52,593**

Household annual income needed to afford the representative home

**28**

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

**-60.1%**

Premium for buying compared to the national urban composite



**Condo**

**\$211,768**

Price of the representative condo in the metropolitan market

**\$38,876**

Household annual income needed to afford the representative condo

**20**

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

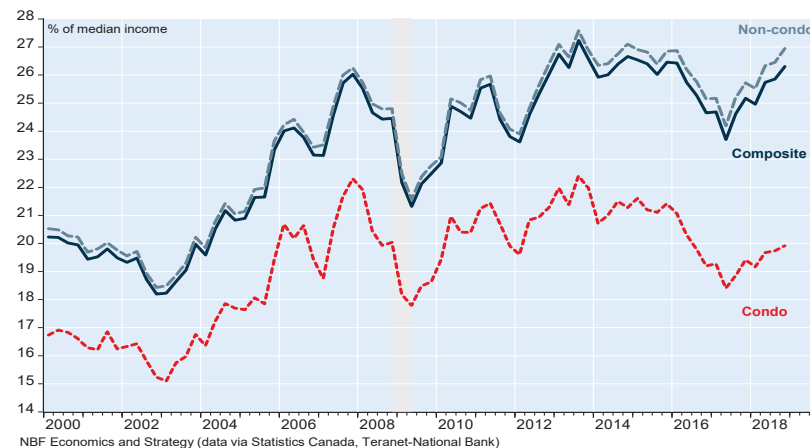
**-2.0%**

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

**QUEBEC CITY**

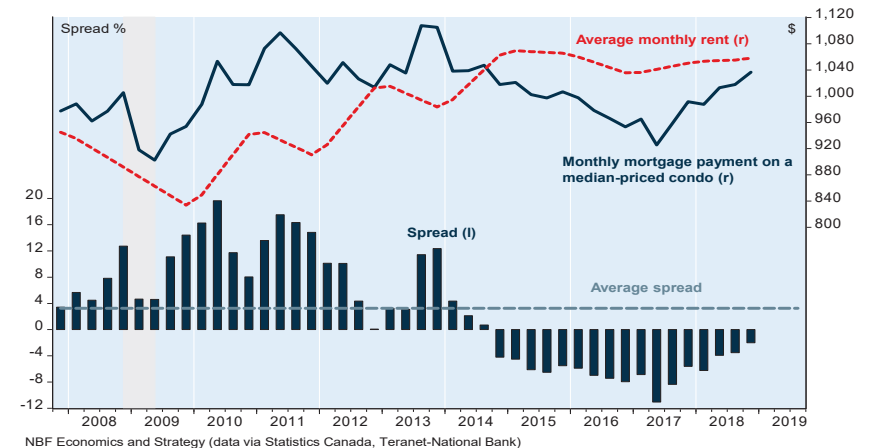
### Quebec city: Perspective on housing affordability

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





## Winnipeg

Winnipeg posted the first worsening in three quarters for housing affordability in Q4. Indeed, the MPPI\* showed a deterioration in affordability for the non-condo (+0.6pp) segment while the condo segment was flat. For the aggregate of all dwellings, the MPPI rose 0.5 point after a 0.1-point decline in Q3. That said, the MPPI was up 1.2-points in the year as a 1.8% increment in income and flat home prices were more than offset by an increase of the mortgage rate. \*See tables on page 12 for more information.

Mortgage payment as a % of income (MPPI)				
Non-Condo	27.1%	▲	+ 0.6%	Q/Q
Condo	18.9%	▶	0.0%	Q/Q



**Non-Condo**

**\$321,259**

Price of the representative home in the metropolitan market

**\$58,976**

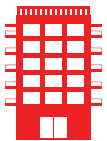
Household annual income needed to afford the representative home

**28**

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

**-55.3%**

Premium for buying compared to the national urban composite



**Condo**

**\$223,614**

Price of the representative condo in the metropolitan market

**\$41,050**

Household annual income needed to afford the representative condo

**19**

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

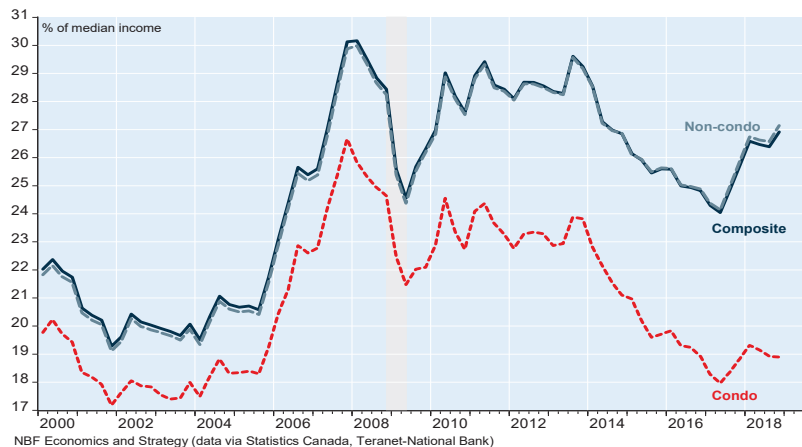
**-22.0%**

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

### Winnipeg: Perspective on housing affordability

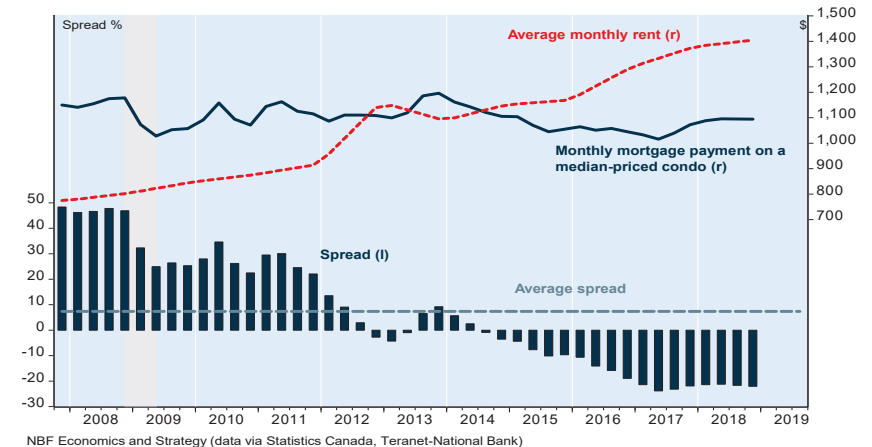
Monthly mortgage payment on median home price (25 year amortization, 5-year term)

**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 a deterioration in affordability of +2.2pp and +1.4pp respectively. For the aggregate of all dwellings, the MPPI rose by 2.0-points in Q4 (the largest one quarter deterioration in 2 years), reaching its highest since at least 2000 (43.8 %). Moreover, the MPPI was up 3.5-points from a year earlier, higher than the 3.1 points rise for our urban composite. This can be credited to prices rising by +4.1% y/y combined with income rising more modestly by 2.1% over that same period and jumping mortgage rates. \*See tables on page 12 for more information.

Mortgage payment as a % of income (MPPI)				
Non-Condo	<b>46.5%</b>	▲ +	2.2%	Q/Q
Condo	<b>34.7%</b>	▲ +	1.4%	Q/Q



**Non-Condo**

**\$598,274**

Price of the representative home in the metropolitan market

**\$109,829**

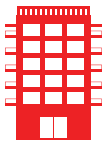
Household annual income needed to afford the representative home

**55**

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

**-16.8%**

Premium for buying compared to the national urban composite



**Condo**

**\$445,629**

Price of the representative condo in the metropolitan market

**\$81,807**

Household annual income needed to afford the representative condo

**35**

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

**43.5%**

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

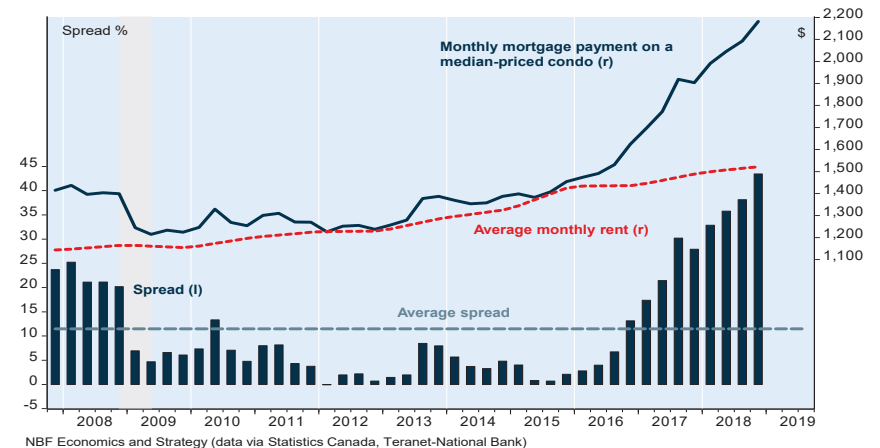
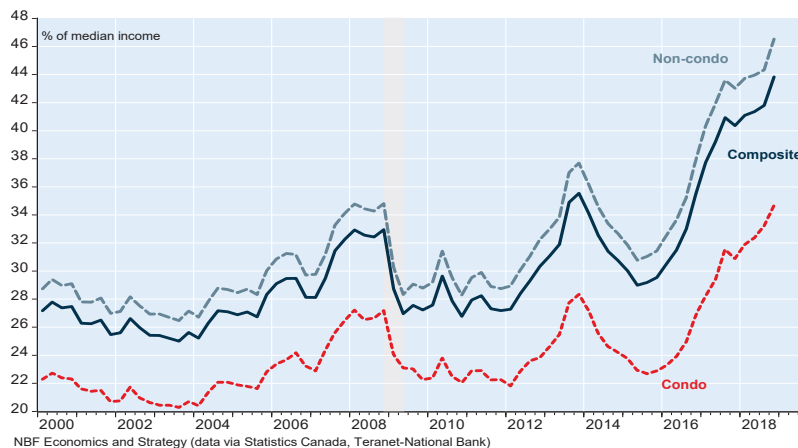
### Hamilton: Perspective on housing affordability

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 experienced the largest deterioration in affordability among the cities observed with the MPPI\* showing a significant deterioration for non-condos (+4.4pp) and a worsening for the condo (+1.9pp) segment. For the composite of all dwellings, the MPPI rose by 4.0-points in Q4 up to 81.6%. The MPPI in Victoria is at a cyclical high with the fourth worst level of affordability since data collection began in 1990. It was up 8.7-points from a year earlier due to higher interest rates and an increase in home prices (+5.4%) which more than offset lackluster growth in income (+0.3%, lowest y/y income growth in over 5 years). \*See tables on page 12 for more information.



**Non-  
Condo**

**\$850,469**

Price of the representative home in the metropolitan market

**\$156,127**

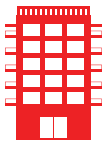
Household annual income needed to afford the representative home

**124**

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

**18.3%**

Premium for buying compared to the national urban composite



**Condo**

**\$485,937**

Price of the representative condo in the metropolitan market

**\$89,207**

Household annual income needed to afford the representative condo

**50**

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

**51.3%**

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

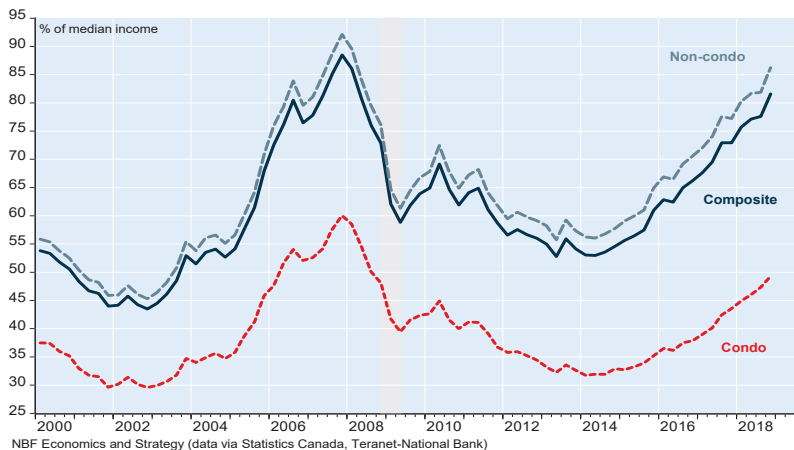
### Mortgage payment as a % of income (MPPI)

<b>Non- Condo</b>	<b>86.2%</b>	<b>▲</b>	<b>+</b>	<b>4.4%</b>	<b>Q/Q</b>
<b>Condo</b>	<b>49.3%</b>	<b>▲</b>	<b>+</b>	<b>1.9%</b>	<b>Q/Q</b>

### Victoria: Perspective on housing affordability

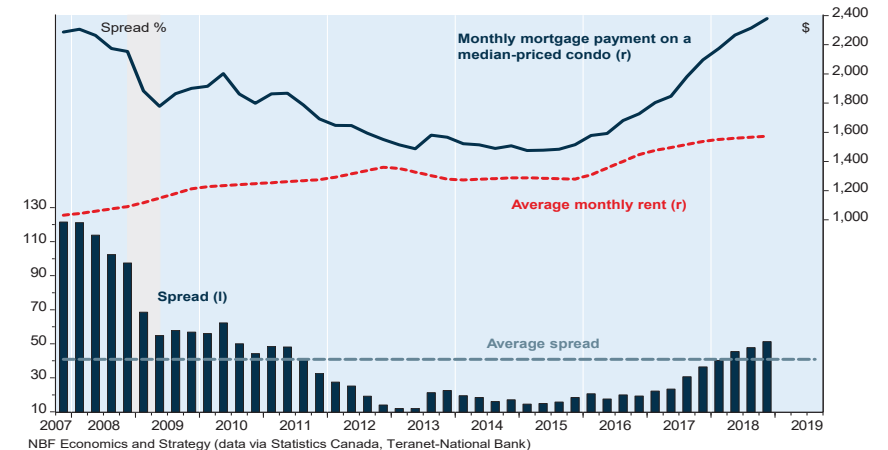
Monthly mortgage payment on median home price (25 year amortization, 5-year term)

**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
<b>Urban Composite</b>	<b>\$ 572,214</b>	<b>0.9</b>	<b>1.9</b>	<b>58.0</b>	<b>33.8</b>	<b>50.4</b>	<b>1.4</b>	<b>3.1</b>	<b>39.9</b>	<b>\$ 105,046</b>	<b>\$ 66,696</b>	<b>68%</b>	<b>\$ 2,801</b>
Toronto	\$ 847,256	2.1	1.2	102.4	45.0	71.1	3.0	3.7	48.1	\$ 155,537	\$ 69,996	66%	\$ 4,148
Montreal	\$ 340,985	1.9	5.1	34.4	24.9	33.7	1.0	3.0	30.1	\$ 62,597	\$ 59,437	56%	\$ 1,669
Vancouver	\$ 1,081,529	-0.7	1.8	340.0	73.9	83.2	2.2	6.2	61.0	\$ 198,544	\$ 76,352	64%	\$ 5,295
Calgary	\$ 437,645	-1.6	-2.2	33.1	26.9	32.4	-0.3	0.9	33.7	\$ 80,342	\$ 79,429	73%	\$ 2,142
Edmonton	\$ 396,777	-1.0	-1.1	23.2	23.4	22.7	-0.1	0.8	29.8	\$ 72,839	\$102,630	70%	\$ 1,942
Ottawa/Gatineau	\$ 396,895	1.3	6.0	30.3	23.7	29.6	1.0	2.8	28.9	\$ 72,861	\$ 78,702	67%	\$ 1,943
Quebec	\$ 279,686	0.4	0.0	26.9	19.7	26.3	0.4	1.1	23.4	\$ 51,344	\$ 62,461	60%	\$ 1,369
Winnipeg	\$ 318,553	-0.2	0.0	27.5	20.8	26.9	0.5	1.2	25.0	\$ 58,479	\$ 69,534	67%	\$ 1,559
Hamilton	\$ 563,606	2.5	4.1	49.8	25.8	43.8	2.0	3.5	30.1	\$ 103,465	\$ 75,541	70%	\$ 2,759
Victoria	\$ 804,810	1.6	5.4	114.9	53.6	81.6	4.0	8.7	61.4	\$ 147,745	\$ 57,947	63%	\$ 3,940

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
<b>Urban Composite</b>	<b>\$ 405,825</b>	<b>1.0</b>	<b>6.2</b>	<b>36.5</b>	<b>24.1</b>	<b>35.7</b>	<b>1.0</b>	<b>3.6</b>	<b>29.3</b>	<b>\$ 74,500</b>	<b>\$ 66,696</b>	<b>9%</b>	<b>\$ 1,987</b>	<b>\$ 1,837</b>
Toronto	\$ 536,082	2.9	9.4	49.0	26.0	45.0	2.3	5.5	30.9	\$ 98,413	\$ 69,996	15%	\$ 2,624	\$ 2,343
Montreal	\$ 276,889	1.7	5.1	28.0	21.7	27.4	0.8	2.4	26.4	\$ 50,831	\$ 59,437	11%	\$ 1,355	\$ 1,190
Vancouver	\$ 638,842	-0.8	7.9	61.1	31.7	49.2	1.3	6.3	37.6	\$ 117,277	\$ 76,352	22%	\$ 3,127	\$ 1,913
Calgary	\$ 266,107	-2.8	-2.4	20.1	19.1	19.7	-0.4	0.5	24.3	\$ 48,851	\$ 79,429	14%	\$ 1,303	\$ 1,524
Edmonton	\$ 231,117	0.9	-4.6	13.5	15.6	13.2	0.2	0.0	20.2	\$ 42,428	\$102,630	12%	\$ 1,131	\$ 1,355
Ottawa/Gatineau	\$ 261,454	2.2	5.1	19.9	17.1	19.5	0.8	1.7	21.0	\$ 47,997	\$ 78,702	9%	\$ 1,280	\$ 1,586
Quebec	\$ 211,768	-0.4	-1.8	20.3	16.1	19.9	0.2	0.5	19.2	\$ 38,876	\$ 62,461	9%	\$ 1,037	\$ 1,058
Winnipeg	\$ 223,614	-2.2	-4.1	19.3	17.1	18.9	0.0	0.1	20.9	\$ 41,050	\$ 69,534	6%	\$ 1,095	\$ 1,403
Hamilton	\$ 445,629	2.0	7.6	35.4	20.3	34.7	1.4	3.8	24.1	\$ 81,807	\$ 75,541	11%	\$ 2,182	\$ 1,521
Victoria	\$ 485,937	0.6	6.6	50.3	31.5	49.3	1.9	5.7	39.4	\$ 89,207	\$ 57,947	14%	\$ 2,379	\$ 1,573

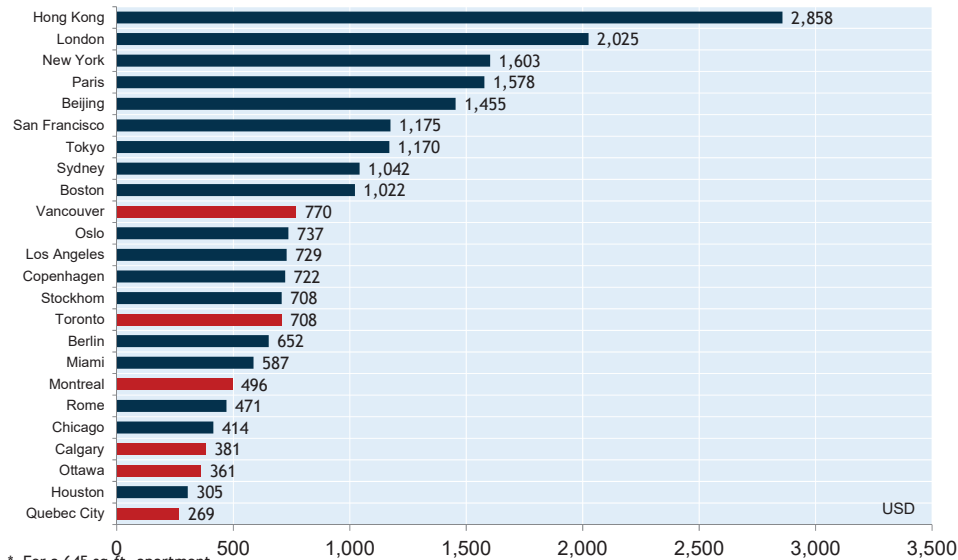
Table 3

	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
<b>Urban Composite</b>	<b>\$ 718,685</b>	<b>0.9</b>	<b>1.2</b>	<b>84.3</b>	<b>44.1</b>	<b>63.3</b>	<b>1.8</b>	<b>3.5</b>	<b>49.8</b>	<b>\$ 131,934</b>	<b>\$ 66,696</b>	<b>59%</b>	<b>\$ 3,518</b>
Toronto	\$ 902,916	2.0	0.1	111.9	48.6	75.8	3.2	3.1	51.1	\$ 165,755	\$ 69,996	52%	\$ 4,420
Montreal	\$ 369,234	1.9	5.2	37.3	26.6	36.5	1.1	3.3	32.2	\$ 67,783	\$ 59,437	45%	\$ 1,808
Vancouver	\$ 1,318,768	-0.7	0.5	414.5	109.1	101.5	2.7	6.4	73.1	\$ 242,096	\$ 76,352	42%	\$ 6,456
Calgary	\$ 494,689	-1.4	-2.2	37.4	29.9	36.6	-0.3	1.0	37.3	\$ 90,814	\$ 79,429	59%	\$ 2,422
Edmonton	\$ 422,508	-1.2	-0.7	24.7	24.5	24.2	-0.1	1.0	31.2	\$ 77,563	\$102,630	57%	\$ 2,068
Ottawa/Gatineau	\$ 428,595	1.2	6.1	32.7	25.4	32.0	1.0	3.1	30.9	\$ 78,680	\$ 78,702	58%	\$ 2,098
Quebec	\$ 286,491	0.6	0.2	27.5	20.0	26.9	0.5	1.2	23.7	\$ 52,593	\$ 62,461	51%	\$ 1,402
Winnipeg	\$ 321,259	0.0	0.3	27.7	20.8	27.1	0.6	1.3	24.9	\$ 58,976	\$ 69,534	61%	\$ 1,573
Hamilton	\$ 598,274	2.6	3.7	55.3	27.7	46.5	2.2	3.5	31.9	\$ 109,829	\$ 75,541	60%	\$ 2,929
Victoria	\$ 850,469	1.8	5.2	124.3	57.0	86.2	4.4	9.0	64.5	\$ 156,127	\$ 57,947	49%	\$ 4,163

## Global perspective on housing affordability

### World: Home prices do not seem extreme in Canada

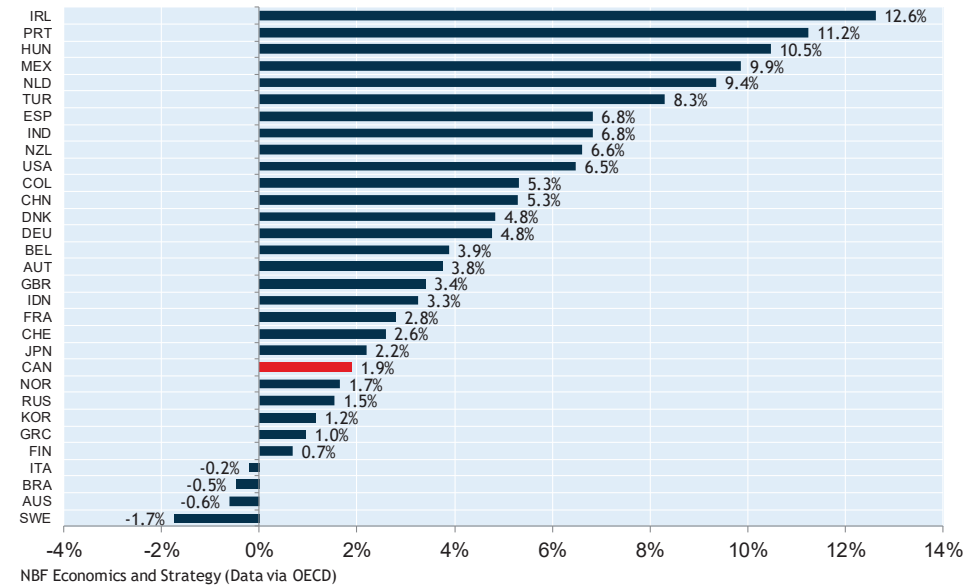
Price per square foot in USD for downtown living\* (summer 2018)



\* 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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