

## US Housing Cycle Still Has Room to Run

- The US housing recovery is ongoing, though it remains more of a marathon than a sprint. Combined new and existing home sales hit an 11-year high in 2017, with higher volumes tallied across all four major regions of the country. Meanwhile, tight inventories continue to generate strong price growth.
- Modestly higher home sales, prices, and starts are forecast for 2018–2019. Demand remains well supported by fundamentals, including a robust job market, rising wage gains, and ageing Millennials. The recently-passed US tax bill is expected to have a minimal impact on national trends, but could disproportionately impact high-priced markets.

### A MARATHON, NOT A SPRINT

The US housing market is showing renewed vigour. Existing home sales accelerated into the final quarter of 2017, after appearing to stagnate through much of the year. Hurricane-related recoveries in the South have aided the recovery, but the improved momentum has been broadly based well beyond these regions. Sales for the year as a whole edged up 1% from 2016, to their highest level since 2006. Sales activity remains well below the pre-crisis peak but is in line with long-term trends (chart 1).

Healthy demand combined with tight supply is supporting steady house price appreciation. National average existing home prices rose 5% in 2017, and maintained this strong momentum through year-end. Roughly a decade after the housing bust, nominal house prices—measured by the CoreLogic HPI—finally surpassed their pre-crisis peak in late-2017, though they remain about 15% below this level after adjusting for inflation (chart 2).

National average trends mask wide regional disparities. Nominal home prices have risen above their pre-crisis peak in roughly three-quarters of US states, led by a 40–50% advance in North Dakota and Colorado. In the hard-hit markets of Nevada, Arizona and Florida, prices remain 15–25% below their pre-crisis peak.

The ongoing recovery in the US housing market is strengthening household balance sheets, bolstering consumer confidence, and supporting robust household spending. US home equity wealth increased by USD 1.3 tn in the twelve months to 2017Q3 to a record USD 14.1 tn (chart 3). Rising home prices are rapidly shrinking the pool of ‘underwater’ homeowners. Just 5% of mortgage holders have negative home equity, down from a peak of 26% in 2009.

### MODERATELY HIGHER VOLUMES AND PRICES AHEAD

Looking ahead to 2018–19, we anticipate moderately higher home sales volumes and further upward pressure on prices. Demand fundamentals remain favourable, including robust job growth, rising incomes, still-low borrowing costs, and a modest easing in bank lending standards for residential mortgages. The US jobless rate has fallen to a cycle-low 4.1%, and the prime-age employment-to-

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Chart 1

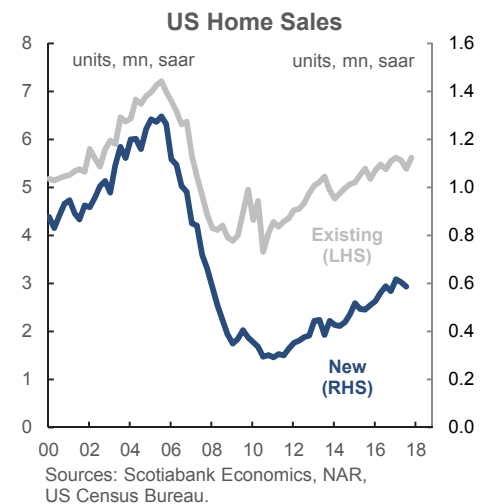
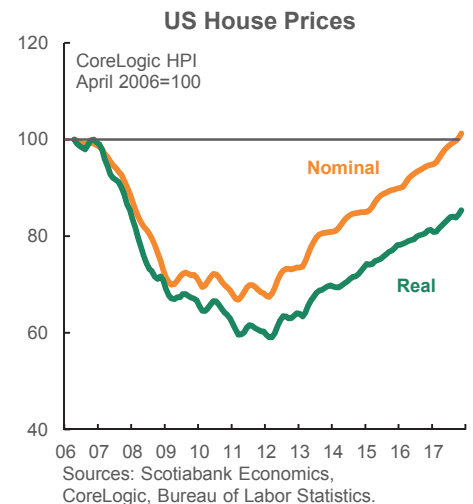


Chart 2



population ratio is at a cycle-high 79.1%. Firmer wage gains, rising minimum wages in many states, and personal income tax cuts are adding to confidence and purchasing power.

Millennials entering their prime home-buying years represent a significant and ongoing source of pent-up demand. The most populous five-year age cohort in the United States is currently aged 25–29, just shy of the median age of first-time buyers of 32. For the first time since the 2007 housing crash, owner-occupied household formation is outpacing the number of new renter households (chart 4), leading to a modest upturn in the homeownership rate.

International investors are adding to the demand for US residential property. Non-resident buyers purchased a record USD 75 bn in US residential real estate in the twelve months to March 2017, representing 5% of the dollar volume of existing home purchases, and 2% of unit sales. Resident foreigners, including recent immigrants and temporary visa holders, accounted for another 5% in dollar volume and 3% of unit purchases. More recent data will inform whether US political uncertainty and tighter capital controls in China have since dampened international investment inflows.

### STILL SOME HEADWINDS

Yet, the industry faces several headwinds, including deteriorating—though still decent—affordability. The combination of higher home prices and rising interest rates has boosted total mortgage principal and interest payments for buyers by 10% over the past year, outpacing the 4% increase in median family income over the same period. Affordability metrics are expected to deteriorate further in 2018–19, with mortgage carrying costs continuing to outpace income growth. Record-high student debt loads and rising rents further lift the savings bar for first-time homebuyers, whose share of purchases remains stuck under one-third, compared with a historical average of 40%.

A persistent shortage of inventory, most notably for entry-level homes, also is restraining activity. The pool of existing single-family homes for sale has fallen to its lowest level in at least 35 years, representing just 3.2 months' supply. The dearth of resale listings has prompted more buyers to turn to the much smaller new home market, where sales are tracking their strongest pace in a decade (chart 1). Traffic among prospective buyers is near its highest level in almost two decades.

### BUILDERS RESPOND

Builders are responding, ramping up single-family housing starts by almost 10% last year to a decade high of 848,000 units (chart 5). These units will not add notably to the supply of entry-level homes, as new construction tends to target higher-income households. The average price of a new single-family home tops USD 390,000, a 35% premium over the USD 290,000 average price of an existing single-family home. However, it should encourage more move-up buyer activity, freeing up much-needed resale inventory. Meanwhile, builders are gradually shifting toward smaller footprints after years of delivering ever-larger homes. The median square footage of newly-completed single-family homes was 2,375 in 2017Q3, down from a record 2,488 in 2015Q3 (chart 6).

Multi-family construction rebounded strongly following the 2008–09 recession, but appears to have peaked for the current cycle with starts falling 10% last year to a four-

Chart 3

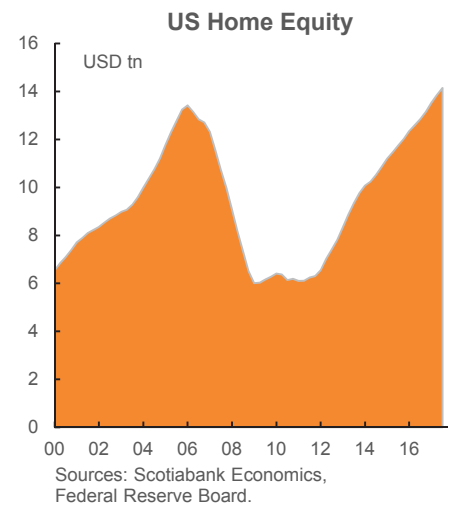


Chart 4

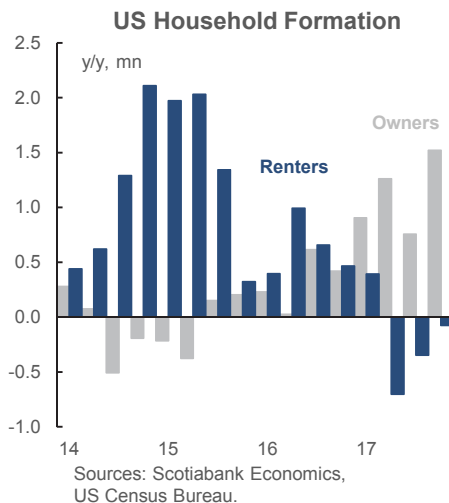
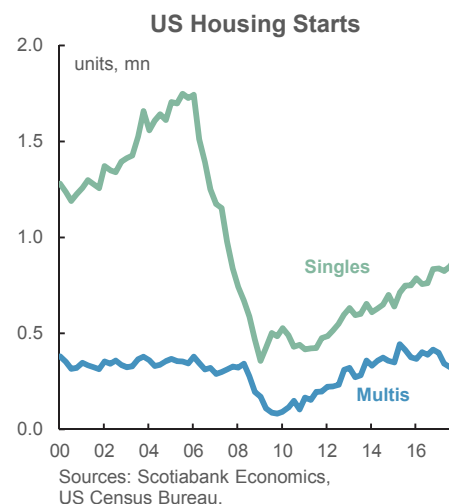


Chart 5



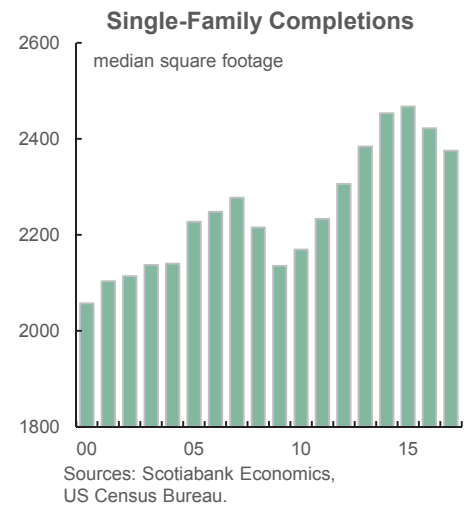
year low of 354,000 units. Builders have begun to pull back on new apartment projects as rental demand and rent growth slow, vacancy rates edge up, and new supply comes to market. Apartment completions last year likely totaled their highest level since the late 1980s. Multi-family starts have now returned to pre-downturn levels, whereas single-family starts are still about 50% below (chart 5).

### NEAR-TERM FORECASTS AND CAVEATS

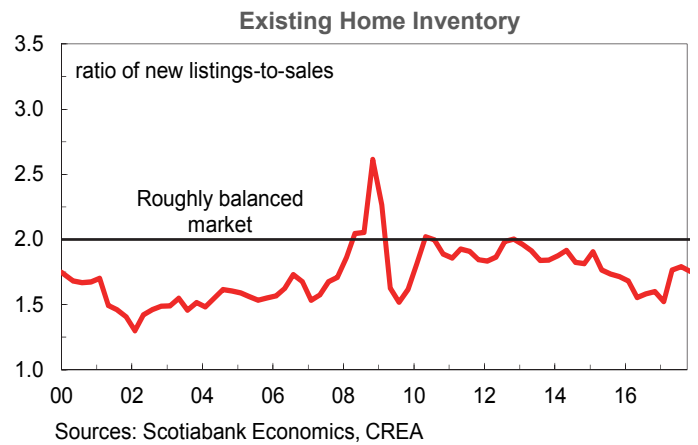
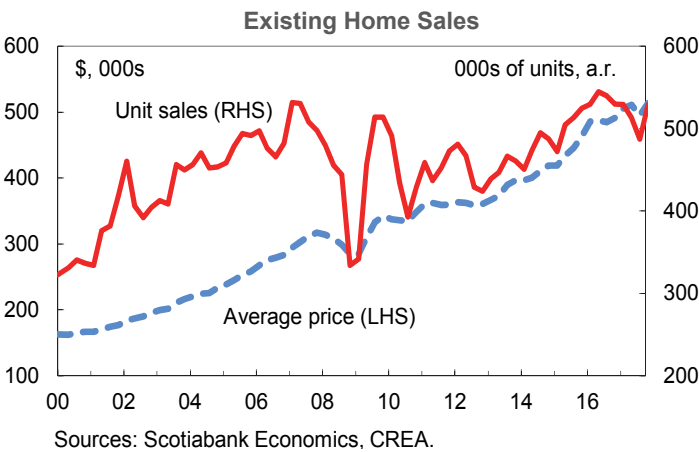
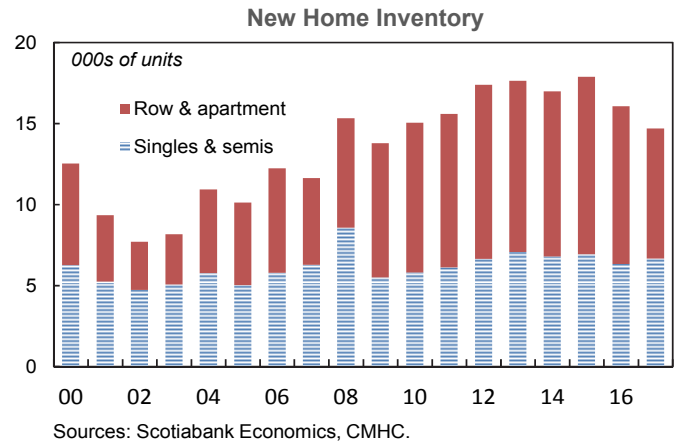
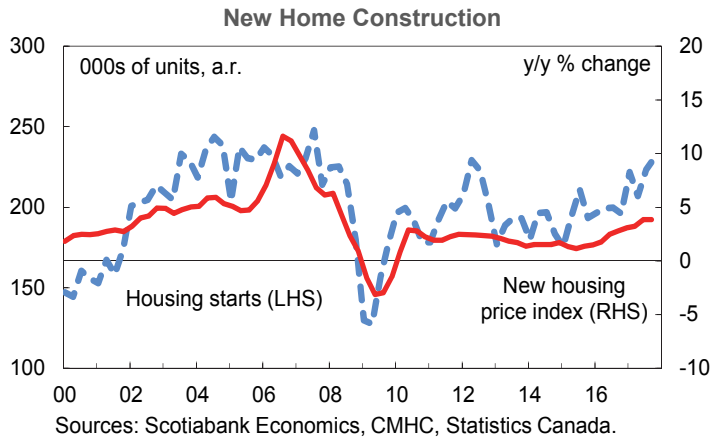
Overall, US housing starts are forecast to climb to 1.25 mn units this year and 1.30 mn in 2019, up from 1.20 mn units in 2017. However, this still falls short of the estimated 1.40–1.50 mn annual units needed to plug the inventory gap. A faster pace of construction will remain constrained by labour shortages and rising land and construction costs. The number of construction job vacancies exceeds 200,000, near the level at the peak of the housing boom. Lumber prices have surged to near-record highs amid strong construction and rebuilding-related demand, and supply disruptions. The passthrough of higher US softwood lumber tariffs by Canadian producers to US buyers also is adding to cost pressures.

The recently-passed US tax bill, which includes a USD 750,000 cap on mortgage interest deductions and a USD 10,000 cap on property tax deductions, is expected to have a minimal impact on national home sales and prices. According to the National Association of Realtors (NAR), only 6% of homeowners have mortgages exceeding USD 750,000 and only 5% pay more than USD 10,000 in property taxes. However, the changes could disproportionately impact higher-priced housing markets, such as California, Massachusetts, and New York, and high-tax states. Meanwhile, corporate tax cuts are expected to benefit builder confidence and profitability.

Chart 6



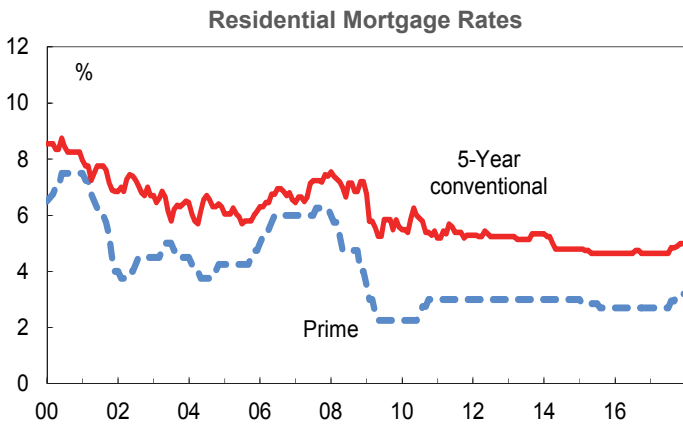
**CANADIAN RESIDENTIAL MARKETS**



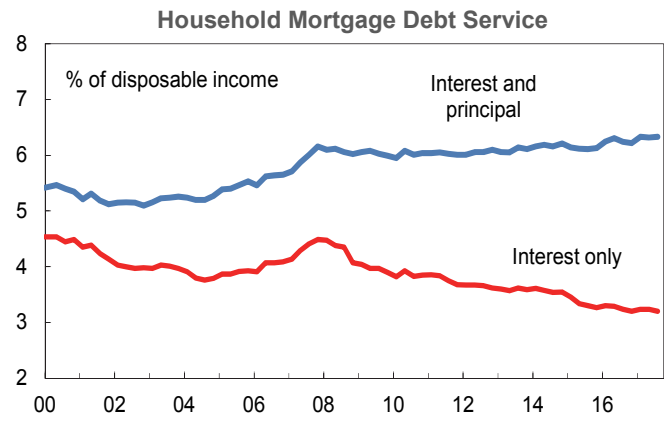
Housing Starts								
	Canada	B.C.	Alberta	Sask.	Manitoba	Ontario	Quebec	Atlantic
<i>(000s units, sa)</i>								
2010	190	26	27	6	6	60	51	13
2011	194	26	26	7	6	68	48	13
2012	215	27	33	10	7	77	47	13
2013	188	27	36	8	7	61	38	10
2014	189	28	41	8	6	59	39	8
2015	196	31	37	5	6	70	38	8
2016	198	42	25	5	5	75	39	8
2017	220	44	29	5	8	79	46	9
2018f	206	41	29	5	7	75	41	8
2019f	196	38	30	5	6	71	38	8
<i>(units, nsa)</i>								
	Vancouver	Calgary	Edmonton	Toronto	Ottawa	Montreal	Halifax	St. John's
2010	15,217	9,262	9,959	29,195	6,446	22,001	2,390	1,816
2011	17,867	9,292	9,332	39,745	5,794	22,719	2,954	1,923
2012	19,027	12,841	12,837	48,105	6,026	20,591	2,754	2,153
2013	18,696	12,584	14,689	33,547	6,560	15,632	2,439	1,734
2014	19,212	17,131	13,872	28,929	5,762	18,672	1,757	1,230
2015	20,863	13,033	17,050	42,287	4,972	18,744	2,599	985
2016	27,914	9,245	10,036	39,027	5,298	17,834	2,305	833
2017	26,183	11,500	11,386	39,206	7,494	24,697	2,731	761

Sources: Scotiabank Economics, CMHC. Year-to-date data are expressed at seasonally adjusted annual rates.

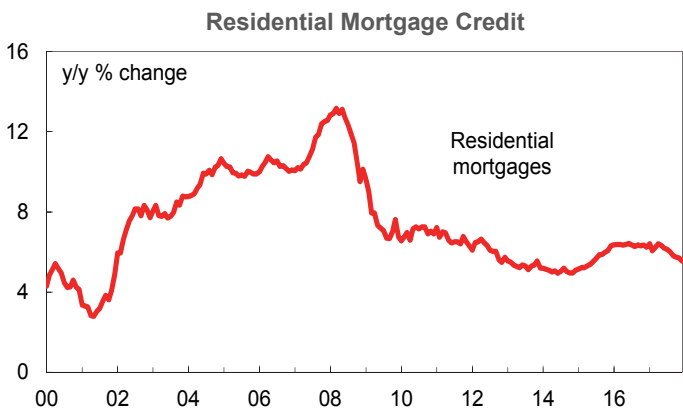
**CANADIAN RESIDENTIAL MARKETS**



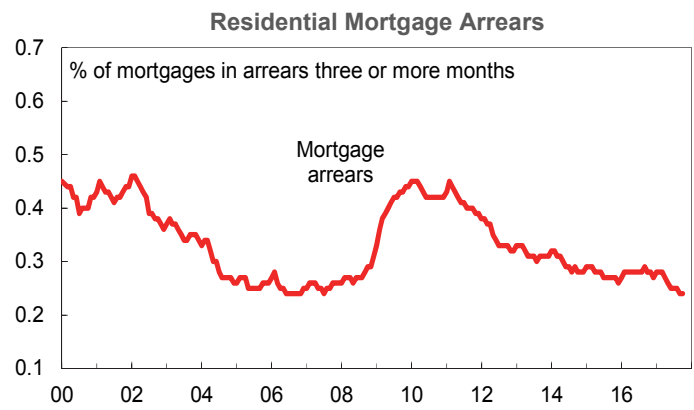
Sources: Scotiabank Economics, Bank of Canada.



Sources: Scotiabank Economics, Statistics Canada.



Sources: Scotiabank Economics, Bank of Canada.



Sources: Scotiabank Economics, CBA.

**Home Sales**

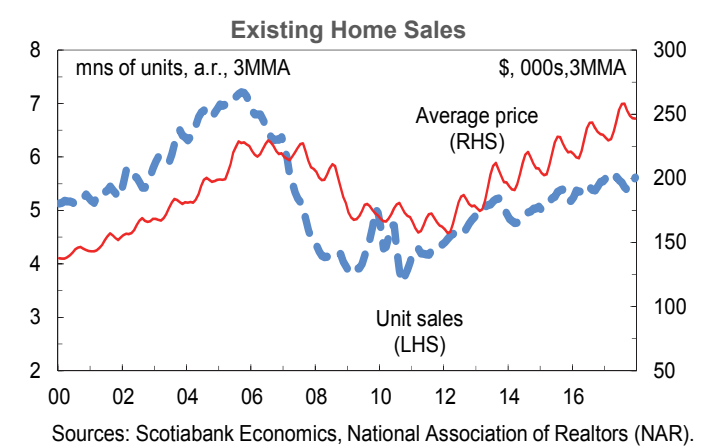
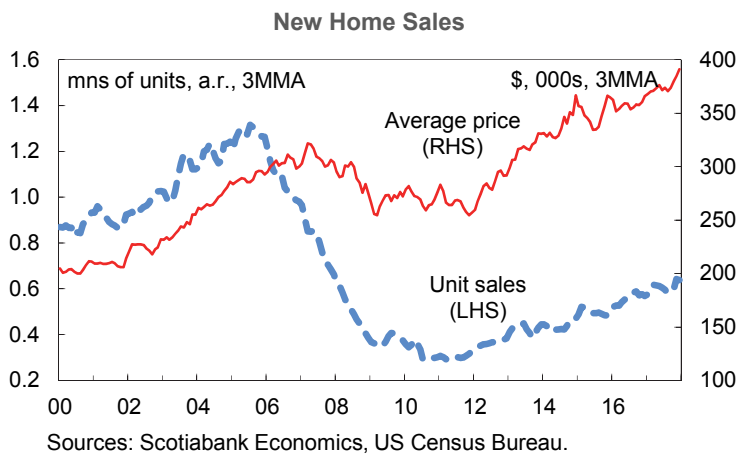
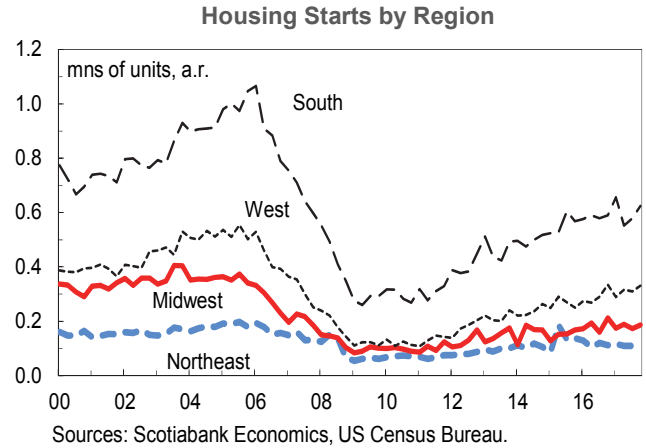
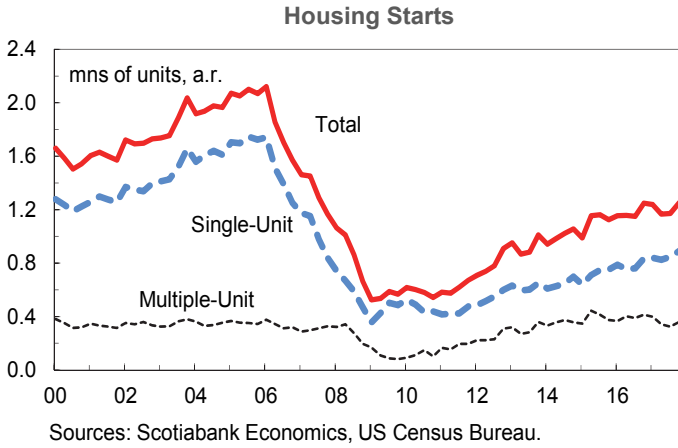
	Canada		British Columbia		Alberta		Man.-Sask.		Ontario		Quebec		Atlantic	
	Avg. Price	Units	Avg. Price	Units	Avg. Price	Units	Avg. Price	Units	Avg. Price	Units	Avg. Price	Units	Avg. Price	Units
2010	339,643	437,479	505,511	74,555	352,488	50,030	232,270	23,885	343,681	185,840	239,275	80,024	193,046	22,712
2011	362,155	456,181	561,271	76,727	353,413	54,157	247,809	26,912	364,586	197,671	251,138	77,164	201,613	23,107
2012	363,132	451,244	514,849	67,634	363,342	60,588	262,723	27,602	383,603	194,568	260,705	77,372	209,268	23,022
2013	382,196	454,178	537,428	72,936	380,972	66,089	275,235	27,160	402,102	194,961	264,285	71,194	210,335	21,402
2014	407,391	477,817	568,391	84,054	400,594	71,783	282,973	27,530	429,866	202,434	267,916	70,620	209,878	20,938
2015	442,006	503,592	636,607	102,514	393,131	56,471	283,405	26,301	463,546	221,665	271,791	74,122	208,588	22,018
2016	489,871	535,909	691,111	112,211	394,512	52,166	287,485	25,895	534,572	243,192	279,832	78,144	206,441	23,691
2017	510,179	514,437	709,559	103,768	398,128	57,170	286,294	25,893	586,208	220,148	292,545	82,639	205,121	23,688

	Vancouver		Calgary		Edmonton		Toronto		Ottawa		Montreal		Halifax	
	Avg. Price	Units	Avg. Price	Units	Avg. Price	Units	Avg. Price	Units	Avg. Price	Units	Avg. Price	Units	Avg. Price	Units
2010	675,853	31,144	398,764	20,996	328,803	16,403	432,264	88,214	328,439	14,586	289,189	43,736	253,352	5,925
2011	779,730	32,936	402,851	22,466	325,595	16,963	466,352	91,760	344,496	15,059	304,805	41,672	260,624	6,101
2012	730,063	25,445	412,315	26,634	334,318	17,641	498,973	88,157	352,199	14,692	316,630	41,491	271,706	6,229
2013	767,765	28,985	437,036	29,954	344,977	19,552	524,089	88,946	358,592	14,013	319,548	37,764	275,245	5,168
2014	812,653	33,693	460,584	33,615	362,657	19,857	566,491	93,278	362,525	14,122	326,539	36,917	276,118	4,836
2015	902,801	43,145	453,814	23,994	369,536	18,227	622,046	101,846	368,521	14,849	332,496	39,210	284,963	4,936
2016	1,017,228	40,880	463,047	22,522	369,365	16,990	729,591	113,725	374,649	15,616	344,509	41,309	290,258	5,257
2017	1,031,546	36,604	466,259	23,869	379,987	19,545	823,874	93,158	394,504	17,309	364,510	44,448	295,505	5,594

Sources: Scotiabank Economics, CREA, QFREB. Year-to-date data are expressed at seasonally adjusted annual rates.

US RESIDENTIAL MARKETS

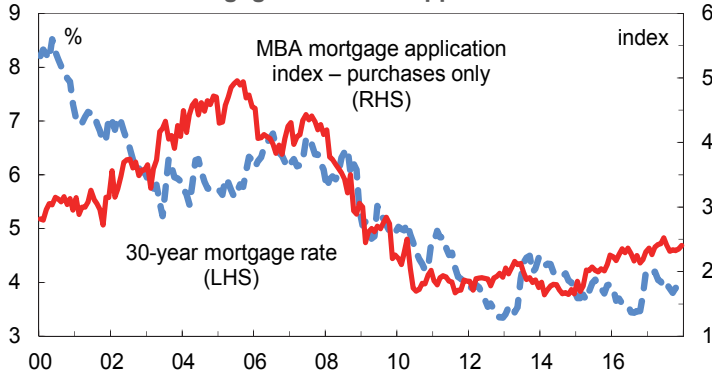


	Housing Starts							Permits		
	Total	Singles	Multis	West	South	Midwest	Northeast	Total	Singles	Multis
	<i>(millions of units)</i>							<i>(millions of units)</i>		
2010	0.587	0.471	0.116	0.120	0.298	0.098	0.072	0.605	0.447	0.157
2011	0.609	0.431	0.178	0.133	0.308	0.101	0.068	0.624	0.418	0.206
2012	0.781	0.535	0.245	0.175	0.398	0.128	0.080	0.830	0.519	0.311
2013	0.925	0.618	0.307	0.215	0.464	0.150	0.097	0.991	0.621	0.370
2014	1.003	0.648	0.355	0.235	0.496	0.163	0.110	1.052	0.640	0.412
2015	1.112	0.715	0.397	0.266	0.556	0.153	0.138	1.183	0.696	0.487
2016	1.174	0.782	0.392	0.291	0.585	0.182	0.116	1.207	0.751	0.456
2017	1.202	0.848	0.354	0.312	0.598	0.180	0.111	1.263	0.818	0.446
2018f	1.250									
2019f	1.300									

Sources: Scotiabank Economics, US Census Bureau. Year-to-date data are expressed at seasonally-adjusted annual rates.

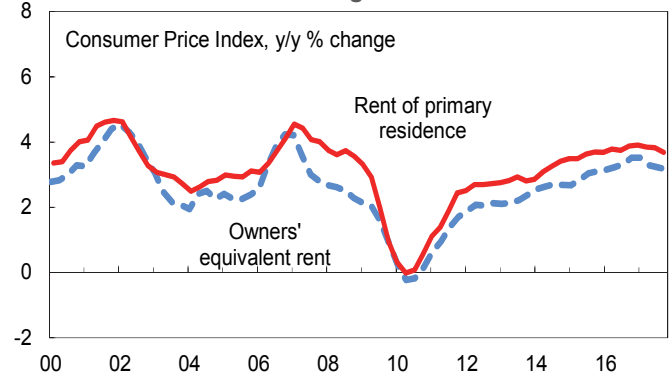
**US RESIDENTIAL MARKETS**

**Mortgage Rates and Applications**



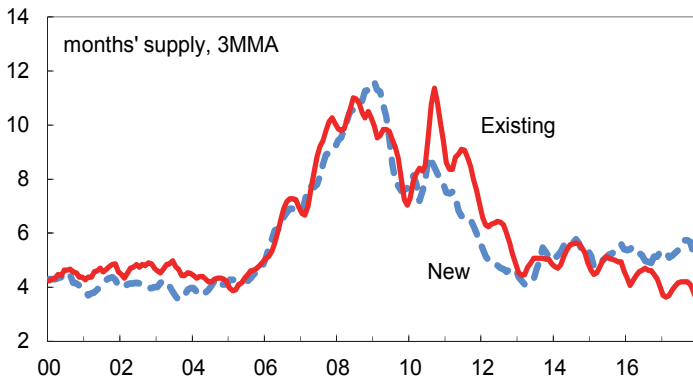
Sources: Scotiabank Economics, Mortgage Bankers Association (MBA), FHLMC.

**Housing Costs**



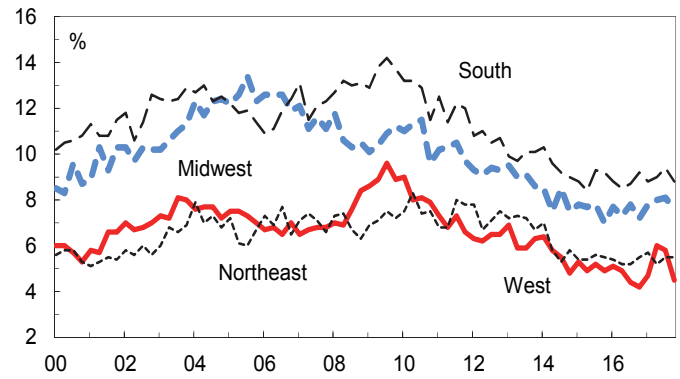
Sources: Scotiabank Economics, US Bureau of Labor Statistics.

**New and Existing Home Inventories**



Sources: Scotiabank Economics, US Census Bureau, National Association of Realtors (NAR).

**Apartment Vacancy Rates**



Sources: Scotiabank Economics, US Census Bureau.

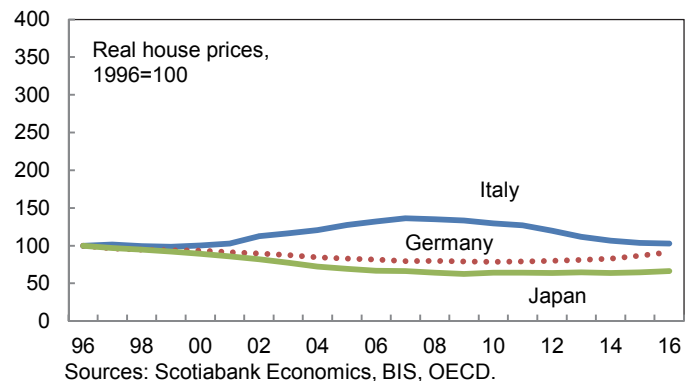
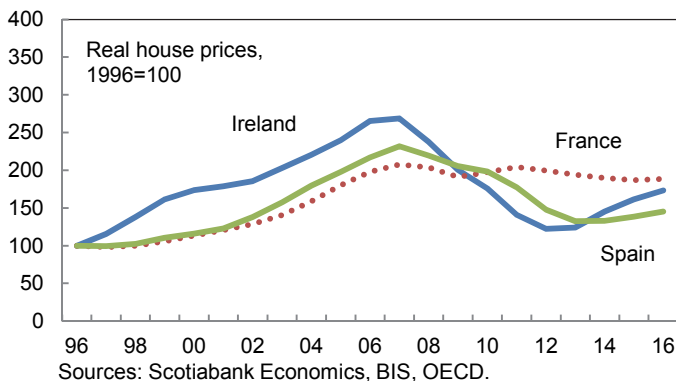
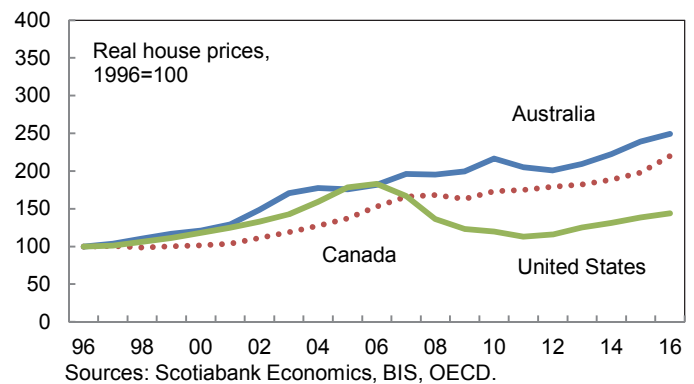
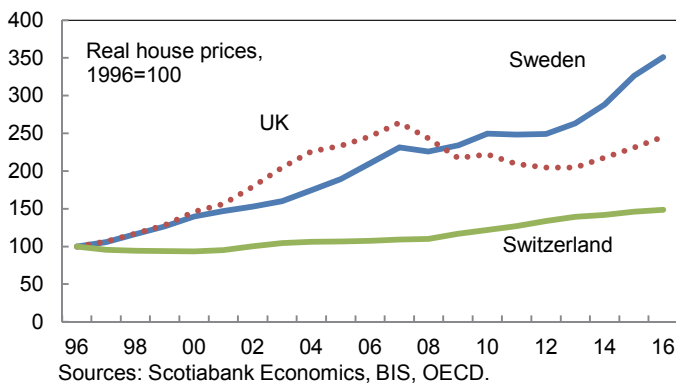
	Existing Home Sales							New Home Sales			
	Total	Avg Price	Months' Supply	West	South	Midwest	North East	Total	Avg Price (\$000s)	Months' Supply	
	(sa)	(nsa)	(nsa)		(million units, saar, unless otherwise noted)						
2010	4.190	220.0	9.4	1.080	1.630	0.910	0.570	0.321	271.5	8.0	
2011	4.260	214.0	8.3	1.130	1.680	0.910	0.540	0.306	263.4	6.6	
2012	4.660	225.4	5.9	1.160	1.840	1.070	0.590	0.368	285.4	4.8	
2013	5.090	245.5	4.9	1.190	2.050	1.200	0.660	0.430	319.3	4.7	
2014	4.940	255.3	5.2	1.100	2.050	1.140	0.640	0.440	341.8	5.5	
2015	5.250	266.4	4.8	1.170	2.160	1.240	0.700	0.503	348.6	5.2	
2016	5.450	276.0	4.4	1.190	2.220	1.300	0.740	0.561	359.3	5.2	
2017	5.510	289.2	3.9	1.220	2.260	1.300	0.740	0.612	376.8	5.4	

Sources: Scotiabank Economics, National Association of Realtors (NAR), US Census Bureau.  
Year-to-date data are expressed at seasonally-adjusted annual rates.

**INTERNATIONAL RESIDENTIAL MARKETS**

International House Prices													
(Inflation-adjusted, y/y % change)													
	2008	2009	2010	2011	2012	2013	2014	2015	2016	16Q4	17Q1	17Q2	17Q3
Australia	-0.3	2.2	8.5	-5.3	-2.1	4.1	6.4	7.4	4.2	6.1	7.9	8.1	---
Canada	1.4	-3.2	6.2	0.9	2.4	1.8	3.4	4.9	11.2	13.4	15.0	16.2	---
France	-1.9	-6.3	3.2	3.6	-2.4	-2.7	-2.1	-1.5	0.9	1.5	1.6	2.6	---
Germany	0.4	-0.7	-0.6	0.5	1.0	1.7	2.2	4.3	5.5	5.4	3.7	3.5	---
Ireland	-11.6	-15.7	-12.3	-19.7	-13.3	1.5	16.9	11.0	7.5	9.1	9.2	11.1	---
Italy	-0.7	-1.3	-2.9	-2.0	-5.7	-6.9	-4.6	-2.6	-0.7	-0.5	-1.5	-1.6	---
Japan	---	---	2.2	0.3	-0.8	1.3	-1.2	1.6	2.3	2.2	3.7	---	---
Spain	-5.3	-6.3	-3.5	-10.5	-16.8	-10.4	0.5	4.1	4.8	3.4	2.5	3.5	---
Sweden	-2.3	3.5	6.8	-0.4	0.3	5.5	9.6	13.2	7.6	5.0	5.1	6.7	---
Switzerland	0.9	6.2	4.2	4.2	5.2	4.2	1.8	3.1	1.6	1.5	1.2	1.5	0.3
United Kingdom	-7.8	-10.8	2.3	-5.7	-2.3	0.0	6.5	5.9	6.3	4.1	2.2	1.9	---
United States	-18.3	-9.7	-2.8	-5.7	2.6	8.3	4.7	5.4	4.0	3.4	3.0	4.3	---
Russia	9.1	-10.9	1.3	-27.0	9.5	-2.7	-6.0	-12.3	-11.6	-9.3	-8.4	-7.6	---
Brazil	15.8	19.4	19.0	11.6	6.1	2.8	0.2	-8.0	-10.3	-8.9	-7.0	-5.8	---
Chile	-8.9	1.5	6.0	2.0	2.3	6.2	1.8	4.3	-0.7	-0.6	---	---	---
Colombia	9.2	4.9	5.5	4.3	7.2	7.6	5.0	4.5	4.3	4.8	2.9	1.8	---
Mexico	-0.5	0.1	-0.3	0.8	0.7	0.0	0.4	3.8	5.1	4.0	0.2	0.7	---
Peru	20.7	14.0	9.3	13.2	17.5	13.7	9.2	2.6	2.4	3.1	-7.5	-2.7	---
China	0.2	1.9	5.4	-1.2	-3.2	3.2	0.6	-5.2	4.5	8.6	9.2	8.3	6.0
India	---	---	8.5	11.3	15.5	7.8	7.8	8.3	1.6	4.4	6.6	6.4	---
Indonesia	-7.7	-2.7	-2.2	-0.7	0.6	5.3	0.6	-0.8	-0.4	-0.9	-1.0	-1.1	---
South Korea	-0.6	-2.5	-0.5	1.2	0.7	-1.7	0.2	2.6	1.7	0.0	-0.8	-0.7	-0.8
Thailand	---	6.1	-0.5	0.5	0.3	5.5	3.8	3.5	1.2	-1.1	-1.8	-3.2	-0.2

Sources: Scotiabank Economics, Bank for International Settlements





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