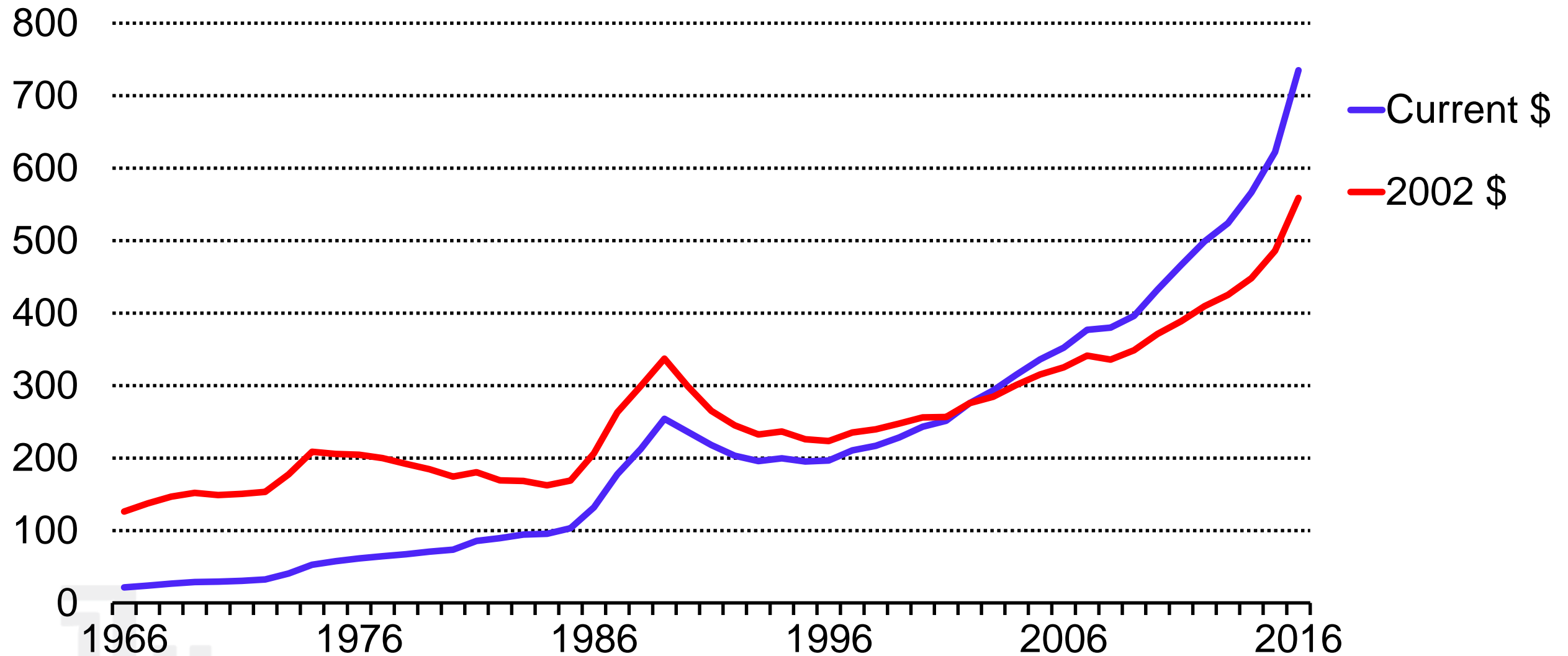


Long-term uptrend in housing prices

MLS Residential Average Sale Prices: Toronto REB

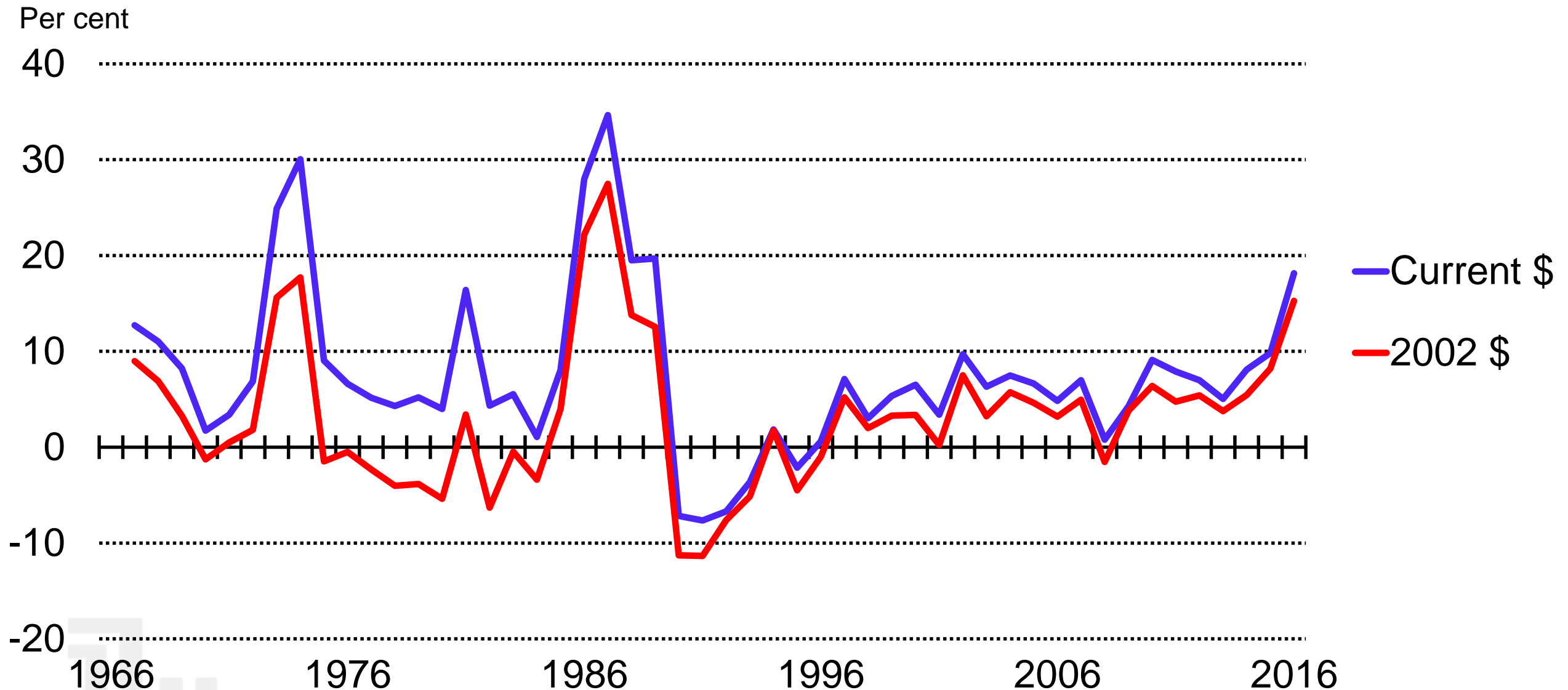
Dollars – thousands



Source: TREB, Statistics Canada, Central 1 Credit Union. Note: Deflated by Toronto CPI, 2016 forecast

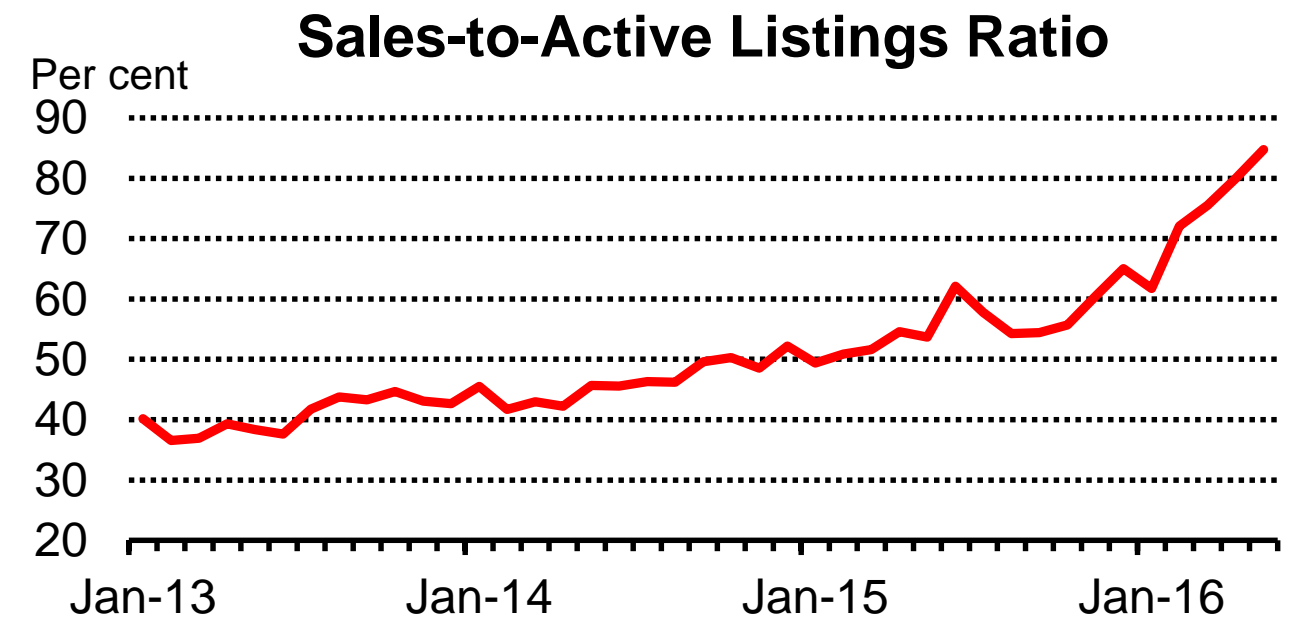
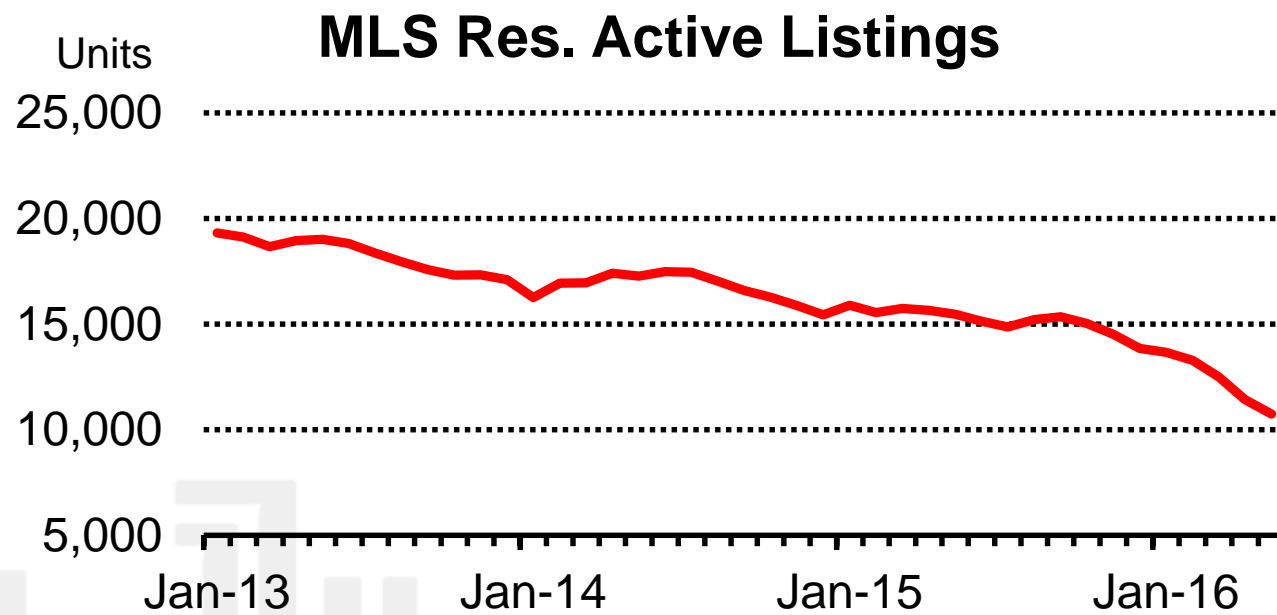
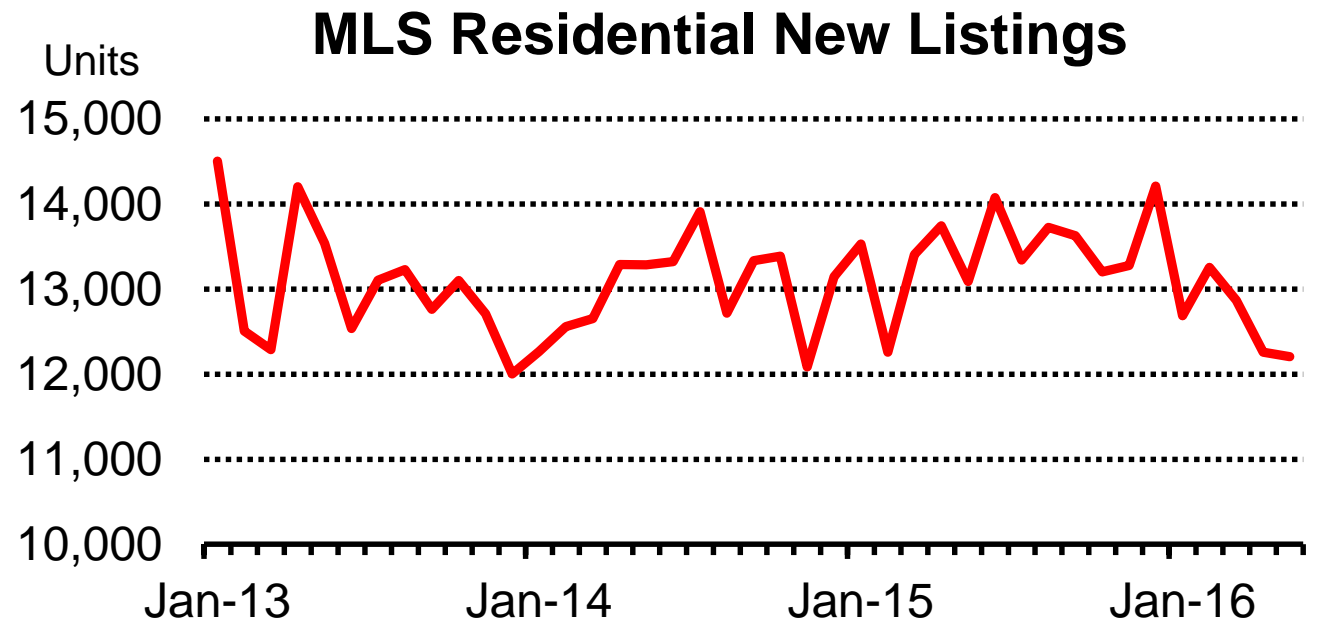
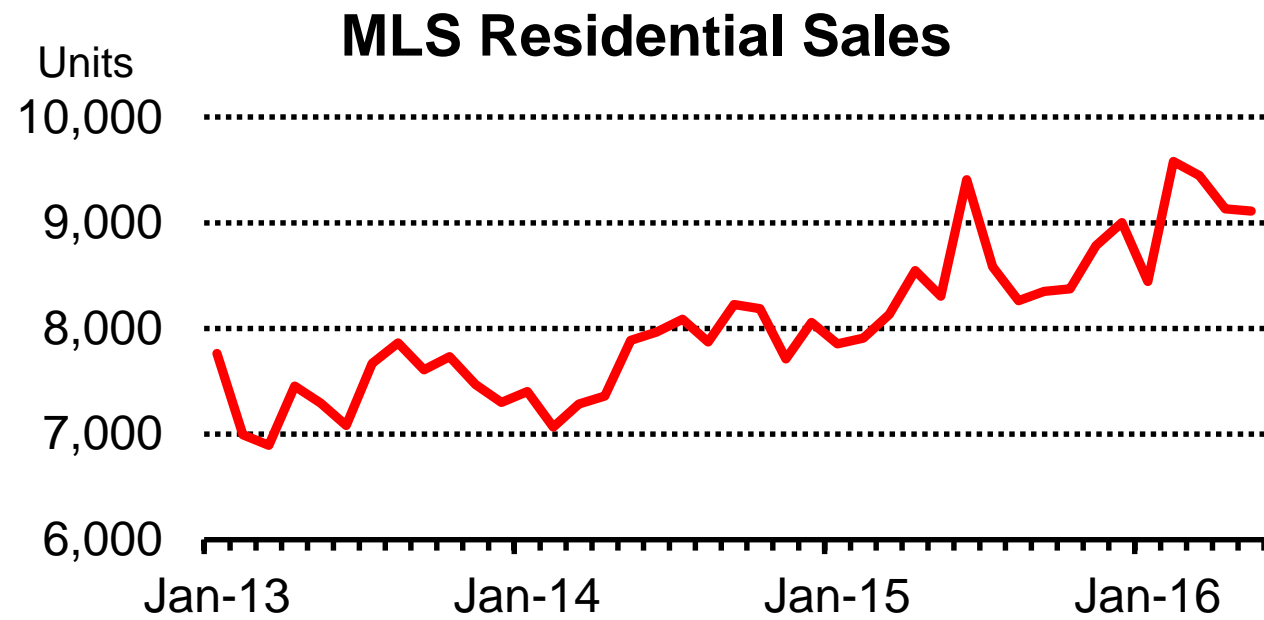
Cyclical movement in housing prices

Change in MLS Residential Average Sale Prices: Toronto REB



Source: TREB, Statistics Canada, Central 1 Credit Union. Note: Deflated by Toronto CPI, 2016 forecast

Housing market indicators: TREB

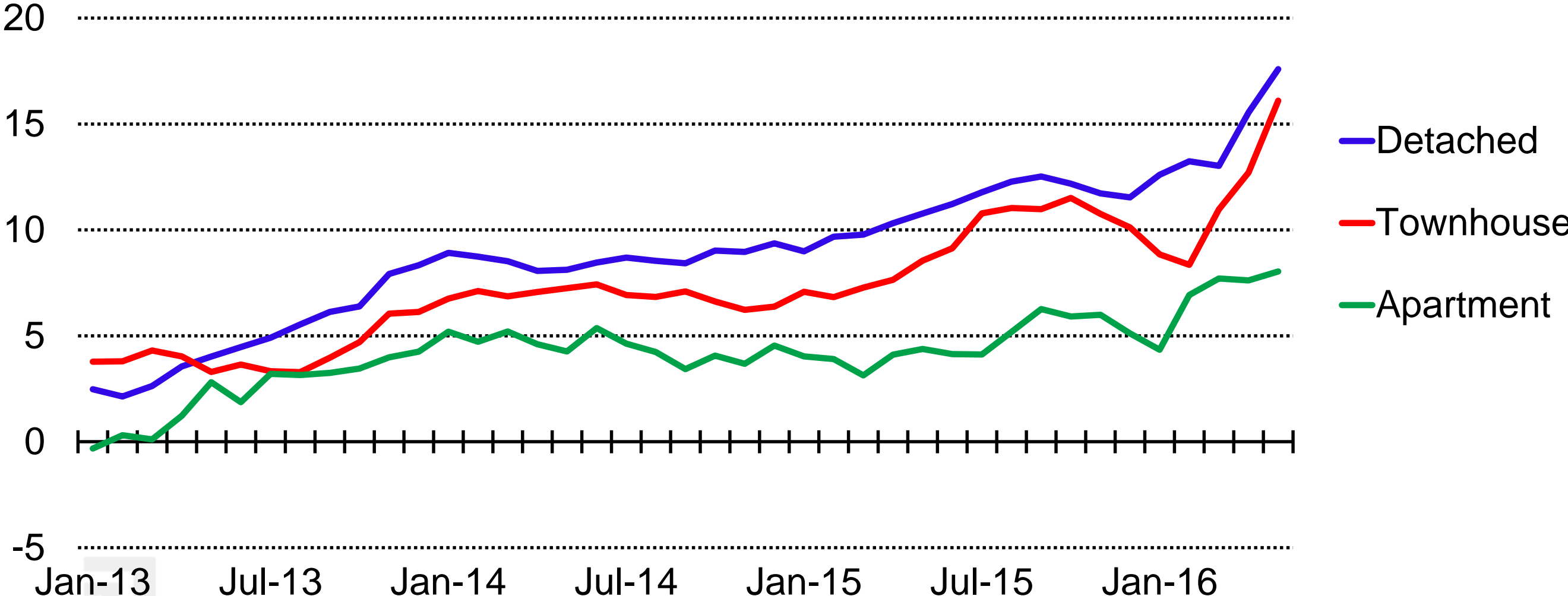


Source: TREB, Central 1 Credit Union. Note: Seasonally adjusted. Latest: May-16

Most price pressure in ground-oriented homes

MLS Home Price Index by Dwelling Type: TREB

Percentage change at annual rate



Source: CREA, Central 1 Credit Union. Note: Seasonally adjusted.

Latest: May-16

Definition of an asset bubble:

“[I]f the reason that the price is high today is only because investors believe that the selling price is high tomorrow – when ‘fundamental’ factors do not seem to justify such a price -- then a bubble exists.”

Joseph Stiglitz (1990). “Symposium on Bubbles,” *Journal of Economic Perspectives* 4(2), Spring, pp. 13-18.

Determinants of housing prices:

Demand and supply factors or “fundamentals”:

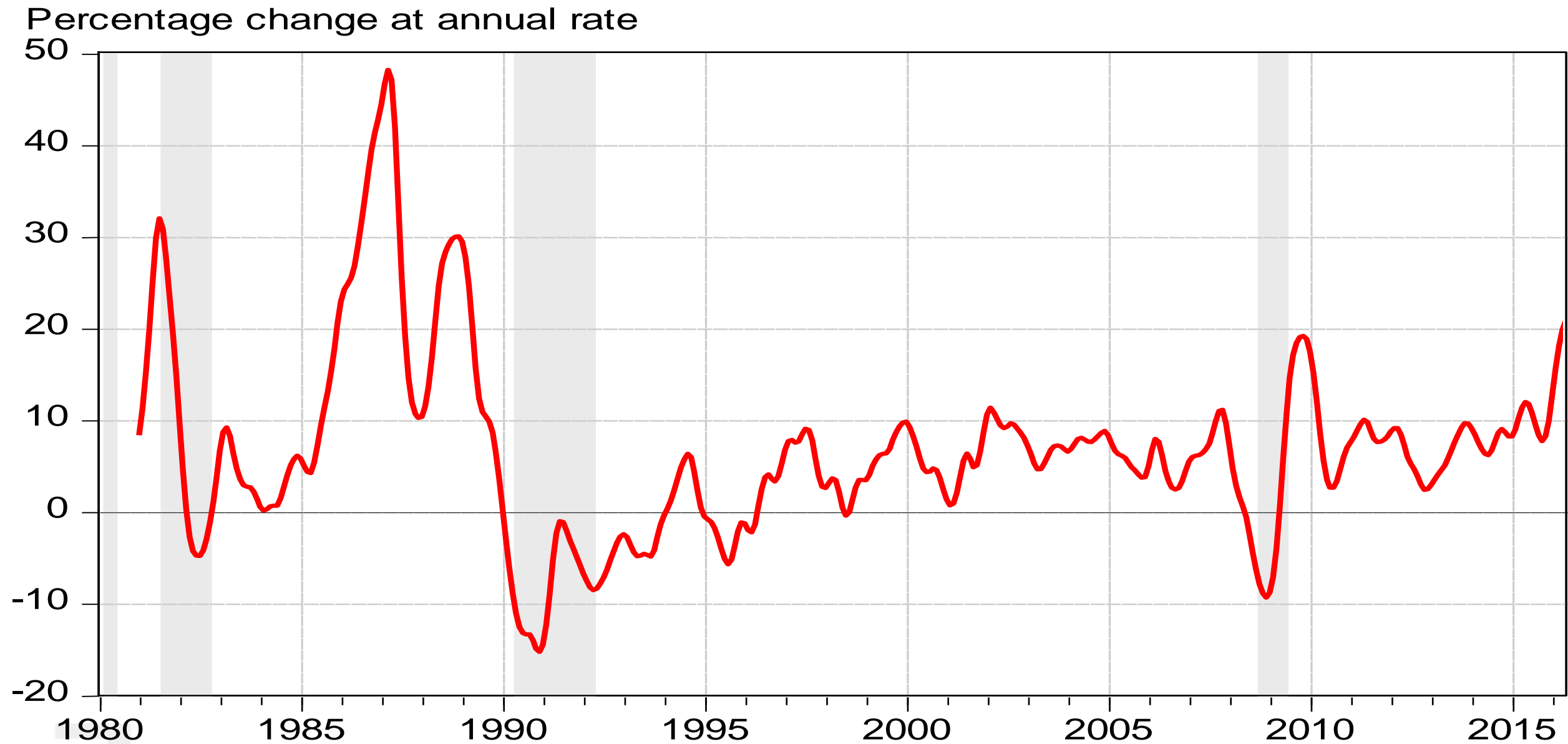
Interest rates, financing conditions, household income, taxes, operating costs, population growth, demographics, consumer and builder confidence, new construction and development costs, regulations, land supply, density, geographic constraints, information and search costs, investment demand, expected price appreciation, opportunity cost, quality of life, non-monetary value of homeownership.

Housing valuation metrics:

Price-to-income and price-to-rent ratios are inappropriate and inadequate measures. The price-to-income ratio is an affordability measure. Housing is not an investment asset like equities and the price-to-rent ratio is not equivalent to price-earnings ratios that mean revert over time.

A more appropriate housing valuation method is a well-specified and data complete user cost method of owner-occupied housing that includes opportunity cost and expected price appreciation.

Change in TREB MLS Residential Average Sale Price and Economic Recessions in Canada



Source: CREA, Central 1 Credit Union. Shaded areas represent recessions.