Data visualization project

This project shows insights on the real estate sector across Canada. You will find interesting analysis that covers the last 40 years. Two relevant parameters are used to quantify the value of the constructions involving on this market.

The HPI that stands for House Price Index

The Price that is the financial value

The price is too elastic over long period that is why the HPI is mostly used in long term analysis. It’s more robust against fluctuations and provide stability when forecasting.

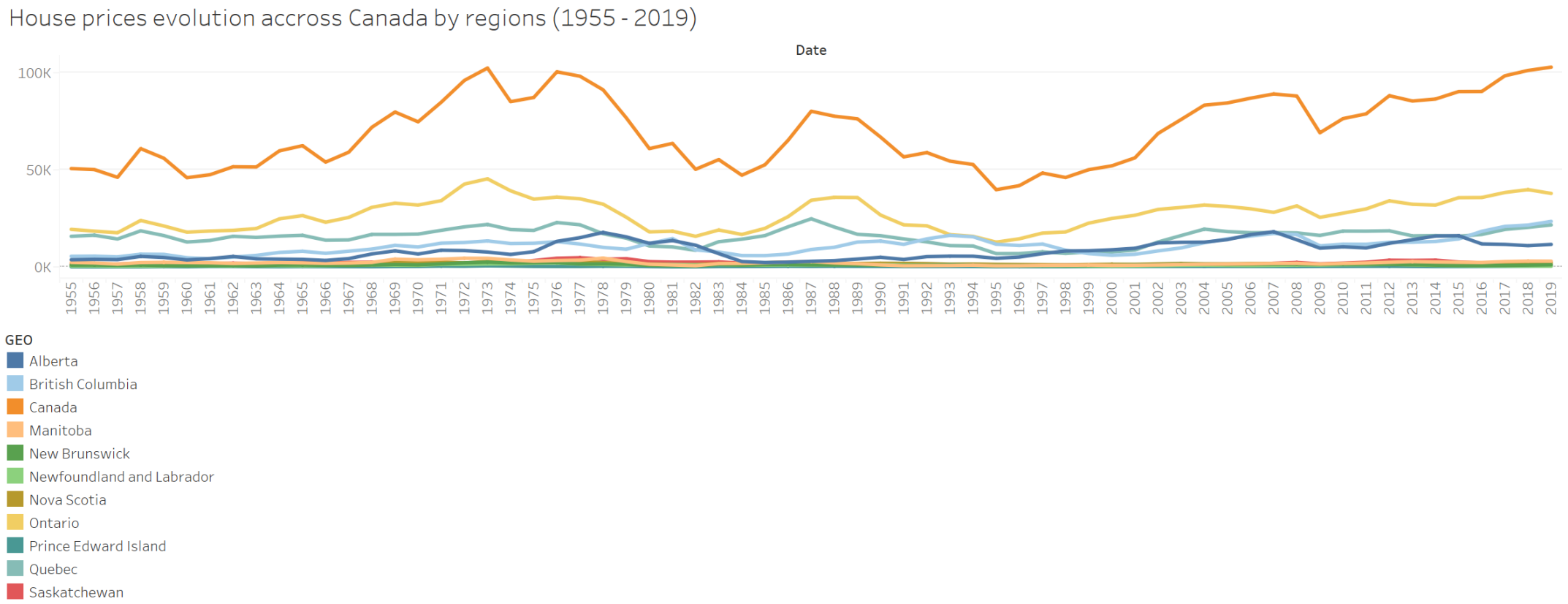
This presentation will follow the fish bone provided below and will cover the most interesting insights.

Insights on real estate sector across Canada

- Trend of house prices over the last 40 years.
- Trend of house prices after 2005 regarding the actual benchmark
- House prices VS Office prices
- Evolution of house prices across Canada
- House prices VS earnings over time
- Analysis on impacts of some economic crises on the real estate market
- Relationship between Houses price index and Consumers index.

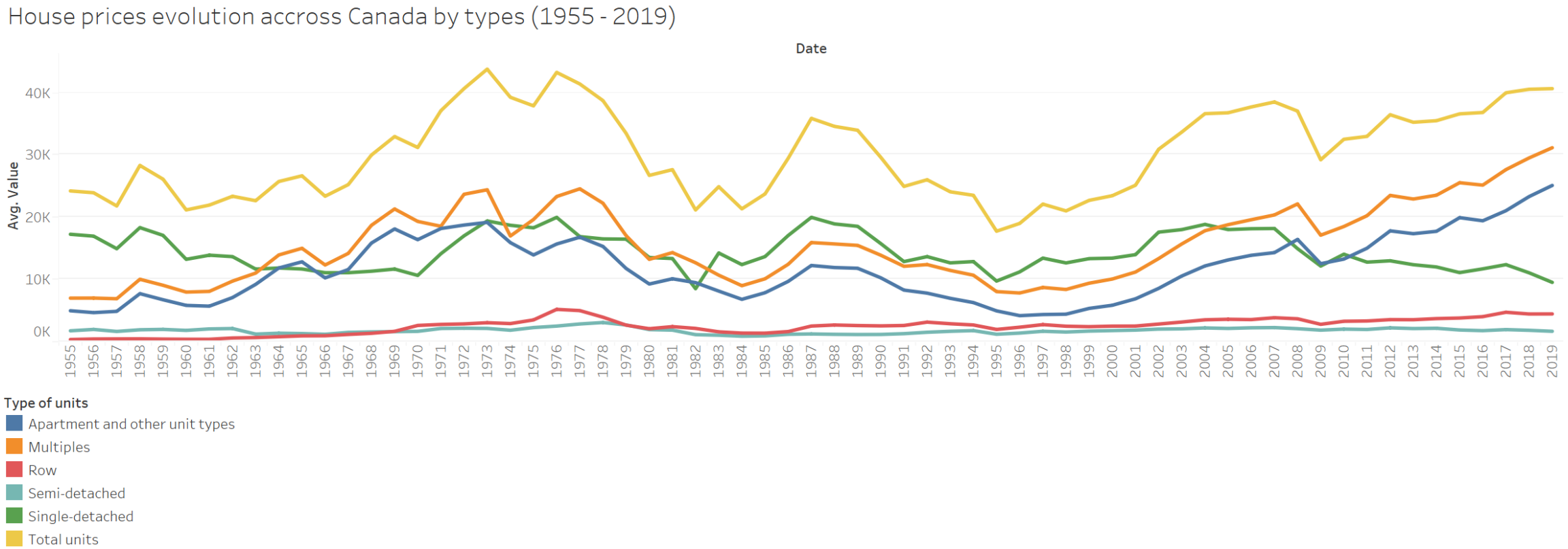
Trend of house prices for the last 40 years

- This graph shows that over 40 years constructions price in real estate kept a level. You don’t see any slope on the trend. Except the data related to the rest of Canada that shows a certain seasonality, but it still a level seasonality with no trend.



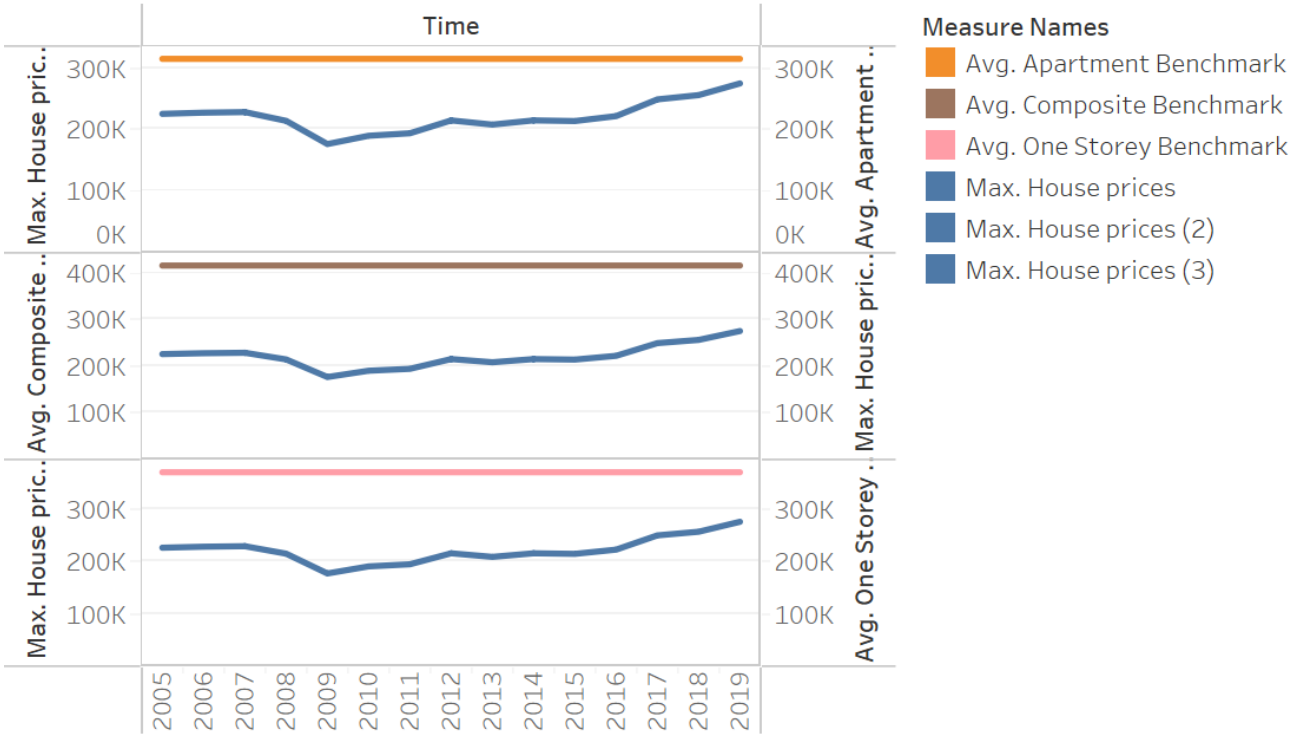
Trend of house prices for the last 40 years

- Even within categories of constructions the level trend remains. No sector buffers for other in aggregation. But you can see more seasonality within the categories.



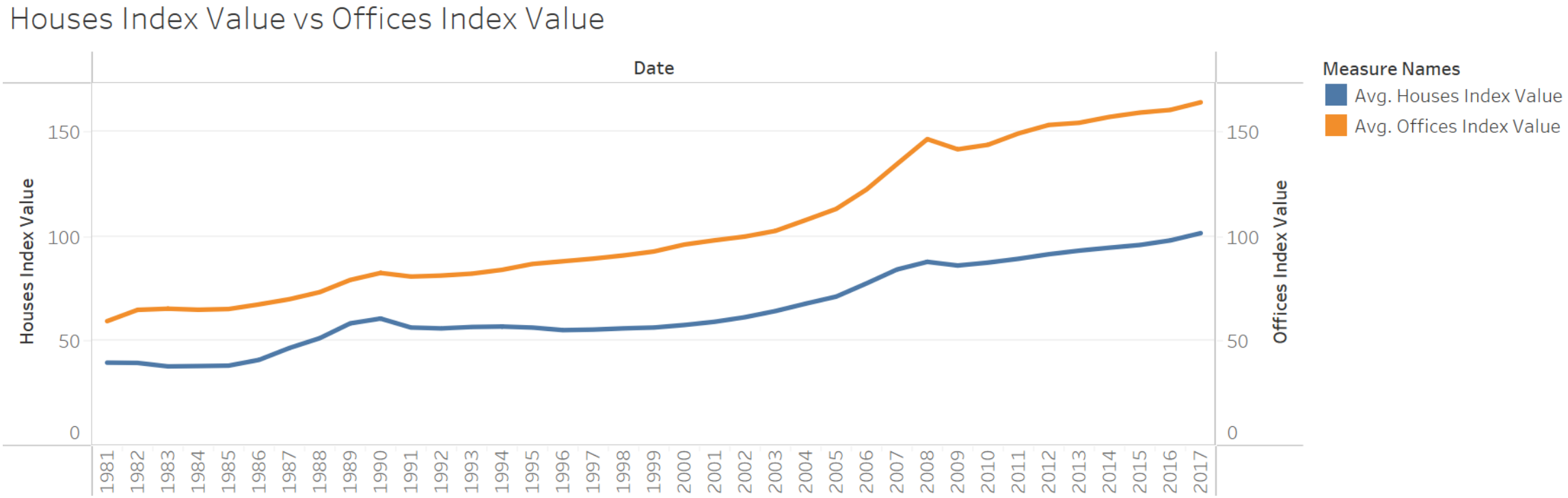
Trend of house prices after 2005 regarding the actual benchmark

- **House prices stay below benchmark. The blue lines outline the maximum prices of house over time. That is a good sign because the benchmark is the forecasted value. Going over benchmark would flag for further investigation on potential disruptive factors**



House prices and office prices trend over time

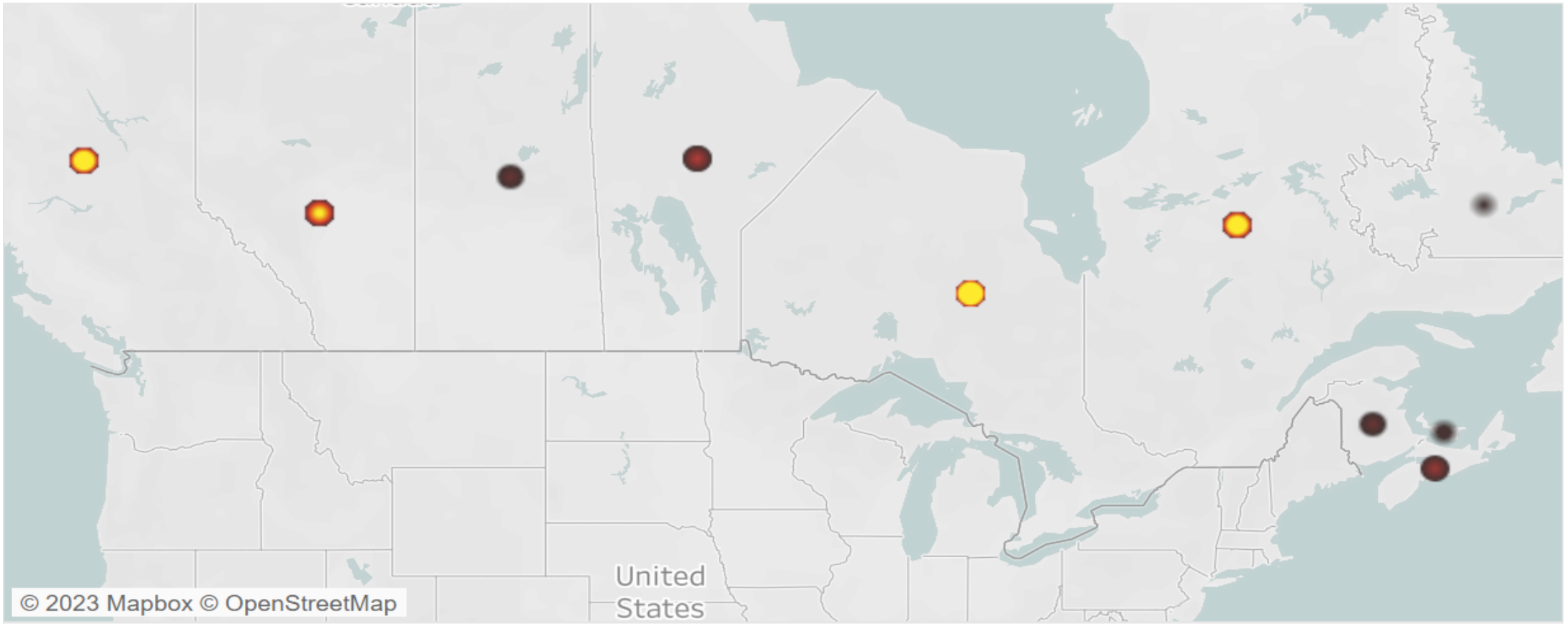
- Office prices stay on top of house prices. It’s logic since offices rent his higher than house one



House prices across Canada

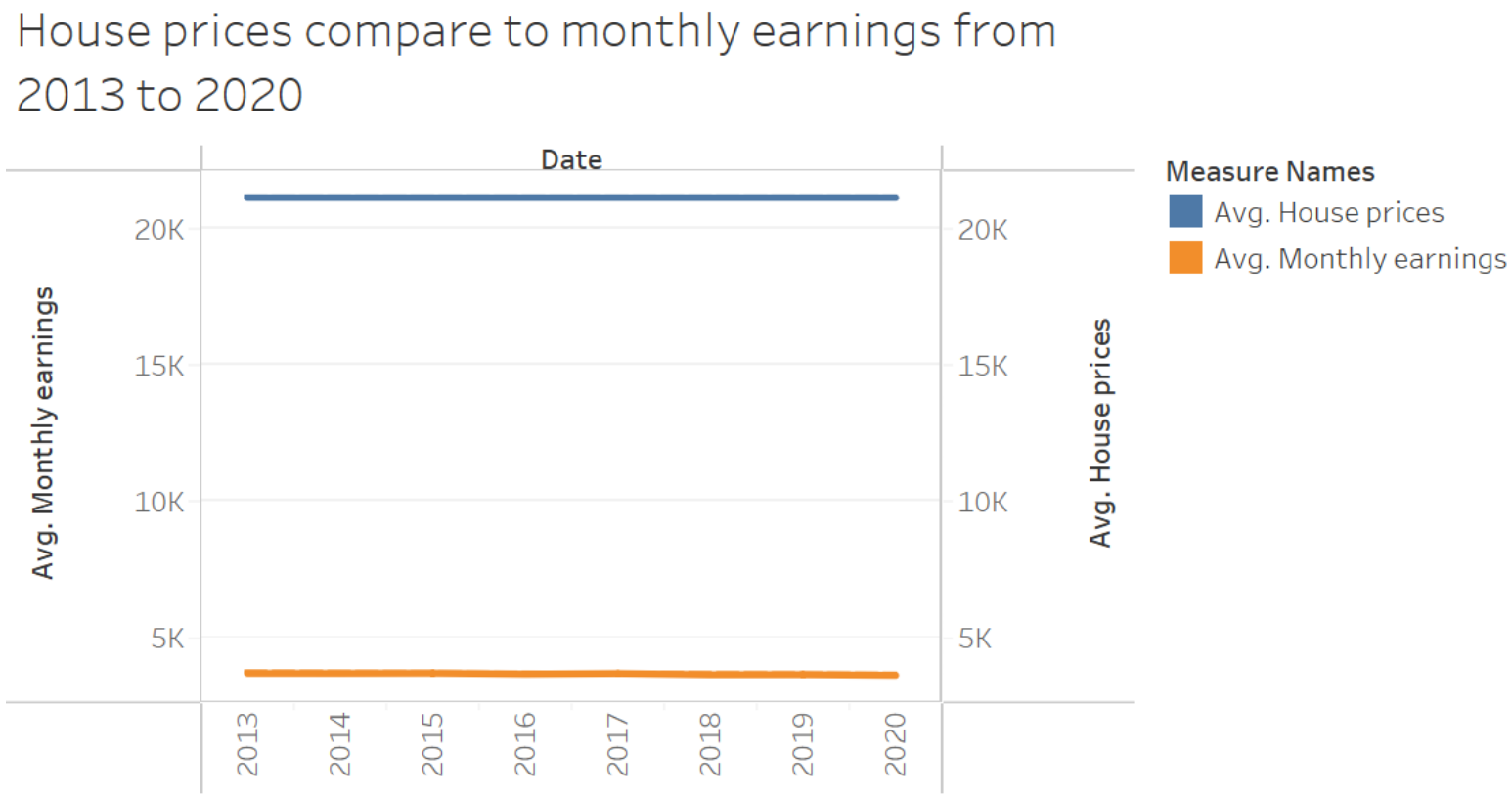
- House prices varies a lot across region of Canada. Starting from Ontario, step to Montreal to end at Prince Edward Island

Sheet 1



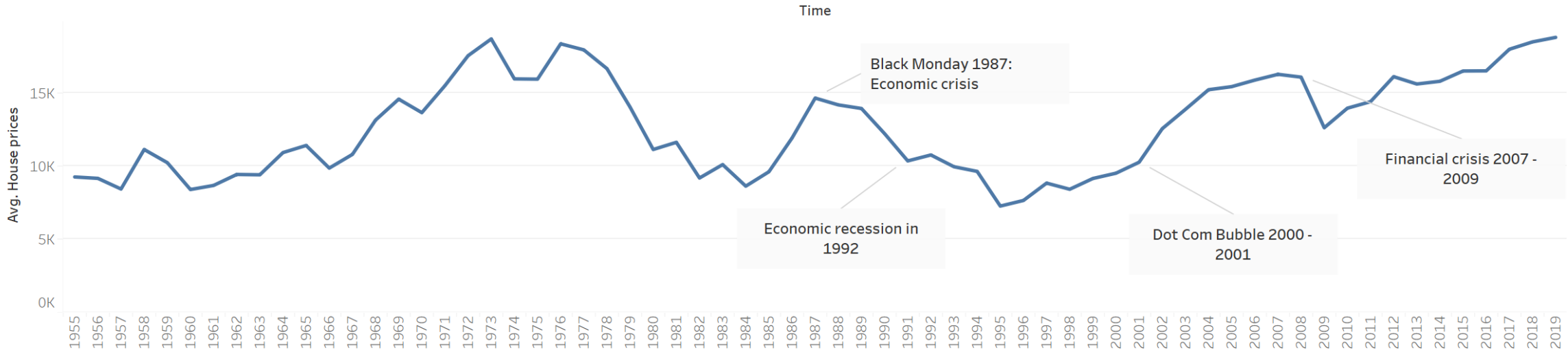
House prices and earnings trend over time

Earnings are as stable as house prices. It’s a sign that this sector offer a good return on investment.



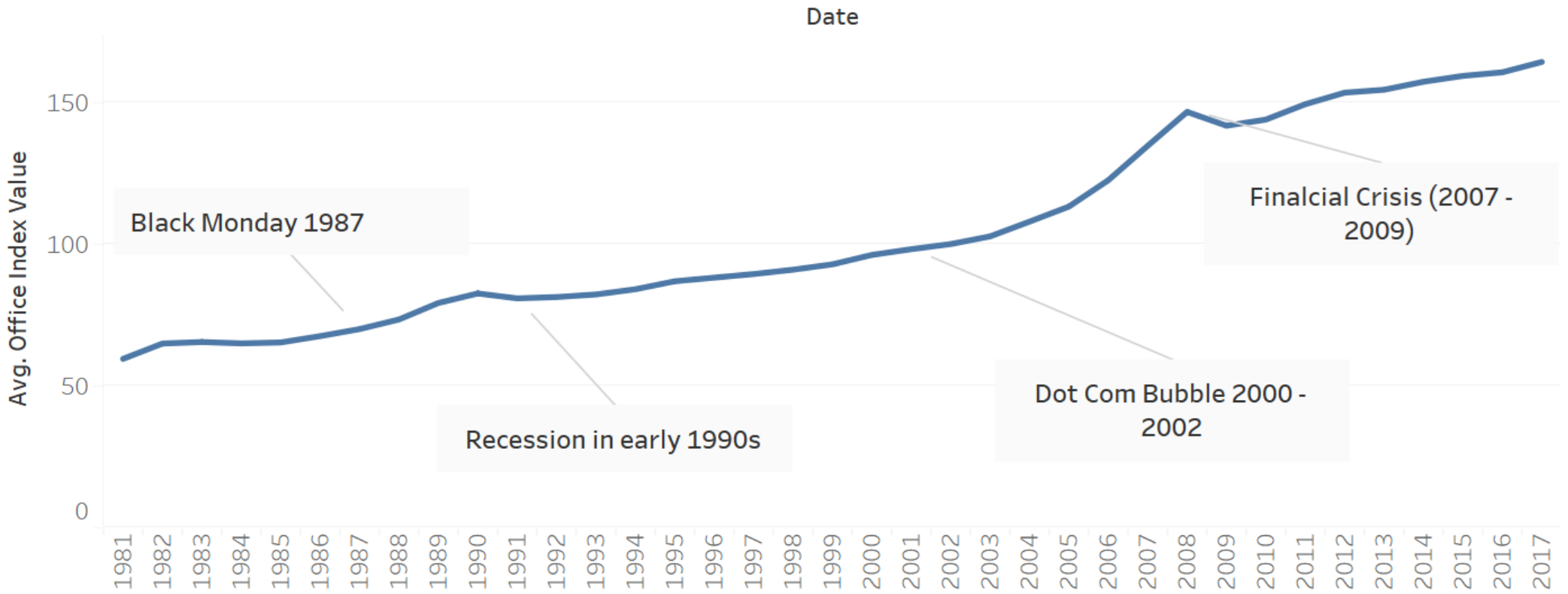
Analysis on impacts of some economic crises on house prices

Economic disruptions always impact financial sectors. You can see on the graph that most of the ones marked above produced a negative trend on the house prices. Except the Dot Com Bubble. This can be explained by the fact that after surviving two closed previous big crisis the system has shaped to resist more to those disruptions. Even thought they have become more robust, the financial crisis in 2007 – 2009 produced a negative effect on the trend again. This stressed the strength of those disruption. Since the system has learnt form the pass, they recovered faster.



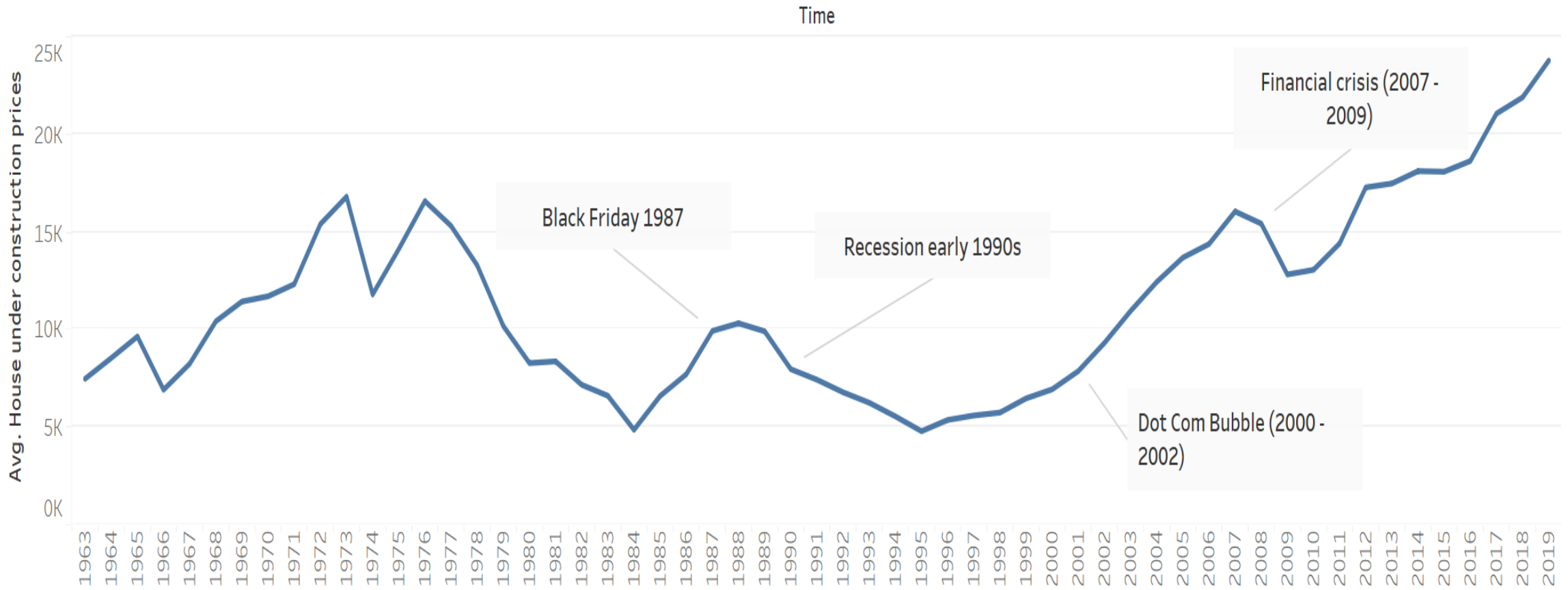
Analysis on impacts of some economic crises on office index prices

You can see that these crises barely affect the HPI of offices. This is because HPI reflects economic balance Whitin a sector. During those crises, all buildings prices dropped at once. So, the prices kept the same balance level within the real estate sector.



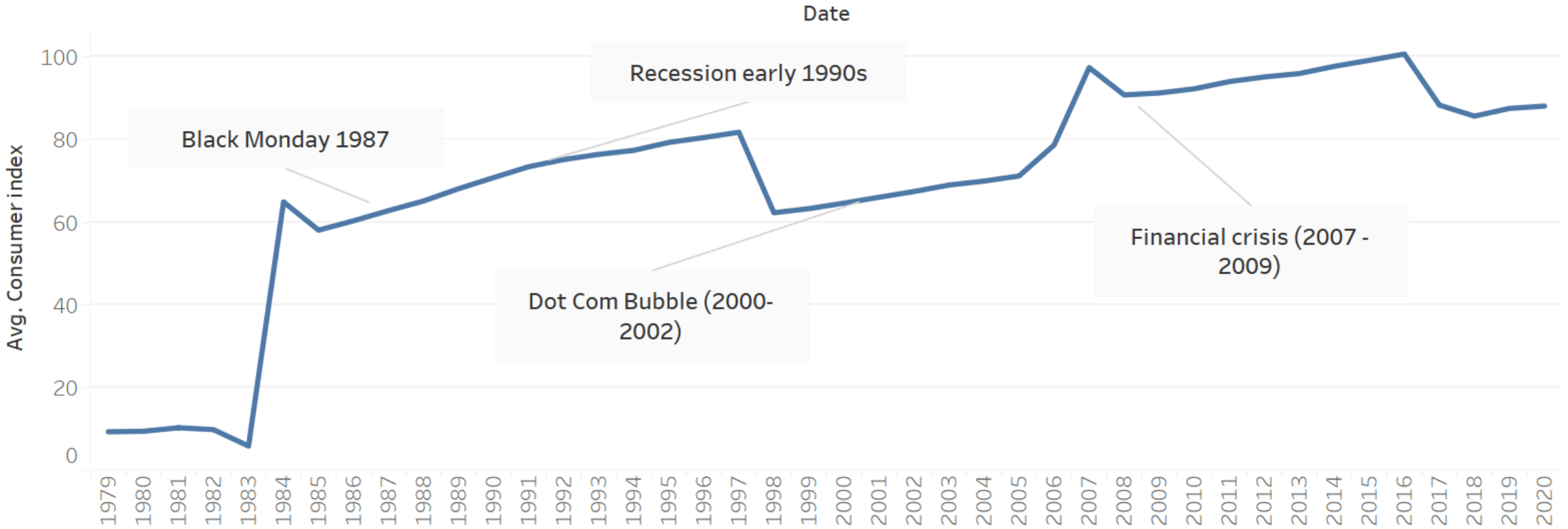
Analysis on impacts of some economic crises on house under construction prices

Same analysis for the house prices apply here



Analysis on impacts of some economic crises on consumer index

Same analysis for office index prices apply here



Correlation between consumer index and House index

Significant correlation at 61.76 %