Forecasting the Growth rate in Residential housing across Danish Municapalities

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Data

This project deals with the question of forecasting the growth in residential house prices across municipalities.

House Prices

House prices are collected from "Statiskbanken", prices are collected quarterly and spans from 1992 to 2023. The unit of measurement is *kr pr m2,* prices are calculated at the individual house level and then summarized at a municipality level, the published data is then the weighted average price for each municipality.

The house prices have been adjusted for inflation, by taking the monthly consumer price index for housing published by Statistics Denmark.

A visual analysis of figure 1 indicates that since 1992 the average growth rate has been between 6% and minus 6% quarter to quarter.

Visual inspection implies a seasonality in real growth rates. Trend is constant over time, this implies the need of accounting for seasonality in our proposed models.

Method

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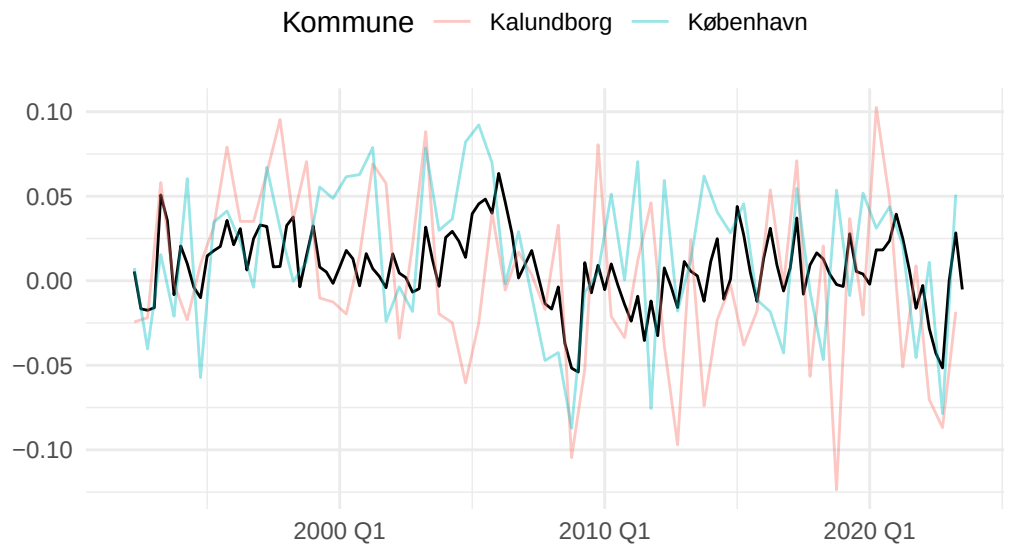

Figure 1: Average growth rate for real m2 prices in Denmark

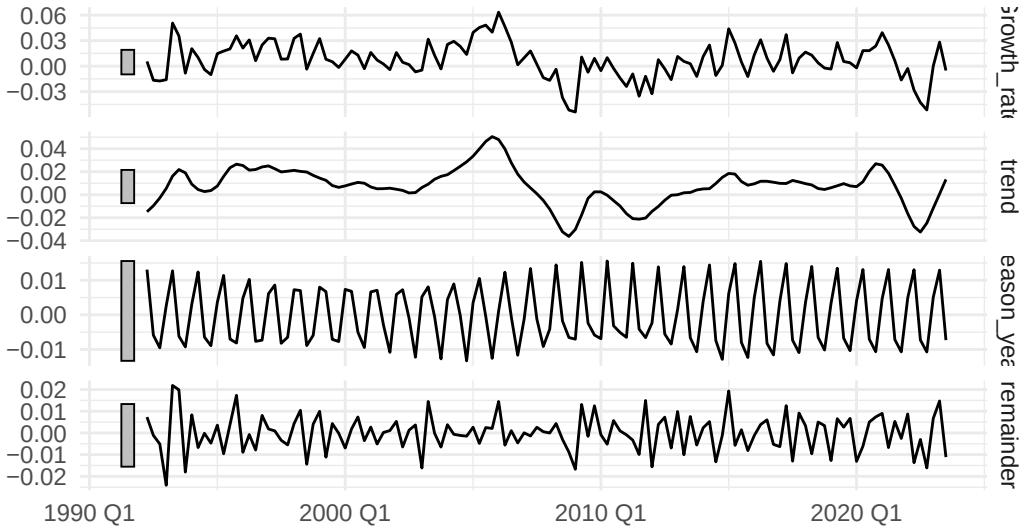

Figure 2: STL decomposition of the average growth rate for real m2 prices in Denmark

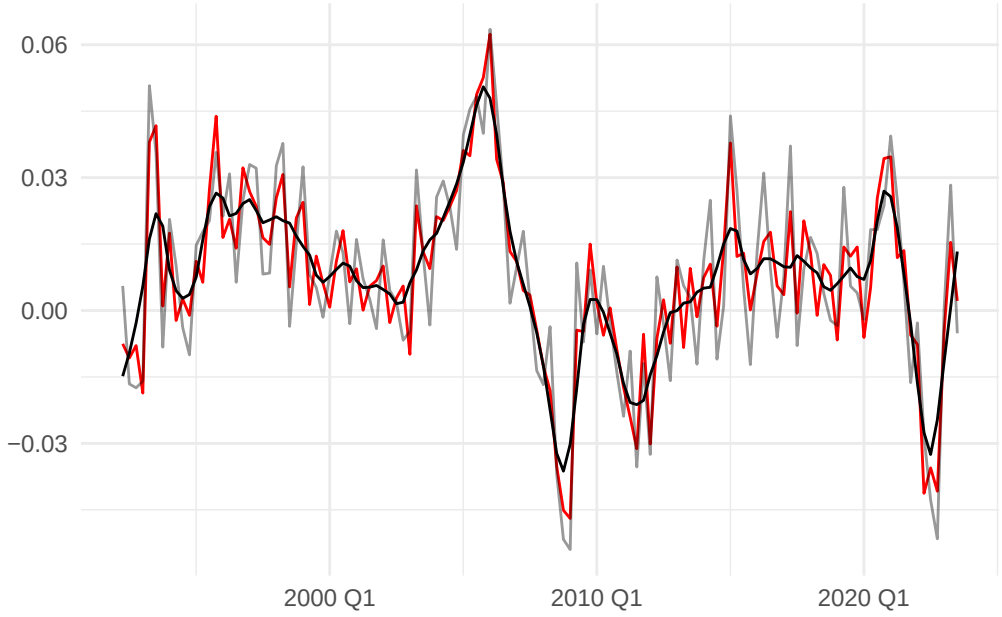

Figure 3: Real growth rates seasonaly adjusted (red) and trend (black)

Forecast

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Conclusion

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