

Price Points and Price Dynamics

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Motivation

- ▶ **Price points**, i.e. prices with special endings such as \$1.99 or \$5.00, **are relevant for firms' price setting decisions** (Knotek, 2016; Kashyap, 1995).
- ▶ These prices are chosen more frequently than other prices, have a longer duration and change by larger magnitudes.
- ▶ Most frequent consumer prices in the UK CPI (Feb 1996 - Dec 2016):

rank	price	relative freq.
1	2.00	1.11%
2	1.00	0.93%
3	2.50	0.85%
4	3.00	0.81%
5	1.50	0.81%
6	7.99	0.73%
7	10.00	0.71%
8	0.99	0.69%
9	1.99	0.67%
10	6.99	0.67%

Research Questions

- ▶ **Can price points explain the observed price dynamics at the micro level** (if we abstract from conventional sources of stickiness such as menu costs)?
- ▶ If so, what are the consequences for aggregate dynamics?

Our approach

- ▶ We propose a model with price points, trend inflation, information rigidities and firm-specific productivity shocks.
- ▶ Price setters choose log prices from a discrete set ("price ladder").
- ▶ We use the price-setting equation to simulate individual prices.

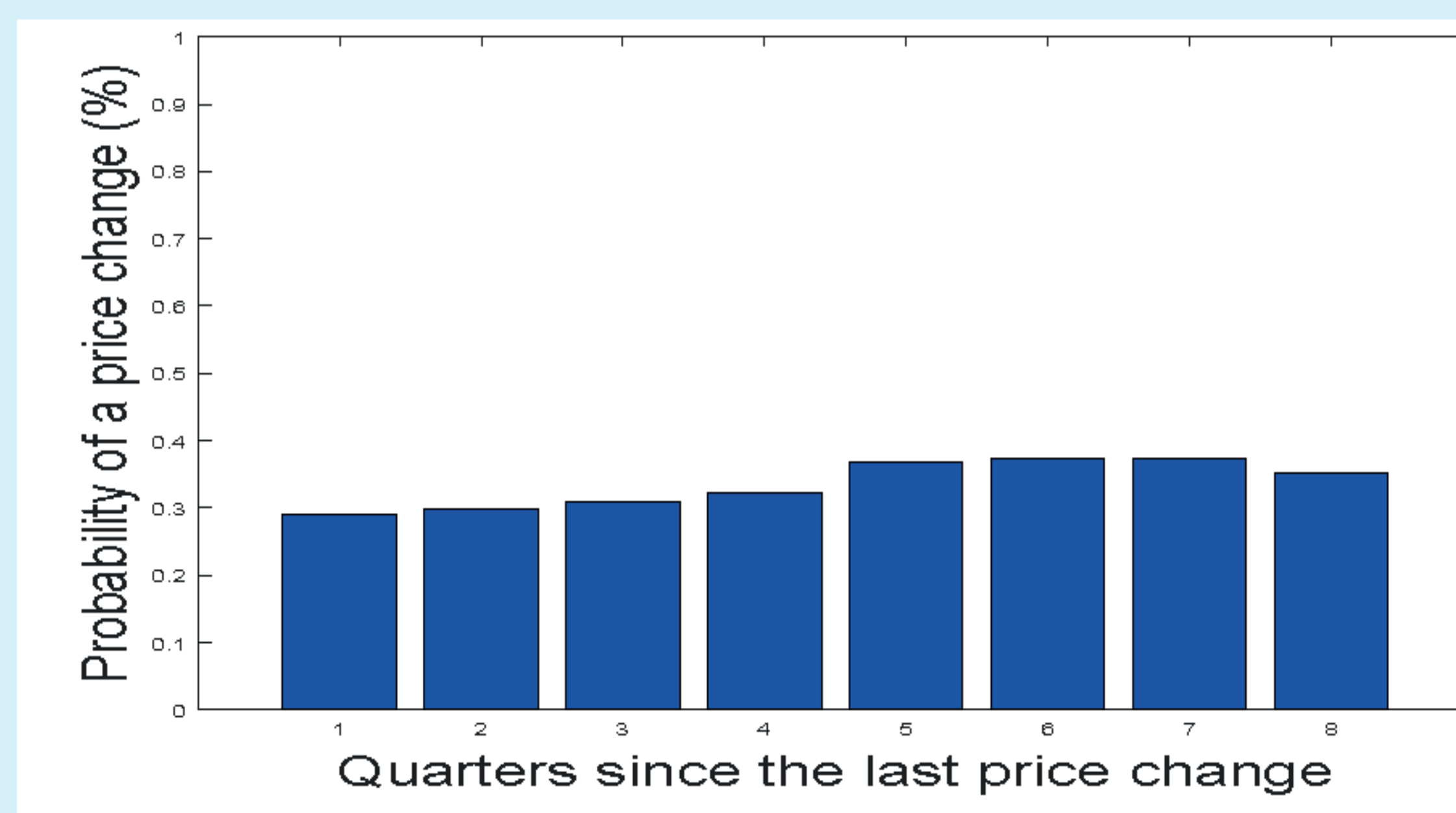
Results

Our model can explain the following **stylized facts of price adjustment** (Klenow and Kryvtsov, 2008; Nakamura and Steinsson, 2008):

- ▶ Prices move back and forth between a few rigid values ✓

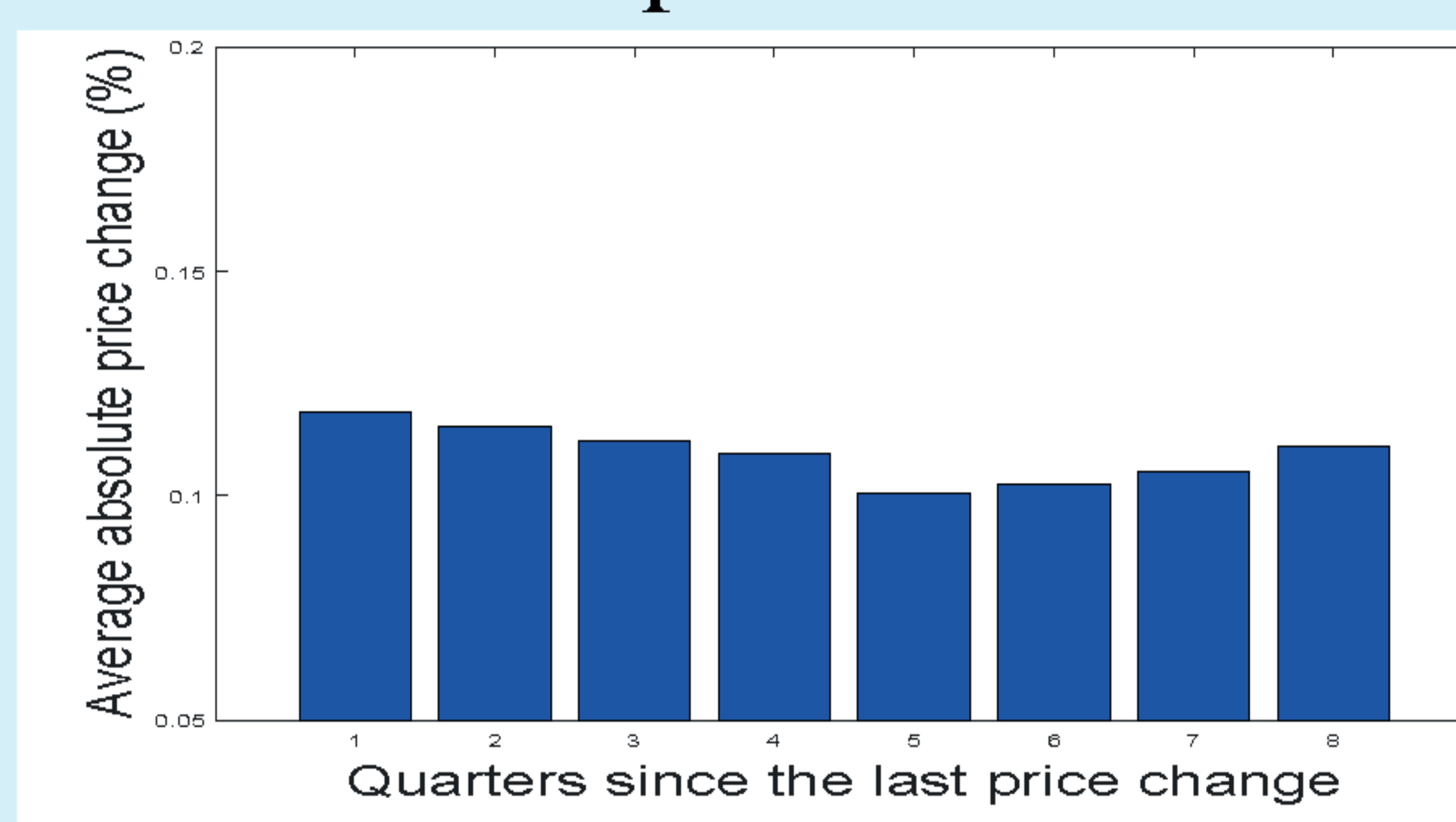
▶ Frequency of price adjustment

- ✓ 2-3 quarters (regular prices)
- ✓ flat hazard curve



▶ Magnitude of price adjustment

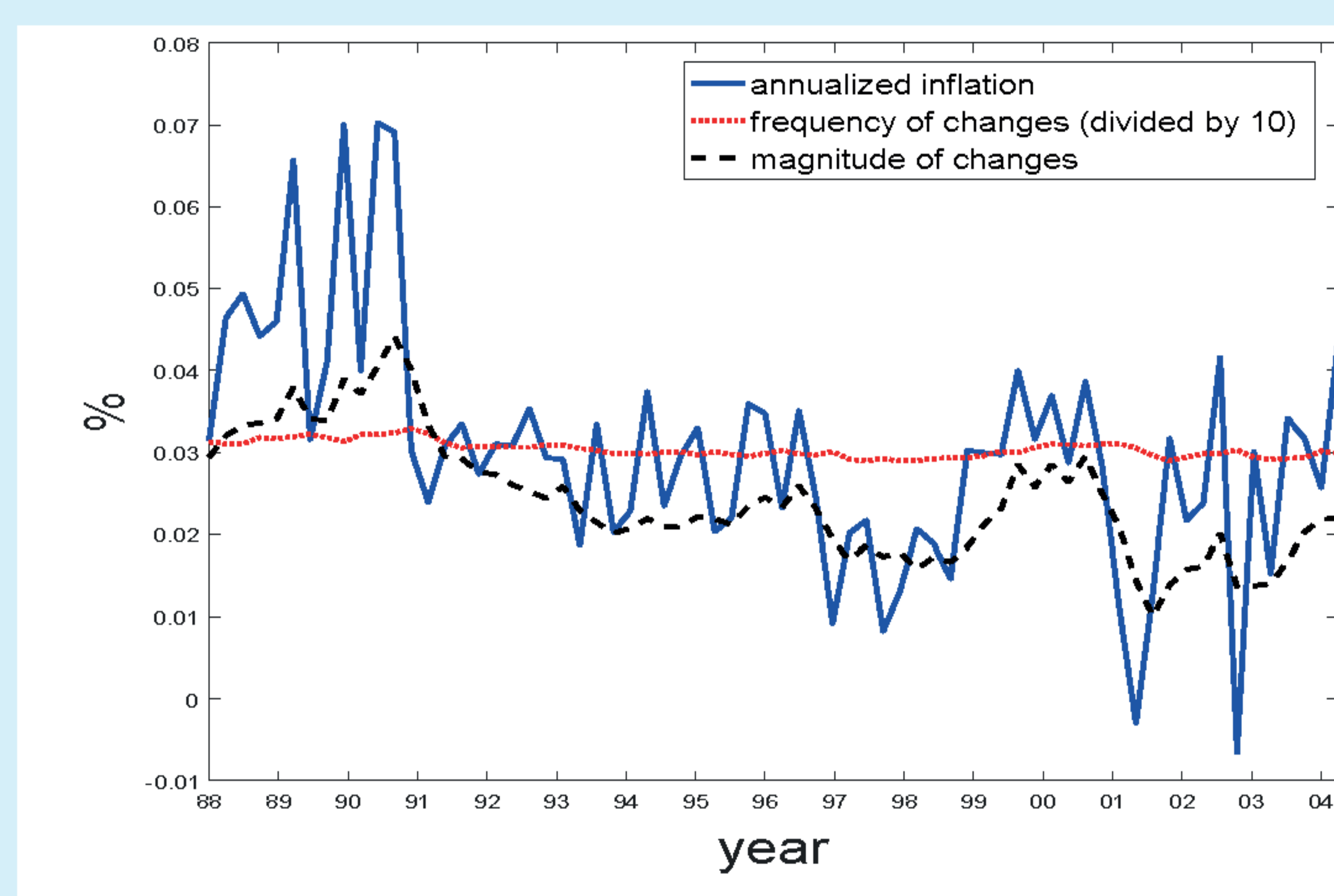
- ✓ mean absolute price change of 11.3%
- ✓ size of price changes does not increase with price duration



- ✓ magnitude of price decreases exceeds the size of increases
- ✓ approximately 40% of regular price changes are decreases

▶ Co-movement with inflation

- ✓ frequency of price adjustment co-moves with inflation
- ✓ freq. of increases covaries strongly, freq. of decreases changes little
- ✓ the intensive margin dominates the variance of inflation



Summary

The combination of price points and information rigidities implies plausible predictions for both individual as well as aggregate dynamics.