The Future of Inflation

Francesco Lippi

LUISS University & Einaudi Institute for Economics and Finance

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What can we say about the future of inflation?

“Prediction is very difficult, especially if it’s about the future!” N. Bohr

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My discussion proceeds as follows

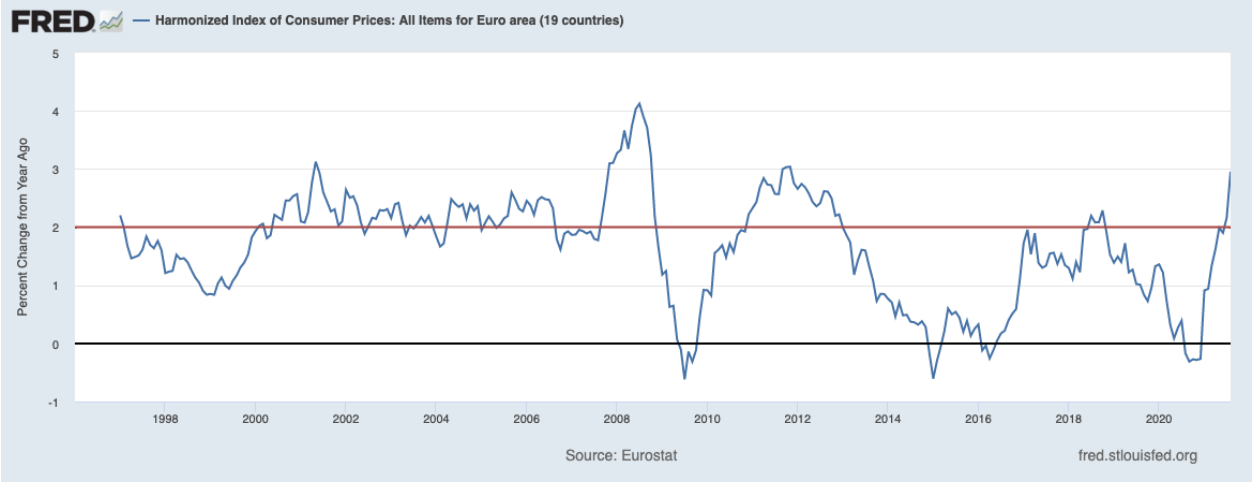
– A look at the past to think about the future

– Use simple "model" to organize the analysis

– Discuss in order (1) short-term trends and (2) long-run issues

Important observations from past 20 years

Inflation during 20 Years of ECB Policy



- Inflation was remarkably stable compared to the past
- Inflation was volatile, high / low outcomes did and will appear
- Inflation under control: no big deflation, no high inflation
- Two “regimes”: Pre vs. Post 2008 . Why?

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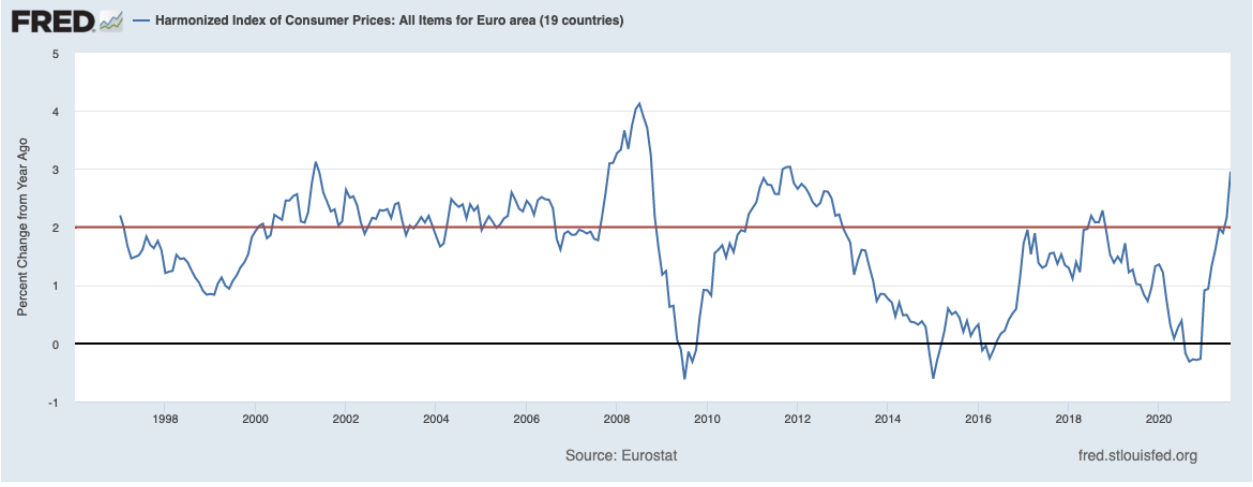

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- Claim: history is the consequence of (good) monetary policy
- Prediction: as good policy continues, similar outcomes will occur

Understanding inflation dynamics

- Inflation (i.e. trend of the aggregate price) has 2 parts:

$$\frac{P_{t+1}}{P_t} = \text{inflation} = \underbrace{\text{transitory shocks}}_{\text{Energy, Trade, Tech, Demand...}} + \underbrace{\text{expected future prices}}_{\text{influenced by expected future policy}}$$

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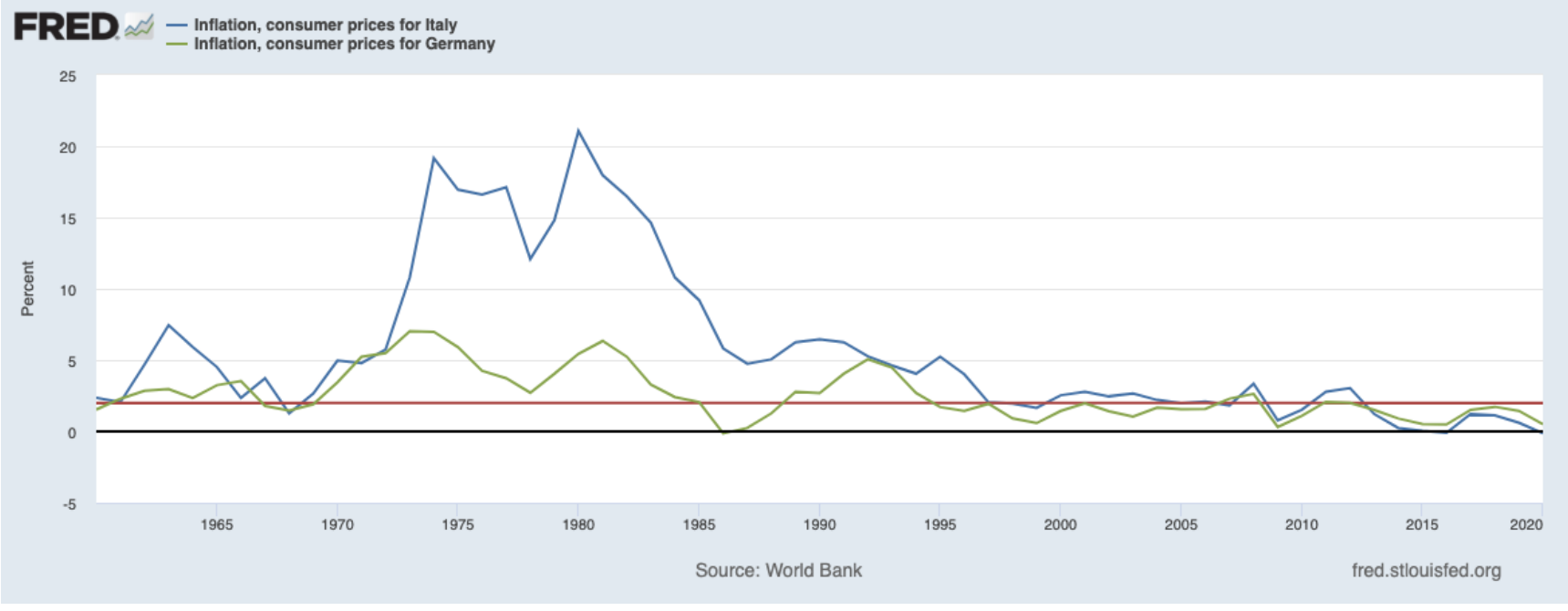
- Key to understanding the future of inflation:
  Disentangle temporary from systematic components

- (1) Monetary policy (credibility) key to determine final outcome
  - good policy: prevent temporary shocks from affecting expectations

- (2) Do not confuse relative-price shocks with trend-change
  - globalisation, IT revolution, supply-bottlenecks, energy shocks, ...

(1) Policy is key to determine final outcome

Oil shocks : Germany vs. Italy



Very many historic episodes supporting this view - see T. Sargent's work

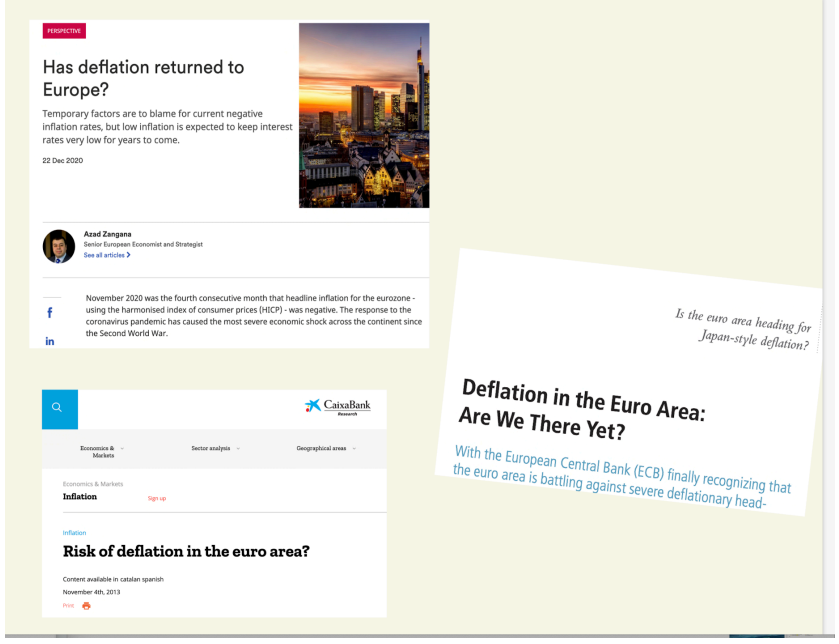
(2) Do not confuse relative-price shocks with inflation

Inflation scares from 2021

Isabel Schnabel 2021 Slides

"New narratives on monetary policy...."

Deflation scares from 2013 and 2020



googling "Euro-deflation"

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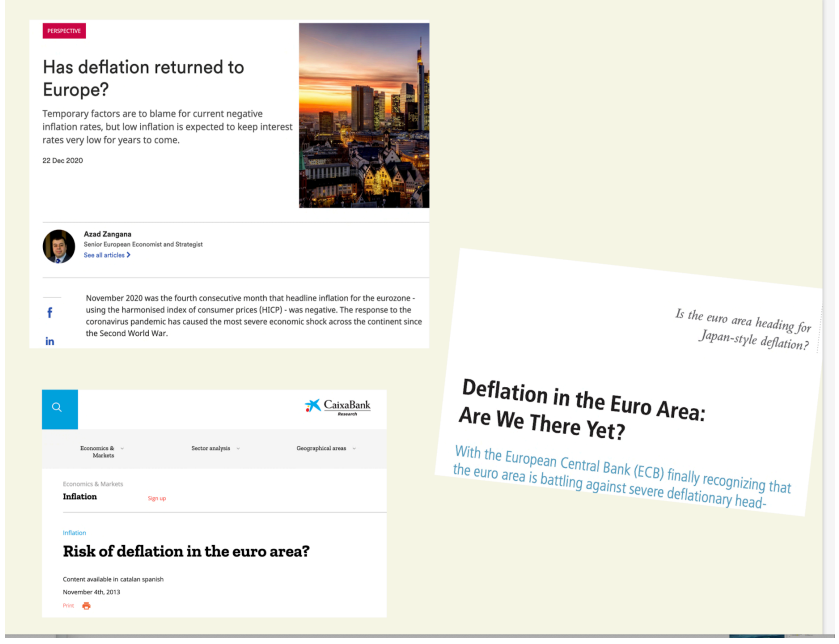


googling "Euro-deflation"

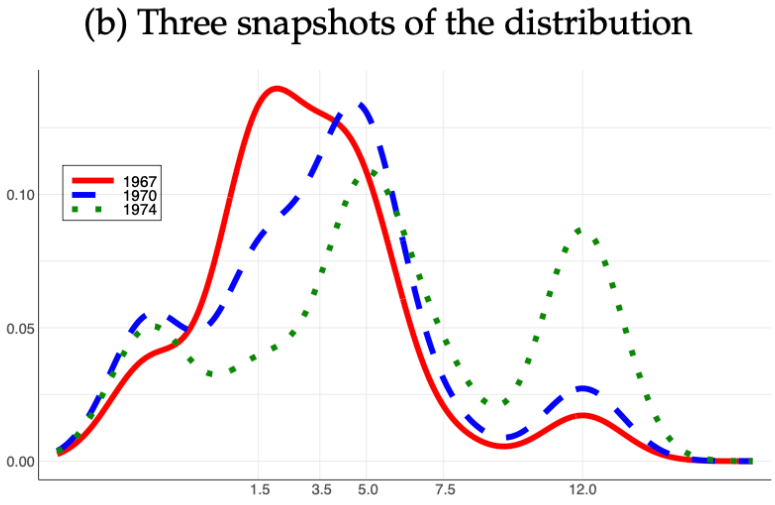
lean against the "this-time-is-different" syndrome

Credible policy will anchor inflation. Key: focus on systematic future policy

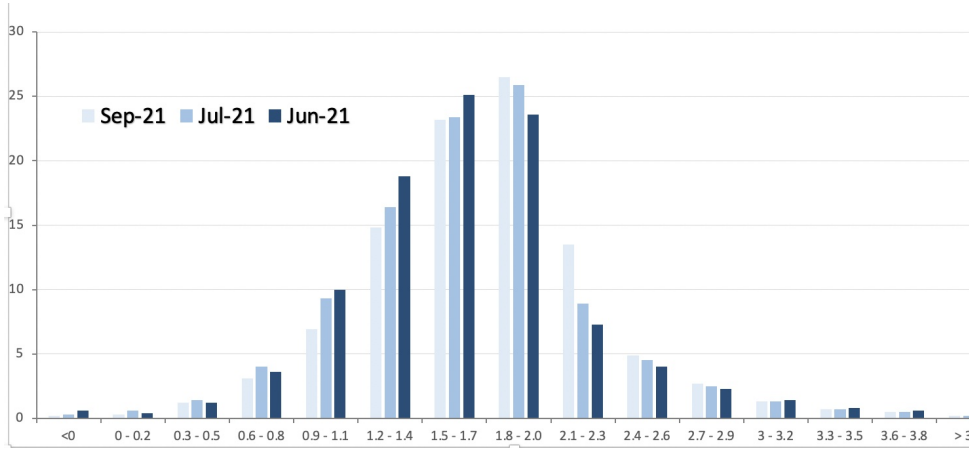
Analyze the dynamics of expectations

cross-sectional **distribution of inflation expectations**

A look at the 70s
R. Reis (2021)



A look at today
SMA Survey Data (ECB)



Keep expectations under control – do not overreact

The future of inflation

My prediction: inflation will remain under control, close(r) to 2%

- 2021 Strategy review:
  - symmetric 2% target
  - improved communication with the various audiences
  - recognize ZLB risks without giving up low inflation objective
- sound research-based policy

Structural issues and the future of inflation

- Link between inflation dynamics and real variables is key
- Many monetary analyses on nominal to real link: **non-neutrality**
  - e.g. "Phillips curve slope" & propagation of nominal shocks (VAT hike, ER shock, one-off cost shock)

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- Link between inflation dynamics and real variables is key
- Many monetary analyses on nominal to real link: **non-neutrality**
  - e.g. "Phillips curve slope" & propagation of nominal shocks (VAT hike, ER shock, one-off cost shock)
- Lessons from economic analysis (theory + data) :

  Alvarez, Cavallo, Gopinath, Gorodnichenko, Itshkoki, Nakamura, Steinsson, ...

  - **non-neutrality** determined by patterns of price-setting behavior
  - Measuring such patterns informs us about future developments

Example: Propagation of a cost-shock

- Pass-through from costs to prices takes time and depends on:
  - average frequency of price-resetting across firms (fast/slow)
  - and on similarity in size & direction of price changes after shock

kurtosis of price changes

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    kurtosis of price changes

- Role of frequency and kurtosis highlighted by several models
- Both variables vary significantly across sectors
- Recent research on French data confirm key role of both

  with Alvarez, Ferrara, Gautier, LeBihan

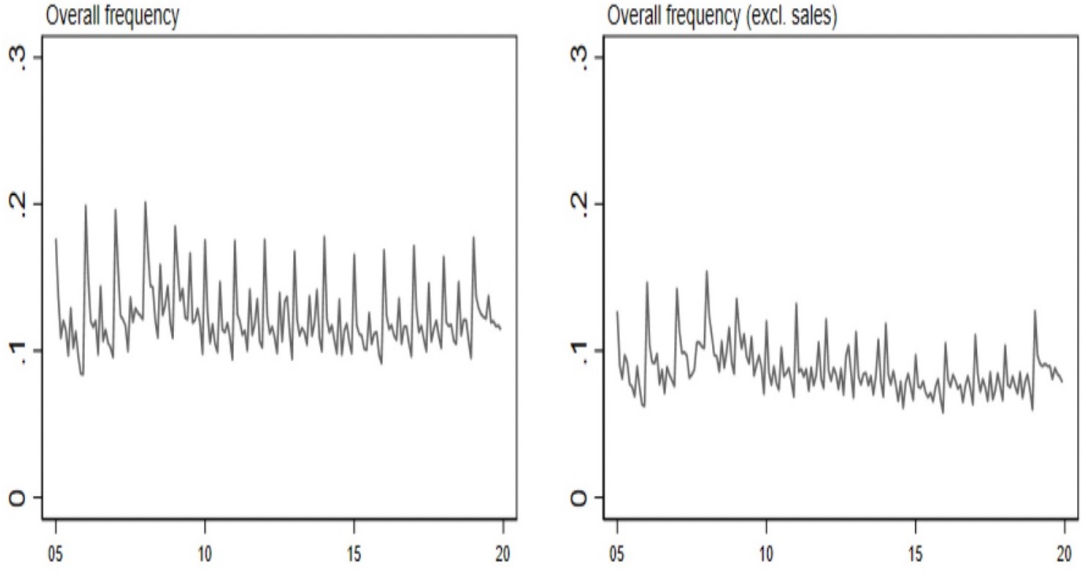
– Ongoing work by ECB (Prisma project) and several scholars

Price-setting patterns in the EA and US (frequency)

cross-sectional **frequency of price-changes**

Facts on Consumer Price Rigidity
E. Gautier et al. (Prisma 2021)

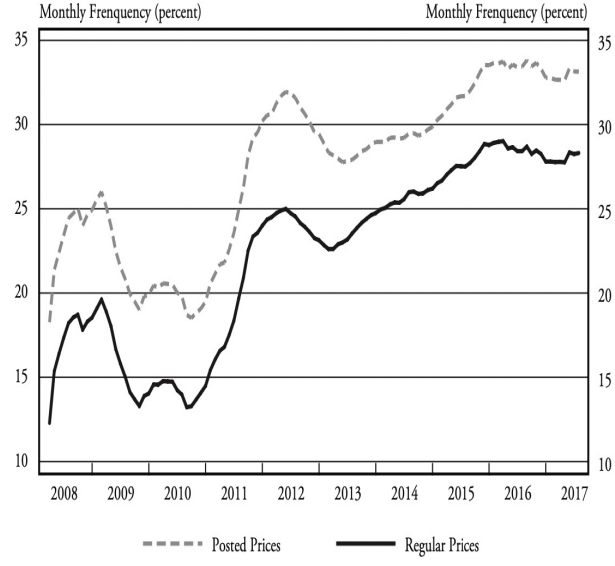
Figure 4: Frequency of Price Change in the Euro Area Over Time



The “Amazon effect”
A. Cavallo (2019)

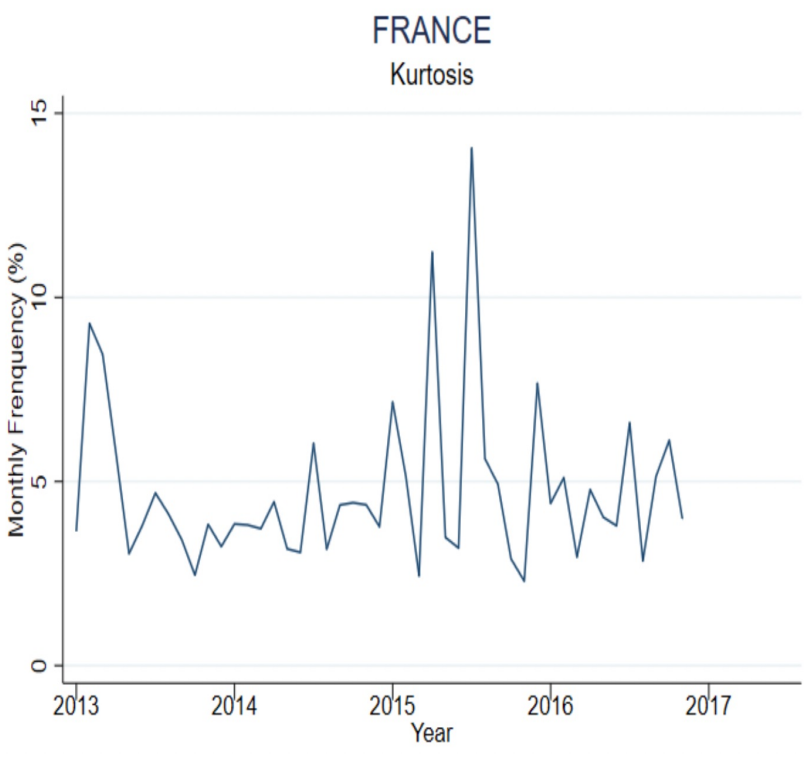
Chart 1
Monthly Frequency of Price Changes, 2008 to 2017

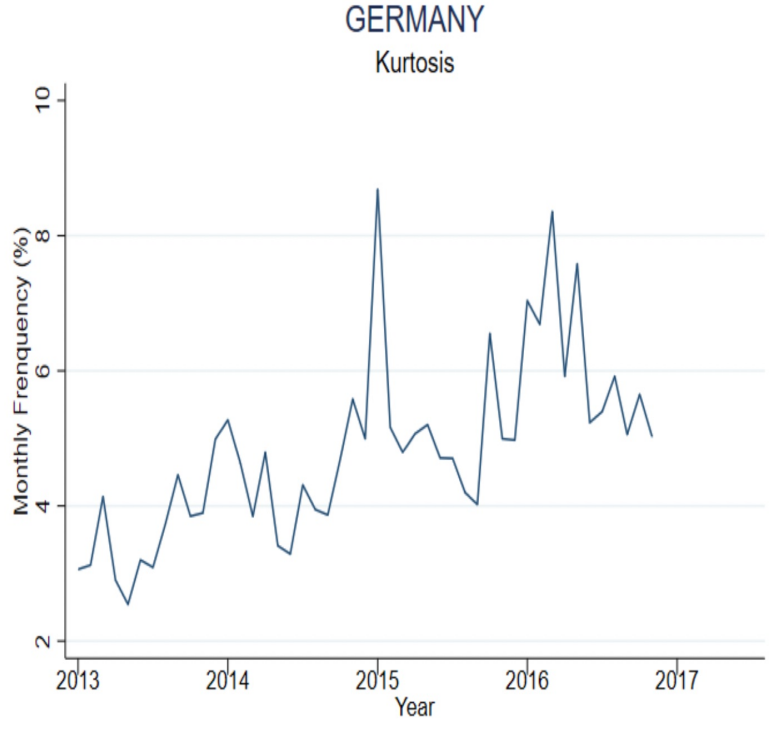
A: Posted and Regular Price Changes



Price-setting patterns: Kurtosis of price changes

cross-sectional **kurtosis of price-changes**
proxies the non-neutrality of nominal shocks





Source: Author's calculation on Cavallo's BPP data

several measurement issues; more research is needed