

# Surveys of Household Economic Expectations

Carola Binder

Haverford College  
cbinder1@haverford.edu

May 17, 2019

# Why do central banks care about expectations?

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  - ▶ Fisher equation:  $r = i - \pi^e$
  - ▶ Phillips curve:  $\pi = \beta\pi^e + \gamma(u - u^*) + \nu$
  - ▶ “Anchored” expectations can facilitate inflation stabilization

# Why do central banks care about expectations?

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  - ▶ What is inflation?
  - ▶ Fisher equation:  $r = i - \pi^e$
  - ▶ Phillips curve:  $\pi = \beta\pi^e + \gamma(u - u^*) + \nu$
  - ▶ “Anchored” expectations can facilitate inflation stabilization
- ▶ Use in forecasting
- ▶ Communication (shaping expectations) as a policy tool, especially at **ZLB**

# Transparency and Communication



# Transparency and Communication



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*Yellen (2013) “For the first time, the committee was using communication—mere words—as its primary monetary policy tool.”*

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*Yellen (2013) “For the first time, the committee was using communication—mere words—as its primary monetary policy tool.”*
- ▶ Forward guidance used extensively during Great Recession with federal funds rate at ZLB.



# Transparency and Communication

- ▶ Central bank independence and democratic legitimacy
  - ▶ “Clear communication is a basic obligation of democratic policymakers” (Annual Report of the Minneapolis Fed 2015).
  - ▶ “Although we work through financial markets, our goal is to help Main Street, not Wall Street” (Yellen 2014).

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  - ▶ “Although we work through financial markets, our goal is to help Main Street, not Wall Street” (Yellen 2014).
- ▶ “Monetary policy is most effective when the public understands what the Fed is trying to do and how it plans to do it” (Yellen 2013).

# Transparency and Communication



Awards

## Transparency: National Bank of Ukraine

Ukrainian central bank has made strong progress in improving transparency during challenging year

🕒 23 JAN 2019 | **CBJ**

[www.centralbanking.com/content-hub/central-banking-awards-2019-3895766](http://www.centralbanking.com/content-hub/central-banking-awards-2019-3895766)

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“The NBU adopted an inflation-targeting regime...The central bank also set itself the tasks of bringing transparency and efficiency to the banking system...Should the NBU safeguard its newly gained credibility... its effectiveness will be increased. And the NBU will find it hard to carry on reforming and supervising Ukraines financial sector without support from politicians, citizens and the media.

...the NBU has shown that increased transparency is not just something that benefits comfortably independent central banks in the world's most prosperous jurisdictions. Transparency can also be a vital tool for central banks seeking to reform economies hit by crisis.”

# Which or Whose Expectations?

Not just one “true” inflation expectation at any given time.

- ▶ Measures derived from financial instruments, e.g. TIPS
- ▶ Measures from professional forecasters, e.g. Survey of Professional Forecasters (Philadelphia Fed or ECB)
- ▶ Measures from consumer or household surveys (this lecture)

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- ▶ Measures from consumer or household surveys (this lecture)
- ▶ Lots of heterogeneity, i.e. consumers disagree with each other and with professionals and financial markets
- ▶ Focus on household expectations is relatively recent, since harder to measure and not available at high frequency.

# The Michigan Survey of Consumers

- ▶ Monthly telephone survey since 1978 of about 500-1000 households per month.
- ▶ Perceptions and expectations of personal financial situation, business conditions, inflation at 1-year and 5-to 10-year horizons.
- ▶ Mostly a cross-section, but with a partial *rotating panel*.

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Time Series

Time Series Demographics

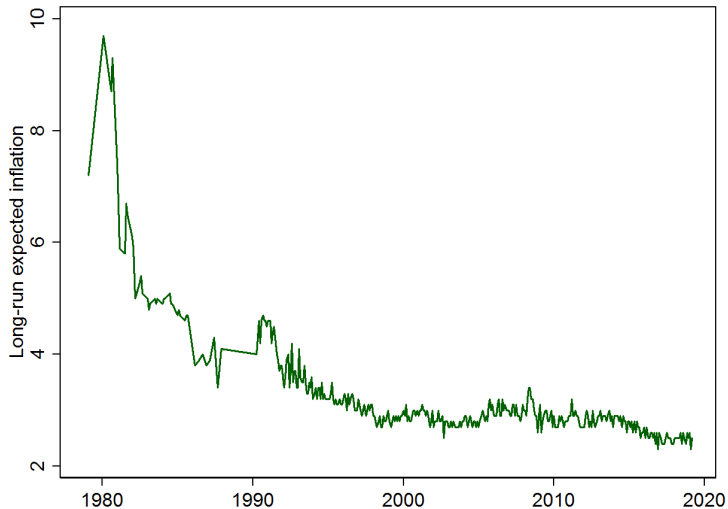
Cross-Section Archive

Downloads

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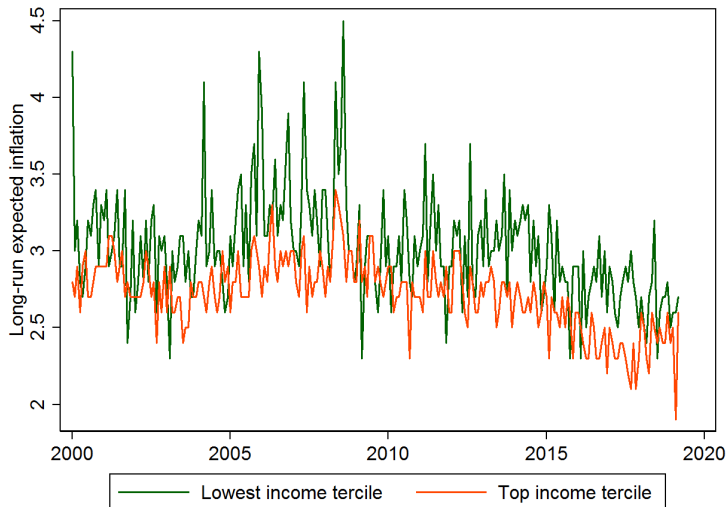


# Median Inflation Expectations



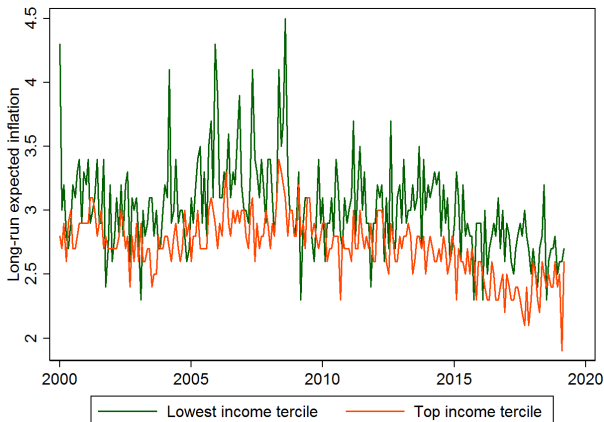
**Notes:** Data from MSC.

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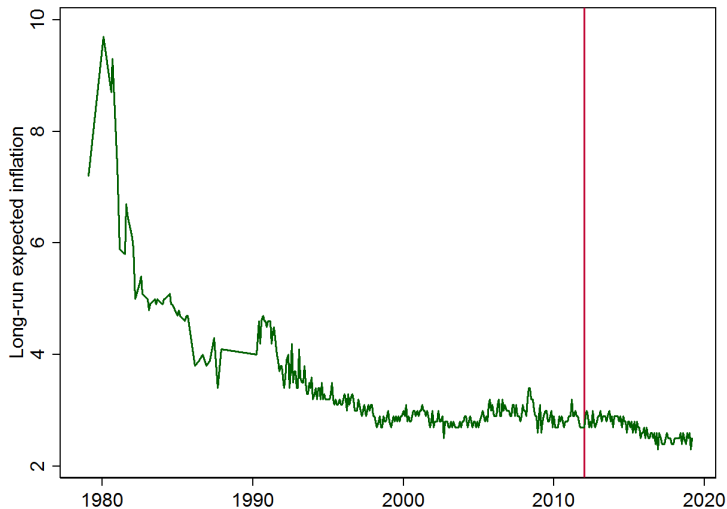
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# Median Inflation Expectations



In “Whose Expectations Augment the Phillips Curve” (2015 Economics Letters) I show that expectations of consumers with high income and education are most relevant for inflation dynamics.

## Did Announcement Help Anchor Expectations?



**Notes:** Data from MSC. <https://data.sca.isr.umich.edu/>

# Did Announcement Help Anchor Expectations?

## surveys of consumers UNIVERSITY OF MICHIGAN

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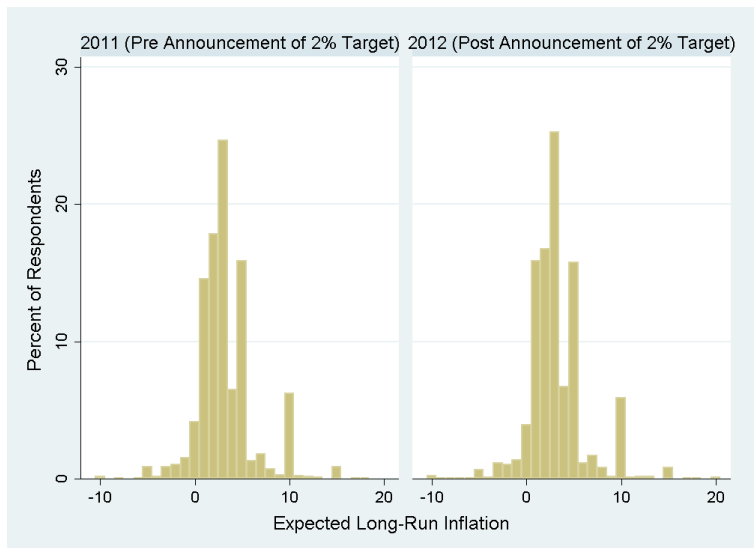
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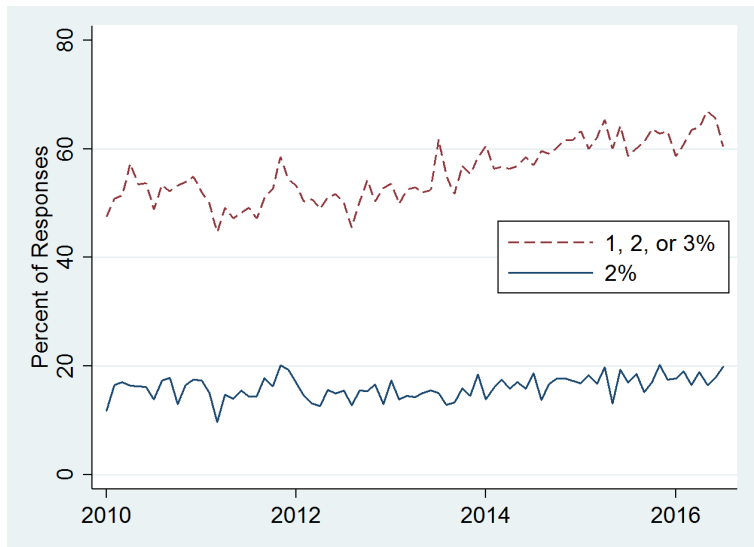
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**Notes:** From Binder (2017 Journal of Macroeconomics). Data from MSC.

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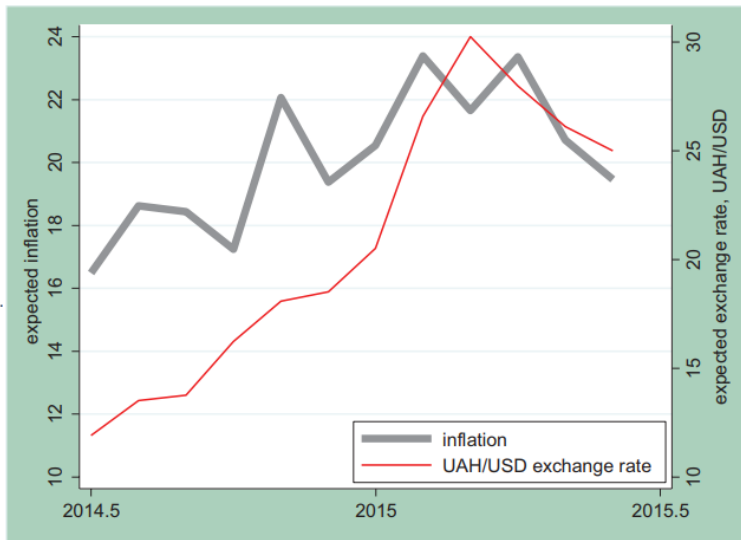


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- ▶ Monthly cross-section of about 1000 consumers
- ▶ Qualitative inflation and exchange rate expectations since 2000
- ▶ Quantitative inflation and exchange rate expectations since 2014 (select interval of width 5 pts.)



# GfK Ukraine Survey



Source: Coibion and Gorodnichenko 2015

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- ▶ Internet-based, about 1300 people per month
- ▶ Several years of experiments and cognitive interviews to develop the survey questions and format.
  - ▶ For example, how to word the survey questions about inflation? Some respondents misinterpret MSC question.
- ▶ Solicits expectations of a range of economic outcomes: inflation, household finance, labor market, housing market.

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Two very important differences from MSC:

- 1 Density forecasts
- 2 Rotating panel

# Density Forecasts

- ▶ Respondents provide the probability that the outcome will fall in various bins
- ▶ Must sum to 100%
- ▶ Allows computation of measures of **uncertainty**

# Rotating Panel

Respondents participate for up to 12 months.

- ▶ More potential for studying expectations formation
- ▶ e.g. I show that consumers revise their expectations frequently, evidence against “sticky information” models (2017 Economics Letters)

# Response Rates, Attrition, and Conditioning

- ▶ Privacy, trust, and burden concerns
- ▶ Selection issues: those who take the survey different than those who do not
- ▶ Panel conditioning effects: taking the survey changes how people respond in later rounds (Binder 2019)

# Survey-Based Experiments

- ▶ Most consumer survey data is *observational data* so it is hard to determine causality
- ▶ In an experiment, you can solicit expectations and randomize “treatment” of some information
- ▶ Relatively easy and cheap with platforms like Amazon Mechanical Turk and SurveyMonkey
- ▶ Example: Binder and Rodrigue (2017), Lamla and Vinogradov (2019)
- ▶ Downsides...



# Future of Expectations Surveys

- ▶ Diversity of countries, populations, topics
- ▶ Linking expectations data to spending and employment data
- ▶ Incentivized surveys
- ▶ Alternatives or supplements to surveys: web-scraping, text analysis