INFLATION EXPECTATIONS – A POLICY TOOL?

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Why inflation expectations?

Key variable for economic decisions: perceived real interest rate

$$i_t - E_t\pi_{t+1}$$

- Conventional monetary policy:
  - Anchor inflation expectations $E_t\pi_{t+1}$
  - Increase/decrease nominal interest rate i_t
- Unconventional monetary policy
  - Manipulate inflation expectations $E_t\pi_{t+1}$
  - Nominal interest rate is at the zero lower bound (ZLB)

Mario Draghi (2015): "*When inflation expectations go up with zero nominal rates, real rates go down. When real rates go down, investments and the economic activity improves. That's the reasoning [of QE].*"

STANDARD MECHANISMS

- *Households consume more*: when inflation expectations rise and nominal interest rates are unchanged (ZLB), real interest rates are lower, so households should save less and spend more.

- *Firms invest more and hire more workers*: when inflation expectations rise and nominal interest rates are unchanged (ZLB), real interest rates are lower so user cost of capital and labor are lower, inducing firms to raise their capital and employment.

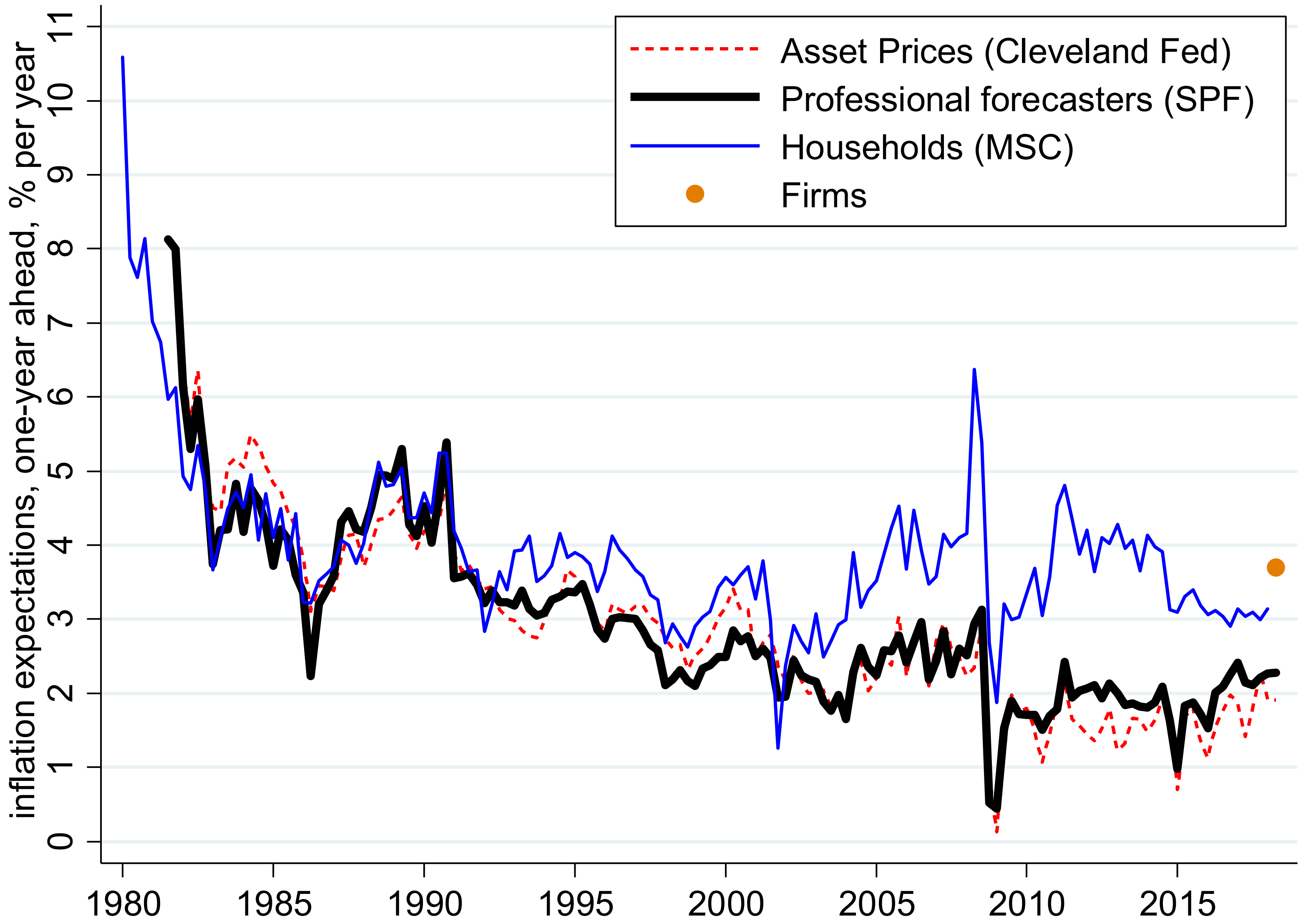
- *Firms raise their prices*: with sticky prices, inflation lowers firms' relative price over time, so expectation of higher inflation induces them to raise prices more than they would otherwise.

- *Workers raise their wage demands*: with sticky wages, inflation lowers the real wage over time, so expectations of higher inflation induce workers to raise wage demands, which should raise prices further.

SOME PRACTICAL QUESTIONS

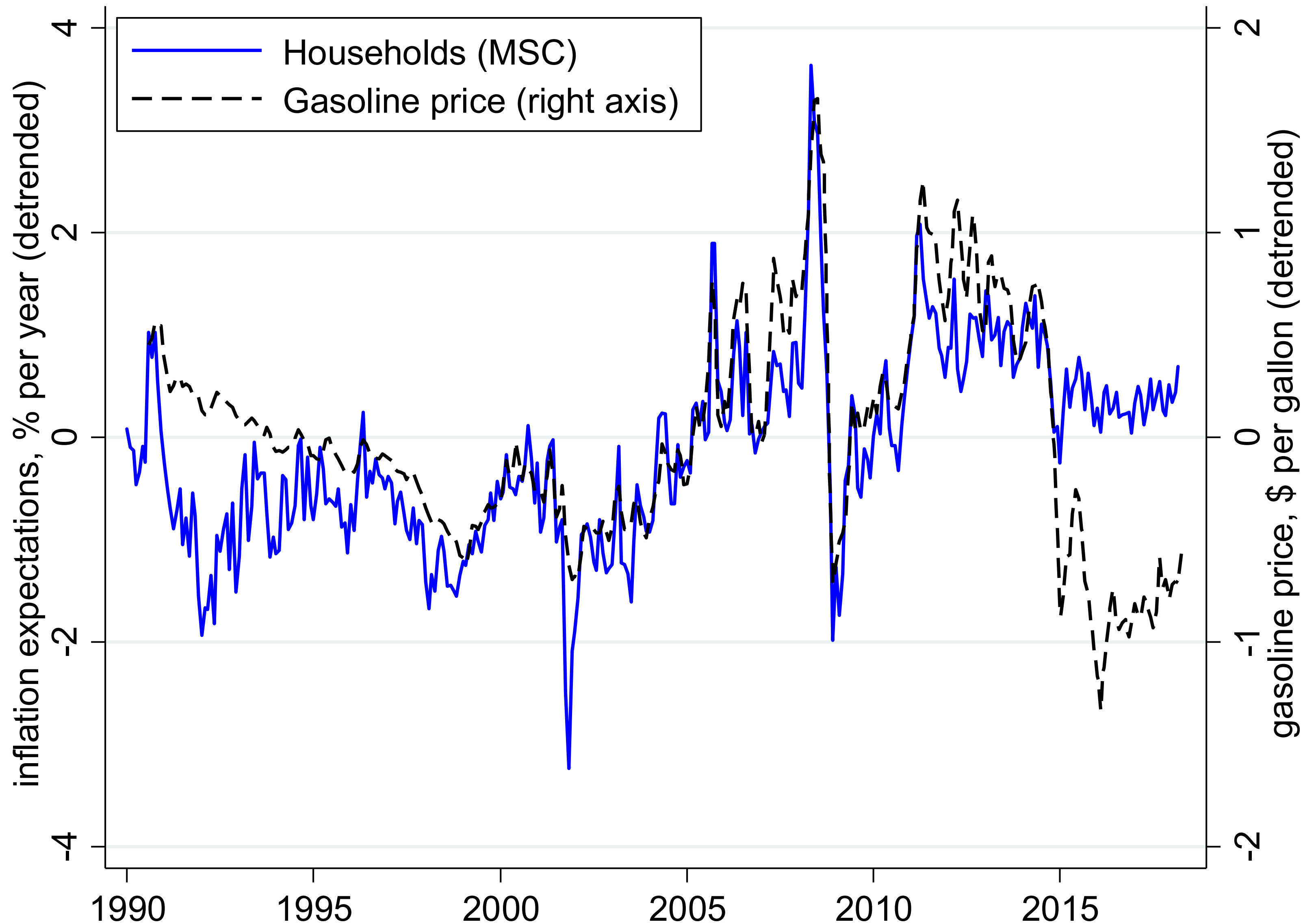
- Whose expectations should central banks use for policymaking?
  - Households and firms (and financial markets)
- What influences household/firm inflation expectations when inflation is low?
  - Salient prices of frequently-purchased, homogenous goods
- Can central banks manipulate inflation expectations?
  - Yes. Households and firms revise their beliefs in response to incoming information (but central banks often fail to reach households and firms)
- Do economic agents react to changes in inflation expectations?
  - Yes. They update their consumption/employment/pricing/etc. (but mechanisms remain unclear)
- What are the challenges in using inflation expectations as a policy tool?
  - Measurement of inflation expectations (especially firms)
  - Breaking through the veil of inattention

Whose inflation expectations?



Expectations are not interchangeable across agents

What forces influence inflation expectations?



WHAT FORCES INFLUENCE INFLATION EXPECTATIONS?

Predictors of inflation expectations

- Perceptions/experience of inflation (strong)
- Shopping (strong)
- Media (intermediate)
- Policy (weak)

CAN WE MANIPULATE INFLATION EXPECTATIONS?

- Randomized controlled trials: provide subsets of firms or households with various bits of information and see how they update beliefs about inflation

Elicit expectations (priors) → Informational treatment (inflation target) → Elicit expectations (posteriors)

Can we manipulate inflation expectations?

- Randomized controlled trials: provide subsets of firms or households with various bits of information and see how they update beliefs about inflation
- Upshot:
  - Households and firms appear to be Bayesian learners
    - Strength of priors
    - Strength of signals

    Posterior beliefs
  - Information effects are short-lived (less than 6 months)

Can we manipulate inflation expectations?

Coibion, Gorodnichenko and Weber (2018)

Dep. var.: Revision of one-year-ahead inflation forecasts of U.S. consumers	
Treatment groups (coefficients are relative to control)	
Past inflation	-1.954***
	(0.366)
Inflation target	-1.411***
	(0.341)
FOMC inflation forecast	-2.004***
	(0.384)

How do consumers and firms act on their inflation expectations?

- Identification challenge: most of the time we see correlations
- Causal estimates are scarce
  - Natural experiments (fiscal policy)
  - Randomized controlled trials

Elicit expectations (priors) and plans → Informational treatment (inflation target) → Elicit expectations (posteriors) → Measure outcomes (relative to plans)

HOW DO CONSUMERS AND FIRMS ACT ON THEIR INFLATION EXPECTATIONS?

- Consumers: higher expected inflation → higher consumer spending

- Firms: higher expected inflation →
  - New Zealand (2014-2016):
    - higher employment and investment
    - no effect on prices

  - Italy (2012-2018)
    - lower employment, lower investment plans
    - higher prices

  - France (1992-2016)
    - higher prices

- Conclusions:
  - Households/firms react to changes in inflation expectations
  - Manipulating inflation expectations can have a *direct* effect on prices
  - … but need more research on mechanisms and general equilibrium effects

Challenges in using inflation expectations as a policy tool?

- Measurement of inflation expectations (especially firms)

- We have reasonably good measures of inflation expectations for households

- We have poor measures of inflation expectations for firms

  - Small, non-representative samples
    - Example: Industry Trends Survey (Confederation of British Industry)

  - Qualitative questions about inflation (“same”, “up”, “down”)
    - Example: Business Survey (European Commission)

  - Priming of responses (e.g., restrict possible responses)
    - Example: Business Outlook Survey (Bank of Canada)

  - Questions about firm-specific outcomes rather than aggregate outcomes
    - Example: Business Inflation Expectations (BIE; FRB Atlanta)

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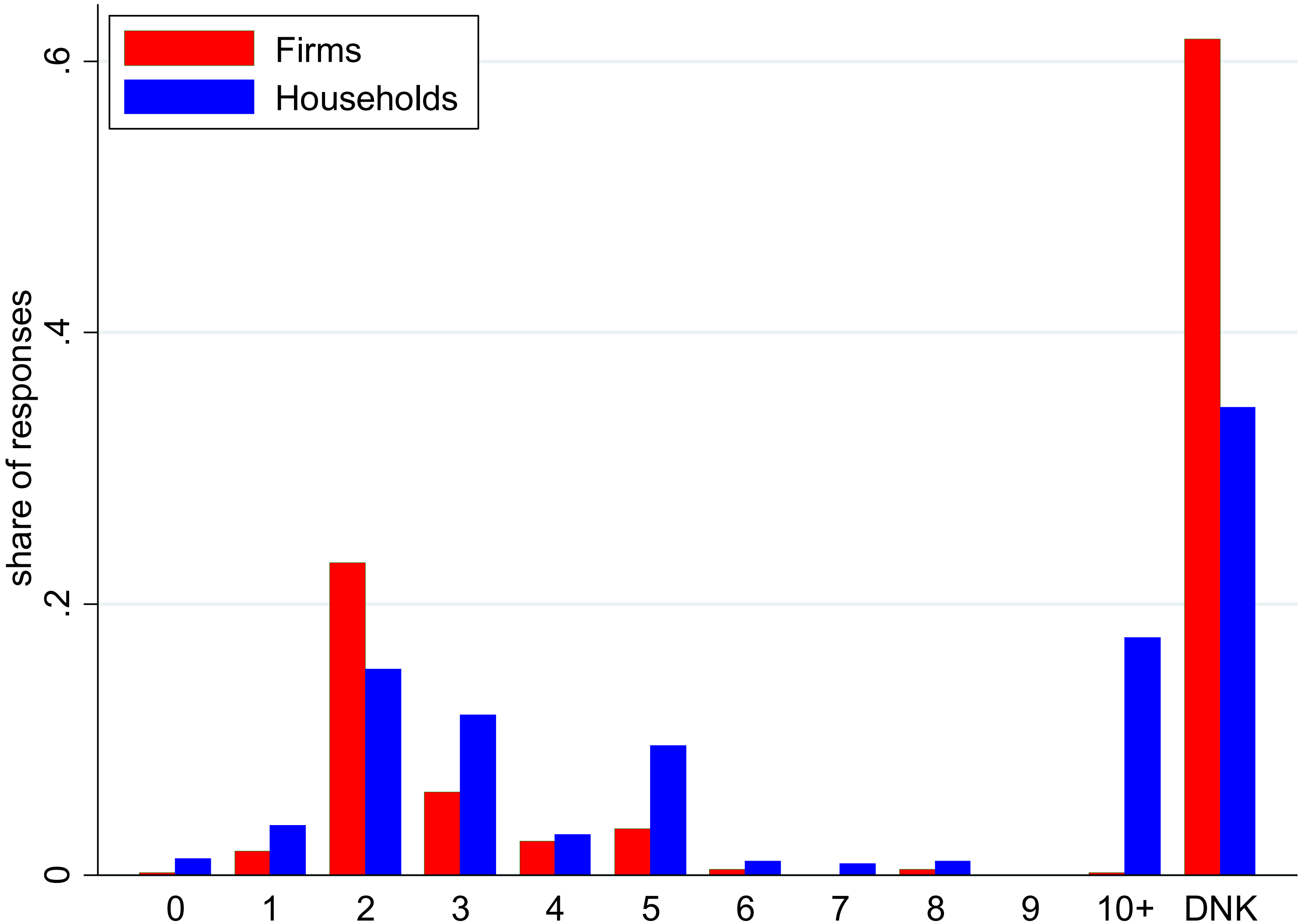
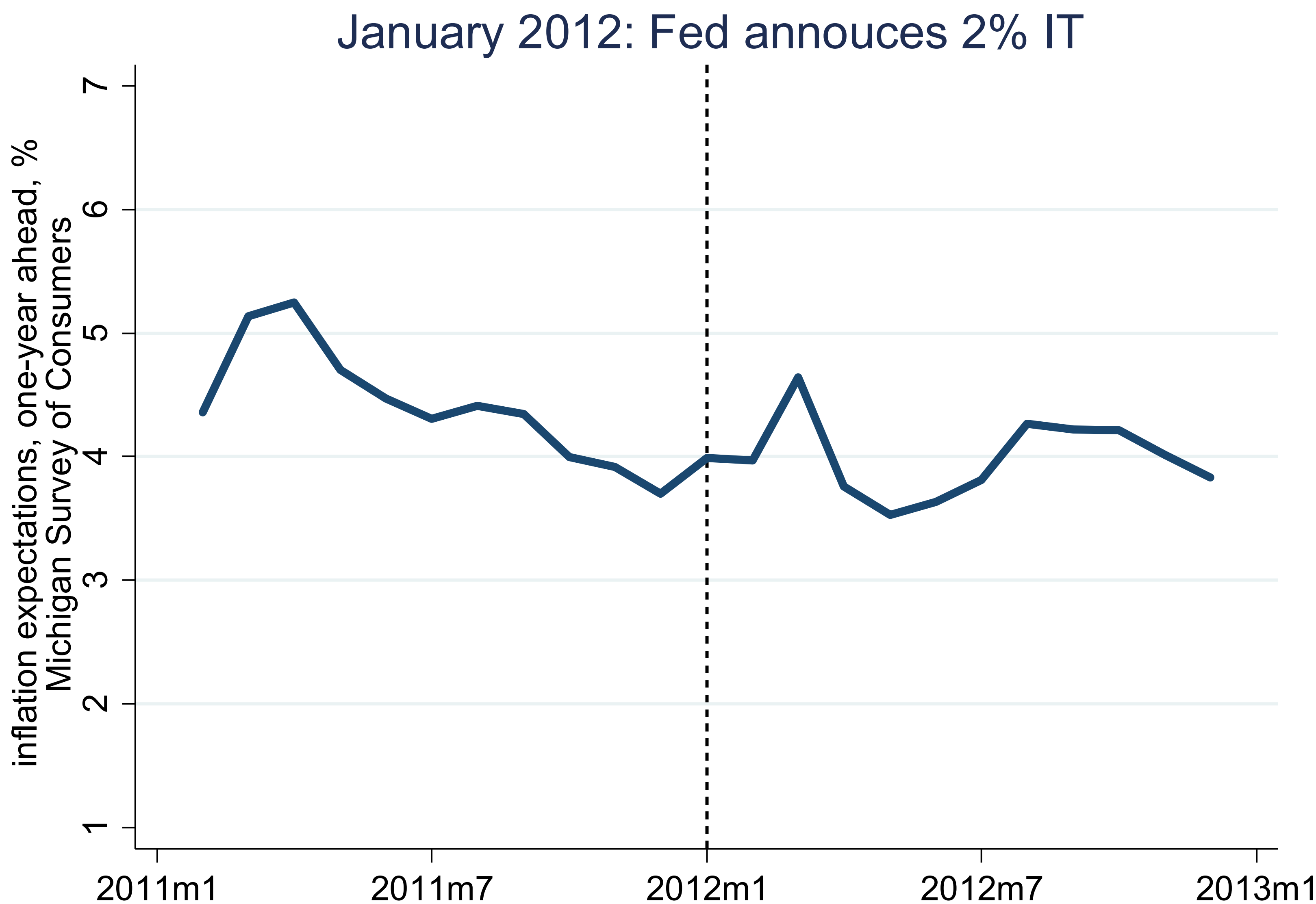
  - Priming of responses (e.g., restrict possible responses)
- Surveys of firms' inflation expectations are expensive but they are most useful!
- Good surveys: Ukraine and Uruguay

Breaking through the veil of inattention

Perceived inflation target in the U.S.



BREAKING THROUGH THE VEIL OF INATTENTION



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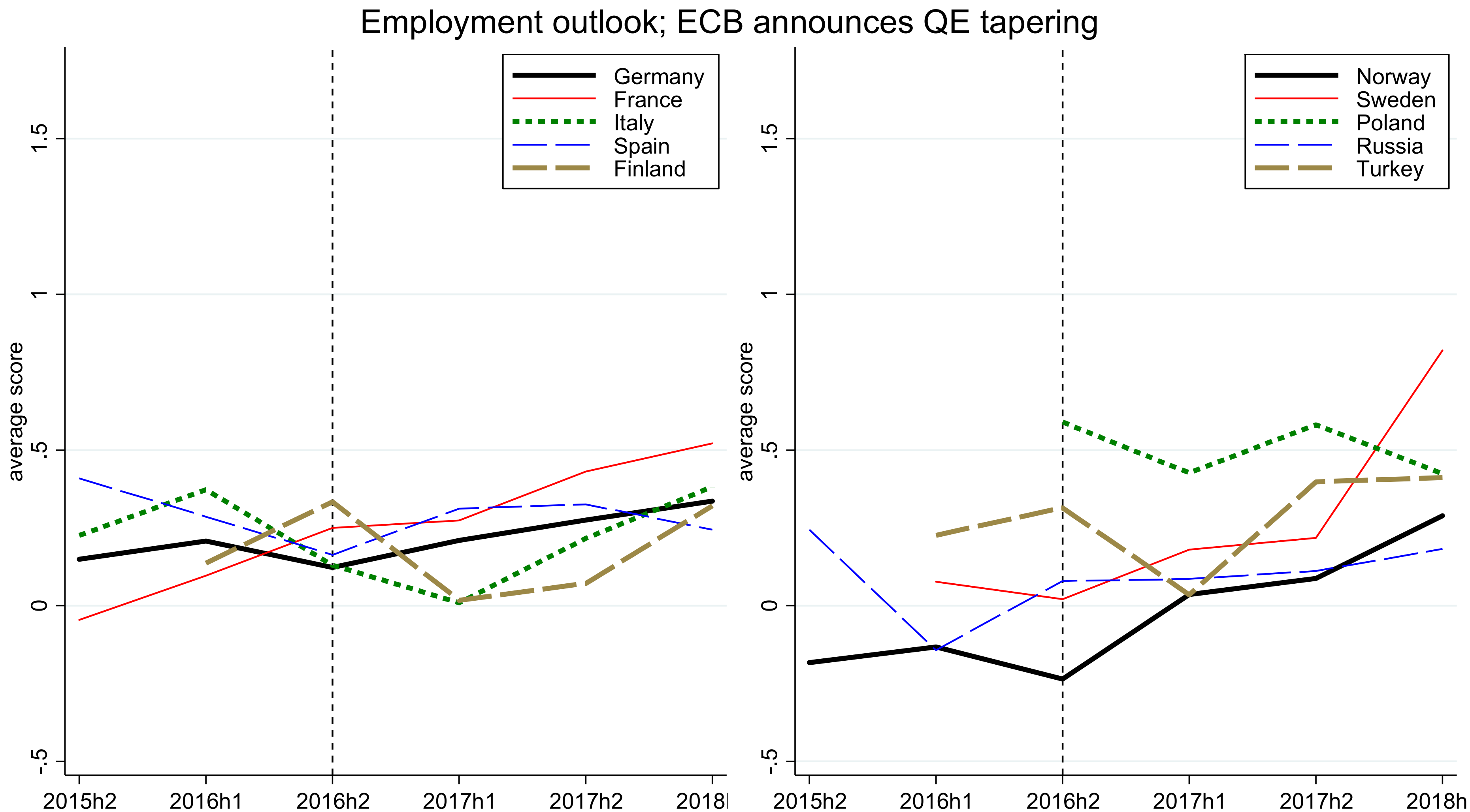

Source: Deloitte Survey of Chief Financial Officers

BREAKING THROUGH THE VEIL OF INATTENTION

- Communication can work
- Simple messages are better
- Repeat the message
- Take the message directly to the target audience
  - Conventional media may be not good enough → Advertising, social media
  - Potentially differentiate messages across audiences
    - Currency bloc with booming "North" and lagging "South"
    - One interest rate as a tool is not enough to address regional imbalances…
    - But one can have different messages for "North" to slow down and for "South" to accelerate.

Breaking through the veil of inattention

- Communication can work
- Simple messages are better
- Repeat the message
- Take the message directly to the target audience
  - Conventional media may be not good enough → Advertising, social media
  - Potentially differentiate messages across audiences
- Target the message to the scenario
  - For example, if inflation is too low, emphasize the inflation target (rather than actual inflation) to raise inflation expectations

CONCLUDING REMARKS

- Inflation expectations as a policy tool: large potential!
  - Move consumption/employment/investment
  - Directly influence prices
  - Target specific areas, industries, or types of consumers
- Are we ready to use it? Not yet…
  - More research to study how inflation expectations translate into actions
  - More high-quality surveys of firms' inflation expectations
  - New communication strategies to reach consumers and firms