

*Discussion of “Consumers’
quantitative inflation perceptions
and expectations in the euro area:
an evaluation*

*by Olivier Biau, Heinz Dieden, Gianluigi
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Conference on Consumer Inflation Expectations
Federal Reserve Bank of New York

November 18, 2010

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Vice President and Economist



**FEDERAL
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of ATLANTA**

Why Do Central Bankers Care About the Inflation Expectations of Households?

For one, it defines how well we are achieving our objectives.

"Price stability means that expected changes in the average price level...do not materially enter business and household financial decisions."

Alan Greenspan (1989)

Why Do Central Bankers Care About the Inflation Expectations of Households?

Furthermore, we think they play a role in observed inflation outcomes.

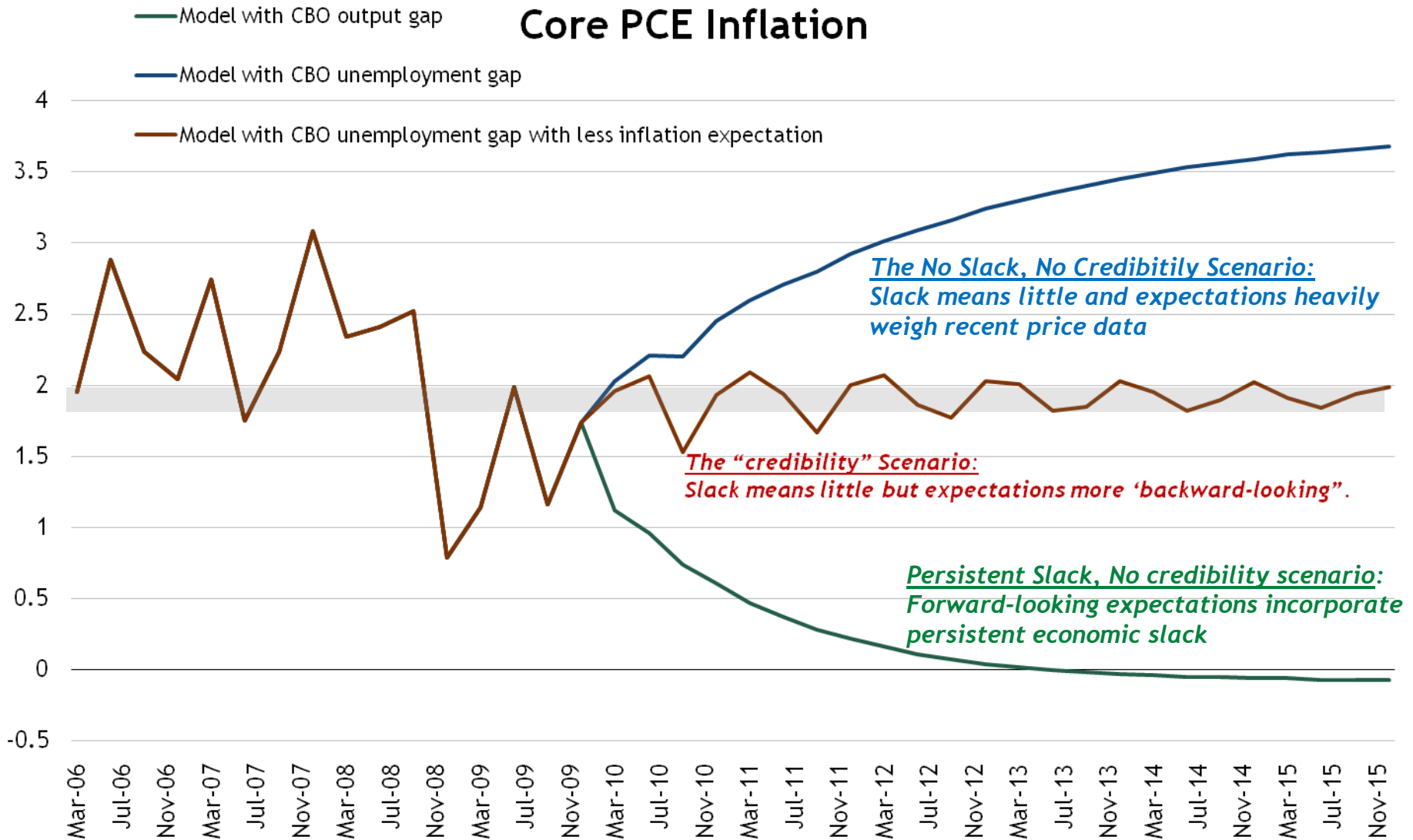
"A broad set of indicators suggested that underlying inflation remained subdued and was, on net, trending lower,... However, inflation expectations were seen by most participants as well anchored, which would tend to curb any tendency for actual inflation to decline."

FOMC minutes, June 22-23, 2010

"Inflation expectations remain firmly anchored in line with our aim of keeping inflation rates below, but close to, 2% over the medium term."

ECB, July 8, 2010

MODEL SIMULATIONS UNDER VARYING ESTIMATES OF SLACK AND ASSUMPTIONS ABOUT THE EXPECTATIONS PROCESS



Source: Federal Reserve Bank of Atlanta

What Are The Contributions of This Paper?

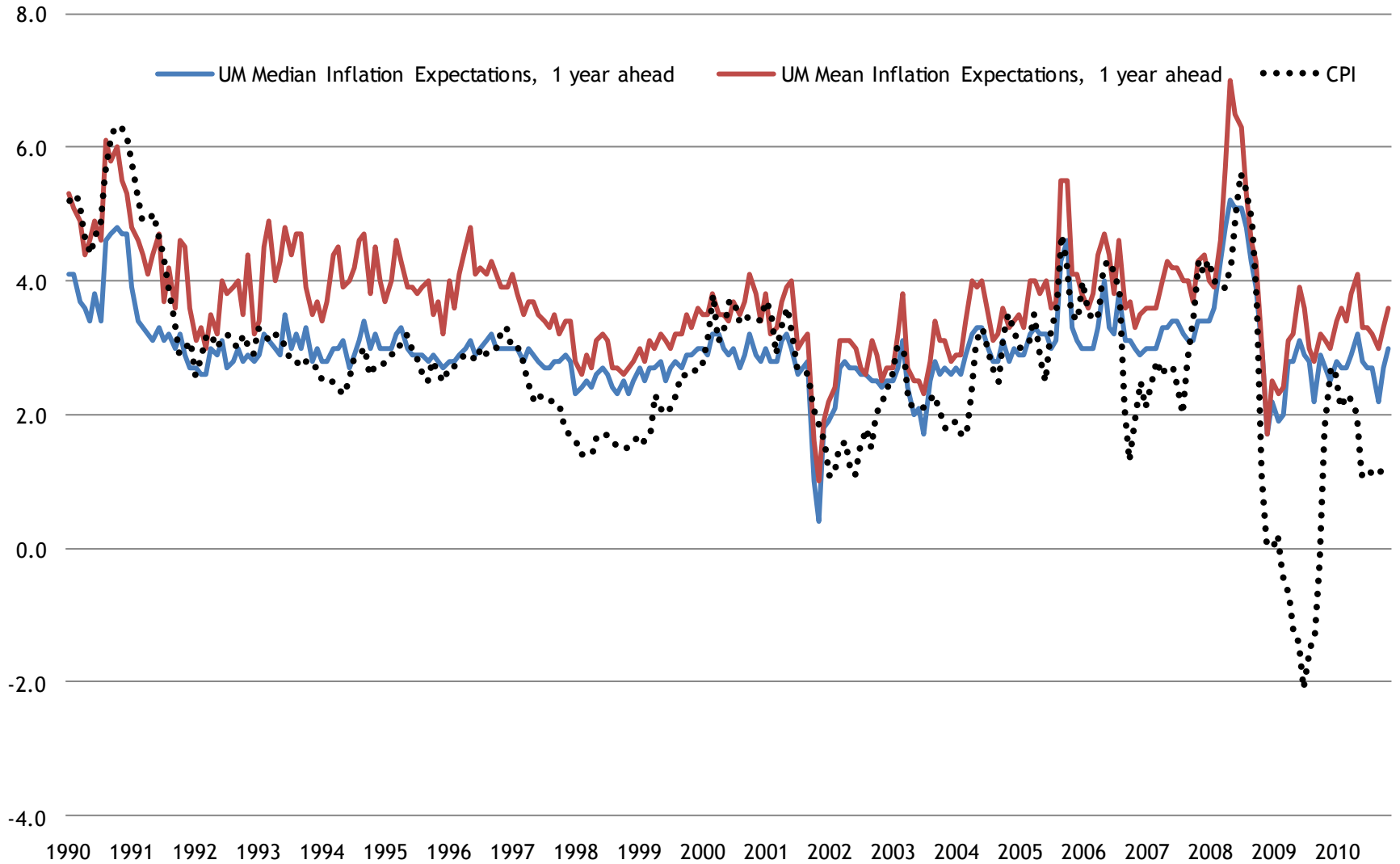
1. It confirms that many of the “anomalous” observations found in the U.S., the U.K, and Sweden household survey data, extend to the Euro-area as well.
2. It documents a curious non-response rate for quantitative estimates.
3. It introduces a seemingly unique puzzle—there is a large and persistent discrepancy between “inflation” perceptions and expectations of European households.

A Curious Collection of “Facts” That Research Needs to Reconcile If Survey Data Are to be Trusted

- 1. Survey measures of inflation expectation, on average, tend to run several percentage points higher than official inflation measures.**
- 2. Survey data tend to be positively skewed, and these positive “outliers” are substantial, and vary with the rate of inflation.**

University of Michigan Inflation Expectations

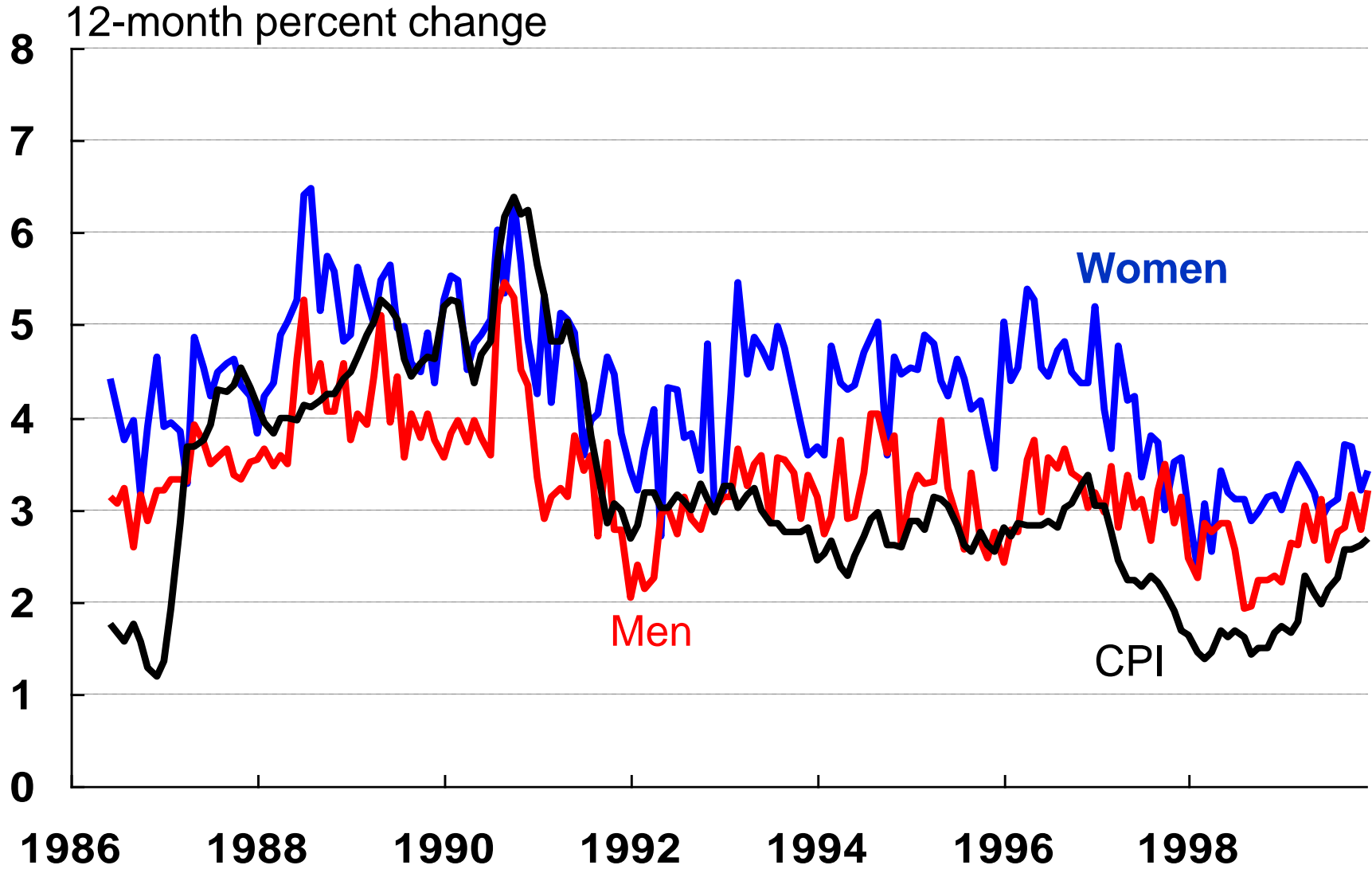
Median vs. Mean, 1 year ahead, through November 2010



A Curious Collection of “Facts” That Research Needs to Reconcile If Survey Data Are to be Trusted

1. Survey measures of inflation expectation, on average, tend to run several percentage points higher than official inflation measures.
2. Survey data tend to be positively skewed, and these positive “outliers” are substantial, and vary with the rate of inflation.
3. Household survey data exhibit strong heterogeneity across most major demographic qualities, with inflation expectations significantly higher for younger and older respondents, women, less educated, non-white, and unmarried cohorts.

DEMOGRAPHICALLY CONSISTENT INFLATION EXPECTATIONS BY GENDER

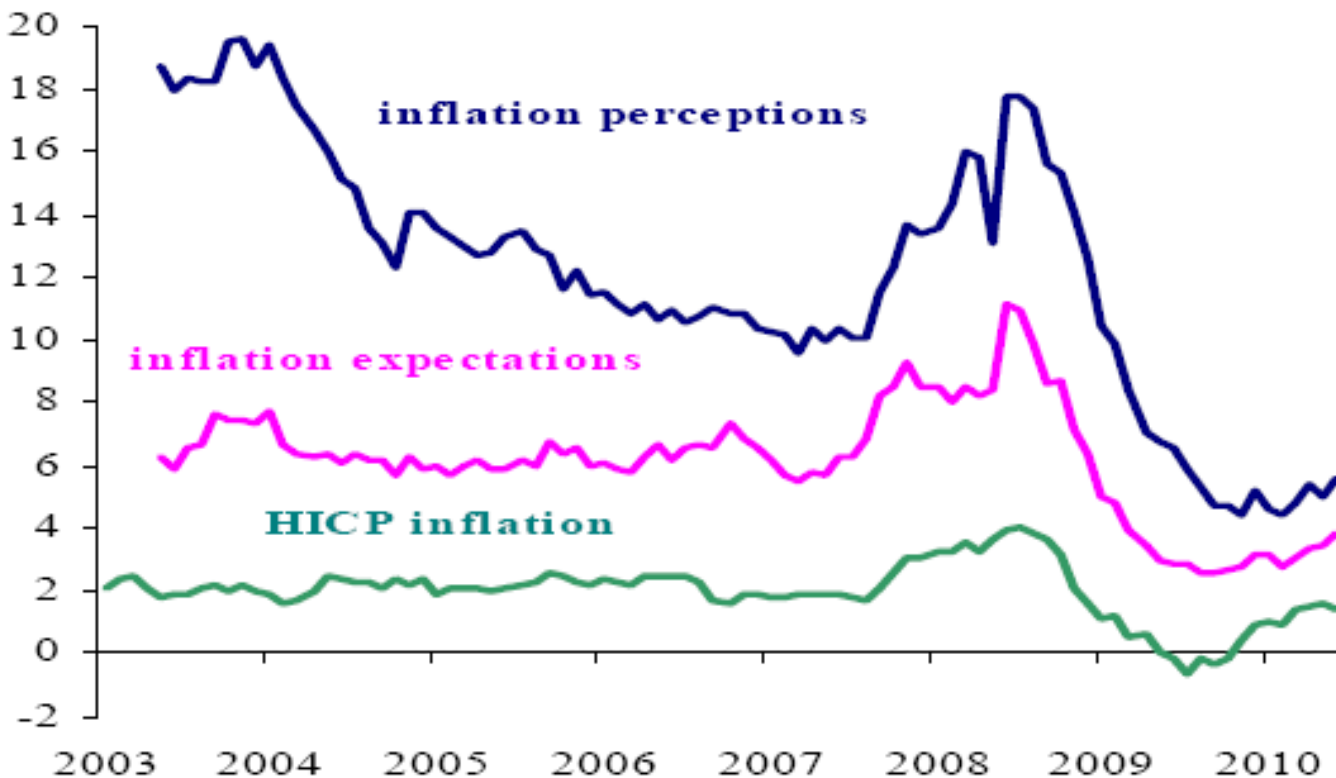


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- 4. One’s perception of inflation appears to be correlated with one’s expectation of inflation.**

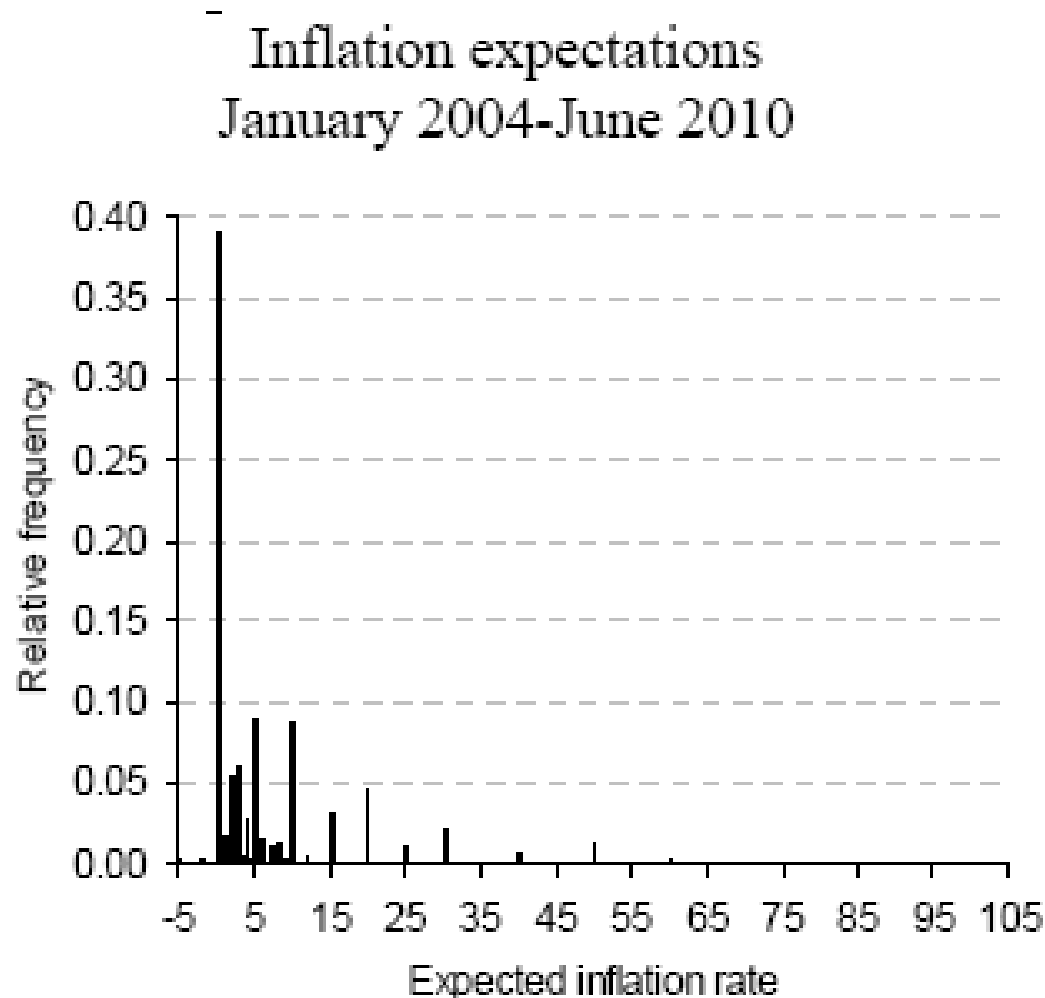
But What Accounts for the Persistent Belief That “Inflation” Next Year Will Always Be (Significantly) Less Than Inflation In The Past Year?

Chart 4 – Euro area consumers’ quantitative estimates of inflation perceptions and expectations (annual percentage changes)



A Curious Collection of “Facts” That Research Needs to Reconcile If Survey Data Are to be Trusted

5. People tend to respond to quantitative questions about “inflation” in particular, whole numbers.



DISTRIBUTION OF INDIVIDUAL INFLATION EXPECTATIONS

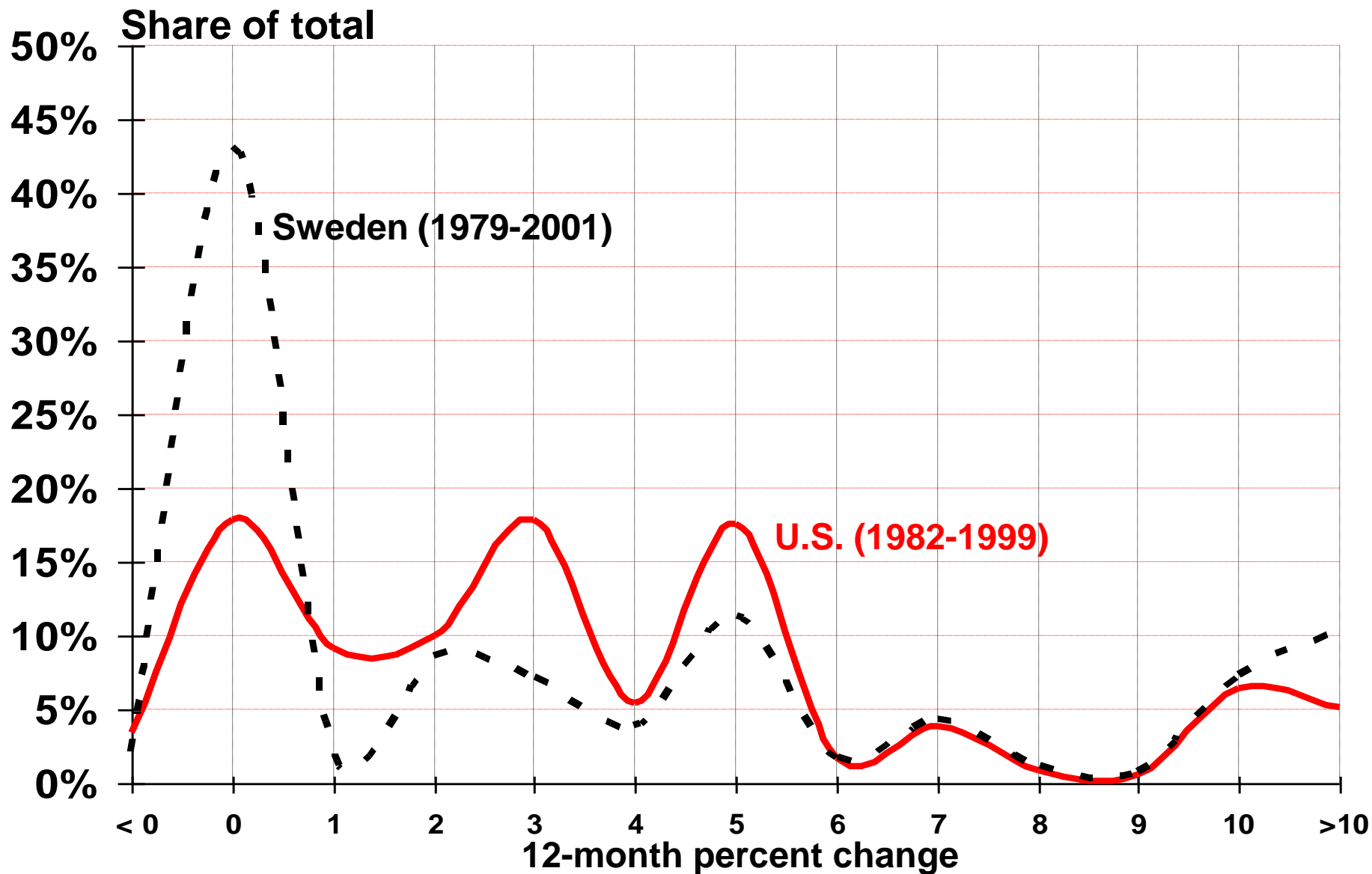
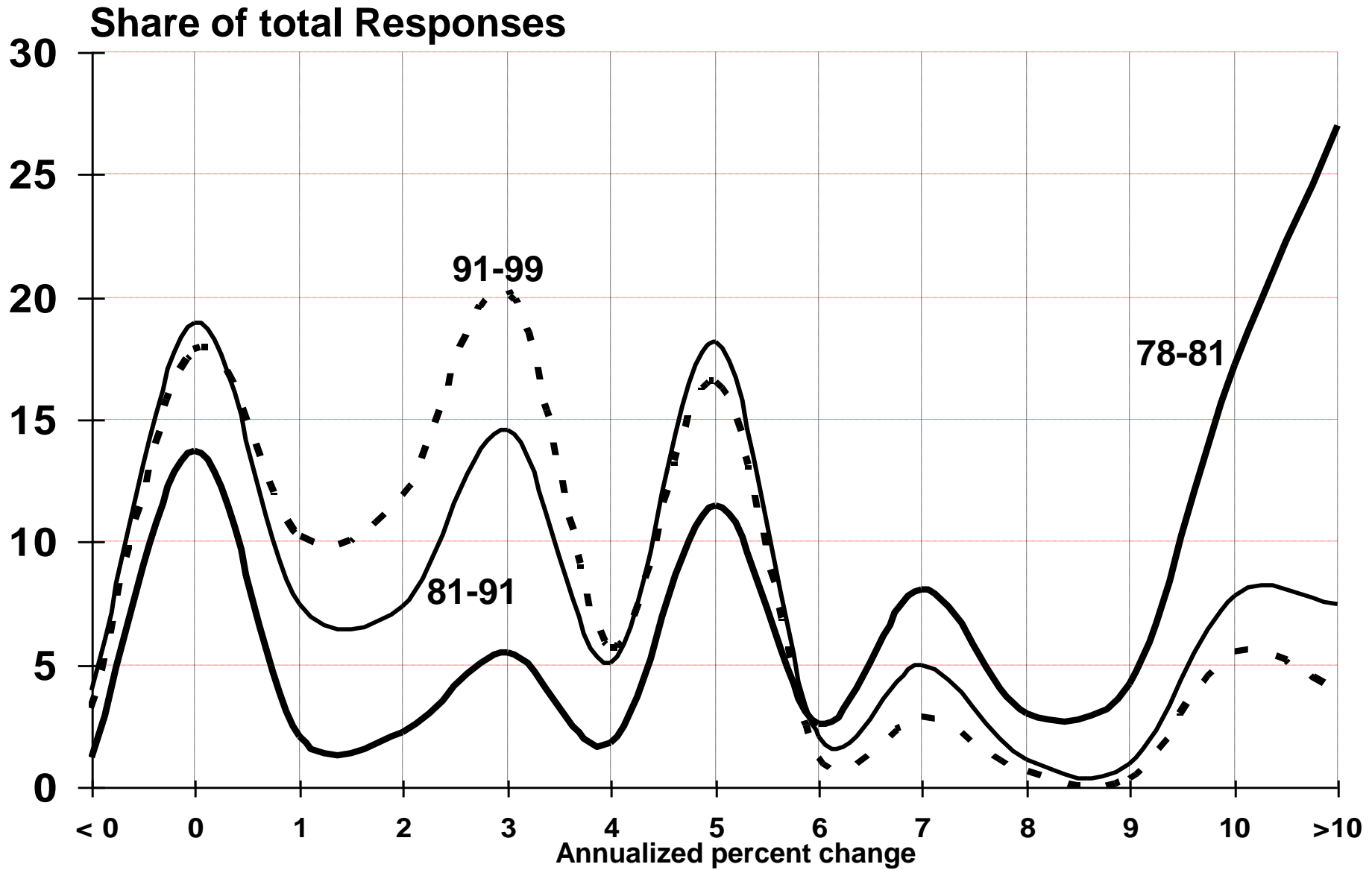


Figure 8a: DISTRIBUTION OF US INFLATION EXPECTATIONS OVER DIFFERENT INFLATION REGIMES



A Curious Collection of “Facts” That Research Needs to Reconcile If Survey Data Are to be Trusted

- 5. People tend to respond to quantitative questions about “inflation” in particular, whole numbers.**
- 6. Observations (1), (2), (3), (4), and (5) appear to be true for all nations and all time periods for which quantitative data are available.**
- 7. People do not think of “prices in general”, “inflation”, “consumer prices” and “the prices of the things you buy” as synonymous ideas.**

Another Interesting Observation: The 2006 Task Force

- 1. Knowing what the government says is “inflation” lowers your response on “consumer prices” but does not eliminate it.**

What about for People Who Are Aware of the Official Numbers?

“By about what percent do you think the Consumer Price Index went up (down), on average, during the last 12 months?”

	Percent	Sample Size
Men	2.8	111
Women	3.1	125

“By about what percent do you think prices in general went up (down), on average, during the last 12 months?”

	Percent	Sample Size
Men	6.0	101
Women	7.4	113

Another Interesting Observation: The 2006 Task Force

1. Knowing what the government says is “inflation” lowers your response on “consumer prices” but does not eliminate it.
2. Asking about absolute values, rather than growth rates, does not improve the “accuracy” of the responses.

“Today, the price of milk is \$1 a gallon. What do you think milk will cost one year from now?”

“Suppose something cost \$100 today. What do you think it will cost one year from now?”

Combine two ideas?

Asymmetric trims centered on the 50th Percentile?

Chart 9

(b) Inflation expectations

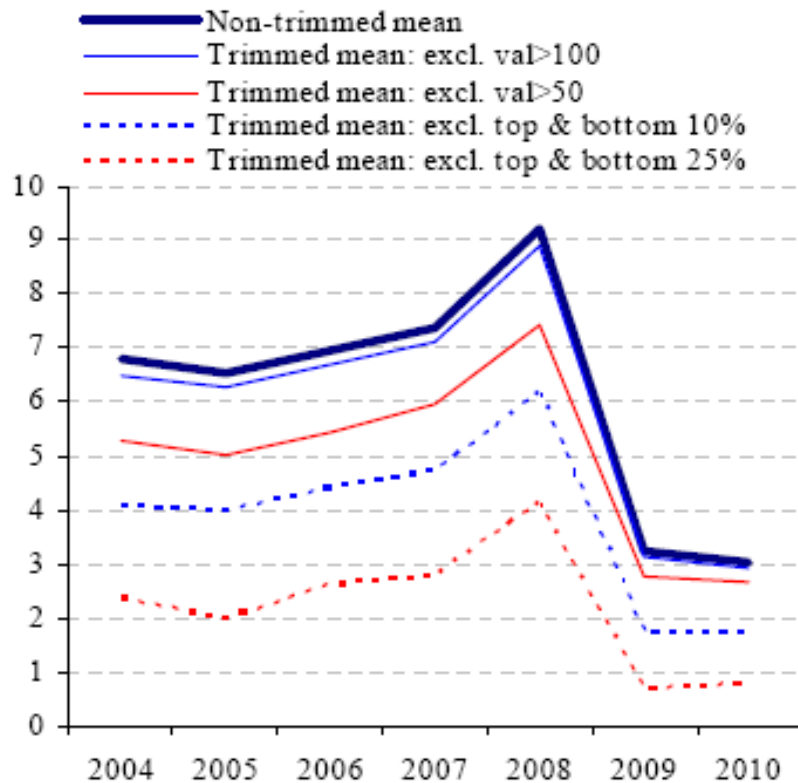
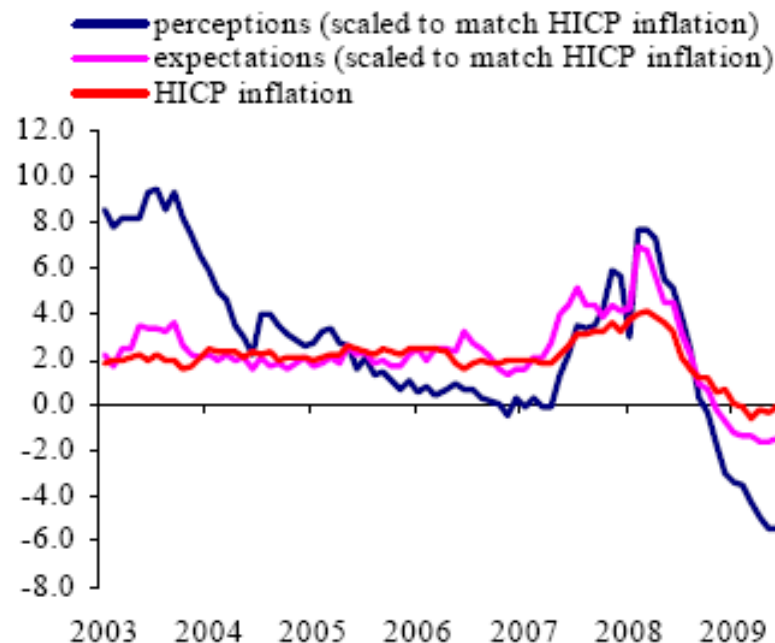
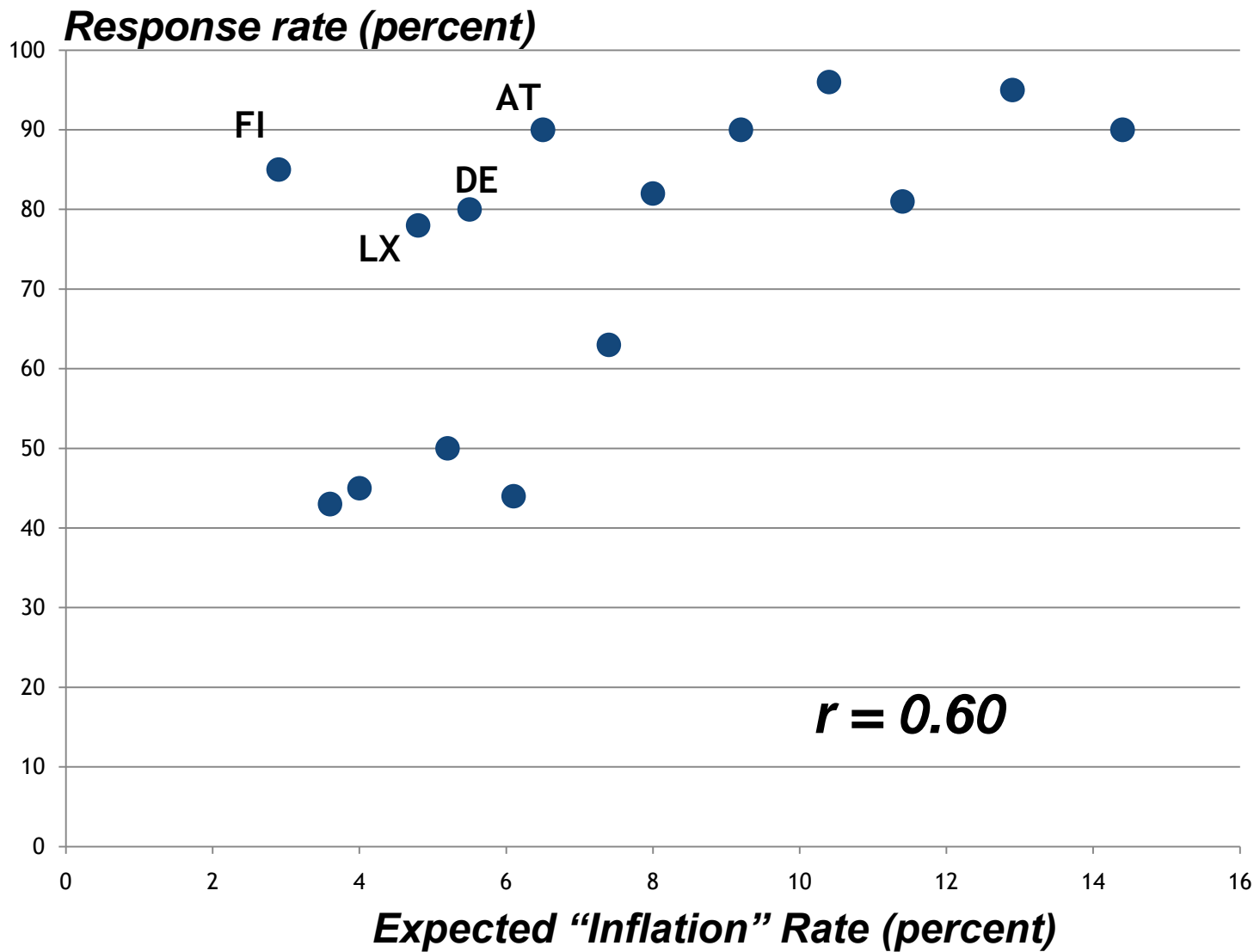


Chart 11 – Consumers’ inflation perceptions and expectations, scaled to match HICP inflation (annual percentage change)



This might be justified on the basis of the skewed and highly kurtotic nature of the data.

There is a Positive Correlation Between Expected Inflation and the Quantitative Response Rate

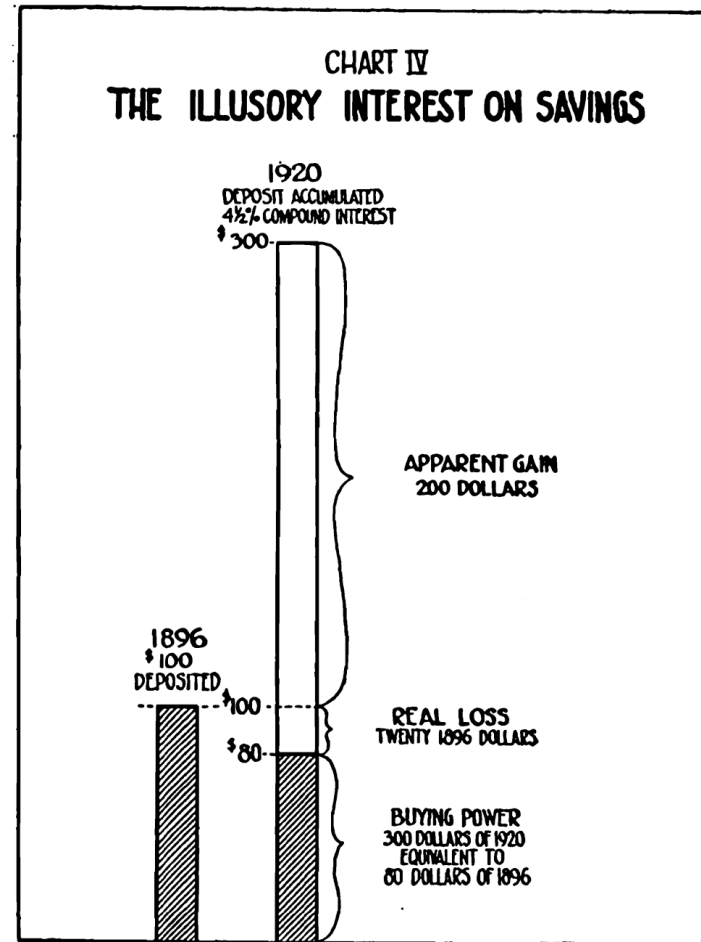
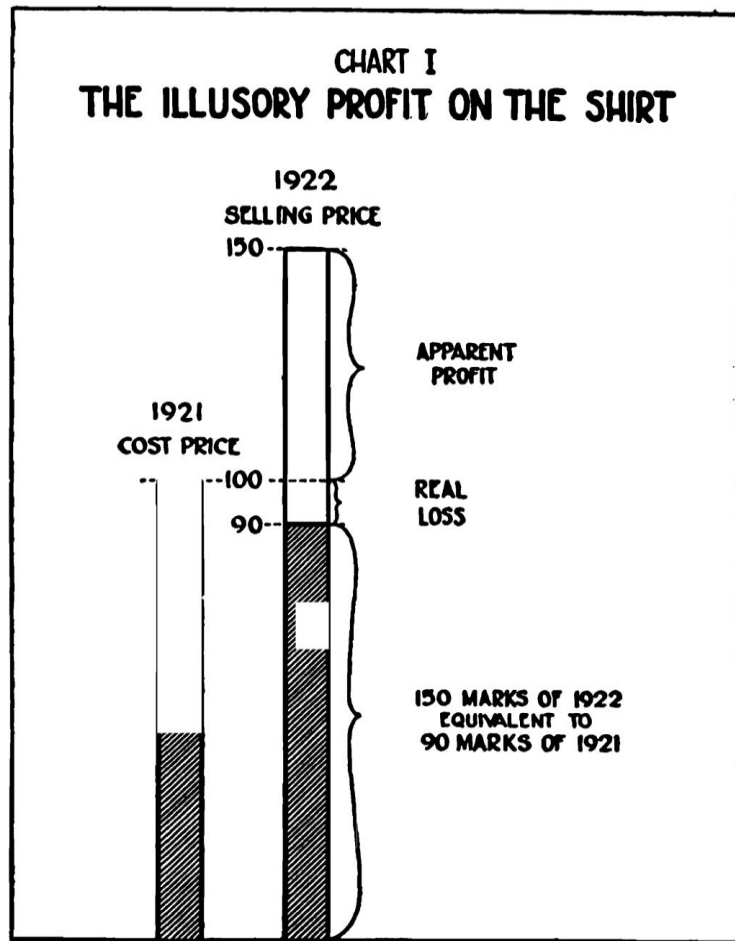


Why Do Households Care About Ideas Like “Inflation” or “Price Change” or “the Cost of Living”?

A Few Heretical Remarks...

- 1. Perhaps Irving Fisher is right, people do not distinguish the real from the nominal.**

Irving Fisher's "Money Illusion"



“[M]en are unable or unwilling to adjust at all accurately and promptly the money interest rates to changed price levels.” Fisher, Money Illusion (1928)

But Why Do Households Care About Inflation?

B9. Which of the following comes closer to your biggest gripe about inflation:

1. Inflation causes a lot of inconveniences: I find it harder to comparison shop, I feel I have to avoid holding too much cash, etc.
2. Inflation hurts my real buying power, it makes me poorer.
3. Other:

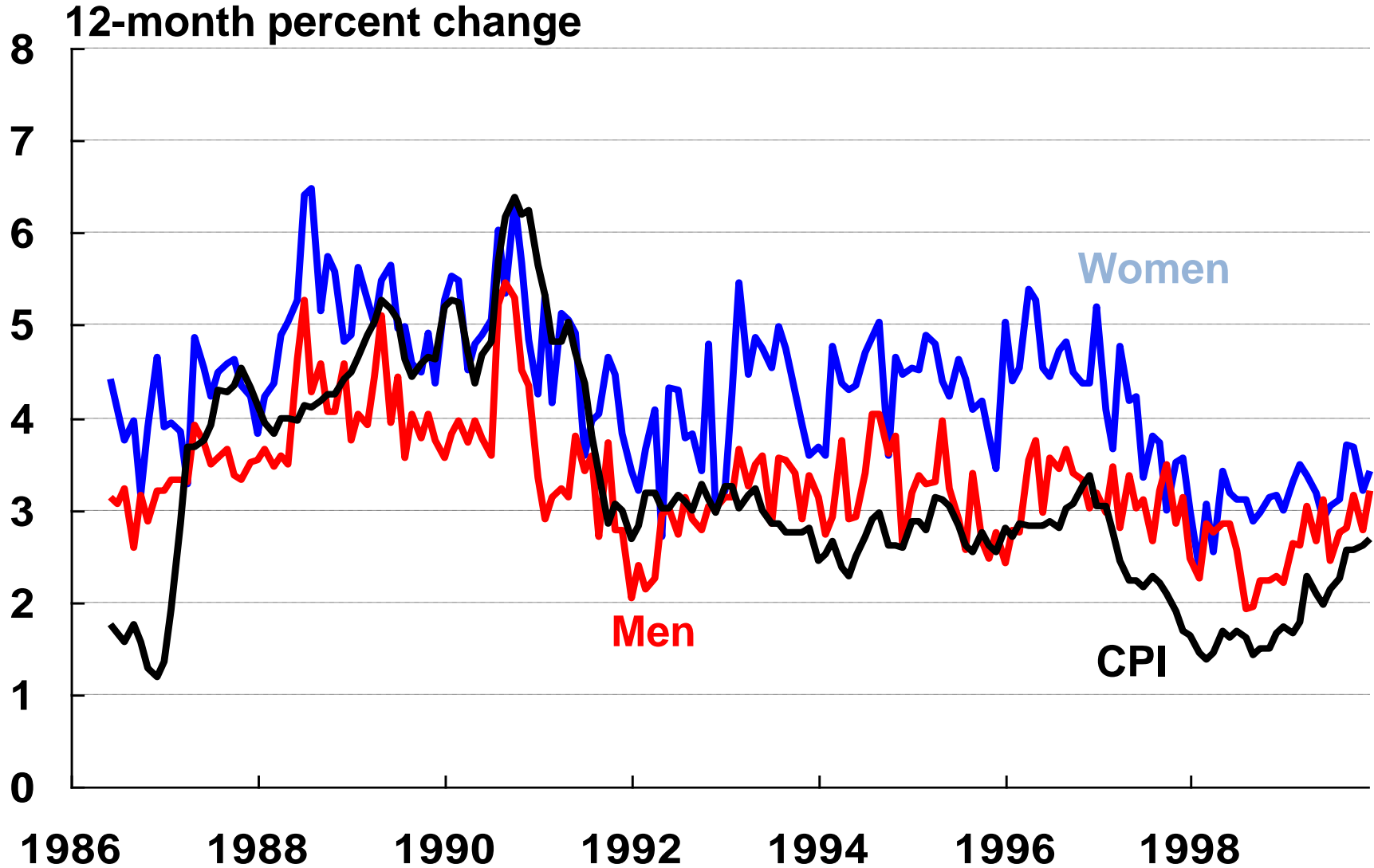
	1	2	3	
US All	7%	77%	15%	n = 110
Economists	49%	12%	40%	n = 78

B6. Do you agree with the following statement? “When I see projections about how many times more a college education will cost, or how many times more the costs of living will be in coming decades, I feel a sense of uneasiness; these inflation projections really make me worry that my own income will not rise as much as such costs will.”

	1 Fully agree	2	3 Undecided	4	5 Completely disagree	
US All	66%	20%	7%	6%	1%	n = 116
Economists	5%	15%	9%	30%	41%	n = 80

Robert Shiller, “Why Do People Dislike Inflation” (1996)

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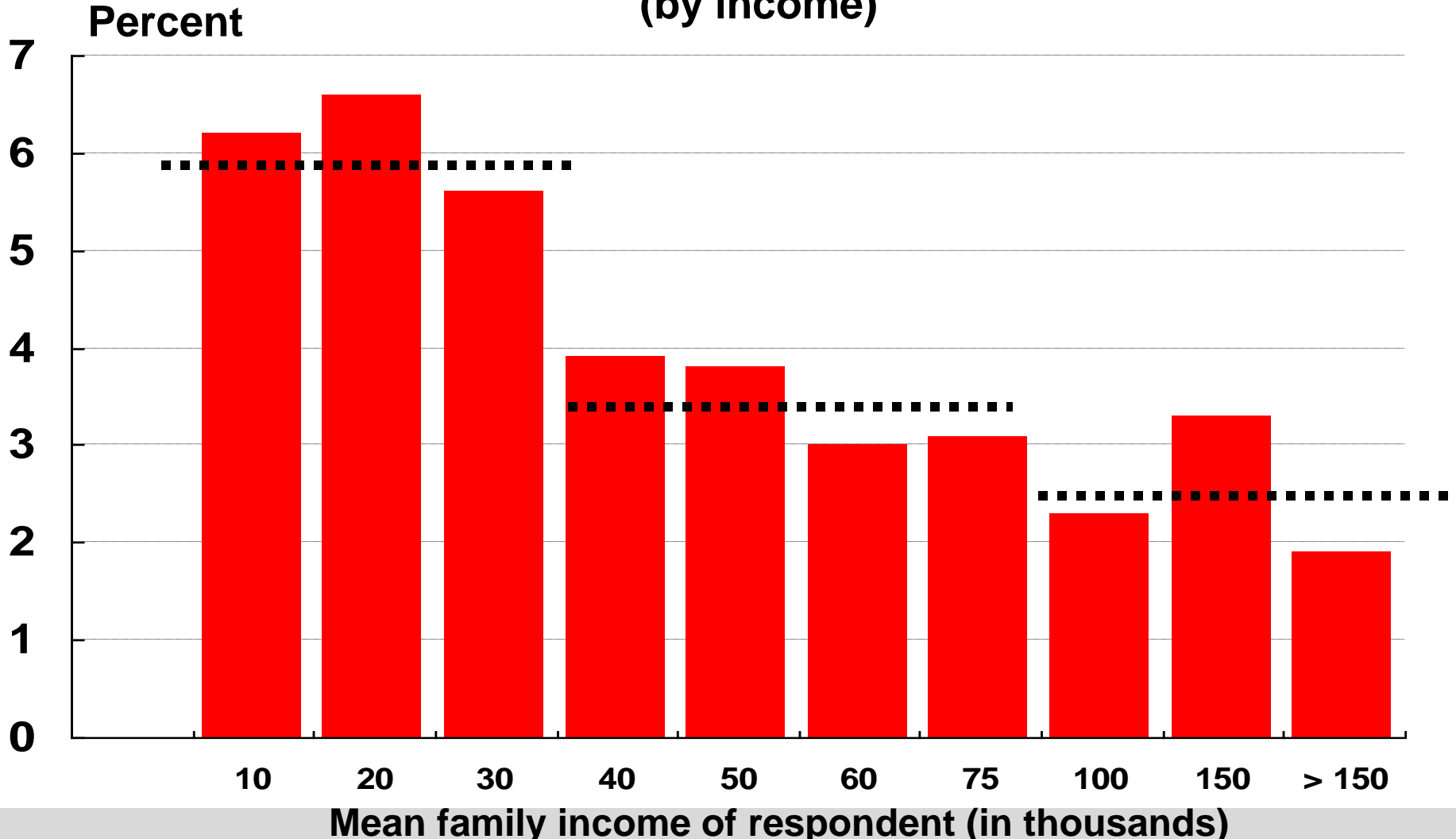


A Few Heretical Remarks...

- 1. Perhaps Irving Fisher is right, people do not distinguish the real from the nominal.**
- 2. Maybe it's time to work more closely with behavioral economists. Might there be a form of loss aversion at work in the formation of inflationary sentiment?**

Do People Really Believe The Expectations They are Reporting ?

Inflation Expectations (by income)



Things To Be Careful About

1. The “presumption” that deviations between the survey response and the HICP is an “over estimation bias.”

We don't really know what metric these responses should be judged against, so it is premature to conclude that there is a “bias” in them.

2. Preference for range-induced responses, survey prompts for “large” responses, and the exclusion, or trimming of outliers.

Again, there are ways to “corral” the responses to get something more in line with the official inflation data, but should we go there before we understand why these differences exist?

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