The Fed and the Inflation of 2021-23: The Transitory/Persistent Debate and the Impact on Credibility

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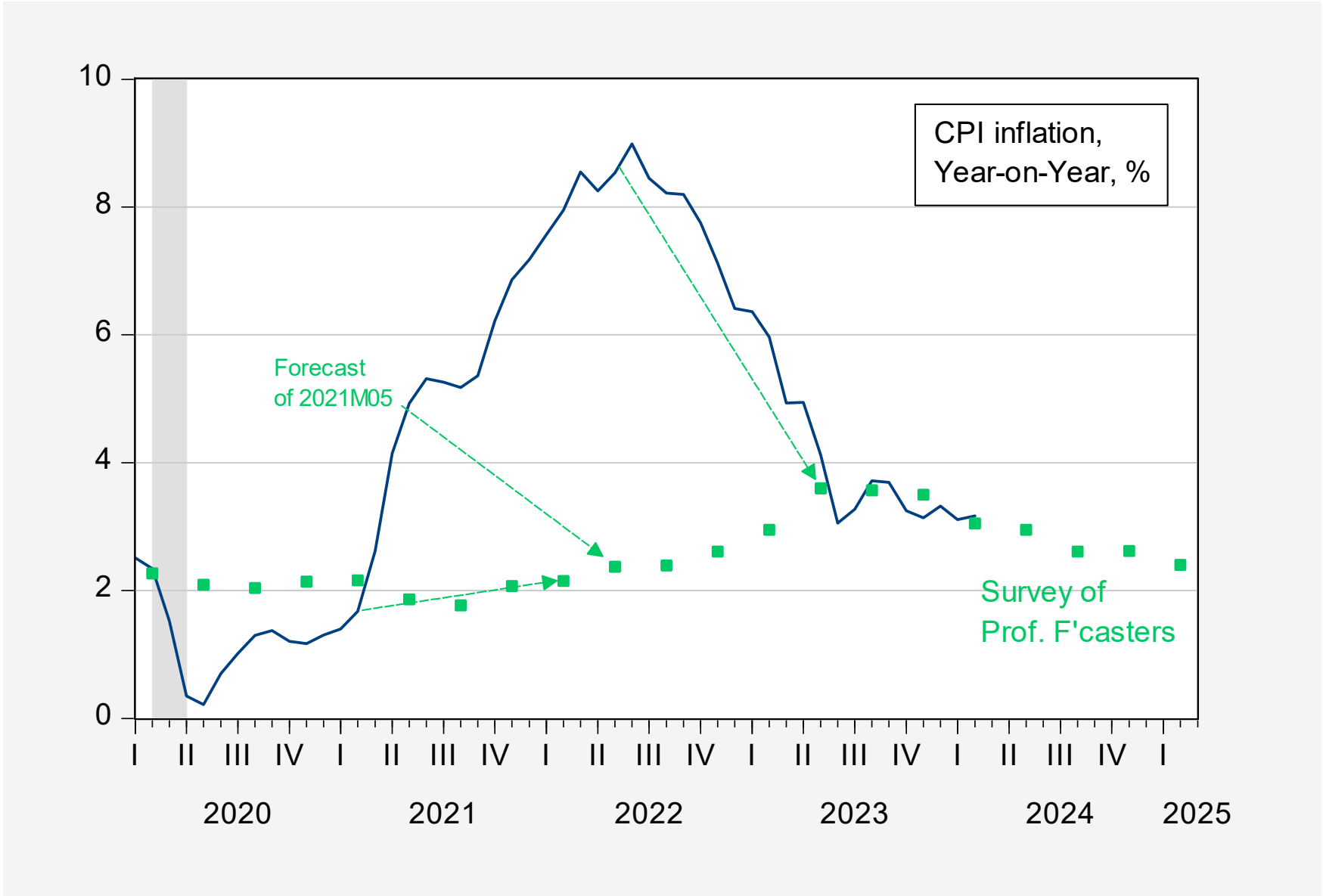
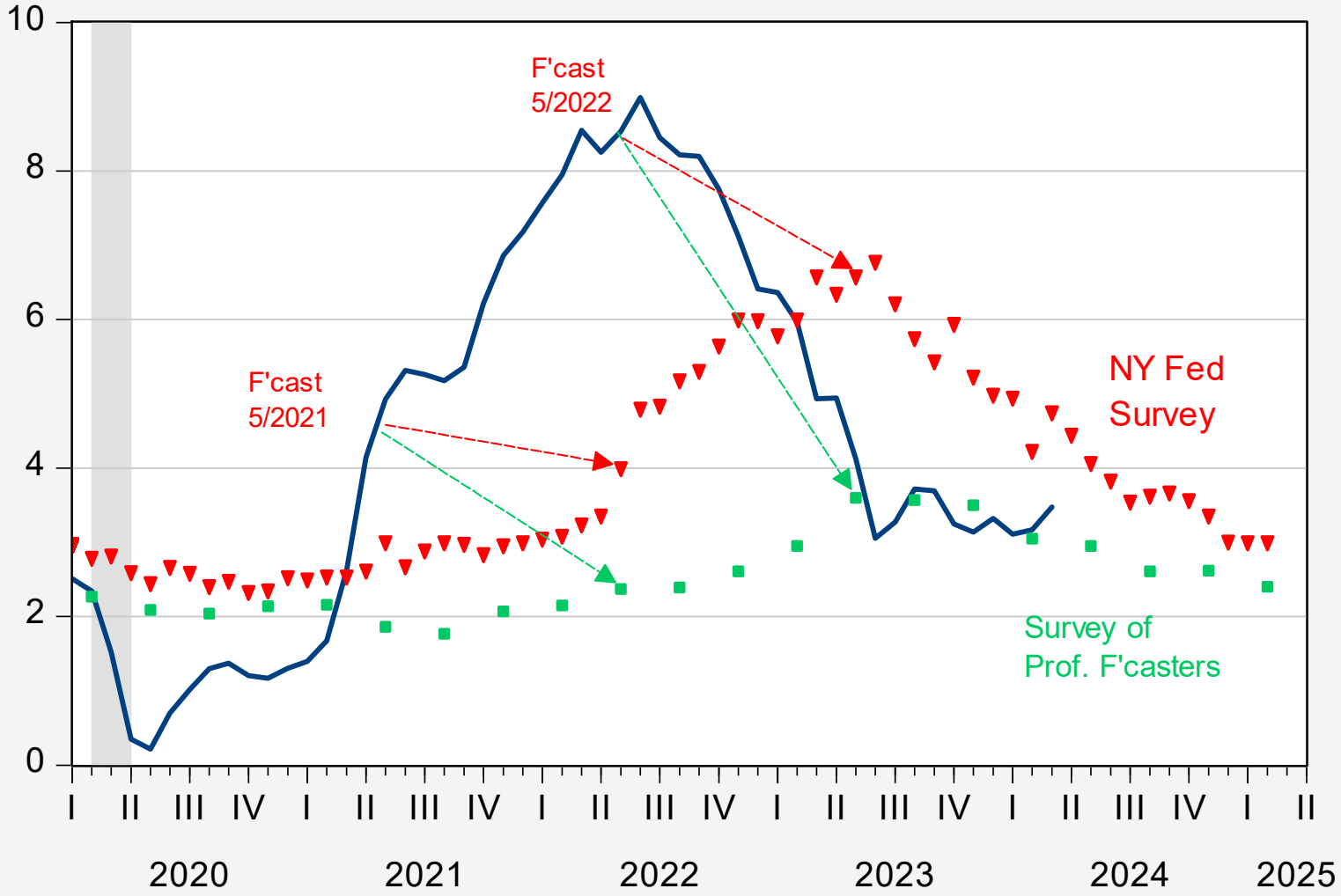
Wisconsin International Law Journal Symposium
Madison, WI
April 12, 2024

Transitory Turned Out Not So Transitory



It’s Not Just Economists



Why Were We Off?

- Use Blanchard-Cerutti-Summers (2015):

$$\pi_t = \theta_t(u_t - u_t^*) + \lambda_t \pi^e{}_t + (1-\lambda_t)\pi^*{}_{t-1} + \mu_t \pi_{mt} + \varepsilon_t \qquad (1)$$

- CPI inflation, q/q annualized
- Cyclical unemployment from CBO
- Expected 10yr inflation from Philadelphia Fed SPF
- Lagged CPI y/y growth (for adaptive expectations)
- Oil price inflation, q/q annualized
- Sample 1999Q1-2017Q4 (pre-Covid)

Estimating a Phillips Curve

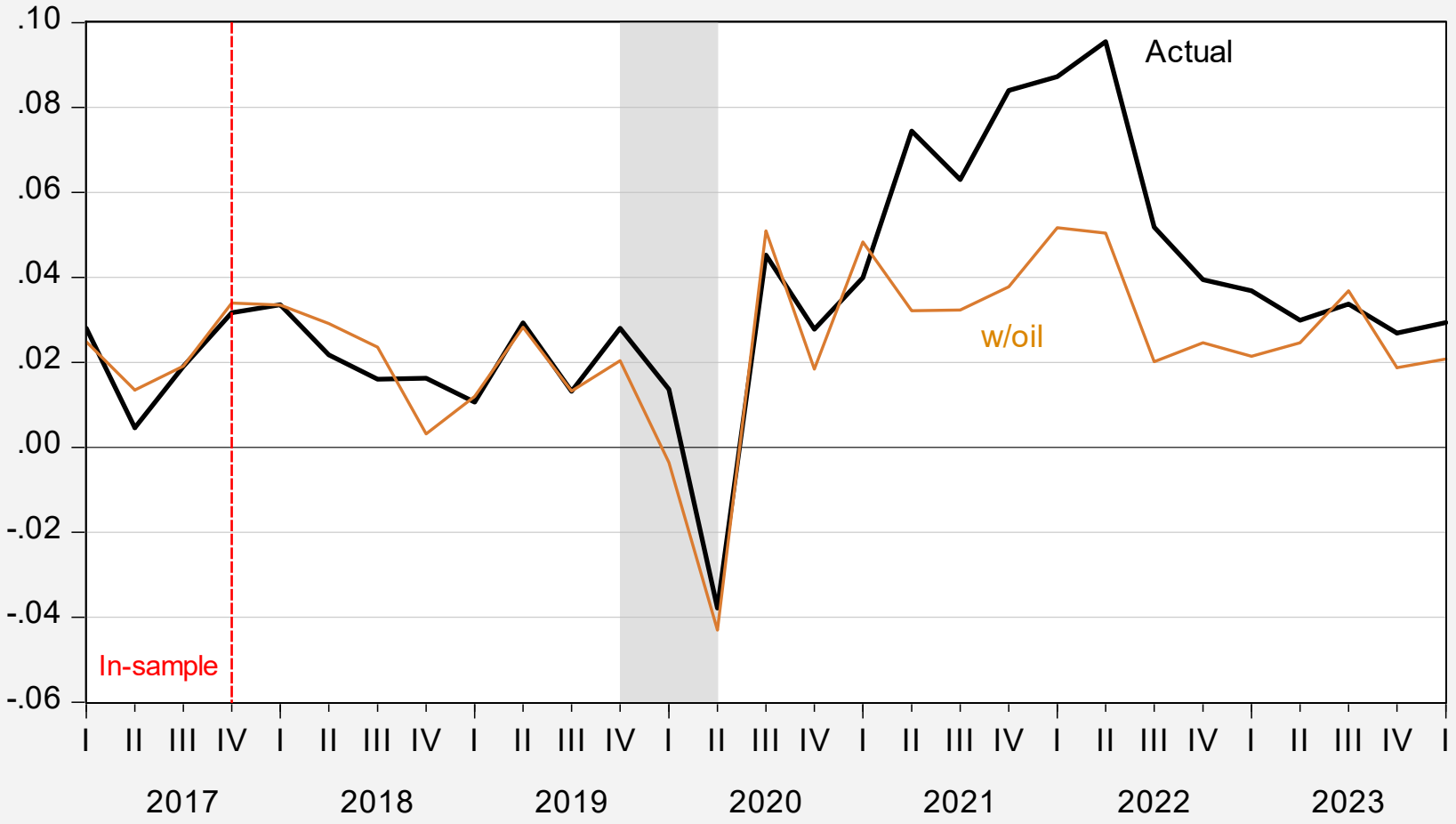
Dependent Variable: INFLQQAR
Method: Least Squares (Gauss-Newton / Marquardt steps)
Date: 04/10/24 Time: 21:26
Sample: 1999Q1 2017Q4
Included observations: 76
HAC standard errors & covariance (Bartlett kernel, Newey-West fixed bandwidth = 4.0000)
INFLQQAR = C(1) + C(2)*(UNRATE-UNRATE_NONCYC)/100 + C(3)*INFLCPI10YR_SPFAVG/100 + (1-C(3))*LOG(CPIAUCSL(-1)/CPIAUCSL(-5)) + C(4)*LOG(OILPRICE(0)/OILPRICE(-1))*4

	Coefficient	Std. Error	t-Statistic	Prob.
C(1)	-0.002755	0.001641	-1.678885	0.0975
C(2)	-0.103013	0.108146	-0.952537	0.3440
C(3)	0.809548	0.143980	5.622649	0.0000
C(4)	0.026551	0.004339	6.119477	0.0000

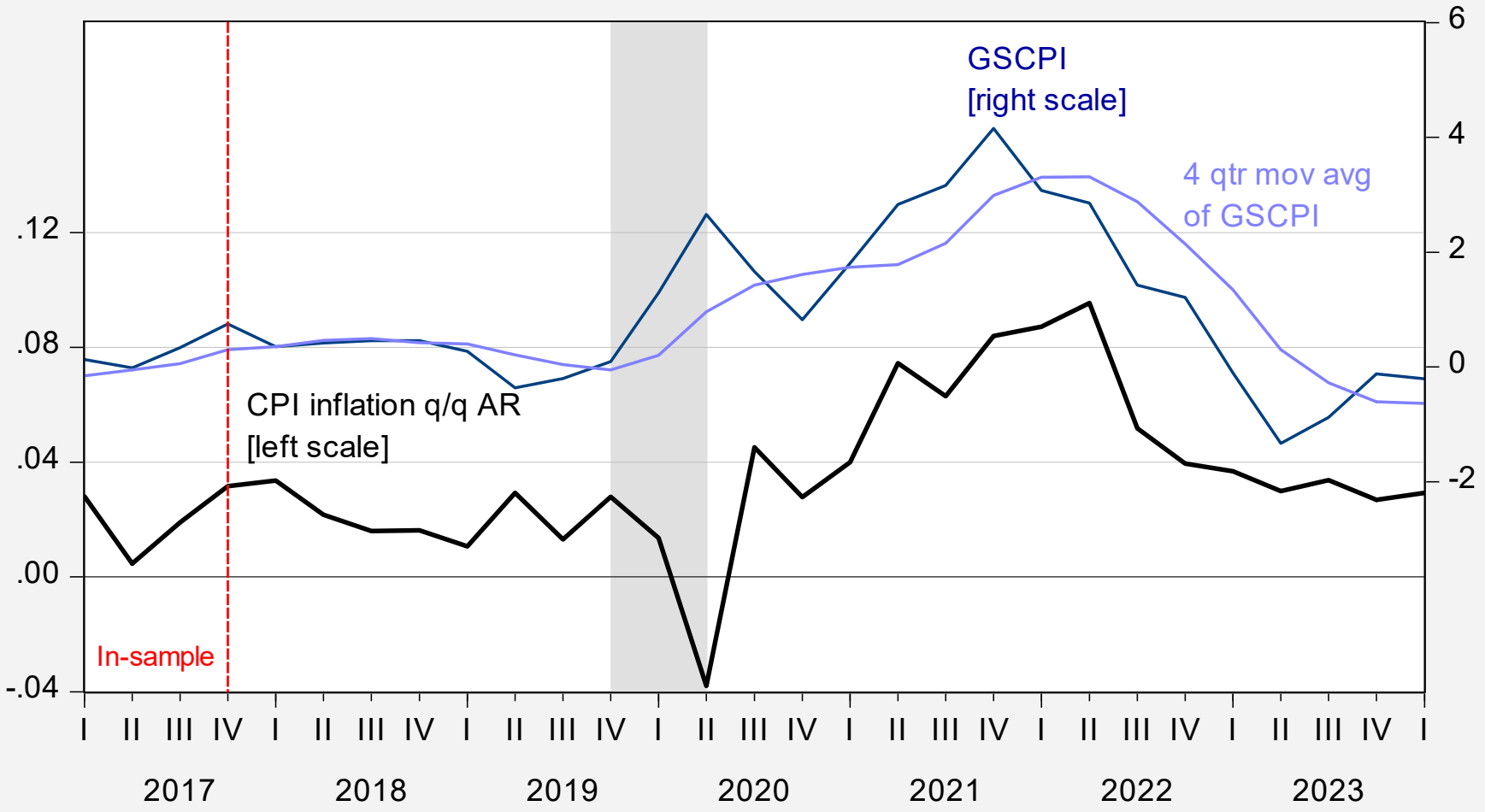
R-squared	0.632852	Mean dependent var	0.021562
Adjusted R-squared	0.617554	S.D. dependent var	0.021941
S.E. of regression	0.013569	Akaike info criterion	-5.710855
Sum squared resid	0.013257	Schwarz criterion	-5.588185
Log likelihood	221.0125	Hannan-Quinn criter.	-5.661830
F-statistic	41.36879	Durbin-Watson stat	2.074677
Prob(F-statistic)	0.000000	Wald F-statistic	39.54106
Prob(Wald F-statistic)	0.000000		

What Went Wrong (Prediction-wise)?

Can We Predict the Inflation Surge? (I)



Supply Chain Disruption Measure



Adding in Supply Chain Disruptions

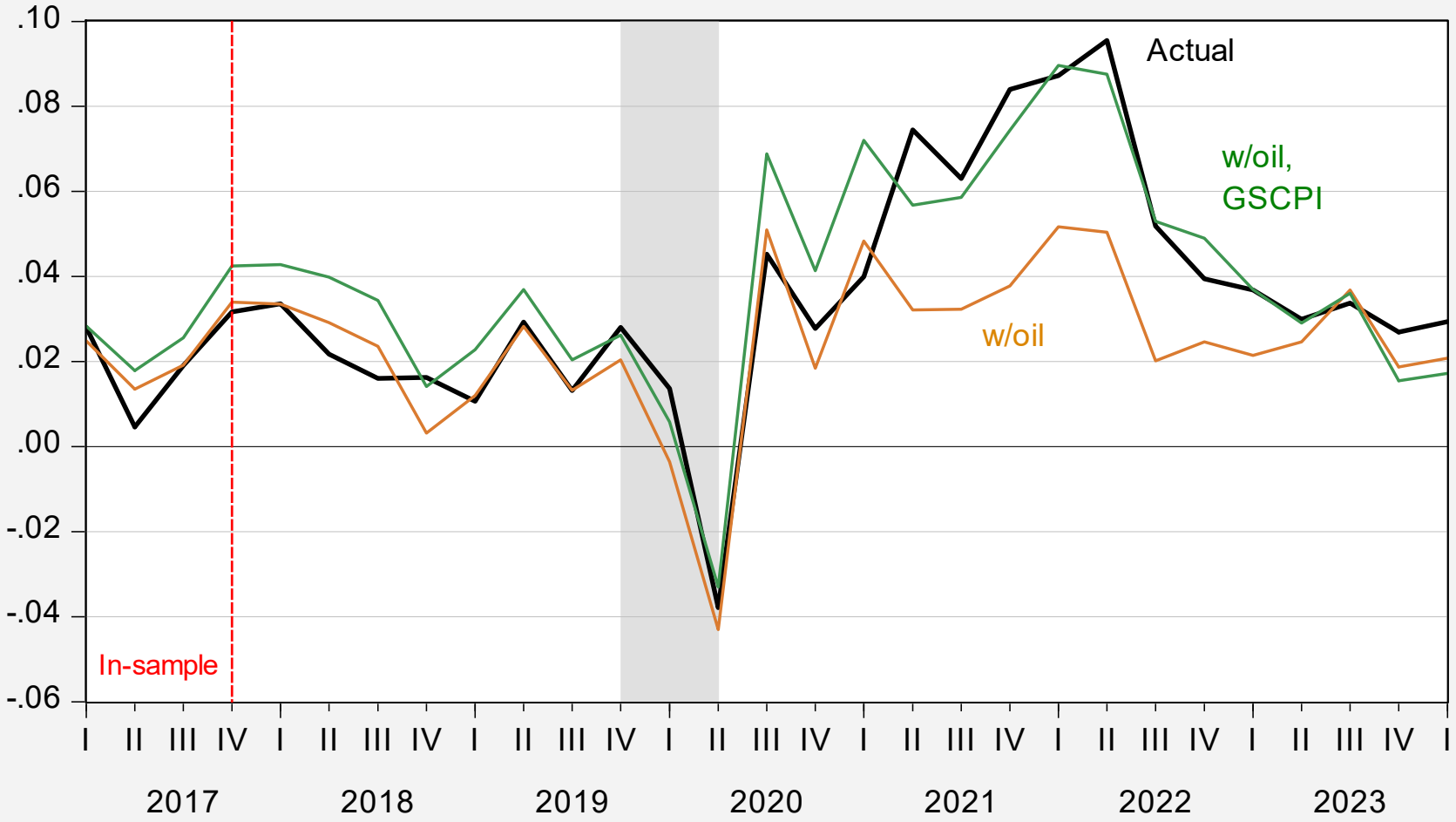
Dependent Variable: INFLQQAR
Method: Least Squares (Gauss-Newton / Marquardt steps)
Date: 04/10/24 Time: 21:24
Sample: 1999Q1 2017Q4
Included observations: 76
HAC standard errors & covariance (Bartlett kernel, Newey-West fixed bandwidth = 4.0000)
INFLQQAR = C(1) + C(2)*(UNRATE-UNRATE_NONCYC)/100 + C(3) *INFLCPI10YR_SPFAVG/100 + (1-C(3))*LOG(CPIAUCSL(-1) /CPIAUCSL(-5)) + C(4)*LOG(OILPRICE(0)/OILPRICE(-1))*4+ C(5) *@MOVAV(GSCPI,4)

	Coefficient	Std. Error	t-Statistic	Prob.
C(1)	0.001998	0.003100	0.644622	0.5212
C(2)	-0.209173	0.097064	-2.155010	0.0346
C(3)	0.965293	0.164327	5.874205	0.0000
C(4)	0.025198	0.004506	5.591667	0.0000
C(5)	0.012061	0.005878	2.051924	0.0439

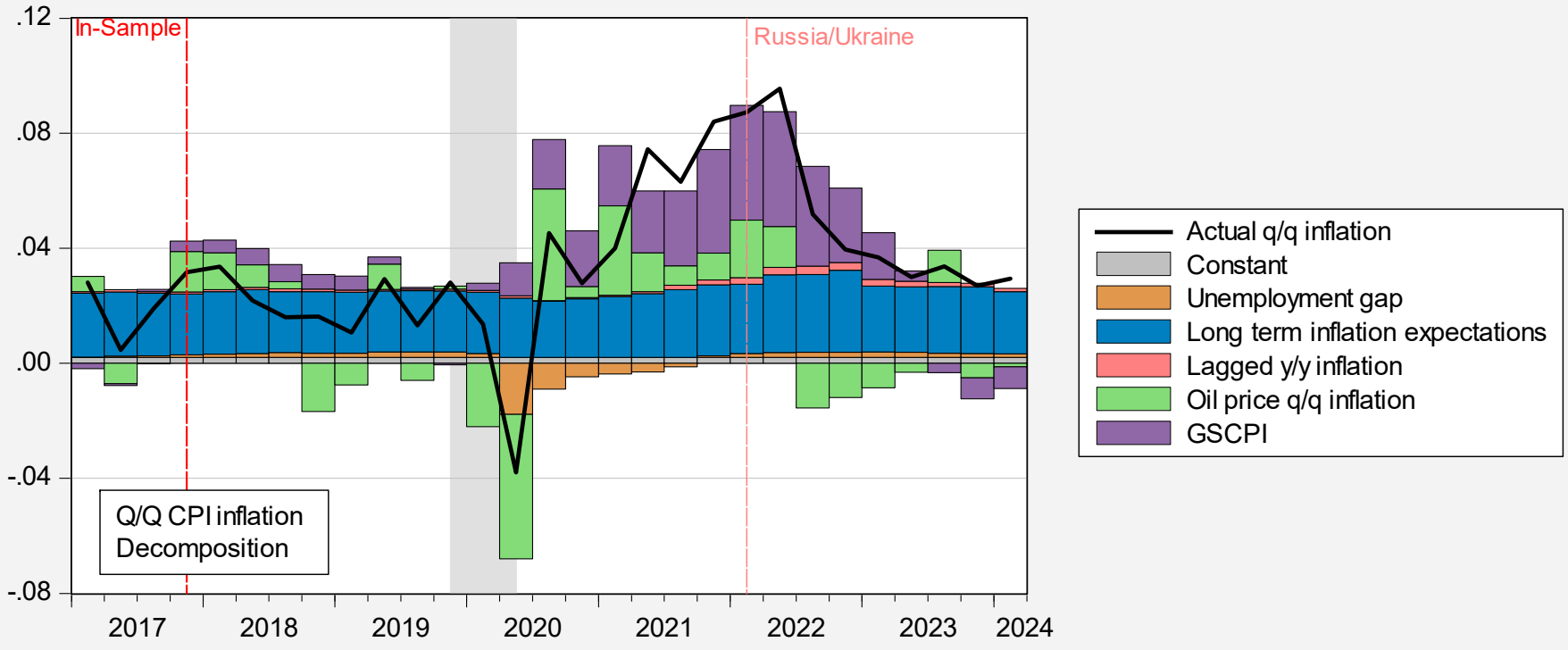
R-squared	0.652140	Mean dependent var	0.021562
Adjusted R-squared	0.632543	S.D. dependent var	0.021941
S.E. of regression	0.013301	Akaike info criterion	-5.738504
Sum squared resid	0.012560	Schwarz criterion	-5.585167
Log likelihood	223.0632	Hannan-Quinn criter.	-5.677223
F-statistic	33.27632	Durbin-Watson stat	2.051566
Prob(F-statistic)	0.000000	Wald F-statistic	28.28938
Prob(Wald F-statistic)	0.000000		

BCS (2015)
C(2)= -0.26
(2007-14)

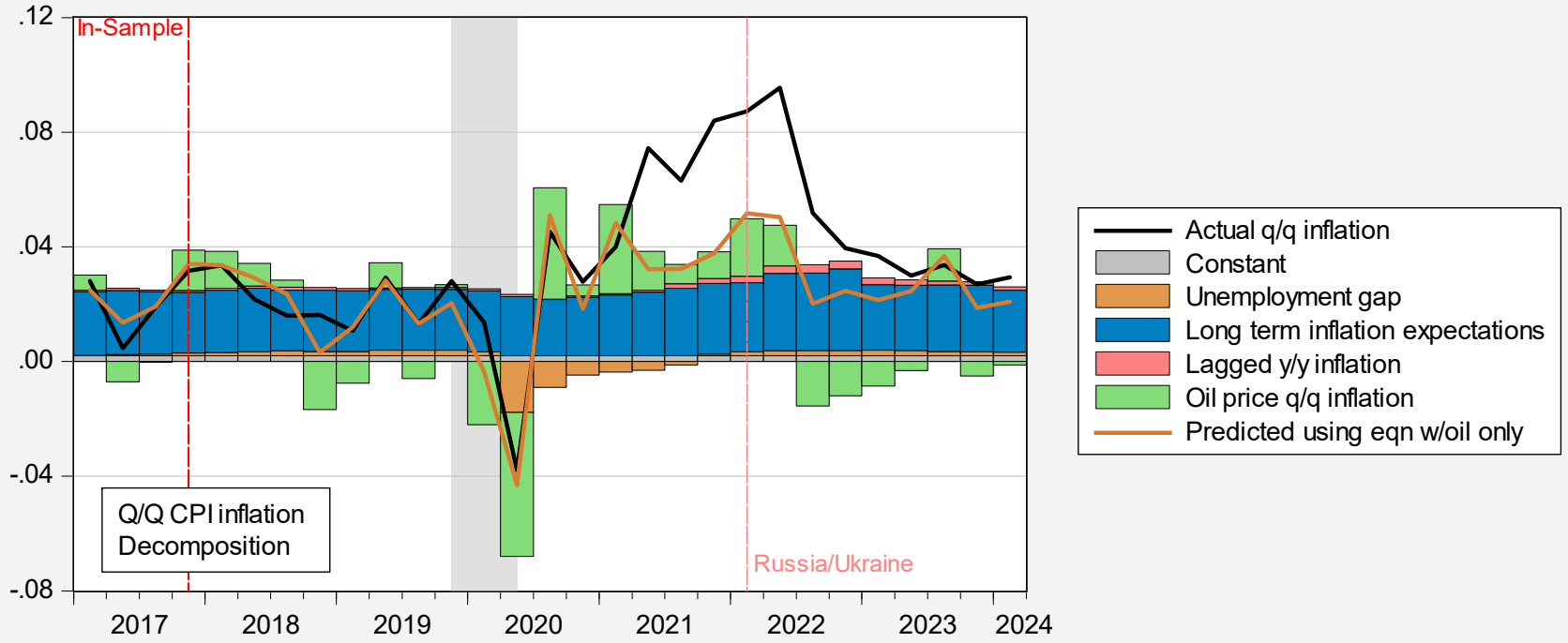
Can We Predict the Inflation Surge? (II)



A Decomposition of Inflation

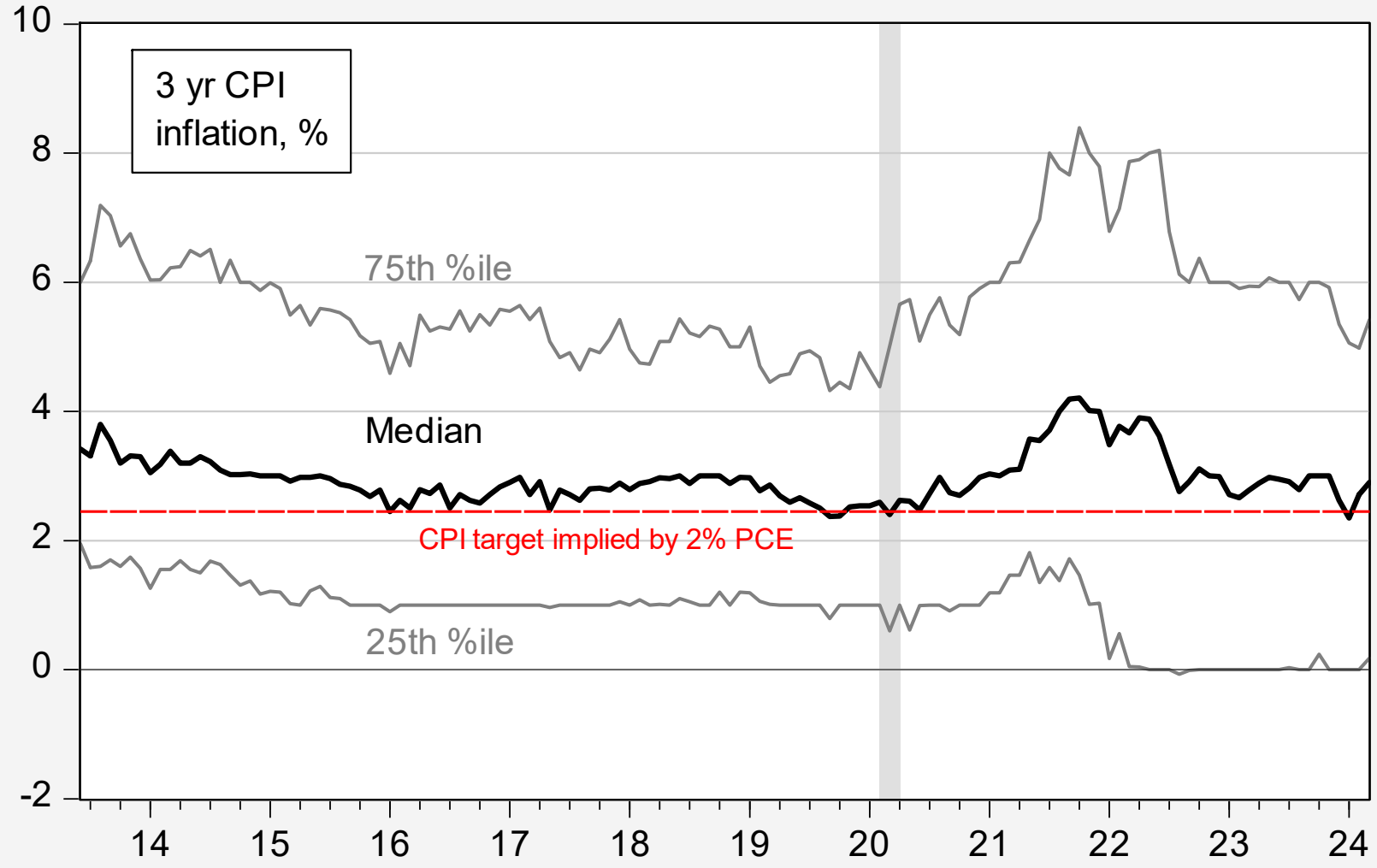


Decomposition, Taking Out GSCPI



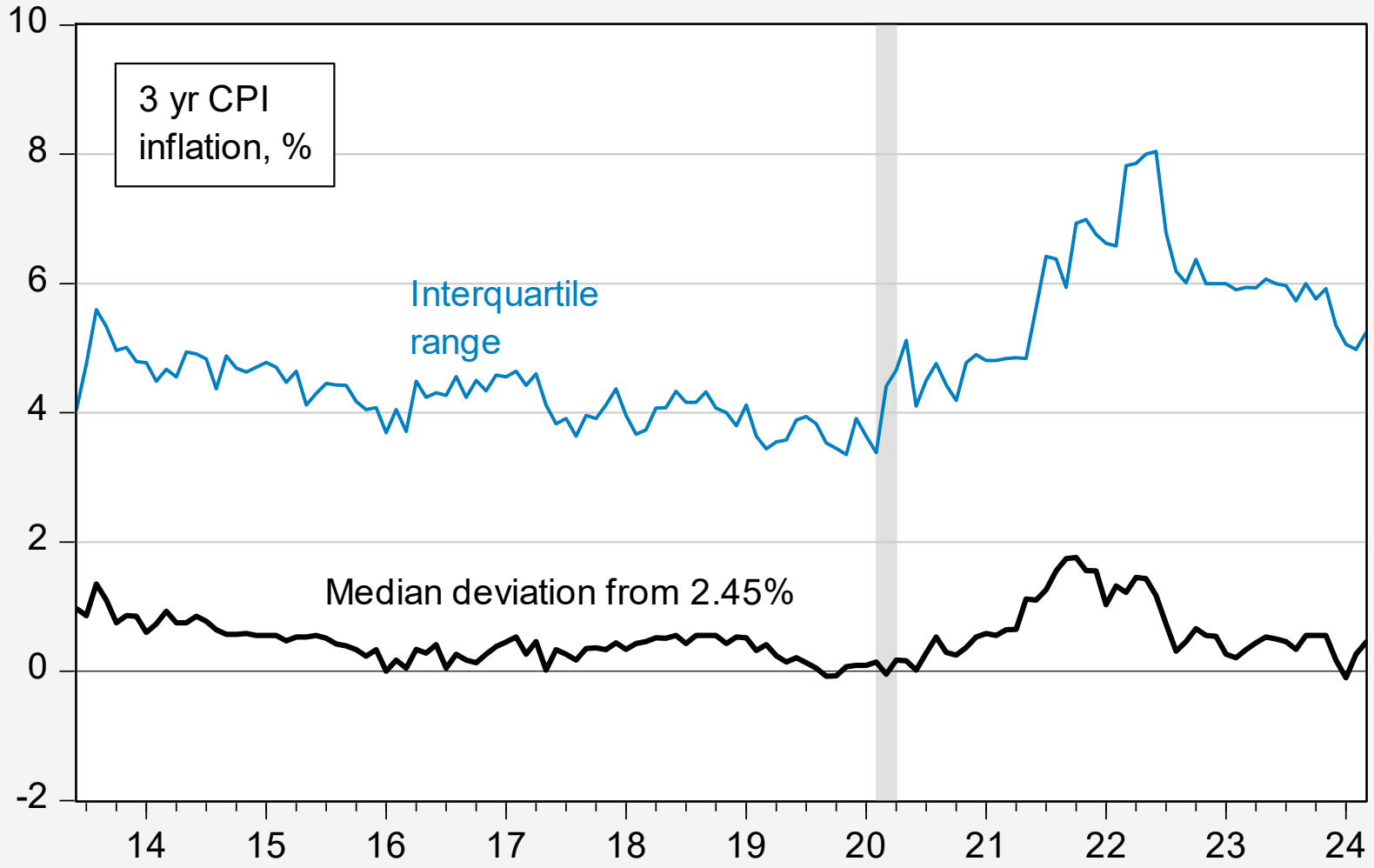
Note: This is a mechanical decomposition. In the absence of the higher inflation, interest rates might have been lower, resulting in a low unemployment, and hence a larger contribution from unemployment gap.

Credibility Lost?

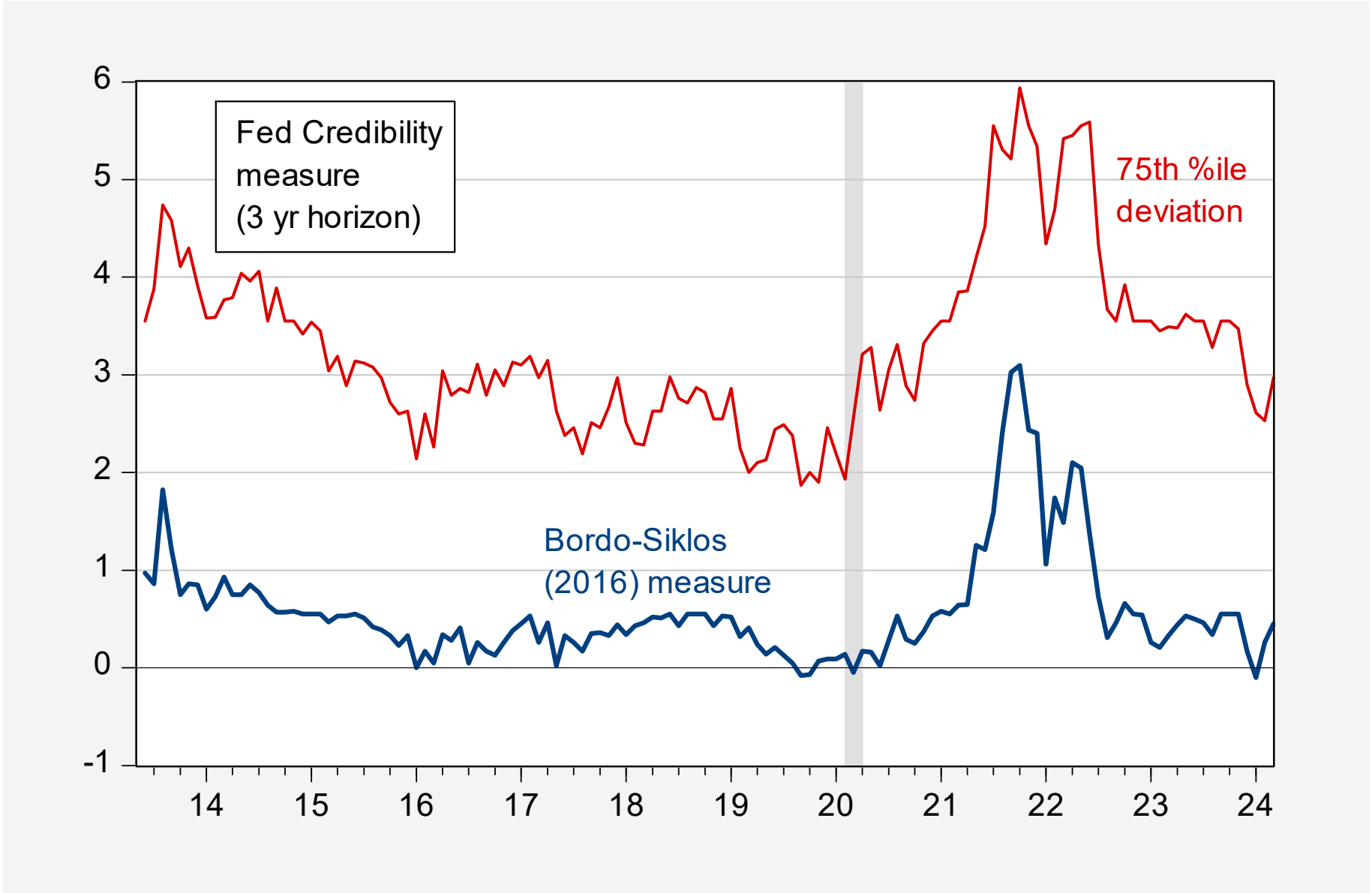


NY Fed survey of consumers 3 year inflation expectations

Dispersion increases



Measuring Credibility



Conclusions

- Economists and households mispredicted the inflation surge
- But ex post, we can explain the inflation
- Rapid inflation and disinflation is consistent with a cost-push shock from supply chain disruptions
- A decomposition using a Phillips curve is consistent with this view
- Credibility has largely been re-attained
- Probably because inflation fell without a large increase in unemployment (per Summers)

References

- Blanchard, Olivier, Eugenio Cerutti, and Lawrence Summers. 2015. Inflation and activity–two explorations and their monetary policy implications. NBER WP #21726.
- Bordo, Michael D., and Pierre L. Siklos. 2015. Central bank credibility: an historical and quantitative exploration. NBER WP #20824.
- Ozge Akinci, Gianluca Benigno, Ruth Cesar Heymann, Julian di Giovanni, Jan J. J. Groen, Lawrence Lin, and Adam I. Noble, “The Global Supply Side of Inflationary Pressures,” Federal Reserve Bank of New York, January 28, 2022.