Fed beliefs and learning (Greenbook Analysis)

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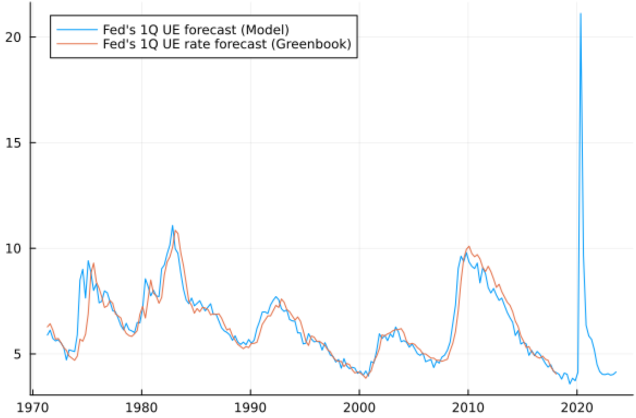
January 2024

Description of the variables:

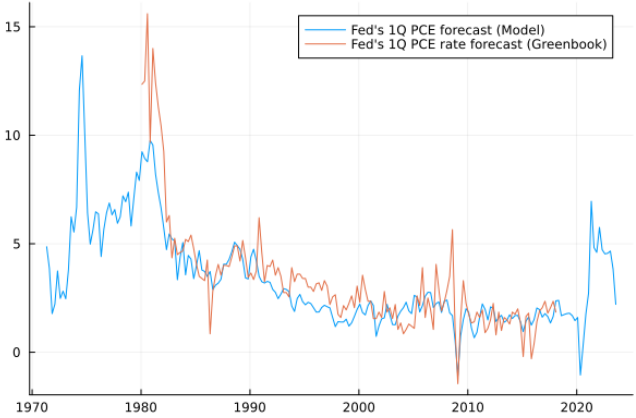
$$FE_t = x_{t+1} - F_t x_{t+1}$$

$$FR_t = F_t x_{t+1} - F_{t-1} x_{t+1}$$

Model vs Greenbook forecasts (UNEMP 1Q ahead)



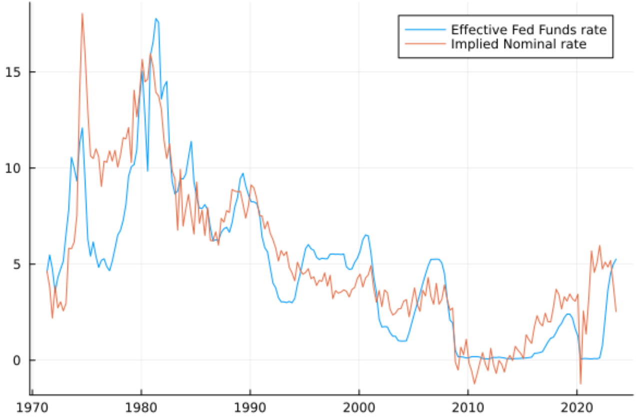
Model vs Greenbook forecasts (PCE 1Q ahead)



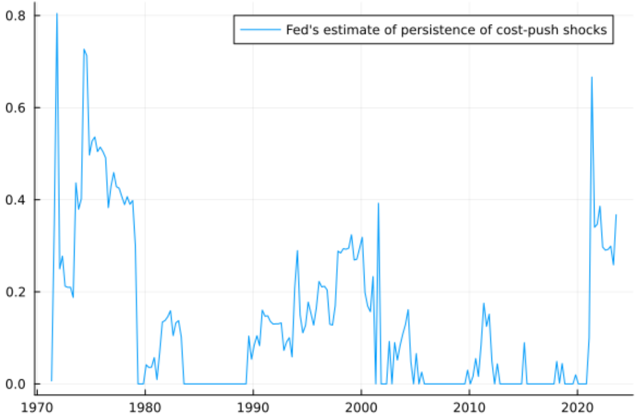
Interpreting Policy variable V_t

- For appropriate value of ϕ (Fed's weight on policy inertia in the loss function), V_t may be interpreted as the optimal real interest rate
- To see how it compares with observations on actual nominal rate (Effective fed funds rate), I plot the implied nominal rate i.e $V_t + \pi_t$ against it
- The result matches reasonably well

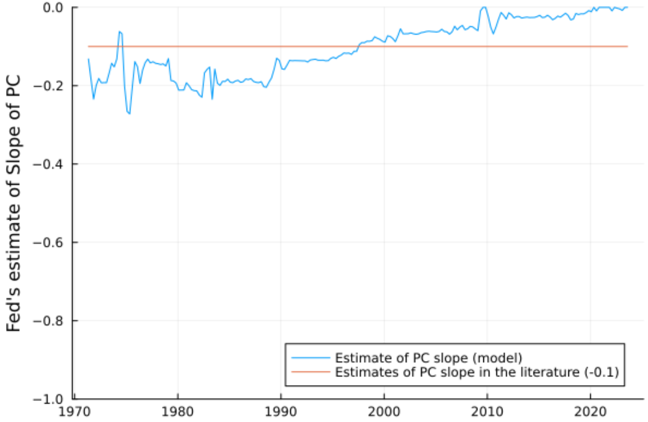
Implied optimal nominal rate (model) vs FFR (Data)



Fed's estimate of persistence of cost-push shocks



Fed's estimate of slope of the Phillips Curve



Fed's information rigidity

I regress forecast errors in PCE and Unemployment rate on their past values and forecast revisions in both variables (i.e including cross terms as well)
I use the sample period 1983-2008 for the most robust results

Greenbook Forecasts: Evidence on Fed learning

Regression of forecast error (1Q ahead) for UE rate on forecast revision

$$FE_{UE,t} \sim FR_{PCE,t} + FR_{UE,t} + FE_{UEE,t-1} + UE_{t-1}$$

	Coefficient Estimate (SE)
const	-0.4126**
	(0.063)
Forecast Rev. PCE	0.0178
	(0.018)
Forecast Rev. UE	-0.5541 **
	(0.059)
Lagged Forecast Err. UE	0.5859 **
	(0.041)
Lagged UE	0.0665 **
	(0.011)
R^2	0.838
N	102

Greenbook Forecasts: Evidence on Fed learning

Regression of forecast error (1Q ahead) for Unemployment rate on forecast revision

$$FE_{PCE,t} \sim FR_{PCE,t} + FR_{UE,t} + FE_{PCE,t-1} + UE_{t-1}$$

	Coefficient Estimate (SE)
const	-0.8529**
	(0.190)
Forecast Rev. PCE	-0.6716**
	(0.097)
Forecast Rev. UE	0.4527
	(0.303)
Lagged Forecast Err. PCE	0.2332**
	(0.079)
Lagged PCE	0.2236**
	(0.063)
R^2	0.437
N	102