Fed Communications As a Risk Indicator

Charles W. Calomiris

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Perspectives on Fed Communication Clarity

- "Never explain, never apologise. You are not here to tell us what to do, but to explain to us why we have done it," Governor **Montagu Norman** told Henry Clay, the Bank's first professional economist (1933).

- "...given the inconclusiveness of the theoretical arguments and the presumption that government secrecy is inconsistent with the healthy functioning of a democracy, further work is required to demonstrate that central bank secrecy is socially beneficial. **Marvin Goodfriend** (1985).

- "Might not that lack of clarity [about Fed inflation targeting] destabilize inflation expectations and facilitate the uncertainty so detrimental for employment?" **Marvin Goodfriend** (2012).

- "Monetary policy is 98 percent talk and only two percent action." **Ben Bernanke** (2015).

Three aspects of Fed communication

- Fed communications can matter for three reasons:

  1. Inform about the nature of the Fed's "reaction function" (given the state of the economy)

  2. Inform the public about the Fed's opinion about what the exogenous state of the economy is.

  3. Inform about Fed beliefs (even if incorrect) about the economy, which will matter for its actions given its reaction function.

- How can we disentangle these three aspects of Fed news? A start is to examine the combination of market outcomes created by the news, which may provide hints about which of the three elements is most important for market responses to Fed news.

Some simple positive economics questions

- Do Fed communications create news that affects markets?

- How do short-run effects differ from long-run effects?

- How do effects on various market indicators differ?

- Is there a natural interpretation of the combination of the various effects of "Fed news" that can sort among the three possible channels through which the Fed affects markets?

- Further question: If Fed news is partly about the state of the economy, is it about first or second moments (e.g., point estimate of growth, or risk state)?

First steps toward answering those questions

- Quantifying Fed news in a consistent way over time (and across different policy regimes).

- Seeing how news affects markets over different time horizons.

- Considering the possible ways of interpreting that combination of observed effects.

- At this point, we don't have conclusive answers to the questions we are posing, but we do have some suggestive facts to share.

12 Month-Ahead Forecasts of FX Returns Using Prattle (Calomiris and Mamaysky 2019)

12-month forward returns regressions for DM across time periods

| | 12-month return | | | | |
| | Base | | | Central bank | |
	(1)	(2)	(3)	(4)	(5)
ret1m	−0.286***	−0.035	−0.212*	−0.020	−0.383***
ret12m	0.071	−0.066	0.207***	−0.054	0.177**
vol1m	5.701	1.388	4.680	1.076	3.151
vol12m	2.993***	3.883**	5.023**	1.645	3.758*
VIX	0.139	0.123	0.344**	0.075	0.222**
logRSpotPos	−0.088	0.099	−0.300***	0.025	−0.208***
logRSpotNeg	−0.107	−0.236***	−0.209	−0.202***	−0.245**
nfa	−0.020	0.172***	−0.105	0.196***	−0.093
res_GDP	0.002	−0.390**	−0.121*	−0.707***	−0.079
cpiYOY	1.362	1.604***	0.886	1.510***	0.656
gdprYOY	0.502***	0.465	0.043	0.418	0.136
exFedCpiYOY	−0.319	3.631***	3.369	4.582**	3.763*
cpiYOYUS	−2.183	−4.059***	−2.171	−3.982***	−2.420*
exFedGdprYOY	1.314	1.760	−0.189	1.632	0.295
gdprYOYUS	−2.357***	−2.341***	1.545	−2.151**	1.000
carry	11.178*	12.776***	−9.402	16.368***	−11.178
exFedRate	1.999	−1.955*	−9.018***	−1.827**	−9.281***
T-bill	0.141	−0.405	9.926***	0.033	9.107***
tress_basis	15.736***	18.542***	−6.373**	18.694***	−5.825**
Fed				0.214	−5.131**
CBexFed				−2.097	−12.910***
Start	Oct96	Oct96	Nov06	Feb07	Nov06
End	Dec15	Oct06	Dec15	Oct06	Dec15
Observations	2,274	1,174	1,100	1,039	1,100
Adjusted R^2	0.292	0.656	0.487	0.632	0.542

Note: *p<0.1; **p<0.05; ***p<0.01
Std. errors clustered by DCOC.

12-month forward returns regressions for EM across time periods

| | 12-month return | | | | |
| | Base | | | Central bank | |
	(1)	(2)	(3)	(4)	(5)
ret1m	−0.167***	−0.165*	−0.162	−0.192**	−0.229***
ret12m	0.026	−0.013	0.059	−0.016	0.032
vol1m	4.655**	5.999***	1.204	6.704***	1.045
vol12m	2.645***	4.154***	2.997***	3.959***	2.560***
VIX	0.129	−0.066	0.419***	−0.056	0.294***
logRSpotPos	−0.026	−0.043	0.010	−0.128*	0.003
logRSpotNeg	−0.003	0.014	−0.158**	0.056	−0.168***
nfa	0.060*	−0.034	−0.011	−0.043	−0.013
res_GDP	−0.066	0.221	0.144*	0.037	0.146*
cpiYOY	0.461***	0.453***	0.494*	0.657***	0.454*
gdprYOY	0.532***	0.309	0.544***	0.442**	0.409**
exFedCpiYOY	−2.536	0.672	1.583	−0.471	1.591
cpiYOYUS	−0.264	−0.313	−1.173	−0.168	−1.245
exFedGdprYOY	0.551	1.381	−0.445	1.119	−0.051
gdprYOYUS	−1.497	−1.482*	−0.164	−1.223*	−0.278
carry	3.349**	3.343	1.403	2.834	2.354
exFedRate	1.124	−0.773	−9.484***	−0.349	−9.667***
T-bill	−0.048	−1.053	9.347***	−0.657	8.936***
tress_basis	8.839*	9.507***	−5.672**	13.797***	−5.738**
Fed				1.060*	−3.065*
CBexFed				−3.876**	−9.292***
Start	Oct96	Oct96	Nov06	Feb07	Nov06
End	Dec15	Oct06	Dec15	Oct06	Dec15
Observations	5,046	2,377	2,669	2,101	2,669
Adjusted R^2	0.183	0.318	0.406	0.331	0.437

Note: *p<0.1; **p<0.05; ***p<0.01
Std. errors clustered by DCOC.

Fed Prattle and the VIX after 2007

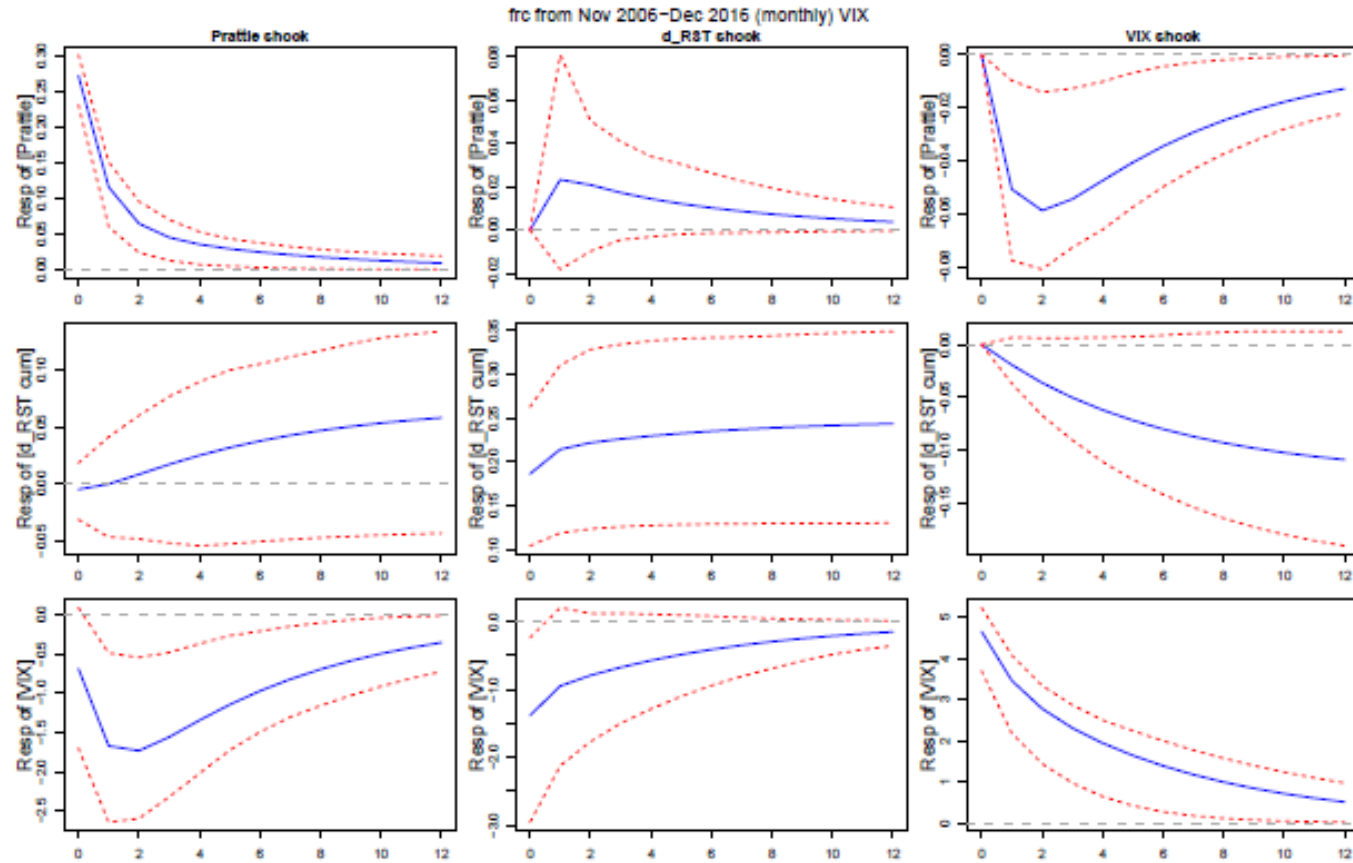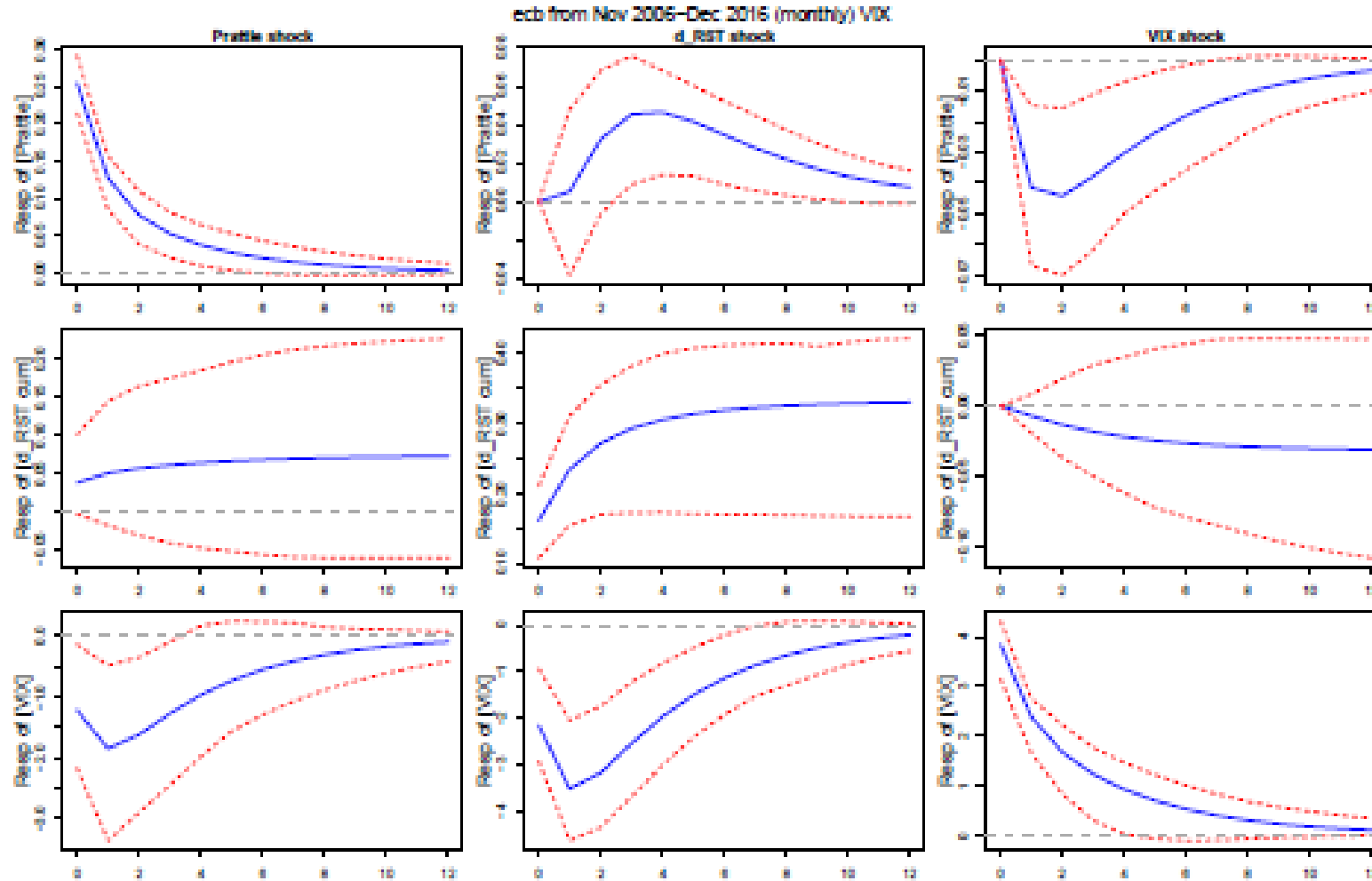Fed: VARs of Prattle, Short-Rate and VIX – Late Subperiod

Figure 2: The VAR contains the Prattle score, the difference in the short-rate and the VIX, in that order. Impulse responses are calculated using a Cholesky decomposition of the residual covariance matrix. Impulse responses for the change in the short-rate are cumulative. Other impulse responses are non-cumulative. Each time step is one month.
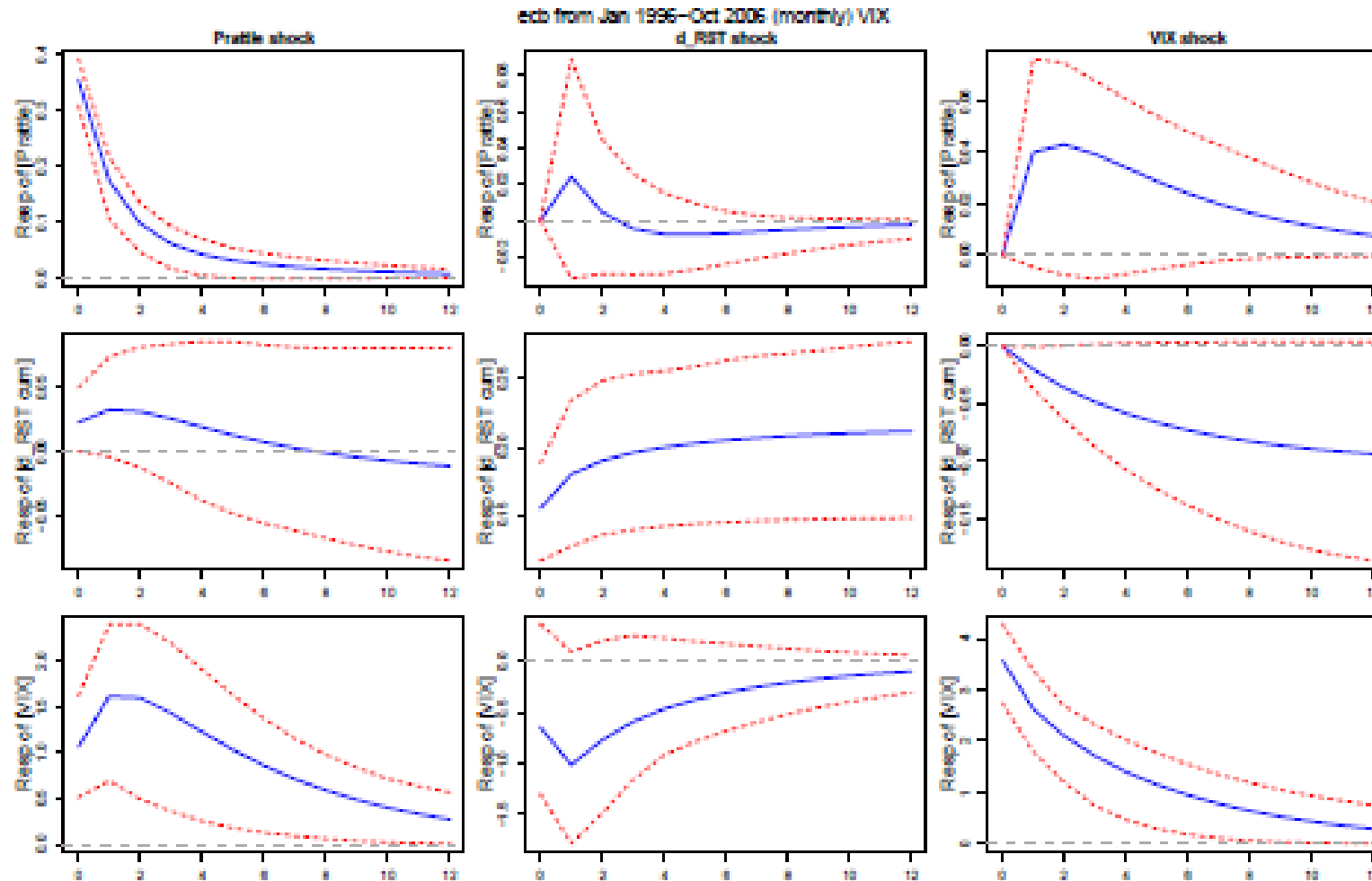
ECB Prattle and the VIX after 2007

ECB: VARs of Prattle, Short-Rate and VIX – Late Subperiod

ecb from Nov 2006–Dec 2016 (monthly) VIX

ECB Prattle and the VIX before 2007

ECB: VARs of Prattle, Short-Rate and VIX – Early Subperiod

Panel: 12 Month-Ahead Forecasts of Prattle Using TR News (Calomiris, Harris, Mamaysky, Tessari 2020)

	Dependent Variable: CB		
	(1)	(2)	(3)
art_count		-0.060***	-0.050***
entropy		-0.485***	-0.395***
f_Mkt		0.139***	0.144***
f_Govt		0.226***	0.217***
f_Corp		0.127***	0.125***
f_Comms		0.027**	0.028**
f_Credit		0.077***	0.076***
s_Mkt		0.089***	0.085***
s_Govt		-0.063***	-0.051***
s_Corp		-0.070***	-0.079***
s_Comms		-0.020**	-0.017**
s_Credit		0.042***	0.039***
CB index	0.233***		0.160***
EPU		0.044***	0.044***
R2	0.162	0.346	0.424
start	Apr 2007	Apr 2007	Apr 2007
end	Dec 2016	Dec 2015	Dec 2015
Nobs	1142	735	732
stderr	time	time	time

Summary

- CB news can be measured through natural language processing of Fed language, which reflects CB beliefs about the state of the economy and the implications of that state for the financial markets and Fed actions.

- CB news largely communicates **highly persistent** facts for financial markets (especially long-run FX returns, persisting changes in VIX).

- Either the market is very slow in understanding the meaning of Fed news (unlikely), or Fed news is largely about the risk state, which has persistent implications for FX returns and VIX.

- Fed news is slow to take into account changes in the risk state because it is not employing new data science tools that would be useful (Sharpe et al. evidence suggests some lagging in Fed forecasts may be intentional).

- **Another twist on Goodfriend's critique:** Improvement in data collection and enhanced clarity of communication would facilitate timely economic reactions to the perceived risk state.