Monetary Policy Communication, Policy Slope, and the Stock Market

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Motivation

Bernanke and Kuttner (2005): MP Shocks and Equity Returns

	full sample		excluding outliers	
Regressor	(a)	(b)	(c)	(d)
Intercept	0.23	0.12	0.17	0.11
	(2.58)	(1.35)	(2.14)	(1.37)
Raw funds rate change	-0.61		-0.11	
	(-1.06)		(-0.31)	
Expected change		1.04		0.67
		(2.17)		(1.62)
Surprise change		-4.68		-2.55
		(-3.03)		(-2.79)
R2	0.007	0.171		0.049

$\Rightarrow$ -4.68% 1-day return in response to a 1% point rate change

This Paper:

- Kuttner surprises are **small**. Monetary policy decisions happen throughout the year.
- Whole **future path** of monetary policy is important. Regress weekly changes in three-month futures on changes in one-month futures. The residual from this regression is a purified measure of path, slope_t.

Main Findings

Intercept	0.12	0.13	-0.47	-0.02	0.12
	(0.08)	(0.09)	(0.36)	(0.29)	(0.09)
Slope	-7.70	-6.96	-6.88	-6.85	-6.35
	(-2.07)	(-1.98)	(-1.99)	(-1.97)	(-1.96)
R		-0.09	-0.08	-0.08	-0.11
		(0.05)	(0.05)	(0.05)	(0.05)
DP			36.79		
			(20.13)		
VIX				0.01	
				(0.02)	
MP					-11.76
					(2.91)
R2	0.019	0.026	0.030	0.026	0.056

- A positive slope, i.e., expectations of faster future monetary policy tightening, predicts negative stock returns.
- Explains around 2% of weekly variation and predictive power is particularly strong during times of high uncertainty.
- Speeches of chair and vice chair predict slope factor.

Comment 1:Identification of Monetary Policy Shocks

Identification of Monetary Policy Shocks

- Measure of monetary policy shocks is constructed from **weekly** changes in the one- and three-month federal funds futures rates.
- Authors argue that ``the whole future path of monetary policy being important for the real economy and that the FOMC releases most of the news about monetary policy outside of scheduled FOMC meetings throughout the year''.
- Issue: Monetary policy is endogenous.
- Authors:
  - Use lagged returns to overcome endogeneity and reverse causality
  - Control for macroeconomic news
- However:
  - Financial markets react to a huge amount of information ...
  - ... endogeneity issue remains key problem

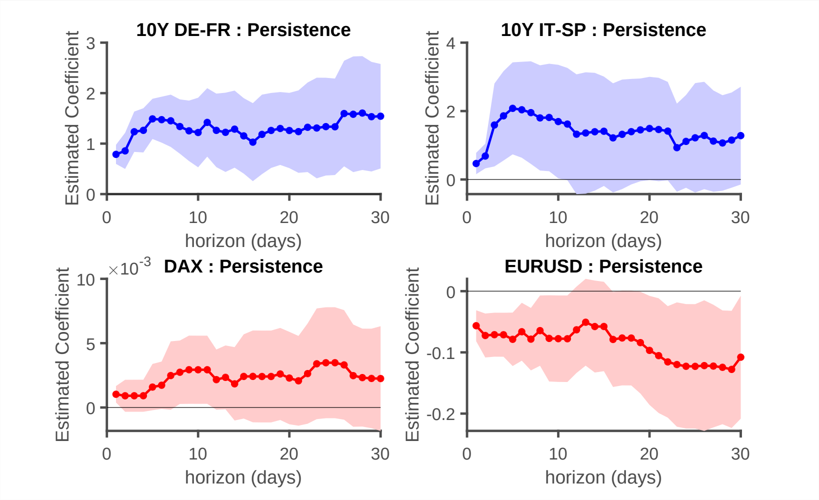
A Sanity Check: Persistence

- Authors argue that market reaction could be delayed due to **slow-moving capital**.
- But how persistent are effects of monetary policy on asset prices? (Brooks, Katz and Lustig 2019)
- Can construct monetary policy shocks from HF risk-free rates and test persistence via long-horizon regressions:

$$rx_{t+h} = \alpha_h + \beta_h \times \text{MP shock}_t + \epsilon_{t+h},$$

  where rx_{t+h} is the cumulative h-horizon return of equity index, etc.
- Given that this is an ECB event, we can estimate MP shock_t from OIS and swap rates in the Eurozone.

Persistence of MP Shocks on Asset Prices in the Eurozone

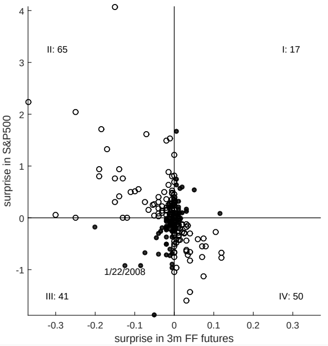


⇒ Very persistent on bonds, not so much on equity.

Comment 2: Focus on Risk-Free Interest Rates Only

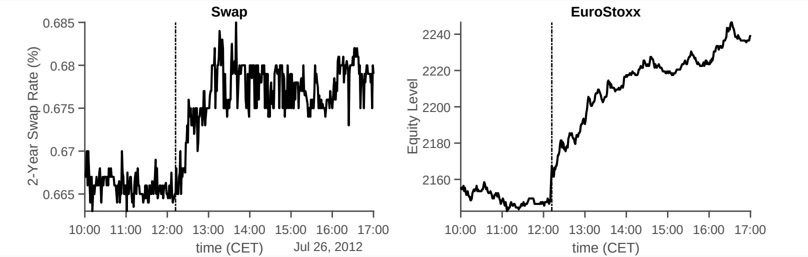
What Asset Prices?

- Authors focus exclusively on Fed funds rate. Sample ends in 2007. However, evidence in literature shows that since crisis other dimensions of monetary policy matter.
- Nakamura and Steinsson (2018): Fed Information Effect.
- Jarociński and Karadi (2019): Stock-bond correlation informative about types of shocks.



Source: Jarociński and Karadi (2019)

Reaction of Asset Prices Around Speeches: July 26th 2012

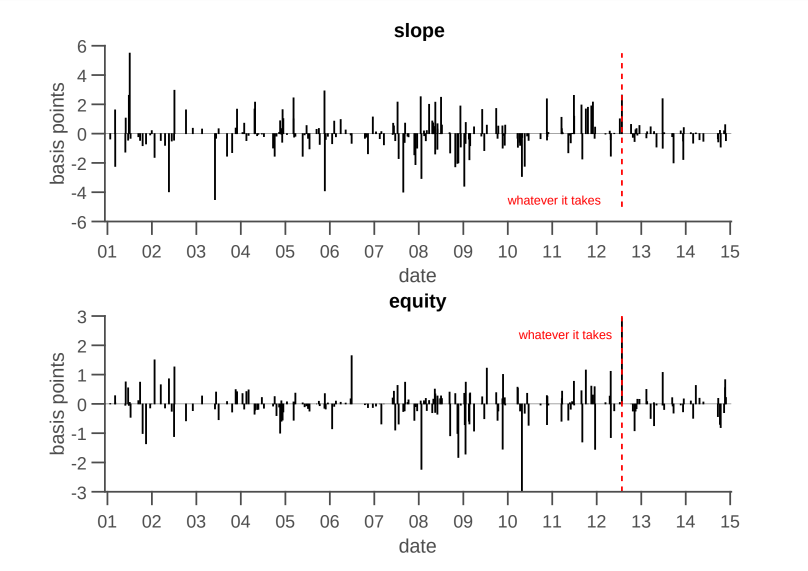


- Swap reaction very small, **dwarfed** by reaction in equity markets!
- `‘‘These premia have to do, as I said, with default, with liquidity, but they also have to do more and more with convertibility, with the risk of convertibility.’’`

Mario Draghi, July 26th 2012

- Exclusive focus on risk-free assets may not be enough...

President Speeches Shocks



Conclusions

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- How should we think about persistence of monetary policy?
- What asset prices are best suited to capture communication?
- I enjoyed reading this paper very much!