Movements in Yields, not the Equity Premium: Bernanke-Kuttner Redux

Authors:Stefan Nagel and Zhengyang Xu

Guilherme Piantino

Table of Contents

Introduction

- Bernanke and Kuttner (2005) (BK) find that most of the stock market reaction to monetary policy announcements is explained by changes of expected excess returns and very little by changes in expected real interest rates

- This result is interpreted as evidence of monetary policy effects on stock market risk, investor risk aversion, or investor sentiment

- With a different approach and data (not available at the time of BK), this paper finds that mostly of the stock market reaction in FOMC announcements is explained by changes in the term structure of yields, without equity premium effects.

BK approach overview

- BK estimates a VAR with stock market excess returns and the dividend-price ratios (among other variables) monthly. Then, they regress the VAR innovations on Fed funds rate surprises within-month FOMC announcement windows.

- Future expected excess returns respond positively to Fed funds rate surprises. If stock prices fall due to unexpected monetary tightening, dividends are sticky in the short run and the divided-price ratio rises.

- Assumption that dividend-price ratio movements around FOMC announcements windows is associated with movements in expected excess returns to exactly the same extent as any other dividend-price ratio movement on all other non-FOMC days

Nagel and Xu approach overview

- Approach does not rely on VAR estimates. No arbitrage implies the price of a stock market index as:

$$P_t = \sum_{n=1}^{\infty} B_{n,t} G_{n,t}$$

- That is the sum of dividend futures prices ($G_{n,t}$) discounted at the default-free zero-coupon ($B_{n,t}$) yield curve.

- How much of price movements in FOMC announcement windows can be explained just by movements in the yield curve, without any change in risk premia?

Nagel and Xu approach overview

- $G_{n,t}$ is fixed at the pre-announcement day and the implied change in P_t is just based on the observed change in zero-coupon bond prices around the announcement.

- This approach gives a model-free assessment of the contribution of changes in default-free yields on stock prices.

- Unlike in BK, they don´t:
  - estimate a VAR
  - assume dividend-price ratio changes in FOMC announcement windows with the same components as in general

- Findings suggest all movements in the stock market index in FOMC announcement windows can be explained just with movements in the yield curve.

Table of Contents

Decomposition of announcement returns

- Let M_{t+j} be the SDF and the dividend stream is broken up into strips. The price at t of a dividend strip paying D_{t+2} at $t+2$ is:

$$\begin{aligned} P_{2,t} &= \mathbb{E}_t[M_{t+1}M_{t+2}D_{t+2}] \\ &= \mathbb{E}_t[M_{t+1}M_{t+2}]\mathbb{E}_t[D_{t+2}] + cov_t(M_{t+1}M_{t+2}, D_{t+2}) \end{aligned}$$

- Using $B_{2,t} = \mathbb{E}_t[M_{t+1}M_{t+2}]$, we can rewrite this as:

$$P_{2,t} = B_{2,t} \underbrace{\left[\mathbb{E}_t[D_{t+2}] + cov_t\left(\frac{M_{t+1}+M_{t+2}}{\mathbb{E}_t[M_{t+1}+M_{t+2}]}, D_{t+2}\right)\right]}_{G_{2,t}}$$

- Going through other horizons, the price of the entire dividend is:

$$P_t = \sum_{n=1}^{\infty} P_{n,t} = \sum_{n=1}^{\infty} B_{n,t}G_{n,t}$$

Implied change of the stock market index

- Assume $B_{n,t-}$ goes to $B_{n,t+}$ with fixed expected dividends and the equity premium, thus dividend futures prices are unchanged. The implied percentage change of the stock market index is:

$$\Delta P_{B,t} = \sum_{n=1}^{m} \frac{G_{n,t-}}{P_{t-}} (B_{n,t+} - B_{n,t-})$$

- They look at $B_{n,t-} - B_{n,t+}$ around FOMC announcements, with futures price at the pre-announcement value.

- Forward rates far out in the future do not change on FOMC announcement days, so m denotes the observable maximum maturity on the dividend futures prices.

Implied change with bond prices fixed

- To see how prices would change around FOMC announcements if the yield curve doesn´t change at all, they hold $B_{n,t}$ fixed at pre-announcement values and look at the change in implied price due to changes in $G_{n,t}$:

$$\Delta P_{G,t} = \sum_{n=1}^{m} \frac{B_{n,t-}}{P_{t-}} (G_{n,t+} - G_{n,t-})$$

- Again expectations about dividends beyond maturity m do not change in response to the news conveyed by the FOMC announcement.

Alternative approach based on Campbell-Shiller

- Let $f_{n,t}$ be the log forward rate between t + n - 1 to t + n:

$$f_{n,t} = ny_{n,t} - (n-1)y_{n-1,t}$$

- Using the present-value identity obtained through Campbell-Shiller approximation and with $x_{n,t+1} = r_{t+n} - f_{n,t}$, the log price change before FOMC announcement is:

$$\Delta p_t \equiv p_{t+} - p_{t-} = (\mathbb{E}_{t+} - \mathbb{E}_{t-}) \sum_{n=1}^{\infty} \rho^{n-1}[(1-\rho)d_{t+n} - x_{n,t+n}]$$

$$+ \underbrace{\sum_{n=1}^{\infty} \rho^{n-1}[f_{n,t-} - f_{n,t+}]}_{\Delta P_{B,t}}$$

$\Delta P_{B,t}$ is the log price change implied by a change in the yield curve, without changes in d_{t+n} and $x_{n,t+n}$

Table of Contents

Data and measures

- POLICY, a measure of monetary surprises, is the first PC of price changes in a 30-minute window around the FOMC announcement of five interest rate futures contracts with $m \leqslant 1$ (year).

- FFR, an alternative measure, uses the change in the Fed funds futures price of the contract expiring at the end of the month after the FOMC meeting. (Same as BK)

- For both surprise measures, they used the updated series from Acosta (2023) which are available between February 1995 and September 2022 for scheduled announcements.

- Dates of FOMC meetings between 1988 and 2019 are obtained from Bauer and Swanson (2023a). The remaining FOMC meeting dates (until 12-2022) from the Federal Reserve Board website.

Asset Prices and survey forecasts

- Daily nominal yields on Treasury zero-coupon bonds with maturities up to 30 years are obtained from Filipovic et al. (2022)
- For the aggregate stock market prices, they use daily prices on the S&P 500 index from CRSP.
- Daily prices of dividend futures on the S&P 500 index between October 2002 and August 2014 come from van Binsbergen and Koijen (2017) and since November 2015 from Bloomberg.
- Monthly forecasts of real GDP, GDP index, unemployment and 3 months Treasury bill rates come from the Blue Chip Economic Indicators (BCEI) and the Blue Chip Financial Forecasts (BCFF).

Summary Statistics

This table reports the summary statistics. In Panel A, POLICY is the first principal component of 30-minute price changes in five interest-rate futures prices of maturities up to one year as in Nakamura and Steinsson (2018) and as updated by Acosta (2023). FFR is the price change of Federal funds futures expiring at the end of the month after the FOMC meeting in percentage points. Panel B shows the actual log and percentage price change of the S&P 500 index around scheduled FOMC announcements, Δp and ΔP, respectively, along with the corresponding counterfactual log and percentage price change based purely on yield changes based on the Campbell-Shiller present-value identity, Δp_B or the dividend futures approach, ΔP_B, as well as the counterfactual price change using only changes in dividend futures prices and holding fixed the yield curve, ΔP_G. Δp^{HF} and Δp_B^{HF} are the high-frequency actual and implied log price changes of the S&P 500 index using data from Bauer and Swanson (2023a). All price changes are shown in basis points.

	Mean	S.D.	Median	5th	95th
A. Monetary Surprise Measures					
POLICY	0	1	0.08	-1.71	1.46
FFR	-0.41	3.93	0	-6.35	5.64
B. Price Changes on Announcement Days					
Feb 1994–Dec 2022:					
Δp	27.38	116.09	12.95	-140.09	213.80
Δp_B	11.22	117.76	1.58	-148.08	185.69
Oct 2002–Dec 2022:					
ΔP	33.22	123.87	12.96	-134.96	261.56
ΔP_B	4.93	68.37	5.74	-94.38	91.53
ΔP_G	-0.84	8.88	0.15	-13.59	8.28
Feb 1994–Dec 2019:					
Δp^{HF}	-2.17	56.58	-4.71	-93.37	82.45
Δp_B^{HF}	2.29	74.76	0.88	-98.20	102.96

Treasury yield response

This table reports the response of zero-coupon yields and forward rates extracted from nominal Treasury securities to monetary policy surprises on scheduled FOMC announcement days. In Panel A, the dependent variables are one-day changes in zero-coupon Treasury yields. In Panel B, the dependent variables are one-day changes in 1-year forward yields. All dependent variables are quoted in basis points. The monetary policy surprise measures include the policy news shock from Nakamura and Steinsson (2018) as updated by Acosta (2023) (POLICY) and the unexpected changes in the target Federal funds rates (FFR). Both shocks are standardized in the full sample period to have unit standard deviations. The sample only uses scheduled announcement days and is from February 1995 to September 2022. All regressions include a constant term whose estimates are not reported. We report t-statistics calculated using heteroskedasticity-robust standard errors in the brackets.

Panel A: Δy_n

	1Y		2Y		5Y		7Y		20Y		30Y	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
POLICY	3.74		4.23		3.85		3.20		1.41		0.97	
	[10.47]		[9.41]		[8.11]		[5.85]		[2.73]		[1.76]	
FFR		2.32		2.03		1.74		1.38		0.65		0.54
		[5.60]		[3.58]		[3.25]		[2.49]		[1.29]		[1.01]
N	221	221	221	221	221	221	221	221	221	221	221	221
Adj. R^2	0.47	0.18	0.40	0.09	0.25	0.05	0.17	0.03	0.05	0.01	0.02	0.00

Panel B: Δf_n

	1Y		2Y		5Y		7Y		20Y		30Y	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
POLICY	3.74		4.72		2.84		1.57		-0.02		0.40	
	[10.47]		[7.58]		[4.38]		[1.68]		[-0.02]		[0.54]	
FFR		2.32		1.73		1.36		0.50		0.81		0.25
		[5.60]		[2.27]		[2.30]		[0.55]		[0.96]		[0.33]
N	221	221	221	221	221	221	221	221	221	221	221	221
Adj. R^2	0.47	0.18	0.30	0.04	0.09	0.02	0.03	-0.00	-0.00	0.01	-0.00	-0.00

Stock market response

The first two columns report the OLS estimates from regressing price changes of the S&P 500 market index on monetary policy surprises on scheduled FOMC announcement days. The monetary policy surprise measures include the policy news shock from Nakamura and Steinsson (2018) as updated by Acosta (2023) (POLICY) and the unexpected changes in the target Federal funds rates (FFR). Both shocks are standardized to have unit standard deviations. Columns (3) and (4) use ΔP_B as the dependent variable in Panel A and Δp_E in Panel B. Columns (5) and (6) in Panel A use ΔP_G as the dependent variable. The rest of columns test the difference between slope coefficients. All dependent variables are quoted in basis points. We report the t-statistics calculated using heteroskedasticity-robust standard errors in brackets. The sample period runs from November 2002 to September 2022 in Panel A and from February 1995 to September 2022 in Panel B.

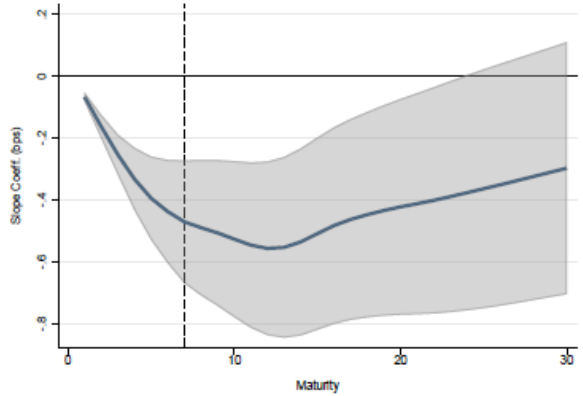
Panel A: Dividend Futures Method

	ΔP		ΔP_B		ΔP_G		$\Delta P - \Delta P_B$		$\Delta P - \Delta P_G$	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
POLICY	-41.82		-27.89		0.63		-13.93		-42.45	
	[-2.79]		[-4.07]		[0.79]		[-0.97]		[-2.76]	
FFR		-23.07		-13.67		-0.94		-9.40		-22.13
		[-1.26]		[-1.74]		[-0.72]		[-0.51]		[-1.15]
Constant	37.75	36.50	6.45	5.56	-0.82	-0.75				
	[3.87]	[3.61]	[1.22]	[1.00]	[-1.12]	[-1.04]				
N	149	149	149	149	149	149				
Adj. R^2	0.09	0.02	0.13	0.03	-0.00	0.00				

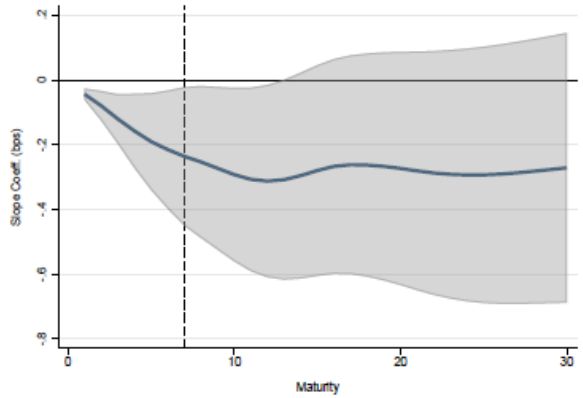
Panel B: Campbell-Shiller PV Identity Method

	Δp		Δp_B		$\Delta p - \Delta p_B$	
	(1)	(2)	(3)	(4)	(5)	(6)
POLICY	-25.25		-25.66		0.41	
	[-2.37]		[-2.46]		[0.03]	
FFR		-19.89		-13.07		-6.82
		[-1.84]		[-1.26]		[-0.51]
Constant	30.27	30.27	9.17	9.17		
	[3.99]	[3.95]	[1.21]	[1.18]		
N	221	221	221	221		
Adj. R^2	0.04	0.03	0.04	0.01		

Short- and long-horizon changes (forwards)



(A) POLICY

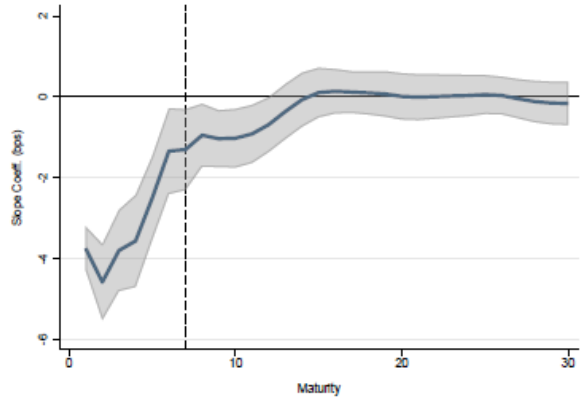


(B) FFR

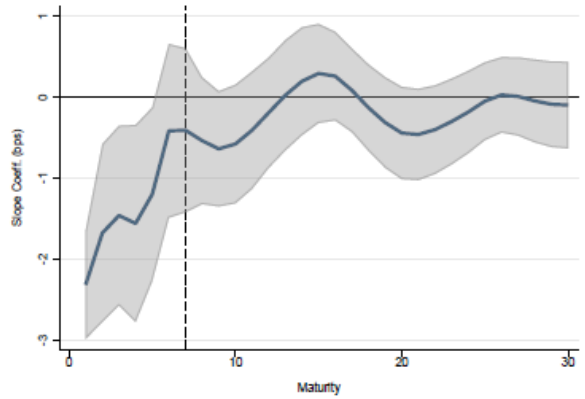
FIGURE 1
Regressing Weighted Zero-Coupon Yield Changes on Monetary Policy Surprises

The blue line plots the slope coefficients from regressing the weighted zero-coupon yield changes $\frac{G_{n,t-}}{P_{t-}}(B_{n,t+} - B_{n,t-})$ on monetary policy surprises for maturities up to 30 years. For $n \leq 7$, we use directly observed dividend futures prices to calculate $G_{n,t-}$; for $n > 7$, we use estimated dividend futures prices under a Gordon growth model following Knox and Vissing-Jorgensen (2022). The monetary policy surprise measures include the policy news shock from Nakamura and Steinsson (2018) as updated by Acosta (2023) (POLICY) and the unexpected changes in the target Federal funds rates (FFR). Black dash line indicates the 7-year maturity. The gray area represents the 95% confidence interval.

Short- and long-horizon changes



(A) POLICY



(B) FFR

FIGURE 2

Regressing Weighted Forward Rate Changes on Monetary Policy Surprises

The blue line plots the slope coefficients from regressing the weighted forward rate changes $\rho^{n-1}(f_{n,t-} - f_{n,t+})$ on the monetary policy surprises for maturities up to 30 years. The monetary policy surprise measures include the policy news shock from Nakamura and Steinsson (2018) as updated by Acosta (2023) (POLICY) and the unexpected changes in the target Federal funds rates (FFR). Black dash line indicates the 7-year maturity. The gray area represents the 95% confidence interval.

High-Frequency responses (Stock index)

The first four columns report the OLS estimates of regressing the 30-minute-window log returns of S&P 500 futures around scheduled FOMC announcements on monetary surprise measures. The monetary surprise measures include the unadjusted monetary policy surprises from Bauer and Swanson (2023a) (MPS), residuals from regressing MPS on six macro and financial variables ($MPS^{\perp}$), the policy shocks from Nakamura and Steinsson (2018) (POLICY), and the unexpected changes in the target Federal funds rates (FFR). All shocks are standardized to have unit standard deviations. The next four columns use the implied price changes based on the 30-minute-window yield responses as the dependent variable. Yield responses on unobserved maturities are interpolated with a step function. The last four columns test the difference between slope coefficients. All dependent variables are quoted in basis points. We report the t-statistics calculated using heteroskedasticity-robust standard errors in brackets. The sample period runs from February 1994 to September 2019 for MPS and $MPS^{\perp}$ and from February 1995 to September 2019 for POLICY and FFR.

	Δp^{HF}				Δp_B^{HF}				$\Delta p^{HF} - \Delta p_B^{HF}$			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
MPS	-26.47				-36.63				10.16			
	[-6.51]				[-5.84]				[1.31]			
$MPS^{\perp}$		-28.71				-31.86				3.15		
		[-6.62]				[-5.99]				[0.42]		
POLICY			-23.05				-36.31				13.25	
			[-5.17]				[-6.16]				[1.72]	
FFR				-13.68				-7.91				-5.76
				[-2.42]				[-2.02]				[-0.76]
Constant	-2.17	-2.17	-2.54	-1.64	2.29	2.29	0.15	1.58				
	[-0.62]	[-0.64]	[-0.71]	[-0.42]	[0.51]	[0.49]	[0.03]	[0.30]				
N	208	208	200	200	208	208	200	200				
Adj.R^2	0.22	0.25	0.17	0.06	0.24	0.18	0.24	0.01				

Regressing actual price changes on implied price changes

This table reports the results of regressing actual price changes of S&P 500 market index on implied price changes. Columns (1) and (3) use ΔP as dependent variables and ΔP_B as independent variables. The remaining columns use Δp as dependent variables and Δp_B as independent variables. All variables are quoted in basis points. We report the t-statistics calculated using heteroskedasticity-robust standard errors in brackets. "Scheduled" and "Unscheduled" use scheduled and unscheduled FOMC announcements, respectively. "Post-1994" uses the sample period running from February 1994 to December 2022. "All" uses the sample period running from February 1988 to December 2022.

	Daily					High-Frequency		
	Scheduled				Unscheduled	Scheduled		Unscheduled
	Post-1994		All			Post-1994	All	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
ΔP_B	0.15		0.15					
	[0.66]		[0.66]					
Δp_B		-0.09		-0.02	-0.16	0.23	0.24	-0.76
		[-0.78]		[-0.17]	[-0.81]	[4.29]	[4.62]	[-1.18]
Constant	32.46	28.36	32.46	24.29	42.13	-2.69	-2.01	19.28
	[3.19]	[3.81]	[3.19]	[3.73]	[2.11]	[-0.73]	[-0.68]	[1.41]
N	151	231	151	284	55	208	262	61
Adj. R^2	-0.00	0.00	-0.00	-0.00	0.00	0.09	0.09	0.11

Short-rate expectations and term premia (BCEI)

The first two columns report the results from regressing implied price changes induced by changes in short rate expectations from BCEI, $\Delta P_{B,s}$ in Panel A and $\Delta p_{B,s}$ in Panel B, on monetary surprise measures. The monetary surprise measures include the policy shocks from Nakamura and Steinsson (2018) (POLICY) and the unexpected changes in the target Federal funds rates (FFR). Both shocks are standardized to have unit standard deviations. Columns (3) and (4) use the implied price changes induced by changes in term premium, $\Delta P_{B,\lambda}$ in Panel A and $\Delta p_{B,\theta}$ in Panel B, as the dependent variable. All dependent variables are quoted in basis points. We report the t-statistics calculated using heteroskedasticity-robust standard errors in brackets. The sample period runs from November 2002 to September 2022 in Panel A and from February 1995 to September 2022 in Panel B.

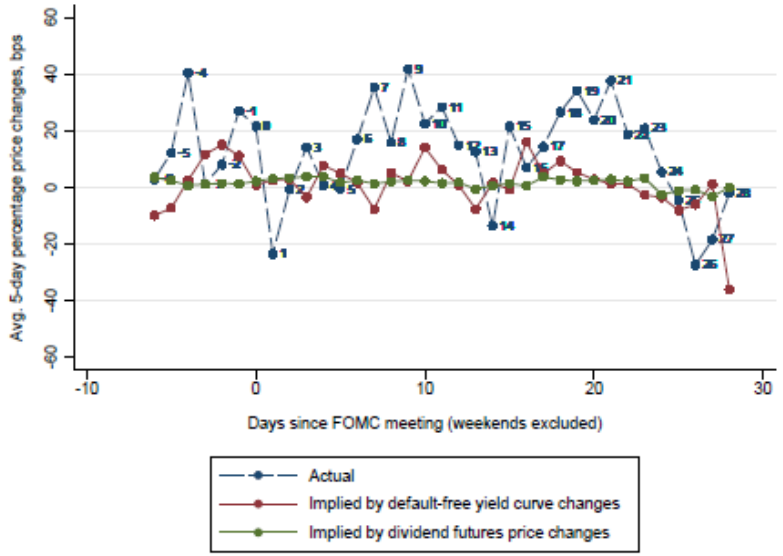
	Short Rate		Term Premium	
	(1)	(2)	(3)	(4)
A. Dividend Futures Method				
POLICY	-14.19		-13.70	
	[-2.85]		[-1.41]	
FFR		-1.38		-12.29
		[-0.23]		[-1.11]
Constant	5.64	5.00	0.81	0.56
	[2.02]	[1.64]	[0.13]	[0.09]
N	149	149	149	149
Adj. R^2	0.12	-0.01	0.02	0.02
B. Campbell-Shiller PV Identity Method				
POLICY	-10.88		-14.78	
	[-3.35]		[-1.23]	
FFR		1.70		-14.76
		[0.39]		[-1.22]
Constant	5.47	5.47	3.70	3.70
	[2.12]	[2.04]	[0.46]	[0.46]
N	221	221	221	221
Adj. R^2	0.07	-0.00	0.01	0.01

Short-rate expectations and term premia (BCFF)

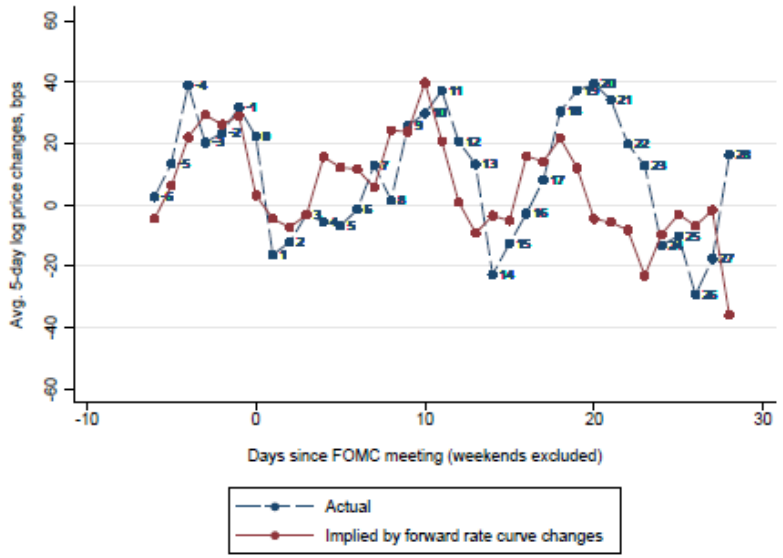
The first two columns report the results from regressing implied price changes induced by changes in short-rate expectations from BCFF, $\Delta P_{B,s}$ in Panel A and $\Delta p_{B,s}$ in Panel B, on monetary surprise measures. The monetary surprise measures include the policy shocks from Nakamura and Steinsson (2018) (POLICY) and the unexpected changes in the target Federal funds rates (FFR). Both shocks are standardized to have unit standard deviations. Columns (3) and (4) use the implied price changes induced by changes in term premium, $\Delta P_{B,\lambda}$ in Panel A and $\Delta p_{B,\theta}$ in Panel B, as the dependent variable. All dependent variables are quoted in basis points. We report the t-statistics calculated using heteroskedasticity-robust standard errors in brackets. The sample period runs from November 2002 to September 2022 in Panel A and from February 1995 to September 2022 in Panel B.

	Short Rate		Term Premium	
	(1)	(2)	(3)	(4)
A. Dividend Futures Method				
POLICY	-18.59		-9.30	
	[-3.67]		[-0.97]	
FFR		-4.94		-8.73
		[-0.73]		[-0.77]
Constant	11.58	10.84	-5.13	-5.28
	[4.00]	[3.36]	[-0.83]	[-0.86]
N	149	149	149	149
Adj. R^2	0.19	0.01	0.01	0.00
B. Campbell-Shiller PV Identity Method				
POLICY	-13.42		-12.24	
	[-3.80]		[-1.05]	
FFR		-2.35		-10.72
		[-0.57]		[-0.92]
Constant	9.54	9.54	-0.37	-0.37
	[4.20]	[3.91]	[-0.05]	[-0.05]
N	221	221	221	221
Adj. R^2	0.13	-0.00	0.01	0.00

Price changes over the FOMC cycle



(A) Dividend futures method



(B) Campbell-Shiller present-value identity method

Price changes over the FOMC cycle

This table reports the coefficients from regressing actual price changes and implied price changes induced by yield curve changes on FOMC cycle dummies. In Panel A, the independent variables are a dummy that equals to 1 in week 0 (days -1 to 3), 2 (days 9 to 13), and 4 (days 19 to 23) in FOMC cycle time and a constant. In Panel B, we include separate dummies for week 0, 2, and 4 in FOMC cycle time and a constant as the independent variables. All dependent variables are quoted in basis points. We report the t-statistics calculated using heteroskedasticity-robust standard errors in brackets. The sample period runs from October 2002 to December 2022 for the dividend futures method and from January 1994 to December 2022 for the Campbell-Shiller present-value identity method, respectively.

	Dividend Futures					Campbell-Shiller PV		
	ΔP	ΔP_B	ΔP_G	$\Delta P - \Delta P_B$	$\Delta P - \Delta P_G$	Δp	Δp_B	$\Delta p - \Delta p_B$
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
A. Even weeks								
Week 0, 2, 4	4.63	1.99	-0.13	2.64	4.76	7.56	5.23	2.33
	[1.34]	[1.36]	[-0.52]	[0.63]	[1.38]	[2.73]	[2.09]	[0.56]
Constant	1.37	-0.80	0.45	2.16	0.92	-0.85	-1.50	0.65
	[0.60]	[-0.83]	[2.59]	[0.79]	[0.41]	[-0.47]	[-0.90]	[0.24]
N	4639	4639	4639	4639	4639	7054	7054	7054
Adj. R^2	0.00	0.00	-0.00	-0.00	0.00	0.00	0.00	-0.00
B. Week by week								
Week 0	3.47	3.78	-0.27	-0.31	3.75	8.15	7.98	0.17
	[0.66]	[1.68]	[-0.77]	[-0.05]	[0.71]	[2.02]	[2.15]	[0.03]
Week 2	7.81	0.30	0.01	7.51	7.80	7.00	2.63	4.38
	[1.60]	[0.14]	[0.03]	[1.24]	[1.61]	[1.75]	[0.74]	[0.72]
Week 4	2.63	1.77	-0.12	0.86	2.75	7.49	4.88	2.61
	[0.53]	[0.85]	[-0.34]	[0.14]	[0.56]	[1.82]	[1.34]	[0.43]
Constant	1.37	-0.80	0.45	2.16	0.92	-0.85	-1.50	0.65
	[0.60]	[-0.83]	[2.59]	[0.79]	[0.41]	[-0.47]	[-0.90]	[0.24]
N	4639	4639	4639	4639	4639	7054	7054	7054
Adj. R^2	-0.00	0.00	-0.00	-0.00	-0.00	0.00	0.00	-0.00

Table of Contents

Conclusion

- Using a model-free method based on dividend futures data, stock market responses to unexpected monetary policy actions are mostly explained by changes in the default-free yield curve, not the equity premium.

- This method does not require the assumption that stock market index returns in FOMC announcement windows obey the same VAR dynamics for returns, the dividend-price ratio, and interest rates as on any other day of the year.

- The effects of monetary policy on the stock market are of a more conventional nature than it seemed in BK. A conventional yield curve channel is sufficient to explain the stock market reaction, which not necessarily extend to monetary policy surprises outside of FOMC announcement windows

Table of Contents

Comments

- Positive points:
  - Model-free method
  - New kind of data used (Dividend futures)
  - Different perspective (and conclusions)
- Negative points:
  - Results are mostly not statistically significant
  - Extend to other kinds of FOMC communications