The Pre-Announcement Drift in China: Government Meetings and Macro Announcements

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Joint work with Qing Peng from SAIF

Motivations

- Announcement "premia" surrounding FOMC meetings
  - Large FOMC-day return in U.S. equity (Savor and Wilson 2013).
  - Large pre-FOMC drift in U.S. and global equities (Lucca and Moench 2015).
  - Premium for heightened uncertainty (Hu, Pan, Wang, and Zhu 2022).
- The unique hold of the Fed on global equities (Brusa, Savor, and Wilson 2020)
  - No announcement "premia" for other central banks.
- What is the FOMC equivalent in China?
  - **Top government meetings.**
  - **Macro announcements:** M2 and total social financing (Guo, Jia, and Sun 2023).
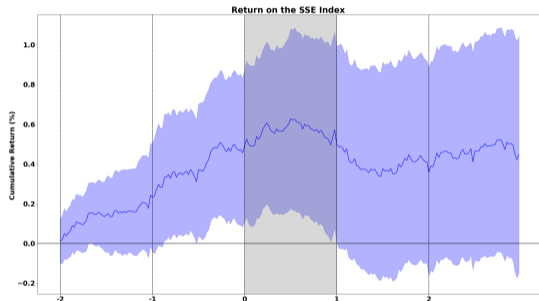
The Pre-Govt Drift in Chinese Equity

Return on the SSE Index
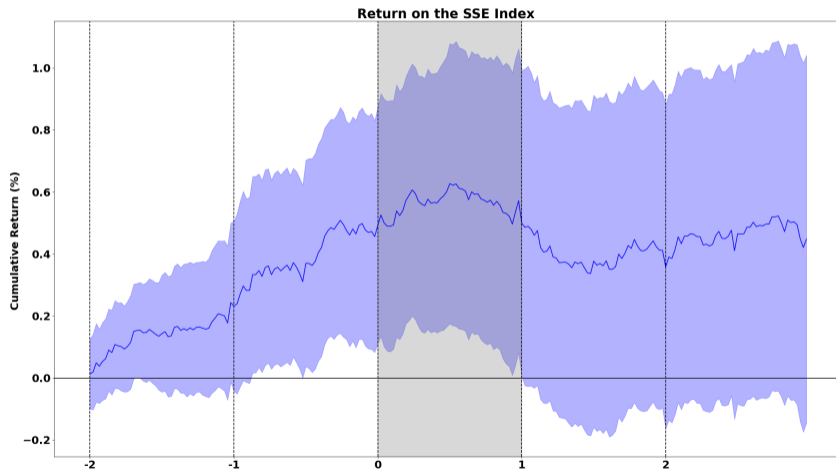
A Parallel: Top Govt Meetings in China and FOMC Meetings in the U.S.
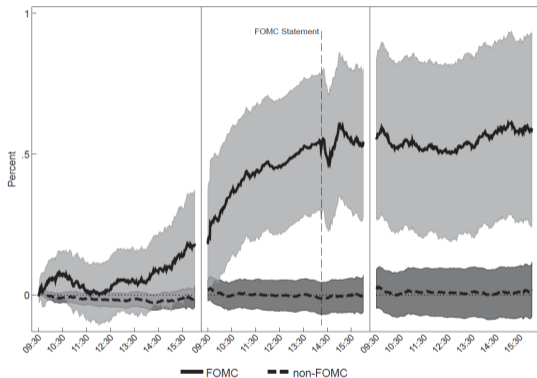
**Pre-FOMC Drift in SPX**
(Lucca and Moench 2015)

Pre-Govt Drift in SSE

Main Findings: The Pre-Announcement Drift in China

- The unique importance of top government meetings for the aggregate stock market
  - We document a significant pre-Govt drift on the Shanghai Stock Exchange Index (SSE) of 42 basis points over the 48-hour window before the announcement of top government meetings.
  - By contrast, we do not observe a significant pre-M2 return on SSE.
- The M2 announcements, which include money supply and data on credit and liquidity, are found to be more important for small-cap firms and growth firms
  - We document a significant pre-M2 drift on the small-minus-big portfolio (SMB) of 36 basis points.
  - And a significant pre-M2 drift on the value-minus-growth portfolio (HML) of -26 basis points.

The Cumulative Effect of the Pre-Announcement Returns
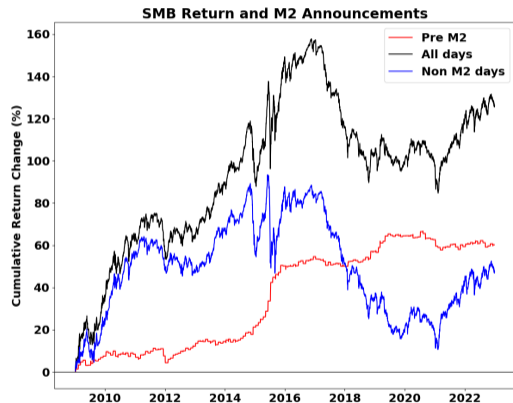
Main Findings: Two Distinct Drivers of the Pre-Govt Returns

- Under high market volatility, the heightened uncertainty channel dominates:
  - The pre-Govt drift averages to 91 basis points.
  - Institution investors significantly over-sell during the accumulation period as the heightened uncertainty builds up.
  - And then over-buy two days before the announcements as the heightened uncertainty begins to resolve.
- Under low market volatility, evidence of the information channel:
  - The pre-Govt drift disappears.
  - The pre-Govt returns are predictive of the post-Govt returns.

China's Government Meetings and Macro Announcements

- Pre-scheduled Government Meetings
  - Five-Yearly Party Congress and its Plenums (全国代表大会/中央全会)
  - Two Sessions (全国两会)
- Unscheduled Government Meetings
  - Politburo Meetings (中央政治局会议)
  - Other Meetings: Central Economic Work Conference (中央经济工作会议), State Council routine meeting (国务院常务会议), Central Financial and Economic Affairs Commission meeting (中央财经委员会会议) and Financial Stability and Development Committee meeting (金融稳定发展委员会会议)
- Macro Announcements
  - M2 Announcements: Monthly release by the PBOC. Reported within the same statement is a collection of data reflecting the broad market credit and liquidity condition (e.g., M2 money supply, RMB loans, and total social financing).

Background on China's Top Government Meetings

Baidu Search Intensity Before Politburo Meetings and M2 announcements
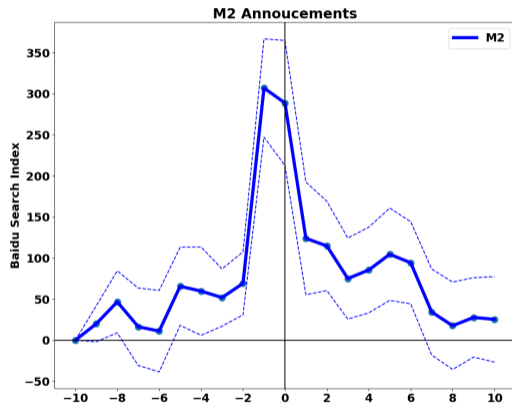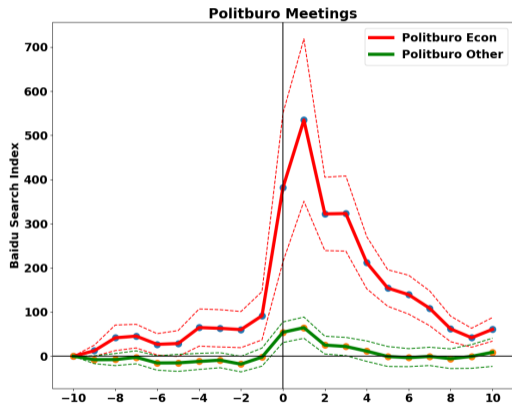
Summary Statistics of Daily Returns on Chinese Equity

| | **Daily SSE Ret (%)** | | | | | | **Daily SMB Returns (%)** | | | |
Day	Obs	Mean	Std	Min	Max	Day	Obs	Mean	Std	Min	Max
GOV -7	95	-0.15	1.42	-6.62	4.44	GOV -7	95	0.17	1.00	-2.53	2.84
GOV -6	95	0.10	1.32	-4.14	5.45	GOV -6	95	0.10	1.15	-4.42	5.92
GOV -5	95	-0.39	1.38	-5.27	3.24	GOV -5	95	0.10	1.10	-3.59	5.33
GOV -4	95	0.10	1.55	-8.86	3.06	GOV -4	95	-0.19	1.02	-4.46	1.82
GOV -3	95	0.07	1.16	-3.10	4.17	GOV -3	95	0.13	0.99	-4.36	2.27
GOV -2	95	0.21	1.28	-3.69	4.22	GOV -2	95	-0.04	1.16	-4.84	3.30
GOV -1	95	0.21	1.26	-3.72	5.94	GOV -1	95	0.02	1.07	-4.15	2.42
GOV 0	95	0.10	1.47	-4.67	5.45	GOV 0	95	0.17	1.08	-3.20	2.48
GOV +1	95	-0.13	1.20	-5.58	2.66	GOV +1	95	0.19	0.81	-4.18	1.94
M2 -7	168	0.25	1.27	-5.95	4.22	M2 -7	168	0.01	1.06	-6.88	2.65
M2 -6	168	0.21	1.36	-7.31	5.94	M2 -6	168	-0.12	1.27	-9.08	2.06
M2 -5	168	0.10	1.38	-5.36	5.55	M2 -5	168	0.05	1.34	-7.58	5.33
M2 -4	168	0.09	1.35	-6.08	4.65	M2 -4	168	0.13	0.93	-3.54	2.95
M2 -3	168	0.02	1.44	-5.75	5.60	M2 -3	168	0.17	0.83	-2.55	2.43
M2 -2	168	0.09	1.17	-4.14	4.44	M2 -2	168	0.15	0.91	-2.77	3.17
M2 -1	168	0.07	1.11	-4.50	4.80	M2 -1	168	0.21	0.87	-2.40	5.92
M2 0	168	0.13	1.19	-3.61	3.48	M2 0	168	0.11	1.09	-6.03	5.33
M2 +1	168	-0.09	1.26	-5.29	3.18	M2 +1	168	0.03	1.03	-4.28	2.01
Full sample	3403	0.02	1.36	-8.87	5.94	Full sample	3403	0.04	1.00	-9.08	5.92

Pre-Announcement Returns in China

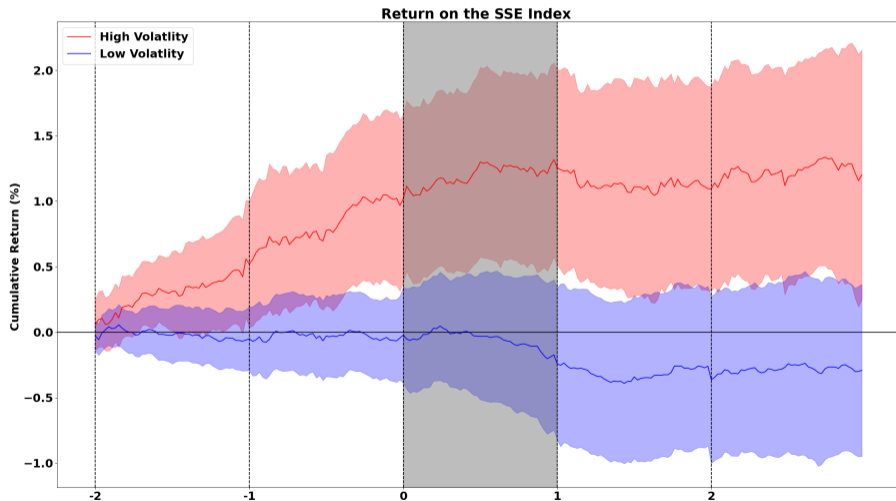|	Two-Day SSE Returns (%) Before the Announcements								
	Obs	Mean	TStat	Std	Min	25%	50%	75%	Max
Govt Meetings	95	**0.42**	2.22	1.85	-6.07	-0.74	0.26	1.33	5.53
(Excl. Top/Bottom 1%)	93	**0.44**	2.53	1.66	-3.98	-0.74	0.26	1.32	4.88
Two Sessions	14	0.07	0.13	2.16	-3.98	-1.06	-0.15	0.94	4.88
Party Congress & Plenums	22	0.37	1.27	1.37	-1.58	-0.51	0.24	1.01	3.42
Politburo Econ	59	**0.52**	2.06	1.94	-6.07	-0.63	0.29	1.57	5.53
Politburo Other	91	-0.04	-0.19	2.01	-11.21	-0.85	0.21	1.11	4.01
GDP	56	-0.06	-0.24	1.81	-6.82	-0.90	0.07	1.07	3.88
M2	168	0.16	1.29	1.60	-4.36	-0.75	0.14	0.98	7.04
CPI	168	-0.02	-0.13	1.99	-7.38	-0.97	-0.06	1.08	5.86
Trade	161	0.08	0.46	2.08	-6.09	-1.18	0.02	1.23	10.05
PMI	168	-0.05	-0.36	1.86	-9.93	-0.83	0.06	0.94	4.36
VAI	154	-0.01	-0.11	1.67	-6.82	-0.96	-0.05	0.98	4.79
Retail Sales	142	-0.03	-0.21	1.68	-6.82	-0.96	-0.10	0.98	4.79
Other	2331	-0.01	-0.12	1.99	-16.81	-0.96	0.05	1.07	9.91

The Premium for Heightened Uncertainty

- The two-risk model of Hu, Pan, Wang, and Zhu (2022):
  - The total market impact of the announcement is given by $\sigma\epsilon$, where ϵ is the news shock, and σ captures the impact uncertainty.
  - Depending on the realization of σ, the same news ϵ can have substantially different market impact.
- Central to the model is the presence of this second risk σ.
  - Its variability is determined by its own volatility, given by a parameter λ.
  - When λ is large, the impact uncertainty is large, giving rise to heightened uncertainty in anticipation of a major announcement.
- Each risk carries its own premium and impacts the price dynamics differently.
  - When λ is sufficiently high, the impact uncertainty carries a higher risk premium in equilibrium than the news risk.
  - Owing to the timing difference of their respective rise and resolution, the premiums for the two risks are realized over different time windows.

Accumulation of Heightened Uncertainty and its Subsequent Resolution

	Accumulation					Pre-Ann		Ann
Day	-7	-6	-5	-4	-3	-2	-1	0
Uncertainty	Builds up					σ Resolves		ϵ Resolves
Pricing	Down					Up		
Institutions	Sell					Buy		

Return on the SSE Index

Conditioning on Accumulation-Period Market Volatility

	Sorted by Accumulation-Period Volatility							Sorted by Accumulation-Period iVIX					
	Govt		M2		Non-Event			Govt		M2		Non-Event	
	High	Low	High	Low	High	Low		High	Low	High	Low	High	Low
Accumulation Period [Day -7 to -4]							**Accumulation Period**						
SSE Ret	-0.72 [-1.27]	0.03 [0.13]	0.63 [1.58]	**0.67** [3.74]	-0.13 [-1.25]	**0.11** [2.29]	SSE Ret	-0.94 [-1.33]	-0.18 [-0.80]	0.37 [0.65]	0.29 [0.96]	-0.12 [-0.88]	0.08 [1.20]
Vol (sorting var)	1.28	0.60	1.28	0.60	1.26	0.62	iVIX (sorting var)	28.43	17.37	28.77	17.77	28.10	17.70
Pre-Announcement Period [Day -2 to -1]							**Pre-Announcement Period**						
SSE Ret	**0.91** [2.74]	-0.06 [-0.34]	0.11 [0.53]	0.21 [1.55]	-0.04 [-0.62]	0.03 [0.82]	SSE Ret	**1.03** [3.27]	0.22 [1.20]	0.21 [0.73]	0.07 [0.37]	-0.08 [-0.80]	-0.03 [-0.53]
Vol	1.18	0.65	1.15	0.63	1.21	0.67	iVIX	27.72	17.50	28.28	17.91	27.83	17.98
Post-Announcement Period [Day 0]							**Post-Announcement Period**						
SSE Ret	0.33 [1.54]	-0.13 [-0.63]	**0.33** [2.07]	-0.06 [-0.73]	-0.05 [-0.98]	0.01 [0.30]	SSE Ret	0.22 [1.26]	-0.07 [-0.23]	0.02 [0.11]	0.001 [0.01]	-0.03 [-0.38]	0.01 [0.16]
Vol	1.15	0.74	1.13	0.66	1.22	0.67	iVIX	27.96	17.91	27.95	17.98	27.78	18.05

Pre-Govt Returns and Market Volatility

SSE Market Return and Govt Meetings
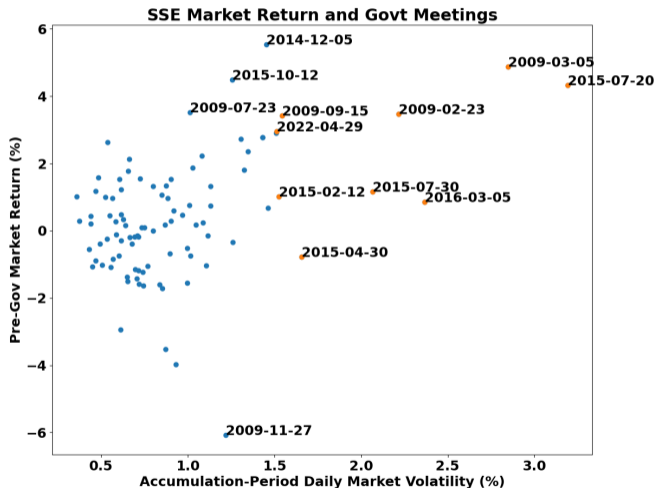
Resolution of Uncertainty Accompanying the Pre-Govt Drift

	High Volatility		Low Volatility		High-Low	
	ΔVol	ΔiVIX	ΔVol	ΔiVIX	ΔVol	ΔiVIX
GOV[-7]	0.01	-0.15	-0.005	0.03	0.01	-0.22
	[0.16]	[-0.48]	[-0.17]	[0.23]	[0.08]	[-0.66]
GOV[-6]	0.08	0.14	-0.003	-0.21	0.09	0.3
	[1.25]	[0.31]	[-0.12]	[-1.59]	[1.26]	[0.66]
GOV[-5]	0.07	0.71	-0.02	-0.18	0.09	0.93*
	[0.98]	[1.56]	[-0.77]	[-1.51]	[1.14]	[1.96]
GOV[-4]	-0.05	-0.54*	-0.01	-0.22*	-0.04	-0.31
	[-0.64]	[-1.76]	[-0.44]	[-1.90]	[-0.44]	[-0.95]
GOV[-3]	0.08	0.34	-0.003	0.04	0.08	0.31
	[0.86]	[0.67]	[-0.13]	[0.38]	[0.89]	[0.59]
GOV[-2]	-0.24***	-0.65***	0.06*	-0.01	-0.30***	-0.63**
	[-3.08]	[-2.89]	[1.81]	[-0.09]	[-3.53]	[-2.52]
GOV[-1]	0.12	-0.47	0.02	0.07	0.1	-0.52*
	[1.31]	[-1.61]	[0.49]	[0.69]	[1.07]	[-1.72]
GOV[0]	-0.09	0.47**	0.08	0.63***	-0.16	-0.14
	[-1.02]	[2.06]	[1.57]	[2.94]	[-1.64]	[-0.44]
Obs	3396	1910	3396	1910	3396	1910

Institution Trading in the Presence of Heightened Uncertainty

- The emergence of heightened uncertainty triggered by the impending government meetings induces risk-averse investors to
  - stay away or hedge their equity positions during the accumulation period,
  - and then come back to the market as the impact uncertainty gets resolved.
- We use the publicly available data from Wind to examine institution trading
  - Wind categorizes stock transactions into retail and institution by trade size.
  - Aggregating the stock-level transaction into index-level for the SSE index, we obtain a time-series of index-level buy-sell imbalances (BSI).
 - For ease of interpretation, we further normalize the BSI so that it is zero mean with a standard deviation of one.

# Normalized Institutional Buy-Sell Imbalance (BSI)
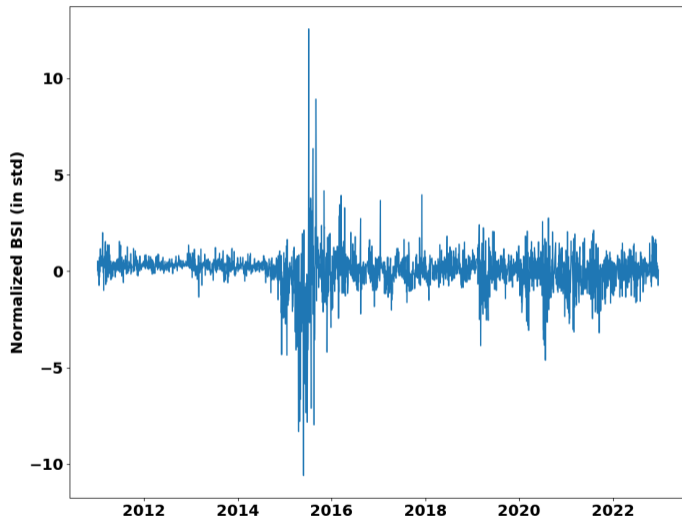
Institutional Trading Before Government Meetings

	High Volatility		Low Volatility		High-Low	
	Return	BSI	Return	BSI	Return	BSI
GOV[-7]	-0.25 [-0.89]	-0.16 [-0.99]	-0.08 [-0.81]	-0.03 [-0.32]	-0.15 [-0.52]	-0.12 [-0.64]
GOV[-6]	0.23 [1.04]	0.08 [0.37]	0.03 [0.20]	0.05 [0.47]	0.21 [0.81]	0.04 [0.16]
GOV[-5]	-0.78*** [-3.32]	-0.56*** [-2.62]	-0.09 [-0.61]	-0.07 [-0.72]	-0.69** [-2.48]	-0.48** [-2.05]
GOV[-4]	0.11 [0.37]	-0.003 [-0.01]	0.06 [0.52]	0.11 [0.96]	0.04 [0.13]	-0.1 [-0.40]
GOV[-3]	0.16 [0.70]	-0.21 [-0.77]	-0.06 [-0.60]	-0.01 [-0.16]	0.21 [0.86]	-0.19 [-0.67]
GOV[-2]	0.43* [1.86]	0.37*** [2.58]	-0.07 [-0.51]	0.12 [1.37]	0.49* [1.86]	0.25 [1.55]
GOV[-1]	0.30 [1.22]	-0.002 [-0.01]	0.09 [0.90]	0.04 [0.54]	0.19 [0.73]	-0.05 [-0.21]
GOV[0]	0.15 [0.79]	0.02 [0.18]	0.03 [0.12]	0.04 [0.39]	0.12 [0.40]	-0.01 [-0.08]
Obs	3402	2909	3402	2909	3402	2909

Institution Buy-Sell Imbalance
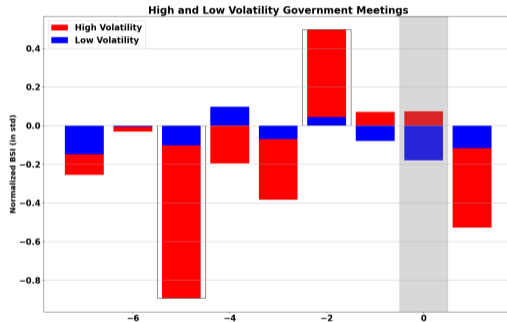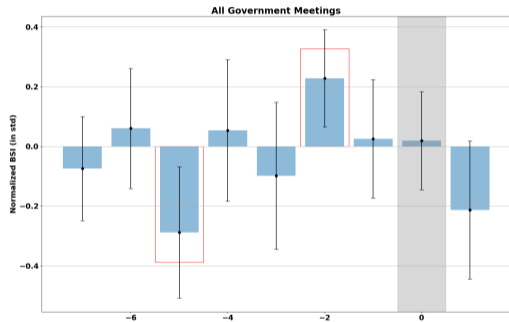
Institution Buy-Sell Imbalance
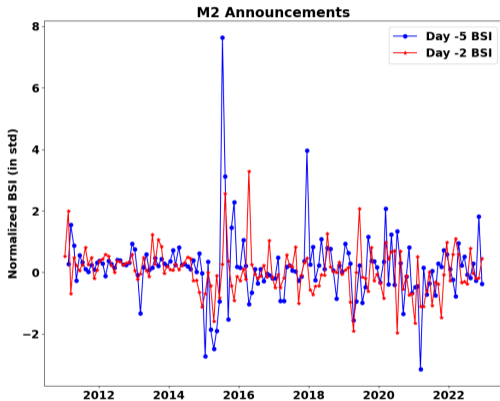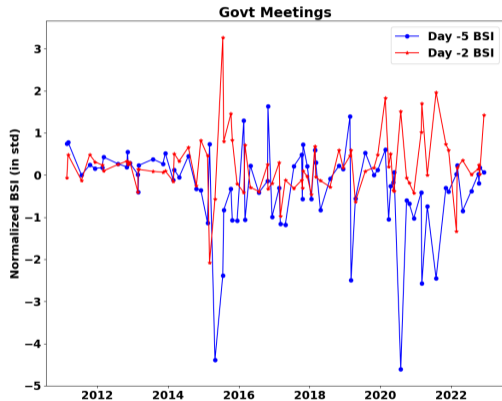
Accumulation-Period BSI Predicts the Pre-Announcement BSI and Return

	BSI_{t-2}				$SSE\ Return_{t-2}$			
BSI_{t-5}	0.17***	0.19***	0.19***	0.18***	0.07	0.09*	0.09*	0.07
	[3.30]	[3.47]	[3.46]	[3.30]	[1.57]	[1.88]	[1.87]	[1.58]
GOV[0]		0.17**				0.03		
		[2.35]				[0.25]		
GOV[0]*BSI_{t-5}		-0.40***				-0.46***		
		[-3.36]				[-3.46]		
HGOV[0]			0.22*				0.17	
			[1.81]				[0.69]	
HGOV[0]*BSI_{t-5}			-0.45***				-0.53***	
			[-2.94]				[-2.92]	
LGOV[0]				0.12				-0.09
				[1.42]				[-0.64]
LGOV[0]*BSI_{t-5}				-0.18				-0.13
				[-0.79]				[-0.62]
Const	0	-0.01	-0.01	0	0	0	0	0
	[-0.03]	[-0.36]	[-0.27]	[-0.12]	[0.13]	[-0.06]	[-0.11]	[0.17]
R-sqrd (%)	3.04	3.72	3.72	3.09	0.31	0.71	0.78	0.32
Obs	2913	2913	2913	2913	2913	2913	2913	2913

The Information Channel: Positive Auto Correlation

- Conditioning on low market volatility over the accumulation period, the pre-Govt drift disappears.
- We document instead an information channel, where the pre-Govt returns are predictive of the post-Govt returns.

	Dependent Variable: Post-Govt SSE Return		
	Full Sample	Low Volatility	High Volatility
Const	0.08	-0.1	0.38**
	[0.58]	[-0.59]	[2.20]
Pre-Govt Return	0.04	**0.29****	-0.06
	[0.41]	**[2.13]**	[-0.57]
R-squared (%)	0.3	5.24	0.81
N	95	47	47

Pre-Govt and Pre-M2 Returns

	Pre-Announcement Returns								
	Govt Meetings					M2 Announcement			
	SSE	MKT	SMB	HML		SSE	MKT	SMB	HML
Mean	**0.42**	**0.47**	-0.02	-0.05	Mean	0.16	0.16	**0.36**	**-0.26**
	[2.22]	**[2.39]**	[-0.09]	[-0.37]		[1.29]	[1.34]	**[3.25]**	**[-3.09]**
Regressing Pre-Announcement Returns on Accumulation-Period Volatility									
	SSE	MKT	SMB	HML		SSE	MKT	SMB	HML
Const	-1.20***	-1.21***	-1.02**	0.54*	Const	-0.25	-0.12	-0.86***	0.43
	[-4.00]	[-3.75]	[-2.21]	[1.79]		[-0.72]	[-0.37]	[-2.76]	[1.57]
Accu vol	1.73***	1.80***	1.06*	-0.63	Accu vol	0.44	0.3	1.29***	-0.73**
	[6.72]	[5.70]	[1.77]	[-1.59]		[1.03]	[0.75]	[3.60]	[-2.31]
R-sqrd	22%	22%	9%	6%	R-sqrd	2%	1%	25%	14%
Obs	95	95	95	95	Obs	168	168	168	168

Conclusions

- We document, for the first time, the existence of a positive pre-Govt drift, which occurs before the announcement of top government meetings in China, a finding that parallels the pre-FOMC drift in the U.S.
- We identify two distinct drivers of the pre-Govt returns conditioning on market volatility. The heightened uncertainty channel dominates under high volatility, while the information channel is present under low volatility.
- We do not find significant pre-announcement drift in the overall stock market before other announcements, demonstrating the unique importance of top government meetings in China.
- Overall, our paper confirms the conventional wisdom that China is a top-down economy with policy-driven markets.