Chinese Asset Managers' Monetary Policy Forecasts and Fund Performance

MANAGEMENT SCIENCE
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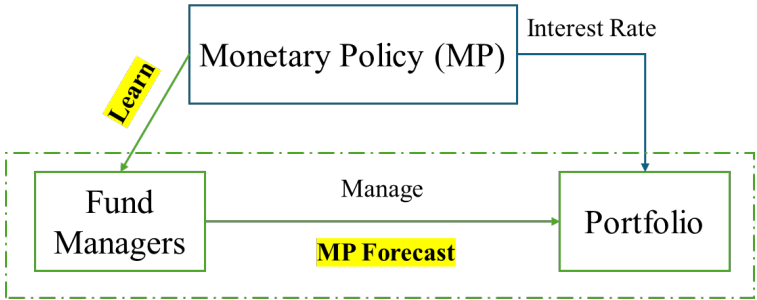
Outline

Framework



Two cases: transparent/opaque monetary policy.

Q1: MP forecast is right?

Q2: Behave based on MP forecast?

Q3: Correct MP forecast promote performance?

Background and Motivation

- As professional investors, fund managers have strong incentives to care about MP.
  1. MP directly shifts the supply of and demand for credit.
  2. MP affects risk-free rates.
- Fund managers' skill of forecast MP shifts is vital especially when MP is opaque.
  1. Their skill of forecast is supposed to enhance fund performance.
  2. However, it's hard to specify managers' expectations of monetary policy.
- This paper tries to figure out how does skill in forecasting MP based on fund disclosure affect professional investors' performance.

Research Questions

Q1: **Whether consensus forecast of institutional investors can predict MP?**

Q2: **Whether institutional investors behave based on their forecast?**

Q3: **Whether correct MP forecast associates with superior fund performance?**

Contributions

- The literature on MP expectations:
  - Past Studies: consider the MP expectations of the professional forecasters or dealers.
  - Extension: provide MP expectation for institutional investors who engage in markets.
- The literature on management skill of funds:
  - Past Studies: infer managers' skill from their investment choices and results.
  - Extension: we infer managers' skill from their predictive statements on MP.
- We provide evidence on MP expectations for China.

Data Description

- Sample Period: 2008Q3 to 2020Q4.
  - Mutual fund managers were asked by the CSRC to discuss their expectations for near-term conditions in **the real economy and financial markets**.
- **Market outlook subsections** of the quarterly, semiannual, and annual reports of the *China Securities Journal*.
- We obtain reference information on the **characteristics of both mutual funds and their managers** from Wind and RESSET.

Quantifying Monetary Policy Forecasts 1

- Step 1: Divide each report in the market outlook sections into **semantic units**.
- Step 2: Keep the **semantic units** that are related to **China's monetary policy.**
  - Judgmentally select a dictionary of words and phrases about MP:
    1. keywords: interest rate and required reserve ratio that indicate monetary policy.
    2. directional words: increase, raise. + composite words: rate cut, monetary loosening.
    3. scaly words: strongly, potentially, no, not that indicate the probability or magnitude.
  - A semantic unit about future MP changes: **keyword + directional/composite word.**
  - Construct a list of disqualifying words and phrases, such as **Federal Reserve** and **ECB**.

2014年下半年以来权益市场持续大幅上涨，虽然对经济稳定有正面作用，但需要关注其泡沫化风险和对实体经济的资金分流，防止过犹不及。[我们认为二季度**货币政策**将延续**宽松**]，[**存款准备金率**等政策仍有**下调**空间]。

Quantifying Monetary Policy Forecasts 2

- Step 3: Assign each semantic unit with a score within the set [-1, 1].
  - positive value: tightening monetary policy.
  - zero: unchanged monetary policy.
  - negative value: easing monetary policy.
- Step 4 Compute $E_t^i(\Delta mp_{t+1})$: mean score across semantic units within each report.
  - Define $E_t(\Delta mp_{t+1}) = \frac{\sum_{i=1}^{N_t} E_t^i(\Delta mp_{t+1})}{N_t}$ as the **consensus forecast** of fund managers.
  - **Interest rates** and **required reserve ratio** are the key instruments investors look to.
  - Define Δmp_t takes value from {-1,0,1} on **interest rates** and **required reserve ratio**.

1. Consensus Forecast and Monetary Policy Index

- Regress the **monetary policy** Δmp_{t+1} on the **consensus forecast** $E_t(\Delta mp_{t+1})$.
- **Monetary policy** is well-predicted by the **consensus forecast**.

Table 1. Predicting Shifts in Monetary Policy, Ordered Probit

	Consensus forecast		Taylor rule		IFR		All	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
$E_t(\Delta mp_{t+1})$	4.62***	3.06**					4.57***	3.68***
	(4.51)	(2.51)					(3.66)	(2.64)
Δy_t			34.53***	14.57			20.87	13.16
			(2.99)	(1.18)			(1.62)	(0.94)
$\Delta \pi_t$			22.71	0.49			−3.24	−7.57
			(1.22)	(0.02)			(−0.15)	(−0.36)
$F^{12}_{t,6} - i_{t,6}$					1.20	0.76	2.57	2.23
					(0.93)	(0.54)	(1.64)	(1.39)
Δmp_t		0.84**		1.18***		1.40***		0.57
		(2.28)		(3.27)		(4.73)		(1.31)
Pseudo R^2	0.28	0.34	0.17	0.28	0.01	0.27	0.35	0.37
Observations	49	49	49	49	49	49	49	49

一致预期正向预测未来货币政策变动

一致预期的解释力较强，优于泰勒规则、隐含远期利率

2. MP Forecast and Fund Behavior

- Case: MMFs' MP forecast and their maturity adjustment.
- Theory: When interest rates raise, they should shorten the maturity of investment.
  - Reasons: Duration; Liquidity risk.

Table 2. Holding Changes in Response to Beliefs in Monetary Policy

	期限在0-30日之间的资产占比					
	(1)	(2)	(3)	(4)	(5)	(6)
	(0, 30)	(30, 60)	(0, 60)	(60, 90)	(90,)	(60,)
Forecast score	2.551***	0.230	2.781***	−0.899*	−1.882***	−2.781***
	(4.09)	(0.67)	(4.74)	(−1.81)	(−3.70)	(−4.74)
Lag log(size)	−1.955***	0.084	−1.871***	0.888**	0.983**	1.871***
	(−3.15)	(0.25)	(−3.62)	(2.42)	(2.31)	(3.62)
Lag log(age)	−2.046*	0.948	−1.098	4.060***	−2.962***	1.098
	(−1.70)	(1.64)	(−1.07)	(5.36)	(−3.40)	(1.07)
Lag inflow	−0.065	0.023	−0.042	−0.077	0.118**	0.042
	(−0.52)	(0.26)	(−0.36)	(−0.98)	(2.19)	(0.36)
Expense ratio	−0.089***	−0.060***	−0.149***	0.085***	0.064***	0.149***
	(−6.97)	(−2.94)	(−5.52)	(3.45)	(7.02)	(5.52)
Fund fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Observations	2,337	2,337	2,337	2,337	2,337	2,337
Adjusted R^2	0.042	0.006	0.044	0.058	0.024	0.044

预期货币政策紧缩时，MMF增加对短期资产的持有

预期货币政策紧缩时，MMF减少对长期资产的持有

3. MP Forecast Correctness and Fund Performance

- $correct_t^i$: equal to 1 if the fund's forecast is in the same direction as the shift of MP.
- Estimate a regression separately for each type:
  $perform_{t+1}^i = a + c_1 parti_t^i + c_2 parti_t^i \times correct_t^i + X_t^i + FE^i + \epsilon_{t+1}^i$

Table 3. MP Forecast Skill and Fund Performance: MMFs and Bond Funds

	MMFs			Bond funds		
	(1) ExRet	(2) CT	(3) CTMA	(4) AlphaCAPM	(5) AlphaFF	(6) CT
Participated	0.015	−0.133	−0.131**	0.515***	0.500***	0.925
	(0.34)	(−0.99)	(−2.15)	(3.21)	(3.12)	(1.51)
Participated and correct	−0.150***	0.069	0.254***	0.875***	1.151***	2.349**
	(−4.34)	(0.50)	(3.20)	(3.98)	(5.07)	(2.56)
Lag log(size)	0.199***	−0.244***	0.015**	0.318***	0.225**	−1.670***
	(10.40)	(−5.75)	(2.21)	(3.72)	(2.42)	(−7.92)
Lag log(age)	−0.202***	−0.354***	0.133***	−0.808***	−1.035***	−3.661***
	(−4.93)	(−5.15)	(7.90)	(−5.81)	(−7.27)	(−13.20)
Lag inflow	0.001	−0.008	0.004*	0.000	0.000	0.001***
	(0.64)	(−1.35)	(1.67)	(1.20)	(0.38)	(3.09)

可能由利率市场化改革驱动

对债券型基金，正确的MP预期能提升其未来的能力

Further Researches and Results

1. MP Forecast Skill and Fund Flow:
   - Historical correctness is positively correlated with the accumulative fund inflow rate.
2. Interest Rate Liberalization(2013 Q2) and Fund Performance:
   - MMFs: After interest rate liberalization, **benchmark interest rates** (policy interest rates) became less relevant to the **market interest rates** (related with MMFs index return).
3. Characterizing Superior Forecasters:
   - Large size, high management fees, a Ph.D. degree is related to higher forecast accuracy.

Ideas

1. Other cases(fiscal policy, other countries) and tools(LLM).
2. Study what factors drive fund managers' MP forecast formation and correctness.
   - MP variables, MP clarity...
3. Study the relationship between MP forecast and market response or policy efficiency.