Discussion of

"Watching Paint Dry? Monetary Policy Conditions and Balance Sheet Policies" by B. Mojon, P. Rungcharoenkitkul, D. Xia

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Beyond the Shadow Rate

Motivation

- Policy rates alone fail to capture stance in QE/QT world.
- Shadow rates revert mechanically to policy rate once ELB lifts ⇒ no longer informative

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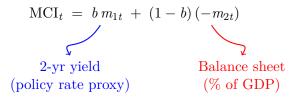
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Contribution

■ New Monetary Policy Condition Index (MCI):



⇒ Unified indicator across conventional and unconventional regimes.

Empirical Framework

Methodology

- Weight b estimated in Bayesian VAR with output, inflation, financial conditions (Gibbs sampler + Metropolis-Hastings)
- Identification of shocks via sign restrictions \rightarrow demand, supply, risk aversion, monetary

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Findings

- Prior: $b \approx 0.95$ (calibration) → Posterior: $b \approx 0.81$ ⇒ Balance sheet plays larger role than prior literature suggests
- MCI tracks shadow rate before and at ELB but diverges afterward.
- Historical perspective: QE crucial in post-GFC recovery; pandemic easing supported growth but fueled inflation; post-pandemic conventional tightening partially offset by the large balance sheet

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On the Index

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 - ➤ Rate hikes → short-term rates, lending and expectations (Bernanke & Gertler, 1995; Mishkin, 1996)
 - ► QE/QT → term premia, portfolio balance and reserves + state-dependent, non-linear effects (Krishnamurthy & Vissing-Jorgensen, 2011; D'Amico & Seida, 2023; Wei, 2023)
 - ▶ ∃ "information effects" complicating aggregation (Jarociński & Karadi, 2020).

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 - ▶ ∃ "information effects" complicating aggregation (Jarociński & Karadi, 2020).
- The proposed framework over-aggregates results. Suggestions:
 - ▶ Some of these aspects could be better contextualized
 - \triangleright Explore alternative functional (non-linear) forms for m_t

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On the Index

- Single dimension that ignores
 - ► Composition: longer-duration purchases reduce term premia more strongly (Vayanos & Vila, 2009; Gagnon et al., 2011).
 - ▶ Duration: the maturity mix of Fed/TSY debt holdings shapes yield curve effects (Greenwood, Hanson & Stein, 2015).
 - ► Forward guidance vs QE: affect different parts of the curve (Campbell et al., 2012; Swanson, 2021, Odendahl et al., 2024).
 - Liquidity tools: alter funding conditions beyond balance sheet size (Ihrig et al., 2020; Arslan et al., 2022).

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 - Liquidity tools: alter funding conditions beyond balance sheet size (Ihrig et al., 2020; Arslan et al., 2022).
- Some of these concerns are addressed in Sections 5.2-5.3. However:
 - extensions rely on strong priors how do you calibrate the priors of ε , b_1 , b_2 and b_3 ? or are assumption-driven survey-based B^*
 - not covering forward guidance or heterogeneous facility

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On the VAR framework

Estimation of b

■ Concerns:

- Posterior highly prior-driven, calibration of prior means based on two papers only → it should be better grounded
- ► Flat likelihood → weak identification (Canova & Sala, 2009; Baumeister & Hamilton, 2015)
- ▶ Diffuse prior $\rightarrow b < 0.6$ (MLE): balance sheet almost as important as interest rate

■ Potential solutions:

- ▶ Pre-sample training priors (Doan, Litterman & Sims, 1984)
- Empirical Bayes/marginal likelihood calibration (Giannone, Lenza & Primiceri, 2015; Chan, 2022)
- ▶ Hierarchical shrinkage priors (Giannone, Lenza & Primiceri, 2019)
- ightharpoonup External instruments to discipline prior on b (Stock & Watson, 2018)

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On the VAR framework

Weak inference due to balance sheet

- ▶ Balance sheet only informative post-2008 \Rightarrow short effective sample
- ► Series is highly persistent (near unit root) ⇒ hard to disentangle shocks from slow trends
- ➤ Small sample + persistence ⇒ unstable coefficients, flat likelihood, inference highly sensitive to priors (Inoue & Kilian, 2002; Baumeister & Benati, 2013; Rossi, 2019)

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Endogeneity MCI \iff financial conditions

- \triangleright b is partly estimated from financial variables (FCI).
- ► MCI shocks are then used to explain financial conditions ⇒ simultaneity
- ► Central banks both influence **and react to** financial markets ⇒ causal direction blurred
- ► MCI may embed FCI by construction
- ⇒ Solutions: use external instruments or HFI (Gilchrist & Zakrajšek, 2012; Miranda-Agrippino & Ricco, 2021; Caldara & Herbst, 2019)

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Additional comments

VAR.

- Information effects: MCI shocks may conflate stance with central bank information (Nakamura & Steinsson, 2018; Jarociński & Karadi, 2020)
 - \Rightarrow see comments on HFI and proxies above
- Policy proxy: 2-year yield bundles stance with expectations, might not be super clean policy measure
 - \Rightarrow additional controls for expectations?
- Covid: Do you control for it?
 - ⇒ Covid priors (Lenza & Primiceri, 2022)?

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MCI

- Time variation: very promising \Rightarrow modeling it in the VAR?
- Additional robustness: risk that the MCI replicates the shadow rate pre-ELB and fudges the balance sheet post-ELB ⇒ run VAR with shadow rate and balance sheet separately

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