

# VOLATILITY FINANCIAL CONDITIONS INDEX (VFCI) AND THE BUSINESS CYCLE

---

Tobias Adrian<sup>1</sup>, Matthew DeHaven<sup>2</sup>, Fernando Duarte<sup>2</sup>

September 20, 2023

<sup>1</sup>International Monetary Fund. <sup>2</sup>Brown University.

The views expressed here are the authors' and are not necessarily representative of the views of the International Monetary Fund, its Management, or its Executive Directors.

# REPLICATION OF “BUSINESS CYCLE ANATOMY”

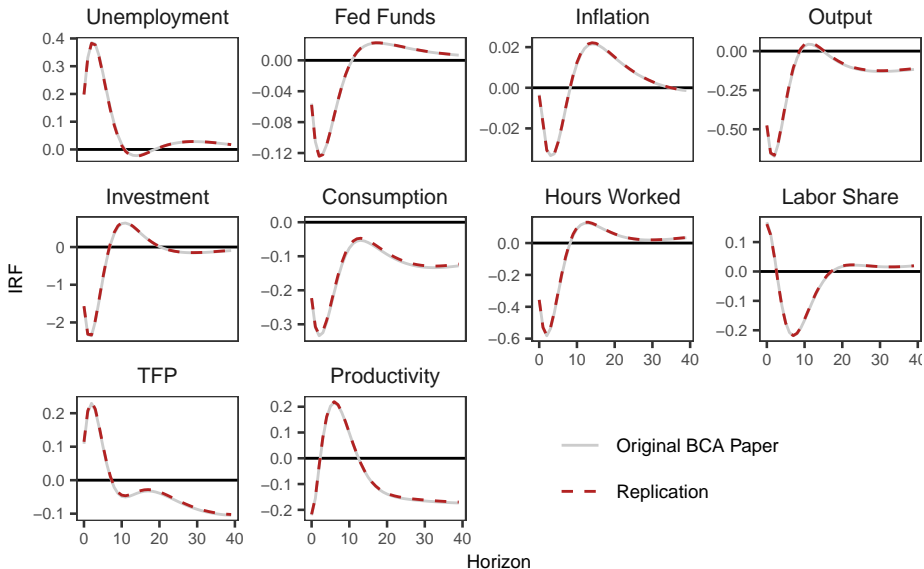
Large VAR with 10 variables

## **Identification scheme:**

Choose the linear combination of empirical shocks that explains the most forecast error variance in a target variable, at a target frequency.

In particular, Angeletos et al. choose to target unemployment at the “business cycle frequency” of  $\frac{2\pi}{32}$  to  $\frac{2\pi}{6}$ , which matches a period of 6 to 32 quarters.

# REPLICATION OF “BUSINESS CYCLE ANATOMY”

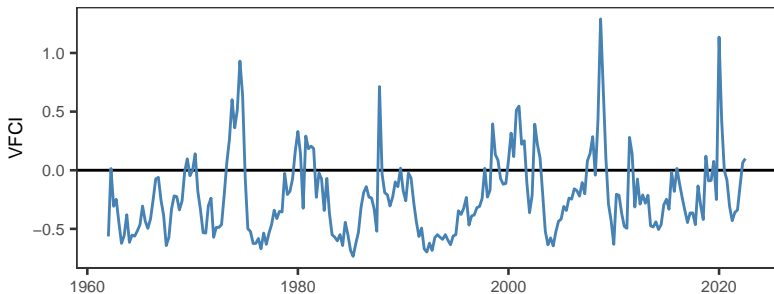


# VOLATILITY FINANCIAL CONDITIONS INDEX (VFCI)

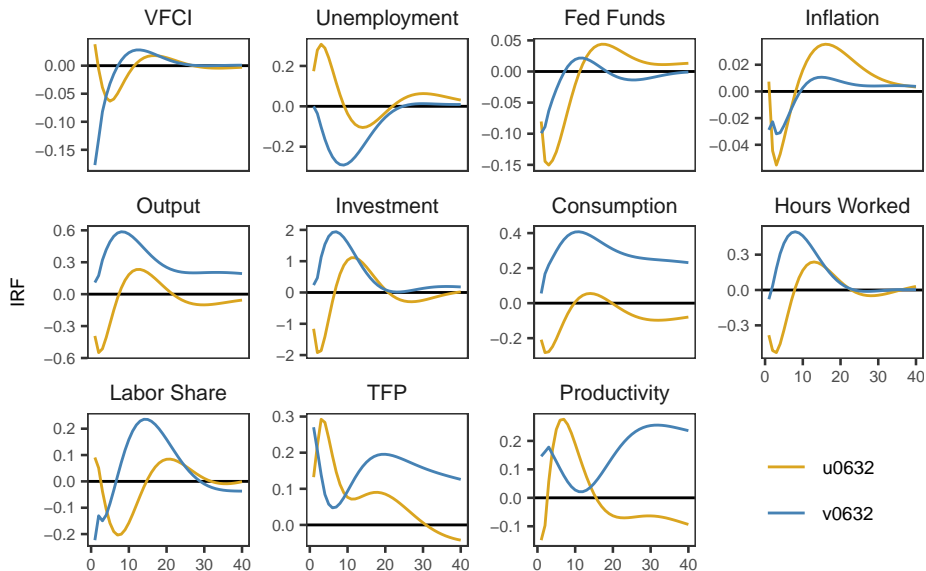
Financial Conditions Indexes usually lack theoretical underpinnings.

- 

- 



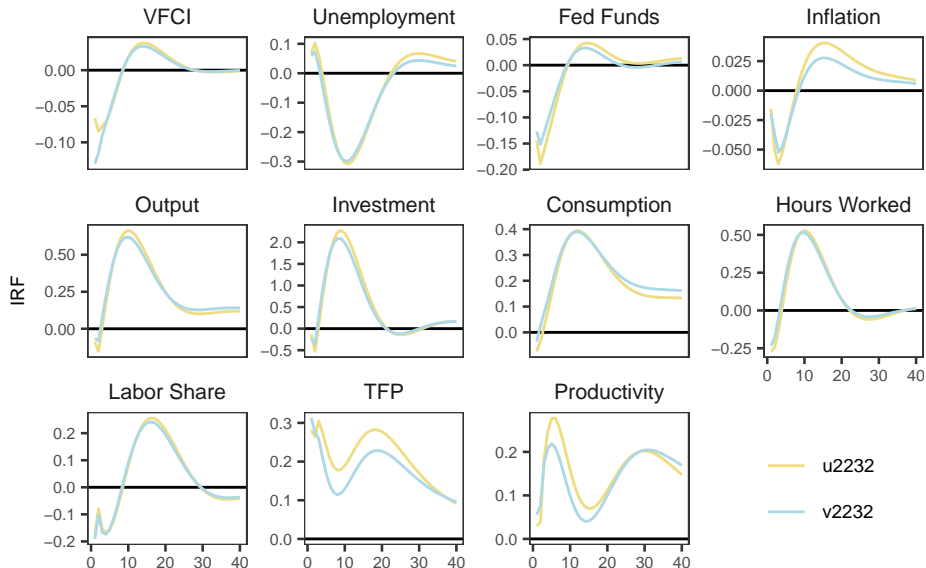
# RESULTS 1 - BOTH TARGET BC (6 - 32 Q)



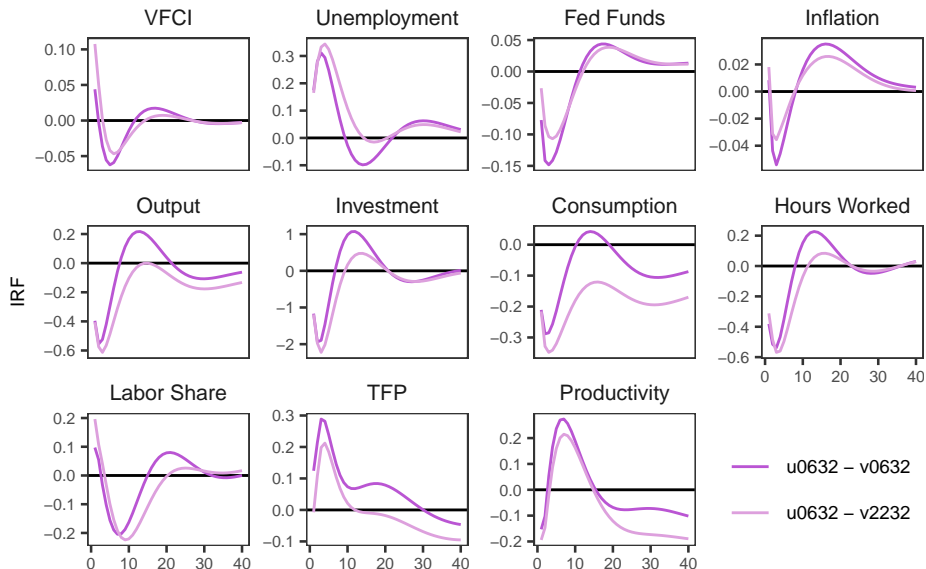
► Differences

► First Differences

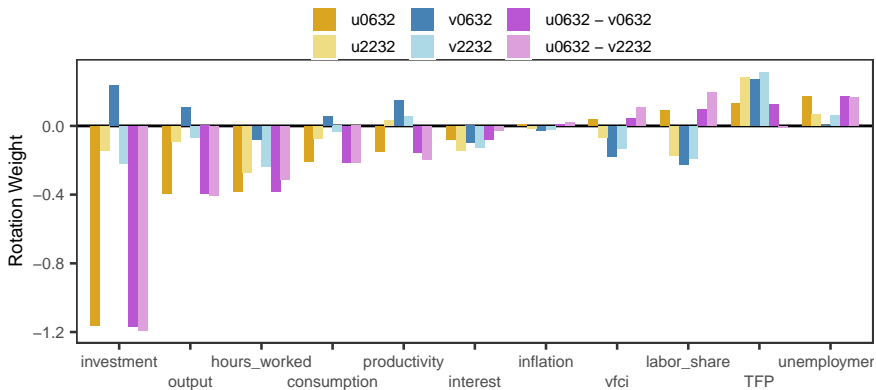
## RESULTS 2 - BOTH TARGET 22 - 32 Q



## RESULTS 3 - RESIDUAL OF MBC

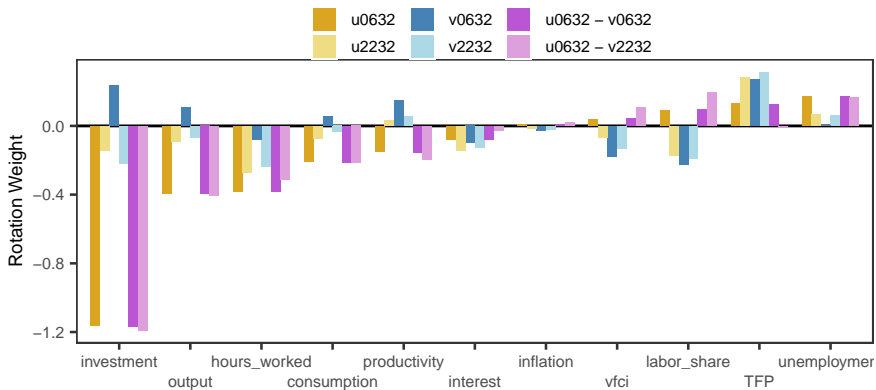


# ROTATION WEIGHTS

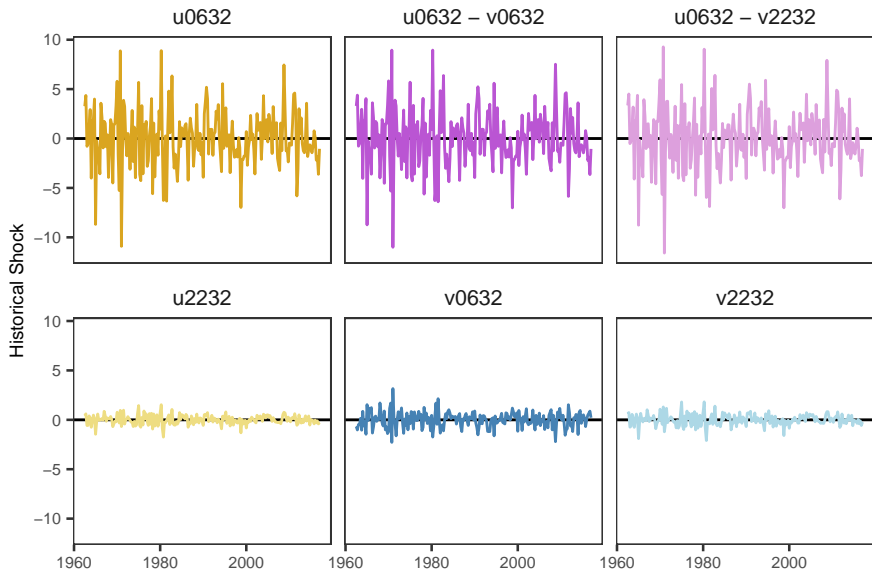




# EMPIRICAL SHOCK WEIGHTS

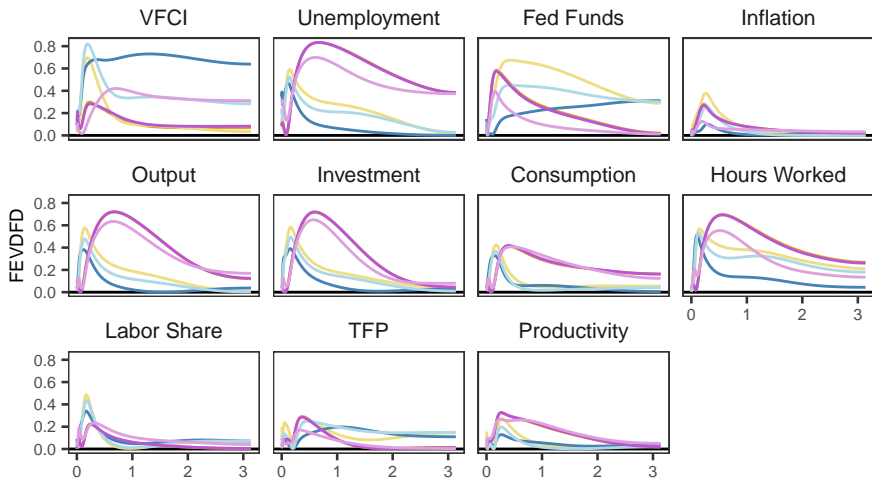


# OTHER - HISTORICAL SHOCKS



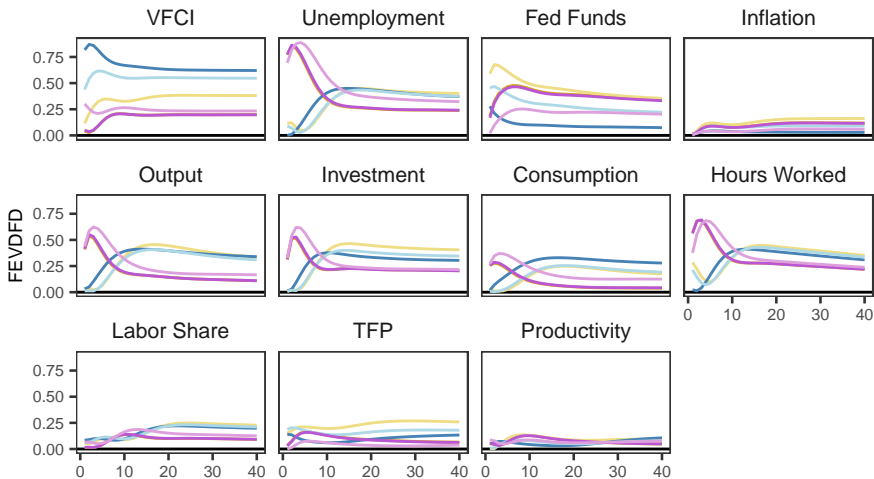
# OTHER - FEVDFD

— u0632 — v0632 — u0632 - v0632  
— u2232 — v2232 — u0632 - v2232



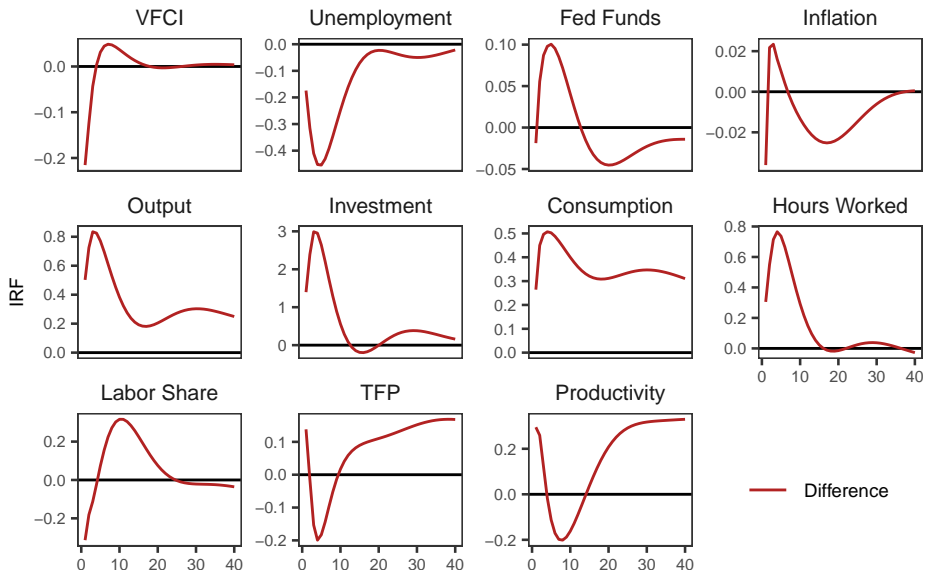
# OTHER - FEVD

— u0632    — v0632    — u0632 - v0632  
— u2232    — v2232    — u0632 - v2232



# APPENDIX

# VFCI AND U, 6 - 32 Q, DIFFERENCES



# VFCI AND U, 6 - 32 Q, FIRST DIFFERENCES

