FINANCIAL CONDITIONS AND THE BUSINESS CYCLE

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MOTIVATION

PREVIEW OF RESULTS

1. Targeting the VFCI matches the Business Cycle
2. ...

OUTLINE

1. Max Variance VAR Identification
2. VFCI construction
3. Targeting VFCI matches the business cycle
4. Changing the horizon of the VAR...

EXPLAIN VAR

VFCI ESTIMATION

Usual model assumptions give an Euler equation which relate

- asset prices, X_t
- future consumption growth, $\ln c_{t+1} - \ln c_t$

through the SDF.

$$\ln c_{t+1} - \ln c_t = \beta X_t + \varepsilon_t \tag{1}$$

$$\text{Var}[\varepsilon_t] = \lambda X_t + \text{Var}[\epsilon_t] \tag{2}$$

VFCI is the log of the unpredictable portion of the variance of eq. (1).

$$\text{VFCI}_t \equiv \ln \text{Var}[\epsilon_t]$$

VFCI ESTIMATION

Usual model assumptions give an Euler equation which relate

- asset prices, X_t
- future consumption growth, $\ln c_{t+2} - \ln c_{t+1}$

through the SDF.

$$\ln c_{t+2} - \ln c_{t+1} = \beta X_t + \varepsilon_t \tag{1}$$

$$\text{Var}[\varepsilon_t] = \lambda X_t + \text{Var}[\epsilon_t] \tag{2}$$

VFCI is the log of the unpredictable portion of the variance of eq. (1).

$$\text{VFCI}_t \equiv \ln \text{Var}[\epsilon_t]$$

Consumption forwarded one more period to align with theory.

VFCI ESTIMATION

Usual model assumptions give an Euler equation which relate

- asset prices, X_t
- future consumption growth, $\ln c_{t+h} - \ln c_{t+1}$

through the SDF.

$$\ln c_{t+h} - \ln c_{t+1} = \beta X_t + \varepsilon_t \tag{1}$$

$$\text{Var}[\varepsilon_t] = \lambda X_t + \text{Var}[\epsilon_t] \tag{2}$$

VFCI is the log of the unpredictable portion of the variance of eq. (1).

$$\text{VFCI}_{t,h} \equiv \ln \text{Var}[\epsilon_t]$$

Can also consider longer forward growth horizons, $h \in [1, \infty)$.

CHOOSING A FORWARD GROWTH HORIZON

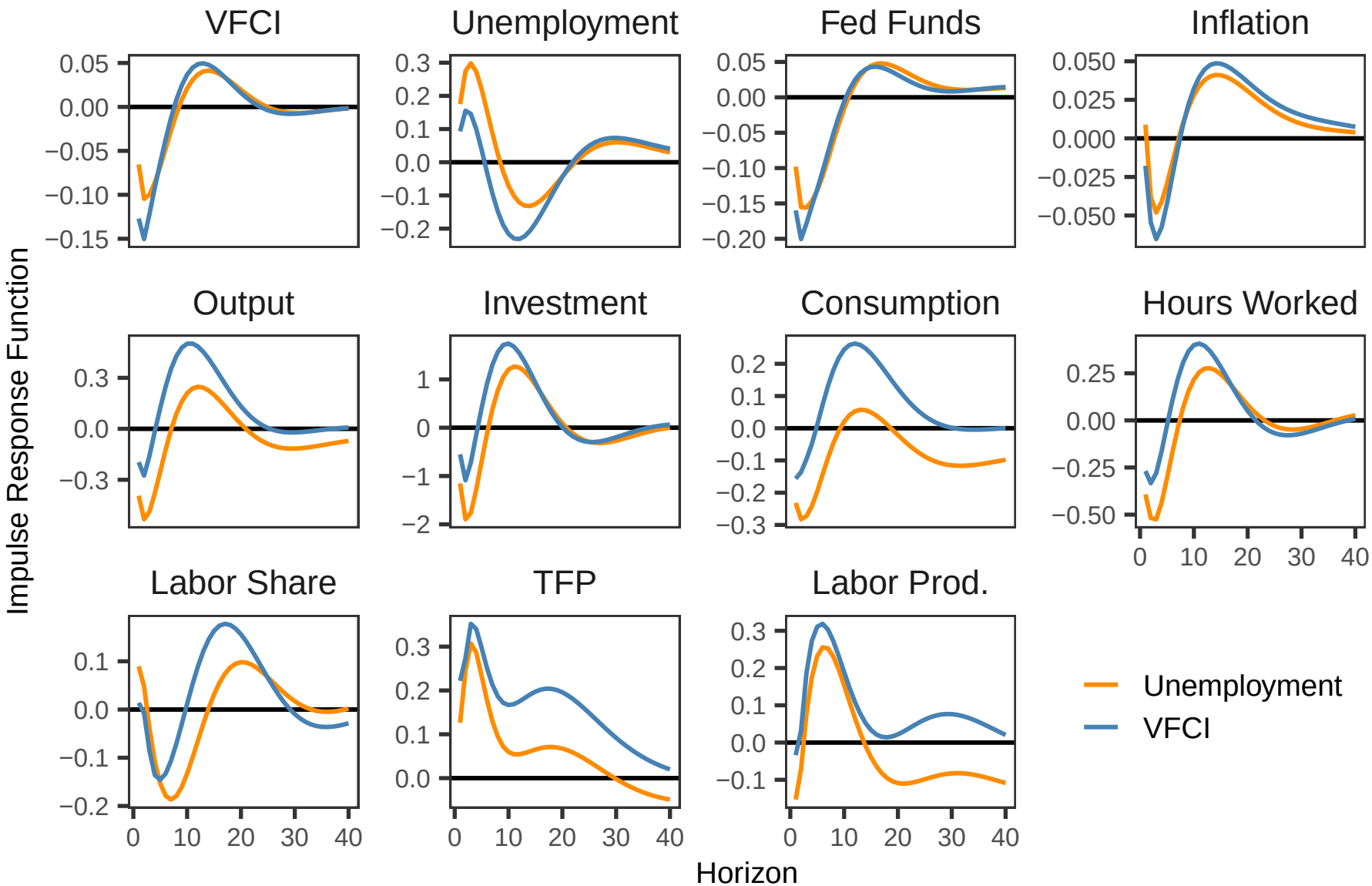
Will use: $\text{VFCI}_{t,10}$

Why?

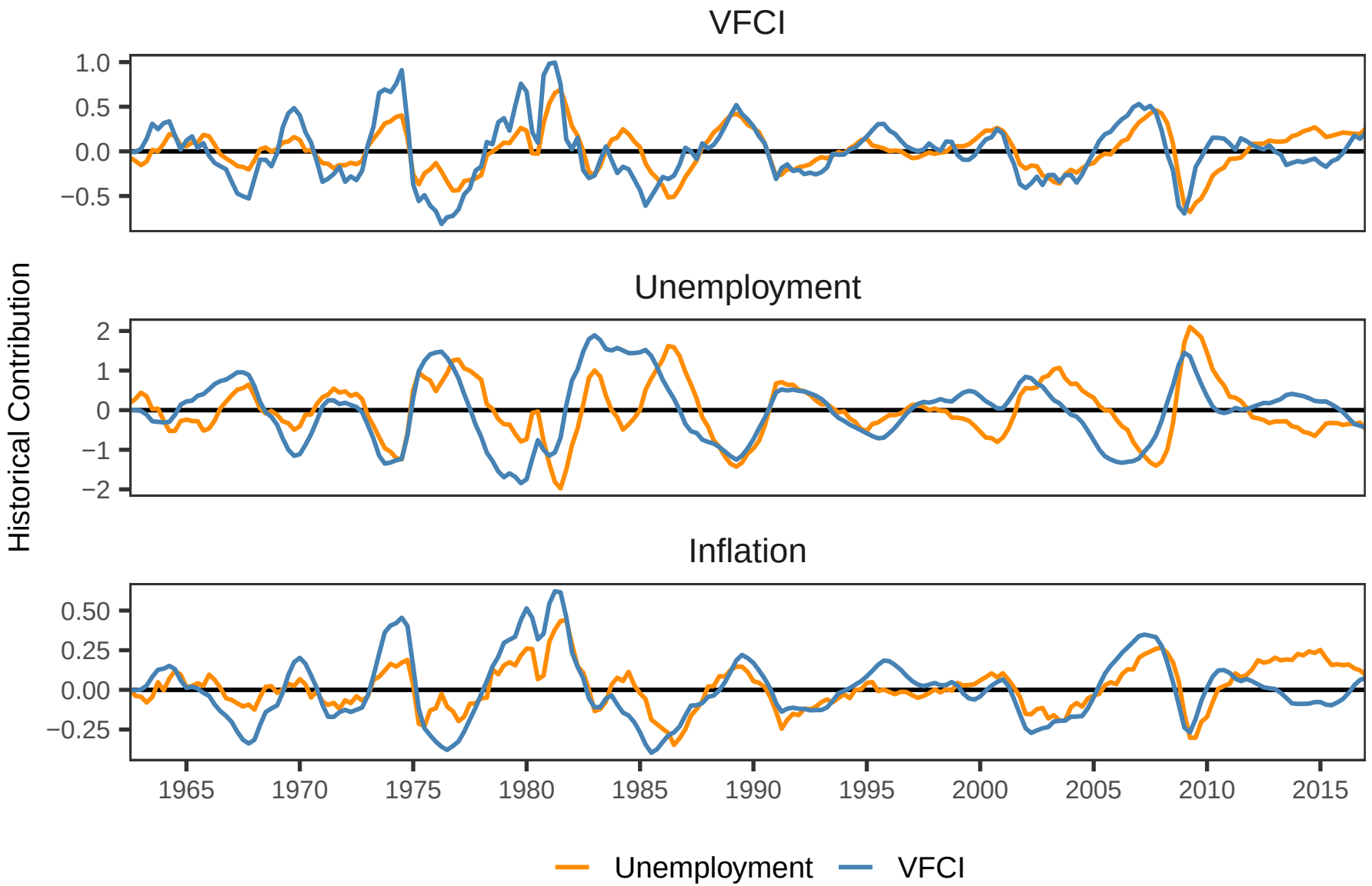
- 10 is in between 0 and 26 quarters (length of the business cycle)
- Creates a good match between targeting either VFCI or unemployment for the…
  - IRF
  - Forecast error variance decompositions
  - Historical shock contributions

Results are robust to choosing similar horizons [8, 12].

TARGETING VFCI MATCHES THE BUSINESS CYCLE



TARGETING VFCI MATCHES THE BUSINESS CYCLE



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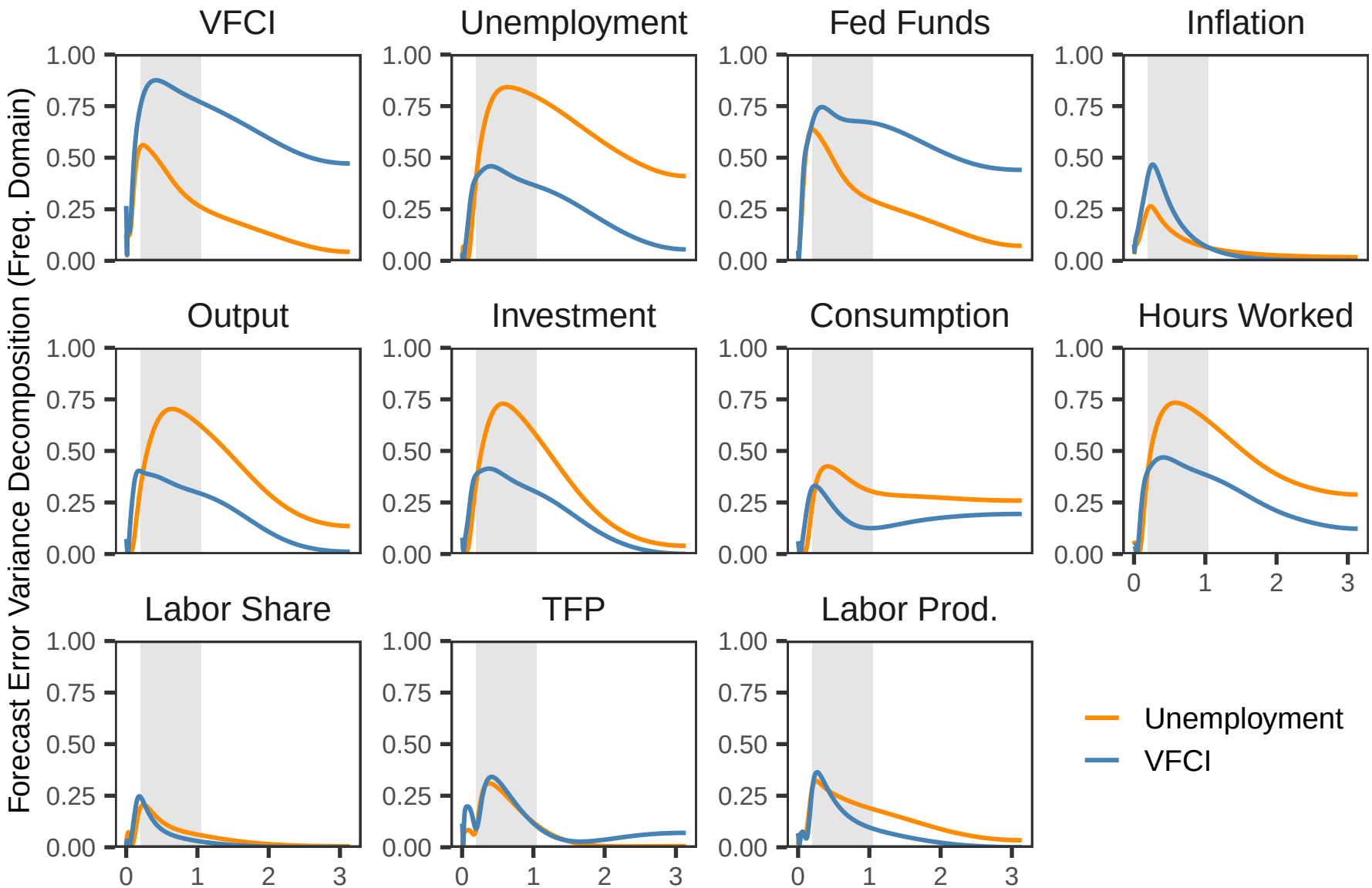

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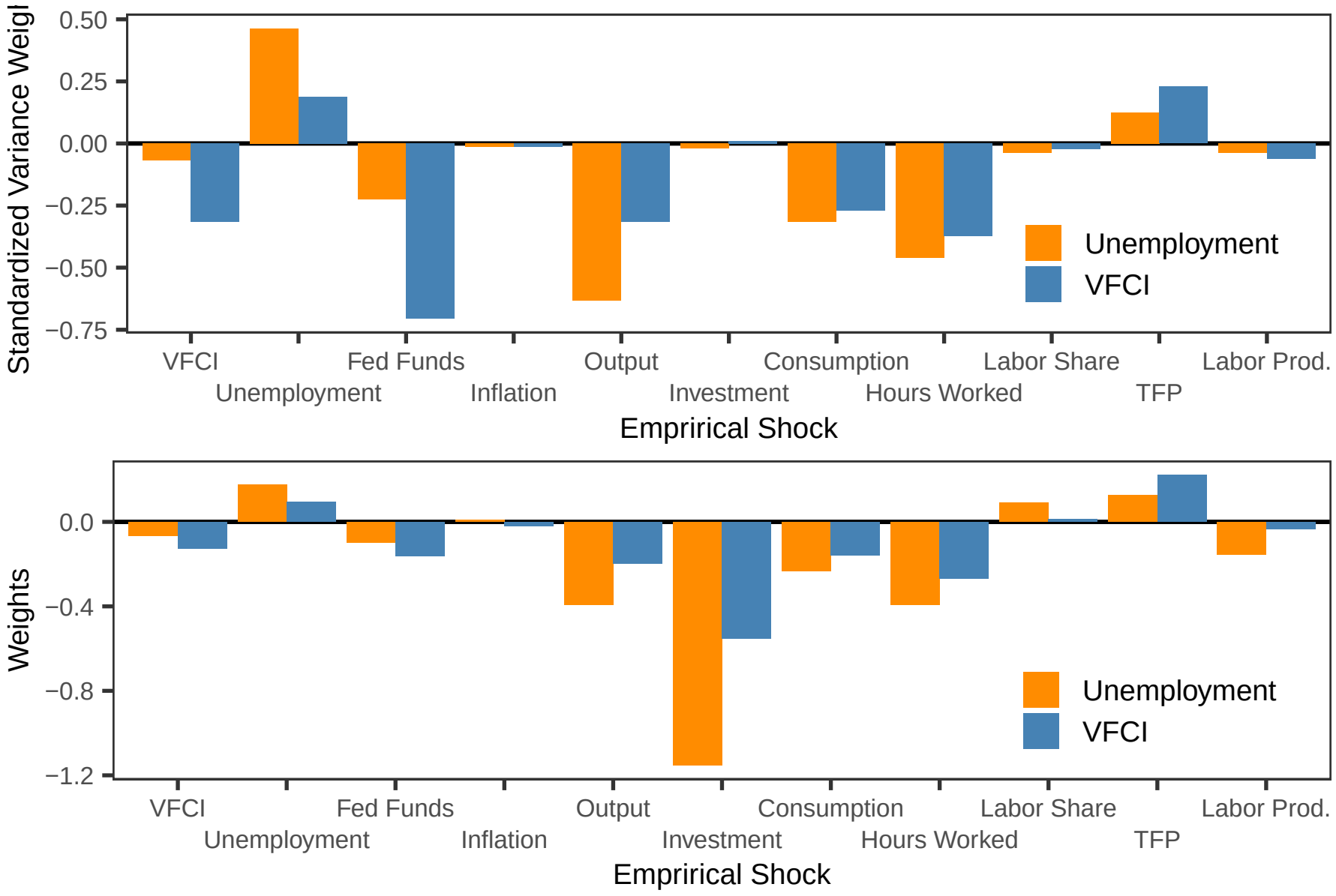
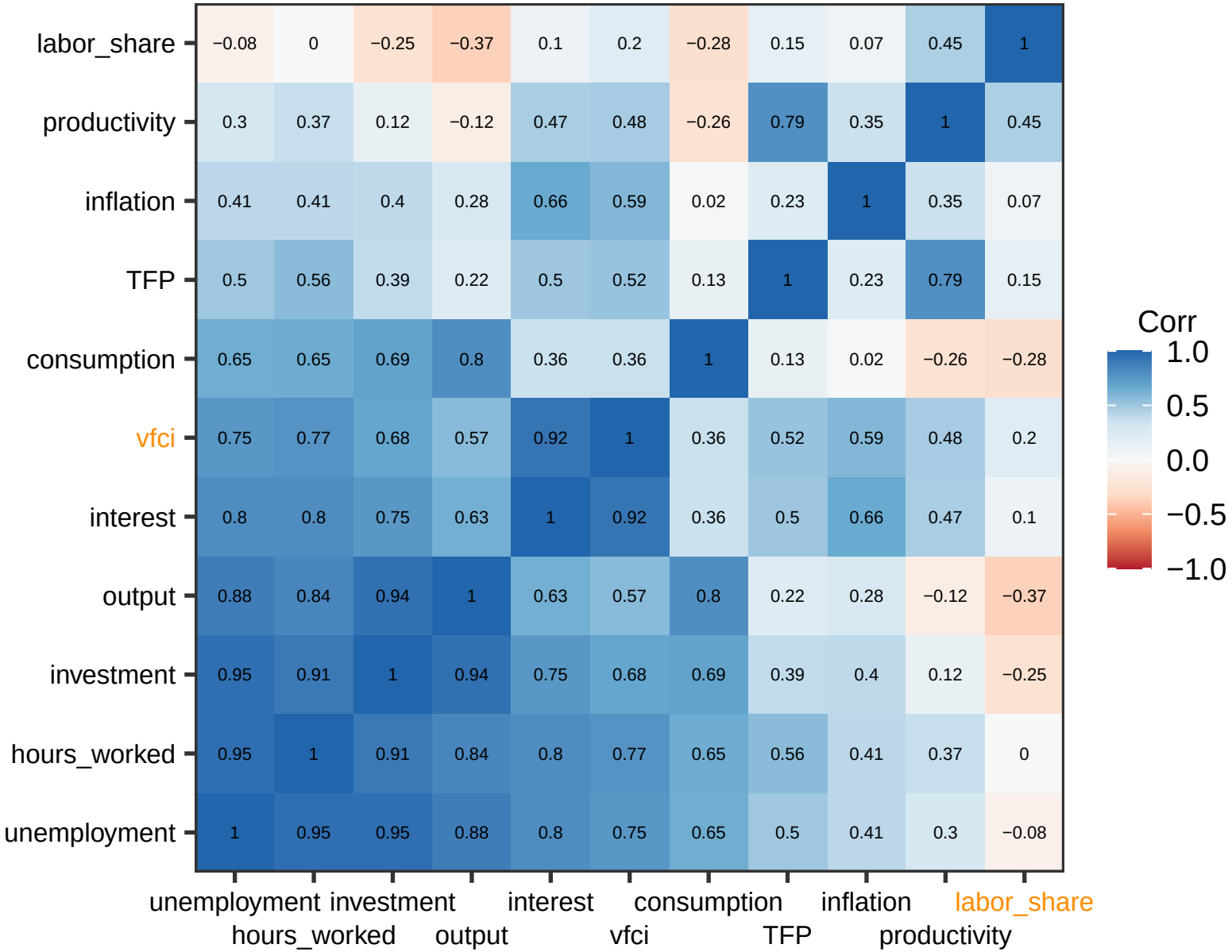


CONCLUSION

So what?

APPENDIX

COMPARING VAR TARGETS



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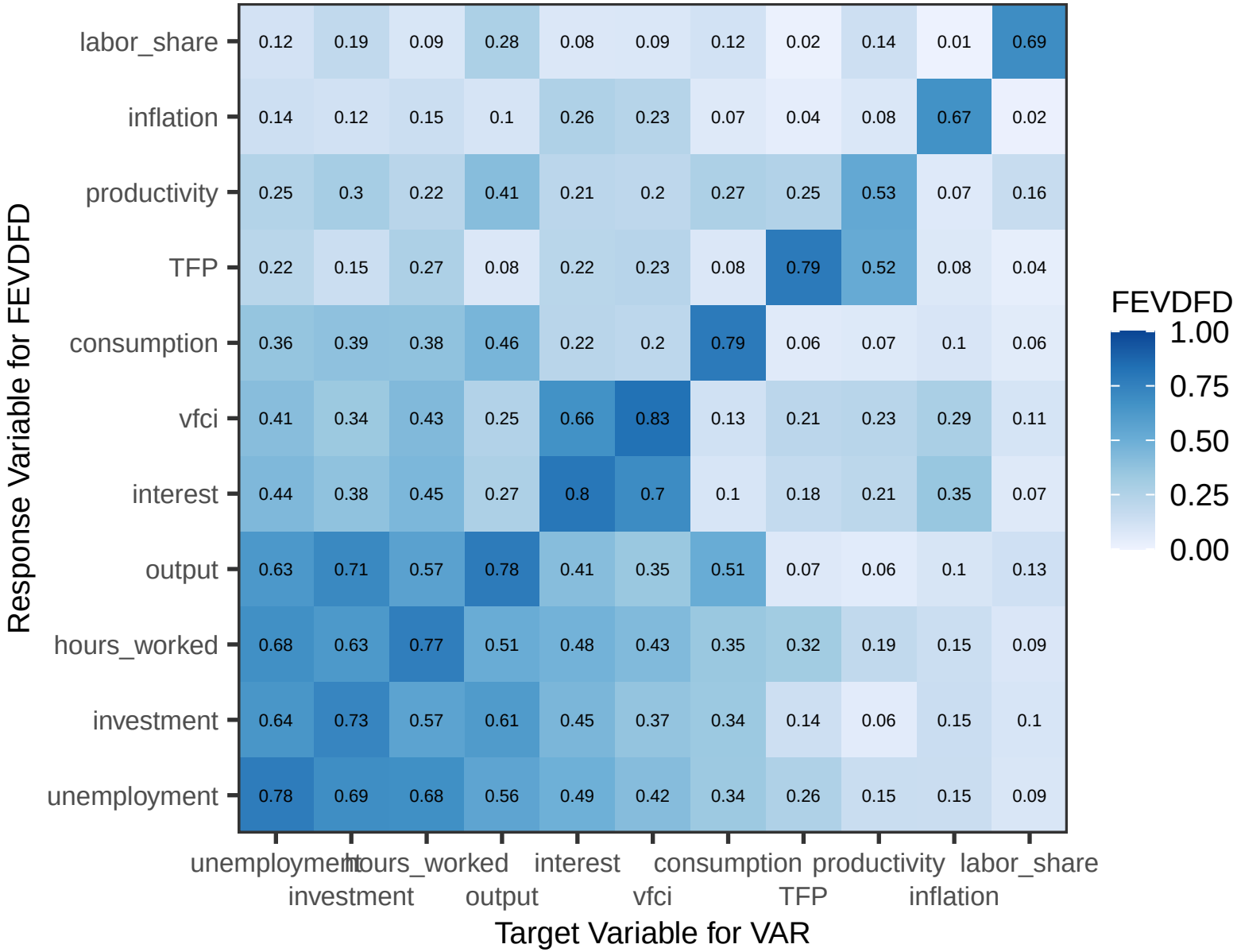
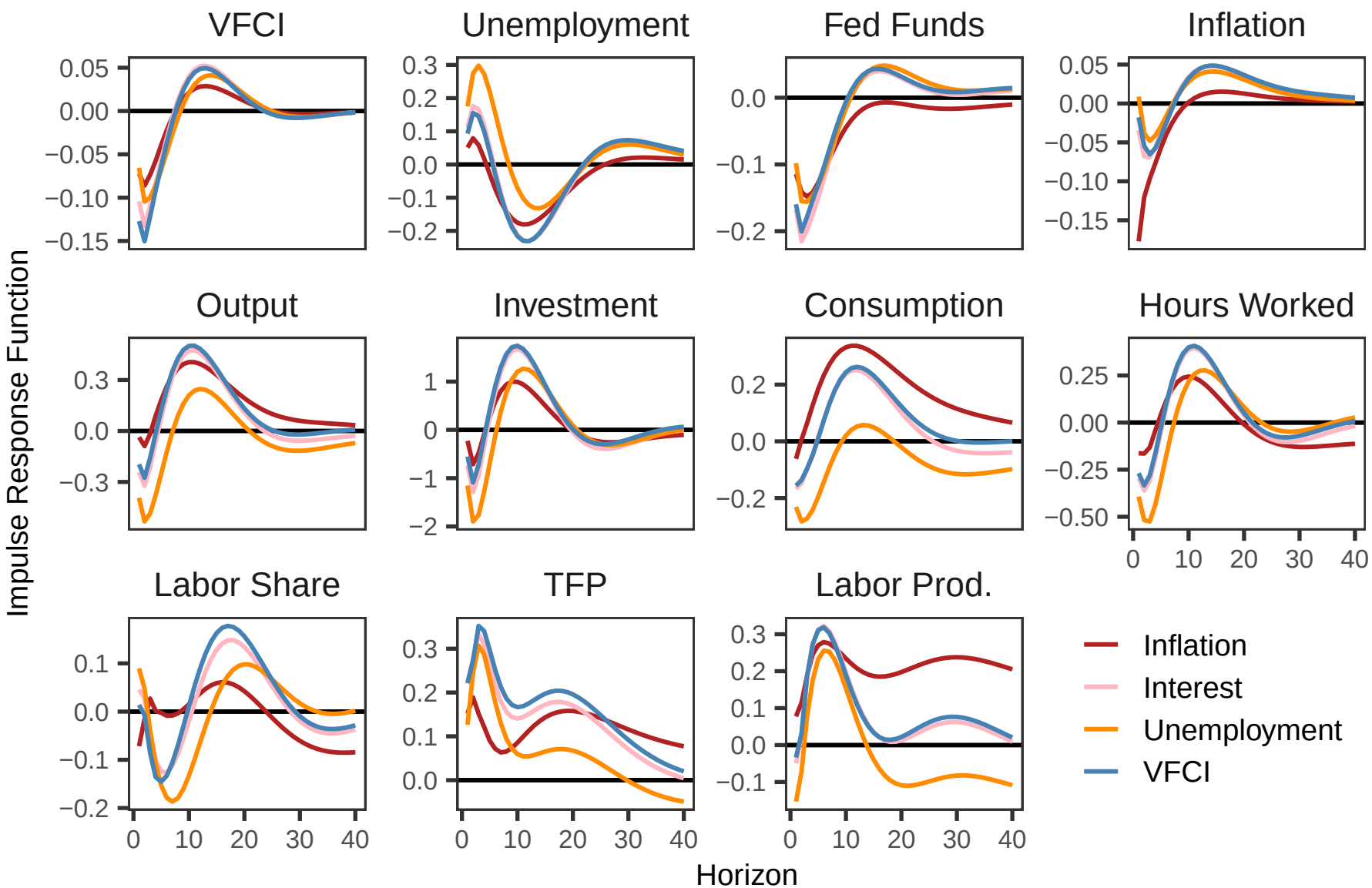


TARGETING INFLATION AND INTEREST RATE



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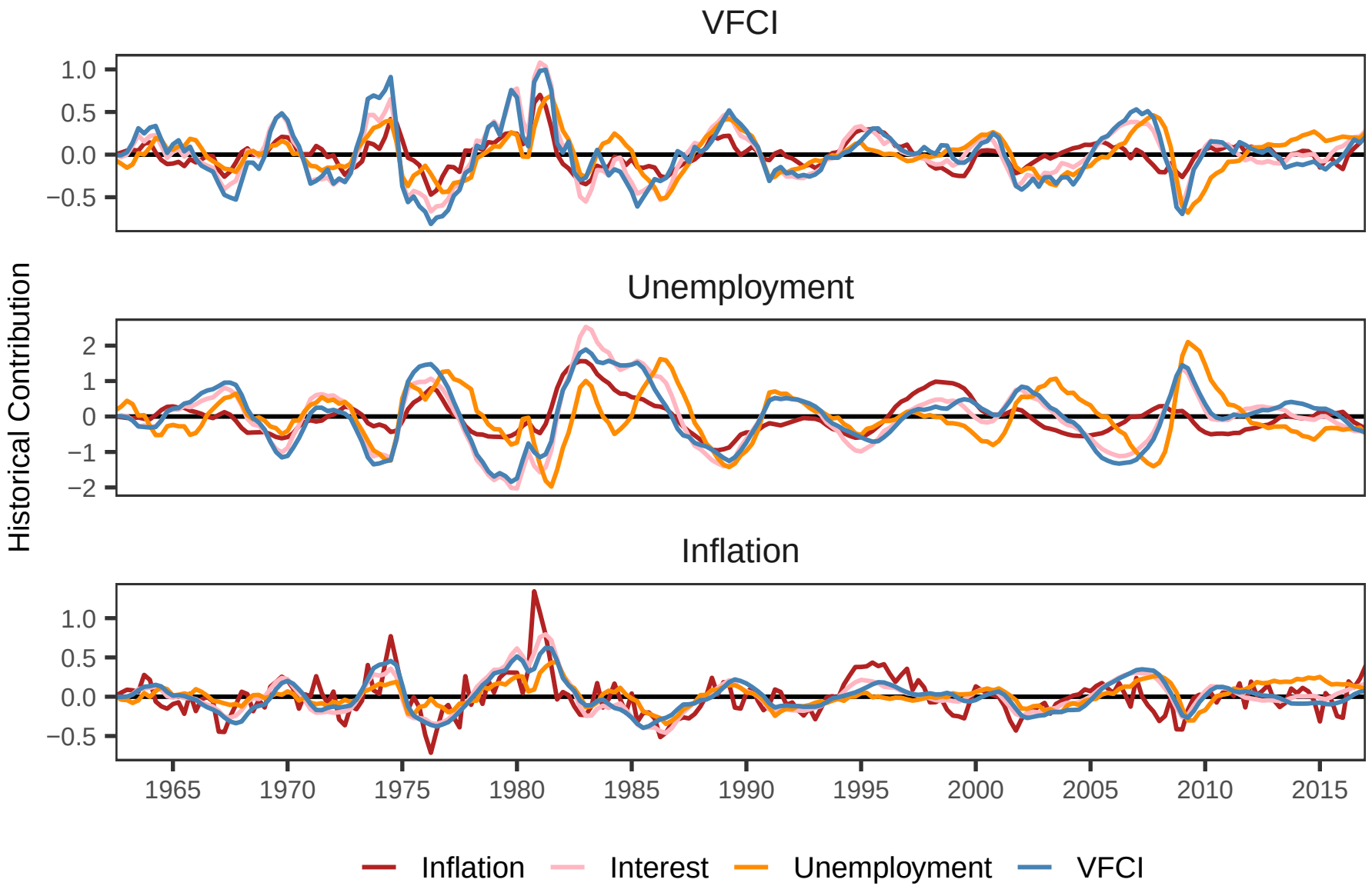

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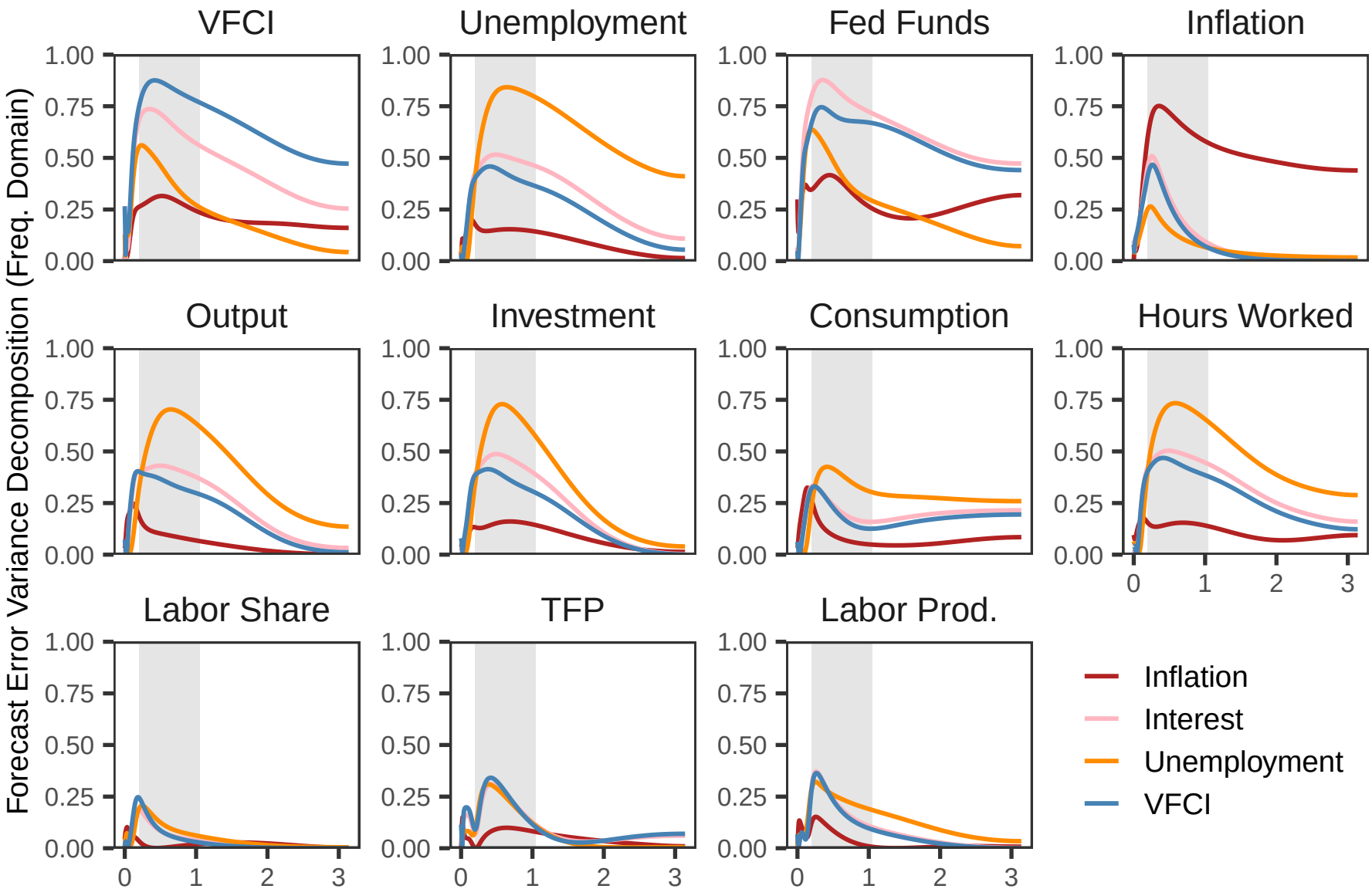

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