

Policy Rules and Forward Guidance Following the Covid-19 Recession

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Hoover Monetary Policy Conference

- ❑ How Monetary Policy Got Behind the Curve
 - FOMC Did Not Follow Policy Rules
 - Even those in Accord with the August 2020 Revised Statement
 - Followed September 2020 Forward Guidance
- ❑ How to Get Back
 - Five More FOMC Meetings in 2022
 - Four 50 Basis Point and One 25 Basis Point Rate Increases
 - Smoother Path with Policy Rule than FOMC Forward Guidance

What is “Behind the Curve”?

❑ Standard Answer

- Liftoff from Effective Lower Bound Should Have Been Earlier
- Federal Funds Rate Should Have Been Raised Faster After Liftoff
- No Benchmark for What “Earlier” and “Faster” Mean

❑ Our Answer

- Define Benchmark by Policy Rule Prescriptions
- “Too Late and Too Slow”

How Monetary Policy Got Behind the Curve

❑ Two Standard Answers

- Inflation Higher and Unemployment Lower Than Expected
 - Powell, Yellen, Waller, etc.
 - Would Have Acted Sooner if We Had Known
- The Fed Should Have Expected Higher Inflation
 - Summers

❑ Our Answer

- FOMC Should Have Followed Policy Rule Prescriptions
- Not Based on Being Surprised by Inflation

FOMC Since the Covid-19 Recession

❑ March 2020

- Decreased FFR to Effective Lower Bound
- 0.0 – 0.25 Percent, Midpoint of 0.125 Percent

❑ March 2022

- Raised FFR by 25 Basis Points to 0.25 – 0.5 Percent
- Six More 25 Basis Point Rate Increases in 2022 in SEP

❑ May 2022

- 50 Basis Point Rate Increase
- Signaled 50 Basis Point Increases in June and July
- Recently Leaning Towards No “September Pause”
- Consistent with CME FedWatch Tool

Revised Statement on Longer-Run Goals and Monetary Policy Strategy

August 2020

- ❑ Flexible Average Inflation Targeting
 - “following periods when inflation has been running persistently below 2 percent, appropriate monetary policy will likely aim to achieve inflation *moderately* above 2 percent for some time”
- ❑ Mitigate *Shortfalls*, Rather than *Deviations*, of Employment from its Maximum Level.
 - Unemployment in Longer-Run Not in Statement
 - Remains in Summary of Economic Projections

FOMC Forward Guidance

September 2020

- ❑ Maintain Target Range of FFR at ELB
 - “until labor market conditions have reached levels consistent with the Committee’s assessment of maximum employment and inflation has risen to 2 percent and is on track to moderately exceed 2 percent for some time.”
- ❑ Rob Kaplan (Dallas Fed) Dissent
 - Preferred Greater Policy Flexibility
 - Distinction Between “Accommodative” and “Zero”

FOMC and Policy Rule Forward Guidance

- ❑ FOMC Forward Guidance Projections
 - FFR Projections from SEP's for September 2020 – March 2022
- ❑ Policy Rule Forward Guidance Prescriptions
 - Data and Forecasts from the Same SEP's
 - Unemployment Gap and Inflation
 - Concurrent Prescription Based on Real-Time Data
 - Future Prescription Based on SEP Forecasts

Policy Rules for Forward Guidance

❑ Non-Inertial Rules Where Prescribed FFR Equals Desired FFR

❑ Taylor

- $R_t = r_t^{LR} + \pi_t + 0.5(\pi_t - \pi^{LR}) + (U_t^{LR} - U_t)$

- $r_t^{LR} = 0.5$, $\pi^{LR} = 2.0$, and $U_t^{LR} = 4.0$

❑ Balanced Approach

- $R_t = r_t^{LR} + \pi_t + 0.5(\pi_t - \pi^{LR}) + 2(U_t^{LR} - U_t)$

❑ Taylor (Shortfalls)

- $R_t = r_t^{LR} + \pi_t + 0.5(\pi_t - \pi^{LR}) + \min\{(U_t^{LR} - U_t), 0\}$

❑ Balanced Approach (Shortfalls)

- $R_t = r_t^{LR} + \pi_t + 0.5(\pi_t - \pi^{LR}) + 2 \min\{(U_t^{LR} - U_t), 0\}$

Policy Rules for Forward Guidance

□ Taylor (Consistent)

- $R_t = r_t^{LR} + \pi_t + 0.5(\pi_t - \pi^{Mod}, \pi_t - \pi^{LR}) + \min\{(U_t^{ME} - U_t), 0\}$
- $\pi^{Mod} = 2.2$ and $U_t^{ME} = 3.5$

□ Balanced Approach (Consistent)

- $R_t = r_t^{LR} + \pi_t + 0.5(\pi_t - \pi^{Mod}, \pi_t - \pi^{LR}) + 2 \min\{(U_t^{ME} - U_t), 0\}$

□ Inertial Rules Where Prescribed FFR Adjusts Towards Desired FFR

- $R_t = pR_{t-1} + (1 - p) R_t^P$
- $p = 0.85$

Non-Inertial and Inertial Policy Rules

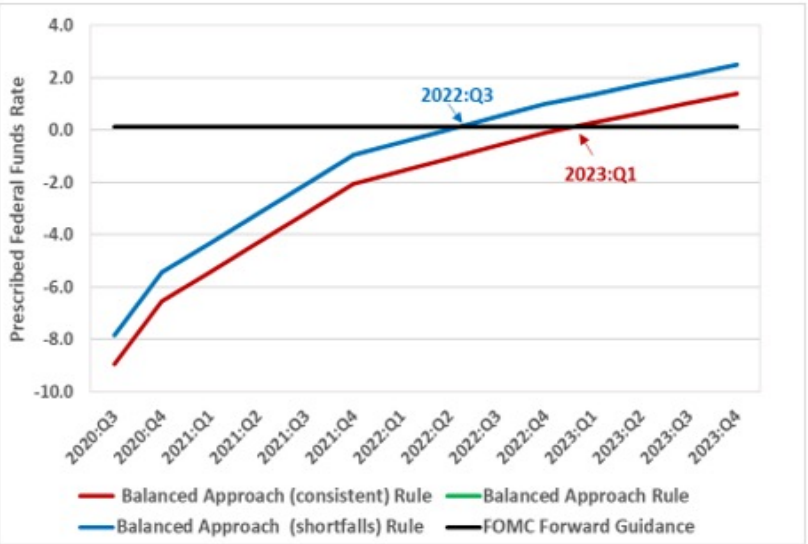
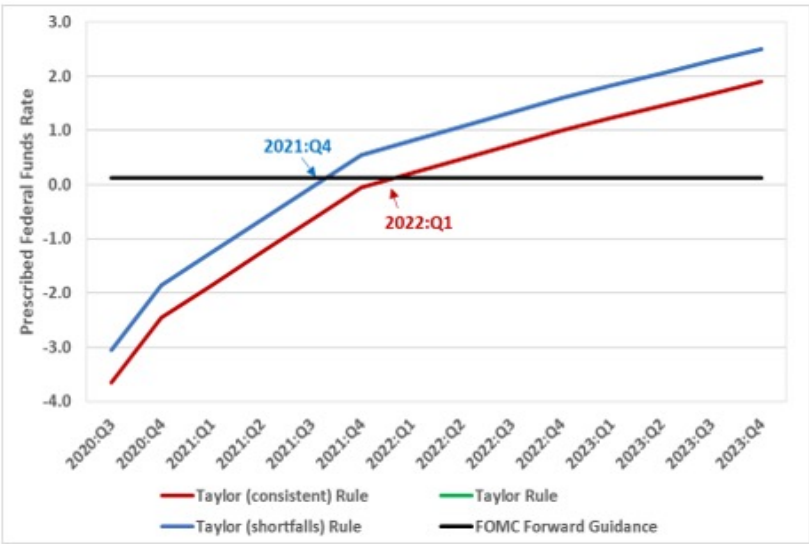
- ❑ Standard Rules (Taylor, Balanced Approach) Non-Inertial
 - Attain Desired FFR within the Period
 - Used for Normative Analysis (Comparing Deviations)
- ❑ Inertial Rules
 - FFR Adjusts Slowly Towards Desired FFR
 - Used for Positive Analysis (Estimation)
- ❑ Policy Rule Forward Guidance
 - Normative Analysis with Inertial Rules
 - Incorporate FOMC Practice of 25 Basis Point FFR Increases

Policy Rule and FOMC Forward Guidance

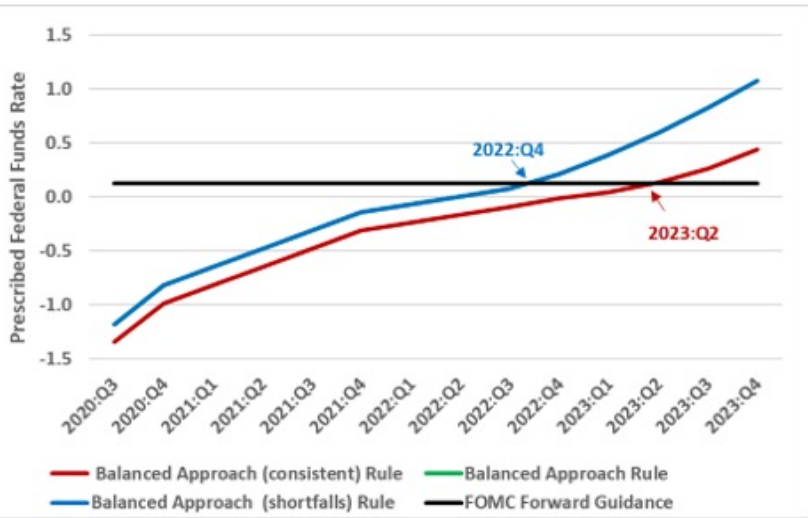
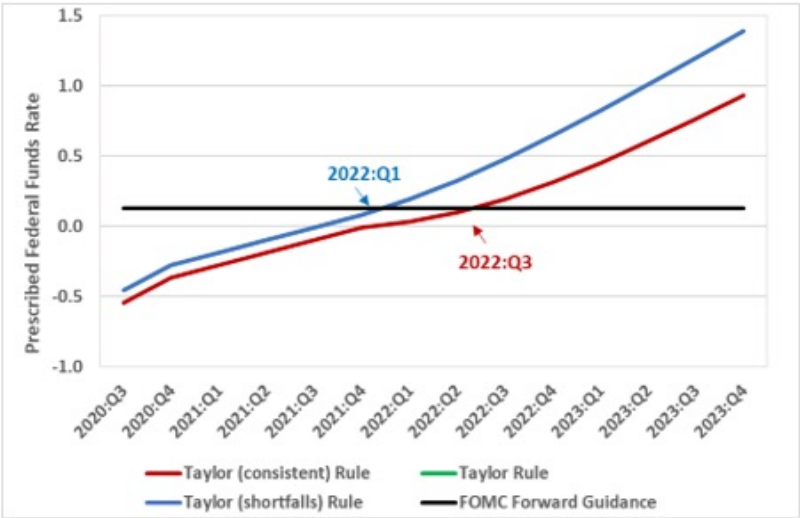
- ❑ Policy Rule Forward Guidance
- ❑ Prescribed FFR when Inflation and Unemployment Goals Attained
- ❑ Taylor Rule as an Example
 - $R_t = r_t^{LR} + \pi_t + 0.5(\pi_t - \pi^{LR}) + (U_t^{LR} - U_t)$
- ❑ Prescribed FFR when Inflation and Unemployment Gaps are Zero
 - $R_t = r_t^{LR} + \pi_t$
- ❑ $r_t^{LR} = 0.5$ and $\pi_t = \pi^{LR} = 2.0$ from Summary of Economic Projections
 - $R_t = \text{Neutral Nominal Rate} = 2.5$
- ❑ FOMC Forward Guidance
 - Liftoff from Effective Lower Bound so $R_t = 0.25 - 0.5$

Summary of Economic Projections for September 2020

Panel A. Non-Inertial Rules

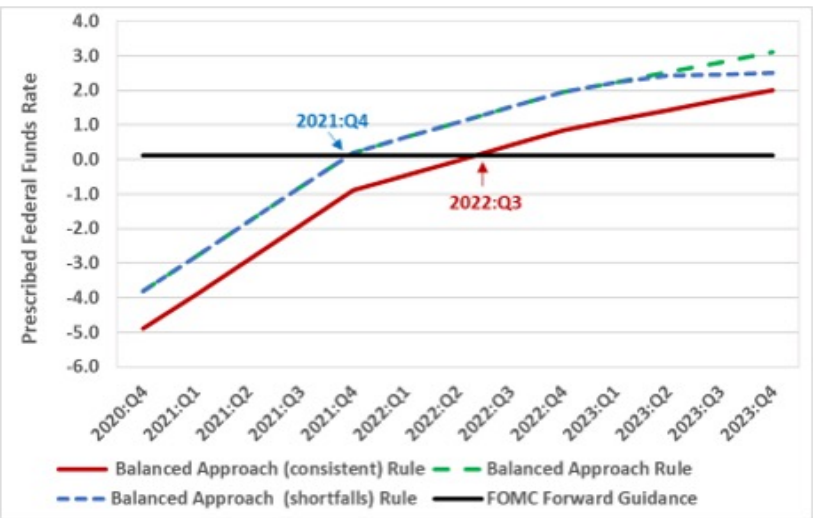
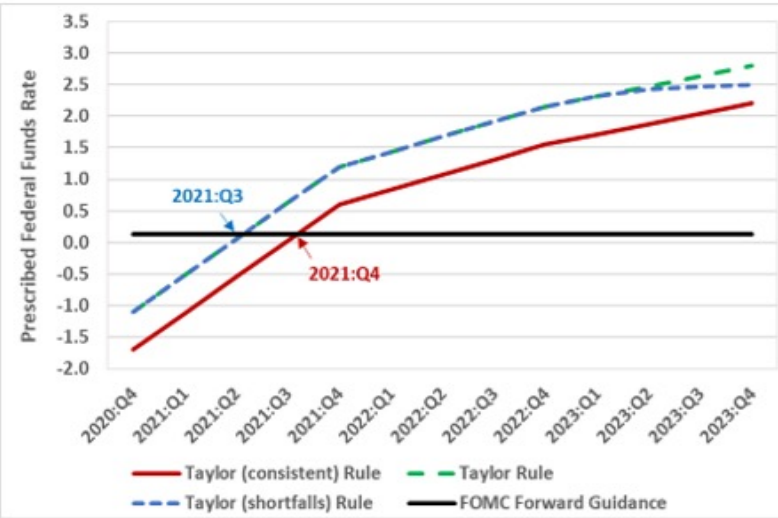


Panel B. Inertial Rules

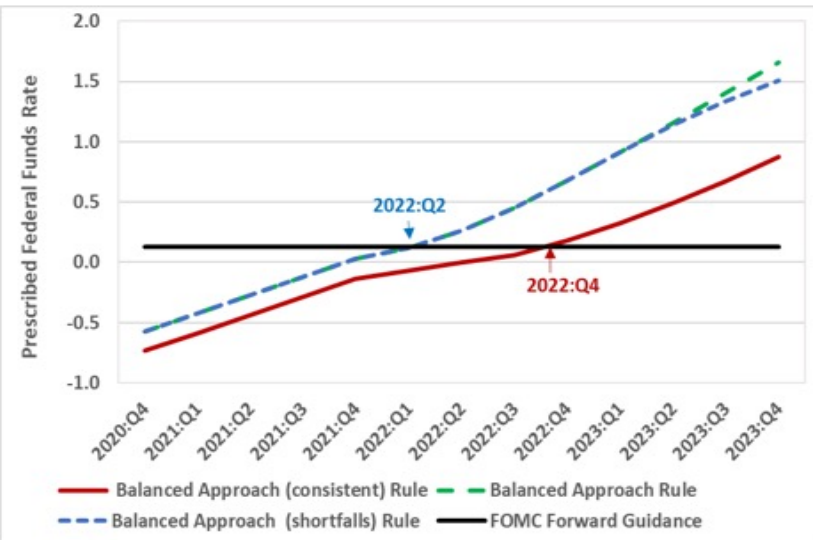
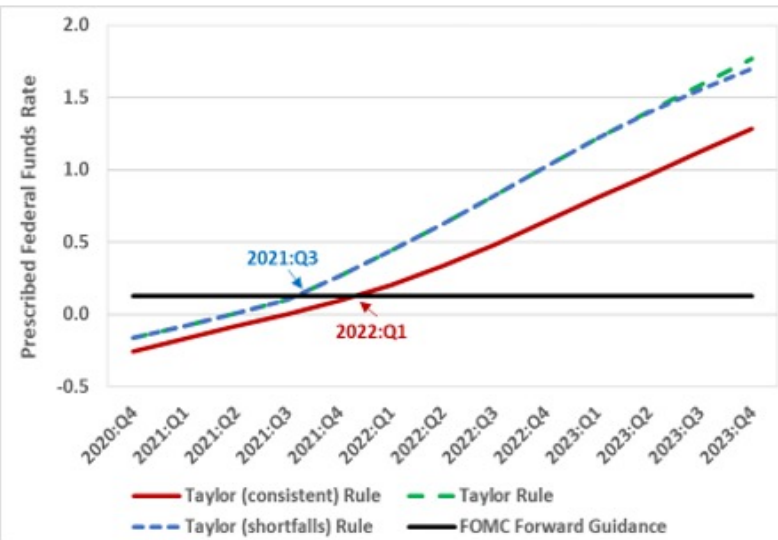


Summary of Economic Projections for December 2020

Panel A. Non-Inertial Rules

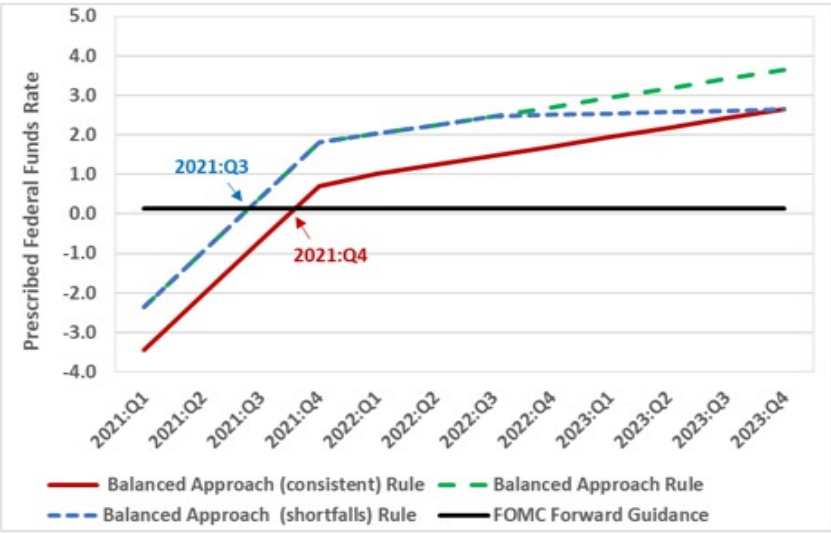
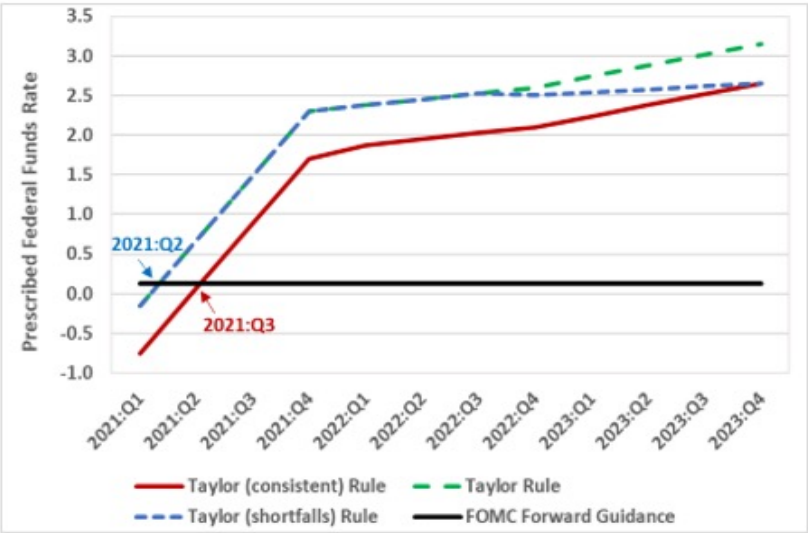


Panel B. Inertial Rules

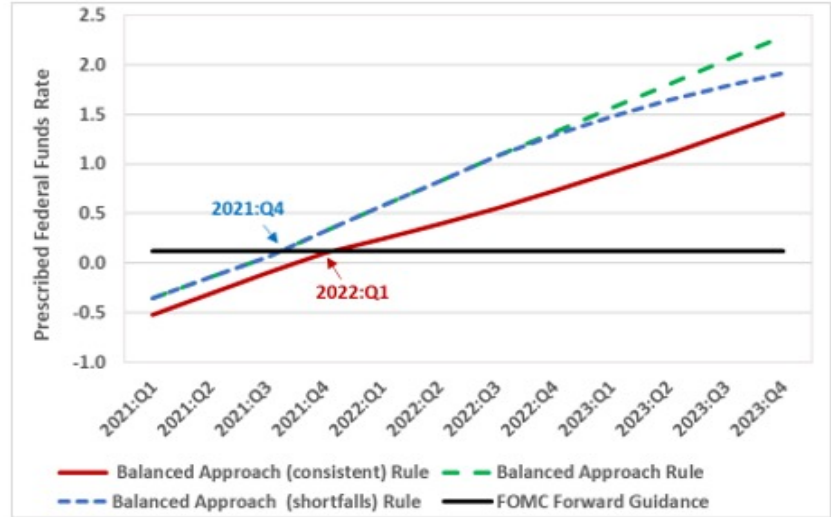
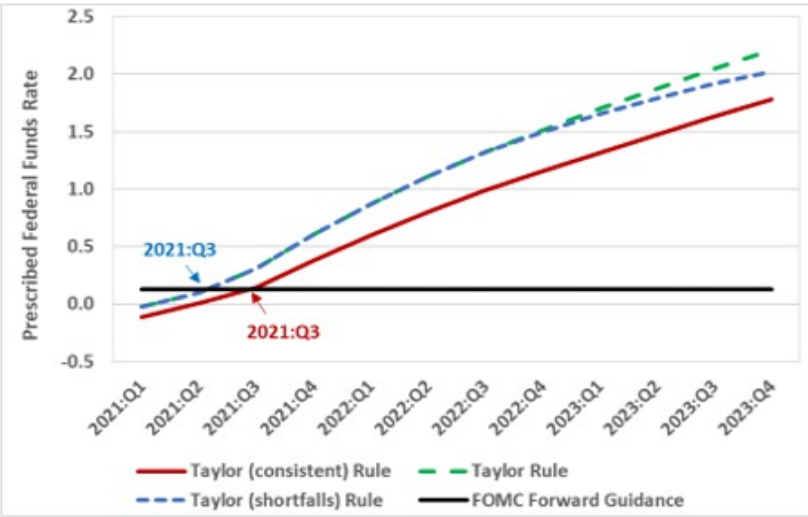


Summary of Economic Projections for March 2021

Panel A. Non-Inertial Rules

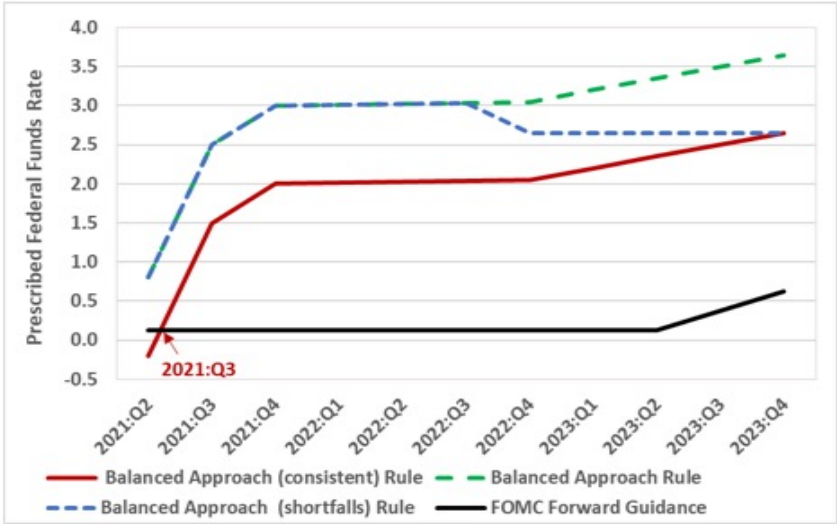
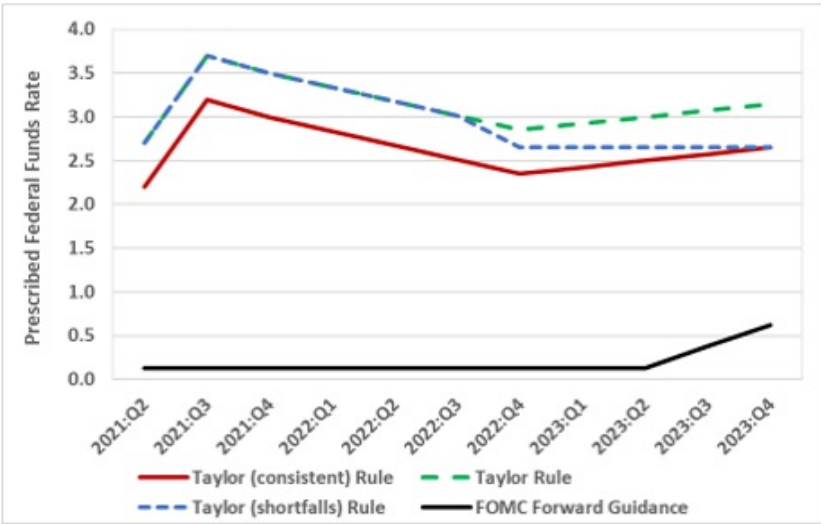


Panel B. Inertial Rules

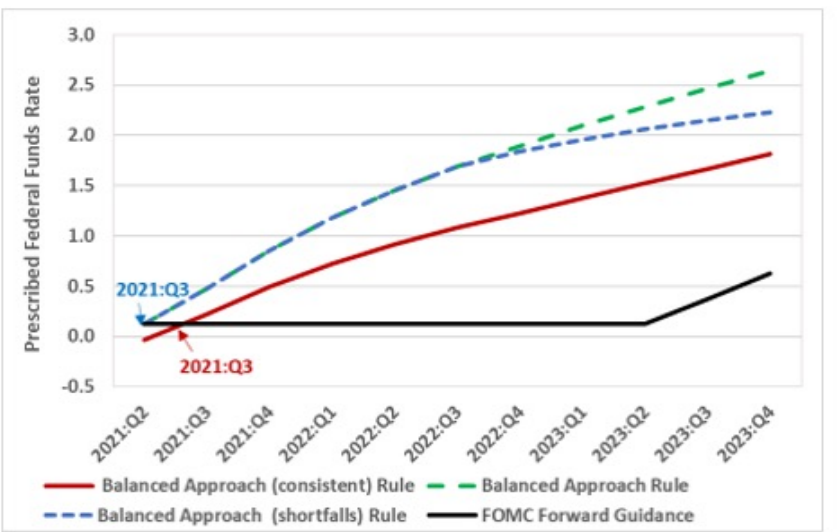
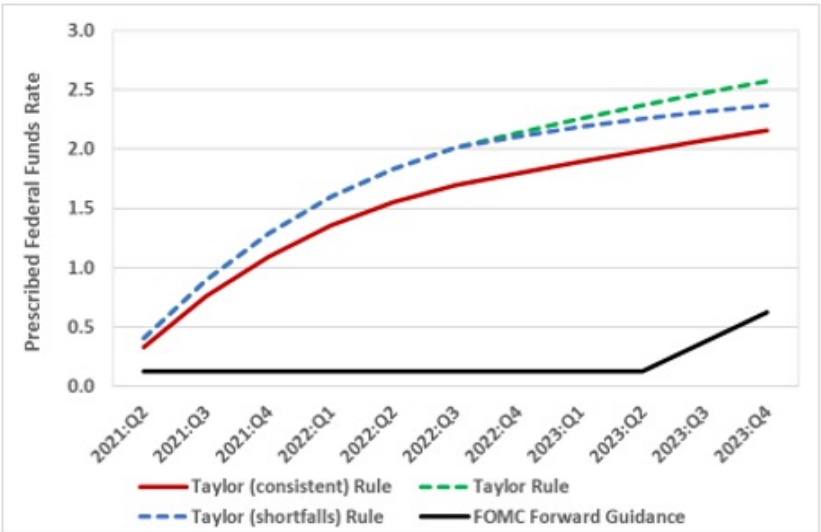


Summary of Economic Projections for June 2021

Panel A. Non-Inertial Rules

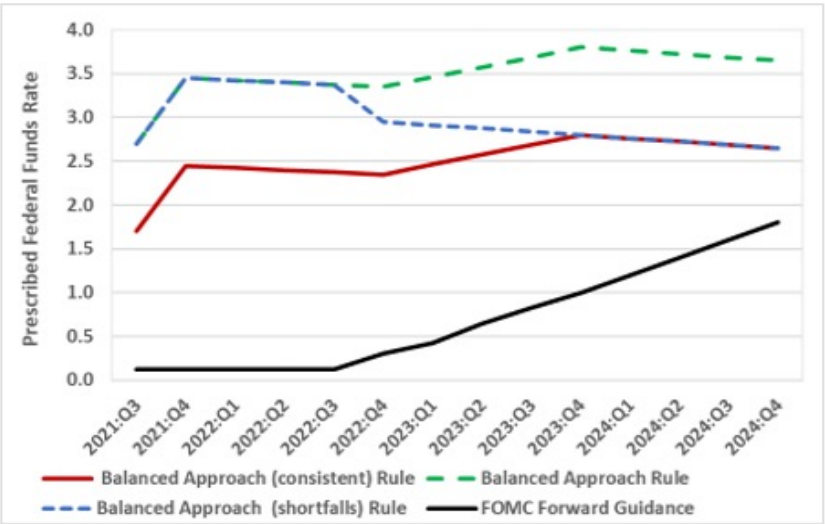
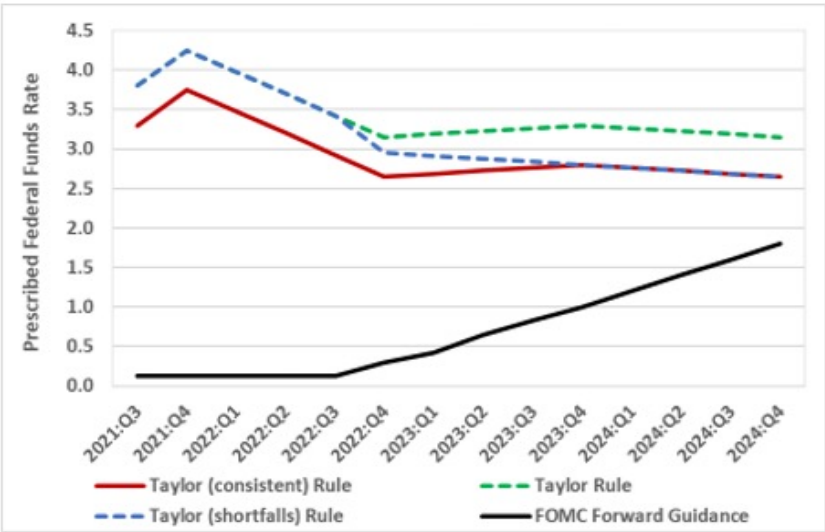


Panel B. Inertial Rules

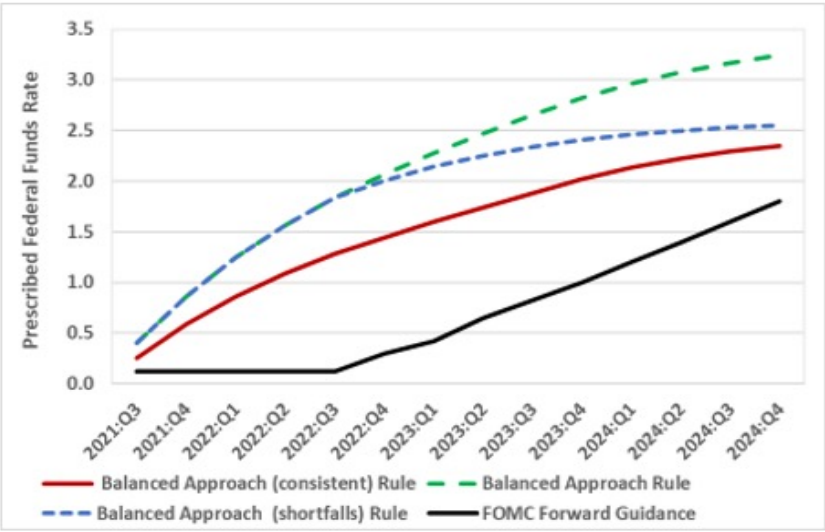
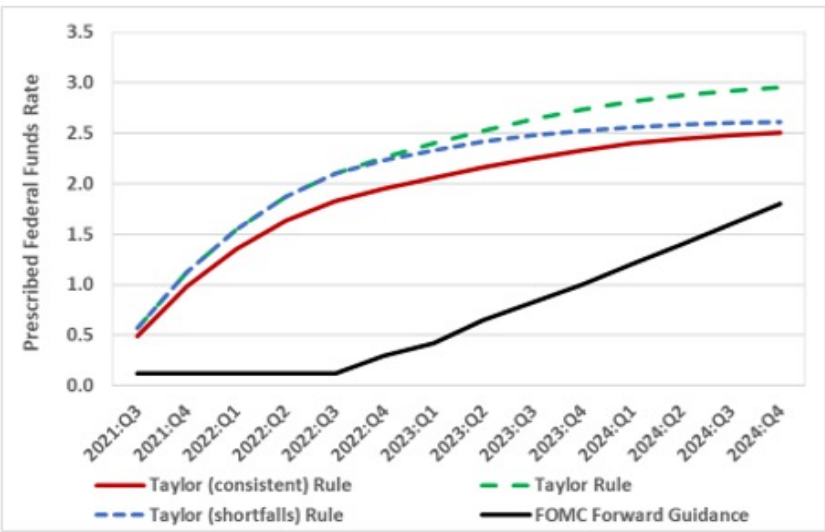


Summary of Economic Projections for September 2021

Panel A. Non-Inertial Rules

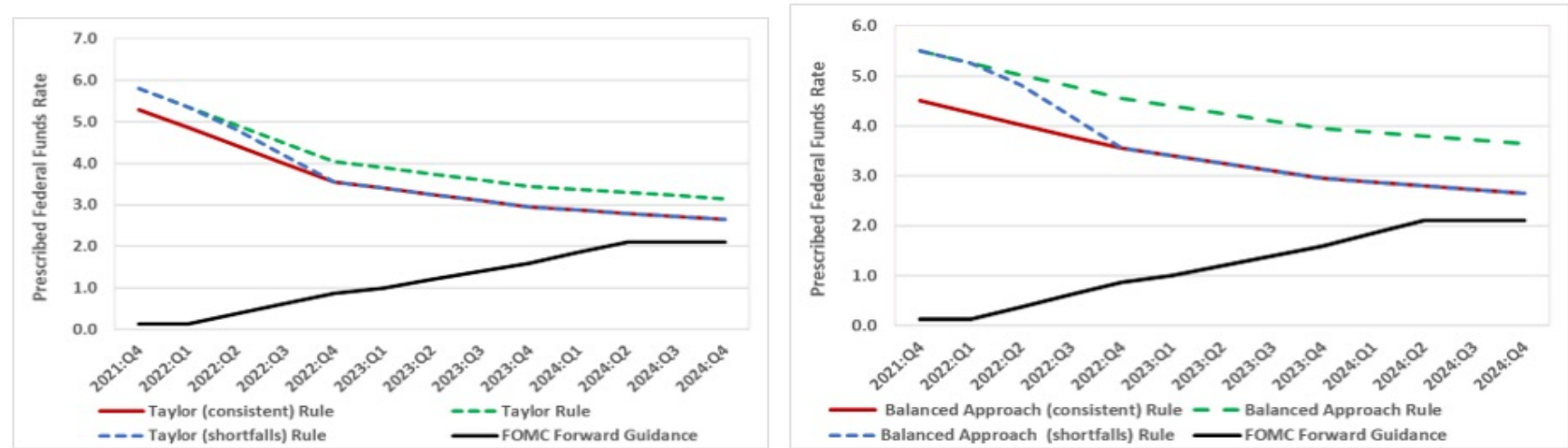


Panel B. Inertial Rules

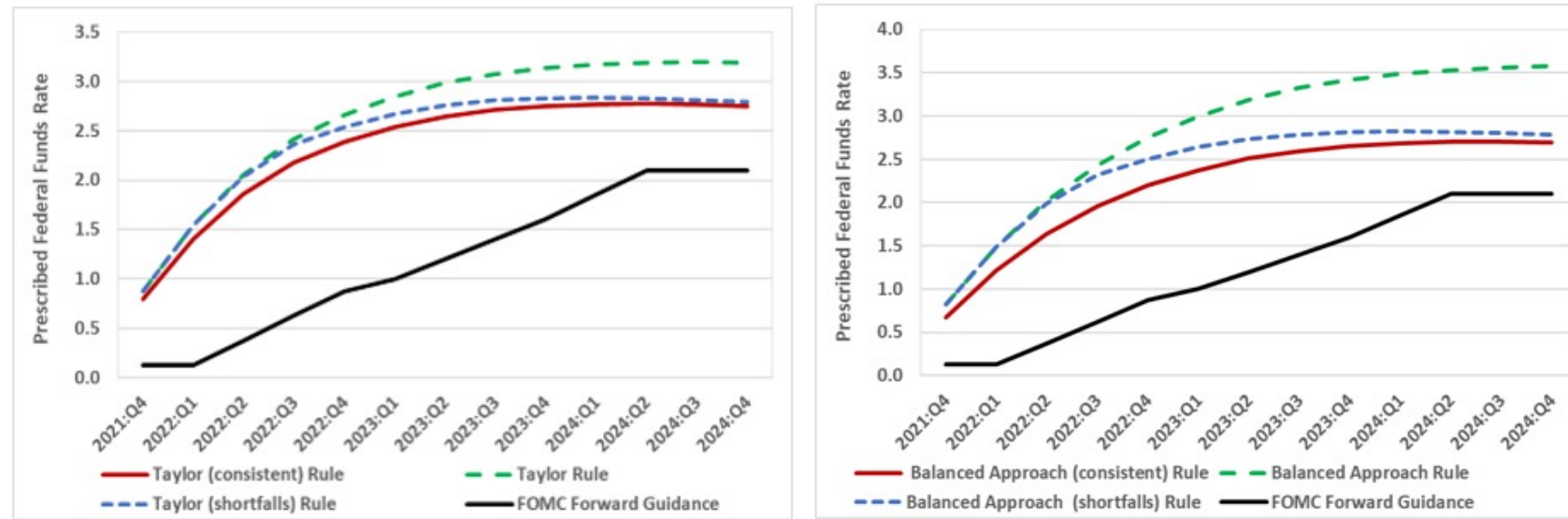


Summary of Economic Projections for December 2021

Panel A. Non-Inertial Rules

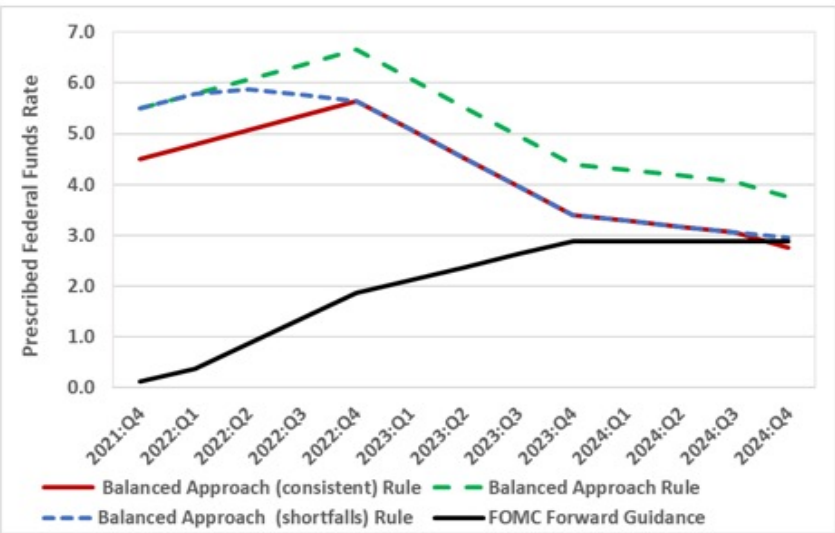
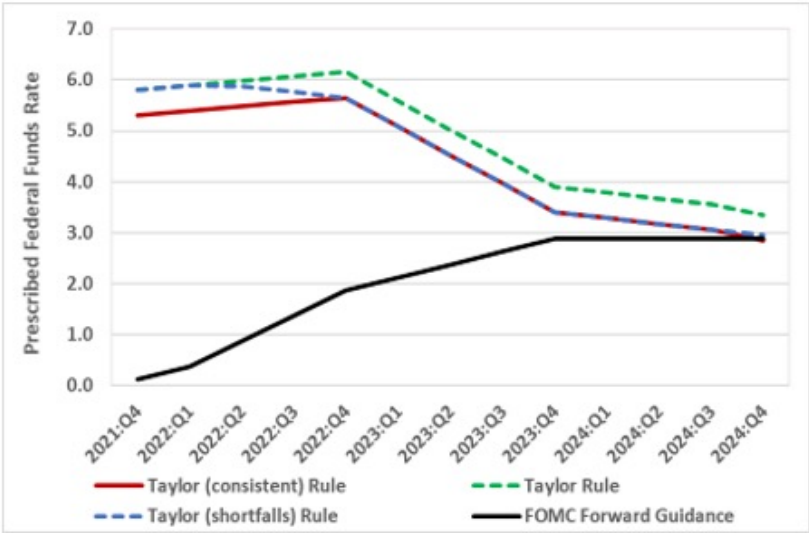


Panel B. Inertial Rules

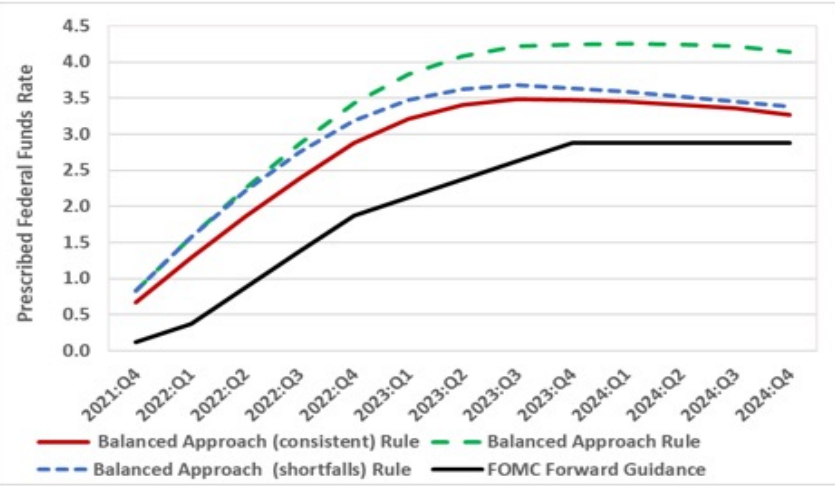
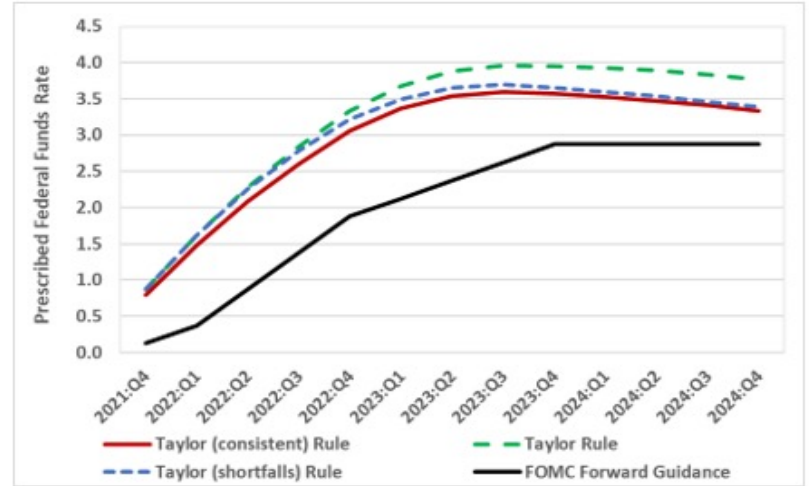


Summary of Economic Projections for March 2022

Panel A. Non-Inertial Rules



Panel B. Inertial Rules



Policy Rule Prescriptions For 2022 - 2024

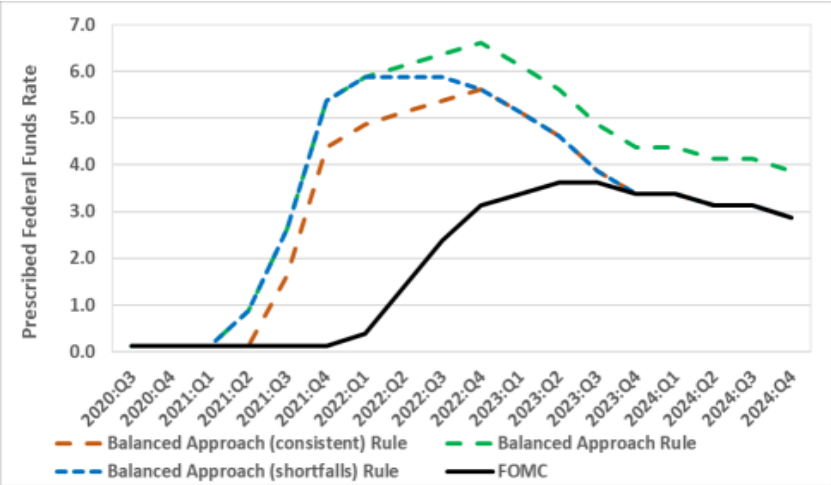
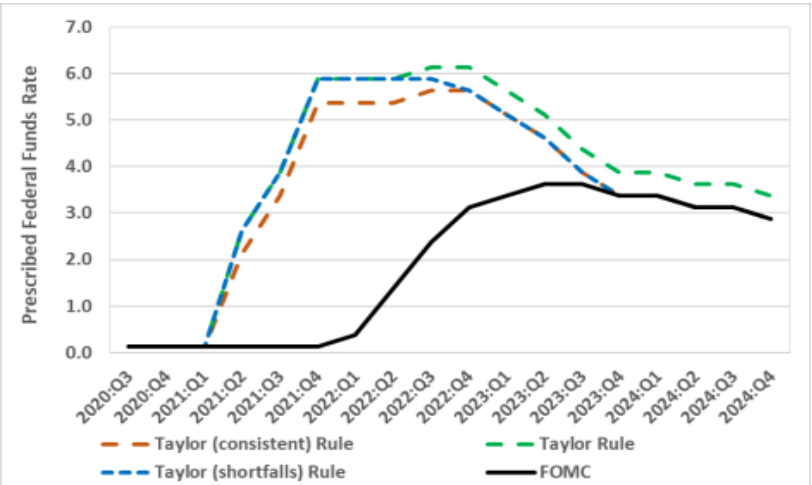
- ❑ Policy Rules in Accord with FOMC Objectives
- ❑ Flexible Average Inflation Targeting Has Become Irrelevant
- ❑ Cannot Return to Taylor and Balanced Approach Rules
 - FOMC Cares About Unemployment Shortfalls – Not Deviations
- ❑ Cannot Use Consistent Rules
 - FOMC Not Trying to Keep Unemployment at Current 3.6 Percent
- ❑ Taylor and Balanced Approach (Shortfalls) Rule
 - Identical Prescriptions
 - Forecasted Unemployment Never > 4 Percent
 - Median Among the Six Rules

How to Get Back with Shortfalls Rules

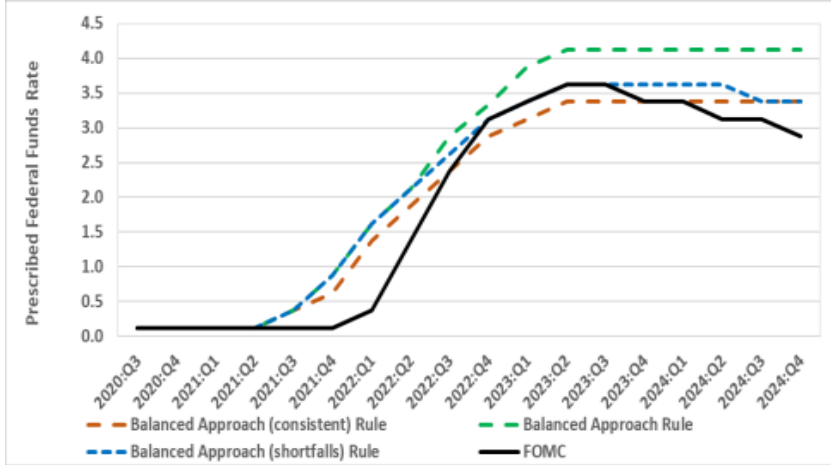
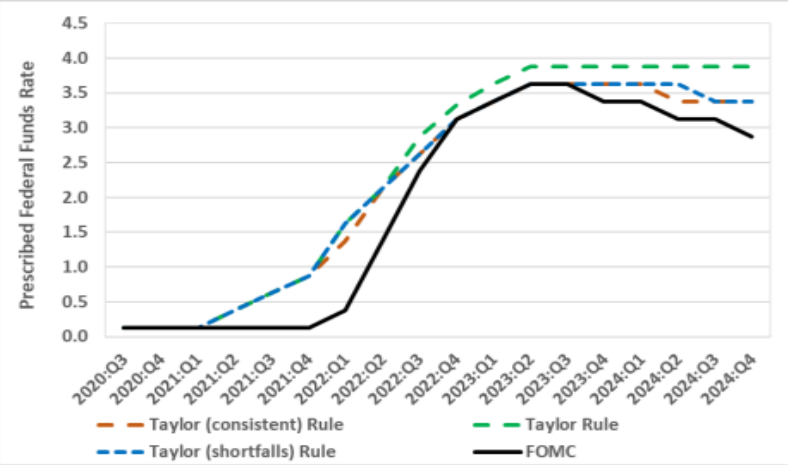
Quarter	Non-Inertial	Inertial	FOMC
2022:Q1	5.875	1.625	0.375
2022:Q2	5.875	2.125	1.375
2022:Q3	5.875	2.625	2.375
2022:Q4	5.625	3.125	3.125
2023:Q1	5.125	3.375	3.375
2023:Q2	4.625	3.625	3.625
2023:Q3	3.875	3.625	3.625
2023:Q4	3.375	3.625	3.375
2024:Q1	3.375	3.625	3.375
2024:Q2	3.125	3.625	3.125
2024:Q3	3.125	3.375	3.125
2024:Q4	2.875	3.375	2.875

Policy Rule and FOMC Prescriptions

Panel A. Non-Inertial Rules



Panel B. Inertial Rules



How to Get Back by December 2022

❑ FOMC Path

- Liftoff of 25 Basis Points in March 2022
- Five 50 Basis Point Increases and One 25 Basis Point Increase
- FFF = 3.125 at End of 2022

❑ Balanced Approach (Shortfalls) Rule Path

- Liftoff of 25 Basis Points in September 2021
- Ten 25 Basis Point Increases
- One 50 Basis Point Increase (December 2021)
- FFF = 3.125 at End of 2022

Conclusions

- ❑ Policy Rules as Alternative to FOMC Forward Guidance
 - Consistent Rules in Accord with August 2020 Revised Statement
 - Shortfalls Rules in Accord with FOMC Pivot in 2022
 - Inertial Rules for Upward Path of FFR in 2021 – 2023
 - Non-Inertial Rules for Downward Path of FFR in 2024
- ❑ FOMC Fell Behind the Curve in September 2020
 - About 100 Basis Points Behind at March 2022 Liftoff
- ❑ How to Get Back on Track by End of 2022
 - FOMC - Five 50 Basis Point Increases in 2022
 - Policy Rules – One 50 Basis Point Increase