

# REDUCING DEFLATIONARY RISK IN THE U.S.

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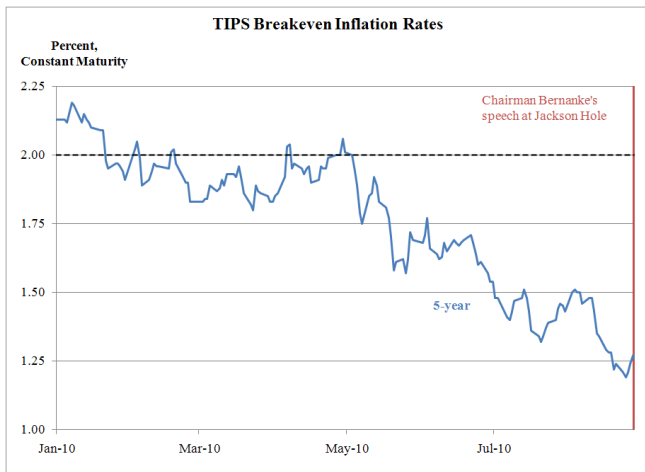
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Any opinions expressed here are mine and do not necessarily reflect those of other Federal Open Market Committee participants.

## THE STATE OF PLAY

- Worldwide economic recovery continues.
- During the recovery process, economies are susceptible to further negative shocks.
- Negative shocks can dampen inflation expectations.
- How to combat this possibility when policy rates are already near zero?
  - Some of the material in this talk is based on my paper, "Seven Faces of 'the Peril'", which appeared in the September-October 2010 issue of the Federal Reserve Bank of St. Louis *Review*.

## MARKET-BASED U.S. INFLATION EXPECTATIONS



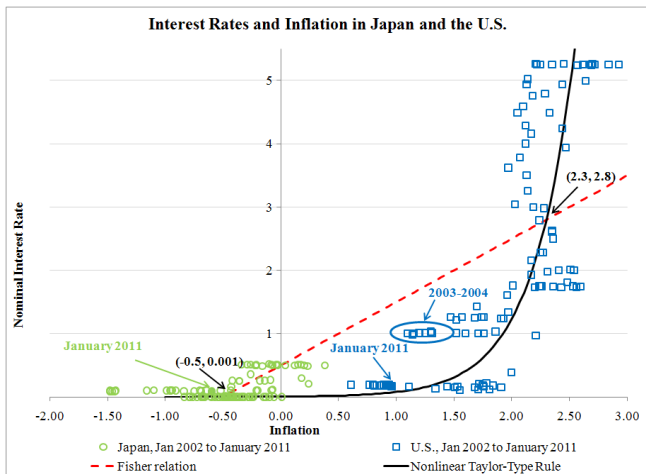
## CURRENT U.S. MONETARY POLICY

- Near-zero policy rate.
- Large quantitative easing program.
- “Extended period” language for near-zero policy rate.
- Conventional wisdom reaction to a negative shock: *lengthen the “extended period.”*
- Could this send the U.S. (and Europe) to a liquidity trap?

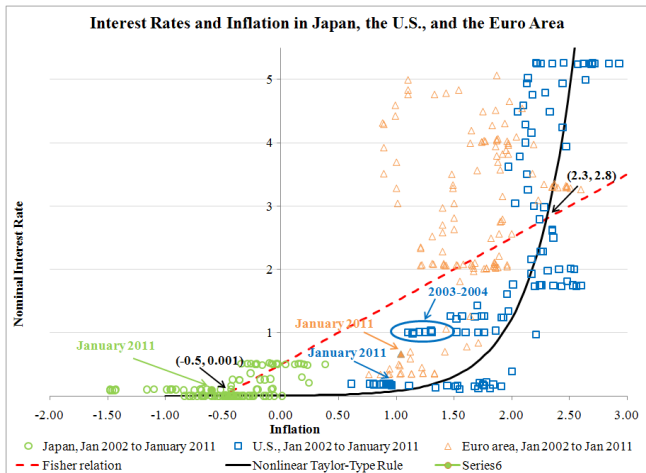
## BENHABIB, SCHMITT-GROHE, AND URIBE

- Consider a model with three generic features:
  - A Fisher relation.
  - A monetary authority which follows a Taylor-type policy rule.
  - The zero lower bound on nominal interest rates.
- Models with these features possess an unintended steady state.
  - The unintended steady state is characterized by:
    - Short-term nominal interest rates at or near zero.
    - Inflation consistently below target.

## BENHABIB, SCHMITT-GROHE, AND URIBE



## BENHABIB, SCHMITT-GROHE, AND URIBE



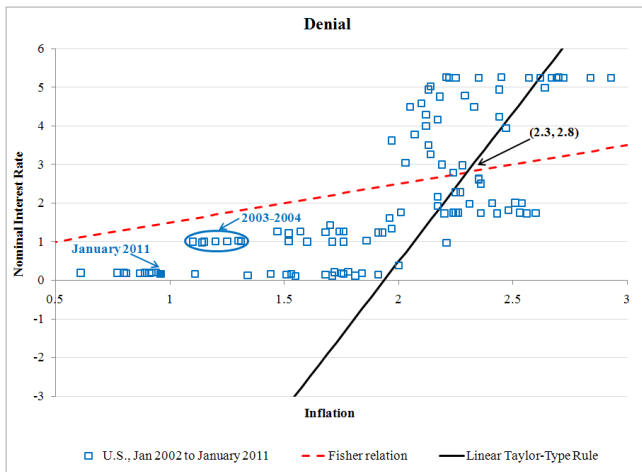
# Reactions



## REACTIONS

- Macroeconomists and policymakers are generally very fragmented on this issue.
- The following is a list of views, some formal, some informal.

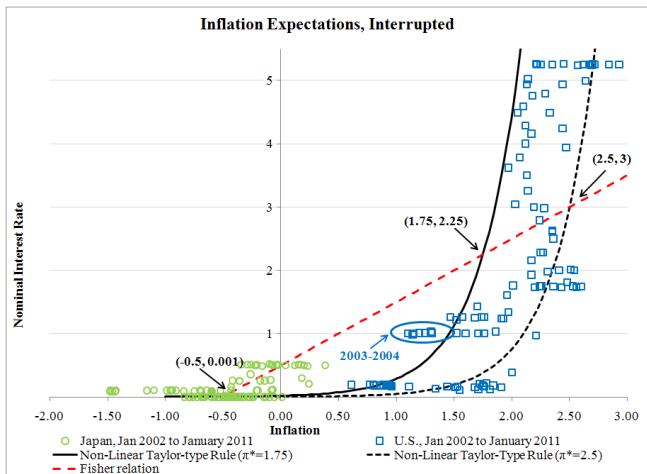
# DENIAL



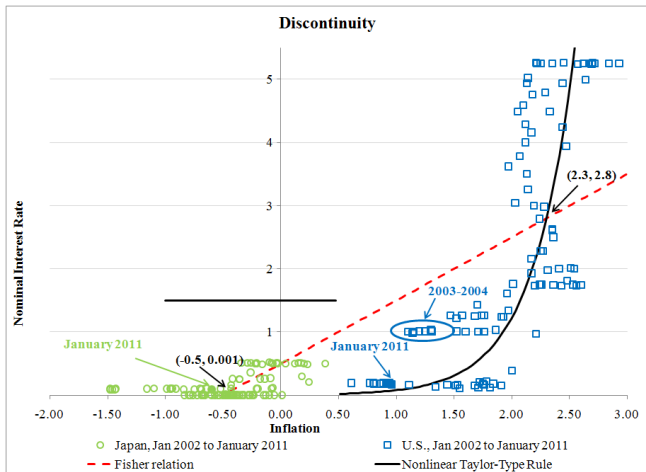
## LEARNABILITY

- Eusepi (2007, *JME*).
- Global analysis.
- Targeted equilibrium can be the sole learnable long-run outcome.
  - The Taylor-type rule has to respond only to past inflation.
- But many other possibilities exist.
- Cold comfort—a form of denial?
- Evans-Guse-Honkapohja (2008, *EER*): intended steady state locally but not globally stable under learning.

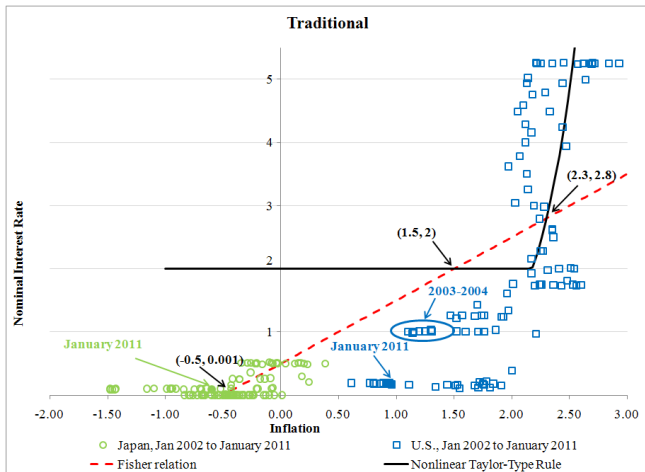
## FOMC, 2003



## DISCONTINUITY



# TRADITIONAL



## FISCAL EXPANSION

- Benhabib, Schmitt-Grohe, Uribe (2002, *JPE*), Woodford (2003, *Interest and Prices*).
- Aggressive fiscal expansion to avoid a liquidity trap.
- Total government liabilities  $M + B$  promised to grow at a rate in excess of the nominal interest rate.
- This eliminates the liquidity trap as a steady state equilibrium.
- This approach is criticized by Atkeson, Chari, and Kehoe (2010, *QJE*): implementation through extreme government response.
- *Impractical and dangerous in the wake of the European sovereign debt crisis.*
  - Japanese fiscal expansion nearing a debt-GDP ratio of 200 percent.

## DETERMINISTIC PATHS FOR THE POLICY RATE

- Schmitt-Grohe and Uribe (2010, NBER Working Paper #16514).
- Set a threshold for inflation below the target rate of inflation.
- If inflation falls below the threshold, abandon the Taylor-type policy rule.
- Instead, follow a deterministic path for the nominal interest rate.
- Involves raising policy rates independently of economic events.
- Avoids the fiscal expansion.



## QUANTITATIVE EASING

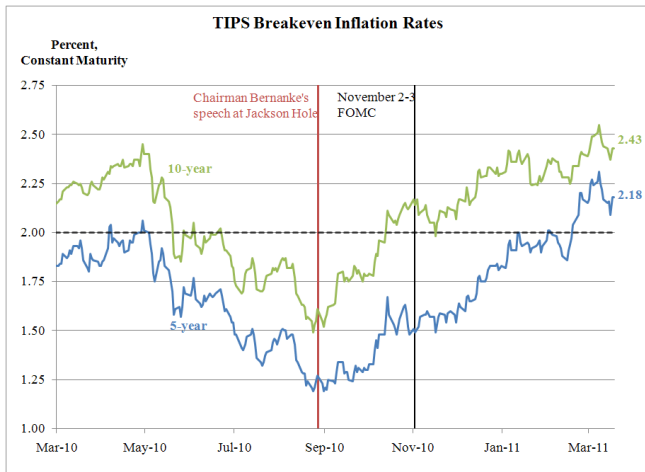
- Successful for the U.S. and the U.K.
- U.K. actual and expected inflation have remained higher.
- Threats to permanently “monetize more debt” are more credible than fiscal actions.
  - Reliably pushes inflation expectations higher.
- Can be made state contingent in an appropriate way.
- Japanese record shows that a temporary balance sheet expansion is not effective.

# QE2: Was It Effective?

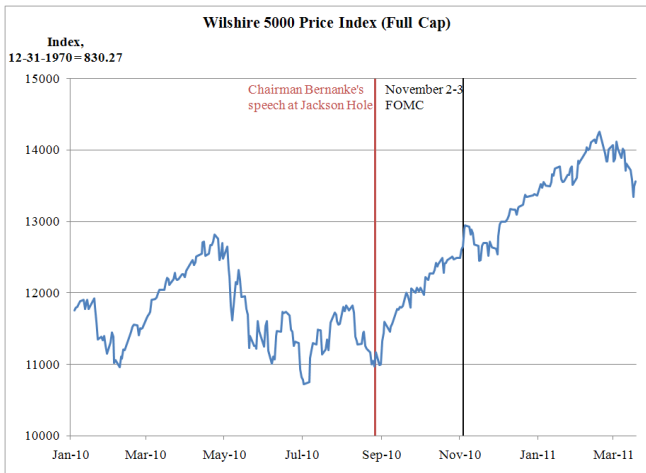
## WHAT THE FOMC DID

- The FOMC began slowing the run-off of the balance sheet in August 2010.
- Markets began pricing in additional action after the Chairman's Jackson Hole speech later in August.
- The decision on QE was made at the November FOMC meeting.
- Most effects were already priced into financial markets at that point.

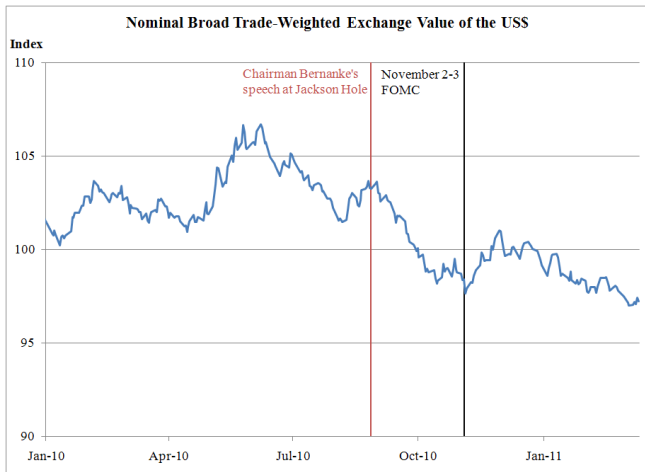
## EXPECTED INFLATION INCREASED



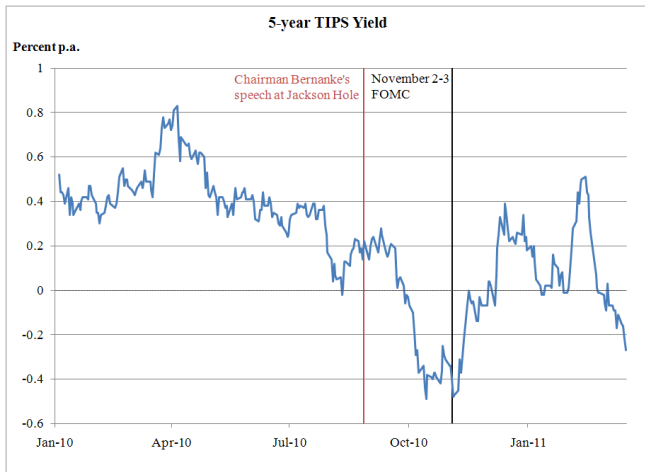
## EQUITY PRICES INCREASED



## THE DOLLAR DEPRECIATED



## REAL INTEREST RATES DECLINED

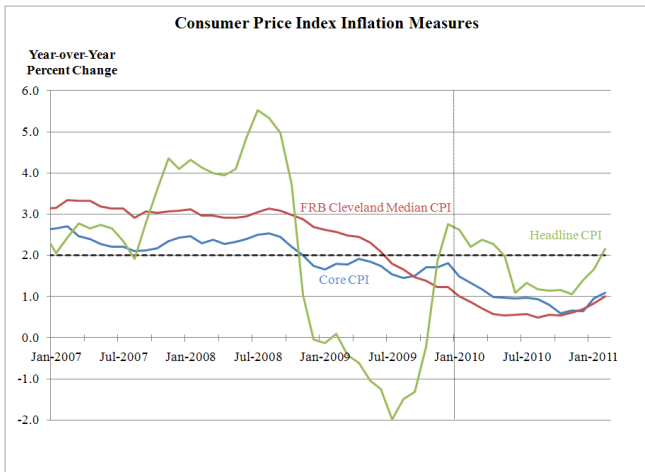


## CLASSICAL MONETARY POLICY EASING

- These are the “classic” financial market effects one might observe when the Fed eases monetary policy in ordinary times (that is, in an interest rate targeting environment).
- Effects on the real economy would be expected to lag by six to twelve months.
  - Real effects are difficult to disentangle because other shocks hit the economy in the meantime.
  - This is a standard problem in the evaluation of monetary policy.



## ACTUAL INFLATION TURNING AROUND?



# Conclusions

## CONCLUSIONS

- The U.S. was susceptible to negative shocks which could dampen inflation expectations.
- This could possibly push the economy into a liquidity trap.
- The conventional wisdom policy response to a negative shock is to promise a longer “extended period.”
- This may work—but it may also encourage a liquidity trap outcome.
- A better policy response to a negative shock is to expand the QE program.