Discussion

Managing Expectations without Rational Expectations

George-Marios Angeletos and Karthik A. Sastry

Marcus Hagedorn

University of Oslo

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My Comments

- Bottom line: Outstanding paper on an important and policy-relevant question
- Usual mix of cheap shots, unfair comments and far-fetched suggestions but will not quote my own work :D

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Overview

- Forward Guidance:
  - How it works.
  - The puzzle.
  - Potential Solutions
- Underlying view of the world
  - How does the counterfactual rational world look? Role of policy.
  - Power of communication/expectation management

PE - GE: Horizon invariance

Forward Guidance in normal times

- Partial Equilibrium: Consumption Euler Equation

$$c_t = E_t c_{t+1} - \sigma(i_t - E_t \pi_{t+1} - r_t^n)$$

- General equilibrium $c_t = y_t$: IS-equation.

$$y_t = E_t y_{t+1} - \sigma(i_t - E_t \pi_{t+1} - r_t^n)$$

GE effects are small in normal times

Appendix: Partial Equilibrium versus General Equilibrium

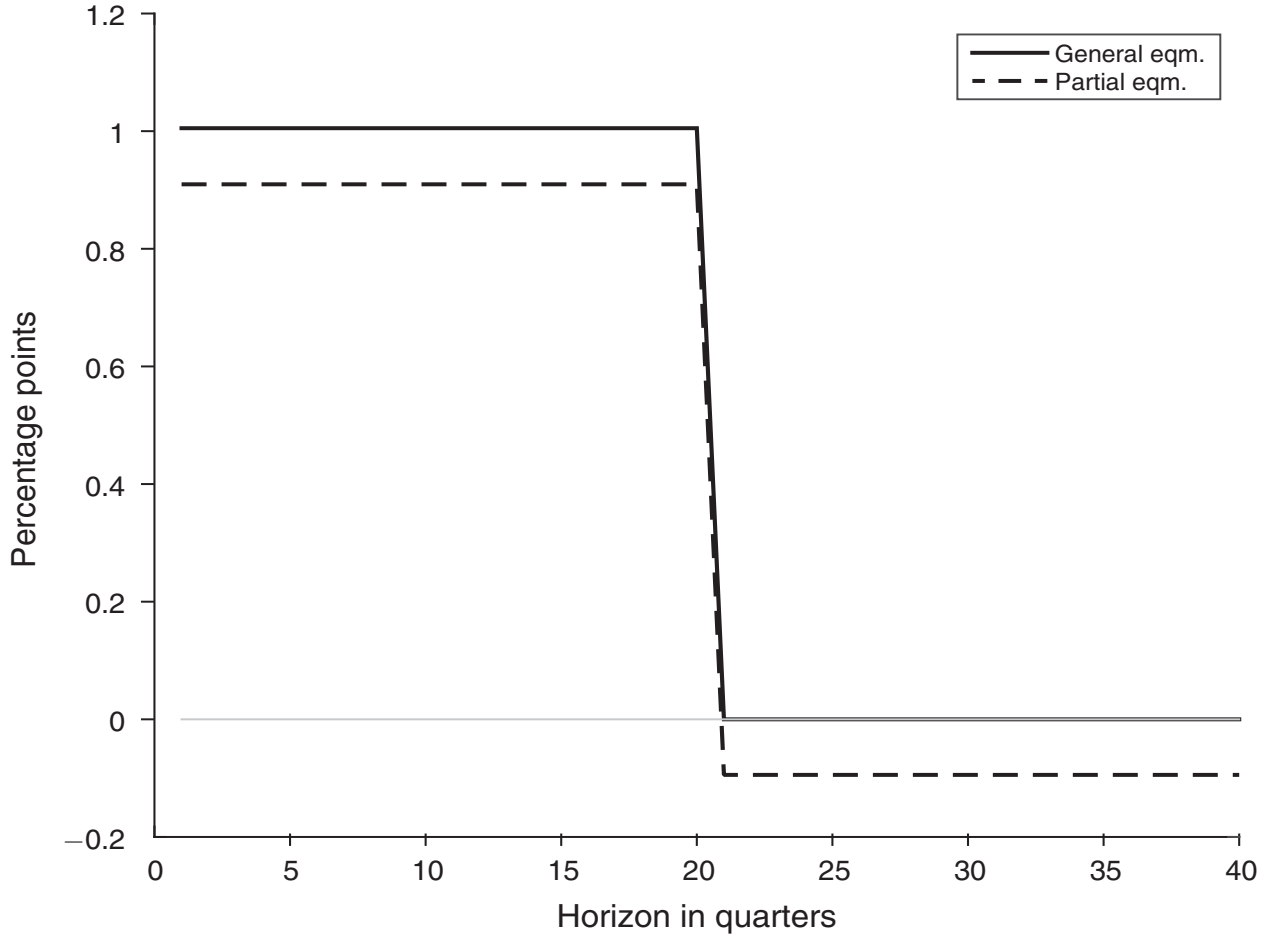


Figure A1. Comparison of the General and Partial Equilibrium Responses to a 1 Percentage Point Reduction in Real Interest Rates in Period 20 with a Unit Intertemporal Elasticity of Substitution Under Complete Markets

THE PUZZLE

FORWARD GUIDANCE IN LIQUIDITY TRAPS

- Phillips curve

$$\pi_t = E_t \pi_{t+1} + \kappa x_t$$

- Substituting and iterating

$$\pi_t = \kappa \sum_{j=0}^{\infty} \beta^j E_t x_{t+j}$$

- Current inflation response depends on cumulative output response.
- The further is the interest rate change in the future the larger is the initial inflation response
- With full inflation/real interest rates/output feedback: large output effects.

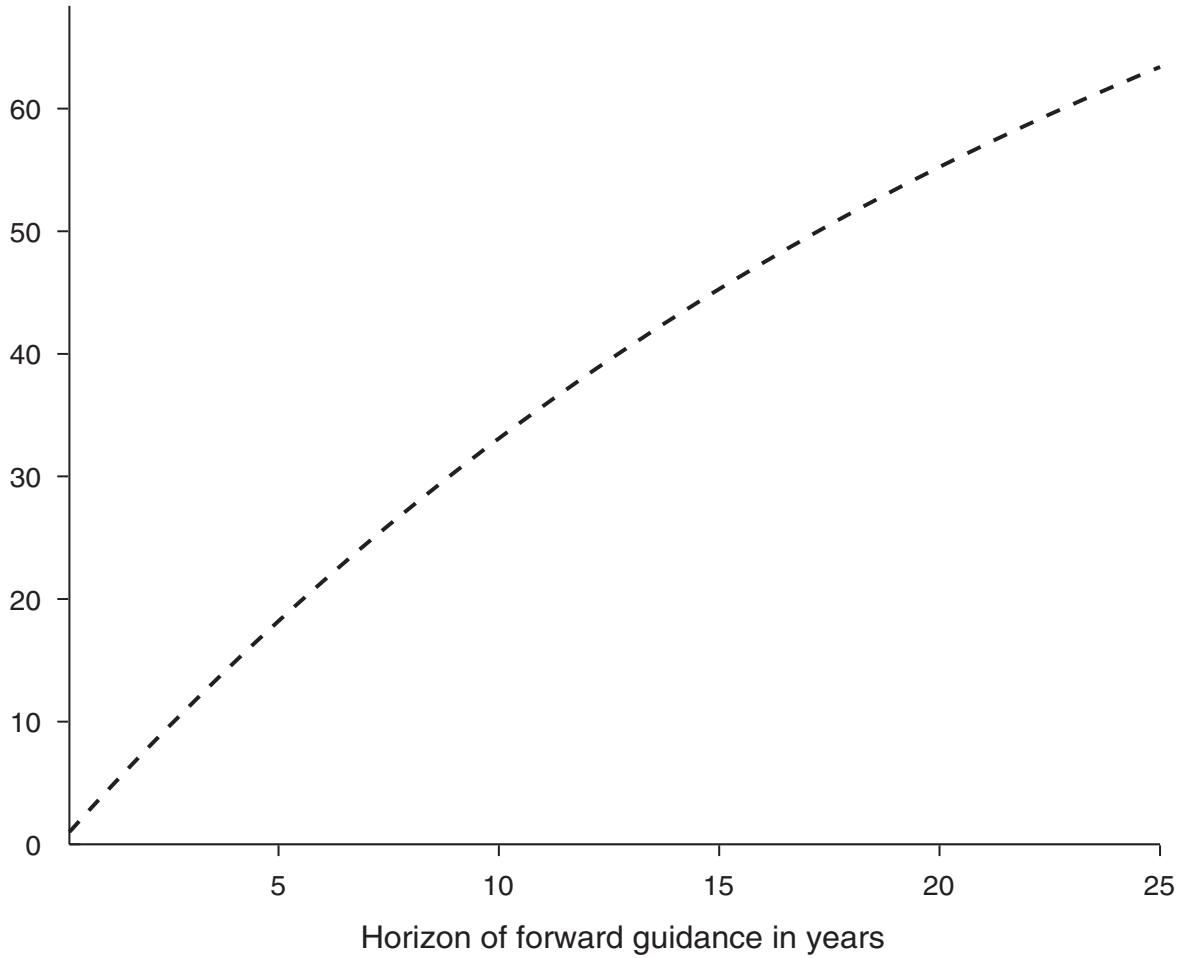


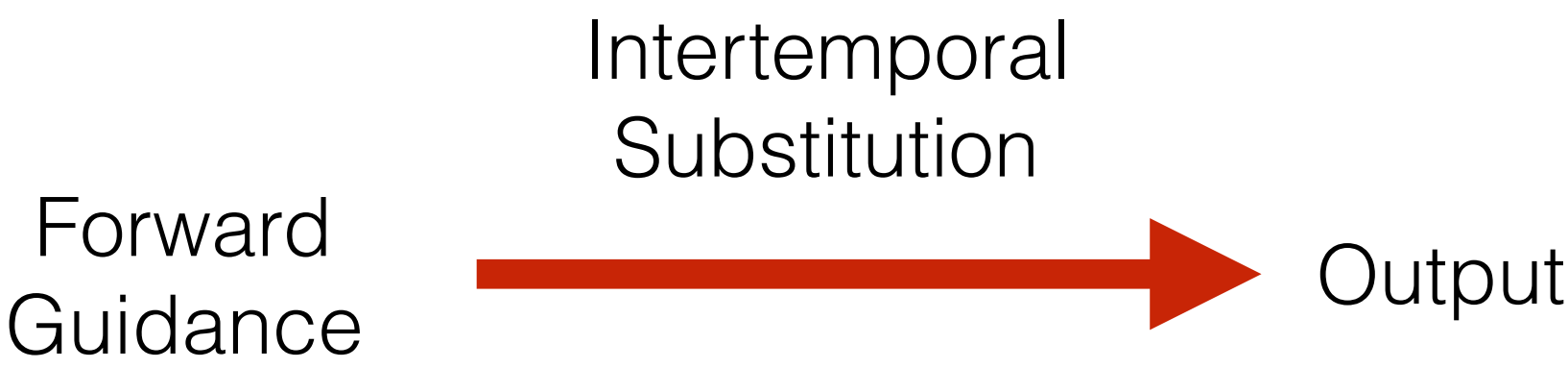
Figure 2. Response of Current Inflation to Forward Guidance about Interest Rates at Different Horizons Relative to Response to Equally Large Change in Current Real Interest Rate

Incomplete Markets and Forward Guidance

- One approach taken to address puzzle: Heterogeneous-agent incomplete-markets models (Bewley-Imrohoroglu-Huggett-Aiyagari)

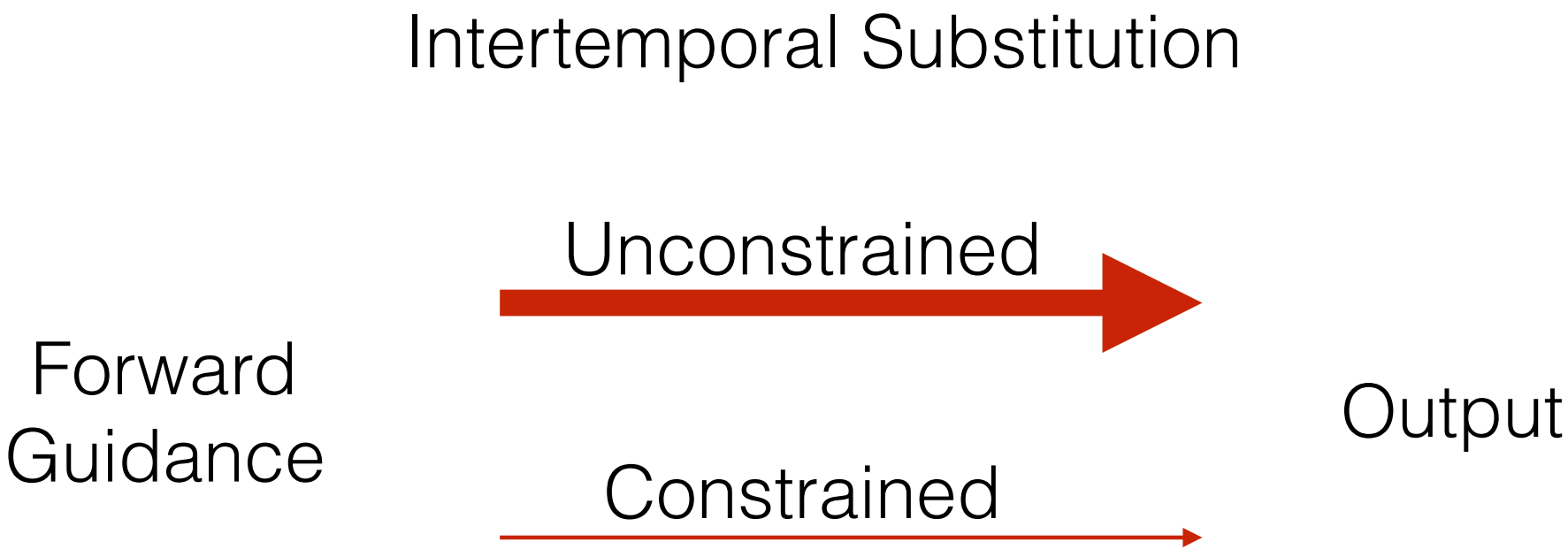
Incomplete Markets and Forward Guidance

- McKay, Nakamura & Steinsson 2015:
  - Strong Intertemporal Substitution (+ large real interest rate changes) explains large effects in complete markets (CM).



Incomplete Markets and Forward Guidance

- McKay, Nakamura & Steinsson 2015:
  - Strong Intertemporal Substitution (+ large real interest rate changes) explains large effects in complete markets (CM).
  - Intertemporal Subst. weaker in incomplete markets (IM).
  - Forward guidance **less** effective in IM than in CM.

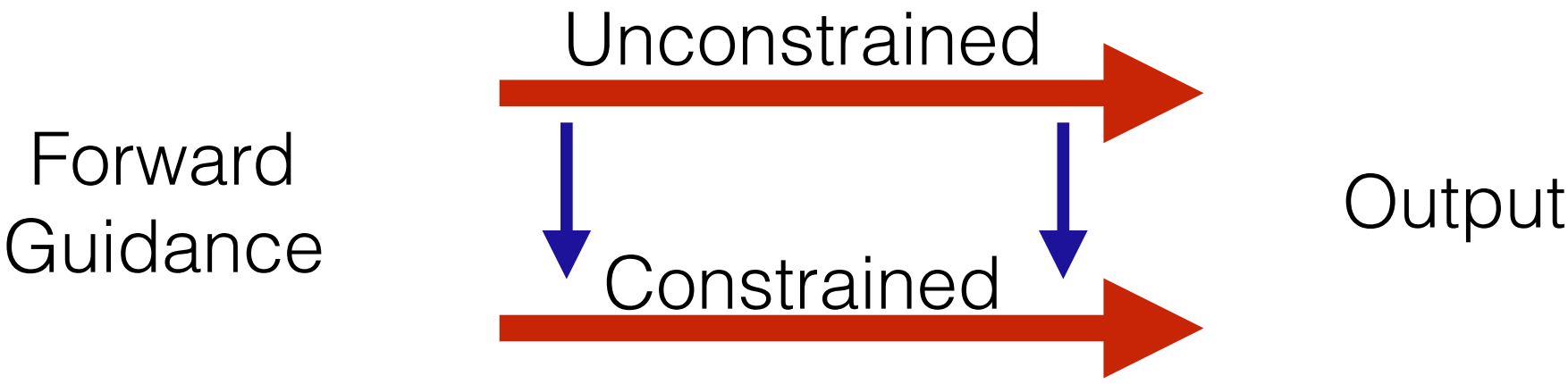


Incomplete Markets and Forward Guidance

- Werning 2015:
  - Taking GE effects into account can break this intuition.
  - Benchmark: FG **equally** effective in IM and in CM.

General Equilibrium

Intertemporal Substitution



FARHI & WERNING LEVEL-K THINKING

	Complete Markets	Incomplete Markets
Rational Expectations	Benchmark	Zero or Modest Improvement
Bounded Rationality	Modest Improvement	Sizable Improvement

- Based on attenuation of GE:
  agents respond less than in frictionless benchmark.
- Same here if strategic complements (instrument announcement).
- Opposite if strategic substitutes (target announcement):
  agents respond more than in frictionless benchmark.
- Question: Why not adjust the announcement accordingly?
- Question: Why not communicate both?

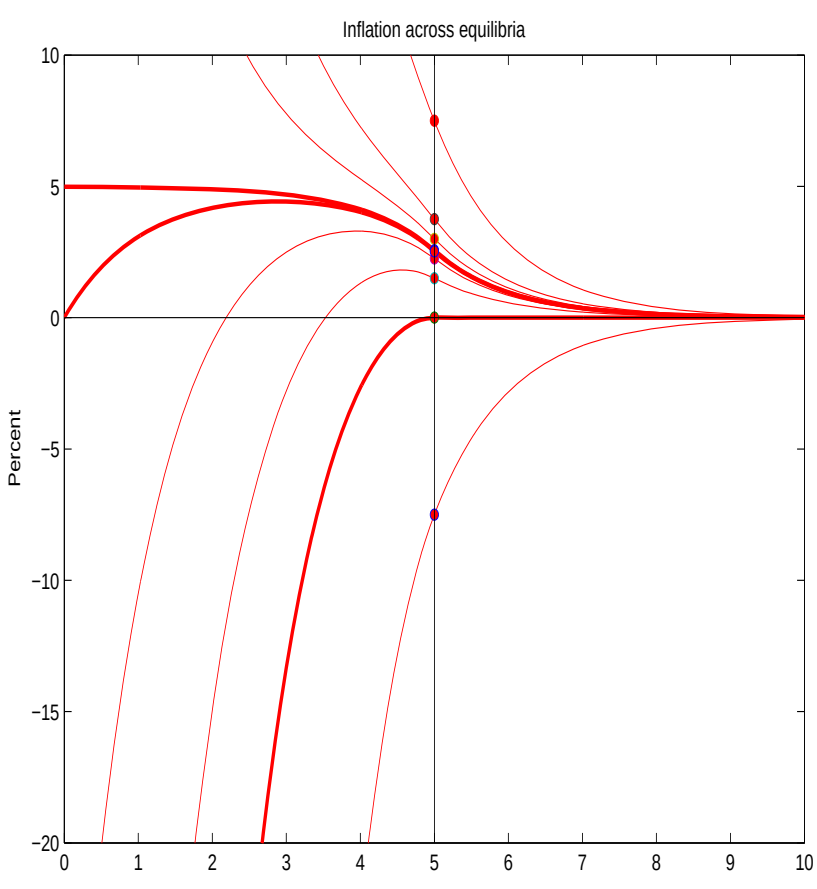
LACK OF CK

- Applies to all (both) model equations
- Can thus eliminate the forward guidance puzzle
- But: Is lack of CK really the source of the puzzle?
- Yes for the PE/GE , $c = y$.
- Sceptical about inflation/output part.
- Rather: Puzzle is a model deficiency
  (price/inflation indeterminacy in a liquidity trap).

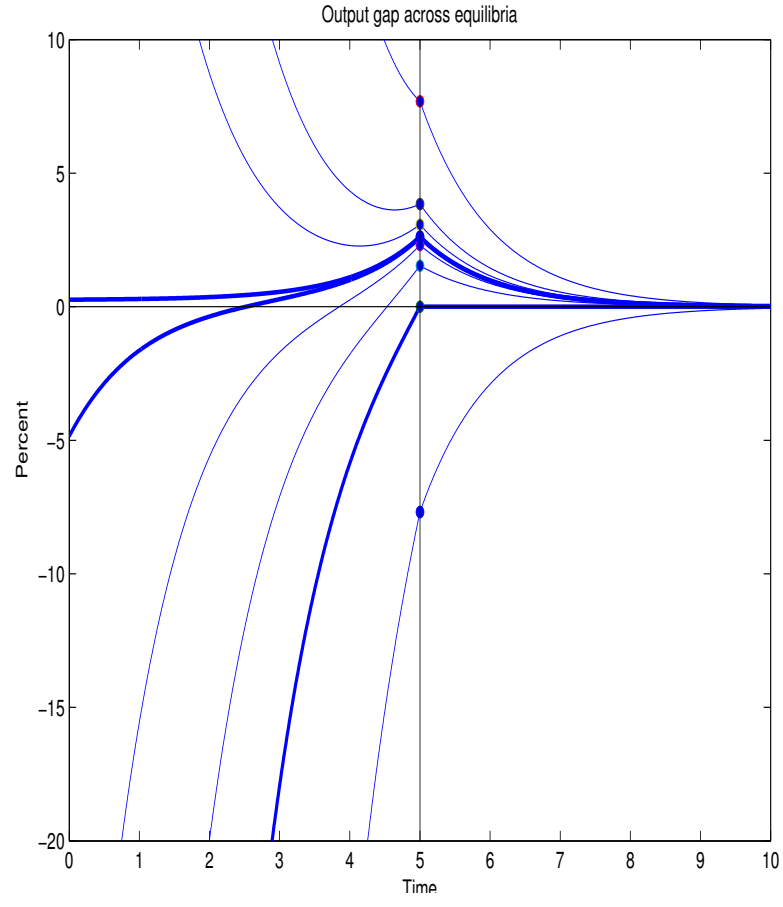
VIEW OF THE WORLD

- Fully rational world / common knowledge:
  Forward guidance would be very powerful
- We do not observe large effects just because lack of rationality
- Large GE effects not taken into account by agents.
  Question: How can policy fix it?
- Maybe a model bug that the GE effects are so big.
  It is not lack of rationality that we do not observe them.
- Not the “real” model part, the “nominal” model part.

COCHRANE (2015)'S POLICY ANALYSIS OF NEW-KEYNESIAN MODELS DURING A LIQUIDITY TRAP



(A) Inflation



(B) Output

Power of Communication

- Specific interpretation assigned to

  Monetary policy is 98 percent talk and only two percent action (Bernanke, 2015).

- Not just (credible) communication of future policy.
- Instead: expectation management almost life of its own.
- But: CB has to be able to implements what it communicates (model, power of CB . . .)
- Similar role of communication to achieve a higher inflation target.

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- Friedman (1969):

  . . . danger of assigning to monetary policy a larger role than it can perform, in danger of asking it to accomplish tasks that it cannot achieve, . . .

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- Friedman (1969):

  It [monetary authority] cannot use its control over nominal quantities to be a real quantity - the real rate of interest, the rate of unemployment, . . .

Managing Expectations = Success ??

. . . OR MAYBE IT WORKS

TAKK