

Discussion of
“Asset Price Bubbles and Monetary Policy in a
Small Open Economy”
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¹ Any opinions expressed here do not necessarily reflect the views of the management of the Federal Reserve Bank of San Francisco or of the Board of Governors of the Federal Reserve System



Should Central Banks Try to Prevent or Deflate Bubbles?

No

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- Attempts to lean against bubble may result in recession or too much inflation volatility ([this paper](#)).

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Yes

- Central banks already respond to variables that are difficult to measure in real-time (e.g., output gap).
- Bubbles distort economic decisions, leading to capital misallocation and dangerous imbalances.
- Bursting bubbles can lead to recession, financial crises, or deflation.
- Throughout history, bubbles have been accompanied by fraud and scandal, followed by need for more financial regulation.
- Bubbles can be identified in real-time by examining key variables such as leverage or credit growth.

Academic literature: This is not a settled issue!

Many researchers find benefits of interest rate response to financial variables.

Models where interest rate response to equity prices is beneficial.

- Cecchetti, Genberg, Lipsky, & Wadhvani (2000, Geneva Report).
- Dupor (2005, JME).
- Gilchrist and Saito (2008, NBER book chapter).
- Filardo (2008, BIS Working Paper). $\Pr(\text{burst}) = f(\text{policy rate})$.
- Christiano, Ilut, Motto & Rostagno (2010, FRBKC Symposium).
- Kannan, Rabanal & Scott (2012, BE Journal).
- Airaudo, Cardani & Lansing (2013, JEDC).

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Evidence that the Fed does react to stock prices

- Rigobon and Sack (2003, QJE), empirical study 1985 to 2000.
- Hayford and Malliaris (2001, Elsevier book chapter), study of FOMC transcripts.

Fact: Interest rate policy reacts to financial markets.

“How fast the normalization process will proceed depends mainly on two factors: (1) how the economy evolves and (2) how financial market conditions respond to movements in the federal funds rate.

If financial market conditions do not tighten much in response to higher short-term interest rates, we might have to move more quickly. **After all, the point of raising short-term interest rates is to exert some restraint on financial market conditions.”**

FRBNY President William Dudley, April 6, 2015.



Central bank views on bubbles have shifted.

Pre-crisis view: Do not *lean* against suspected bubbles. Instead, *clean-up* the damage afterwards.

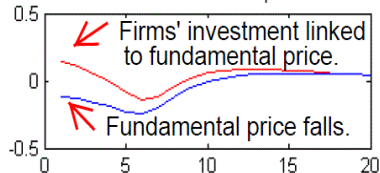
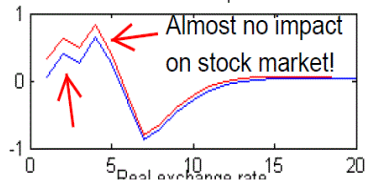
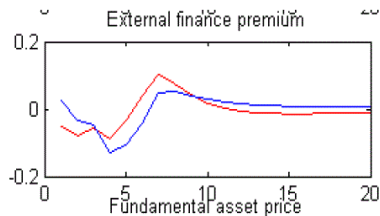
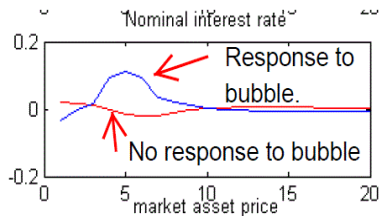
Post-crisis view: “What has become patently obvious is that not dealing with certain kinds of bubbles before they get big can have grave consequences. This lends more weight to arguments in favor of attempting to mitigate bubbles, especially when a credit boom is the driving factor.”

FRBSF President Janet Yellen, April 16, 2009.



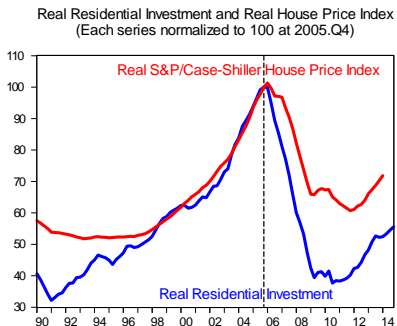
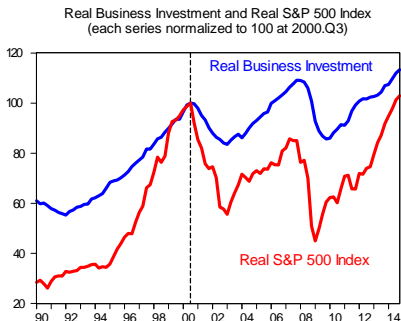
Policy cannot prevent or deflate bubbles in B-G model.

Baked into the cake: Leaning against exogenous bubble must fail.



Missing from model: Bubbles lead to over-investment.

B-G Model: “Firms make their investment based on fundamental considerations, such as net present value, rather than on valuations of capital including the bubble.”



Bubbles lead to over-investment and capital misallocation.

Unfinished subdivision in Rio Vista, California.



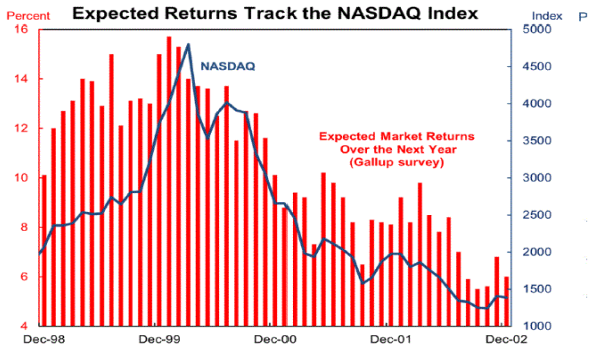
Fredric Larsen / The Chronicle

Source: San Francisco Chronicle, January 26, 2009.

Investor return expectations appear backward-looking.

B-G Model: All agents have fully-rational expectations.

- Agents in model anticipate central bank response to bubble, which drives down fundamental equity price and investment.
- Consequences less severe with backward-looking agents?



Source: A. Vissing Jorgensen (2004). "Perspectives on Behavioral Finance: Does Irrationality Disappear with Wealth" in NBER Macro Annual 2003, MIT Press, pp. 139-194.

What is the optimal simple rule in model?

Should compute optimal response to inflation, output, and equity prices.

Model Policy Rule: $R_t = \alpha_\pi \pi_t + 0.3 \left(\frac{S_t}{S_{t-1}} \right)$, with $\alpha_\pi = 1.4$ or 3.

