

Discussion:  
The Role of Learning for Asset Prices,  
Business Cycles and Monetary Policy  
Fabian Winkler, 2015

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DNB Learning Conference, Sep 2016

# Summary

- ▶ Documentation of 3 facts (and suggest explanation):
  - ▶ Stock price shocks have real impact (VAR)
  - ▶ Stock prices are highly volatile and returns predictable (lit.)
  - ▶ Expectations on stock prices deviate from RE (survey)
- ▶ Create link from stock prices to real activity
- ▶ Introduce learning-based asset pricing
- ▶ Data fit & policy implications

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## Main contributions: Model

- ▶ Feature-rich medium scale NK model (nominal frictions, labor mkt. frictions, ...)
- ▶ BGG type financial friction
- ▶ Substitute net-worth for stock prices in borrowing constraint (& show that relationship between stocks and  $N$  exists)

## Main contributions: Learning

- ▶ All expectations but stock price expectations are *model consistent*
- ▶ Assume asset prices follow a random walk
- ▶ **But:** rational guys form beliefs based on fundamentals *and* asset prices (inconsistency resolved by forecasting errors)
- ▶ RE are then also driven by learning process

# Main contributions: Data Fit and Policy Implication

- ▶ Good data fit (tremendously improved by learning)
- ▶ Learning matches stylized facts about asset prices
- ▶ Implication: CB should (weakly) react to asset prices

## Remarks I.

- ▶ VAR?
- ▶ Many (4) parameters for financial frictions
- ▶ If a firm is unable to pay its debts  $\rightarrow$  unable to pay dividends  $\rightarrow$  mkt. value = 0 (stock price is not price for capital)
- ▶ Implementation of linkage by using stock prices as benchmark for reselling could be interpreted as believe based

## Remarks II.

- ▶ Firms' leverage should be motivated by decisions and optimality conditions
- ▶ Motivation: why are stock prices different from other variables? Behavioural explanation?
- ▶ Lucas critique: if we would understand financial markets (hence believe the model), the model would collapse.
- ▶ Wilderness of bounded rationality: variety of concepts that match stylized facts of asset prices. Robust to a policy regime shift?

## Remarks III.

- ▶ Consistent expectations are driven by learning → asset prices have impact on real activity even without direct linkage
- ▶ RE guys could learn from observing their systematic forecasting errors
- ▶ Policy implication results from the degree of autonomy of stock prices:
  - ▶ Low autonomy, high impact → APT might stabilize
  - ▶ High autonomy, low impact → APT amplifies real responses to fundamental shocks
- ▶ Cross-correlation matrix helpful for model identification
- ▶ Generally: unlinking asset prices from real activity desirable. Creating structural (= not believe-based) linkage through ATP might be the wrong response

Thanks!

**Thank you for your attention!**