

Macroeconomic feedbacks and financial stability: better macro models

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New Keynesian Dynamic Stochastic General Equilibrium models

- **Not new**, based on outdated microeconomic ideas made redundant by the asymmetric information revolution of Stiglitz, Akerlof, Spence.
- **Not Keynesian**, ignoring co-ordination failures, especially between real economy and finance, hence **useless for understanding financial stability**.
- **Not dynamic** enough, misleading on real world lag structures.
- **Hardly stochastic** (statistical distributions), missing both radical uncertainty (time dimension) and heterogeneity (cross-section dimension) of distributions.
- **Hardly GE**, **missing feedbacks via balance sheets**.
- Rational expectations and inter-temporal optimization need reformulation when **structural breaks and radical uncertainty** are endemic, Hendry & Mizon, VOXEU 2014.



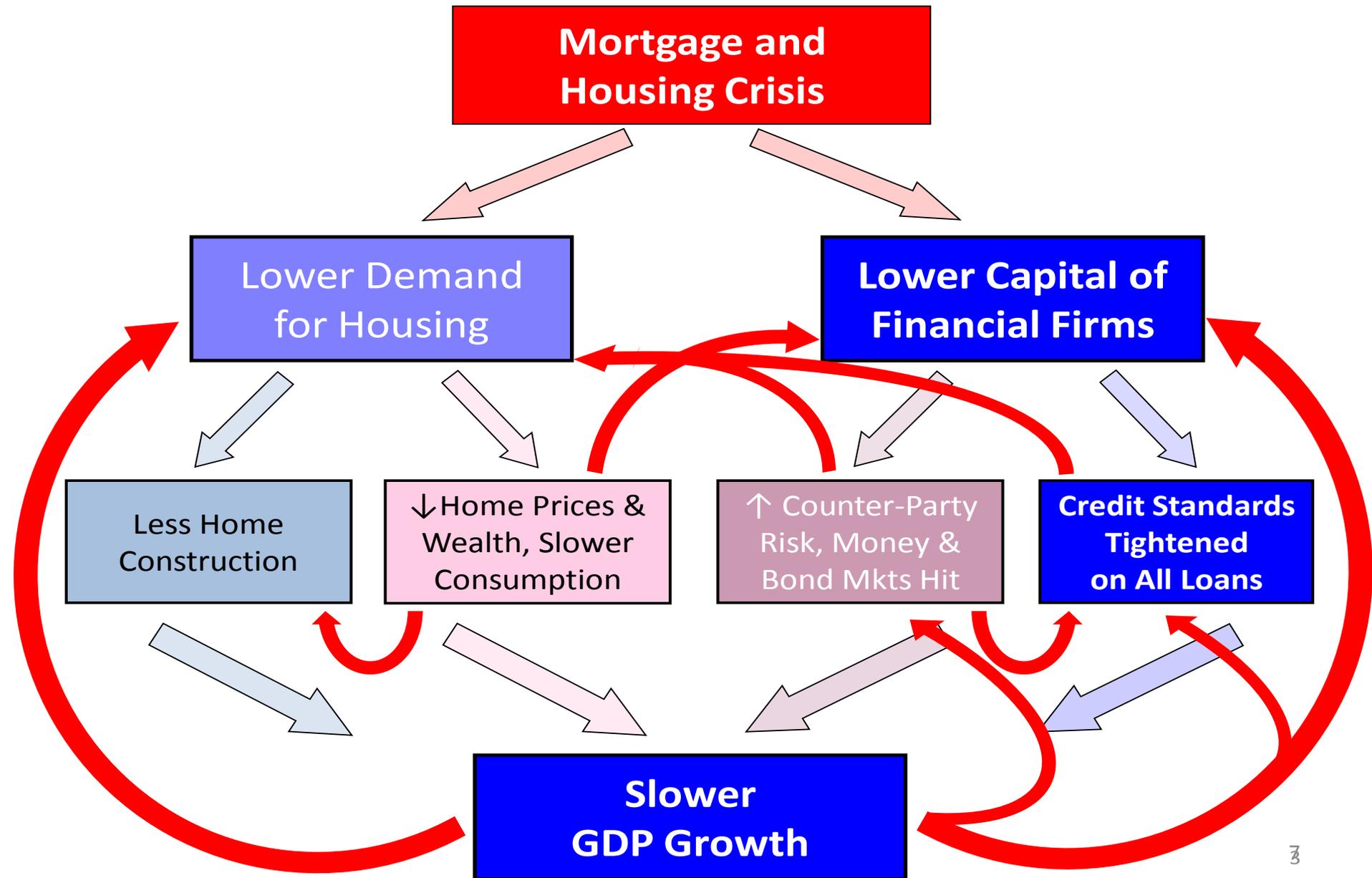
- In the fashionable New Keynesian ‘science of monetary policy’ (Clarida, Gali and Gertler, 1999) credit sectors, money and asset prices were thought **irrelevant**.
- Blanchard (2017) <https://piie.com/blogs/realtime-economic-issues-watch/need-least-five-classes-macro-models>, and 2018 OXREP, favours major repairs of central bank policy models:
- less imperialistic attitude so that alternative GE models, closer to the data, can flourish.
- Many (BOC, DNB, **ECB**, even BOE) have realised the need for non-DSGE macro models.
- So far, these models also miss institution-specific, **potentially amplifying** feedbacks, so hard to integrate with stress testing.



- Post crisis, central banks have studied the flow of funds and financial balance sheets much more carefully.
- New attention to old ideas of Tobin, resurrected in **stock flow consistent** (SCF) approaches of Godley and Lavoie (2012), Burgess et al (2016), BOE, Staff Working Paper No. 614.
- But **behavioural links** with spending and hence the real economy are as yet **weak** in all these models, **including FRB/US**. So miss business cycle feedback loops and understanding of risks to financial stability.
- FRB/US failed acid test in crisis: in 2007 Jackson Hole symposium, Mishkin reported FRB/US simulations of a 20% decline in real house prices for 2007-2008: GDP lower than baseline by ONLY 0.25% in early 2009!

- UK abandoned exchange controls in 1979; eliminated ‘corset’ on bank lending;
- Banks invaded mortgage market;
- Building societies responded, new liberties in 1986 BS Act.
- Centralised mortgage lenders invaded in 1986-1990.
- Mortgage crisis led to credit crunch.
- After 1996, credit liberalisation for buy-to-let market; increased securitisation; new breed of centralised lenders.
- Fernandez-Corugedo and Muellbauer (BOE WP 2006) track mortgage credit conditions index consistent with above.
- From 2008, credit crunch and re-regulation, partial relaxed.

- Irving Fisher's 1933 debt-deflation theory of great depressions and book on Booms and Depressions:
 - credit availability expands, pushes up spending, debt and asset prices, irrational exuberance raises prices to vulnerable levels, negative shocks can then cause falls in asset prices, bad debt, credit crunch, rise in unemployment, deflation.
- Explaining the collapse in UK personal saving (Muellbauer and Murphy, 1990):
 - (unsustainable) credit-liberalisation-driven house price boom: evidence that debt had far more negative effect on spending than previously thought
 - Hence crucial to control for the shift in credit conditions!
- Adair Turner (2015) *Between Debt and the Devil: Money, Credit and Fixing Global Finance*.
- Jorda, Schularick and Taylor *Economic Policy* Jan 2016 on role of real estate debt in forecasting banking crises.
- Mian, Sufi and Verner QJE 2017: role of hh debt in forecasting recessions and banking crises.
- IMF Oct 2017 Financial Stability Report, ch. 2 on hh debt.



- In the long run, credit supply and house prices boom has negative feedbacks: higher debt limits consumer spending, higher housing stock limits further rises in house prices, higher hp/income **can** increase saving for down-payment: **French evidence**.
- But in short-run, **can** be amplifying feedbacks: increased consumption due to increased credit supply and **higher house prices**, and higher incomes and employment from increased residential investment.
- In down-turn, bad loans contract credit supply, amplifies shocks: **French evidence**.
- If large extrapolative element in expectations of house price appreciation, a sequence of positive shocks can lead to amplifying feedbacks, especially with high levels of gearing.
- Large differences between economies in these feedbacks.
- **Where is France in this spectrum?**

- Overvaluation of housing due to overshooting, can contribute to over-extension of household debt, given fundamentals.
- **French evidence for overshooting?**
- Deterioration of lending quality in credit booms, given fundamentals, especially to property developers.
- Other sources of risk:
 - ‘Fundamentals’ may be fragile e.g. duration mis-match in credit supply (Ireland, UK seen in money-market stop in Aug 2007); currency mis-match of debt (Baltics, Hungary, Asian financial crisis); unsustainably weak financial regulation (bank mis-selling scandals).

Exogenous negative shocks can arrive: deterioration of terms of trade, collapse of export market (Finland early 1990s), rise in global interest rates (Reagan fiscal shock early 1980s, German unification shock early 1990s), oil shocks, external credit supply shocks, political risk, climate change.



- 6-equation Latent Interactive Variable Equation System (LIVES) with mortgage (MCCI) and non mortgage credit conditions for consumption, mortgage debt, non-mortgage debt, liquid assets, house prices and permanent income.
- Partial equilibrium framework conditioning on income, unemployment, interest rates, stock market and demography.
- France experienced substantial credit market liberalisation, esp'y in the 1980s. But little equity withdrawal, still high down-payment constraints- and cautious bank regulation.
- In French house price boom, 1996-2008, almost all of rise in c/y due to credit liberalisation and higher housing wealth was offset by negative effect of higher house prices and higher debt.
- Negative effect of debt on consumption is far higher than positive effects of illiquid wealth.
- Only moderate overshooting of house prices:extrapol. expectations



- Lagged ratio of French non-performing loans/total bank loans to private sector is negatively correlated with MCCI: **role for bank balance sheets & stress testing.**

