A dynamic model of financial imbalances for the United Kingdom

Burgess, Burrows, Godin, Kinsella and Millard

Discussion by Stefano Neri

Banca d'Italia

Economic outlook and monetary policy Directorate

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Outline

- What the paper is about

- A general comment
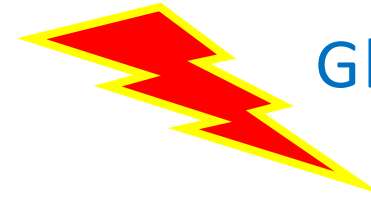
- Specific comments

- Summing up

What the paper is about

Goal: filling a gap, building a new Dynamic Macro model for UK

Great Moderation → Little attention to building up of financial imbalances

Global financial crisis

Severe criticism of DSGE models

(New generations of?) DSGE models with banks and financial frictions

Stephen and co-authors' stock-flow consistent (SFC) approach

"DSGE *models had little to say about how financial flows had contributed to the crisis and how they might evolve post crisis*"

- What is a stock-flow consistent approach?

- "[…] *a framework for the model where every flow comes from somewhere in the economy and goes somewhere, and sectoral savings/borrowings and capital gains/losses add or subtract from stocks of wealth/debt*"

- "[…] *The addition of accounting constraints is crucial, as one aspect of the economy we would like to model is the way it might react differently when policies such as fiscal consolidations are imposed slowly or quickly*"

- Great potential!

A general comment

- No free lunch, but trade-offs

- Modelling link between financial flows and real economy comes at cost of a weaker link with economic theory

Table A: Pros and cons of using the SFC approach rather than the DSGE approach

Pros	Cons
Typically use national accounting constraints to provide a framework.	The model equations are not explicitly linked to the optimisation problems of particular agents.
Allow modelling of gross flow and balance sheet positions by sector.	The framework is not well-established, which makes it harder to take on board insights from other work.
Can be used to model feedback from financial asset and liability positions to the paths for production and spending.	The models are complicated, which makes it hard to explain the main economic mechanisms at work.
Can include an important role for money, credit and the financial system.	They are hard to take to the data: the data requirements are large relative to those in more standard DSGE models.
Can offer a framework for exploring different specifications for agents' expectations.	The model parameters suffer from the Lucas critique: they can be affected by changes in policy regime or time series properties of the driving processes.
Arguably SFC models have more realistic behavioural assumptions than many models which are micro-founded.	The models are not so clearly linked to economic theory.

- Criticism of DSGE models: not totally fair

- *"When a theorist builds a model, it is an attempt to highlight the features of the world the theorist believes are the most important for the* question at hand*"* (Bob Lucas, The Economist, Aug 6th 2009)

- *"[…] workhorse paradigm is one that is clearly applicable to* normal times, I *would even say normal times in developed, stable economies"* (Jordi Galí, 2009)

- *"[…] DSGE models will remain central to how macroeconomists think about aggregate phenomena and policy. There is simply* no credible alternative to policy analysis *[…]"* (Larry Christiano, 2017)

- *"[…] it may be better for macroeconomists to embrace more diversity of methodological approaches […] even in physics […] mankind has not yet managed to find a* theory of everything*"* (Anton Korinek, 2017)

- Assessment of forecasting performance and goodness of fit; essential for confidence in simulations

- How to assess amplifying role of financial sector? How would dynamics change if some mechanisms are shut down?

- Adaptive expectations: DSGE models with constant-gain learning (Slobodyan and Wouters, JED, AEJ: Macro; Milani, JME)

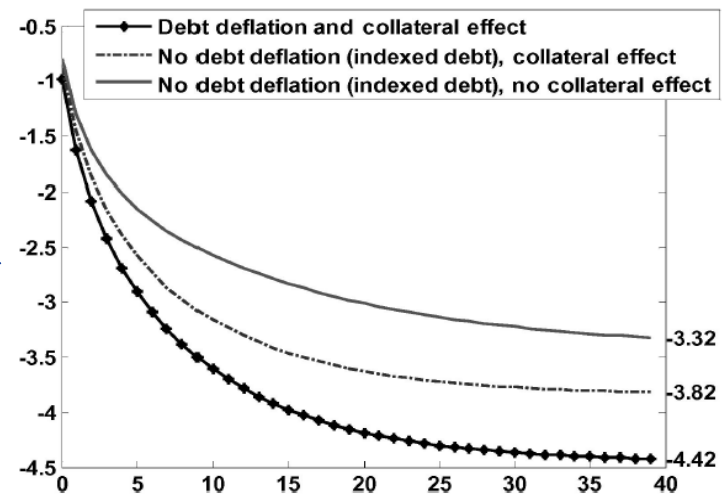- Monetary policy: nominal GDP targeting? Not realistic if model is to be used also for monetary policy

FIGURE 2. TOTAL OUTPUT LOSS IN RESPONSE TO A MONETARY SHOCK IN THE BASIC MODEL: COMPARISON BETWEEN ALTERNATIVE MODELS
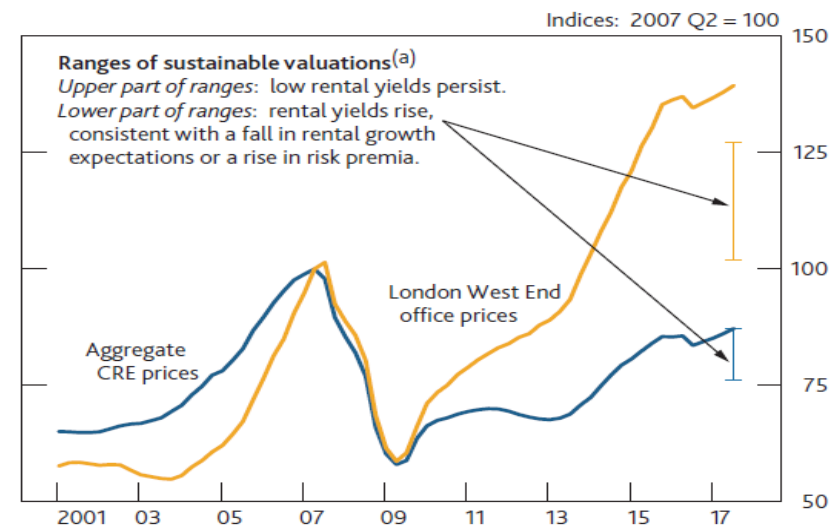
Notes: Ordinate: time horizon in quarters. Coordinate: percent deviation from initial steady state.

Source: Iacoviello (AER, 2005).

Specific comments (cont'd)

- How to deal with decline in natural rate of interest and in potential output growth? How does model behave in long-run? Important for assessing medium to long-term impact of Brexit

- Commercial real estate sector? →

- Modelling of banking sector similar to Gerali et al. (2010). How about non-linearities in credit supply?

- Does Stephen's model relate to BoE COMPASS (DSGE) model?

Chart A.32 UK commercial real estate prices look stretched based on ranges of sustainable valuations
Commercial real estate prices in the United Kingdom and ranges of sustainable valuations

Indices: 2007 Q2 = 100

Ranges of sustainable valuations(a)
Upper part of ranges: low rental yields persist.
Lower part of ranges: rental yields rise, consistent with a fall in rental growth expectations or a rise in risk premia.

London West End office prices

Aggregate CRE prices

Sources: Bloomberg Finance LP, Investment Property Forum, MSCI Inc. and Bank calculations.

Summing up

- Very ambitious project, with great potential

- Paper could benefit from

  - statistical testing of forecasting performance

  - better understanding of amplification and propagation role of stock/flow mechanisms

- Not clear model captures non-linearities characterizing financial cycles

- Challenge for all models; be humble about they can deal with and what they cannot

- DSGEs were not developed to explain all aspects of macroeconomic fluctuations, in a sort of "*unifying theory*"