Stock-Flow-Consistent Modeling

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Weekly plan

	First block	Second block
Monday	Introduction	SFC principles
Tuesday	A simple SFC model	The monetary circuit
Wednesday	More complex models	The “New Cambridge” approach
Thursday	Financial balances and the 2009 crisis	Financial balances and the Eurozone crisis
Friday	Empirical models	Lines of research

Alternative program	
Thursday	Model development in practice
Friday	Model development in practice

Introduction to stock-flow-consistent modeling

Why is it of interest?

- The SFC approach provides a tight framework for modeling the <u>interactions between real and financial markets</u>
- It has a rigorous, yet flexible structure to accommodate alternative theoretical – and empirical – closures
- In its post-Keynesian version, it has been found to be effective to understand/predict financial or economic crisis (Bezemer 2010)

Examples

Godley (1999) “Seven unsustainable processes”
Predicted the 2001 recessions

Godley – Zezza (2006) “Debt and lending”
Predicted the 2007 recessions

Papadimitriou – Nikiforos – Zezza (2013) “The Greek Economic Crisis and the Experience of Austerity”
Better projections of Greek depression vs IMF, etc.

Relevance of Flow of Funds analysis

The 2007 crisis exposed the shortcomings of the mainstream approach.

"The biggest financial crisis in a lifetime has shown how important it is to have a deep understanding of the financial balance sheets of the main sectors of the economy and the financial flows that take place between them."

(From the Foreword in *A Flow-of-Funds Perspective on the Financial Crisis*, edited by Bernhard Winkler, Ad Van Riet, and Peter Bull, 2014)

Super-brief history of macro…

1950s-1960s
Keynesian/Post-Keynesian/Neo-classical synthesis models
IS-LM model in textbooks. Original Phillips curve
Cowles-Commission-type large scale macroeconometric models used at Central Banks > Macro I: see Fair (2012)

1970s-1990s
Inflation shocks. Vertical Phillips curve. NAIRU.
Lucas critique. Rational expectations
Saltwater economists: New-Keynesians
Freshwater economists: Real Business Cycle

Super-brief history of macro... #2

Micro-foundation of macro models

Dynamic Stochastic General Equilibrium Models

Olivier J. Blanchard (2008) "The state of macro", NBER WP

"a largely shared vision both of fluctuations and of methodology has emerged … the state of macro is good"

Blanchard refers to the convergence between New Classicals and New Keynesians: the New Consensus Model

The NCM for a closed economy

$$x_t = E_t x_{t+1} - \sigma(i_t - E_t \pi_{t+1} - r_t^*)$$

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

$$i_t = i_t^* + \gamma_\pi (\pi_t - \pi^*) + \gamma_x (x_t - x^*)$$

x : output gap
π : inflation
i : nominal interest rate

The debate on macro

Ray Fair (2012) "Has macro progressed?", Journal of Macroeconomics

"*If the macro 2 message is not sensible or its methodology is not feasible for estimating realistic models, it is perhaps time to move back to macro 1 (the Cowles Commission approach)*"

The debate on macro #2

Blanchard (2014) “Where Danger Lurks”, Finance and Development, IMF, Sep.

“*If macroeconomic policy and financial regulation are set in such a way as to maintain a healthy distance from dark corners, then our models that portray normal times may still be largely appropriate … Trying to create a model that integrates normal times and systemic risks may be beyond the profession’s conceptual and technical reach at this stage.*”

The debate on macro #3

Paul Romer (2016) “The trouble with macroeconomics”, The American Economist

“*In the last three decades, the methods and conclusions of macroeconomics have deteriorated to the point that much of the work in this area no longer qualifies as scientific research*”

The debate on macro #4

Ricardo Reis (2018) "Is something really wrong with macroeconomics?"

"*most critiques of the state of macroeconomics are <u>off target</u> … (but) perhaps that there is too little discussion of which models to teach*"

Simon Wren-Lewis (2018) "Ending the Microfoundations Hegemony"

Compares SEMs to DSGE, suggests coexistence

Where does the SFC approach stand?

(Empirical) Methodology similar to the Cowles Commission approach: structural equation models

Post-Keynesian/Kaleckian. The economy is demand-driven, even in the long run

Disequilibria in the short term imply adjustments

Emphasis on the analysis of stock-flow and flow-flow norms (example: debt/income ratio, debt burden/income)

Interest for SFC is growing...

Post-Keynesian contributions were usually ignored by mainstream economists.

Interest is now growing, especially among practitioners, and economists advising Central banks

See Burgess et al.(2016)

References to main contributors

Origins

- Copeland (1947)
- Godley and Cripps (1983)
- Tobin (1969)
- Others include Davidson (1968); Eichner (1987); Taylor (1983); Skott (1989); Foley (1982)
- Main reference: Godley and Lavoie (2007)
- Recent survey in Nikiforos and Zezza (2017)