

**Unconventional Monetary Policies and Credit Market:
Insights from Complex Systems**

Topic description

The recent crisis has revealed the fundamental role of credit and more generally of financial markets in triggering deep and long downturns. Ng & Wright (2013) find that in the last thirty years all recessions hitting the U.S. originated in financial markets. More generally, financial crises are not rare events (apart from the calm of the 1930-1970 period), they occur both in developed and emerging economies, and their cost is much more severe than “normal recessions” (Taylor 2015). Finally, credit booms can fuel asset price bubbles, leading to deeper recessions and slower recoveries (Jorda et al. 2015; see also Stiglitz 2015 on the links between credit and deep downturns). In such an environment, traditional economic theory could not explain, much less predict, the near collapse of the financial system and its long-lasting effects on the global economy.

This explains why in the last decade there has been an increasing interest in using ideas from complexity theory to make sense of economic and financial markets. In particular, network effects matter to financial-economic stability because shock amplification may occur via strong cascading effects (Battiston et al., 2016). This recent research methodology is fruitful to analyze not only how complex market economies manage to coordinate activities in normal times (Howitt 2011), but especially to study how major crises emerge, pushing the economy outside the stability “corridor” (Leijonhufvud 1973) and in “dark corners” (Blanchard 2014).

In such a framework, standard monetary policy is an inadequate tool to achieve both price and financial stability. Therefore, the recent policy debate is focusing in particular on the adoption, implementation and effectiveness of alternative, unconventional policy tools (Balasubramanian & VanHoose 2013, Claessens et al. 2013, Miles et al. 2013, Aiyar et al. 2014, Cerutti et al. 2015, Popoyan et al. 2017), that would also account for the complex interconnections that tie financial institutions and affect system stability.

In this special session we focus on endogenously evolving complex system models of the economy (Kirman 1992, Colander et al. 2008). These models offer sufficient flexibility to implement, examine and test the effectiveness of a large set of unconventional monetary and fiscal policies (e.g. Quantitative Easing (QE), Green QE and Helicopter Money), micro and macroprudential policies (e.g. leverage targets, minimum capital requirements and countercyclical capital buffers) as well as stress tests for the financial system, whose real implications still need to be explored. Furthermore, they allow the study of the interplay role between credit and financial markets and real economy.

It is an opportune time for academic economists, complexity scientists, social scientists, ecologists, and researchers at financial institutions to join forces to develop tools from complexity theory, as a complement to existing economic modeling approaches. Our special session is meant to perform a further step in this direction.

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