

The Role of the Macro-Prudential Financial Regulation in enforcing Financial Stability: An Evolutionary Model

Gladys Gissell Huaccha
University of Siena
University of Leeds (Visiting)

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“Man is not simply a bundle of desires but rather a coherent structure of propensities and habits which seeks realisation and expression in an unfolding society.”

Thorstein Veblen

1 Abstract

The motivation of this investigation lies on the awareness that economic systems are nothing else than complex organisms, which in order to survive they need to evolve through time and adapt themselves to the new environmental conditions. Such an evolutionary adaptation must take into consideration not only similarities among agents involved, but also their own differences from previous periods (in a word their heterogeneity). Therefore, along all the considerations within this investigation, the concept of time and highly time dependence, of the way in which agents such as households, production firms, banks, governments and financial regulators take their decisions and interact with one another, in a specific moment of the mankind history, will be always present. However, since it is basically impossible to derive analytic solutions which describe how a modern “monetary economy” as a whole it evolves, particularly, due to its intrinsically dynamics, constantly reshaped by the change of both its institutions and its behavioural patterns through historic time, the present investigation will be conducted on the implementation of an evolutionary model by means of an Agent Based-Stock Flow Consistent macroeconomic model (hereafter, AB-SFC), in the vein of Caiani et al. (2016).

The framework upon which this investigation will be build is the Macro-Prudential Financial Regulation.¹ The concern to focus this investigation upon the Macro-Prudential Financial Regulation, banking regulation in particular, arises out of belief that banks play a paramount role in the creation of money, role that can not be neither neglected nor underestimated in the analysis of financial instability. The concern increases, even more, considering the globalisation of money markets and the recurrent danger of global financial disruption, cause money markets are imperfect (some examples are information asymmetries, moral hazard and adverse selection). Not surprisingly, the Global financial crisis 2007-2009 and the widespread financial turmoil that it caused have exposed the inadequacy of the light-touch regulation (e.g. on capitalisation; on threat from off-balance sheet liabilities; on derivatives, among others)². Given the aforementioned rationales and the fact that some scholars have suggested that the activities performed by the financial sector do not provide any economic value and are not welfare enhancing (Turner, 2010), the broad purpose of this investigation, along all its facets, is to reach a better understanding about what the Macro-Prudential Financial Regulation, banking regulation in particular, has been done so far to ensure financial stability and to promote a sustainable growth, through the promotion of green investments.

1.1 Model description

The evolutionary model proposed is a simplified but coherent and fully integrated representation of both real and financial sides of a modern “monetary economy” moving forward non-ergodically along a sequence of periods, Davidson, 1988, designed to study the economic and financial implications of five crisis resolution mechanisms. More specifically, in case of distress the defaulting institution can either be: (i) liquidated via a purchase & assumption (P&A) transaction McGuire, 2012; or (ii) bailed-out using taxpayer money; or (iii) bailed-in through a debt-to-equity conversion or balance sheet restructuring, where only depositors at the failing bank are forced to participate in the deal; or (iv) again bailed-in but only partially; (v) the hypothesis carried out in last scenario is the nationalisation (temporary or not) of the failing financial institution. Formally, the model will be build considering a closed economy populated by five sectors (households, production sector (made up for firms), financial sector (essentially banks), pure government, and the central bank³), and implementing a financial resolution mechanism which adopt five alternatives crisis resolution mechanisms in case of distress of a financial institution. The main purpose of this model is enable the investigation to explore the performance of these five financial crisis resolutions mechanisms in reducing financial contagion risk; enhancing financial stability; enhancing the overall economic output and growth by creating additional means of payments; and reducing the level of unemployment. Besides to furnish a better understanding on how the performance of these five financial crisis resolutions mechanisms are subject to some economic preconditions.

¹The Macro-Prudential Regulation aimed to ensure a more stable financial system through designing rules able to ensure the stability of the whole financial system. Llewellyn (1999) claims that the financial sector needs an adequate regulatory framework to ensure systemic stability; to provide protection to smaller, retail clients, which is a sensitive issue if customers risk to lose their lifetime savings; and to protect consumers against monopolistic exploitation, such as monopoly power in product pricing.

²The British regulators themselves, which light-touch financial regulation approach, before the crisis was claimed as key factor in the success of London’s position as global financial centre Furse (2006), recognised the failure of the discretionary power allowed by principles-based regulation Turner et al. (2009).

³Although the central bank represents a small portion of the government, it plays a decisive role with respect to monetary policy, and the impact on monetary aggregates is usually identified on its own. Thus, following Godley and Lavoie, 2016, in this investigation the central bank has been considered separately from the government.

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