THE PARADOX OF TRANQUILITY REVISITED. A LOTKA-VOLTERRA MODEL OF THE FINANCIAL INSTABILITY

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1. *Introduction*

A look at the financial markets from a Wall Street boardroom makes them seem like the core of a «paper world», grounded on a inextricable set of present and future payment commitments that are, in turn, the outcome of some previous commitments. The viability of this system depends upon the uninterrupted regeneration of the cash-flows among banks, firms and households, in a world marked by radical uncertainty. From this point of view, the irrelevance problem of so-called *Neoclassical Economics* – the school which has as one of its major hypotheses the notion that all markets clear through a process of attaining simultaneous general equilibrium – clearly emerges[1]. The pure exchange model, which represents the analytical core of Neoclassical Economics, describes a «village fair» paradigm, where money does nothing other than facilitate exchanges between identical, sovereign, completely rational individual agents with perfect foresight. So, not only are very relevant aspects of today's economies neglected, but the question of *why* capitalistic countries tend to fall into recurrent crises remains unsolved.

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[1] The reference is to both the *Neoclassical Synthesis* and the *New Classical Macroeconomics*. Even the *New Keynesian Economics*, although it differs from previous positions for the higher refinement of the hypotheses (including market failures and imperfections, asymmetric information, wage-rigidity and institutional constraints), appears to attempt to integrate the neoclassical analytical core, in a wide sense, rather than to overcome it.

It is starting from these reflections, and from his *financial* re-reading of Keynes' works, stressing the elements which break with neoclassical economics, that Hyman Philip Minsky builds his «Financial Instability Hypothesis» (see Minsky 1975; 1977; 1982; 1986; 1991; 1996). The financial instability hypothesis is neither a new economic doctrine, nor a complete analytical framework: it is, instead, an attempt to interpret the cyclical nature of capitalistic economies. Such an attempt starts from the analysis of the US economic trend during the Great Depression («It», using Minsky's well-known definition) and from the thirty years covering the period after the Second World War to the early 1980s. Upon this *empirical* basis Minsky builds his *theoretical* view of capitalism seen as an intrinsically unbalanced system marked by the alternation of growth (during which the exposure to debt of economic «units» – banks, firms and households – grows) and recession (during which a risk of debt deflation emerges)[2]. «Stability is destabilizing» is the idea that pervades Minsky's work. «Tranquil growth» opens the way to speculative attitudes and structures and these, in turn, lead to the global financial vulnerability preluding the crisis.

Given these premises, the paper aims to shed light on the main interpretative difficulty raised by the financial instability hypothesis. This concerns the assumption according to which the *leverage ratio* for firms as a whole must eventually rise during the boom phase of the economic cycle because of non-financial businesses' investments. Here Minsky seems almost to conflate two different factors of financial fragility: the excessive exploitation of financial leverage for the investment, on the one hand; and the practice of financing long-term assets by means of short-term liabilities, on the other hand. Yet, from a macroeconomic point of view, the increase in net retained profits (that have not been distributed as dividends) that come from the higher investment during the boom may offset the higher debt of the non-financial firms (see Lavoie 1986; Lavoie and Seccareccia 2001; also Toporowski 2008). This is the outcome of the so-called *paradox of debt*, the Kaleckian equivalent of the better known Keynesian *paradox of thrift* and implicit in Kalecki's macroeconomic equations of profit.

Obviously, during a period of tranquil growth – insofar as there is a positive spread between long-term and short-term interest rates – firms are inclined to finance long-term assets by means of short-term liabilities (so increasing their *mismatching ratio*). Of course, this may be enough to admit that economic stability is potentially destabilizing. However, «for the crisis to arise as a result of endogenous forces one must still be able to explain why

[2] With regards to the methodological aspects of Minsky's thought, see Vercelli (2001) and Toporowski (2008).