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**Between Theory and Policy:
Political Economy of Crises**

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*For a nation to tax itself into prosperity is like a man standing in a bucket and trying to lift himself by the handle.
(Winston Churchill)*

*A supply-side-type fiscal policy is consistent only if carried out in tandem with a serious and rigorous process of reducing public expenditure.
(Mario Arcelli)*

***Macro prudential policy as a reference for economic policies:
a Hicksian perspective***

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Abstract

The 2007-2009 Great Financial Crisis provided evidence of the lack of a reliable theoretical and policy framework to identify, prevent and ultimately address the consequences of systemic risk and large adverse shocks in economic systems. The intertwining of real and financial imbalances was neglected, structural factors were not considered and the need for a complex, interactive use of corrective economic policies was not recognised.

Prior to the crisis, a strong consensus had developed among professional economists, banking regulators and policy-makers that a modern market economy, in the absence of short-term destabilising policy impulses, was inherently self-corrective. In this framework policy objectives and instruments should be fundamentally segmented and independently pursued within a medium-term, transparent, policy setting. In particular, there was ample agreement on the advances of financial surveillance and risk analysis, after the Basel standards revolution. All these tenets proved incorrect and risk increased sharply, acquiring systemic features.

The necessity of overall repair of the analytical and policy paradigms led to a profound reassessment and the identification of a new “macro prudential” framework to cope with systemic shocks, and notably with the perverse interaction of bank failures, government deficits/debts and sovereign risk (in particular in the Euroarea). A second line of response highlights and builds a different and broader structural approach to crises along the lines of great economists of the past.

The purpose of this note is to offer a framework that takes into account a double order of interconnections: first, reference is made to the links between different economic policies; secondly, light is shed on the complex interactions between the micro and macro levels (with possible fallacies, but also synergies, of composition). From this perspective, macro prudential policies – aimed at preventing/containing systemic risk and instability – take on particular significance, and it is proposed to extend them beyond the common focus (and related dichotomy) with respect to the requirements of micro supervision in the financial field. The implications for the well-known Tinbergen-Theil policy model are also briefly analysed.

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1. Economic policies: introduction and summary

The 2007-2009 Great Financial Crisis provided evidence of the lack of a reliable theoretical and policy framework to identify, prevent and ultimately address the consequences of systemic risk and large adverse shocks in economic systems. The intertwining of real and financial imbalances was neglected, structural factors were not considered and the need for a complex, interactive use of corrective economic policies was not recognised.

Prior to the crisis, a strong consensus¹ had developed among professional economists, banking regulators and policy-makers that a modern market economy, in the absence of short-term destabilising policy impulses, was inherently self-corrective. In this framework policy objectives and instruments should be fundamentally segmented and independently pursued within a medium-term, transparent, policy setting. In particular, there was ample agreement on the advances of financial surveillance and risk analysis, after the Basel standards revolution. All these tenets proved incorrect and risk increased sharply, acquiring systemic features: in the banking sector gross leverage rose steadily, risk-weighted assets declined, but only as a result of regulatory arbitrage of the capital rules through derivatives. The corrective work is still underway and today's seminar on deeply rooted causes of instability should help shed additional light on the required changes to analytical and policy models.

A first, but incomplete answer, notably from international financial institutions, came as a result of the (re)discovery of a narrow definition of structural policies (Abdel-Kader, 2013 and EC, 2015b). It was argued that monetary and fiscal policies were meant to address primarily short-term fluctuations (which is hardly consistent with the New Classical Macroeconomic approach, previously propounded!). But large shocks had to be dealt with by structural policies to cope with longer term issues. According to the two cited surveys of the IMF and EC, the recommended principal structural policies were: price control elimination, sustainable medium-term public finances, sounder financial institutions through better regulation and supervision, less intrusive social safety nets, flexible labour markets, more competition and innovation. It was, therefore, affirmed that stabilisation and structural policies should complement each other. This was, in any event, an incomplete conclusion. The complex trade-off/possible conflicts among policies – notably between credit policies and capital regulation – were not recognised. The potential inconsistencies between micro and macro perspectives were not analysed. Possibly more complex and deep-rooted factors endangering economic stability were not adequately recognised.

¹ In reality, many economists did not agree on diagnosis and policy prescriptions, but their voices could not affect the conventional wisdom.

The necessity of overall repair led also to a more profound reassessment of economic policies and to the identification of a new “macro prudential” framework for economic policies to cope with systemic shocks, and notably with the perverse interaction of bank failures, government deficits/debts and sovereign risk (in particular in the Euroarea). A second line of response, which is the hallmark of the workshops on the “Political Economy of Crises” by the Accademia dei Lincei in Rome, highlights and builds a different and broader structural approach to crises along the lines of great economists of the past – among others, Aftalion, Hicks, Hayek and, of course, Keynes.

Hopefully, this contribution may represent a small piece in this overall picture. The primary aim is to demonstrate that the traditional simplified approach to policy making based on independent targets and instruments, in the context of a fundamentally self-corrective economic system, is flawed. Complexity, structural factors, strong network interactions and endogenous risk are fundamental features of the economic systems. Policy making can be associated with fallacies of composition/division. Additionally, theories and policies need not be immutable Laws of the Tables of Stone, “written with the finger of God and given to Moses”². As Hicks indicated and showed, theories and policies can instead be topical – for instance «the General Theory is the book of the Great Depression» (Hicks, 1967, p.156 and also pp.169-171) – and are, therefore, historically and structurally conditioned. More generally, Hicks persuasively argued that «a free market system is not automatically self-righting» and therefore has «to be stabilised by policy» (Hicks, 1977 pp.119-120). Which policy and combination of policies would be more appropriate could not be predetermined on an a priori basis, but depended on the severity on the crisis and on its structural and topical characteristics. More specifically, the degree and the type of stress should guide in the selection of the desirable policy mix. In his later writings, Hicks for instance conceded much to the “monetarist” interpretation of the Great Depression («the monetary base brake», Hicks, 1977 pp.85-86) and its policy analysis, alongside the Keynesian effective demand explanation and its policy mix prescriptions. It is in this sense that the broad macro prudential policy framework is fully in line with the Hicksian analytical and policy heritage.

As is well-known, the traditional approach to government economic policies focuses on: i) fiscal policy, ii) monetary and credit policy³, and iii) structural policies. The first two policies are fundamentally macroeconomic and demand-side. The third are microeconomic and supply-side.

² The Dynamic Stochastic General Equilibrium Model and the resulting Golden Age of economics are inherently dangerous simplifications! (see, for instance, Stiglitz (2011)).

³ Bernanke and Blinder (1988), by using an enlarged version of the IS-LM model, showed that it is necessary to consider separately the monetary and the credit channels.

The traditional goals of economic policies are price stability, sustainable full employment and growth. The two alternative approaches to their adoption are discretionary vs. rule-based policies.

As a result of the Great Financial Crisis, a new key economic policy was introduced: macro prudential policy (de Larosi re *et al.*, 2009 and Dodd-Frank Act, 2010). At the same time, emphasis was laid on financial regulation as an independent policy tool. As to economic goals, a third objective was introduced: financial and systemic stability, which is the primary target of macro prudential policy. The new framework is characterised by micro/macro interconnections and by the intertwining of economic policies.

The purpose of these notes is to offer an analytical framework that takes into account a double order of policy interconnections: first, reference is made to the links between different economic policies; secondly, light is shed on the complex interactions between the micro and macro levels (with possible fallacies – but also synergies – of composition). From this perspective, macro prudential policies – aimed at preventing/containing systemic risk and instability – take on particular significance, and their extension is proposed beyond the common focus (and related dichotomy) with respect to the requirements of micro supervision in the financial field. This approach was set out by de Larosi re *et al.* (2009) and developed by Masera (2012) to analyse the vicious circle between banking and sovereign risk and to explain the need for changes in EU policies to avoid stagnation and deflation. The implications for the well-known Tinbergen-Theil policy model are also briefly analysed.

2. Towards a broad definition of macro prudential policies

2.1. Some methodological premises

The fallacy of composition is the logical (and economic) fallacy of inferring that something is true of the whole from the fact that it is true for every part of the whole. The converse of the fallacy of composition is the fallacy of division: something true for the whole must be true of all of its parts. Both logical fallacies were first confuted by Aristotle in his Sophistical Refutations, and are well-known in modern philosophy and logics.

In economic analysis, an example of fallacy of composition is offered by the Keynesian explanation of the paradox of thrift (total saving and investment may decline even when all economic agents attempt to increase their saving) (Keynes, 1936 and Hicks, 1937). Since this paradox is a key element of Keynesian economics, the fallacy of composition itself has been often rejected by critics of Keynes, notably Neoclassical and Austrian school economists. Quite apart from the fact that the same concept had been expounded by Adam Smith himself⁴, denial of the fallacy of composition is not only a logical, but also an economic mistake. This was clearly explained by a key critical exponent of the Keynesian approach, Milton Friedman:

«What fascinates me so about economic systems is that the fundamental principles are so simple...And yet people so often get them wrong. And the major reason...is that almost always what is true for the individual is the opposite of what is true for everybody put together (Friedman, 1991)».

It follows from the fallacy of composition and the fallacy of division that any meaningful analysis of system-wide risk in economics and of ways, means and policies to prevent/limit its manifestations requires a network approach to evaluate actions and interactions of economic agents/policies. This brings to the fore the need to allow for endogenous risk, in addition to the traditional fundamental risk (see below).

The common current neglect of these fallacies is a “collateral effect” of the Lucas New Classical Macroeconomics (NCM), associated with the assumptions of rational expectations and perfectly efficient markets. As is well known, in this approach – based on the representative price-taker economic agent⁵ – it becomes necessary to consider deviations from economic equilibrium as the result of external shocks, such as unanticipated “news”: price volatility is a reflection of exogenous risk (quantities are given, as a consequence of the price taking assumption).

⁴ As recalled by Keynes (1936, p.361 footnote 1).

⁵ For a critical analysis of the standard representative agent model, see for instance Stiglitz (2013).

In all advanced economic systems, any actual transaction has a monetary/financial counterpart. Therefore, there is one-to-one correspondence between financial developments and economic problems at the individual and macroeconomic levels (real accounting/flow-of-funds accounting, balance of payments accounting). Financial stability and real stability are therefore inextricably interconnected. Normally, in market economies heavily dependent on finance, we tend to assume that financial instability precedes and generates real instability, even without accepting Minsky's (1982) extreme theses. However, financial instability may also have real/structural causes (e.g. polarization of income/wealth, dynamic links between investment, wages and productivity (Goodwin, 1967), unsustainable fiscal policies, the knife-edge problem). The Neoclassical analysis and New Classical Macroeconomics see money (and finance) as a neutral veil: the "Classical" real-monetary dichotomy. Any manifestations of instability have therefore a root which is mainly real/linked to incorrect/destabilizing macroeconomic policies. The extremely rarefied assumptions that underlie NCM must however be taken into account (Grossman and Stiglitz, 1980 and Masera 2010).

If the classical dichotomy does not hold, the Modigliani-Miller theorems on the irrelevance of financing sources do not apply (Masera and Mazzoni 2015). Banks' capital becomes therefore costly and binding in the credit creation process. Basel regulation conceived for microeconomic bank stability acquires a macroeconomic, monetary policy dimension: it is not only an issue of micro/macro prudential trade-off, but also of interaction between economic policies. The so-called "Basel capital standards" of banking regulation make reference to an accounting framework where capital is fundamentally banks' equity. This is, however, not inconsistent with the theoretical "Fundist" approach to capital, to which Hicks himself adhered in *Capital and Time* (1973). As he succinctly put it in (1977, p.154):

«Even to this day, accountants are Fundists. It is not true, accountants will insist, that the plant and machinery of a firm are *capital*: they are not capital, they are assets. Capital, to the accountant, appears on the liabilities side of the balance sheet; plant and machinery appear on the assets side. Capital, accordingly, is a Fund that is embodied in the assets».

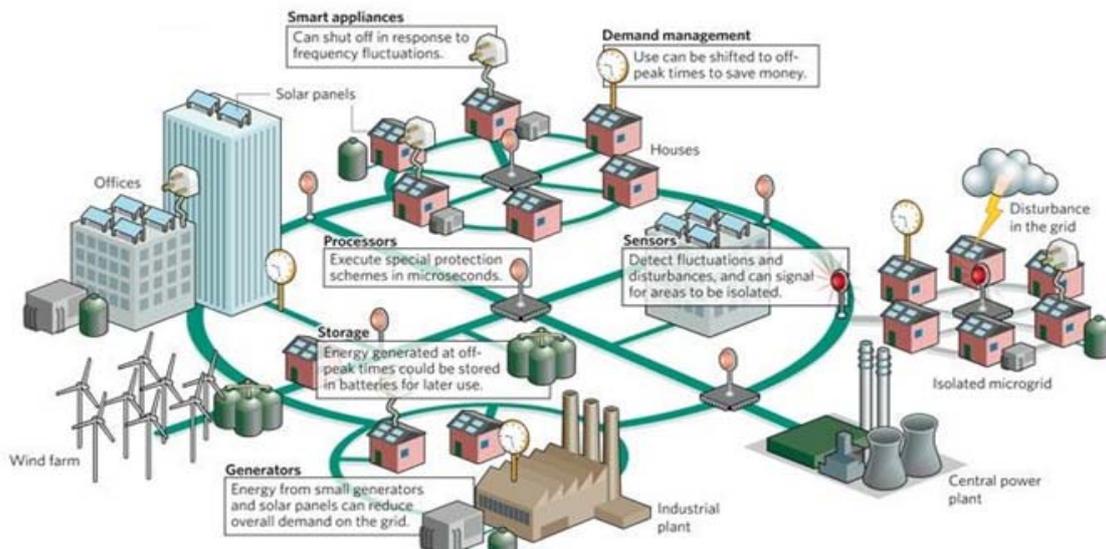
It is therefore somewhat paradoxical that Hicks disregarded the crucial role of capital in the workings of the banking system and in the supply of credit (Masera, 2008 p.232). According to the approach adopted here, economic and financial systems are complex systems composed of a very large number of dynamic interconnected units (networks/nodes/links). Complex systems cannot be fully grasped through the study and analysis of the individual components. The whole is more than/different from the sum of the parts. This is especially so if the fallacies of composition/division are duly recognized. The global financial system, which includes the Euroarea (EMU, Economic

and Monetary Union), is an example of a complex system/network. Another example, referred to the physical world, is that of a smart grid (Figs. 1 and 2).

Figure 1 – Global Financial System: a complex, innovative, interconnected system.



Figure 2 – Smart grid: a complex, innovative, interconnected system.



There are differences, but also analogies – which should be explored – between the dynamic network approach outlined here and the structural economic dynamics method of analysis of an economic system as a “set of relations” (Scazzieri, 2012). In both instances, the two conditions for macroeconomic equilibrium – i.e. full utilisation of physical capital and full employment of human

capital – may not be met because of conflicting constraints upon capital proportions. In special perverse cases, no Traverse (sequence of changes in the relevant capital structures) is possible, with the full economy declining into depression (Hicks, 1985, p.136 and Hagemann and Scazzieri, 2009).

In these richer, but more complex frameworks, economic policies should be analysed in interactive ways, not identified in Tinbergen paradigm. I offer here an example in respect of monetary policy in the Eurozone. Notwithstanding the fact that the area is not an optimal currency domain and is not complemented by fiscal or even political union – as in the United States and as some consider it necessary in the Eurozone – monetary policy is (necessarily) conducted by the ECB according to a one-size-fits-all approach (Issing, 2005). At the same time, the Basel Standard declinations of banking regulation are also implemented according to a one-size-fits-all model⁶, as against the tiered approach followed in the United States. This is in itself incorrect (Masera, 2014 and Yellen, 2015): the adverse consequences of this policy choice are enhanced as a result of the considerations developed for monetary policy. As indicated, the inapplicability of M-M financing irrelevance theorems makes capital binding in the banks' credit process, with credit constrains most significantly felt by small banks and small enterprises, and therefore with overall recessionary impulses and uneven effects on the euro area national economic systems.

Economic and financial systems are characterized by problems of idiosyncratic/fundamental risk and systemic risk (which are common to all complex systems). The first is specific to one element of the system, the second influences the entire market/financial system. Systemic risk implies instability, potentially catastrophic, not attributable exclusively to idiosyncratic agents, but arising also from the links and interdependencies (nonlinear and stochastic) that characterize the reference system. The failure of a single entity can trigger cascading failures that can result in the collapse of the entire network. The financial system is characterized by endogenous risk, which can also occur in physical systems. Exogenous risk is related to "news", i.e. to unexpected changes in economic fundamentals. Endogenous risk is unexplained volatility due to non-fundamental factors (perverse incentive structures, serially-related structures of opinion, methodologies of risk control, herd behaviour, ...).

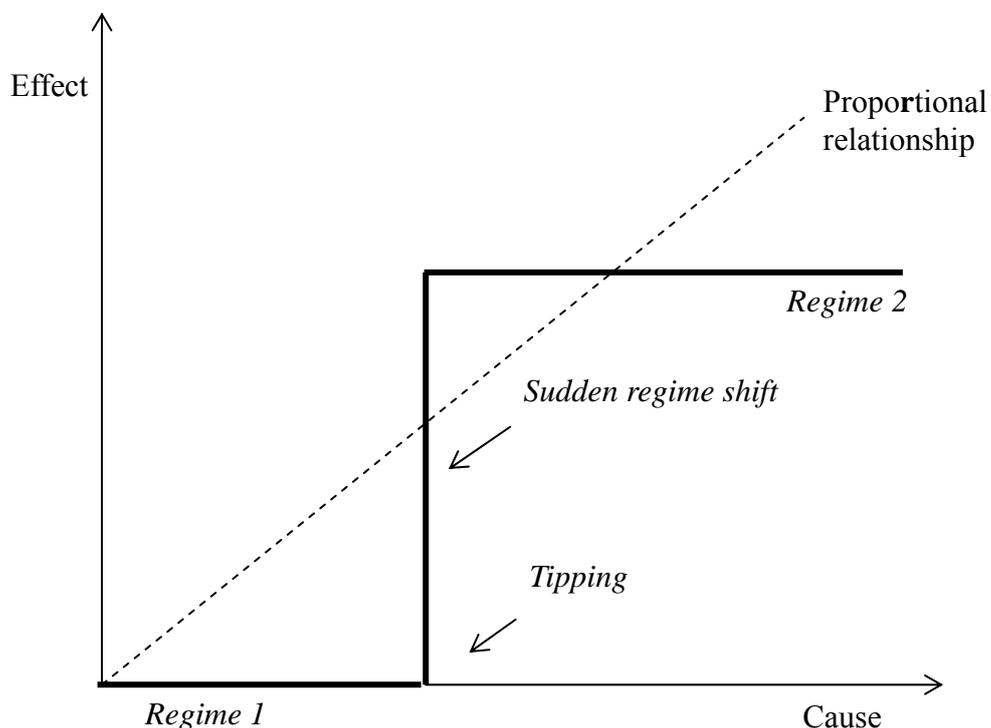
⁶ This policy choice can be interpreted as the result of an instance of the fallacy of division. The size and complexity of the Basel Requirements for the Eurozone banking sector as a whole should not be proportionally related to and commensurate with every bank, irrespective of size and business model.

Analysis of the so-called “tipping points” in complex systems helps to explain the apparent paradox that strongly-connected networks (not only financial) can be “robust but fragile”. Within a certain range of values the connections act as risk shock absorbers (robust networks). However, outside the reference range, interconnections predominantly acquire a characteristic which gives rise to in propagation and amplification of shocks (contagion) resulting in systemic fragility («at times of acute distress co-movements in the various markets amplify and reinforce themselves» – Masera (2008) and “the system flips to the wrong side of the knife edge” – Haldane, 2009). To conclude, the management of a complex interactive system poses major challenges to evaluate the actions and interactions to the impulses of economic policies.

2.2. Turning points: exogenous/endogenous and systemic risk

Fig.3 provides a simplified illustration of a typical feature of complex systems: regime shift.

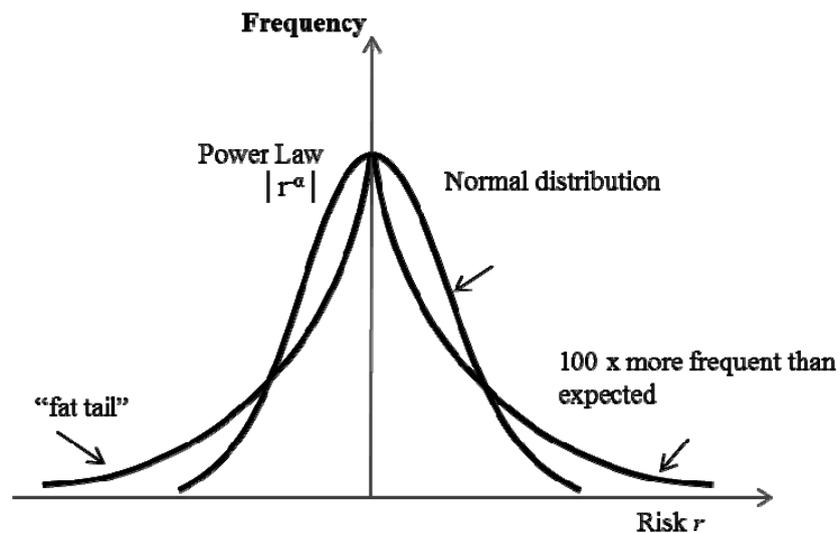
Figure 3 – Complex systems: example of regime shift.



Regime 1 (normal) reveals a linear relationship between causes and effects. When the tipping point is reached, system behaviour changes and different/nonlinear responses with “non-normal” stochastic characteristics are obtained, which may result in manifestations of systemic risk.

Fig. 4 shows the transition to a situation of strong interaction between the elements of the system, which is expressed in the reconfiguration of the statistical distributions that characterize the behavior. Specifically, there is typically a transition from Gaussian distributions to power laws or in any case distributions with heavy tails, i.e. there are domino effects (cascades of failures/chain reactions, perverse feedback loops).

Figure 4 – Power laws and heavy-tail distributions.



Source: Helbing (2010)

As mentioned above, these events are typical of financial markets, but they are of a general nature and affect physical, biological, environmental, socio-economic etc. phenomena. A well-known example used for referring to endogenous risk outside economics and finance is that of the pedestrian Millennium Bridge in London (Danielsson and Shin 2003). The resonance phenomena related to a common factor (e.g. strong wind and the onset of swaying) can determine completely homogeneous behavior on the part of all crossers, and potentially catastrophic resonance. The first oscillations, caused by the wind (exogenous) induce/force pedestrians to walk in a manner synchronized with the swaying, creating the endogenous phenomenon of resonance. This forced the closure of the bridge only two days after its opening. The problem was solved only by the installation of new fluid viscous dampers.

The endogenous risk in financial systems has an important difference compared to physical, biological, etc., risk. Participants' expectations can influence future events, pushing towards self-fulfilling prophecies, so causing overshooting/market failure, with systemic repercussions. The problem can be illustrated by comparing models and forecasts in meteorological and financial contexts. In both cases, when stress conditions are forecast, precautionary and prudential safety

measures are necessary. However, in the first case the predictions and the security measures taken ex ante to improve and strengthen the resilience of the system do not influence the weather outcome. Vice versa, in the financial context, the traditional models of financial forecasting (VaR) and micro prudential standards can increase the total risk, beyond the levels indicated by the fundamental analysis. This is a result of an incorrect modeling of the volatility and non-stationarity of the underlying stochastic models, the homogenization of risk aversion and buying/selling strategies on the markets (Danielsson *et al.*, 2011).

As a demonstration of the fallacy of composition, the paradox may arise such that an attempt to enhance the absorption capacity of the system by increasingly stringent restrictions on the raising of equity by individual banks may precipitate into a vicious cycle of real and financial destabilization and unjustified widening of sovereign spreads, interrupted only by the activation of monetary policy announcements and correction (Draghi, «whatever it takes», July 2012). Sovereign systemic risk may have its origins both in real macro-fundamentals and in pressures from financial markets. It can also be caused by poor planning of the mix of monetary and fiscal policies (see the debate on the proposition “monetary union without fiscal union is doomed”, which will be briefly taken up at the end of this paper).

2.3. Macro prudential policies and systemic risks

The adjective “prudential” has a well-defined but very broad meaning: inspired/dictated by prudence, i.e. the exercising and applying of prudence and good judgment. In accordance with the etymological definition, in this note policies are defined as *macro prudential if they use analytical models and policy tools to prevent/reduce systemic risks to the economy and in particular to pursue the goal of financial stability*. The definition developed here is broader than that which circumscribes macro prudential policy to the examination of financial and banking regulation (Hanson *et al.*, 2011); it also includes the examination of other economic policies affecting the economic system which, if mismanaged, can trigger systemic risk and financial instability. Evidently, the links between macro prudential and “traditional” economic policies are especially close and relevant with reference to the micro prudential and monetary policies. However, it is also necessary, in a complex system, to identify and analyse potentially destabilizing interrelationships with other economic policies: if neglected, the problems associated with the possible occurrence of systemic risk may arise. The analysis aims to identify possible inconsistencies arising from instances of fallacy of composition between the individual and aggregate levels. To recall, the financial system, seen as a dual of the real one, is interpreted here as a complex network.

Analytical reference to macro prudential financial policies, which should accompany the rules at the level of individual banks/financial firms, was established within the BIS in Basel. This is not a coincidence: the Basel Capital Standards have introduced a revolution in the process of financial regulation, with implications that only gradually, and still partially, have been understood and evaluated. In particular, the method of analysis at the firm level must go hand in hand with examination at the system level: analysis through a sum-of-the parts approach may be incomplete or even misleading. The intellectual framework, already present to the drafters of the First Standard, is basically attributable to Alexandre Lamfalussy, as documented by Maes (2010).

Andrew Crockett, General Manager of the BIS, well before the Great Financial Crisis, had stressed the importance of macro and micro financial stability, in terms of objectives, mechanisms, processes and tools. The macro prudential goal consisted in preventing or at least limiting systemic risk. The microgoal was to limit the probability of failure of any single financial institution (idiosyncratic risk). While at the micro level equal weight was attributed to each component, at the macro level evidently the overall performance of the total portfolio of businesses was highlighted. Accordingly, the micro standard centred on a bottom-up approach based on examination of a uniform application of requirements in each “representative” company. But, the macro approach was based on a top-down scheme with emphasis on the possibility of a systemic crisis and its financial and real costs, in terms of wealth and product lost. In particular, the macro prudential aspect emphasized as critically important the collective behaviour of individual firms with “endogenous” results that compared with exogenously-determined outcomes for each individual company. The concept of fallacy of composition was introduced and the main consequences drawn for micro prudential supervision.

«The macro-prudential paradigm stresses the possibility that actions that may seem desirable or reasonable from the perspective of individual institutions may result in unwelcome system outcomes» Crockett (2000). The final part of his paper therefore stressed the need to address issues of financial stability through the coordination of different economic policy authorities, with separate tasks and responsibilities. In the limit, it was indicated that the main levers of economic policy could be under the control of authorities not immediately focused on systemic stability. In the absence of analysis and consensus on diagnosis/cure and allocation of responsibilities, the weaknesses of the system would not be identified, much less addressed and resolved⁷.

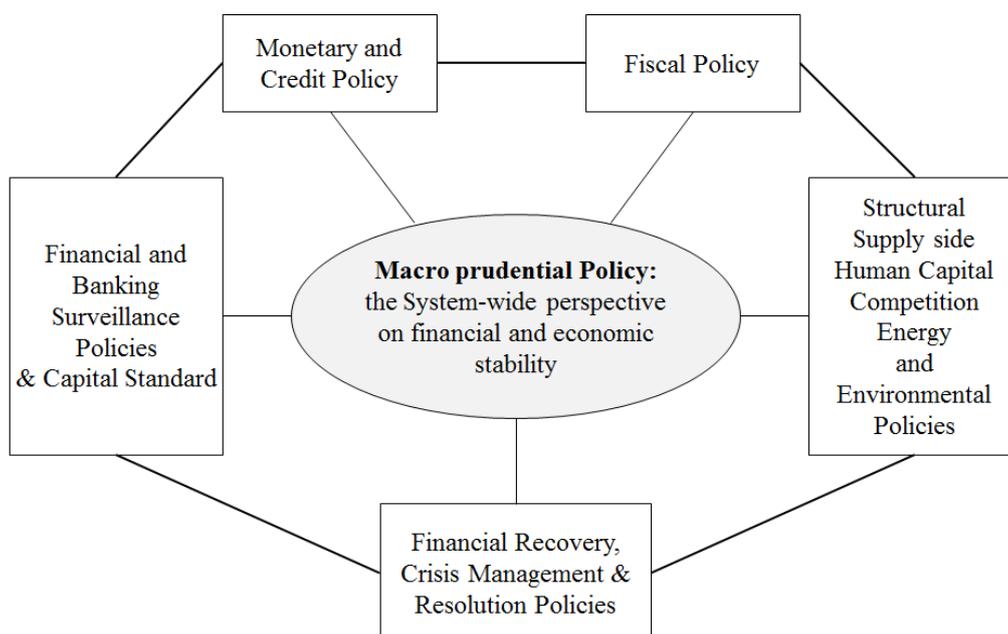
⁷ It is not possible to consider here the BIS analyses on these point, but the contribution of Claudio Borio (2003) can be singled out.

At an official European level, the links between macroeconomic and regulatory policies were highlighted in the de Larosière Report (2009), in which – as recalled – the connections between macroeconomic surveillance and crisis prevention were illustrated and the need to create a macro prudential supervisory authority at European level (ESRB) highlighted. The literature on these issues is now very wide and there is broad agreement at official level on the key role of macro prudential policies and their focus on financial stability and systemic risk. I recall several analyses by the BIS (Galati and Moessner, 2011), the International Monetary Fund (2013), the ECB, for example Cour Thimann and Winkler (2013), and the OECD, particularly Blundell-Wignall and Roulet (2013). An overall assessment is offered by Goodhart (2014).

2.4. Principal economic policies and their interactions in a macro prudential framework

In the light of the foregoing considerations, Fig. 5 below offers a brief overview of the following economic policy areas: monetary and credit; fiscal; structural, supply side and competition; management and resolution of financial crises; and finally microeconomic surveillance and capital standards, in the context of a macro prudential policy reference framework. The latter takes on the leading and linking role with a view to achieving the objective of economic and financial stability at the systemic level.

Figure 5 – A complex system (network) representation of macro prudential and other economic policy



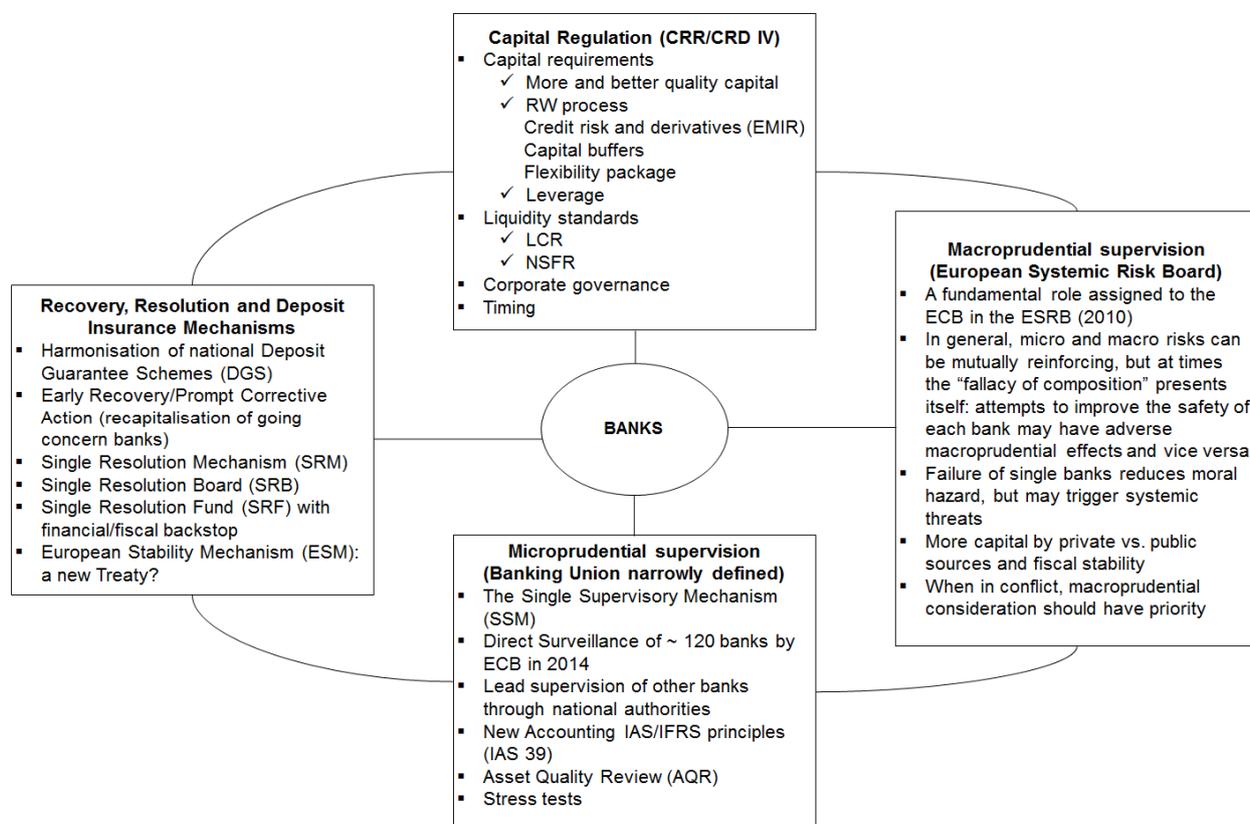
The macro prudential objective is to prevent/limit systemic risk, whether financial or real. The relevance of this target underlines the priority of this policy compared to traditional policies. The micro prudential financial objective is to intervene in order to anticipate/reduce idiosyncratic risk for each individual company/agent. In the case of an integrated and complex system, analysis cannot be carried out through a sum of the parts approach. The interactions between the individual policies require specific attention: under stress conditions certain nodes can collapse.

Financial instability can lead to systemic instability, extending from the financial system to the economy as a whole. In the absence of well-engineered Crisis Management & Resolution Policies and Frameworks (see box in Fig.5), bailouts may become a necessity, as a consequence of market failures and of negative externalities: the overall cost of non-intervention to the taxpayer could be greater than the direct burden of bailouts. This was the rationale behind the large bailouts of banks and financial intermediaries in the 2007-09 financial crisis. As a result of these considerations, in the US, the Dodd-Frank Act (2010) added a third mandate to the Fed regulation of systemic risk and preservation of financial stability – to the traditional (1977) dual mandate (maximum sustainable employment and stable prices) – and introduced a resolution framework for banks.

As indicated, in the EU the monetary and price stability objective was broadly interpreted by the ECB in July 2012 to permit doing «whatever it takes» to preserve financial stability and the Euro. Monetary and financial stability were viewed as intertwined. President Draghi elaborated these points recently in a hearing at the European Parliament (Draghi, 2015). He pointed out that price stability, which is the primary objective of the ECB, is a necessary condition for financial stability, but not a sufficient one. On the other hand, financial stability is a precondition for the effective conduct of monetary policy which must rely on the effectiveness of the money transmission mechanism in order to maintain price stability. It follows that the central bank has as a task the preservation of financial stability, to pursue its primary objective of price stability. Financial stability has therefore become a goal of both the Fed and the ECB. According to the line of analysis presented in this paper it is, more broadly, a joint responsibility of macro prudential and monetary policies.

The network/holistic approach is used also in Fig. 6, where the focus is on the subset of the “Banking Union Package” in the EU.

Figure 6 – The new Bank Capital Regulatory Framework and the other three interactive building blocks of the “Banking Union Package”.



Source: Masera (2014)

For discussion of the four pillars of the Banking Union Package and their interconnections see Masera (2014) and the references contained in this work. In particular, macro prudential supervision, assigned to the ESRB, refers to the intertwinement with capital regulations, with the resolution mechanism (SRM, SRB, SRF) and, of course, with the micro supervision of banking firms entrusted to the ECB (Single Supervisory Mechanism, or Banking Union according to the more limited traditional definition of the EU). A specific feature of the macro prudential framework in the EU, which is not in line with the pivotal role assigned here and outlined in Fig.6, should be underlined. The ESRB can only issue recommendations, while ample powers are in the hands of national authorities, the European Commission and of the ECB itself. In particular, tools not explicitly foreseen by EU legislation (e.g. the Loan-to-Value ratio) remain of exclusive competence of the national authorities.

3. Links between economic policies and micro-macro interactions: some examples

The focus of the macro prudential framework presented here is on the interactions between the different economic policies and on the possibility of fallacies/synergies of composition. Accordingly, Table 1 below offers a few examples of these links, examined, for simplicity's sake, on the basis of bilateral relationships.

Table 1 – Links between economic policies and possible fallacies/synergies of compositions: some examples in the framework of a network approach to macro prudential and other economic policies.

Policies	Links
<p>Fiscal and Structural Policies</p>	<p>The intertwining of structural adjustments and fiscal policy compulsory targets is now a formal features of the EU complex budgetary procedure. To recall, the Stability and Growth Pact is the centrepiece of the EU rulebook to foster fiscal responsibility and budget discipline, and to create the conditions for monetary union, since its adoption in 1997. Reforms and complements were agreed in 2005 and in 2011-2013. As of January 2015, existing rules are applied to strengthen the links between fiscal policy commitments and structural reforms on the one hand, and promotion of investment – in the context of the Juncker Plan and the European Fund for Strategic Investment (EFSI) – on the other hand (EC, 2015a). In particular, under the Preventive Arm of the Pact, Member States implementing major structural reforms are now allowed to deviate temporarily from their medium-term budget objective (MTO) or the adjustment path to it. The temporary deviation must be less than 0.5% of GDP.</p> <p>Excessive rigidity in budget targets can lead to strong increases in taxation which undermine the willingness to invest and to work (the Mundell-Laffer approach), and hence to lower total revenues.</p>
<p>Fiscal and Monetary Policies</p>	<p>Budget restraint creates linkages: hyperinflation, public debt defaults, sovereign/banking risks... (unanticipated) inflation as a tax on monetary base and on government bonds.</p> <p>Excessive fiscal contraction can lead to output losses and destabilizing debt/income processes (fallacy of composition) which may be hard to offset by monetary policy.</p>

Table 1 – Links between economic policies and possible fallacies/synergies of compositions: some examples in the framework of a network approach to macro prudential and other economic policies (ctd.).

Policies	Links
Crisis Management & Resolution Policies and Fiscal Policy	In the absence of Resolution Policies, banking/ financial crises can lead to budget/debt shocks and widespread moral hazard, because the risks of a systemic real/financial crisis can outweigh the fiscal costs (Masera and Mazzoni, 2011).
Energy, Environmental and Fiscal Policies	The public objective of Green energy can imply government incentives and guarantees leading to unprofitable/loss making energy investments and to large budget costs. Ultimately, it could even be self-defeating, if substitute technologies lower the relative price of fossil fuels (Sinn, 2012).
Structural/Supply Side Policies and Monetary /Fiscal Policies	No monetary or fiscal stimulus can be successful if it is not accompanied by the right structural policies (synergy of composition) (Draghi, 2014).
Monetary/Credit Policies and Capital Regulation	<p>In a phase of recession/faltering recovery and of financial stress excessive capital requirements (predicated on micro prudential grounds) can lead to cumulative destabilizing credit restraint, invalidating monetary policy impulses: procyclicality and fallacy of composition.</p> <p>Leverage is a key aggregate/regulatory requirement which should be at the center of micro/macprudential analysis.</p> <p>The money/credit supply process can be affected by equity requirements. Capital (and not bank reserves) can become the key factor, limiting bank credit and undermining the reliability and effectiveness of the monetary transmission mechanism.</p> <p>Non-proportional capital rules can lead to artificial expansion of shadow banking and to systemic risk.</p>
Macro Prudential and Monetary Policies	Too loose monetary policy can create financial bubbles and inflation. Too tight can lead to recession/ deflation. In both instances financial and systemic stability is at stake: the delicate balance requires an overall assessment of the two types of systemic risk.

Evidently, according to this approach, there is not a unique dynamic stochastic general equilibrium model as background. It is instead necessary to define the analytical reference framework and to derive the appropriate set of policy actions, account being taken of the possible/desirable intertwining of policies.⁸

4. Concluding remarks

For those who have studied and worked with John Hicks⁹ let it first be permitted to reaffirm the validity, under certain conditions, of the fallacy of composition at the root of the paradox of saving: the simultaneous (policy driven) attempt by almost all sectors of the economies of the Eurozone to save more (due to the rigid constraints of public finances) coupled with the consequences on credit flows of the strong, sudden increase in capital ratios and in compliance costs required of financial intermediaries, and in particular small and medium banks), created stagnation/decline of product, savings and total investments. Ex post the decline in savings and investments has boosted the vicious circle of pressure towards recession and deflation. Between 2007 and 2012, in Europe, investments declined by almost €500 billion. In Italy they fell by €90 billion, twice the fall in consumption. Total factor productivity was heavily affected in terms of levels and growth rates. In the Euroarea, TFP is still below the 2007 levels.

The paradox of thrift has combined and interacted with that of deleveraging in helping to explain why diagnosis and cure based on patterns of microanalysis were not correct. Macro prudential models and policies could have/should have avoided the recessionary pressures and vicious loops of the debt-income ratio in many countries, with the risk of financial and real systemic instability¹⁰.

Banking Union, the “Juncker Plan” (2015) for stimulating investment and the decision of the ECB to adopt a policy of QE to prevent deflation and sustain credit and growth go in the right direction and should be supported. However, they are not exempt from criticism. First, the adjustments are taking place late. Attention to a macro prudential policy framework should have and should avoid falling into the errors committed in the past by Chancellor Heinrich Brüning,

⁸ For an application of the above-mentioned framework to the analysis of: i) the Basel standards, reviewing in particular endogenous and exogenous risk considerations and ii) the intertwining of monetary and fiscal policies in Europe, see Masera (2012).

⁹ I recall that Hicks (1974) was a severe critic of the so-called Keynesian policies of increased deficit public spending and of boosting inflation undertaken by many countries in the late ‘60s and the ‘70s.

¹⁰ The shortcomings of the policies pursued in the Eurozone have been clearly recognized and documented also in official EU, ECB and IMF papers (Constâncio, 2015; Praet, 2015; Allard *et al.*, 2013).

between 1930 and 1932. The conventional statement that it was the threat of hyperinflation associated with the Weimar Republic that created the conditions and represented the prelude to the rise of Hitler is basically a mistake. At the time of the appointment of Brüning to the Chancellorship, inflation had been brought under control and the German economy was in recovery. Economic history is more complex: it was Brüning's deflationary policies and cuts in public spending which drove up unemployment and laid the foundations for the "democratic" rise of Hitler to power, also as a result of war reparation payments, opposed by Keynes.

The Juncker plan starts from the correct diagnosis of the need to raise public and private investment and financing to SMEs. However, there is an obvious discrepancy between ambitions in terms of quantity and the scarcity of resources. The excessive emphasis on private co-financing and the lack of flexibility characterizing the Plan must be underlined and are being corrected.

As for Banking Union, it must be emphasized that both the mechanisms for the resolution of banks in crisis, and systems of deposit guarantee, continue to exist in a national framework, despite unified supervision being entrusted to the EC.

QE by the ECB was and is necessary to break the cycle of deflation, low growth and credit rationing. But it runs the risk of crowding out ABS securitization processes that were supposed to represent the bridge between banks and markets in a different relationship in the financing of the economy; the formalization of the risk of government bonds in banks' portfolios is a logical difficulty for current models of capital regulation and calls into question the principle of a gradual transition to Fiscal Union to support and complement the single currency; the limit of 92% on national risk, which falls on the individual central banks, questions the uniqueness of ECB intervention in the market which is de facto covered with a CDS in the relation with national central banks.

According to the approach adopted here, which emphasizes the importance of the links between economic policies, there is a clear Eurozone paradox, centred on the interchange between fiscal policies applied simultaneously in all the countries with excessive rigidity and the single monetary policy that has become highly expansionary to avoid financial and real systemic instability: deflation, collapse of the economy and ultimately the dissolution of the euro.

However, the interchangeability that is found between monetary stimulus and restrictive fiscal impulses pushes towards a situation where the difference between the creation of the monetary base and the emission of public debt by individual countries fades and in the limit it disappears. As already mentioned, QE is almost fully accompanied by guarantees by national central banks to the ECB regarding purchases of domestic debt, whose interest is however transferred to the individual central banks (the above-mentioned CDS mechanism). Therefore monetary base is created but the

issuing of debt is favoured, to offset the deflationary effects of the fiscal policies. Germany has managed to hedge against the risk of default/losses on the national debt of the countries in the Eurozone, but has in fact accepted a violation of the principles on which the euro was founded.

In any case, the interaction between monetary and fiscal policies is reaffirmed: tight fiscal/easy money. But monetary policy, with zero or even negative interest rates – to favour taking risks in order to encourage investment and consumption – is in turn countered by micro prudential regulations on capital applied according to the inappropriate rationale of “one-size-fits-all” (Masera, 2014; Tarullo, 2014 and 2015; Yellen, 2015), effectively constraining the process of creating credit and money supply (de Larosi re, 2013 and Aijar *et al.*, 2014).

In particular, the traditional money multiplier anchored to the reserve ratio is replaced by a multiplier bound by the coefficients of capital and liquidity. It would be desirable to have an update of the analysis conducted in 2002 by the ECB (Angeloni *et al.*, 2002) which did not find evidence of a significant role of bank capital and bank size on the monetary transmission mechanism in the Euroarea. A paradox within a paradox: the monetary base is obviously the most liquid and safest asset, but the negative interest rates on reserves push banks towards necessarily riskier holdings of liquid assets (which are imposed by CRR/ CRD IV, Fig.6).

One more consideration on the need to examine the question of the “synergy of composition” also from a perspective of micro- and macro prudential intertwining. The focus on the profound connection between “traditional” and micro-economic supply side policies has been repeatedly emphasized by Mario Draghi, as previously mentioned (Table 1). Mundell, Laffer and Lucas have emphasized the importance of the microeconomic fiscal approach (incentives to work, low marginal tax rates, neutrality in business tax, non-stifling rules for economic agents). In a framework of real European integration anchored to efficient and flexible market mechanisms, the guidelines for these policies at the national level should be implemented consistently in the Eurozone.

The complex system approach, the relevance of micro and macro prudential links, and reference to a macro prudential policy in the broad sense (Schoenmaker, 2014) suggest the need to re-examine Tinbergen’s well-known principle of separation, which, in spite of the Lucas (1976) critique, still represents the reference point for economic policy in the Eurozone (a critical survey is offered by Acocella *et al.* (2012)). As is known, the principle states that to achieve a given number of independent economic policy objectives over time, one must have (and use separately) an equal number of independent instruments. The model proposed here does not deny the principle but modifies it profoundly, in that it underlines the need to take into account the interactions between tools, the fallacies of composition and integration synergies between policies and instruments. Moreover, the linearity of Tinbergen’s mathematical and econometric approach must be amended to

take into account the existence of endogenous risk, possible regime shifts and reconfiguration of stochastic reference models that herald systemic risk. In this context the problems and the effectiveness of the conduct of economic policy reside primarily in integration rather than in separation.

Conversely, the ECB was created on the basis of the “Separation principle” (Bordes and Clerc, 2012). Policy interventions enacted over recent years, in particular QE, show how the principle now appears to be outdated. Moreover, again with reference to monetary policy, it has been emphasized that the process of monetary and credit transmission depends not only on monetary policy as defined in the traditional sense but also on capital constraints, or on what is commonly referred to as the policy of financial regulation (Borio and Zhu, 2008; Masera, 2012 and Aijar *et al.*, 2014).

The perspective proposed here of interaction and complex relationships between micro and macro policies raises the question of the corporate governance of the macro prudential surveillance body. The “Macro Prudential Board” in Europe should work on the basis of rigorous comply or explain principles and report directly to the Euro Council and the European Parliament, because of its central and directing/coordinating role as regards different policies. It clearly cannot be under the control of the (non - existent) Minister of the Treasury (as in the United States on the basis of the Dodd Frank Act), nor of the ECB itself. The effective functioning of the Board would require that it be composed (a limited number) of highly competent members of independent judgment/affiliation.

An enlargement and reaffirmation of the interactive framework to economic policy expounded here is represented by the recent debate on whether monetary and banking unions in the EU should be completed, to ensure a ‘genuine’ EMU, first by moving to a fully-fledged financial union, then by creating a fiscal union and, ultimately, a political union¹¹. Others remain totally unconvinced (Sinn, 2014 and Issing, 2015). The methodological approach outlined here can help offer an overall assessment of the issue (Masera, 2015).

¹¹ This approach was developed in the so-called “EU Five Presidents Report” (Juncker et al., 2015).

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