Preliminary draft (March 2014)

TOWARDS A MACROPRUDENTIAL POLICY IN THE EU: MAIN ISSUES

Paper to be presented at the annual Conference of the European Association of University Teachers in Banking and Finance, Wolpertinger, Milan, 3-6 September 2014

by

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1-Introduction

The financial crisis has led to the reexamination of policies for macroeconomic and financial stability and the development of macroprudential policies (MAP) in different countries. The aim of this paper is to analyze the state of the art of macroprudential policies with specific reference to the case of the European Union and the supervisory architecture *to-be* with the introduction of the Banking Union.

To this end, the first step is to focus on the institutional framework of MAP: relations and/or conflicts with other policies (first and foremost monetary and microprudential); agencies involved, their mandate, accountability and governance issues. Thereafter the operative framework of MAP is analyzed: definition of objectives (intermediate and final) and of the most suitable set of instruments, implementation of the decision process and evaluation of the effectiveness of the policies adopted.

The second part the paper deals with the introduction of MAP in the European Union and its first working, with the definition of intermediate and final targets and toolkit. As a consequence of the crisis, since 2011, the EU started a process towards a greater integration of the supervisory function, following the de Larosière Report, with an institutional framework based on a microprudential pillar (the European System of Financial Supervisors - ESFS) and a macroprudential pillar (the European Systemic Risk Board – ESRB). The MAP architecture based on the working of ESRB and of the National Competent Authorities (NCA) is now undergoing a revision process due to the introduction of the Single Supervisory Mechanism (SSM) and the new role of the ECB as the supervisory authority with micro and macro supervisory responsibilities on financial intermediaries in the Euro area (18+).

The final part of the paper focuses on the main issues facing the European supervisory architecture to-be: the organization of MAP within the SSM and the definition of the role of the ECB as far as macroprudential policy is concerned MAP (decentralized model vs centralized model); the implications of the introduction of the SSM in the 18 countries of the euro area for the role of the ESRB, whose mandate is a limited one in scope, but covering all the financial institutions of the whole EU.

2. Macroprudential policies at a glance.

The theme of macroprudential policies o MAP, even if already developed before the crisis [Borio 2003; Crocket 2000], since the collapse of Leheman Brothers has been one of the main topic at the center of the debate of both academics and policy makers[1]. The main issues are related to the definition of institutional and operational frameworks. In the first area the focus is on the possible interactions and/or conflicts of MAP with the actions of other policies, the architecture of the competent authorities, their mandate, governance and accountability; the second area is devoted to the definition of final and intermediate targets, the most suitable toolkits, the operational aspects and the evaluation of the effectiveness of MAP.

The debate shows divergences of opinions in several key areas [Panetta 2013]. First of all there are difficulties in punctually defining systemic risk, the main target of MAP, since it has different dimensions whose measurements are not univocal: as a consequence it may be difficult to insulate the intermediate objectives and select the toolkit most suitable to target them. Moreover macroprudential policy presents important interactions with other policies (monetary, fiscal, micropudential, competition and crisis management and resolution) [IMF 2013a]: in this area evidences are not always univocal. Last but not least, the effectiveness of some of the instruments is testifyed only by a limited number of practical experiences, mainly in developing countries [Lim et al. 2011]. Very few and recent are the experiences of developed countries [Panetta 2013]: in Spain maesures of dynamic provisioning have been introduced since 2000; in Switzerland countercyclical capital requirements have been adopted recently; in New Zeland liquidity standards have been anticipated in line with the successive measures introduced by Basel 3. In 2011 a macroprudential pillar started working in the European Union, based on the European Systemic Risk Board (ESRB), alongside a microprudential pillar , based on the European System of Financial Supervisors (ESFS).

In the following pages we will first describe the institutional framework of macroprudential policy; afterwords we will focus on targets and instruments. To this end the preliminary step is to define contents and perimeter of MAP, within the wide range of actions of economic policy, focusing on possible interactions, complementarities and conflicts with other policies, mainly microprudential and monetary.

2.1 Micro and macro regulation

The best way to define action and perimeter of macroprudential policy is to focus on differences and complementarities with microprudential policy, since many tools are shared (and also the suffix "prudential"). MAP focuses on interactions between financial institutions, markets, infrastructures and general economy: it is complementary to microprudential policy whose aim is the stability of the single financial institution, while the whole financial system and the general economy are given as data [CGFS 2010]. Borio [2003; 2010] compares the two perspectives focusing on the main differences related to: proximate and ultimate objectives, model of risk (endogenous vs exogenous), relevance of correlation and common exposure across institutions, calibration of prudential controls (table 1).

[describe table 1]

[1] See Angelini et al. [2012], Borio [2010; 2013], Haldane [2013], Lim et al.[2011].

TAB. 1

Macro and micro prudential perspectives compared

	Macroprudential	*Microprudential*
Proximate objective	Limit financial system-wide distesss	Limit distress of individual financial institutions
Ultimate objective	Avoid output (GDP) costs	Consumer (investors/depositors) protection
Model of risk	Endogenous	Exogenous
Correlations and common exposures across institutions	Important	Irrelevant
Calibration of prudential controls	Top-down in terms of system-wide distress	Bottom-up in terms of risks of individual institutions

Source: Borio, C. [2003], *Towards a Macroprudential Framework for Financial Supervision and Regulation?*, BIS, February.

Possible interactions and/or conflicts among micro and macro policy are due to two main aspects: *(a)* they share several instruments; *(b)* they both relay on similar transmission mechanisms [IMF 2013a, 2013b, 2013c; Vinals 2013]. From the part of policy makers, the debate after the crisis first of all turned to re-direct typical micropudential intruments (capital and liquidity ratios, loan-to-value ratios, debt-to-income ratios ecc) to limit systemic risk, the main macroprudential target.

In bad times possible conflicts arise from the fact that macroprudential policy aims at introducing countercyclical policy with the relaxation of regulatory requirements (capital buffers) to avoid credit crunch, while micro prudential policy aims at keeping capital buffers to protect the health of individual banks and financial stability.

In good times, the two policies may work in the same direction: micro *"hand-in-glove"* with macro. The action should be to build-up capital buffers to be decreased in bad times: in this way conflicts in bad times are avoided (however low NPL and good profits give little sense of urgency for this action.

Therefore there should be cooperation rather than contraposition, with the sharing of information, joint analysis of risk and strong dialog.

Finally strong microprudential supervision is essential for MAP: to ensure information on risk assessment and to effectively enforce MAP across institutions

[complete main issues]

[CGFS 2010; 2012; IMF 2013b; 2013c; Vinals 2013].

3.2 Macroprudential policy and monetary policy: conflicts or interactions?

Another key point of the debate regards the links between macroprudential policy and monetary policy. The two policies have quite different final targets: financial stability and price stability (and/or full employment). As a consequence conflicts of interest may arise, but also strong complementarities and interactions.

[insert main issues of the debate]

Effective MAP may support monetary policy by:

- addressing the undesired side-effects of monetary policy on financial stability
- reducing systemic risks and creating buffers. In this way monetary policy is helped in the face of adverse financial shocks

The need for Map is even greater when monetary policy is constrained (as in the Euro area), to counter national imbalances.

Strong dialogue and coordination are therefore needed (Vinals 2013).

3.3 Architecture and governance

The key aspects of the institutional framework of MAP are the architecture of the competent authorities, their mandate, governance and accountability, with a relevant role for communication policies [IMF 2013b, CGFS 2012].

The first question is: who should run MAP? Institutional arrangements may vary across countries, due to national factors: financial structure, historical and political reasons and political economy considerations. Possible solutions are:

- Ad hoc new agency
- Central bank
- Dedicated committee within the central bank structure (UK)
- Joint committee/council comprising the central bank and other agencies(US

Each solution has advantages and disadvantages (Table 2).

[Insert comments and main issues of the debate]

Table 2

MAP policy: governance issues

Who should run MAP?

New (*ad hoc*) Agency	Cons may lack both credibility and leverage over the supervisors and central banks who will take the relevant decisions.
Central Bank	Pros ▪ leading role in macroeconomic surveillance and the interpretation of aggregate risks, because it has the data and skills to perform system-wide analyses ▪ expertise in market intelligence gathering from its market participation roles ▪ independence, which enables it to impose policy interventions that are unpopular in the short term. Cons ▪ possible conflicts with monetary policy function ▪ it possesses only a few of potential macro-prudential tools, such as reserve requirements. Most of the toolkit is with the bank regulator➔ cooperation with other agencies is required
Joint Committee (Central Bank; Bank Regulator; Market Regulator)	Pros : ▪ the three agencies are the primary sources of information for MAP Cons ▪ coordination problems

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The fundamental point is that someone must be in charge of MAP, with a clear mandate and objectives. Key requirements are considered: independence, strong accountability, adequate powers and strategy of information (Table 3).

Table 3 Committee for Global Financial Stability, *«Operationalizing the Selection and Application of Macroprudential Instruments»* .(Dec 2012)

> ***Principle 5***: *Macroprudential policy should be the responsibility of an independent central agency, formal committee arrangement or similar institutional framework. It should be conducted either as part of the central bank or involving the central bank in a key role, appropriately reflecting national circumstances.*
> ***Principle 6***: *Macroprudential authorities should be charged with a **clear mandate** and objectives and given **adequate powers**, matched with **strong accountability**.*
> ***Principle 7***: *Macroprudential policy **communications strategies** need to convey financial stability assessments clearly, link them logically to policy decisions, and manage public expectations about what can be achieved with macroprudential policy.*

[Insert comments]

4 Targets of MAP

4.1 General targets

The macroprudential perspective is based on the ultimate target to limit costs for the economy arising from financial crises [Crocket 2000]. The key issue is therefore to maintain the stability of the financial system as a whole, avoiding the uprising of systemic risks. From the operative point of view, two different approaches in targeting MAP may be identified [Haldane 2013]:

(1) a target of protection of the financial system against shocks determined by the real economy. In this case macroprudential policy may be seen as a reinforcement of microprudential policy by the enforcement of regulators with additional powers;

(2) a less limited target: a protection for the real economy from shocks endogenously aroused within the financial system. The action required is the prevention and correction of externalities. In this case, MAP is considered as an additional and completely legitimate arm of macroeconomic policy: this implies an active approach (*leaning against the financial cycle*) to limit/prevent the building up of risks and financial imbalances [CGFS 2010]. An example is the double mandate entrusted to the Financial Stability Committee of the Bank of England [2013], with a clear ordering of ultimate targets: first of all financial stability while secondary objectives are economic growth and employment stabilization. Following this approach, liquidity requirements have been decreased in the UK in 2012, as anticlycal action to stimulate the grant of loans by banks to foster the economic growth.

[insert comments]

[insert reference to the mandate of ESRB]

4.2 Intermediate targets

ESRB [2013b] identifies five intermediate targets for MAP, on specific market failures documented in the literature (Table 4). The following step is to define the specific macroprudential instruments or toolkit for each target.

Intermediate objectives of macro-prudential policy and related market failures

Intermediate objective	Underlying market failures
Mitigate and prevent excessive credit growth and leverage	Credit crunch externalities: a sudden tightening of the conditions required to obtain a loan, resulting in a reduction of the availability of credit to the non-financial sector. Endogenous risk-taking: incentives that during a boom generate excessive risk-taking and, in the case of banks, a deterioration of lending standards. Explanations for this include signalling competence, market pressures to boost returns, or strategic interaction between institutions. Risk illusion: collective underestimation of risk related to short-term memory and the infrequency of financial crises. Bank runs: the withdrawal of wholesale or retail funding in case of actual or perceived insolvency. Interconnectedness externalities: contagious consequences of uncertainty about events at an institution or within a market.
Mitigate and prevent excessive maturity mismatch and market illiquidity	Fire sales externalities: arise from the forced sale of assets due to excessive asset and liability mismatches. This may lead to a liquidity spiral whereby falling asset prices induce further sales, deleveraging and spillovers to financial institutions with similar asset classes. Bank runs Market illiquidity: the drying-up of interbank or capital markets resulting from a general loss of confidence or very pessimistic expectations.
Limit direct and indirect exposure concentrations	Interconnectedness externalities Fire sales externalities: (here) arise from the forced sale of assets at a dislocated price given the distribution of exposures within the financial system.
Limit the systemic impact of misaligned incentives with a view to reducing moral hazard	Moral hazard and 'too big to fail': excessive risk-taking due to expectations of a bailout due to the perceived system relevance of an individual institution.
Strengthen the resilience of financial infrastructures	Interconnectedness externalities Fire sales externalities Risk illusion Incomplete contracts: compensation structures that provide incentives for risky behaviour.

Source: ESRB [2013b]

[insert description]

5 The toolkit of MAP

The choice of the toolkit is related to the definition of the intermediate objectives (table 4), following criteria of effectiveness and efficiency of their working [ESRB 2013b; CGFS 2012].

[insert debate and evidences]

Table 5 shows instruments selected by the ESRB according to intermediate objectives.

Table 2

Intermediate objectives and indicative macro-prudential instruments

1. **Mitigate and prevent excessive credit growth and leverage**
   - Countercyclical capital buffer
   - Sectoral capital requirements (including intra-financial system)
   - Macro-prudential leverage ratio
   - Loan-to-value requirements (LTV)
   - Loan-to-income/debt (service)-to-income requirements (LTI)
2. **Mitigate and prevent excessive maturity mismatch and market illiquidity**
   - Macro-prudential adjustment to liquidity ratio (e.g. liquidity coverage ratio)
   - Macro-prudential restrictions on funding sources (e.g. net stable funding ratio)
   - Macro-prudential unweighted limit to less stable funding (e.g. loan-to-deposit ratio)
   - Margin and haircut requirements
3. **Limit direct and indirect exposure concentration**
   - Large exposure restrictions
   - CCP clearing requirement
4. **Limit the systemic impact of misaligned incentives with a view to reducing moral hazard**
   - SIFI capital surcharges
5. **Strengthen the resilience of financial infrastructures**
   - Margin and haircut requirements on CCP clearing
   - Increased disclosure
   - Structural systemic risk buffer

Source: ESRB 2013b

5.1 The classification of instruments

[introduce main sets of instruments (MPIs): Countercyclical capital buffers and provisions, Sectorial tools (i.e. limits to LTV and DTI), Liquidity tools (to contain funding risks), Changes in market infrastructures]

From the operative point of view, different classifications of instruments are defined in the literature and also introduced in the limited experiences[2].

1. Instruments pursuing a *system wide* approach, vs a *sectorial/cross-section* approach [Borio 2010; Panetta 2013].

   System wide instruments are calibrated on aggregate variable (es. total credit) and aim to reduce the building up of imbalances and of risks for the whole financial system. In the case of generalized credit bubbles, for example the key instruments are: anticyclical capital buffers and liquidity requirements. *Cross-section* instruments aim to cope with the risk arising in a specific sector of the financial system, for example mortgage lending: in this case parameters such as loan-to-value (LTV) may be introduced. They are also introduced to reduce the risk undertaking of specific intermediates (systemically important financial institutions SIFI) [Davis, Karim 2009] with addition capital requirements; or the riskiness of markets for financial instruments, such as Over The Counter (OTC) markets by modifying market structure, terms and conditions of transactions. In the *cross-section* dimension a key aspect is the identification of the perimeter of the regulatory action: this is the case of the definition of SIFI or the choice of the specific OTC markets to regulate.

2. Instruments related to the intermediaries' balance sheet, terms and conditions of financial transactions, market structures [BoE 2011].

   a) In the recent experiences MAP tools mainly aim to three balance sheet areas: credit, liquidity and capital [Lim et al. 2011, BoE 2011; ESRB 2013b].

      In the case of credit linked instruments, the distinction is among: i) instruments aiming to condition the lenders' behavior: capital requirements, limits to leverage, variable provisioning, limits to foreign exchange net position, credit ceilings, and loan-to-deposit (LTD); and ii) instruments conditioning the borrowers' behaviour: limits in parameters such as: loan-to-value (LTV) e loan-to-income (LTI).

      The most important liquidity related instruments are: limits to net currency positions, limits in maturity transformation, liquidity reserves.

      Capital requirements,/anticyclical buffers, restrictions in the dividend distribution are the capital related instruments.

   b) Instruments influencing terms and conditions of financial transactions are mainly related to loans and the most relevant target is to reduce the amount of mortgages loans as compared to the value of houses (LTV) or the income (LTI). They also regard the introduction of minimum margins or haircuts on guaranties and derivative transactions [BoE 2011].

[2] Angelini et al. [2013], Davis, Karim [2009], Panetta [2013], ESRB [2013b], BoE [2011], Borio [2010], Lim et al. [2011].

c) Among instruments influencing market structures: the requirements to negotiate in organized market/platforms and/or the presence of a clearing house. Other actions in this field concern the strengthening of information transparency to reduce the uncertainty on exposures and on specific interconnections. Interventions to limit the building up of expositions between intermediaries are also included [BoE 2011].

3) Distinction between *price based* and *quantity based* instruments

Instruments may also be classified upon their links to a price variable or a quantity one (and also a combination of both) [Lim et al. 2011; Haldane, 2013].

Price based instruments are mainly: capital and liquidity coefficients and taxation of specific financial transactions (es. the so called Tobin tax). Among *quantity based* instruments: limits to morgage loans (LTV o DTI); requirements for guaranteed financial transactions (margins, *haircuts*, ecc).

Both ESRB and the British Financial Policy Committee (FPC) have focused on a first set of macroprudential tools. In the case of ESRB [2013b], the number of instruments has been fixed in 15, starting from the 45 of the first analysis. Among them: anticyclical capital buffer as introduced by Basel 3 (up to a maximum 2,5% of the RWA, upon the decision of the national regulators); leverage ratio and capital requirements for specific sectors. Also included: limits to LTV, LTD, LTI requirements and liquidity ratios (Basel 3 *net stable funding ratio* – NSFR).

Table 6 presents a classification of tools adopted by the ESRB, in relation to intermediate targets, to the different ways of impact (via aggregate variables or specific sectors) and to the specific area (credit, liquidity and capital). Also markets structures and terms and conditions of transactions are considered.

Table 6

Intermediate target	Instruments	Whole System	Specific Sectors	Credit: Caps on Debtors	Credit: Caps on Creditors	Liquidity	Capital	Mkt Structure	Transaction Terms & Conditions
Mitigate and prevent excessive credit growth and leverage	Countercyclical capital buffers	X					X		
	Sectoral capital requirements		X				X		
	Macroprudential leverage ratio	X	X				X		
	Loan-to-value requirements (LTV)		X		X				
	Loan-to-income requirements (LTI)		X	X					
Mitigate and prevent execessive maturity mismatch and market illiquidity	Macroprudential adjustments to liquidity ratios *(e.g. LCR: Liquidity Coverage Ratio)*	X				X			
	Macroprudential restrictions to funding sources *(e.g. NSFR: Net Stable Funding Ratio)*	X				X			
	Macroprudential unweighted limit to less stable funding *(e.g. Loan-to-Deposit Ratio)*	X				X			
	Margin / haircut requirements	X						X	
Limit direct and indirect exposure concentration	Large exposures restrictions		X		X				
	CCP clearing requirements	X						X	X
Limit misaligned incentives and reduce moral hazard	SIFI capital surcharges		X				X		
Strenghten the resilience of financial infrastructures	Margin and haircut requirements on CCP clearing							X	X
	Increased disclosure								X
	Structural systemic risk buffers		X				X		

5.2 Intruments calibraton: rules vs discretion

Implementation and calibration of instruments are key aspects of MAP. As a matter of fact the macroprudential action should be mainly preventive and not an ex-post measure [Goodhart, Perotti 2013]. The implementation of macroprudential instruments can be either defined within a regulatory framework or based upon discretionary action of the authorities.

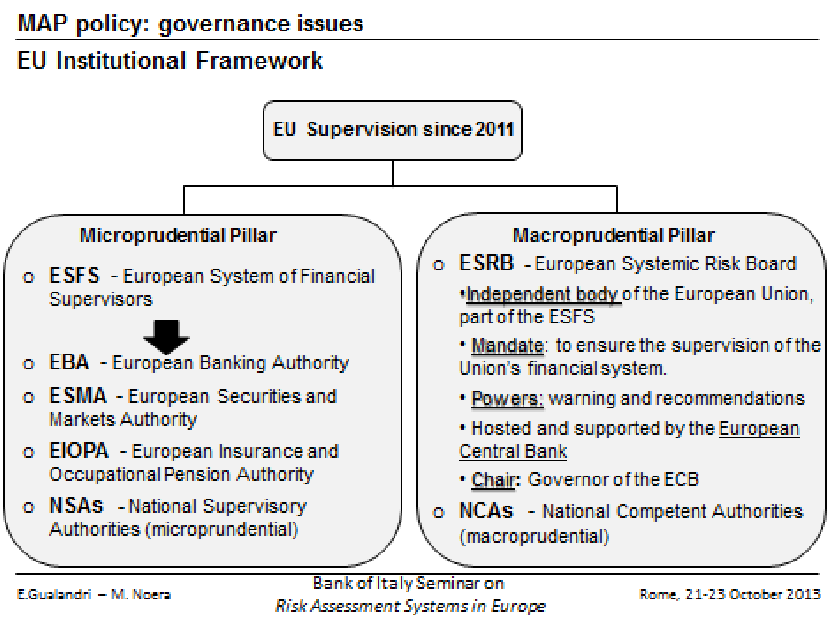
Preventive instruments may be of a static nature or a *time-varying* one.

[insert analysis]

6 MAP in the EU

In 2011 a two pillars European supervisory system was put in place as an answer to the critical key points revealed by the crisis in the EU supervisory architecture (or better absence of): microprudential supervision based on the European System of Financial Supervisors ESFS with a key role for the three European Supervisory Authorities - ESA (European Banking Authority - EBA, European Securities and Markets Authority –ESMA, European Insurance and Occupational Pensions Authority -EIOPA.); macroprudential supervision based on the European Systemic Risk Board ESRB (Table 7).

Table 7



With the establishment of the ESRB an institutional framework for an European macroprudentail policy has been defined, with two operative levels: the ESRB itself and the National Competent Authorities NCA. ESRB is entrusted with the legal responsibility for identifying, monitoring and mitigating systemic risk in the EU and also for giving warnings. It defines inputs and guidelines for the prevention of systemic risks, to be introduce in the different countries, subject "to comply or explain" mechanism. Its powers are limited to warnings and recommendations.

The ESRB has no power to use macro-prudential instruments directly, since the responsibility for the operation of MAP, and therefore for the calibration of instruments, is upon the NCAs, while the task of the ESRB is to define the governance and operative frameworks in which the NCAs operate. The flows of information required by the ESRB to fulfill its tasks are provided by the ECB and the three ESA [ESRB 2011a]).

Table 8 ESRB - Governing bodies

- General Board
  Members with voting rights
  - ECB President and Vice President
  - Governors of NCBs
  - Member of the EU Commission
  - Chairpersons of the three Esa
  - the Chair and the two Vice-Chairs of the Advisory Scientific Committee (ASC)
  - the Chair of the Advisory Technical Committee (ATC)

  Members without voting rights:
  - *one representative for each NCA; the President of the Economic and Financial Committee (EFC)*
- Steering Committee
- Secretariat ECB
- Advisory Scientific Committee (ASC)
- Advisory Technical Committee (ATC)

[insert comments]

The two main areas of intervention of the ESRB have been related to the organizational features and governance of MAP in the member countries in 2011; and to the operative frameworks with the definition of the intermediate targets and the related toolkit in 2013.

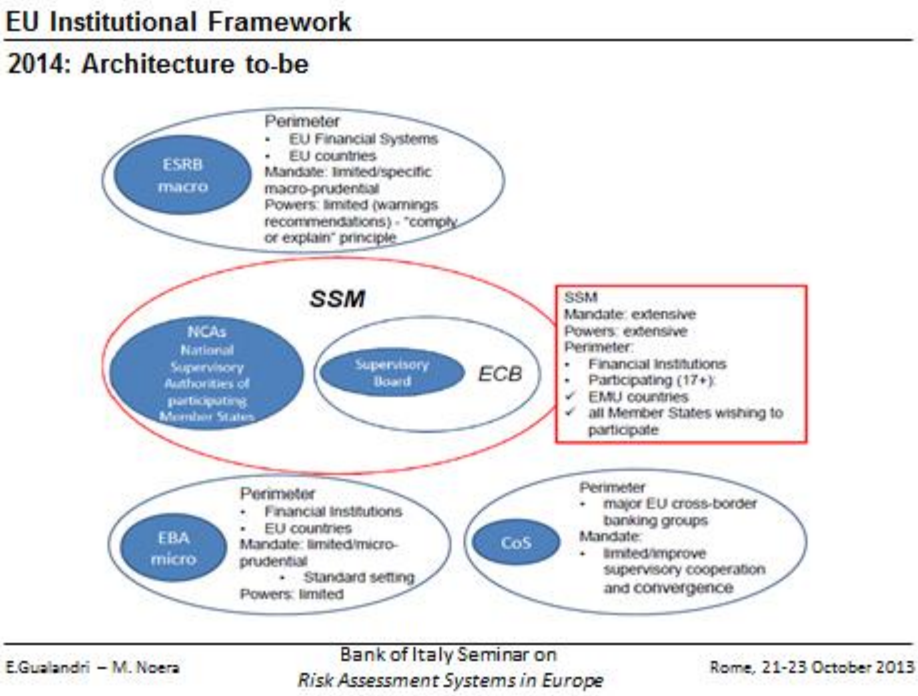
[Introduce and comment ESRB Recommendations [2011b] and [2013b]

In many EU member countries the process for the definition of the MAP framework has been already put in place, following ESRB Recommendations (ESRB 2012, 2013). In the UK the development of MAP is at an even more advanced stage. (BoE 2011, 2013).

The institutional framework in work since 2011 in the EU is undergoing a significant evolution due to the introduction at the end of 2014 of the Banking Union and the Single Supervisory Mechanism SSM, with the responsibility of the micro and macro surveillances on financial intermediaries of the euro area (and also of those of other EU countries under specific request and agreement with the ECB, so called 18+).

The emerging European supervisory architecture is quite complex and fragmented with possible overlapping of competences and the need for a rationalization for an efficient and effective working (Table 9). The key responsibility for micro and macro supervision is upon the ECB, but only for the euro area (18+) and financial intermediaries, while the NCA, the three ESA, the ESRB and the College of Supervisors (CoS) for cross border groups have different tasks and perimeter of competences. The redefinition of the role of the ESRB is one of the main issue, since its mandate is only for macroprudential policy (with NCAs), but for the whole financial system and for all the member countries of the EU, a perimeter larger than that of the ECB.

Table 9



Since 2011 the working of the ESRB has been conditioned by two main factors: first of all it is quite a cumbersome institution, moreover the definition of the SSM has been a priority since 2012, introducing a question mark for the future role of the ESRB as stressed by De Larosiere, in a public hearing (May 24 2014): "… *the body needs a shaking up*".

Table 9 De Larosiere public hearing May 24, 2013

The body needs a shaking up.

ESRB reports were too general and without specific recommendations when there are sources of systemic risk from central bank liquidity to low interest rates. *"If we want to avoid mistakes of the recent past, we should be prepared to act. The ESRB is a very large body, difficult to stir and get into action," "If the present institutional setting is too cumbersome it should be changed. Europe needs a sailor at the top of the mast who looks at possible systemic dangers."*

7. Conclusions

What we now need is the definition of a rational, effective and efficient supervisory architecture in Europe.

[insert main conclusions]

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