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Three Essays on the Implementation Process of the Basel II Capital Accord

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To Elio, Serena, Giacomo and Costanza

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Abstract

The aim of the thesis is to analyze the implementation process of Basel II so to understand whether and to what extent national discrepancies might cause problems of competitive neutrality and thus invalidate the significant level of harmonization in capital adequacy regulation which was successfully achieved by Basel I. To achieve this result, this work looks at three different issues.

The first paper looks at the negotiation process of an international soft law agreement and tries to understand whether it is able to explain its implementation results in terms of the actual degree of compliance across different countries. A game theory coordination model is suggested as a theoretical answer to this question, while the two Basel Accord cases are used to test the model empirically. The appreciation of the circumstances that led to the two Accords is proved as indicative of the reasons behind the widespread adoption of the Basel I Accord as opposed to the piecemeal implementation of Basel II.

The aim of the second paper is then to focus on the actual implementation of Basel II and to analyze how its second Pillar is likely to impact the banking industry in Europe. It finds evidence of a piecemeal implementation of Pillar II rules across Member States (MSs) which, in turn, is able to cause an alteration of the level playing field among banks depending on the country they are incorporated in. It concludes that there is a clear case for further harmonization not only by reducing the extent of national discretions at the regulatory level, but more importantly in building up further arrangements for supervisory convergence and coordination.

With the third paper the attention is finally drawn to possible problems of competitive neutrality arising from the fact that under Basel II "standardized" banks' level of capital is indirectly determined by rating agencies. Being their predictions often inconsistent one with the other, banks can in principle enact regulatory arbitrage strategies. And despite minimum standards are required by means of a common recognition process, the consistency of national authorities' assessment is still not guaranteed and banks might thus be provided with undue regulatory capital relief. A more institutional answer is needed if Europe wants in real fact to ensure competitive neutrality across MSs.

THE BARGAINING PROCESS AS A VARIABLE TO EXPLAIN IMPLEMENTATION CHOICES OF INTERNATIONAL SOFT-LAW AGREEMENTS: THE BASEL CASE STUDY

Abstract

The aim of this paper is to understand the conditions under which an international soft-law agreement may result in widespread compliance across different countries. In particular, it will be assessed whether the number and size of the actors involved in the bargaining process may be able to explain the contents of the accord and, consequently, the level of regulatory isomorphism it is able to create. A game theory coordination model is suggested as a theoretical answer to this question, while the two Basel Accord cases are used to test the model empirically. The Basel example has a twofold interest. On one hand the Basel I agreement is widely cited as a primary example of successful soft-law international agreement due to its worldwide implementation. On the other the recent approval of the Basel II Accord and the unenthusiastic way it has been received in many countries gives the possibility to oppose it to the Basel I experience. The appreciation of the circumstances that led to the two Accords may be suggestive of the reasons behind the widespread adoption of the Basel I Accord as opposed to the piecemeal implementation of Basel II.

Keywords: Negotiation, Implementation, International Soft Law, Game Theory, Basel

I. Introduction

Many of the international rules, guidelines or principles that govern international financial relations are not legally binding and for this reason are often regarded to as "soft law"[1]. These standards have neither a customary character nor a legal character within the traditional significance of the term, but are simply "policy recommendations of international bodies[2]". Also, they have been defined as "law in limbo[3]" before it is ratified into formal (domestic) rules and can therefore be enforced by legal means. In fact, there is no neat dichotomy between soft and hard law, but rather a gradation of cogency depending on different degrees of obligation, precision and delegation[4].

Despite its informal and flexible[5] character, soft law can still be very effective: states may implement soft law spontaneously or because of other mechanisms known as "market discipline" and "peer pressure". National implementation is a precondition for compliance which in turn may be defined as a "state behaviour that conforms to and arises out of an obligation of international law[6]". Soft law's non-binding character makes implementation a very interesting phenomenon to observe. In particular, the study of soft law's implementation and compliance is pivotal to understand if international (hard) law is merely epiphenomenal, as the neorealist doctrine assumes[7], or if

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[1] As the FSF website confirms: "through promoting sound policy making and orderly and efficient markets, the *voluntary adoption* of standards of good practice will (…) help to make the international financial system stronger and more stable"; www.fsforum.org (accessed 2nd July 2006).

[2] Giovanoli (2002:6). The same view may apply to domestic soft law.

[3] Giovanoli (2002:7).

[4] Abbott and Snidal (2000).

[5] Cf. Alford (2005). For a clear analysis of advantages and disadvantages of soft law see Abbott and Snidal (2000).

[6] Ho (2002:649).

[7] In political science, according to the neorealists' view "all international law is soft", Abbott and Snidal (2000:422).

institutional arrangements matter, as the institutional school argues. A limited implementation of soft law international agreements would in fact confirm that what really matters is the legal character of the formal accord which is struck and not the prior interests of the states involved. Also, if this was the case, enforcement mechanisms would be proved as relevant[8] thus corroborating the enforcement school's[9] main thesis. However, to date no clear evidence is available[10]. Consequently, the neorealist argument still holds: none of these disparate theories is able to credibly demonstrate if compliance with international law is based on something different from the immediate governmental interests. In the absence of any reliable counterevidence, the neorealist assumptions (which will be briefly reviewed in *Section II*) thus pragmatically constitute the most sensible framework to work within.

This work is different from most existing literature as it attempts to use negotiation as a tool to explain implementation choices. It will be hypothesised that leading countries seek to impose their standards on the international scenario in order to avoid implementation costs. Smaller countries need instead to conform to international standards if they want to attract investments and, at the same time, be allowed to invest abroad. Within this framework, it will be suggested that the analysis of the number of players and the distribution of power among them may help in understanding what kind of agreement is more likely to be struck and, in turn, the subsequent incentives to implement it in a soft-law (i.e. non binding) context. In particular, this essay aims to demonstrate that the leading country's relative market size has an essential role in the implementation dynamics. Widespread implementation and compliance with soft law international agreements may be achieved only in presence of a clear commitment by the hegemonic country that it will follow the rules it has agreed to abide by. In fact, this will happen only if the standards agreed with are

[8] This is consistent with the arguments of the "managerial" school. See for instance Chayes and Chayes (1993).
[9] See Downs at al. (1996).
[10] Simmons (2000).

sufficiently close to the leader's pre-existing rules and this is especially true when its (relative) market power is very large.

This argument will be proved *theoretically* through a simple coordination model that draws on a work by Drezner[11] (*Sections III and VI*). Game theory predictions have often been used in the political science literature and especially by the neorealist school in order to explain bargaining behaviour. However, these arguments have rarely been formalized in favour of general discussions on the theoretical relevance of models such as 2x2 Prisoner Dilemma or Battle of Sexes[12]. I argue that while formal models of social behaviour need many assumptions to work, they constitute an important tool to understand its analytical dynamics and to give grounding to positive conclusions.

Empirically, the Basel case study will be employed to test the previous hypotheses (*Section V*). The two Basel Accords on capital adequacy are very similar examples of international soft-law agreements but they show different outcomes in terms of implementation. While the Basel I agreement has been widely implemented well beyond the original signatories, the Basel II Accord is far from a similar result. In particular, the U.S., the world's greatest power, is dismissing most of the treaty. This contradicts the neorealist assumption that international agreements simply reflect power imbalances between states. The institutional doctrine seems unfit to explain this puzzle as well, since both the Accords have been agreed within the same *forum* and they have both soft law character[13].

To summarize, working within a neorealist framework in which states are rational self-interested actors, the present paper tries to innovate the literature by looking at the impact of the number and size of actors participating in the negotiation process on the outcome of the bargaining and, more importantly, on the subsequent implementation decisions. It concludes that power imbalances matter but not

[11] Drezner, (2004).
[12] See Jervis (1988) and (1978). *Contra*, Snidal (1985).
[13] Lee (1998).

necessarily in the way predicted by the neorealist scholarship. What really matters in an international soft law agreement is the existence of a country or a group of countries which is strong enough to lead the implementation process. Only a clear decision by the dominant country to implement the agreement may prompt the market mechanisms which are pivotal to weak states' implementation choices.

II. Assumptions and the literature.

After the publication of Professor Abbott's paper in 1989[14] there have been numerous instances of academics researching in the economic and political science field applying their theories to international law[15]. The result of this interest has been the rise of a new interdisciplinary area which attempts at analysing the role of international law in an innovative manner. In particular, this strand of literature has helped to update some axiomatic views of the legal scholars, especially on implementation and compliance issues. Indeed "it is fair to say that most international law scholarship does not ask why there is compliance but rather simply assumes as much[16]".

Instead, economists and political scientists (in particular the neorealists[17]) are sceptical about the role of international law in prompting compliance[18]. Even though some papers have empirically proved high levels of compliance with international law, this evidence is debatable because most of the examined treaties only ask states to move slightly from what they would have done anyway without an

[14] Abbott (1989).

[15] See for instance A.M. Slaughter *et al.* (1998) and the entire issue of International Organization, Summer 2000.

[16] Guzman (2001:1) and cf. Chayes and Chayes, (1993).

[17] Within political science, the neorealist scholarship, differently from the institutionalists, argue that institutions have no real effect too, so that both soft and hard international law are indeed "soft" and thus only constitute "window dressing". "This perspective is so deeply held among the neorealists that they rarely discuss international law at all" (Abbott and Snidal, 2000:422). Cf. *supra* note n^7.

[18] As in Guzman (2001), the enforcement school is here acknowledged as a legal strand of literature rather than a political science theory.

agreement[19]. Given this, any empirical analysis is biased by a "selection effect" which makes it unreliable unless the "depth of cooperation"[20] is taken into account and it is observed to what extent deep cooperation has been attained in absence of enforcement. Consequently, as long as international law is not clearly proved to have a significant *per se* effect on state behaviour, it is reasonable to assume that it is "wholly beholden to international power[21]". In line with this view, powerful states are able to exercise a strong degree of control on international outcomes and do not necessarily need legalisation. States are rational and self-interested agents and comply with international law only when it fits their needs. When it doesn't, compliance simply results from fears of sanctions or reputational implications.

This paper is consistent with another *leit-motive* of the neorealist scholarship: governments are considered as the primary actors in the bargaining process of international law. This assumption, which is definitely not innovative[22], is based on the idea that capital structurally depends on states at least as much as states depend on capital[23]. Other academics[24] are completely opposed to this idea and argue that international regulatory harmonization should be analyzed through the lenses of domestic policy. According to this strand of the literature, individuals and private groups are the key actors in international relations studies. Even though these scholars' broad conclusion that states with a "liberal" structure tend to implement international law more often is appealing (and also grounded with some empirical

[19] Downs *et al*. (1996).
[20] *Ibid*.
[21] Abbot and Snidal, (2000:427).
[22] Cf. Simmons (2001), who explain harmonisation as a result of hegemonic power; Vogel (1995), who hypothesize a global "California Effect"; Mattli (2001); Koremenos *et al*. (2001).
[23] Drezner (2005).
[24] See Slaughter (1995) and Singer (2004) who tries to go beyond both the traditional functional argument as that of Kapstein (1989, 1992) but also innovate the "Chicagoan" idea of "redistributive cooperation" as in Oatley and Nabors (1998). The idea that domestic policy determines international relations is also in Putnam (1988) who proposes a two-level game to understand the results of international negotiations.

support), this model is highly complex and thus "rarely generate[s] predictions about how nations behave[25]".

Also, this work heavily relies on the insights of game theory[26]. Unlike some neorealists[27], though, it tries to avoid "proto game theory[28]" and attempts to gain instead from the rigour and precision of more formalised models. However, the use of more formalization is not a panacea, as many elements of world politics are still to be assumed. Even though reasonable, neorealists' assumptions (which mainly reflect economics' hypotheses) are not immune from criticisms because actors' preferences and believes are complex phenomena to be explained. Further, problems may arise if even one of these assumptions is not verified. If for instance narrow self-interest is not demonstrated to be the driver of national behaviour, many arguments would loose their validity. Still, it must be acknowledged that the game theory framework "yields significant propositions in the conditions and strategies that increase the likelihood of cooperative behaviour and outcomes[29]". In an international soft law context, game theory is quite helpful because states may effectively be represented as playing a *non-cooperative coordination game*. Indeed, they "have a strong desire to coordinate but some differences over where exactly to coordinate"[30] and they seek to coordinate their standards in a context in which formal enforcement is not possible and behaviour only depends on market incentives.

Finally, this article's main thesis is apparently similar to what sustained by the hegemonic stability theory[31], which actually is often used to explain positive or negative outcomes in international cooperation. To be sure, this paper shares the broad conclusion that the presence of a

[25] Guzman (2001:17).
[26] See for instance Jervis (1988) and (1978); Snidal (1982).
[27] Cf. Jervis (1988).
[28] O'Neill (1989).
[29] Jervis (1998).
[30] This definition of coordination games is provided by Snidal (1985).
[31] On this theory see at least Keohane (1984).

dominant actor[32] in international relations may lead to collective outcomes which are desirable for all the members of the international system. However, this analysis is built on different assumptions and works on separate mechanisms. Hegemony theorists hypothesise that collective action is a public good problem in which coordination is only possible when there is a "benevolent despot"[33] who is able to capture benefits which are bigger than the cost to provide public goods[34]. Small states in turn are able to free ride on the dominant state's provision. Conversely, this model represents a coordination problem and draws on the appreciation that small states gain most from standards coordination because it allows them to attract foreign investments as well as to expand their industry in bigger markets. Therefore, they are willing to bear the cost of switching to great powers' standards, which are generally tighter than their pre-existing rules. However, small actors' benefits are conditional to great powers' implementation, which may be expected only when new standards roughly coincide with their pre-existing ones. This, in turn, is more likely to happen when the leading country enjoys an higher degree of (relative) market power. Consequently, what really matters is not whether an hegemonic country exists on the international scenario, but the relative market share of the leader within the bargaining group. To summarize, while the broad conclusion of this paper may be assimilated to the hegemonists' one, it is the logic of mechanisms which are different from the ones behind hegemonic theory.

[32] The assumption that an hegemonic actor exists (see Simmons, 2001), is challenged by Braithwaite and Drahos who observe that "these days no one really leads the globalisation of banking regulation (…) the hegemony of the U.S. in international monetary relations has no counterpart in banking regulation" (Braithwaite and Drahos, 1999:113).

[33] Kindleberger (1976).

[34] The public good problem may be seen as a special case of Prisoner Dilemma.

III. A game theory model to analyze negotiation outcomes in non-cooperative coordination games.

III.1 Methodology

Modelling governments' inclinations is complicated. A good starting point, though, is the recognition that coordination at a point which diverges from the domestic *status quo* is costly[35]. A government's ideal point is then its pre-existing regulatory structure which is a political equilibrium that is costless to maintain. This makes coordination difficult because domestic *status quo* varies across countries depending on history and the level of economic development. Higher standards of regulation are generally associated with more wealthy states because societal preference for regulation tend to augment as the median level of income increases. In the case of capital adequacy, while regulation is not necessarily linked with a better quality of life, it helps to reduce externalities and inequalities arising from banks' failures. Consequently, it is reasonable to assume that capital requirements are stricter in high-income countries and viceversa. Still, if this is true, why do low-income countries find it convenient to converge to the standards adopted in high-income markets? As it will be pointed out later the answer is twofold. Firstly, by coordinating at international standards they are able to attract foreign investments and therefore increase the competition level within their markets. Secondly and more importantly, international coordination makes it possible for their industries to expand to bigger markets overseas. Big markets have a gravitational effect on firms: the bigger the market, the more international companies are attracted and strive to secure market access. In a globalized world in which trade barriers are not effective any more, accessing foreign markets is the only way for small countries to keep growing.

Consistently with the previous assumptions the following game theory model tries to capture the dynamics of regulatory coordination. The

[35] Most of these assumptions are common to Drezner (2004).

classical mistake in the neorealist literature on international harmonization is to reduce the analysis of every puzzle to the dichotomy Prisoner Dilemma (PD) – Battle of Sexes (BS)[36]. For instance, issues like military treaties are commonly analyzed in the framework of cooperation games (PD) while international standardization is generally understood as a coordination problem (BS). While this kind of analysis is not necessarily flawed, it may be criticized on technical grounds because it tends to oversimplify complex issues. Also, avoiding any formalisation, the explanatory power of game theory is necessarily reduced to a superficial level. The spectrum of possible outcomes that may be reached is often assumed to be too narrow while the comparative static of subsequent costs and benefits is poorly analyzed. Another serious shortcoming of the neorealist literature on regulatory coordination is that it often assumes symmetrical payoffs thus obscuring power imbalances that are actually quite common in international relations[37]. In fact, power considerations are at times incorporated in the analysis recurring to some expedients such as providing one of the actors with the agenda-setting power. Again, this kind of approach may reveal itself as too simplistic and may overstate differences among states. Also, it may not be able to explain how variations of relative power throughout time can affect payoffs.

To avoid incurring the previous mistakes, this paper attempts at looking into the black box of international treaties. Drawing on a the model elaborated by Drezner[38], the following analysis tries to disclose the drivers behind different outcomes in international treaties on regulatory coordination. Unlike Drezner, the role of a few variables is revisited. For example, the costs of coercion are assumed to be borne only by small powers[39]. Graphical insight is also provided in order to facilitate the understanding of the hypotheses. Finally, the possibility to extend the analysis to n-players game is considered. In this way, the

[36] Simmons (2000).
[37] Drezner (2004).
[38] *Ibid.*
[39] While coercion is costly to enforce, great powers rarely bear this cost directly. More often, they take advantage of IFIs like the IMF or the WB.

present paper aims at discussing the influence that the number of actors may exercise on the outcomes of international agreements. Efforts addressed at enlarging or restricting the number of bargainers in an international *forum* may severely affect the likelihood to reach a self-enforcing agreement (see *infra*)[40].

III.2 A model of coordination

Let's assume a coordination game between two actors A and B. A's market share is bigger than B's. Therefore, the benefits from coordination are higher for B because coordination reduces barriers to exchange and thus allows B to access a market bigger than its own (see *supra*)[41]. A's standards (a) are more stringent than B's (b) so that a>b. A and B can choose whether to coordinate at each other standards or retain their own. π_i represents the benefits that state i derives from coordinating. Similarly, d_i constitutes the political and economic costs for state i to adjust to the new standards. d_i is defined as $d_i = f_i(a-b)$, i.e. a monotonically increasing function of the gap between pre-existing standards of A and B. π_i is a linear transformation of $y_j/(y_i + y_j)$, where y_i is the market size of country i and y_j of country j. As explained above, this means that the benefits which country i gains from coordination increase as the size of the partner country increases. The payoff for retaining the existing regulatory regime is normalized to 0 for A while assumed to be negative for B. This is because it is easy for great powers to exercise

[40] I thank an anonymous referee for reminding me to emphasize that the model described in the following is not supposed to provide the reader with a complete and exhaustive answer to the research question. By simplifying the decisions' structure of the actors, the model only aims to achieve a clearer and more precise understanding of some main drivers behind each player's strategies and to draw some positive conclusions regarding the most likely outcomes of the negotiation process. For this reason, the formal calculations in the following should not be regarded as a substitute but simply as a tool for analysis.

[41] Helpman (2004: 71-72).

coercion (c) to convince small powers to adhere to their regulatory standards[42]. The threat of market sanctions is a common tactic that big players can exercise to change the payoffs of the coordination game so that other actors are penalized if they retain their existing standards.

The main intuition behind the model is straightforward. Small powers draw high gains (π_i) from regulatory coordination with stronger countries because it gives them the possibility to receive investments from wider markets where, in turn, they will be allowed to penetrate.

In fact, within the banking sector, when home and host country supervisors apply different rules (say, for instance, that the home supervisor allows the adoption of IRB approaches while the host supervisor only recognizes the standardized approach, see *infra*) consolidated prudential supervision of international banks might become really complicated because different host supervisors may well not entrust foreign supervision and thus may not allow the foreign entity[43] to use its domestic approach. This, in turn, might result in further compliance costs for the parent bank thus hampering its propensity to invest in the foreign country.

If, on the contrary, foreign banks are provided with an homogenous regulatory environment, they will be willing to invest more and small states' domestic markets may benefit from competitive pressures arising from their entry, thus increasing productive and operational efficiency. Despite the available evidence is debatable[44], this process is supposed in turn to be beneficial for banks' customers which may benefit from lower fees. Also, the presence of foreign banks may decrease the risk of bank runs as they may be perceived as sounder and thus safer in times of confidence crisis. One might object that the parent bank's protection is not always granted but evidence from Korea and Indonesia during the financial crisis of 1997-1998, also as observed in

[42] Drezner (1999).
[43] Following the Basel Concordat of 1983, branch supervision is primary responsibility of the home supervisor but this rule does not accommodate the case referred to in the text.
[44] Cf. Drezner (2004).

Thailand, Mexico and Hungary in earlier years, seems to confirm the stated hypothesis. In addition, as a result of regulatory coordination peripheral banks are allowed to enter bigger countries, which is the only way for them to keep growing in a market which is increasingly globalized (see *supra*).

These circumstances (i.e. weak countries' twofold advantages in coordinating with stronger countries) seem able to ground the model's hypothesis that countries with smaller market size derive higher π_i from coordination and are also empirically[45] confirmed in that both inward and outward developing countries' FDI[46] (Foreign Direct Investments) have been steadily increasing in the last three decades following the gradual opening of national markets (see Appendix II).

On the other side the model hypothesizes that small powers' adjustment costs (d_i) tend to be high because stringent standards are directly associated with higher degrees of economic development (see *supra*)[47]. Graph 1 clearly demonstrates this point in the case of Capital Regulation. All the indicators constructed by Barth *et al.* (2001) to proxy regulatory stringency in prudential requirements are positively correlated with the degree of economic development. In particular, the overall capital stringency is around 30% higher in developed countries then in developing or emerging markets. Consequently, when the gap between regulatory standards is so wide that $\pi_b < d_b$, then small states have no incentive to coordinate at the great powers' standard.

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[45] This evidence is clearly anecdotic though, being the level of development just an (imprecise) proxy for market size. The same caveat should be applied to the regulatory stringency analysis that follows.

[46] While Financial Services Foreign Direct Investments (FSFDI) would clearly be a better proxy, as argued by the Committee on the Global Financial System (CGFS, 2004:7), "data on FSFDI flows that are comprehensive and methodologically consistent across countries are not available".

[47] While for simplicity this model assumes that international coordination is costly for small states because they need to comply with more stringent standards, other economic effects should be acknowledged. For example, lower barriers to global capital markets have been proved to increase the volatility of economic output.

Graph 1: Capital regulatory variables and levels of economic development. (from Barth et al. 2001)

Variable	High income	Upper middle income	Lower middle income	Lower income	Developed countries	Developing or emerging markets	Offshore centres
4. Capital Regulatory Variables							
(a) Overall Capital Stringency	3.89	3.54	3.00	3.11	4.19	3.20	2.13
(b) Initial Capital Stringency	1.69	1.58	1.48	1.37	1.85	1.46	1.13
(c) Capital Regulatory Index	5.60	5.13	4.42	4.47	6.08	4.65	3.25
(d) Maximum Capital Percentage by Single Owner	80.46	59.96	61.92	56.06	88.70	59.49	50.63

Two hypotheses emerge from this framework:
HP.1) If $\pi_i > d_i = d = f(a-b)$ for all i, the likelihood (L) of coordination at A's standards is an increasing function of A's market size;
HP.2) *Ceteris paribus*, there is a size threshold for country A (i.e. y_a *) after which the only equilibrium outcome for other countries is to coordinate at A's standards.

In Appendix I both the hypotheses are formally demonstrated while the following corollary is derived:
C1: *Ceteris paribus*, as n increases the likelihood L of a coordinated equilibrium at A's standards decreases.

IV. Beyond negotiation: the implementation issue

Intuitively, the previous argument is straightforward: it simply acknowledges the role of market power in international relations which is a mainstream belief. More innovatively, this approach is able to disclose the mechanisms with which market power is exercised and it provides a framework to analyze how different agreements may be reached depending on the number and size of the actors involved in the bargaining process. Still, the previous argument shares one of the most common flaw in negotiation theories: it tends to ignore implementation issues. In the following this paper attempts to fill this

gap linking the bargaining process with the analysis of implementation issues.

As pointed out earlier, in the context of (international) soft law, countries are not legally forced to implement the agreements they sign. For this reason they have an incentive to bargain hazardously because they know that they can opt out later on. This is especially true in the case of big countries, which have a gravitational effect on firms (see *amplius supra*). Indeed, great powers are also less dependent on international standards so that they cannot be coerced. This is the reason why empirically economic sanctions show a mixed record[48]: great powers have a "go-it-alone" power[49]. On the other hand, weak countries tend to implement international soft law agreements for market reasons. By coordinating at leading economies' standards, their credibility in front of international markets is strengthened and as a consequence their ability to attract investments from abroad (and to invest, as well) is higher (see *supra*).

Great power's compliance is thus cardinal for the mechanism to work: if the leader fails to fully implement the standards agreed upon, these are not considered as a best practice anymore and their reputation effect is lost. Consequently, while deciding whether to comply with an international agreement, what really matters for weak actors is not its content, but the degree to which the agreed norms are being implemented by the leading country. Once the prevailing country dismisses the agreement even partially, the latter looses part of its reputation effect and weak countries have lower incentives to comply with it. For these reasons, analysing the outcome of the negotiations is key to understanding the leader's incentives to comply with it. Strikingly, coordinating at the leader's standards is thus good news for implementation. It is a guarantee that it will comply with what was agreed and, in turn, that other states will find it convenient to mimic its behaviour. The following hypothesis emerges:

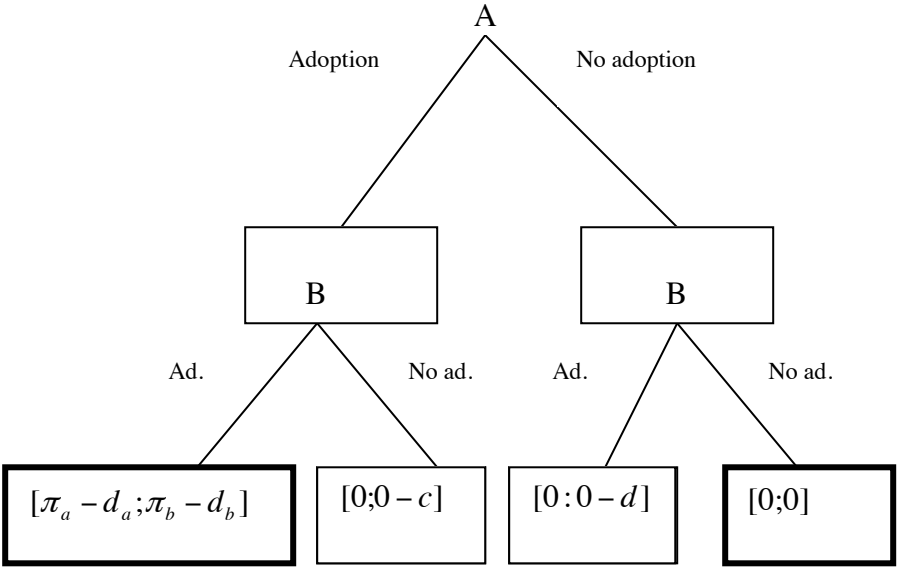
[48] Pape (1997).
[49] Gruber (2000).

HP.3: Coordination at A's standards leads both A and B to choose "adoption" strategies

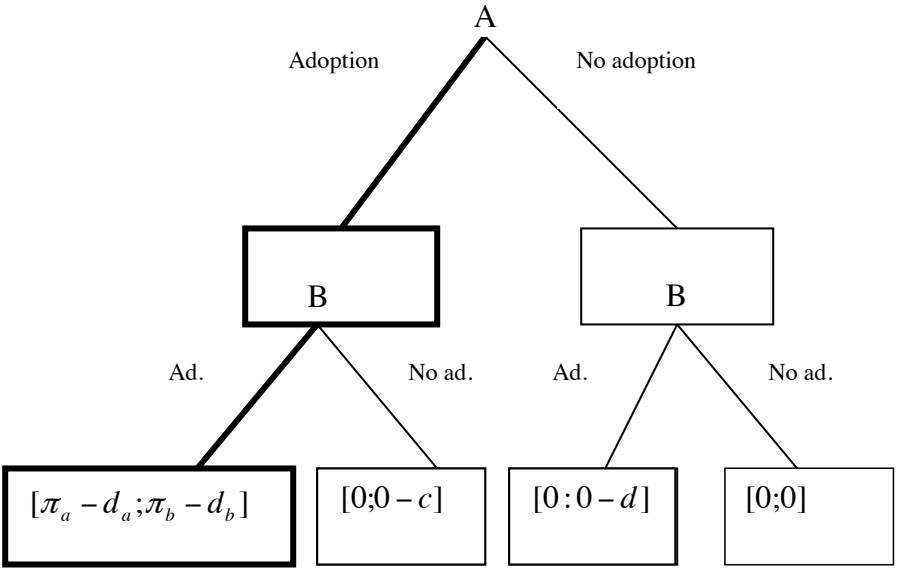
Drawing on the previous assumptions[50], the implementation game may be demonstrated as follows. Let's assume that after the coordination agreement has been struck, the hegemonic country (A) has to decide whether to comply with the new rules. A is first mover. Following its decision, B has to decide whether to adopt the new standards. If the new rules are close to A's pre-existing standards, d_a is low while A's *relative* size is probably high so that π_a is high as well. If these two conditions hold, it follows that $\pi_a - d_a$ is bigger than zero. Consequently, as shown in Graph 2, B has two different dominant strategies depending on A's choice. If A chooses "non-adoption", B will always reject the new rules. If A adopts, B will adopt the new rules iff $\pi_b - d_b > -c$. By backward induction, if the new standards are sufficiently close to its preferences, A will then choose the "adoption" strategy because $\pi_a - d_a > 0$ (Graph 3). Otherwise, if the new rules are far from A's preferences (because A was probably not big enough to impose them), d_a is high while π_a is low. As a consequence, $\pi_a - d_a$ is negative and, again by backward induction, A's dominant strategy is found to be "non-adoption" (Graph 4).

[50] The only difference with the previous assumptions is that here *d* may assume different values depending on the country. *C* represents the degree of coercion (i.e. market sanctions) that may be imposed by A on B.

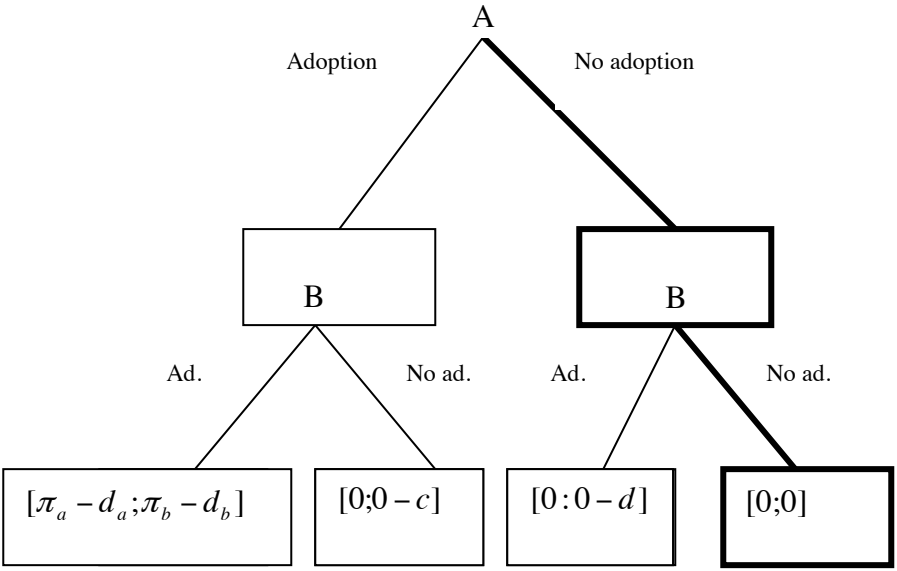
Graph 2: B's dominant strategies



Graph 3: A's "adoption strategy"



Graph 4: A's "non-adoption"strategy



V. Empirical demonstration: negotiation and implementation in Basel I and Basel II.

The following case study aims at testing the hypotheses empirically. Case studies are often said to be an inferior method to demonstrate empirical validity[51], but statistical analysis is helpful only if good data is available. Finding proxies and good data about the effectiveness of regulatory coordination is extremely complicated. Take for instance π_i and d_i, the two main variables of the model above. As discussed, finding operational measures is possible, but complete data time series are most of the times lacking when – as in the Basel case - the observation period is sufficiently long and the sample has a worldwide dimension[52].

[51] See George (1979).

[52] In particular, the main problem is the inconsistency of data among different countries.

However, if case studies are well selected, they may be stronger than expected. In particular, the Basel Accord case study has two main advantages. On one side it is a clear primary example of international soft law. Second and more importantly, the Basel I and the Basel II agreements have been negotiated within the same committee and on the same broad issue (i.e. capital adequacy). For this reason the analysis of variations in the implementation process (our dependent variable) assumes a strong empirical validity because most of the independent variables are already controlled for.

The Basel Committee on Banking Supervision (henceforth BCBS) was established within the BIS[53] in 1974 by the G-10 Central Banks as an answer to the problems experienced in the international currency and banking markets after the crisis of Herstatt Bank. More generally, "globalisation[54]" of international regulation was needed as an answer to the globalisation of banking and financial markets. At that time, members of the BCBS were all the supervisory authorities of the G-10 countries plus Switzerland and Luxemburg. In 2001, Spain also joined the "club"[55]. Within the committee, central bankers regularly exchange information and cooperate on banking supervision matters, with special attention at improving capital adequacy standards and the quality of supervisory activity across countries. This has been particularly important in recent years as increased cross-border activities have made national information quite unreliable while systemic risks have grown steadily[56]. As already mentioned, though, the BCBS does not enjoy any formal legal authority, it formulates mere recommendations that individual authorities have to implement through statutory arrangements. In the following, the paper will first describe the negotiation structure and implementation results of both

[53] The BIS is the Bank of International Settlements, established in Basel after the First World War to manage Germany's war repayments. For further information see http://www.bis.org/about/history.htm.
[54] Braithwaite and Drahos (2000).
[55] BIS (2001).
[56] Breithwaite and Drahos (2000).

Basel I and Basel II. Secondly, the model's ability to explain variation in implementation will be tested.

V.1 Basel I

Since 1974, the BCBS has issued guidelines, standards and statements of best practice on several matters[57]. Still, the topic which has been receiving most of the attention in recent years is capital adequacy. In particular, it was in the early 80's that the BCBS became worried about the risks of instability that were prompted by the progressive erosion of capital standards in several jurisdictions (in particular Japan and France). Also, concerns arose from the fact that these countries were competing unfairly on the international scenario because their domestic banks could benefit from lower capital requirements. For these reasons a common system of capital measurement was needed and soon introduced in July 1988. Quite rudimental, the Basel Capital Accord (henceforth Basel I) mainly consisted of a simple 8% capital to risk-weighted assets ratio[58].

Given the previous "competition in laxity[59]", the implementation process of these new standards was "amazing"[60], as the Secretary General of the BCBS commented in an interview. The Basel system was progressively introduced in "virtually all [non G-10] countries with international active banks"[61], well beyond the initial objective which was simply to get the Japanese (and French) banks into the system[62]. In the view of the Secretary General, two facts were essential to achieve this result: "1. working on good relationships; and 2. precommitting to

[57] Notably, the BCBS's first achievement was the drafting of a number of principles (the "Concordat") based on the idea that "no foreign banking establishment should escape [adequate] supervision" (BIS, 2001: 2).

[58] The numerator was divided into a (at least) 50% Tier 1 and a 50% Tier 2 . The denominator was composed by assets and off-balance sheet items, both adjusted by risk. For further details see Lastra (2004).

[59] Braithwaite and Drahos (2000:117).

[60] *Ibid*.

[61] BIS (2001:3).

[62] Basel Committee interview, 1998, as cited by Braithwaite and Drahos (1999:117).

make a decision"[63]. While the first idea that committees of informal nature facilitate cooperation and consensus is surely reasonable, the second is more intriguing for the purposes of this analysis. Precommitting is said to be fundamental to give the right incentives to other players to reach an accord. But who can precommit to make a decision? Only great powers can because they are the only ones with a "go it alone" power[64]. Indeed, it is only after "the most important banking nations in the world accept [new] guidelines [that] they effectively constitute a regime of practice[65]". At that point, "most other supervisory authorities see little point in staying away from [it]"[66] and guidelines become standards "that all must comply with"[67].

The negotiations that brought to the approval and implementation of Basel I are consistent with these explanations. The need to stop the Japanese and French dumping gave the right incentives to the US to precommit to new international standards. Within the BCBS, the US market size[68] in the banking and financial sector was big enough to ensure that other states would have followed its decisions. While multilateral discussions within the BCBS were not straightforward, it took only few weeks to reach a bilateral compromise with the British. Consequently, it appeared clear first to Japan and then to the other BCBS members that a decision to retain their existing standards would have pushed the US and the UK to build trade barriers. Obviously, such a decision would have been highly detrimental for their economies (see *infra* §V.c) and they soon accepted a conciliation[69]. As a result, the terms agreed with were quite close to US preferences. For example, banks were given incentives to buy (OECD) government bonds, something the US had strong need of. As Gowan[70] confirms: "the result of the accord was a regulatory regime skewed towards

[63] *Ibid*.
[64] Gruber (2000).
[65] Braithwaite and Drahos (1999:118)
[66] *Ibid*.
[67] *Ibid*.
[68] For the relative evidence see *infra*, §V.c.
[69] As Sebenius (1992:345).
[70] Gowan (1999:26).

serving US interests"[71]. But once other G10 countries had followed, it was clear to non G10 countries that given the wide G10 market size coordinating with the new rules was the only feasible choice.

V.2 Basel II

However, the Basel I capital framework was quite rudimentary and was thus later amended several times, particularly in 1996 when market risk was finally taken into account. In June 1999 a first proposal for a new and more risk-sensitive Capital Accord was issued and, following long consultations, a final document was published in June 2004. The new Accord, often referred to as the Basel II Accord (henceforth Basel II), is composed by three Pillars. Pillar I sets the new capital rules, Pillar II dictates how supervisors should monitor their implementation and Pillar III concentrates on the achievement of market discipline by means of information disclosure.

The most controversial during the negotiations was definitely Pillar I, under which three different approaches could be used to calculate regulatory capital[72]. Since regulatory capital is a cost for a bank, the way it is computed is key for their profitability. So, at the international level, each country looks for capital rules which may favour their domestic banking industry. Despite a technical analysis of these issues is beyond the scope of the paper, the three approaches under Pillar I

[71] Further details are in Kapstein (1994).

[72] The first one is the simplest and draws on what was required by the Basel I Accord. The second one is the foundation internal risk-based (IRB) approach which mainly relies on the banks' capability to calculate their required capital on the basis of their assessment of the counterparty's default risk. Finally, the third "advanced" IRB (A-IRB) approach allows the bank to use its own models to forecast not only the probability of default (PD) of the counterparty, but also the loss given default (LGD), the exposure at default (EAD) and the remaining maturity (M). Under Pillar I, three different approaches of increased sophistication (BIA, SAOR and AMA) are also used for the calculation of operational risk. See Lastra, (2004). On Basel II there is a long and miscellaneous literature. See for example, for a technical discussion: Danielsson *et al.*, (2001); Decamps J.P. *et al.* (2002); for a legal discussion Llewellyn (2001); Thomas and Wang (2005); Lastra, (2004).

have been proved[73] to be competitively non neutral and to represent a compromise between different powers. For example, the use of meta-regulatory techniques[74] (i.e. IRB approaches, see note 9) tends to favour countries with a fairly concentrated banking industry. Other elements of the accord (e.g. the correlation coefficients) give clear advantages to economies characterized by SMEs[75] [76]. In sum, differently from Basel I, in the Basel II Accord the US was probably not able to impose its preferred terms.

The implementation process of Basel II is currently in progress. As stated above, though, it seems quite troublesome. After many years of efforts to strike an agreement the US and the EU have decided to implement the Accord in significantly different ways. The EU version of Basel II (i.e. the CRD directive, adopted in 2006) is quite consistent with what agreed in Basel and, despite some delays in the implementation process are being experienced due to its complexity, it is likely that by 2008 most credit institutions and investment firms[77] in the EU will comply with the new rules. Differently, after a remarkably uncertain and long process, the US has finally decided to require its "core banks"[78] to comply with a subset of the new rules[79] (i.e. Pillar I IRB-Advanced and AMA)[80], while the rest of the banking industry will still be able to stay with the old regime. The idea is probably to "pick

[73] For an empirical demonstration see the five Quantitative Impact Studies (QIS) gradually published by the BIS. They are available on www.bis.org.

[74] On this literature see Coglianese and Lazer, (2003).

[75] i.e. Small and Medium Enterprises.

[76] Shin, (2005).

[77] As defined in the ISD (Investement Services Directive, 93/6/EEC).

[78] These are all those banks with consolidated total foreign exposure above $10 billion and consolidated total assets of more than $250 billion. According to Cornford (2006a), they currently account for 99 per cent of the foreign assets and two-thirds of all the assets of US banks. Despite other ("opt-in") banks may adopt Basel II if they meet the eligibility criteria for the AMA and A-IRB approaches, US regulators believe that most of them have no need to implement the complex technicalities required by Basel II.

[79] See Howke (2003); Courtis (2003). After a long period in which the results of QIS4 were carefully analyzed, the US regulators have finally decided to adopt Basel II (Kroszner, 2007).

[80] See note 68.

the cherry" of the agreement, i.e. the most flexible and favourable part, and to discard the rest of the accord.

Also, despite the US New Proposed Rulemaking (NPR) has been published in November 2007, its implementation is forecasted to be quite gradual. Internationally active banks have been allowed to run their first parallel calculations from January 2008 and required to run a minimum transition period of three years during which capital will be allowed to decline only by 5% per year[81]. Further, there are still a number of issues which have not been resolved. For example, final rules covering market risk are still to be issued and three guidance proposals to be used in parallel with Basel II and published in February 2007 have not been finalized yet. Finally, a post-adoption study is to be conducted at the end of the second year of the transition period to verify if the system is effective. Given the number of US-based international banks which have been hit by the 2007-2008 financial crisis because of relevant failures in internal risk management and controls, some[82] of the players involved in the finalization of the NPR might easily change their mind and try to withdraw the implementation of the new rules.

This piecemeal US implementation process of the Basel II regulation was received by financial analysts and academics "with surprise[83]". While a minor fine-tuning of the new rules (that indeed is sometimes necessary) was forecasted, most of the agreement was expected to be complied with. Concern was shown by many commentators that foreign banks in the US would be forced for a certain amount of time to use different capital regimes. The main consequence of the US decision

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[81] See Attachment 1 of *Risk-based Capital Standards: Advanced Capital Adequacy Framework – Basel II*. Available at http://www.federalreserve.gov/generalinfo/basel2/FinalRule_BaselII/, accessed 23rd March 2007.

[82] This might particularly be the case of the Congress, the OTS, the OCC and the FDIC. As the chair of FDIC, Sheila Bair, confirmed in a 2007 interview, "the advanced approaches could result in a dangerous fall in the level of capital kept by banks to absorb shock losses" (Global Risk Regulator, July-August 2007).

[83] Courtis, *ibid.*, pg.52.

was rarely forecasted though: it is that other countries could mimic the US and implement only that (or other) part of the new agreement, thus causing standards fragmentation. As Ayadi[84] argues, "undoubtedly, the Basel II developments in the US (different US agency perspectives, staggered implementation dates, divergences in the interpretation of rules and guidance, etc.) clearly undermine a consistent implementation of the new rules across the globe".

This is what is currently happening for example in China, which, as reported by an officer of the China Banking Regulatory Commission[85] (CBRC), will take a "bifurcated approach" asking only to its four top banks[86] to comply with the new rules by 2010 (with a possible deadline's extension for up to three years)[87]. Similarly, other countries are making available different approaches to different kinds of banks. For example, the Hong Kong Monetary Authority (HKMA) is establishing for small and simple institutions a "basic approach" which combines some of the rules of Basel I and Basel II. Switzerland decided instead to add a new approach (the "Swiss Finish") to the three approaches already present in Basel II for its banks with a domestic business orientation. Overall, despite the 2006 survey of the Financial Stability Institute reports formal statements by around 80 countries to implement Basel II at some stage, these plans are miscellaneous, often partial and not always reliable.

Remarkably, the 2006 Survey received less answers (98 vs 107) and less "confirmative" answers (82 vs 88) than the one performed in 2004.

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[84] Rym Ayadi is one of the few observers who clearly recognizes this risk (Ayadi, 2008:107).

[85] This was anticipated by Luo Ping, officer of the CBRC, during the Second Annual Conference on the Future of Financial Regulation, FMG, LSE, London, April 6-7, 2006. Ping added that a detailed policy paper will be probably issued in the next months on the CBRC web site.

[86] Ping reported that China currently has four main commercial banks, which together hold 58.3% of total deposits.

[87] Cfr. The Financial Regulator, *China sets Basel II deadline*, 12-1, 2007.

Further, most of the initial plans have been strongly delayed[88]. This is clearly the case for Africa, Asia, Caribbean and Middle East[89]. With the exception of BCBS Europe, only non-BCBS European countries are keeping a tight implementation schedule, even though they are currently reporting delays with A-IRB and AMA and the overall proportion of respondents planning to implement Basel II in that area has declined[90]. Latin America countries have partly retreating from advanced approaches, with more respondents envisaging to implement SA and BIA.

The reported delays have been told to be correlated with an increased understanding of the technical problems arising from Pillar I and a stronger focus on Pillar II and supervisory skills as a precondition for an effective implementation of Pillar I[91]. But this explanation would not fit with the choice of Latin America countries to focus more on Pillar I. What is clear instead is that, given the partial forfeit of the US, until now the implementation process of the Basel II Accord both within and beyond the signatories of the agreement appears problematic and not homogenous. The confident statements of the 2004 FSI survey are thus probably to be reconsidered and more attention should be drawn to the factors driving or slowing implementation. While it is true that within a period of a decade most global banking activity is forecasted to be regulated by Basel II, doubts might be casted on the real meaning of timetable flexibility: the "delay strategy" might indeed constitute an opportunistic way for some smaller markets to wait and see other countries' approaches (notably the US) before reaching a final decision.

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[88] Global Risk Regulator, various issues. See also FSI (2004, 2006) and Cornford (2005, 2006a, 2006b)

[89] FSI (2006).

[90] The non-BCBS data are to be taken with some caution, because they are probably the result of two different sub-groups. One one side, those 16 countries which have joined the EU and are thus subject to the CRD and therefore compliant with most of the Accord; on the other the non-EU non-BCBS countries whose implementation process appears definitely more troublesome.

[91] Cf. Cornford (2006).

V.3 Explaining variation

Within the theoretical framework of the neorealist theory (and in particular, of its "hegemonic" strand) this variation constitutes a puzzle. In fact, if power is the only real matter in international coordination, the two agreements' negotiation and implementation should have followed the same broad path as the US was the dominant power in international finance both at the time of Basel I and Basel II.

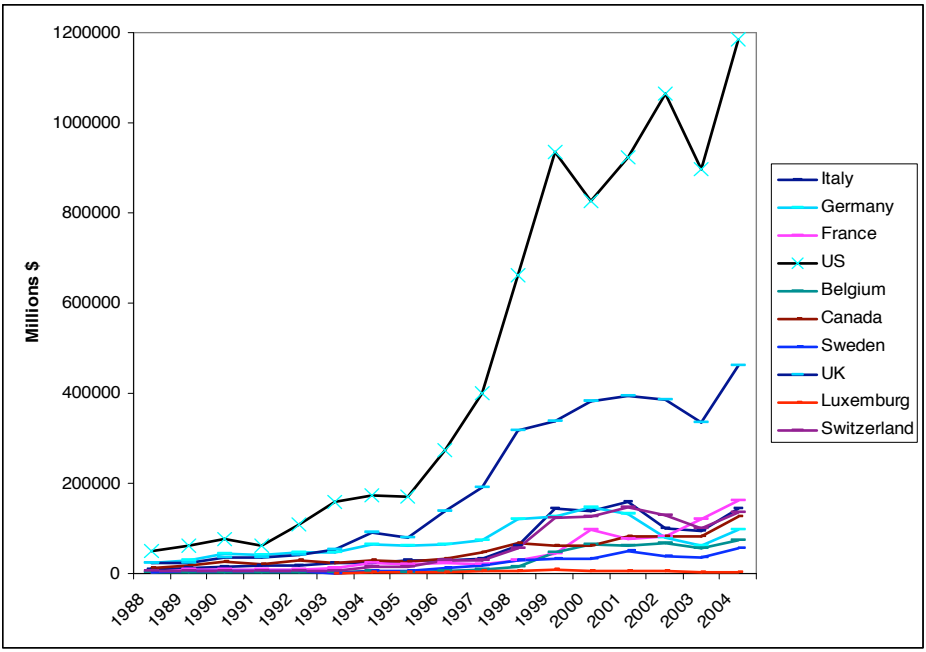
A few figures can effectively demonstrate this supremacy. In the US, financial sector currently accounts for nearly 14% of the GDP[92] while the market capitalisation of listed companies amounts to 139%[93]. In 1988, US commercial banks held total assets for over 3100 billions dollars[94] and a gross income of 170 billions while, during the same year, UK commercial banks had assets for only 390 billions sterling pounds[95] and a gross income of 23 billions. In 2003, US commercial banks' assets accounted for 7500 billion dollars[96] while the depository credit intermediation had alone sales for about 488 billions[97]. All other G10 countries had much lower figures[98] [99].

Graphs 5 and 6 elaborate on this point and track the US banking sector capitalization from 1988 to 2004. They further prove that back in the 1988 the US was already dominant in banking and remained so later on. During this period its market capitalization raised from 50 billion to the astonishing figure of 1.2 trillions in 2004. As shown in Graph 5, this latter number is even higher if securities houses and investment banks

[92] US Department of Commerce, as cited by Simmons (2001).
[93] World Bank (2004).
[94] OECD (1992).
[95] *Ibid*.
[96] OECD (2004).
[97] US Census Bureau (2006).
[98] OECD (2004). In the same year, for instance, French banks accounted only for 2300 billion euro.
[99] According to Simmons (2001), this dominance is clearly facilitated by the role of the dollar, which is still used for nearly 86% of world foreign exchange transactions; see BIS (2007).

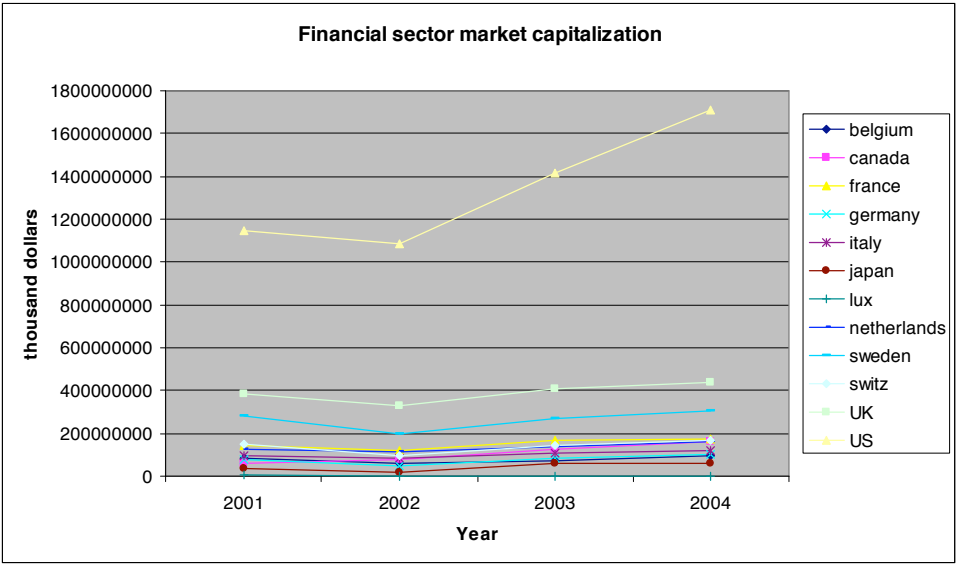
are considered within the sample. Formally, within our model, this means that y_j (i.e. the US market size) is bigger than y_i (the partner country's market size), thus $\pi_i = y_j/(y_i + y_j) > 0$. Consequently, keeping d constant, both in 1988 and in 2004 it was convenient for virtually every country to coordinate with the US banking regulation.

Graph 5: Banking sector's market capitalisation *(Study construction using Datastream[100])*



[100] No sufficient data available for the Netherlands and Japan.

Graph 6: Financial sector's market capitalisation (*Study construction using Bankscope*[101]).



Also, there is anecdotic evidence that, given its size, the US was both at the time of Basel I and Basel II the key market counterparty of most developing (and developed) countries. For example, the US was already in 1988 by far the most important partner of Asian countries[102] (notably China). The inward and outward position of Asia[103] vs. a few main developed countries during the whole 1988-2004 period[104] (as reported in Appendix III) confirms this situation and other regions' data also corroborate the picture, even though time series are not

[101] Investment banks and securities houses are included in the sample. A complete time series from 1988 is not available.

[102] Data for other areas are not complete but, similarly to Asia, tend to prove the US's dominance in international trade.

[103] This is the only "developing macro-region" for which OECD data on foreign direct investments are sufficiently complete during the analyzed period.

[104] This period has been chosen in consideration of the Basel Capital Accord case study which is performed in the following. As it will be described, the Basel I Accord was agreed in 1988 while the Basel II Accord (i.e. the so-called revised framework) was reached in 2004.

sufficiently long to cover the whole period analyzed. As a result, it is reasonable to assume (consistently with our model[105]) that the consideration of retaining or obtaining access to the US market was pivotal both in 1988 and in 2004 for other countries' decisions on whether to coordinate on regulation.

So, provided that the US was still leader in international finance in 2004, the neorealist framework is unfit to explain the implementation process of Basel II. For these authors[106] a hegemonic country may be thought of as an "unconditional first mover"[107] which is subject to non-binding constraints. This means that may easily impose new standards in international negotiations and this in turn is enough to ensure worldwide implementation. Even if its power is declining, the mere presence of a leader is sufficient to ensure this outcome. According to Beth Simmons, "the US is hegemonic in finance, in the sense that it is costlier to alter its preferred regulatory innovation than to try to change the policies of the rest of the world[108]". The flaw of this doctrine is that it assumes that international standards always reflect the leader's preferences. While this is possible, it is unreasonable to assume such a coincidence. As suggested in HP.2, it may happen instead that even in presence of a dominant country the point of coordination is slightly distant from its preferences[109]. If this is the case, a full prompt implementation should not be assumed. Rather, more piecemeal responses are possible. This, in turn, may alter the market incentives for smaller players to follow the new rules, and the harmonization result may be jeopardized.

In line with the model, the analysis of actors involved in the bargaining process may be helpful to understand some of the reasons behind different outcomes of Basel I and Basel II. As stated in HP.1, international standards are most likely to coincide with the hegemonic

[105] See *supra*, § 3.b.
[106] *Ibid*.
[107] *Ibid*.
[108] *Ibid*. (2001:595)
[109] As explained in the model above the only costless equilibrium is the *status quo*.

country's preferences (i.e. maintaining the *status quo*) when that country's (relative) market power is higher. While US absolute banking market size has remained dominant throughout the years, the international negotiations that led to the approval of Basel II Accord were far more multilateral than in Basel I. To examine this, the parties involved in the bargaining of the two accords are identified next.

Formally, the 2004 composition of the BCBS *forum* was unaltered with the exception of Spain which joined in 2001. The way the agreement was negotiated was quite different though: extensive consultations with both the industry and non-BCBS supervisors were undertaken. A special purpose group, the Capital Working Group (CPWG), was constituted as a *forum* to non-G10 countries to work on the development of Basel II. The CPWG is an emanation[110] of the Core Principles Liaison Group which "was originally established to serve as a technical group to discuss and oversee the application of the Basel Core Principles[111]". Actually, its role grew rapidly so that in 1997 it was key to the drafting of the Principles that were developed by "a mixed drafting group in which non-G-10 countries were the majority[112]". As Daniel Nouy[113] observed, "the extent of consultation with supervisors in all countries was such that the document can truly be regarded as a *consensus document* of the world supervisory community. The first of this kind, but by no means the last". Indeed, a similar effort was made in order to enlarge the consensus behind the New Accord. As even the BIS acknowledges, "non-G10 supervisors have played a particularly important role in the consultative process (…) as members of the Committee's Working Group on Capital of the Core Principles Liaison Group[114]". Therefore, while Basel I Accord was agreed quite informally between G-10 Central Bankers, Basel II was the complex result of long

[110] The CPWG is comprised of "representatives from CPLG organisations that are not members of the Committee". See http://www.bis.org/bcbs/index.htm#Core_Principle_Liaison_Group (accessed in August 2006).
[111] *Ibid.*
[112] Nouy (1999).
[113] *Ibid.*
[114] BIS (2000:4).

and troublesome negotiations and consultations not only within but also beyond the boundaries of the BCBS.

Hence, the role of the Liaison Group and CPWG in the bargaining process of Basel II should not be underestimated. They are not merely a way to exchange information, as some critics argue, but they constitute a *forum* for effective cooperation. Even though their members are not formally included within the BCBS, their role has grown substantially and they provide significant inputs for regulatory reforms. Whatever the reason, which may even be the need for great powers to show "fairness"[115] or to seek more consistent implementation, emerging economies are increasingly taking part in international negotiations. While their role will be recognized *de iure* only in the late future, their *de facto* influence is already tangible and should be acknowledged.

It is reasonable then to affirm that the emerging countries involved in the Basel II negotiations made it more difficult for the hegemonic country to impose its standards because the relative size of the US as compared with the other negotiators decreased (cf. C.1). This is consistent with HP.1, as the relative weight of the hegemonic country matters because it determines the equilibrium outcome of the bargaining process. Less relative weight may force the hegemonic country to accept standards that are very different from its existing standards (a broad graphical intuition for this is provided in graph 4 of Appendix I). This, in turn, may increase its implementation costs so that it may opt for partial or no implementation.

The main problem with this possible outcome is that if the leading country does not fully implement the accord, the whole implementation process worldwide may be jeopardized. As it has been demonstrated by backward induction in HP.3, when A is not able to impose its preferred terms it has an incentive to opt out because $\pi_a - d_a < 0$. Consequently, B also decides not to comply. During the Basel II Accord the US was not able to impose its preferred terms and

[115] For a discussion on the literature on fairness, see Carraro *et al.* (2006).

hence opted for only partial implementation as it was concerned about the high costs of compliance. Other countries are now deciding to "cherry pick" only few parts of the agreement. As Courtis confirms, "the most obvious implication of the US decision is the latitude it creates for (…) other regulators around the world, to cherry pick. If the US chooses not to implement the bulk of the accord, they will argue, why should we?"[116]. However, the European decision to fully implement Basel II constitutes a puzzle for the model.

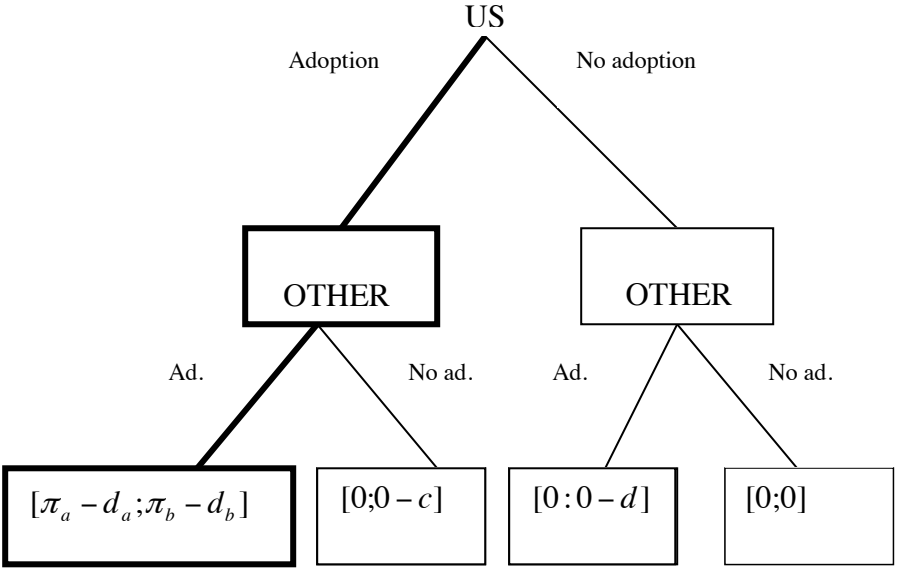
When in 2003 the US banking regulators publicised the possibility of partial implementation, the EU regulators answered with apprehension[117]. They immediately started facing pressure to modify the draft of the CADIII and follow a more opportunistic approach[118]. Despite these demands, EU institutions went ahead and fully implemented Basel II by means of the CRD, a decision which cannot be explained by the model. To be sure, the EU does not easily fit within the model's assumptions. It cannot be acknowledged as a single actor in the bargaining process since its members still negotiate international agreements quite independently. However, its legal environment has been increasingly harmonised and international standards are often centralized, so that at the implementation level the EU may be considered as a single player. Possibly the EU did not expect the US forfeit[119] and tried to push the US towards full implementation but could only partially convince it because of the US "go-it-alone" power. However, its decision to go ahead with full implementation regardless of the US decision is peculiar. To date, only few other actors opted for a full implementation of the new standards[120]. As mentioned, a huge emerging market like China has instead recently decided to follow the US and is adopting a "bifurcated approach", thus corroborating the

[116] Courtis (2003:46)
[117] Courtis (2003)
[118] *Ibid.*
[119] *Ibid.*
[120] Apart from the EU, the most relevant case of full implementation is Australia, whose decision is probably due to its political-economical affinity with the UK.

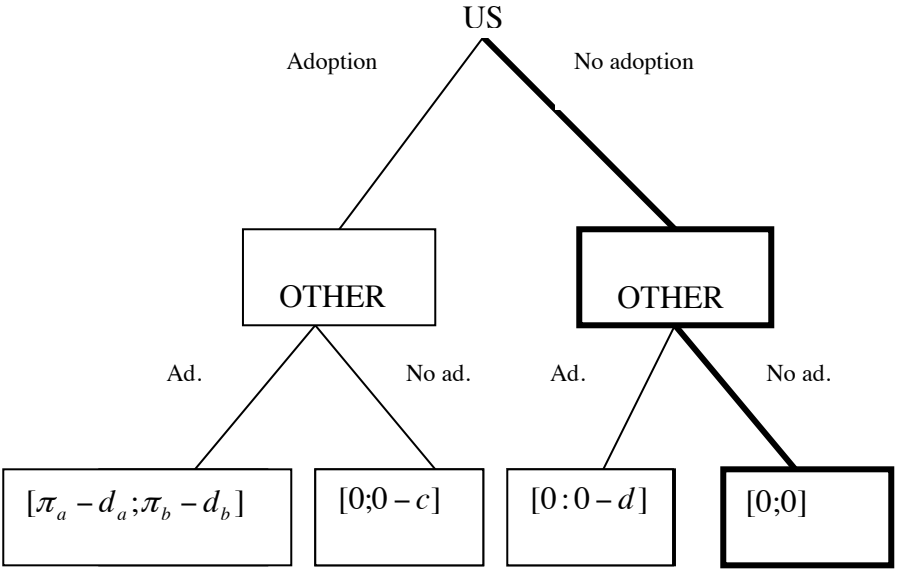
model's prediction that a rejection by state A leads B to follow a "non-adoption strategy" (Graph 8).

To summarize, the Basel I implementation process is clearly explained by the model. During the Basel I negotiations, the US was able to impose its interests and it promptly implemented the Accord. As explained in HP.3, this is the reason why other countries also adopted the new rules and harmonisation was reached. To date, the Basel II implementation results also seem broadly consistent with the theoretical model. Dissatisfied with the new agreement (which resulted after extremely multilateral negotiations, see C.1), the US decided to reject part of it and, consequently, other countries are doing the same (Graph 8). However, within this general trend, EU full implementation is puzzling. It remains to be seen whether, as predicted by the model, the EU will eventually decide to change the CRD to avoid possible competitive disadvantages or if, alternatively, it will try to negotiate a new agreement with the US. Certainly, the Basel II Accord may lead to increased fragmentation across countries and the striking harmonisation results produced by Basel I may be lost. With the aim to refine and make capital requirements more risk sensitive, Basel II may lead back to capital rules' heterogeneity, thus proving detrimental for financial stability.

Graph 7: HP.3 in Basel I



Graph 8: HP.3 in Basel II



VI. Conclusion

This article has attempted to explain the implementation process of a soft-law international agreement in two steps. As a *first* step, the structure of the bargaining process is analyzed. Adopting the lenses of Game Theory, international soft law agreements may be effectively depicted as non-cooperative coordination games in which each country seeks to impose its preferred terms, i.e. its pre-existing standards. Drawing on a model by Drener, two hypothesis (H.1-H.2) were advanced and theoretically proved. The likelihood of coordination at one country's standards is an increasing function of its (relative) market size, and, *ceteris paribus*, there is a size threshold after which the only equilibrium outcome is coordination at its standards. So, when a dominant power exists within an international standard-setting committee, coordination will probably be reached at its preferred terms. However, when the number of actors within the negotiation *forum* increases, its relative size decreases and the likelihood to reach an agreement at its standards decreases as well (C.1). Empirically, the Basel case study seems to confirm what hypothesized. The higher number of actors involved in the Basel II bargaining could have made it more difficult for the US to impose its preferred terms. Indeed, the terms agreed in Basel II are clear example of a complex compromise between different preferences while Basel I standards were very similar to what initially asked by the US.

The *second* step of the analysis is built on the idea that implementation decisions may be understood as a function of the equilibrium outcome of the bargaining process. States have a clear incentive to preserve their regulatory *status quo*, which is politically costly to alter. So compliance with international agreements is frequently determined by fears of reputational implications. In this context, great powers are the only ones who can enjoy a "go-it-alone" power and thus can freely decide on non-compliance if the agreement is not sufficiently close to their preferred terms. This, in turn, put the implementation process at risk because, in absence of the leader's full implementation, peripheral

states have less incentives to fully comply with the agreement (HP.3). In the Basel case, while the terms agreed in Basel I reflected most of the US preferences, Basel II was an example of a fairly balanced compromise. The US was visibly not satisfied with it and soon decided to apply only a part of the new rules to few banks. In other words, thanks to its "go-it-alone" power, it could freely decide to (partially) neglect what it signed. With the notable exception of the EU, apparently many other countries are now implementing Basel II in their own way and the benefits of Basel I harmonization will perhaps be lost.

Positively, the paper also explains why most of the important bargaining in financial regulation is carried out within "club IGOs[121]". As with the BCBS, great powers tend to create clubs even when a "universal-membership IGO"[122] exists because they know it is the only way for them to control bargaining outcomes[123]. Still, in the hope to legitimize international accords to the eyes of peripheral states, sometimes they decide to include other countries' views through extensive consultations. The latter tend to acquire greater significance with time and their contribution may be institutionalized. This was the case during the Basel II preparatory works, in which the CPWG enjoyed a relevant role. However, if the degree of multilateralism eventually assumes relevant proportions, the benefits of "club IGOs" in terms of effectiveness are lost. Soon great powers may look for new smaller *fora*, which may be a likely scenario if the failure of Basel II will lead to interest in a new agreement.

The normative conclusion follows. Even though politically reasonable, recent calls[124] to further increase multilateralism and to enlarge the composition of the BCBS cannot be justified on practical grounds.

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[121] i.e. International Governmental Organisation. Drezner (2004).

[122] Drezner (2004). For Drezner (2004:23) the important point is that "relative to club IGOs, the international financial institutions pose a more divergent set of actor preferences and greater transaction costs of decision-making".

[123] Koremenos *et al*. (2001).

[124] Davies (2003:6); IMF (2001).

Ceteris paribus, increasing the numbers of players in the bargaining process has been found to be detrimental for implementation results. A more balanced composition of the BCBS would lead to the same outcome as what matters is the market power of the leader, *relative* to the other actors. So, contrary to common opinion, more multilateralism would lead to less effective agreements, which, in turn, would push great powers to create new and smaller committees where they could cooperate. Even the strongest advocates of multilateralism would not find this latter outcome beneficial.

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VIII. APPENDIXES

Appendix I: *Theoretical demonstration of HP 1, HP 2 and C 3.*

HP.1) If $\pi_i > d_i = d = f(a-b)$ this game may be solved as a symmetrical coordination game with three Nash equilibria. Two equilibria are pure strategies: [A retains and B switches] or [B retains and A switches]. The third equilibrium is a mixed strategy equilibrium which may be calculated in a stochastic environment where p = Prob(A retains). A chooses its probability p in order to maximise its expected profit, given B's probability q. The same is true for B. Thus:

$$p(\pi_b - d) - (1-p)d = 0 + (1-p)\pi_b$$

$$p\pi_b - d = \pi_b - p\pi_b$$

$$p^* = (d + \pi_b)/2\pi_b$$

and

$$q^* = (d + \pi_a)/2\pi_a$$

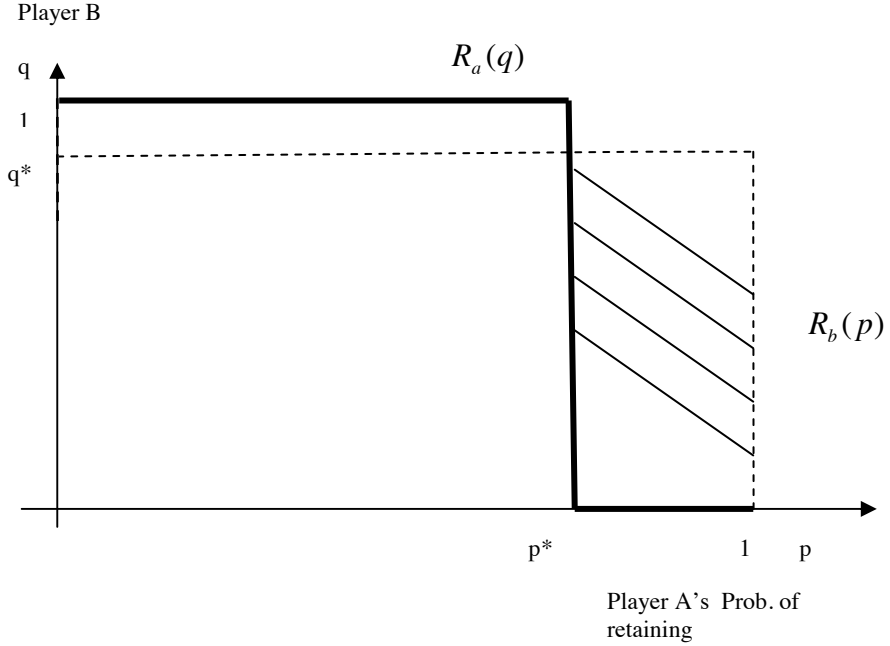
The optimal reaction of A to B's strategy is $R_a(q)$. Three different equilibria are then possible:

Retain national standards	If q<q*
Retain national standards with probability q=q*	If q=q*
Switch to B's standards	If q>q*

B's optimal reaction to A's standards is $R_b(p)$. Similarly, three equilibria are possible:

Retain national standards	If p<p*
Retain national standards with probability p=p*	If p=p*
Switch to A's standards	If p>p*

Graph I.1: HP.1



Assuming that both actors have a uniform distribution of beliefs over p and q, the likelihood of coordination at A's standards in equilibrium is:

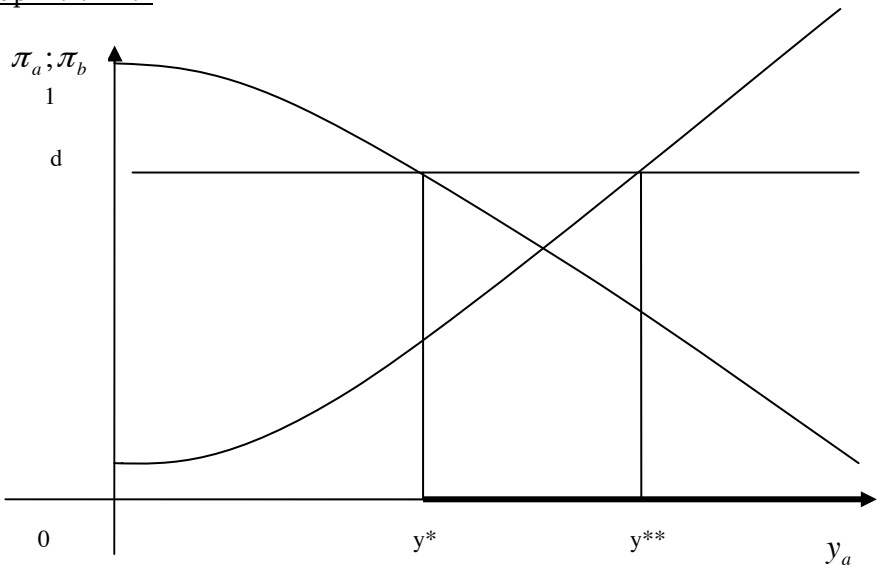
$$L(p^*,q^*) = P[R_b(p) > p^*]^* P[R_a(q) < q^*] = q^*(1-p^*)$$
$$= [(d+\pi_a)/2\pi_a]^*[1-(d+\pi_b)/2\pi_b] =$$
$$= [\pi_a\pi_b + d(\pi_b - \pi_a) - d^2]/4\pi_a\pi_b =$$
$$= 1/4 + d[(\pi_b - \pi_a) - d)/4\pi_a\pi_b$$

The result of this equality is that L increases with π_b and decreases with π_a. Recalling that for all i π_i is a linear transformation of $y_j/(y_i + y_j)$, it is easy to observe that when y_a increases, π_a

decreases and π_b increases. If π_a decreases and π_b increases the value of L increases as well. Therefore, *ceteris paribus*, when the market size of state A (i.e. y_a) increases the same does the likelihood of coordination at A's preferred standards.

HP.2) Recalling that when y_a increases, π_a monotonically decreases and π_b monotonically increases, the demonstration of the second proposition is straightforward. Since d is between 0 and 1, there exist a y* such that for all $y_a > y^*$, $\pi_a - d < 0$. When this inequality is verified, A's dominant strategy is to retain standards. B will respond to this strategy by switching its standards iff $\pi_b - d > 0$. Since π_b increases with y_a, there must be a y** such that, *ceteris paribus*, both the inequalities are verified for all $y_a > y^{**}$. Given these values of y, the only equilibrium is coordination at A's standards.

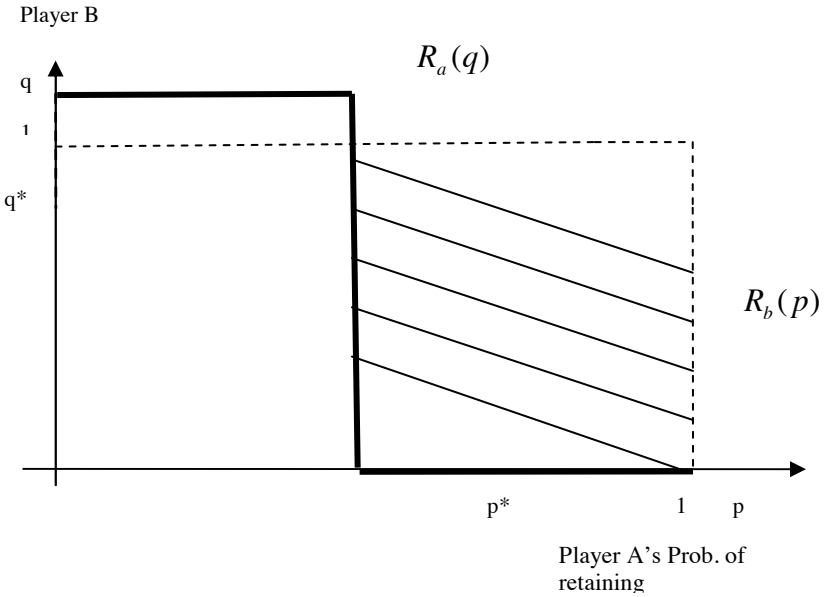
Graph I.2: HP.2



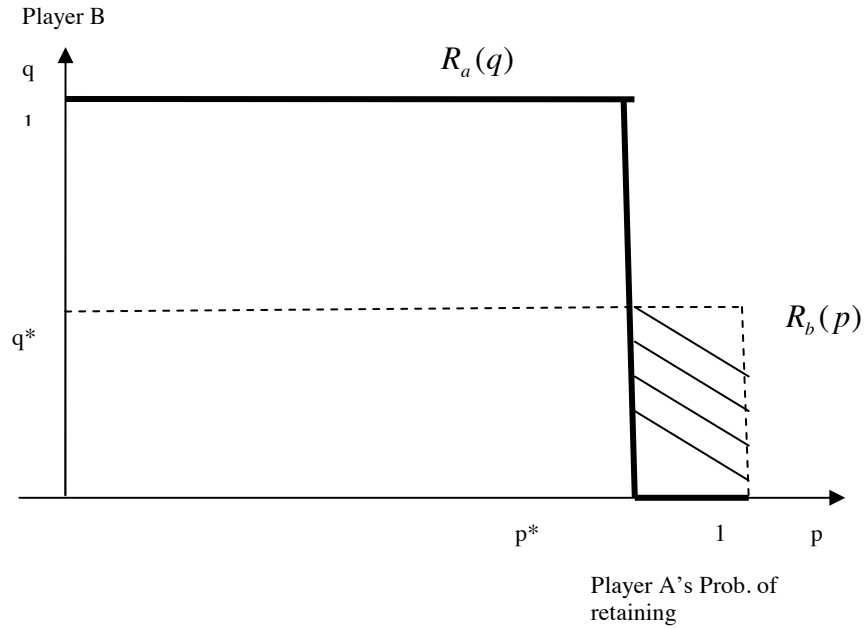
The previous considerations are not easily extended to the case of n actors. Still, a hypothetical scenario with one leader and n-1 followers may be helpful in understanding what kind of outcome may result from an increase in n. Accordingly, let's assume that $y_{\bar{a}}$ is the sum of the market shares of all the countries different from A, i.e. $(y_b + y_c + y_d + ...)$. π_a may then be viewed as a linear transformation of $\frac{(y_{\bar{a}})}{(y_a) + (y_{\bar{a}})} = 1 - \frac{y_a}{(y_a + y_b + y_c + ... + y_n)}$. It is easy to observe that, *ceteris paribus*, as n increases π_a decreases. Thus the likelihood L of a coordinated equilibrium at A's standards decreases and y* increases. In practice, others things equal, an increased number of actors in a coordination game makes it more difficult to reach an agreement at A's preferred standards. Alternatively, a decreasing *relative* market size makes it harder for a leading country to force other states to coordinate at its own standards. Thus the following corollary:

C1: *Ceteris paribus*, as n increases the likelihood L of a coordinated equilibrium at A's standards decreases.

Graph I.3: HP.1 in Basel I

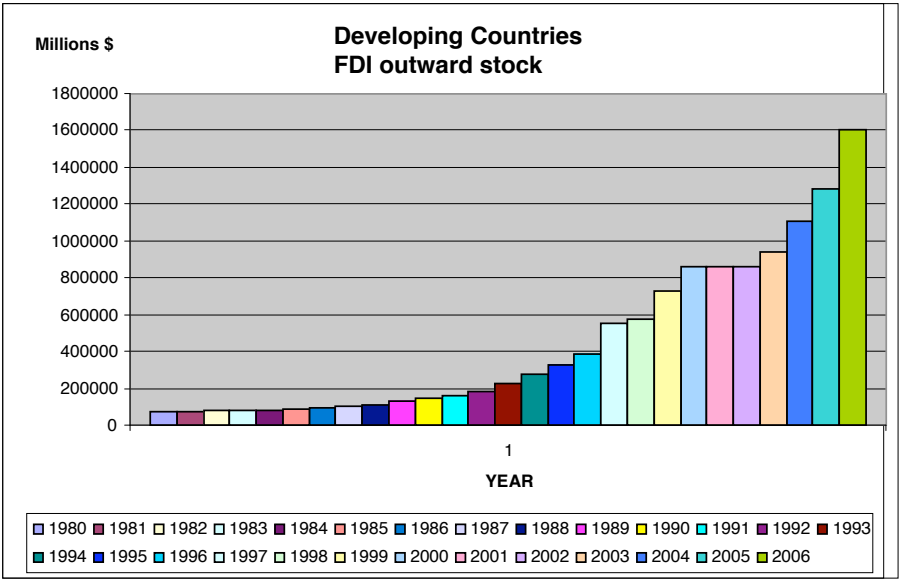


Graph I.4: HP.1 in Basel II

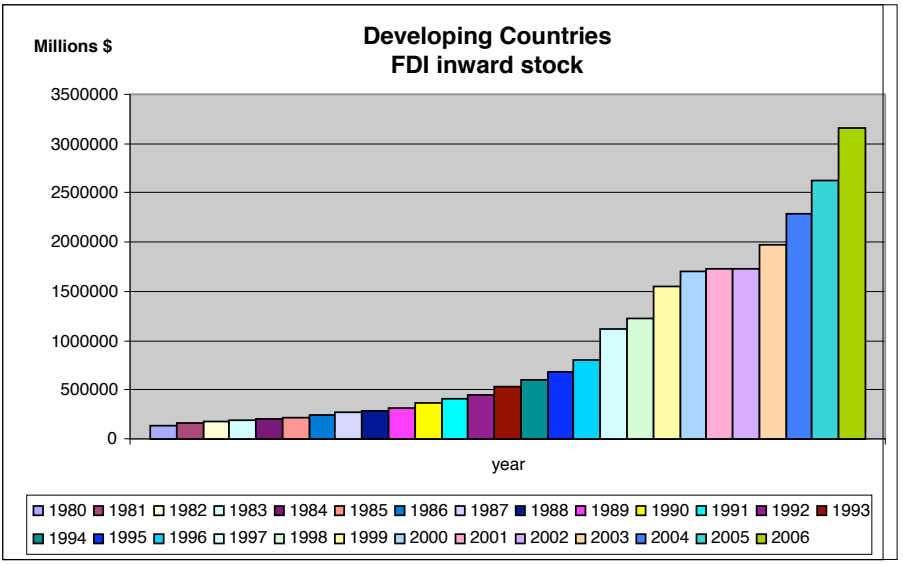


Appendix II: Developing Countries FDI inward and outward stock and flow (Study construction using UNCTAD data)

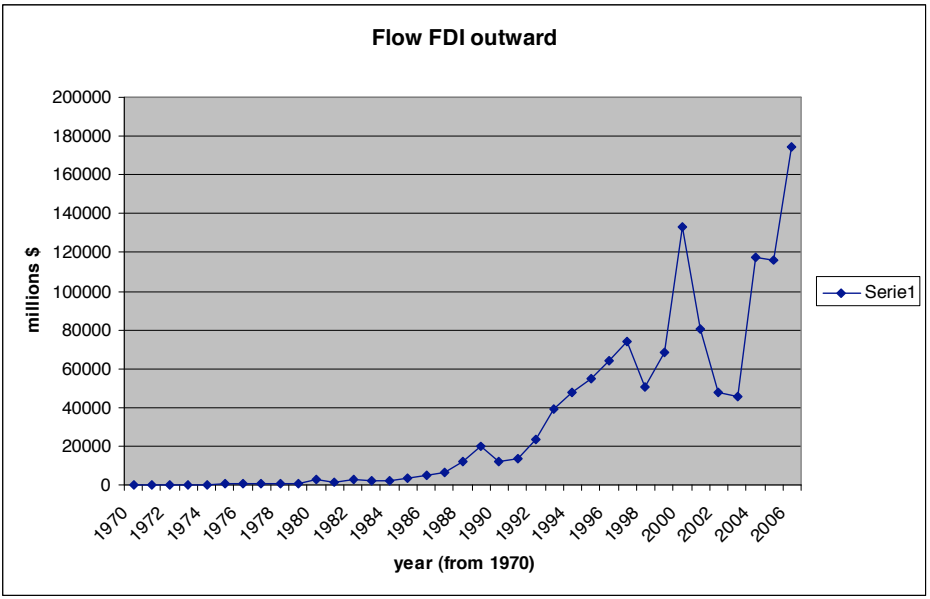
Graph II.1: Developing Countries' FDI outward stock



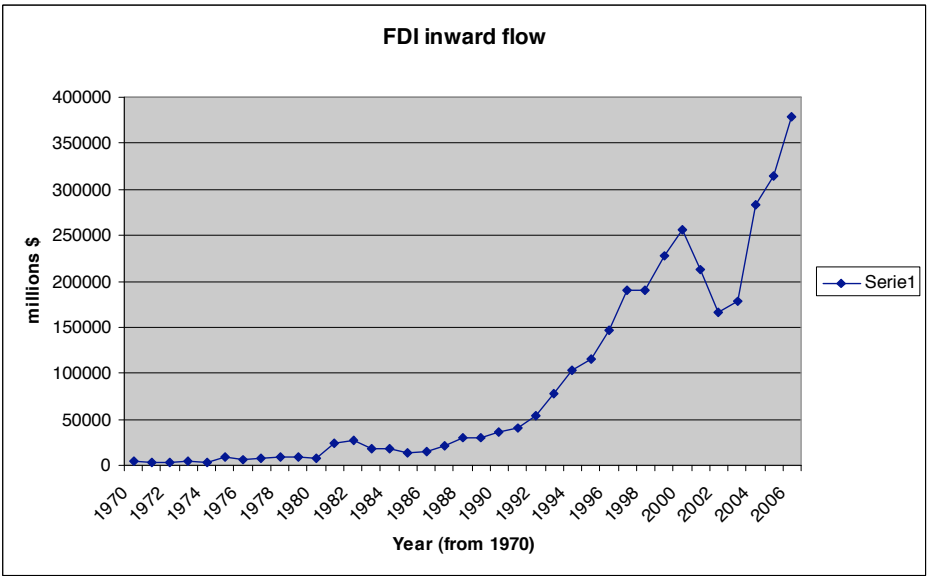
Graph II.2: Developing Countries' inward stock



Graph II.3: Developing Countries' FDI outward flow::

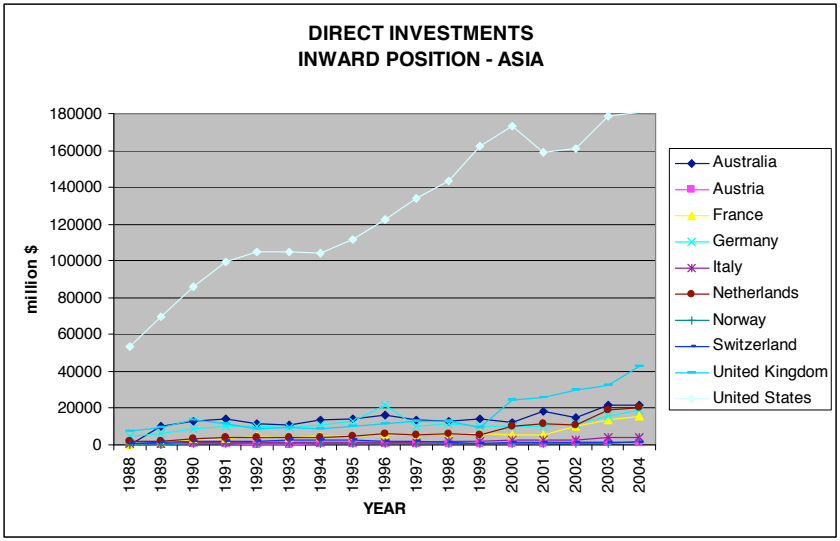


Graph II.4: Developing Countries' FDI inward flow

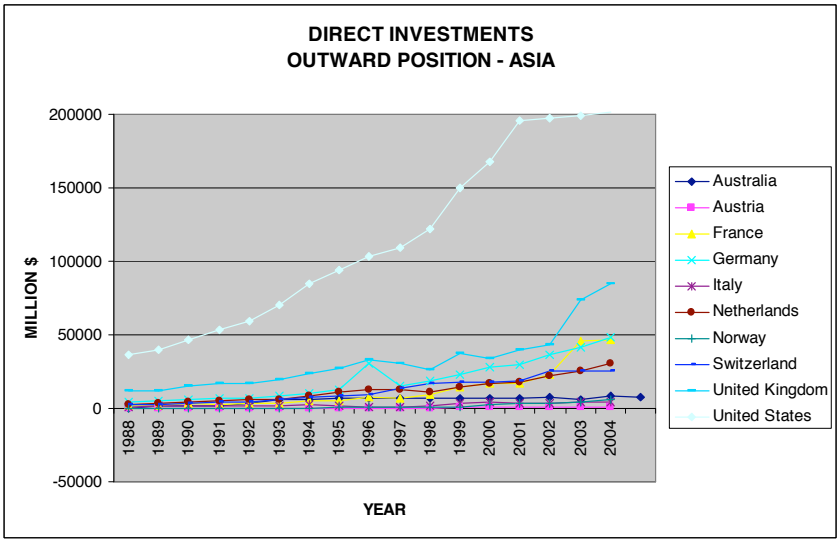


Appendix III: Asia's FDI inward and outward positions from 1988 to 2004 (Study construction using OECD data)

Graph III.1: Direct investments – Asia's Inward Position



Graph III.2: Direct investments – Asia's Outward Position



The implementation of Pillar II in Europe and its impact on the banking industry: an assessment of competitive neutrality

Abstract

The aim of this paper is to analyze how the second Pillar under the Basel II Capital Accord is likely to impact the banking industry. Pillar II provides independent financial authorities with the possibility to enjoy ample discretion in the supervisory activity, but discretionary powers are sometimes used in idiosyncratic ways so that different capital charges might be applied to similar banks depending on their home-country supervisor's approach. Even within an highly harmonized legal environment such as Europe, this paper finds evidence of a piecemeal implementation of Pillar II rules. This, in turn, might cause an alteration of the level playing field between countries which the widespread and consistent implementation of the Basel I Capital Accord had instead successfully achieved after 1988. Different regulatory styles and administrative procedures may have a strong influence on how discretionary powers are used, but within the European context the empirical evidence appears mixed, suggesting that different capital charges might be the consequence of a precise political choice. The normative conclusion follows. There is a clear case for further harmonization not only by reducing the extent of national discretions at the regulatory level, but more importantly in building up additional arrangements for supervisory convergence and coordination. More generally, the uneven implementation process of Basel II in Europe casts serious doubts on the possibility to maintain a level playing field in capital requirements across the globe.

Keywords: Basel II, Pillar II, Implementation, Competitive Neutrality, Europe

"I believe the EU can and should go further then others may be able to go in its efforts to ensure consistent implementation of the new capital framework and effective supervision on a cross-border basis. And by making rapid and real progress, we can also promote greater convergence beyond the EU, as others may find our experiences of benefit to the wider search for international consistency in the implementation of Basel II." [J. Caruana[1], 2005]

"The current status of supervision [in Europe] is unacceptable, unsustainable and dangerous because it implies that rules are in real fact not common for banks. For example, Basel II rules have been implemented in completely different ways across countries". [T. Padoa-Schioppa, 2008[2]]

I. Introduction

The Basel II Accord is composed by three Pillars. In line with Basel I, Pillar I sets the rules to quantify how much regulatory capital a bank is required to hold as a buffer to offset the risks arising from fractional reserves, maturity mismatch and high leverage. Differently from Basel I, while market risk assessment[3] has remained the same, the way credit risk is quantified has been modified and operational risk has been considered for the first time. The key peculiarity of Pillar I is that banks are able to choose between different approaches of increased sophistication[4] to calculate the capital needed to offset credit[5] and operational[6] risk.

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[1] J. Caruana, Implementation of Basel II, Financial Markets, Institutions and Instruments, 14-5, 2005.

[2] Author's translation from Jones and Vagnoni (2008).

[3] Market risk was first introduced in 1996, as an amendment to Basel I rules. The amendment dictates two possible approaches to calculate market risk: the standardized, which follows some simple rules imposed by regulators, and the internal models approach which gives to banks the opportunity to calculate by themselves the amount of regulatory capital needed by making use of Value at Risk (Var) models.

[4] While the Standardized Approach (SA) and the Basic Indicator Approach (BIA) are sufficiently straightforward, the Internal Rating Based (IRB) approach and the Advanced Measurement Approach (AMA) are quite complex and more sensitive to real risk exposures.

The second Pillar[7] of Basel II focuses instead on supervisory review and arises from the recognition that even the most sophisticated set of rules is not able to completely assess the quality of an asset portfolio. So there is a need to leave to banks ample flexibility to assess capital adequacy through their own capital models. In parallel, supervisors have to "ensure that banks have adequate capital to support all the risks in their business [and have to] encourage banks to develop and use better risk management techniques in monitoring and managing their risks"[8]. In particular, national regulators have to check that:

- the bank's risk-management systems are transparent, integer and consistent,
- risks under Pillar I have been correctly estimated with Pillar I computation formulae,
- risks not included under the first Pillar are adequately considered under Pillar II,
- stress tests have been performed to simulate how capital requirements would change in case of recession.

---

[5] Basel II provides three approaches, of increasing sophistication, to calculate credit risk-based capital. The first one (standardized approach or SA) is the simplest and draws on what was required by the Basel I Accord. The only difference lies in the fact that corporate credits now range depending on their external ratings. The second one is the foundation internal risk-based (F-IRB) approach which mainly relies on the banks' capability to calculate their required capital on the basis of their assessment of the counterparty's default risk. Finally, the third "advanced" IRB (A-IRB) approach allows the bank to use its own models to forecast not only the probability of default (PD) of the counterparty, but also the loss given default (LGD), the exposure at default (EAD) and the remaining maturity (M). Cf. Lastra (2004).

[6] "With regard to the capital requirements for operational risk, there are also three different approaches according to the level of sophistication of the bank's risk management techniques" (Lastra, 2004: 232). The basic indicator approach (BIA) is the simplest and it is calculated as a percentage of gross income; the standardised approach (STA) differentiates this percentage according to different business units; finally the advanced measurement approach (AMA) leaves to the risk management unit ample methodological flexibility but it can be used only by those banks which can demonstrate to dispose of sufficiently reliable time series.

[7] Pillar III tries to reinforce the whole system by fostering market discipline via information disclosure and it is beyond the scope of this paper.

[8] BCBS (2004b:§720)

Consequently, national regulators are provided with the needed discretionary powers to achieve this objective. In particular, if they are not satisfied with internal capital assessments and strategies, they can take appropriate supervisory action with the possibility to demand capital in excess of the minimum and to promptly intervene and require remedial action in case of serious undercapitalization. However, different uses of supervisory discretion may lead to different results in terms of actual capital requirements across countries and this, in turn, is likely to create problems of competitive disadvantage for firms that are more strictly supervised. Regulatory competition may then arise possibly ending up in a race to the bottom, that is exactly what the first Basel agreement tried to avoid.

While Pillar II implementation is key for Basel II's success, it has seldom been analyzed in the literature. In particular, it has never been empirically investigated whether risks of competitive distortions are really grounded[9]. By taking advantage of some quantitative simulations on diversification effects as elaborated by national central banks under CEBS input, this paper aims at filling this gap by testing the stated hypothesis within the European context. Actually, Europe constitutes a perfect scenario in that:

- it is a nearly completely harmonized regulatory environment with respect to capital adequacy regulation (the soft-law Basel II Accord has been transposed into the hard-law CRD directive[10]);
- supervision is somewhat harmonized thanks to the numerous Guidelines issued by the CEBS, which in turn is obtaining increasing monitoring powers on their actual implementation;

[9] This is probably due the fact that consistent data on the effects of Pillar 2 on banks' actual capital adequacy is still lacking. Following the release of complete balance-sheet data on year 2008, more attention is likely to be devoted to this issue.

[10] The CRD is the Capital Requirements Directive. While several so-called national discretions are available to single countries, most of the times these are not of major importance.

- cultural and institutional factors are less variant than in other contexts.

Testing the research question in the European perspective thus gives the possibility to observe if there is any variation in capital requirements within a highly harmonized scenario in which most of the factors are already controlled for.

Positively, it will be demonstrated that:
a) different implementation styles are likely to bring about different capital charges for identical bank portfolios across Europe;
b) the type1/type2 implementation styles as described by the CEBS and self-assessed by national institutions are most of the times consistent with those differences;
c) institutional factors which might be considered as a proxy for type 1 and 2 are not able to explain the quantitative results.

The normative conclusion follows. It is that national differences in capital charges as forecasted in CEBS's simulations might be the result of a political choice and not a simple effect of institutional dissimilarities. In other words they could be a symptom of a tendency towards regulatory competition even within the super-harmonized European context. If this is the case some more effort should be devoted to further harmonize the implementation process. A more levelled playing field could be achieved not only by reducing the extent of national discretions but also by giving increased coordinatory powers to the CEBS and other centralized institutions.

In the following, section 2 will briefly analyze the literature on Basel II implementation and show how the paper aims at enriching and innovating this stream by focusing on Pillar II. Section 3 illustrates the data and explains why the paper is focused on the European context. In section 4 it is then assessed how and to what extent Pillar II might impact on the European banking industry by looking at the interaction between its ICAAP (internal models) and SREP (supervisory review) components. Section 5 finally concludes.

II. Key facts and the literature

Back in 1999, the Basel Committee on Banking Supervision (BCBS) proposed to establish a new capital framework as an answer to the problems experienced with the 1988 Capital Accord, commonly referred to as Basel I. The Basel I Accord had indeed been severely criticised for its rudimentary way to assess risk and, consequently, for creating wide opportunities for regulatory arbitrage between different asset categories. For this reason, the New Accord, reached in 2004 and generally referred to as Basel II, tries to make regulatory capital more risk-sensitive to the actual risks born by regulated entities. Although Basel II tries to achieve a reasonable aim, the way this objective is attained has been extensively debated. In particular, most of the literature has been devoted to the analysis of Pillar I, especially to the effects of the new rules on different geographical areas and on different segments of the banking industry. Indeed, three main streams of literature regarding the effects of Pillar I have arisen.

The first strand has arisen from the recognition that Pillar I new rules are likely to produce a strong impact on the financial industry, both in terms of costs and incentives. In particular, the way a bank's portfolio is allocated (commercial lending, retail lending, securitisations, …) may be biased. Also, the process of consolidation in the banking sector will be probably fostered because big financial firms will try to take advantage of economies of scale and develop more sophisticated risk management skills in order to use the IRB models and, consequently, to reduce the amount of regulatory capital they need to keep aside. These outcomes have been studied extensively[11] not only by the academia but also by the Basel Committee itself, which published five Quantitative Impact Studies (henceforth QISs) to assess the impact of the Accord on a large set of banks[12].

[11] See for instance Danielsson (2001, 2003b), Danielsson and Shin (2003), Goodhart (2005), Lastra (2004), Wilson (2004).
[12] See www.bis.org.

The second important point that the literature has stressed is that Pillar I regulation is procyclical. As such it is likely to exacerbate the swings in the economic cycle[13] making downturns as well as upturns lasting longer. While it is not easy to assess the quantitative impact of the procyclicality problem, a few attempts have been made in order to understand how the new rules would have impacted on past financial crises[14]. The results are coherent with the theoretical predictions: under the Basel II regulatory framework financial crises would have lasted longer, possibly ending up in an economic recession.

Drawing on some positive results of the first strand, (i.e. the fact that the IRB approaches are likely to bring about a significant capital reduction for big banks) one last stream of literature on the effects of Pillar I looks at the possible generation of competitive biases between developed and developing countries. It is argued[15] that developing countries will not benefit from the new rules as many non-G10 financial firms will only be able to choose the standardised approach. According to QIS5 this choice is likely to result in a 38.2% average increase of regulatory capital for the group of "less developed" non-G10 countries' banks[16], while a decision to implement the IRB foundation approach would instead result in a much lower 11.4% average increase. So the degree to which Pillar I will create competitive biases between countries probably depends on the non-G10 banks' capability to implement the IRB approaches, something which at the moment appears quite scarce.

This paper fits within the previous literature on Basel II effects but is different in that it switches the focus to Pillar II, which has been studied far less extensively, and in particular to its process of implementation. Scholars of regulation sometimes pay low attention to the

[13] See Blum and Hellwig, (1995); Thakor, (1996).

[14] For the case of Mexico see for instance Lowe and Segoviano (2002).

[15] See for example Griffith-Jones, Spratt and Segoviano (2002), Powell (2001), Reisen (2001) and Griffith Jones and Spratt (2001).

[16] QIS 5 available at www.bis.org . This estimate represents the *average* impact of the new rules under Pillar I on a subsample of "less developed" non-G10 countries. The reader is reminded that the non-G10 countries set is very wide and suffers from high variance.

implementation process[17], i.e. to how rules are put in practice and actually enforced, omitting to consider that it may have a very strong influence on economic outcomes. Some academics[18] have actually recognised that different approaches to the implementation of Pillar I rules are likely to occur, not only in the US but also in some large emerging countries like People's Republic of China and India. Still, they have not taken into due consideration[19] that also the way supervisors will use their discretionary powers under Pillar II will probably vary between different countries.

Different approaches to implementation have been said by the literature to depend on supervisors' institutional structure and the context in which they operate or on differences in philosophy, administrative procedures or regulatory style. Regarding context and institutional structure, a key driver that has long been highlighted is the degree of independence enjoyed by the supervisor together with the availability of resources and the characteristics of the supervised industry. Philosophy is related instead to the way supervisors interpret the spirit of the rule[20]. Administrative procedures refer to the type of powers that a supervisor might use (and how) in cases of severe undercapitalization[21]. Finally, regulatory style depends on a wide set of drivers and ranges from the very prescriptive (i.e. command and control)[22] to the "smart[23]" or fuzzy. Under Pillar II, all these different characteristics may have relevant consequences in terms of the actual capital that banks are required to hold in different countries, thus in

[17] Baldwin (1997). Basel II is a clear example of this phenomenon in that scholars have started to look closely to the implementation process only in the last few months, while indeed it is key for the New Accord to succeed.

[18] See in particular Cornford (2004, 2005, 2006a, 2006b).

[19] Caruana (2003).

[20] In the case of Pillar II, it will be shown that some supervisors see it as a necessary "top-up" to the requirements under Pillar I[20], others do not.

[21] In the Pillar II case, the use of Prompt Corrective Action vs. Forbearance.See infra. §4 and cf. Nieto and Wall (2006).

[22] Baldwin and Cave (2001).

[23] Gunningham and Grabovsky (1998) and Baldwin (1997).

principle they might be able to bias international competition in the financial industry.

The Basel Committee explicitly recognizes a risk of inconsistent implementation[24] for Pillar II. Similar problems have also been highlighted by other international organisations such as the IMF[25] and the BIS[26] while the industry as well is aware of these issues[27]. Possible solutions have been suggested in terms of increased communication between national supervisors: as the BCBS's chairman Caruana argues, " (…) exchange of information should enhance the consistent application of the New Accord and thereby promote a level playing field which we all agree it is an important objective[28]". Although an increased exchange of information may indubitably favour the development of a more consistent supervisory action across states, it has been questioned if this solution may be sufficient *per se* or if a more institutionalised framework (together with relevant powers) is needed. However, it has also been emphasized that institutional solutions are bounded to practical difficulties arising from the fact that the Basel II Capital Accord is a soft law (i.e. non binding) agreement[29].

[24] As its chairman Caruana (2003) argues: "By incorporating into the new Basel Accord the requirements for supervisors to evaluate the internal process behind a bank's view of its need for capital, the committee expects that bankers and supervisors will engage in a more focused discussion of risk management. Pillar II recognizes that national supervisors may have different ways of entering into such discussions and provides flexibility to accommodate those differences. At the same time, Pillar II will ensure that supervisors share insight into their approaches with others and will foster a better understanding among supervisors and bankers about the differences in national regulatory practices".

[25] See IMF (2005).

[26] See Le Pan (2005).

[27] Wilson (2004).

[28] Caruana (2003:3).

[29] In the absence of international legally binding obligations or judicial remedies one could doubt if "the implementation at the domestic level of each jurisdiction [is able to] ensure a sufficient degree of consistency and internationally harmonized competition Giovanoli (2002:6).

Part of the academia also recognizes inconsistent Pillar II implementation as a significant issue to be addressed[30] but it has not closely investigated it so far. This point is confirmed by Ayadi (2008) who argues that "since the beginning of the process, the chief attention has been given to the quantitative aspects of the CRD (mainly related to Pillar I because of its complexity) while overlooking other very important elements related to Pillar II". If fears of competitive biases are empirically grounded and which might be the main drivers behind different forms of Pillar II implementation are all issues which are still to be discussed. By looking at how different countries are implementing some of the key elements of Pillar II, this paper aims to fill this gap answering to the following questions: can Pillar II different implementation styles result in different amounts of capital being required in front of similar risk portfolios? And, if yes, can these implementation styles be explained by institutional or legal factors?

III. Data and methodology

III.1 Data

Due to the implementation schedule of the Basel II Capital Accord, it is likely that more and more interest will be shown on this issue. However, the novelty of the topic implies that data difficulties have to be dealt with in the short term. Hopefully, in parallel with countries' actual implementation of the new rules, more and more information on banks' capital adequacy under Basel II will became available to researchers, and this will probably make studies in this area easier. At the moment, though, due to a definitely long and somewhat piecemeal implementation process[31], worldwide consistent information on Basel II effects is still not available. Even in those countries in which Basel II is already in force, balance sheet disclosures on capital numbers are quite fragmentary. As for Pillar II, the scenario is even more complex since information is rarely disclosed at all. Also, it is quite difficult to

[30] See for instance Ayadi (2008) and Lastra (2004).

[31] See for further analysis the first paper of this thesis.

understand the mechanics through which the dialogue between banks and supervisors takes place in different countries, since no consistent source of information is available. To partially overcome information shortage problems, this paper focuses on the European context, which is currently the area in which Basel II has been implemented to the greatest extent and where more information and data are available thanks to the coordinatory role of the CEBS.

CEBS surveys

To test the research question, this paper takes advantage of some quantitative simulations on capital requirements as produced by national central banks under CEBS's stimulus. More in particular, the CEBS has sent to its members some numerical examples of standard risk portfolios which are designed to let them provide an exposition of their national policies on the recognition of diversification effects (see table 1 and 2). As it will be suggested in the next section, recognition of diversification is one of the key national differences which can impact on banks' capital numbers and thus can be used as a proxy of supervisors' approaches to Pillar II.

As a caveat, it should be highlighted that the test provided by the CEBS was structured with the purpose of gaining answers which are "free of data quality or methodological concerns"[32]. Nonetheless it is well organized as it distinguishes between standard and IRB banks and differentiates the possibility of a "low" or "high" ICAAP[33], thus providing a full array of information to judge different countries' approaches. Further, it differentiates between single Pillar I and Pillar II risks and hypothesises ICAAP and diversification numbers for each of them. However, this paper focuses only on Pillar I and Pillar II total numbers in the case of IRB banks as they have been interpreted more consistently across countries and can better explain national differences. Also, provided that they can demonstrate a sufficiently diversified portfolio, IRB banks are those which can gain most from the

[32] Group de Contact (2008:24).

[33] Meaning that the ICAAP numbers are lower/higher than the Pillar I regulatory numbers.

recognition of diversification effects. Pillar I and Pillar II numbers for IRB banks are thus key to understand how different supervisors intend their role and, more in general, how the ICAAP-SREP process work.

The CEBS's questionnaire was sent to all the European banking supervisors but complete answers were received only by seventeen countries. While this might somehow restrict the validity of the sample, its results appear nonetheless useful to answer the research question as they cover most of the European banking industry's home countries. Similarly, some countries didn't answer to another questionnaire which analyzes the supervisory philosophy across Europe. Only sixteen countries (a subsample of those which replied to the first questionnaire, still representative of most of the European industry) informed the CEBS of which supervisory style (whether the one described as type 1 or the other referred to as type2, see *infra*) they believed was nearer to their actual day-to-day behaviour (see infra table 4). Being the simple distinction between type 1 and 2 somewhat clear-cut, a more sophisticated survey is currently in progress which distinguishes five different supervisory types (i.e. types A/B/C/D/E) but its results are still preliminary. For this reason the present paper takes only into consideration the type1/type2 distinction which might not be very accurate but offers results that are more complete and reliable.

A further caveat is that national supervisors' answers to CEBS's stock-takes are not binding for member countries. So in principle it cannot be excluded that supervisors gave an imprecise and preliminary view that they will not necessarily stick to. Nonetheless it seems unreasonable that they voluntarily gave misleading answers as they would have had no interest in doing that, being the aim of the surveys simply informative. Similarly, there is no reason to presume that some countries voluntarily omitted to reply to the surveys. Consequently, despite a certain degree of imprecision is possible, this is probably not systematic and thus should not be able to bias the results of the stock-takes.

Table 1: Sample risk portfolio (Low ICAAP)

Capital Required	**Pillar 1**		**ICAAP (full diversification claimed)**	**Diversification included in ICAAP**
Pillar 1 risks				
Credit Risk	80		65	(10)
Market Risk	10		5	(2)
Operational Risk	10		11	(2)
Inter-risk diversification (Pillar 1 risks)			(10)	(10)
	100		**71**	**(24)**
Pillar 2 risks				
Interest Risk (Non-trading Book)			5	
Concentration Risk			2	
Settlement Risk			0	
Pension Risk			6	
Other Risk (1)			2	
Other Risk (2)			1	
Inter-risk diversification (Pillar 2 risks)			(4)	(4)
Inter-risk diversification (Pillar 1 v Pillar 2 risks)			(3)	(3)
	100		**80**	**(31)**

Table 2: Sample risk portfolio (High ICAAP)

Capital Required	**Pillar 1**		**ICAAP (full diversification claimed)**	**Diversification included in ICAAP**
Pillar 1 risks				
Credit Risk	80		75	(5)
Market Risk	10		8	(2)
Operational Risk	10		11	(2)
Inter-risk diversification (Pillar 1 risks)			(5)	(5)
	100		**89**	**(14)**

Pillar 2 risks				
Interest Risk (Non-trading Book)			10	
Concentration Risk			5	
Settlement Risk			2	
Pension Risk			6	
Other Risk (1)			6	
Other Risk (2)			4	
Inter-risk diversification (Pillar 2 risks)			(4)	(4)
Inter-risk diversification (Pillar 1 v Pillar 2 risks)			(3)	(3)
	100		**115**	**(21)**

World Bank survey

In the second part of the data analysis, this paper verifies whether the results of the type1/type2 stock-take just implicitly replicate the traditional distinction between supervisors with an attitude to forbear and those which instead are legally forced to exercise a prompt corrective action[34]. To do so, it draws on data from Barth, Caprio and Levine (2007[35]) and builds two different indicators which proxy these two different attitudes. As in Barth, Caprio and Levine (2001) the forbearance indicator is constructed with four dummies. It is asked whether infractions of any prudential regulation (as found in the course of supervision) must be reported and if there are any mandatory actions that the supervisor must take in these cases. Also, it is verified whether the banking supervisor can forebear certain prudential regulation and if there is any predetermined levels of solvency (capital or net worth) deterioration which forces automatic actions like intervention.

Similarly, the PCA indicator is constructed with five dummies. Firstly, it is observed if banking supervisors are required to make public formal enforcement actions, which include cease and desist orders and written agreements between them and the supervised institutions. Secondly, it

[34] For further details see *infra*.

[35] World Bank (2007).

is asked whether supervisory agencies can order to the bank's directors or management to constitute provisions to cover actual or potential losses. Thirdly, it is analyzed if they can suspend the directors' decision to distribute dividends, bonuses and management fees. Further, it is verified whether the banking supervisor can force a bank to change its organizational structure and, finally if it can (0) or cannot (1) forebear in the cases above[36].

Also for this dataset a few caveats are to be flagged. In particular, it should be highlighted that all the indicators here are translation of qualitative information into dummy variables and as such might not be able to precisely describe the nuances within a regulatory framework. Further, the groups of dummies as described above are linked together and used to proxy the forbearance and PCA indicators following the somewhat subjective choice of Barth, Caprio and Levine (2001). However, differently from their methodology, this paper does not add up each single dummy but compares different vectors of dummies. Finally, it is to be mentioned that to overcome the incompleteness of some of Barth, Caprio and Levine (2007[37]) data, we resorted to a expert judgement by means of interviews with different countries' central bank officials.

III.2 Sample selection and methods

As mentioned, this paper answers to the research question by looking at the European scenario. While this choice has been prompted by the possibility to take advantage of the two surveys (diversification effect and type1/type2) which have been carried out by the CEBS, focusing on Europe has a clear methodological rationale. Europe in fact constitutes a perfect sample to observe whether, even in presence of equivalent rules and coordinated supervision, differences in implementation might have a concrete impact on capital.

[36] Despite the same question is asked, dummies are used in the opposite way than in the Forbearance indicator.
[37] World Bank (2007).

Truly, the faithful transposition of the Basel II Accord into European law by means of the Capital Requirements Directive[38] (see *infra*) is not a guarantee of full harmonization, because the CRD contains a large numbers of areas for national discretions[39] [40] which might be responsible for several discrepancies[41] in the transposition process. Even the creation of the CEBS, which "intended to respond to the Commission's call for enhanced convergence of regulatory and supervisory practices, with the ultimate aim of forging a single EU financial market[42]" has been far from a panacea. During its first four years of activity, the CEBS has been working hard to increase supervisory cooperation and information exchange and achieve consistent transposition of EU directives across MSs. To reach these objectives, it has released a set of guidelines on a wide range of topics.

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[38] The Capital Requirements Directive, comprising Directive 2006/48/EC and Directive 2006/49/EC, was published in the Official Journal of the EU on Friday 30 June 2006.

[39] See Ayadi (2008). CEBS has identified 101 options or areas of national discretion.

[40] A further issue that leaves room to divergent interpretations in CRD implementation is complexity, which has resulted really challenging for both financial institutions and supervisors. To facilitate and foster a correct and consistent understanding of CRD provisions, a CRD Transposition Group has been put in place which has been providing all interested parties with several clear-cut interpretations of specific provisions. Still, its role should not be overestimated since its views are not legally binding.

[41] To tackle this issue, the European Commission called upon the CEBS to verify to what extent current discretions can be reduced. Indeed, as mentioned by the European Commission in its tenth Call for Technical Advice, "mutual recognition of national discretions should not be seen as an optimum or definitive solution." (European Commission, 2007). Consequently, after careful assessment the CEBS has recently published a Consultation Paper where it proposes "to keep as a national discretion approximately one fifth of the 152 provisions covered in its analysis" (CEBS, 2008:1). Overall, "CEBS believes its proposals strike the right balance between the prudential concerns of its members, the flexibility supervisors need to perform their duties with and the interests of domestic and cross-border operating institutions" (CEBS, 2008:2).
However, even in those cases in which the CRD is transposed quite faithfully into member states' law, its requirements still leave room for divergences in the supervisory practices and this might add a further element of complexity for cross-border banking groups. In other words, the implementation and enforcement process of national regulations transposing the CRD pose several additional issues which are possibly even more complex to address than those on regulations. But also on this matter Europe is making an effort in trying to build up an institutional framework which might guarantee consistency across member countries.

[42] Ayadi (2008:72).

Still, being mostly principle-based, guidelines are open to interpretation and this, again, might hamper the level playing field. Indeed, the challenge is significant and the CEBS itself recognizes that "the degree of supervisory convergence [it] could achieve is limited by significant regulatory constrains[43]" which are crystallized in the Community legislation.

In sum, despite strong legal and institutional efforts to further level the playing field, the harmonisation of supervisory practices in Europe is not always guaranteed and differences from one country to another might still be remarkable, perhaps in reason of different cultural traditions and approaches to supervision. So there is a case to verify whether different supervisory approaches to Pillar II are being developed in European MSs and to what extent they may impact on capital requirements (and, consequently, competitive neutrality) across Europe.

Of course, if it is found that the level of capital required in front of the same risk portfolio is not homogenous in a context in which rules are sufficiently harmonized and supervisory activity is at least partially coordinated, there is a strong case to argue that it can hardly be so at the international level where Basel II has not even been transposed consistently into national legislations[44]. In other words, as mentioned, while restricting the sample to Europe could in principle decrease results' general validity, testing the hypothesis of a piecemeal implementation process within a super-harmonized context can guarantee higher reliability to the results, being most of the factors already controlled for.

The following section then analyzes the European implementation of the second Pillar of Basel II and the mechanics through which the new rules will operate. Together with a brief description of the Pillar II dialogic process between banks and supervisors (so called ICAAP-SREP process), the paper elaborates the data. By looking at the

[43] Nouy (2007:4).

[44] For further details see the first paper of the thesis.

dispersion of Pillar I and Pillar II numbers, it first tries to understand whether there is a correlation between the type1/type2 distinction and regulatory capital numbers. Secondly, further analyses are performed so to understand if these two groups are consistent with the institutional indicators provided by Barth et al. (2007). Finally, capital numbers and institutional indicators are analyzed together using a cluster analysis: dendrograms will confirm that while differences in capital numbers can be explained by the group 1/ group 2 distinction, this latter cannot be proxied by institutional variables.

IV. The mechanics: How Pillar II implementation can impact on competitive neutrality in Europe

IV.1 Pillar II

Pillar II dictates some principles that aim at activating a bilateral dialogue between banks and supervisors so to guarantee the capital adequacy of supervised institutions, and, consequently, their stability as well as that of the whole financial system. Within this framework, banks are asked to measure and manage all their present and forecasted risks, even when not explicitly covered by Pillar I, and must plan their capital needs in view of their risk appetite and their economical and capital target. The internal level of capital adequacy is then to be monitored on a on-going basis to verify compliance with capital adequacy rules and a complete report has to be regularly sent to the supervisor. The underpinning philosophy is that banks' managerial and compliance issues regarding capital adequacy should not be seen any more as dichotomist, but they should be merged within the more ample risk management function which in turn is supposed to become the core of banks' strategic governance.

On the other side, supervisory authorities are asked under the four principles of Pillar II to assess banks' risk management operations on an on-going basis. As mentioned, this task is to be performed in a dialogic way, thus changing by far the way supervision is currently

carried out. In fact, it is under the bank's responsibility to calculate its capital adequacy and to propose its assessment to the supervisor, which in turn critically reviews the results and formulate an overall opinion (in compliance with the so-called first principle of Pillar II). Under the second principle of Pillar II, supervisors are then expressly entitled to intervene with appropriate action in case they are not satisfied with the qualitative and/or quantitative results of the capital adequacy internal assessment. Nonetheless, supervision should still verify the formal adherence to the minimum requirements under Pillar I and the information disclosures needed under Pillar III. Actually, requirements under Pillar I are intended as a minimum and supervisors can ask financial institutions to operate above that minimum (principle 3). If there is a risk that this might not be the case, or if the supervisor is not convinced that the bank has in place an adequate process for assessing its capital adequacy, following principle 4 it can intervene at an early stage by requiring rapid remedial action. This might include the obligation to prepare and implement new risk assessment and capital allocation procedures or also a satisfactory capital restoration plan. In case of serious undercapitalization, supervisors can also require the bank to raise additional capital, to restrict dividends and bonuses and even to replace the senior management and/or the board.

In sum, Pillar II clearly assumes a key relevance within the Basel II infrastructure, so that some authors have depicted it as the architrave more than a pillar, and the likely basis of a future potential Basel III[45]. But the concepts underpinning Pillar II are not new, actually some seeds can be found already in the eighth "Core principle for effective supervision"[46] which dates back to 1997 and affirms that "Banking supervisors must be satisfied that banks have in place a comprehensive risk management process (including appropriate board and senior management oversight) to identify, measure, monitor and control all other material risks and, where appropriate, to hold capital against

[45] Berlanda (2007:43).
[46] BCBS (1997).

these risks". Later on, in the 1999 consultation[47] paper, it is added that "supervisors should have the ability to require banks to hold capital in excess of minimum regulatory capital ratios", so that the most of the current structure was already in place. What is striking is that its relevance was clearly understood by the market only four years later, with the publication of CP3 in 2003. It was only at that moment that several market participants started to question some of Pillar II features; in particular they emphasized that, given supervisors' wide discretion on the possibility to ask additional capital, different national implementation styles could cause competitive biases and thus should be subject to careful monitoring.

But the Revised Framework of June 2004 did not take into account this critique[48]. Nor did the European implementation process which transposed the soft law "Revised Framework" into the hard law Capital Requirements Directive.[49] Indeed, articles 123 and 124 only briefly define Icaap and Srep processes[50], leaving ample discretion in

[47] BCBS (1999: §10).

[48] In a supporting document published in 2001 (BCBS, 2001a:2) the BCBS had already clarified its view by saying that "it is not the purpose of Pillar 2 to harmonise the supervisory process in member and non-member countries, as different legal regimes, powers and styles of supervision will persist. Nevertheless, it is intended that Pillar 2 will encourage consistency in supervisory approaches and that supervisors will share their experiences in implementing Pillar 2. Furthermore, on an on-going basis it is hoped that supervisors can draw on each others experience in applying Pillar 2 in practice".

[49] Cfr. § 53, 54, 123, 124, 136 together with annexes V and XI of the CRD.

[50] Icaap is defined as Internal capital adequacy assessment process while SReP is the Supervisory Review and evaluation process. As for the former, art.123 dictates that "Credit institutions shall have in place sound, effective and complete strategies and processes to assess and maintain on an ongoing basis the amounts, types and distribution of internal capital that they consider adequate to cover the nature and level of the risks to which they are or might be exposed. These strategies and processes shall be subject to regular internal review to ensure that they remain comprehensive and proportionate to the nature, scale and complexity of the activities of the credit institution concerned." As for the latter, according to art. 124, "1.Taking into account the technical criteria set out in Annex XI, the competent authorities shall review the arrangements, strategies, processes and mechanisms implemented by the credit institutions to comply with this Directive and evaluate the risks to which the credit institutions are or might be exposed. 2. The scope of the review and evaluation referred to in paragraph 1 shall be that of the requirements of this Directive. 3. On the basis of the review and evaluation referred to in

their practical implementation to national authorities. So, within the European context, it was the CEBS which raised the issue of consistent implementation by publishing two consultation documents[51], and later on, by issuing in January 2006 the final Guidelines (GSs) on the Application of the Supervisory Review Process under Pillar II. The aim of CEBS Guidelines is to "morally persuade" national supervisors to implement in the most consistent way the principles under Pillar II. In CEBS's words, "guidelines are designed to promote convergence of supervisory practice and consistency of approach, taking into account market trends and national practices, to achieve a sound and efficient market".

To achieve the harmonization objective, CEBS Guidelines have attempted at a more precise description of Srep and Icaap features by introducing ten principles each (Icaap 1/10 and Srep 1/10 see Appendix I) that enrich and clarify the concepts highlighted in the CRD. This is particularly needed in that, as it will be further explained in the following, both Icaap and Srep are often understood and implemented in different and inconsistent ways by respectively, firms and supervisors. On one side distinct methodologies and assumptions give rise to sometimes unjustified differences in capital levels. On the other, consistency is not always guaranteed because idiosyncratic regulatory approaches and ways in which the Icaap is challenged are at the origin of different capital requirements in face of similar institutions.

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paragraph 1, the competent authorities shall determine whether the arrangements, strategies, processes and mechanisms implemented by the credit institutions and the own funds held by these ensure a sound management and coverage of their risks. 4. Competent authorities shall establish the frequency and intensity of the review and evaluation referred to in paragraph 1 having regard to the size, systemic importance, nature, scale and complexity of the activities of the credit institution concerned and taking into account the principle of proportionality. The review and evaluation shall be updated at least on an annual basis. 5. The review and evaluation performed by competent authorities shall include the exposure of credit institutions to the interest rate risk arising from non-trading activities. Measures shall be required in the case of institutions whose economic value declines by more than 20 % of their own funds as a result of a sudden and unexpected change in interest rates the size of which shall be prescribed by the competent authorities and shall not differ between credit institutions".

[51] The first one was published in May 2004, while the second followed in June 2005.

IV.2 SREP

The Srep process has to verify that internal capital is consistent with the Icaap results[52] and with Pillar I and Pillar III rules as required by the CRD. However, CEBS Guidelines stress the fact that Srep is not only a box ticking exercise with respect to CRD rules but a more complex procedure which reviews the risk assessment and more generally the whole Icaap process as performed by the bank. Also, Srep has to be performed at least annually and cover all authorized institutions, while its results are to be immediately communicated at the appropriate managerial level. In case capital is not qualitatively or quantitatively adequate (ie Icaap $\neq$ Srep), several instruments of prompt corrective action are given to supervisors. In particular, capital add-ons can be imposed on regulated institutions with the caveat that they should not be seen as the natural outcome of Srep.

Still, in spite of CEBS efforts to achieve consistent implementation, several differences are arising across European countries depending on the degree of "emphasis" which is put on different features of the GLs. First, the principles of internal governance are not always included in the national rules, sometimes in reason of a previous specific regulation on the same topic. Secondly, the principle of proportionality varies very much depending on the country and the size of its banking industry. Thirdly, the way risks other then Pillar I should be calculated is very prescriptive in some countries and very loose in others. But what it is really differentiating one European supervisor from the other is that capital add-ons are seen by some regulators as an ordinary decision within the SReP process while others see it as a "last resort" or temporary instrument to ask individual institutions more capital in case of need.

This is a problem that the members of the Pillar 2 Capital Network (P2CN) within the Groupe the Contact (GdC) have addressed and

[52] Within Icaap, each bank is able to adopt definitions of capital which are different from the one used by supervisors. These latter should devote particular attention to the circumstance in which the internal definition is less restrictive than the regulatory one.

analyzed by identifying two generic and differentiated supervisory types (1 and 2) which can be thought of as extreme models of supervision within the European context. Of course supervisors range most of the times in intermediate positions of the spectrum since several of them share different characteristics of both approaches. In other words, different approaches are not mutually exclusive but they may be both adopted by the same authority depending on the institution or risk they are supervising. Given this caveat, Type 1 and Type 2 are nonetheless useful reference points so to better understand and monitor the variety of supervisory practices and can be described as follows.

Type 1 supervisors recognize that Pillar I covers credit, market and operational risks only. Any other risk and any credit, market or operational risk which is not explicitly covered by Pillar I are therefore supplementary to Pillar I and should result in an additional capital requirement. Type 1 supervisors generally have a list of Pillar II risks for which a minimum capital is to be kept. Therefore they always ask supervised institutions to keep aside more capital than that required under Pillar I rules. Also, type 1 supervisors think that regulatory and internal capital have different purposes, so when they assess Pillar II capital adequacy they never rely on Icaap calculations nor they take into consideration the way Icaap is performed (e.g. the quality of risk management systems or governance structure). They simply ask banks to keep enough Pillar II regulatory capital and issue individual capital guidance on this matter.

On the opposite, Type 2 supervisors believe that Pillar I numbers are a proxy for the whole regulatory capital which each institution should hold. The precise amount of regulatory capital is instead determined internally through the Icaap process, which in turn is reviewed by the supervisors to verify if its qualitative aspects are compliant with Pillar II regulations. So credit institutions are not given individual regulatory capital guidance nor supervisors set explicit Pillar II requirements. However, in case the "acceptable" Icaap number is lower than Pillar 1 number, Pillar 1 still constitutes the minimum buffer required.

Overall, two main differences can be highlighted. First, Type 1 authorities consider that regulatory capital is the only possible measure of capital, so that also Pillar II is to be assessed in terms of own funds, while Type 2 supervisors think that capital adequacy under Pillar II should be consistent with the way capital is internally measured. Secondly, while Type II supervisors try to ensure that credit institutions have qualitative measures in place to cover Pillar II risks (being capital add-ons a last resort measure), Type I authorities see capital add-ons as the unavoidable consequence of Pillar II risks.

Given these extreme reference points, European supervisory authorities have been asked to define themselves according to nine different criteria which were considered by the P2CN as the most crucial in separating the two different approaches (see table 3). However, in analyzing the following table it should be kept in mind that some European authorities have not been able to state their position with reference to all the relevant criteria, generally because Pillar II work is still in progress. Still, in the opinion of CEBS, this should not have a strong impact on the overall findings.

Table 3: Criteria to select Type 1/ type 2 countries (source: CEBS):

	TYPE1	TYPE2
How Pillar 1 and Pillar 2 relate	Supplementary	Separate
Pillar 2 used to determine capital adequacy	Yes	No
Importance of Pillar 2 capital (either reg. or internal)	Imperative	capital is last resort
Importance of banks' internal capital calculations in capital assessment under	Not considered	Only element

Pillar 2		
Use of quantitative or qualitative tools & analyses	Quantitative	Qualitative
Capital for every material risk	Required	Not required
Assessment of capital adequacy in Pillar 2 expressed in terms of regulatory capital or internal definitions	Regulatory capital	Internal capital
Possibility that the outcome of Pillar 2 will be additional regulatory capital requirements (above Pillar 1)	Always	Never
Issuance of individual capital guidance	Yes	No

Table 4 - Type 1/ type 2 countries: answers to the P2CN questionnaire (source: CEBS)

• Belgium	type2
• Cyprus	type1
• Denmark	type1
• Estonia	type2
• Finland	type1
• Germany	type2
• Greece	type2
• Hungary	type2
• Italy	type2
• Netherlands	type2
• Norway	type1

• Poland	type1
• Slovak R.	type 2
• Slovenia	type1
• Spain	type2
• UK	Type1

According to the CEBS survey's results (see table 4), in consideration of the answers provided to the questionnaire seven countries have been assigned to the type 1 group while nine have appeared nearer to the type 2 prototype. This confirms that European supervisors have in real fact brought forward two different approaches to Pillar II, with UK and Germany often taken as the models of, respectively, type 1 and type 2. To be sure, there is a wide traditional difference between these two states' philosophy in banking supervision, with the UK being more similar to a system of prompt corrective action and Germany which has always left more discretionary powers to its banking supervisor. Consequently, some commentators have speculated that the type1 / type 2 taxonomy might simply reflect that institutional dichotomy. In addition, type 1 "top up" approach has sometimes been seen as less "stringent" than type 2 because the recognition of assets for capital purposes is more generous[53].

[53] As mentioned before, other factors such as the institutional structure, the degree of independence, the amount of supervisory resources etc. might also explain the type 1/2 dichotomy. However, data from Barth et al (2007) do not homogenously cover the sample of countries this paper focuses on.

Table 5: Indicators of Forbearance, PCA and Capital Stringency (Source: Barth, Caprio and Levine, 2001)

FORBEARANCE
1) If an infraction of any prudential regulation is found in the course of supervision, must it be reported?
2) Are there mandatory actions that the supervisor must take in these cases?
3) Can the banks supervisor forbear certain prudential regulations?
4) Does the Banking Law establish predetermined levels of solvency (capital or net worth) deterioration which forces automatic actions (like intervention)?
POWERS/PCA
1) Are bank regulators/supervisors required to make public formal enforcement actions, which include cease and desist orders and written agreements between a bank regulatory/supervisory body and a banking organization?
2) Can the supervisory agency order the bank's directors or management to constitute provisions to cover actual or potential losses?
3) Can the supervisory agency suspend the directors' decision to distribute: • Dividends? • Bonuses? • management fees?
4) Can the supervisory authority force a bank to change its internal organizational structure?
5) Does the Banking Law establish predetermined levels of solvency (capital or net worth) deterioration which forces automatic actions (like intervention)?
CAPITAL STRINGENCY
1) Before minimum capital adequacy is determined, which of the following are deducted from the book value of capital? • Market value of loan losses not realized in accounting books? • Unrealized losses in securities portfolios? • Unrealized foreign exchange losses?
2) Are the sources of funds to be used as capital verified by the regulatory/supervisory authorities?
3) Can the initial disbursement or subsequent injections of capital be done with assets other than cash or government securities?
4) Can initial disbursement of capital be done with borrowed funds?

So there is a case to assess whether indicators of forbearance, PCA powers and capital stringency might work well as possible explanatory variables of type 1 and 2. To do so, data from Barth, Caprio and Levine (2007) have been used to construct an indicator for powers to Forebear and one for the Prompt Corrective Action rule. Also, a proxy for regulatory stringency has been constructed. However, the way these indicators are built by Barth, Caprio and Levine (2001) (see questions in table 5) is not completely satisfactory as they simply sum up different dummies, while it would be important to keep track of which questions receive positive answers across countries and which do not. To do so, starting from the appreciation that each country might be represented as a vector of 0 and 1, an analysis according to the formula (1) has been performed to calculate the cosines of the angles between these vectors and see how they are located one in respect to the other. The result is equal to 1 when two vectors have the same number of 1 and 0 in the same positions, and 0 if their elements are opposite.

$$\sum (x_i z_i) / \sqrt{[\sum (x_i) \sum (z_i)]} \qquad (1)$$

The average cosines within the two different groups can then be calculated. The results indicate that the distinction between type 1 and type 2 supervisors is not explained by institutional factors. In fact, members of the two groups show similar cosines for all the three considered variables. At the same time, the average levels of forbearance, stringency and PCA are similar in both type 1 and type 2 countries (table 7) and this is also apparent from the results of the joint cluster analysis of the three indicators (table 9). Only PCA powers appear more homogenous and slightly stronger within the type 2 group (tables 6, 7 and 8). However, as showed in table 7, the difference of means is not significant. The cluster analysis confirms that differences in PCA powers between the two groups are not noteworthy and in any case not able to explain the type 1 / type 2 taxonomy,

Table 6: Average cosines within type 1 and type 2 sample countries (elaboration on World Bank data, 2007)

	type 1	type 2	t	p-val
indicators of Forbearance	0.728865	0.734671	0.17	0.867
indicators of PCA	0.612135	0.77335	3.9615	0.001
indicators of Stringency	0.679669	0.688161	0.221	0.8277

Table 7 Average availability of powers (elaboration on World Bank data, 2007)

	type 1	type 2	t	p-val
Forbearance	0,65625	0,704545	0,4096	0,6872
PCA	0,5	0,61039	1,2087	0,2433
Stringency	0,645833	0,606061	-0,3904	0,7011

Table 8: Cluster analysis of PCA powers (elaboration on World Bank data, 2007)

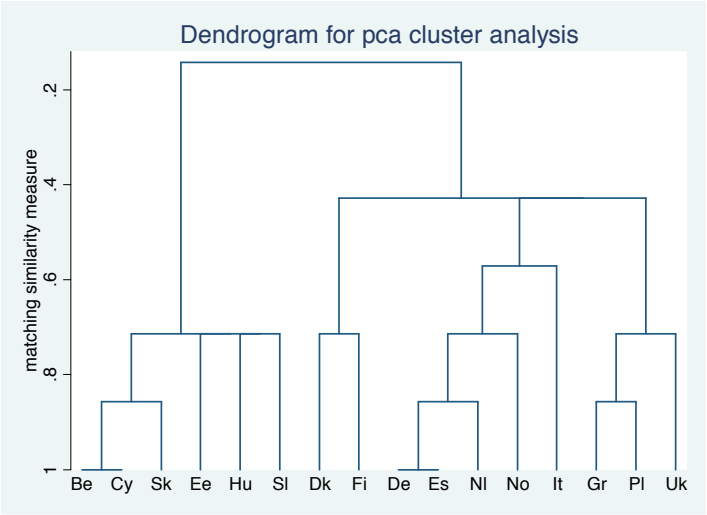
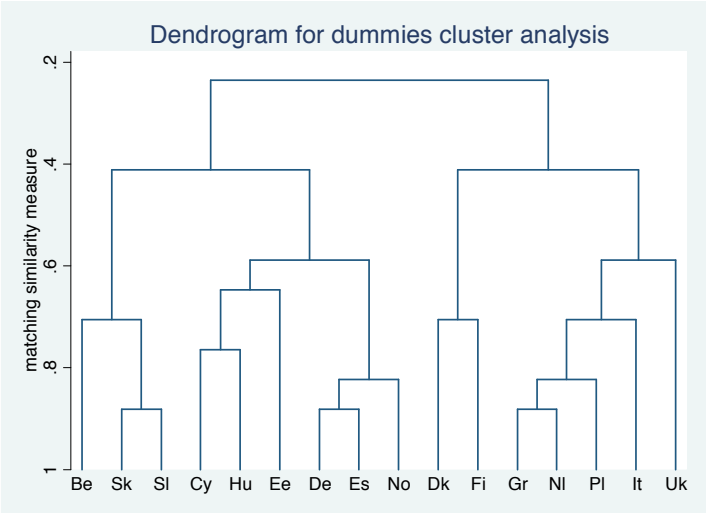


Table 9: Cluster analysis of PCA, Forbearance and Stringency (elaboration on World Bank data, 2007)



IV.3 ICAAP

As for the Icaap, this is defined by CEBS GLs as an integral part of the management process which includes not only the identification and assessment of risk but also its proper documentation and the activity of reporting its results to the senior management and to the executives. These latter, in turn, set the risk appetite and the capital target with a forward-looking approach, monitor its achievement and take the responsibility for the whole Icaap process which is supposed to shape somehow the decision making culture of the institution. Furthermore, Icaap has to be comprehensive and take into consideration not only Pillar I risks but also other risks which are not included in Pillar I, Pillar II risks and other external factors. Finally, Icaap should be risk based and produce a reasonable outcome.

So, the Icaap process allows banks to build up the capital models they believe might fit most with their characteristics but requires them at the same time to be compliant with several methodological principles to

avoid the risk of capital miscalculation. Nonetheless, calculating and monitoring risks is not a clear-cut exercise and banks have an obvious incentive to reduce the amount of capital they keep aside. For this reason supervisors need to understand the drivers which might generate differences between Icaap and regulatory capital numbers for Pillar I risks and address them when needed. Possible examples might be the use of different methodologies (e.g. VaR vs. Expected Shorfall) or confidence levels in the economic capital model, changes in the scope of the risk considered, removal of floors or other regulatory constraints, changes in the assumptions (e.g. portfolio granularity), etc[54].

Also, a key issue is understanding how institutions identify and measure the effects of diversification they claim[55]. In particular, it is important to observe how an institution decompose the effects of diversification (by sector, location, business, etc), which are its sources (Pillar I vs. Pillar II risks) and how each category contributes to calculate inter and intra risk diversification. A precise assessment and measurement of the impact of inter and intra risk diversification on Icaap is needed to understand whether differences between internal capital and regulatory capital are grounded on actual portfolio differences or are the consequence of individual methodologies. Indeed, major parts of the overall differences between Pillar I and Pillar II numbers are due to diversification benefits.

According to a *Groupe de Contact*'s analysis[56], despite some different criteria have emerged, under Pillar II most supervisory authorities intend to recognize in principle both inter and intra-risk diversification benefits. While the assessment procedure will take place through a

[54] Cf. CEBS (2008).

[55] Under the Pillar I framework, diversification is only partially addressed. In particular, regarding credit risk, within IRB models it is assumed that portfolios of credit exposures to different people or firms are infinitely granular, while no assumption is made on sector/business/geographic concentration. As for VaR and AMA models (on market and operational risks, respectively), event correlation is more explicitly taken into account. Finally, inter-risk diversification is not acknowledged since single risks' contributions are simply summed up. (Groupe de Contact, 2008:21).

[56] Groupe de Contact (2008).

case-by-case challenge in which single institutions will need to demonstrate the validity of their models and methodologies, there is a wide consensus that so far banks have accumulated little expertise on diversification, especially on the calculation of inter-risk effects. To be sure, risk aggregation is often really problematic since different risks are frequently measured in different ways. A key issue is that some risks are not easily quantifiable and are analyzed in a mainly qualitative way while others can be completely proxied. Problems sometimes arise also in this latter case, because different confidence levels might be used for different risk categories which in turn might be dissimilar to those used in the calculation of the risk appetite.

For this reasons many supervisors are putting in place quite conservative approaches, imposing both explicit and implicit constraints. As for the former, diversification benefits are sometimes limited to Pillar I risks (e.g. in Austria) or Pillar II (e.g. in Finland); other times caps to the possible capital deductions are put in place (e.g. in Hungary). As for the latter, the decision is generally based on an overall judgement of soundness of methodologies and internal controls and reliability of data. For further conservatism, in some countries supervisors have decided that standardized banks are allowed only to sum up each single risk (so-called "building block approach") and cannot claim inter-risk diversification. In some other cases no diversification benefits at all can be claimed and less sophisticated banks simply have to add the capital needed to cover Pillar II risks to the capital requirements under Pillar I rules. The problem with the existence of different approaches is that they might not be competitively neutral and might thus alter the level playing field within Europe.

As mentioned, to verify if different approaches are arising within the EU and if they can have an actual impact on capital, the CEBS[57] has decided to make a survey among its member countries and asked each national supervisor to describe its policy toward the recognition of

[57] Groupe de Contact (2008).

diversification effects. Of course, responses are supposed to reflect their "theoretical" approach to a standard portfolio which is free from any data quality or methodology concern. It is assumed that banks need to demonstrate solid models and sufficiently long time series and robust tests if they want to obtain supervisors' authorization to use internal risk aggregation models for Icaap purposes. Still, the numerical example has a strong significance as it allows to compare different supervisory approaches on a consistent basis. Also, two different cases are simulated: a case in which the Icaap number is below the Pillar I regulatory number and another where internal capital is higher than regulatory capital. Of course, the "low Icaap" case is critical in that many supervisors, despite in principle open to the recognition of diversification benefits, would not allow this to happen.

Given these caveats (cf. *amplius* section 3), by looking at the results of the CEBS's stock-take it is possible to assess whether different capital requirements might in real fact be applied to the same risk portfolios across Europe. As mentioned, the CEBS has asked to its members to forecast how much capital they would charge a bank in front of a sample portfolio which is partially diversified (see tables 1 and 2 above). In other words, supervisors have been asked to assess to what extent they would recognize the ICAAP calculations performed by banks and, in particular, the diversification benefits they claim both for Pillar I and Pillar II purposes. By looking at the distribution of countries in respect to the values of Pillar I and Pillar II variables, it is clear that European supervisory authorities are taking different roads to the SREP-ICAAP process so that similar banks might be charged differently across MSs (see tables 10 and 11).

The second issue to be addressed is whether the capital numbers collected by the CEBS are consistent with the type 1 / type 2 taxonomy which is based on the results of the stock-take on supervisory approaches. Given the features of the type 1 / type 2 approaches (see above), we expect that type 1 ("top up") supervisors would require on average more regulatory capital and rely to a lower extent on diversification "haircuts" than type 2 supervisors would do. Actually,

by plotting Pillar I and Pillar II numbers of the countries which replied to both the questionnaires (see table 12), we can observe a quite clear-cut polarization of type 1 and type 2 countries. This result holds both in the example of a low and high ICAAP (where more or less diversification effects are claimed, respectively). The same conclusion is reached by means of a cluster analysis which assesses the degree of dissimilarity among different countries (see tables 13 and 14). Only exceptions are Cyprus (CY) and Greece (GR) which, while self-assessed as type 1 and 2 respectively, seem in real fact to behave more similarly to the opposite groups. To a lower extent, also Hungary's behaviour (especially in the "low" scenario) seems slightly contradictory with the way it has assessed itself. However, the overall results are consistent with our predictions and demonstrate that the type 1 / type 2 taxonomy is empirically grounded by the actual level of regulatory capital MSs' authorities are likely to require.

Table 10: Pillar I and II charges – High Icaap (elaboration on CEBS data)

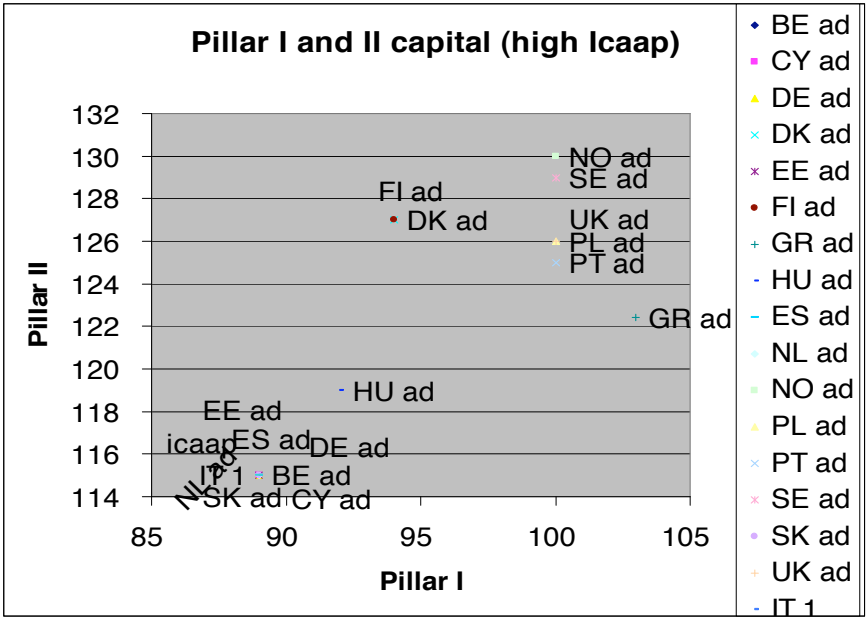


Table 11: Pillar I and II charges – Low Icaap (elaboration on CEBS data)

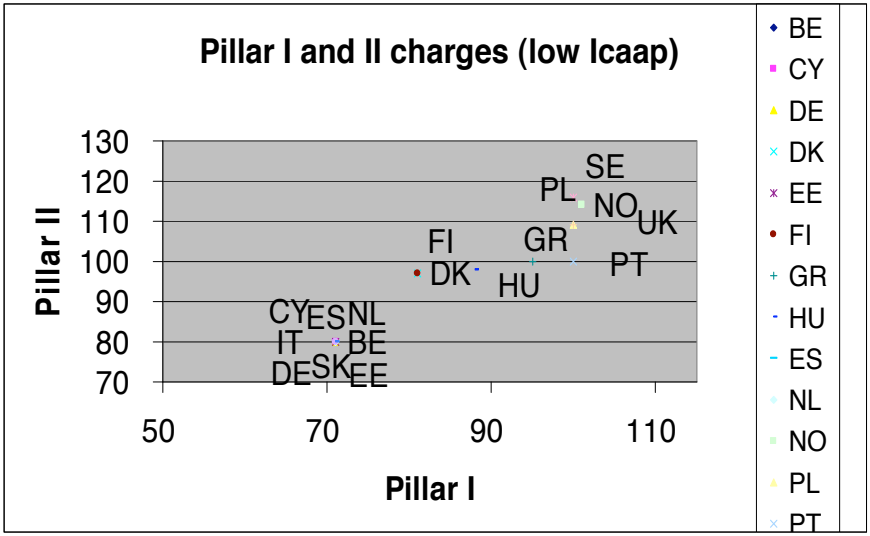


Table 12: Countries which answered to both the quantitative and the P2CN questionnaires (source: CEBS)

country	type
• **Belgium**	2
• **Cyprus**	1
• **Denmark**	1
• **Estonia**	2
• **Finland**	1
• **Germany**	2
• **Greece**	2
• **Hungary**	2
• **Italy**	2
• **Netherlands**	2
• **Norway**	1
• **Poland**	1
• **Slovak Republic**	2
• **Slovenia**	1
• **Spain**	2
• **United Kingdom**	1

Table 13: Cluster analysis of the Pillar I and Pillar II variables (high ICAAP) - Elaboration on CEBS data

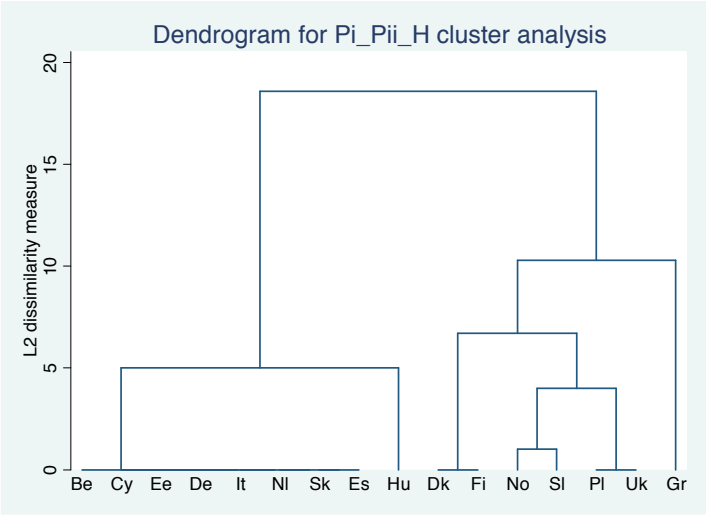
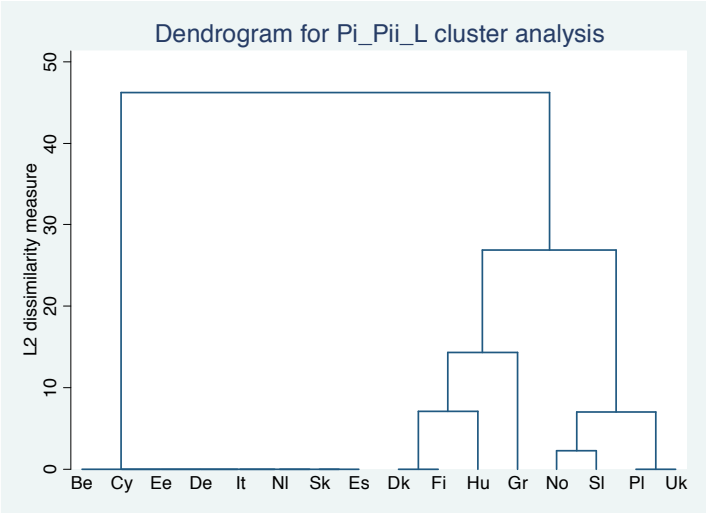


Table 14: Cluster analysis of the Pillar I and Pillar II variables (low ICAAP) - Elaboration on CEBS data



Finally, having observed that regulatory capital numbers are consistent with the type 1/2 supervisory styles, it is examined whether this distinction might be explained by legal or institutional factors or if it is a deliberate choice of MSs' authorities. Differently from the previous section, Pillar I and Pillar II capital charges are therefore analyzed together with the proxies for PCA, Forbearance and Stringency (see supra). To do so, a cluster analysis is performed by means of the Gower[58] algorithm that is able to jointly elaborate dummies and continuous variables (see formula 2).

$$d_{ij} = 1 - \frac{\sum_{h=1}^{k} \delta_{ijh} s_{ijh}}{\sum_{h=1}^{k} \delta_{ijh}} \qquad (2)$$

However, the stated hypothesis is not validated: the way the cluster analysis groups together different countries is not homogenous with the type 1/2 categorization (see tables 15 and 16). Even if those variables which are less variant across countries (i.e. Stringency and Forbearance) are excluded, the results of the cluster analysis do not change much and still reject the stated hypothesis (see tables 17 and 18). This might imply that the type 1 / 2 polarization cannot be explained by the three considered institutional variables and therefore may simply constitute a political choice. Differently, it might be that the qualitative characterization of institutional variables is not always adequately proxied by quantitative measures, which in turn lose their explanatory power.

[58] Gower (1971).

Table 15: Cluster analysis of the Pillar I, Pillar II, PCA, Forbearance, Stringency variables (low ICAAP) - Elaboration on CEBS and WB data

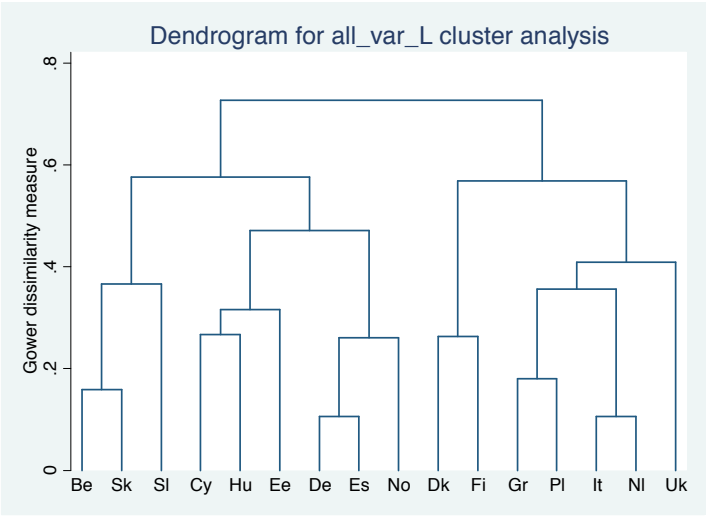


Table 16: Cluster analysis of the Pillar I, Pillar II, PCA, Forbearance, Stringency variables (high ICAAP) - Elaboration on CEBS and WB data

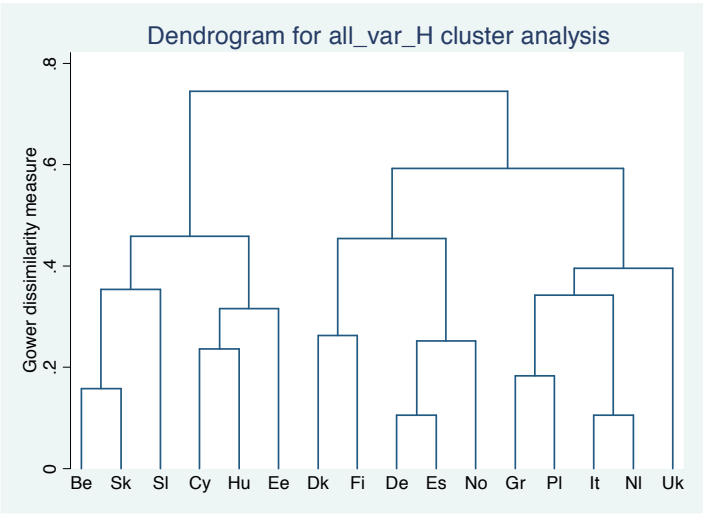


Table 17: Cluster analysis of the Pillar I, Pillar II and PCA variables (low ICAAP) - Elaboration on CEBS and WB data

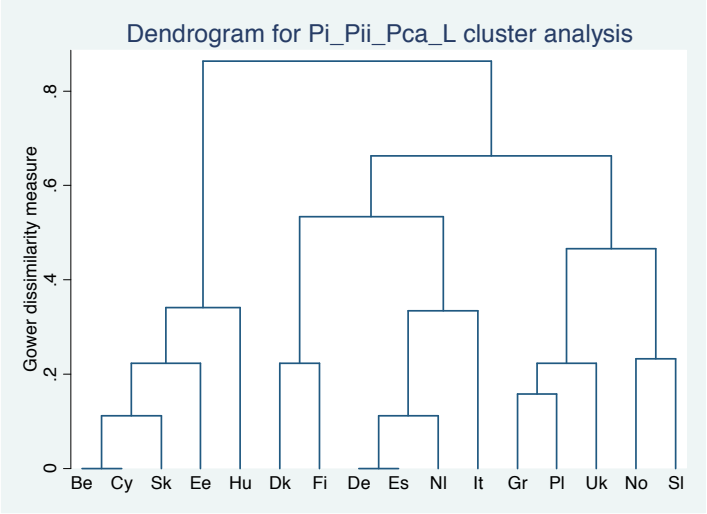
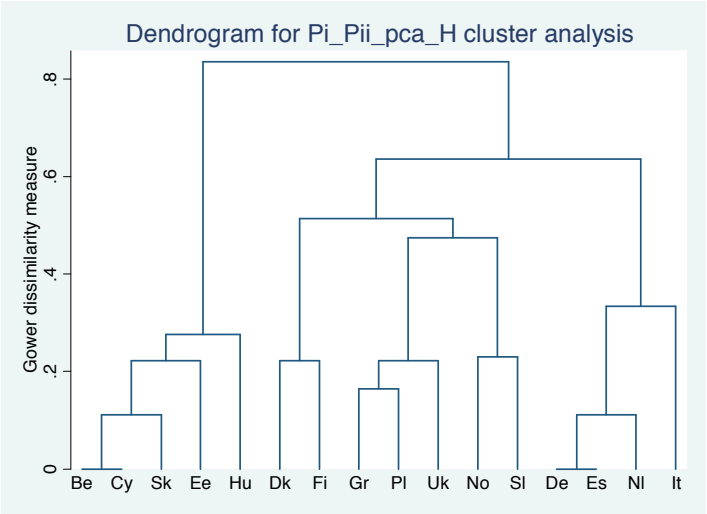


Table 18: Cluster analysis of the Pillar I, Pillar II and PCA variables (high ICAAP) - Elaboration on CEBS and WB data



V. CONCLUSION

This paper has demonstrated that the second Pillar of Basel II is likely to have an impact on the capital adequacy level of the European banking industry and that this effect might not be consistent across countries. Depending on the way different supervisors will implement the new rules and interpret their powers, banks will be asked to keep aside an higher or lower amount of regulatory capital, with clear problems of competitive disadvantage for those banks that are more strictly supervised.

The CEBS has classified European approaches to implementation in two broad groups. Type 1 supervisors believe that Pillar II should cover a number of additional risks in respect to Pillar I, thus they always ask supervised institutions to keep aside more capital than that required under Pillar I rules (so-called "top up" approach). Differently, type 2 authorities believe that Pillar I numbers are a proxy for the whole regulatory capital which each institution should hold, and this latter should be freely determined by their internal models. This paper has proved that the type1/type2 taxonomy is empirically grounded in that type 1 supervisors seem to require a systematically higher capital than those belonging to group 2. However, institutional variables are not able to adequately explain if one country belongs to one or the other of the two groups. Thus it can be inferred that different approaches to Pillar II are not due to institutional differences but might be the result of a precise political choice and therefore signal the presence of regulatory competition.

This result has an obvious institutional relevance and makes clear that harmonized rules might not be enough to ensure in real fact a regulatory playing field at the international level. Consistency in implementation appears fundamental as well, and this might only be achieved through increased cooperation and centralized coordination. Within the European context, this calls for an analysis of the role that is attributed to cooperative institutions such as the CEBS and a

subsequent evaluation of the degree to which the powers they currently enjoy make them able to deal properly and consistently with the assigned functions. It is clear that in absence of stronger centralized powers, it will be more and more difficult to ensure a condition of real competitive neutrality across Europe and in turn to guarantee the stability of European banks. At a higher level, the piecemeal implementation of Basel II in Europe casts serious doubts on the possibility to maintain a level playing field in capital requirements across the world and suggests that powers of international bodies like the BIS or the IMF should be strengthened by far to achieve a consistent and effective worldwide implementation of the new rules.

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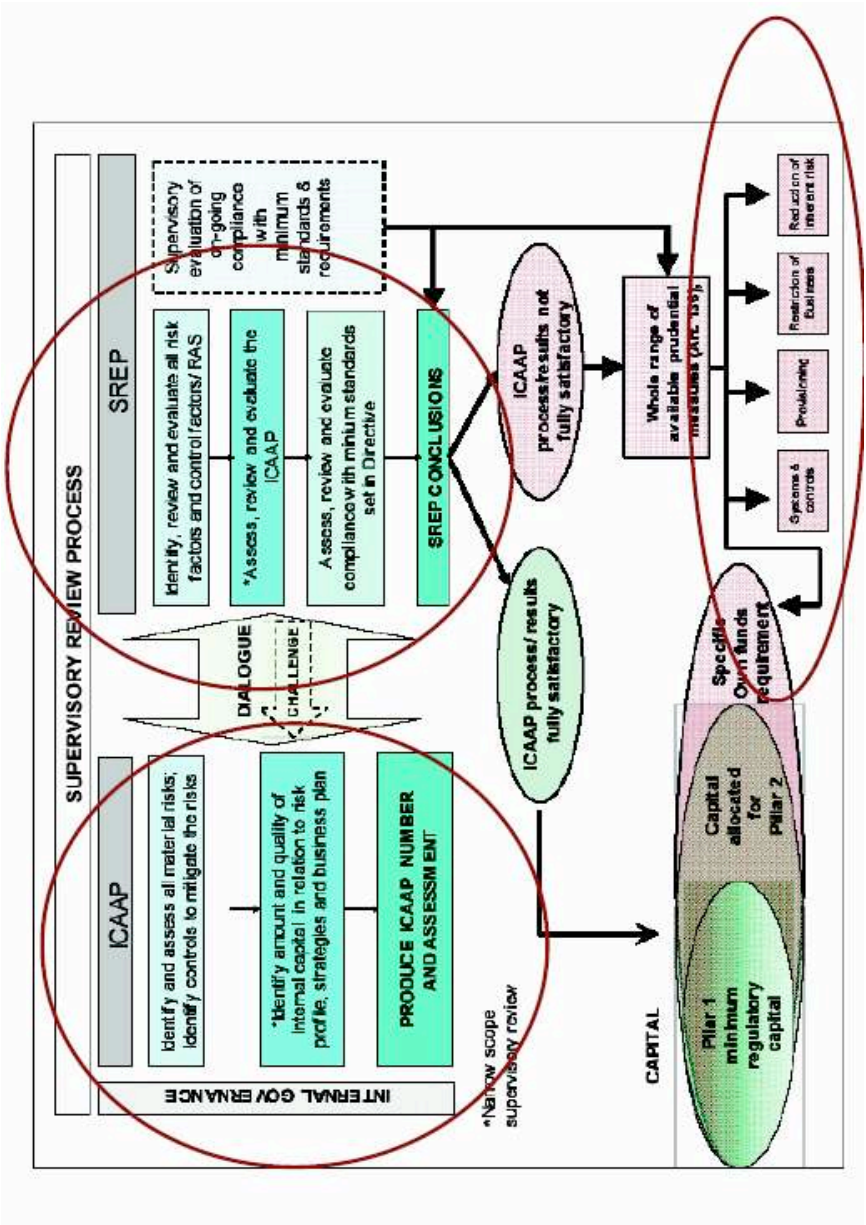
VII. APPENDIXES:

1. CEBS' Guidelines on ICAAP and SREP (source: Penza 2007:70)

	GUIDELINES ON ICAAP		GUIDELINES ON SREP
Icaap 1	Every institution must have a process for assessing its capital adequacy relative to its risk profile	Srep1	The Srep should be an integrated part of the authority's overall risk-based approach to supervision
Icaap 2	The ICAAP is the responsibility of the institution	Srep 2	The Srep should apply to all authorized institutions
Icaap 3	The Icaap design should be fully specified, the institution's capital policy should be fully documented, and the management body (both supervisory and management functions) should take responsibility for the ICAAP	Srep 3	The Srep should cover all the activities of an institution
Icaap 4	The Icaap form an integral part of management process, and decision making culture of the institution	Srep 4	The Srep should cover all material risks and internal governance
Icaap 5	The Icaap should be reviewed regularly	Srep 5	The Srep will assess and review the Institution's Icaap
Icaap 6	The Icaap should be risk-based	Srep 6	The Srep will assess and review the institution's compliance with the requirements laid down in the CRD
Icaap 7	The Icaap should be comprensive	Srep 7	The Srep should identify existing or potential

			problems and key risksfaced by the institution and deficiencies in its controls and risk management frameworks and it should address the degree of reliance that can be place on the output of the institution's Icaap
Icaap 8	The Icaap should be forward-looking	Srep 8	The Srep will inform supervisors about the need to apply prudential measures
Icaap 9	The Icaap should be based on adequate measurement and assessment processes	Srep 9	The results of the Srep will be communicated to the institution at the appropriate level(usually the management body) together with any action that is required of the institution and any significant action planned by the supervisory authority.
Icaap 10	The Icaap should produce a reasonable outcome	Srep 10	The supervisory evaluation should be formally reviewed at least on an annual basis, to ensure that it is up to date and remains accurate.

2. Supervisory review process: ICAAP and SREP (Source: Enria et al, 2008)



Rating Agencies and Basel II implementation in Europe

Abstract

Under the new Basel II rules rating agencies have increased their quasi-regulatory role and are now able to indirectly determine "standardized" banks' level of capital adequacy. But rating agencies' predictions are often inconsistent one from the other, so minimum standards should be required by supervisors to avoid that banks enact regulatory arbitrage strategies. However, different supervisors might in turn perform their tasks differently depending on their regulatory style and philosophy. The aim of this paper is then to understand whether and to what extent coordination might help. To do so it looks at the highly harmonized European context, where the Committee of European Banking Supervisors (CEBS) has been trying to ensure that rating agencies are recognized consistently across countries. Using CEBS's data and information it will be demonstrated that CEBS has been effective in harmonizing the recognition process, but the scope and depth of this task has been very limited. So a significant degree of competitive neutrality is still not granted across Europe. Even the strengthened and broader oversight regime on rating agencies as recently proposed by the Commission seems not able to effectively integrate powers at a centralized level and thus ensure a regulatory playing field in Europe.

Keywords: Basel II, Rating Agencies, European integration, Competitive neutrality.

I. Introduction

While observers and academics have been paying great attention to the IRB approach[1] in that it constitutes a big change in philosophy from the Basel I rules and it is likely to lower[2] the capital buffer banks have to keep aside, much less attention has been paid to the SA approach to credit risk. Gearing banks' capital requirements to the external credit ratings of their borrowings was often supposed a safe choice that simply improved the granularity and risk sensitivity of capital requirements in respect to Basel I. In reality, external credit assessment institutions (ECAIs) have been given by regulators a key power in that they can indirectly determine the amount of capital SA banks are asked to keep aside. Thus ECAIs have reinforced their quasi-regulatory role which is not limited any more to the ability of selling "investment grade" licences for certain securities but allows them to influence the banking sector's capital adequacy level and, in turn, the stability of the whole economy. This new scenario has relevant implications also for the way responsibilities are assigned in case of banks' defaults, with boundaries between regulators and "quasi-regulators" being more and more blurred.

The assignment of a "quasi-regulatory" role to rating agencies for capital adequacy purposes is particularly problematic in that, as much as banks internal models, also rating agencies' models and forecasts might be faulty at times and thus cannot be blindly relied upon. Similarly, different ECAIs might assign different ratings in front of similar situations because credit ratings are a subjective assessment in which the methodology, the rating scale as well as the evaluation factors might differ substantially. Finally, different ECAIs have different geographical coverage, and this variable might in turn bias banks' regulatory capital because non-rated counterparties are assigned a risk weight by default under Basel II rules.

[1] Actually, there are two IRB approaches. For further detail see the first paper of this thesis.

[2] I.e. the five Quantitative Impact Studies performed by the BCBS.

In order to avoid problems of inconsistency and unreliability, under Basel II ECAIs have then to be recognized by banking supervisors and their grades have to be mapped and matched with risk weights. Lacking recognition, SA banks cannot use ECAIs' ratings to risk-weight their exposures. However, this regulatory regime hides a problem: as much as the IRB models validation process might be performed differently and lead to different capital charges depending on the "style" of the responsible supervisor, also the ECAIs recognition and mapping process might be performed differently across countries. And while the recognition and mapping process of an ECAI's assessments are responsibility of the national supervisor, it is the bank that chooses the identity and number of ECAIs to work with. So in principle it is possible that banks will be tempted to "shop" and look for the most favourable grades.

To solve this problem, within the European context the CEBS has established an harmonized process of recognition by guaranteeing a Joint Assessment Process (JAP) with a pre-specified leading authority, a common basis Application Pack and the possibility of indirect recognition by other authorities. This is supposed to guarantee a minimum standard for ECAIs at the European level. Also, it should ensure that rating levels are harmonized across Europe by means of a coordinated mapping process in accordance to the historical default rate.

This paper aims to assess whether the CEBS's effort has been successful in guaranteeing an harmonized recognition and mapping process across Europe. To do so, it makes use of data and information collected at the CEBS and takes advantages of several interviews carried out with senior officials from European national central banks. While the answer to the research question is largely positive it is to be highlighted that the scope and depth of this CEBS's task has been very limited. In particular, while it is definitely noteworthy that Member States (MSs) have implemented common recognition rules and have cooperated to achieve a common view (mapping) on the real meaning of different

ECAIs' grades, it is also true that at the moment only few local agencies have applied for recognition and CEBS-based JAP processes have been confined to the biggest four agencies. Also, doubts can be casted over the real effectiveness of the recognition requisites in ensuring rating quality. As the current turmoil has clearly showed, there are multiple conflicts of interests and methodological problems hidden in the rating industry and the Basel II/CEBS recognition process is probably too formal to guarantee substantial improvements.

This is why, following CESR's advice and SEC[3]'s example[4], the European Commission has recently supported the need for an enhanced European approach to ensure a more stringent and centralized implementation of internationally approved principles for CRAs. To achieve this result it has proposed to introduce a strengthened oversight regime for rating agencies through a EU registration system. While early comments have focused on whether new regulatory powers might be effective in making the rating system working better, this paper tries to assess the Commission proposal in view of its effort towards a level regulatory playing field in Europe. It will be argued that although a more substantial recognition process might guarantee an higher rating quality across Europe, providing MSs with enhanced national supervisory powers might add an element of competitive bias to the system. In the particular case of Banking regulation, the Commission proposal (especially in its first version, see *infra*) is also likely to alter the equilibrium of the current CEBS recognition regime on ECAIs.

To do so, this paper will first briefly illustrate the main background facts and the most relevant literature on the topic (section II); secondly the structure and functioning of the credit rating industry will be described (section III); thirdly it will analyze the current CEBS's recognition and mapping system and assess its effectiveness in ensuring competitive neutrality (section IV); finally it will be considered how the Commission's recent proposal on CRAs

[3] The SEC, Securities and Exchange Commission, is the US Financial Markets Authority.
[4] Cf. note n^60.

supervision might impact on CEBS's regulatory regime and, consequently, on the banking sector regulatory field in Europe (section V). Section VI then concludes.

II) Key facts and literature

After long negotiations, several quantitative studies and a tiresome consultation process, in June 2004 governors of central banks and heads of banking supervisory authorities from the G10 finally agreed on the Revised Framework on capital requirements. Commonly referred to as Basel II, the New Accord aimed at making the Basel I capital adequacy rules more sensitive to the actual risks borne by different banks. To achieve this result, the Basel Committee built up two possible approaches for calculating regulatory capital for credit risk: the Standardized (SA) and the Internal Rating Based (IRB). While the SA approach makes use of grades provided by ECAIs[1], with the IRB approach banks can build "in-house" their ratings.

Following Basel II burdensome approval, much work was still to be done to implement the new rules globally. Within this process Europe has been a first mover in that it soon transposed the Accord into the communitarian legislation by means of the Capital Requirements Directive. But some time was still needed then before the first European banks were able to use the new rules, something that has actually happened only at the beginning of 2008. Outside Europe this process has proved much longer in that many countries are still reaching a decision regarding whether and how to transpose the New Accord into national legislation. Even in those countries where a decision has finally been attained, strong delays are the norm.

Regarding Pillar I, most of the times gradual implementation schedules have been hypothesised, giving the so-called standardized approach (SA) priority over the more sophisticated internal rating based approach (IRB). Implementing the IRB approach is challenging in that banks are allowed to calculate their regulatory capital through internal

models which have to be authorized by supervisors and therefore meet specific methodological and organizational criteria. These standards might be quite difficult for most small and medium banks to comply with, so that the IRB approach will probably be a prerogative of big banks, most of the times located in developed countries. Also, IRB approaches have been supposed to reduce[5] the amount of capital banks will need to keep aside and great attention has been devoted by the literature to the mechanisms through which this result can be achieved[6]. Consequently, it has been analyzed whether IRB "light touch" could lead to competitive biases and unjustly favour developed countries[7].

Differently, the SA approach is simpler and makes use of the traditional Basel I formula where capital requirements are calculated as an 8% ratio of banks' assets, each weighted by its relative risk. The main difference with Basel I lies in the fact that risk weights are now drawn from credit ratings as issued by recognized ECAIs (see *infra*). Due to the strong similarities with Basel I, the SA approach has then received far less attention by the literature. But many small and medium G10 banks will implement it[8] while outside the G10 most banks moving to Basel II will choose the SA approach given their lack of data and accounting weaknesses. Furthermore, ECAIs' ratings are not only used by SA banks[9] to calculate their risk weights and, consequently, their capital requirements according to the traditional Basel I formula (see 1 and 2), but also IRB banks[10] use them when securitization transactions are to be assessed. To sum up, the SA approach is likely to be widely

[5] Cf. all the five QIS studies performed by the BCBS.

[6] See for instance Carling et al. (2002).

[7] Cf. Griffith-Jones and Spratt (2001) and Griffith-Jones, Segoviano and Spratt (2002).

[8] According to a 2003 survey, around 30% of European banks are planning to implement the SA approach. This is a much higher figure than those reported in previous years, probably because many banks have realized that moving to IRB approaches might not always be cost-effective, especially if the possible regulatory advantages will be somewhat limited by national regulators (see KPMG, 2004).

[9] Rectius, banks that have implemented the Standardized Approach under the Basel II Capital Accord.

[10] Rectius, banks that have implemented the Internal Rating Based Approach under the Basel II Capital Accord.

implemented and there is a clear case to look more closely to it and to the way credit ratings are assigned by ECAIs.

$$\sum_{i=1}^{n} RW_i * A_i = RWA \quad (1)$$

$$RWA * 0.08 = RC \quad (2)$$

Where:

RW_i = risk-weight attached to asset i A_i = asset i (i=1,…n)

RWA = risk-weighted assets RC = regulatory capital

As mentioned, the standardized approach is very close to what was required by the Basel I Accord: exposures are classified into a set of asset classes and a different risk weight is assigned to each one in light of its relative degree of risk. Similarly to Basel I, off-balance sheet items are "transformed into assets" through a conversion factor. The main difference with Basel I lies in the fact that risk weights have a wider range and are now determined according to external credit ratings (see table 1). While in Basel I all corporate exposures were weighted at 100%, Basel II weights are widely differentiated according to firms' rating, with at the extremes a 20% weight assigned to AAA credits and 150% weight given to firms rated below B-[11]. Unrated firms maintain instead the same 100% risk weight as under Basel I. Regarding interbank claims, two possible options have been left at the discretion of the national supervisor. Option I draws risk weights from the ratings of the country where the bank is incorporated. Under option II risk weights follow instead banks' own ratings, but are more benign than those assigned to normal firms and somewhat similar to those given to Governments and Central Banks (which in turn are classified into five categories in place of the OECD vs non-OECD Basel I distinction). As for retail exposures and mortgages portfolios, these are believed to be

[11] The way risk-weights are allocated has been questioned by Resti and Sironi (2005) who argue that the risk/rating relationship might be steeper than the one approved by the Basel Committee and suggest some adjustments on this matter.

highly diversified and are thus given more favourable[12] risk weights than under Basel I, but both are independent from the assigned rating. Overall, while very similar to the Basel I capital rules, the Basel II SA approach yields capital charges that are more sensitive to credit risk but strongly rely on rating agencies' judgement.

Table 1 - Risk weights under the standardised approach

Exposures	RATING						
	AAA AA-	A+ A-	BBB+ BBB-	BB+ BB-	B+ B-	< B-	Unrated
Governments and Central Banks	0	20	50	100		150	100
Banks							
- option 1	20	50	100			150	100
- option 2	20	50		100		150	50
Firms	20	50	100		150		100
Retail	75						
Mortgages	35						
Securitizations	20	50	100	350	Deduction from capital		

This new and greater role assigned by the SA approach to credit rating agencies has of course given rise to a renovated interest in the topic, both from national supervisors and academic scholars. Within the academia, the main attention has been devoted to the potential (negative) consequences of linking risk weights with external ratings. In particular, two main issues have been analyzed: the risk of greater procyclicality of capital requirements[13] and the possibility of higher volatility in capital requirements for those banks which are headquartered in developing countries[14]. As for supervisors, they have worked at new studies to get a better understanding of the credit rating industry and to propose a reform[15].

The credit rating industry structure is in fact quite peculiar and several scholars have long been working to understand its features. The first,

[12] While the former passes from 100% to 75%, mortgage loans are assigned a very low 35% risk weight. It is important to highlight that under the "retail" category are often included loans to small and medium enterprises (SMEs) which will therefore benefit of a competitive advantage in respect to Basel I.

[13] Cf. Amato and Furfine (2003).

[14] Cf. Ferri et al. (2001).

[15] See for instance BCBC (2000) and SEC (2003).

striking, characteristic of the rating market is the low number of incumbents. On the global scenario there are currently only three big players: Moody's (a freestanding company specialized in rating activities), Standard & Poor's (owned by McGraw-Hill and big provider of financial information services, of which credit activities are only a part) and Fitch Ratings (a merger of smaller agencies currently owned by the French Fimalac). In the past, this number has never rose higher than 5 and Standard & Poor's and Moody's hold alone around 80%[16] of the total market share, with their services being provided all around the world. In addition to these three major firms, it is possible to identify almost 30[17] fairly small rating agencies that most of the times provide local services around the world.

Many authors have questioned why the market is so concentrated[18] and proposed two possible explanations. One stream of literature has argued that the presence of significant economies of scale, scope and of standardization in the rating market may explain the few number of incumbents. In particular, they have claimed that lenders prefer to have a few standardized ratings (and raters) to compare[19], so reputation is vital and firms need to cover the market extensively if they want to establish their name among investors. Indeed, the greater the number of issuers an agency is able to cover, the more useful is the comparison. In sum, in the view of these scholars, the rating market is not able to lodge many competitors, thus is naturally oligopolistic.

A second scholarship hypothesizes that regulation has played a big role in shaping the structure of the market: while the recognition system might have kept the market oligopolistic, the "two ratings norm" might

[16] See Hill (2004).

[17] According to BIS (2000).

[18] The argument that the market is oligopolistic and the two incumbents are able to exercise market power seems to be confirmed by the supra-normal profits that rating agencies' balance sheets show, as well as by the almost proportional fee structure (while the costs to analyze small and big issuers do not necessarily differ too much). Cf. White (2001).

[19] White (2001).

have been crucial in empowering the two market leaders[20]. The underlying view is that ratings have virtually no information content[21] and agencies simply sell regulatory licences, i.e. "the right to be in compliance with various rules and regulations[22]". In their opinion this is mainly because a significant part of investors are required by law to purchase only investment grade instruments, while there is evidence that professional investors and issuers rely on them only partially, both for quality[23] and time effectiveness[24] problems. In the particular case of structured finance, regulatory licences are said to be an even more compelling explanation in that deals are structured ad hoc by rating agencies to give to the investors the rating they are looking for.

The regulatory licence thesis has been challenged on several ground, mainly referring to the evidence that regardless regulation rating agencies have never been numerous, that most of the times issuers buy Moody's and S&P grades (despite Fitch has been proved cheaper and more favourable) and that several issuers ask for a rating even when they expect it to be under investment grade[25]. Still, as the recent turmoil as well as other previous crises has clearly demonstrated, it seems very difficult for rating agencies to ignore the regulatory effects of their decisions, especially when downgrading under investment grade and thereby changing the way financial firms treat the bond. On the other side, the market can difficultly ignore the regulatory relevance of their choices so that it has been argued that "the new information that the change in a rating brings to the financial markets might be only about the change in the regulatory status rather than any new information about the likelihood of default"[26] [27]. But the picture is mixed and recent

[20] Also, both fund managers and issuers' CEOs have an interest to keep this system intact in that it reduces the responsibilities of the former and help the latter in dealing with the market. See Hill (2004).
[21] Partnoy (2001).
[22] Partnoy (2001:80).
[23] See Kent Baker and Mansi (2002).
[24] See Ellis (1998) and Hill (2004).
[25] Cf. Cantor and Packer (1997).
[26] White (2001:21).

studies have shown instead that rating changes provide new and significant information to the markets[28]. What one can be sufficiently sure about is that regulation has had and still have an influence on the rating market. Thus market consequences should be carefully assessed before emanating new legislation.

Thanks to a renovated interest in rating agencies, another issue has later received some attention[29]. Namely it has been argued that the Basel II SA system may suffer from a relevant drawback in that different agencies might assign inconsistent ratings in front of similar situations. This problem arises from the fact that it is the bank which can choose the most preferred rating agency/agencies. So it is possible in principle that banks will be tempted to rely on that rating agency which may guarantee the most favourable ratings. Differences in external ratings may in turn be able to bias not only capital requirements but also banks' lending policies and thus the efficiency of the overall process of credit allocation[30].

This possibility has raised several concerns both among market participants and within the credit rating agency industry. For example at the time of Basel II negotiations Duff & Phelps Credit Rating Co. (DCR, now incorporated by Fitch) was reported to support the use of at least two external ratings so to avoid the risk of "unwarranted reliance on a single, perhaps more favourable rating"[31]. However, the empirical evidence on this point is mixed. While it has been proved that different rating agencies have different views[32] and thus generate different risk

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[27] Knowing that their decision is able itself to self-fulfill the future prospect of the rated issuer, rating agencies face a conundrum between forebearing and providing issuers with incentives for moral hazard.

[28] See for instance Jewell and Livingston (1999).

[29] Cf. Van Roy (2005).

[30] Cf. Tabakis and Vinci (2002). If inconsistencies in external ratings are systematically exploited by banks, a race to the bottom that could reduce the quality and reliability of these assessments might be triggered.

[31] RiskWord (2000), as reported by Van Roy (2005:9).

[32] Most of the literature agrees that ratings differ across agencies, but the size of the phenomenon and the reasons behind it are often disputed. As for the former estimates in different studies vary from as low as 10% to a striking 60% (Cantor and Packer, 1995).

weights, within the EMU different combinations of ECAIs are forecasted to allow at most a 10% reduction of regulatory capital[33]. Even assuming that banks are able to implement a regulatory arbitrage strategy by tailoring their lending policies to lower capital requirements, it is found that the incentive to engage in such a strategy is small[34]. Still it should be pointed out that this literature focuses on big international ECAIs (ie Moody's, S&P and Fitch) and might thus underestimate differences in capital requirements. "Several studies indeed show that smaller credit rating agencies whose assessments will also be used in Basel II tend to assign more favourable credit ratings than those issued by Moody's S&P and Fitch[35]".

III) Agencies' idiosyncrasy and supervisory recognition

So the problem of regulatory arbitrage cannot be ignored and regulators have tried to tackle it by requiring an ex-ante validation process to assess whether an agency is compliant with pre-specified minimum standards and thus its rating can be used for regulatory purposes. Under Basel II ECAIs must obtain formal recognition from the national banking supervisors if they want their ratings to be used by banks for the purpose of determining risk weights in their jurisdiction. To obtain recognition ECAIs have to prove that they are reliable under six criteria: 1) their credit risk assessment methodology has to be objective and 2) they must be free from any political or

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Regarding the latter, while some papers have argued that differences in rating are simply the result of different opinions (Ederington, 1986), others have proved that these depend on other factors such as methodology (Beattie and Searle, 1992), economic trend (Santos, 2003, with more disagreement being observed in downturns), industry (Morgan, 2002, with more disagreement on banks and insurances due to a higher assets opacity) and nationality (ie presence of home country biases, cf. Shin and Moore, 2003). Differently, some authors hypothesize a sort of self-selection process in which firms ask for an additional rating when they believe their credit worthiness is improving[32]. Finally some other researchers have questioned the thesis that ECAIs' opinions differ significantly and proved that the default rates behind ratings are equivalent, thus meaning that ratings differences are due to different scales and not opinions[32].

[33] Van Roy (2005).

[34] Ibid.

[35] Van Roy (2005:5).

economic influence, 3) their services have to be offered to the international market under open and transparent terms, 4) material information such as definitions, methodology, time horizon and actual default rates and transition matrixes is to be disclosed, 5) they must prove the availability of sufficient resources and skills and that 6) their risk assessments are credible.

At the moment the only ECAIs which have secured recognition across all the members of the G10 are the three market leaders, namely Moody's, Fitch and S&P. But national supervisors will soon recognize also smaller players and they will need to map their credit ratings with the SA risk weights according to their long run average cumulative default rates (CDRs). So, once supervisors will have decided which ECAIs are allowed to operate in their country, banks will be able to choose which (and how many) they want to work with. Or they could choose to ignore ECAIs ratings and weight all the exposures at 100% as they used to do under Basel I rules. However, if banks decide to use external ratings to weight their exposures, they will need to disclose which ECAIs they work with and use their grades consistently. This means that they are not allowed to choose for each claim the best rating available among all the recognized ECAIs: if they decide to work with more than one ECAI and their ratings lead to different risk weights in front of the same exposure they are asked to choose the lower (if two) or the higher of the two lowest risk-weights (if three or more).

Thanks to these rules, moving from one to two ECAIs appears not to be an effective strategy to lower capital requirements. However some scholars have noted that by working with more then one ECAI it is possible to reduce the number of unrated counterparties. Since rated counterparties are generally assigned a better risk weight than those which are unrated, there might still be an incentive for banks to move from one to two ECAIs and this is especially true when different ECAIs specialize on different market sectors or geographical areas. More in general, by combining the right mix of specialized or local agencies, it seems possible in principle for banks to lower sometimes significantly their capital buffer.

For this reason, it is key for guaranteeing competitive neutrality that supervisors ensure a reasonable degree of consistency among ratings. Given the global dimension of the market, the problem is of course that supervision is national and different authorities might have different views in assessing rating agencies' compliance with the Basel standards. Also, some regulators might simply be less skilled or embrace a "softer touch" than others[36]. Finally, the interpretation of the requisites might be not homogeneous or even biased by internal politics. Consequently it might be possible that banks, especially if local (those which most probably will implement the SA approach), take advantage of less rigorous agencies' ratings to lower their capital requirements.

Even within the super-harmonized[37] European context, the situation as depicted by a survey[38] from the Czech National Bank in 2004 was somewhat piecemeal with different supervisors showing different intentions on how to perform the ECAI assessment process. Disagreement was shown regarding the selection of an ECAI as a benchmark and whether to recognize an ECAI as eligible in case its historical default experience exceeded the benchmark. In sum, it was clear that a centralized intervention was needed to facilitate convergence between MSs. So the CEBS stepped in by constituting the ECAIs Working Group (ECAIs WG) which immediately focused on harmonizing the requirements for ECAIs recognition and the way they are understood and monitored across countries.

To do so, the ECAI WG firstly surveyed the state of the art in the market by asking to its members to compile a list of the potential candidates to recognition for prudential purposes in their country. Most of the 14 answers received confirmed that MSs were at an early

[36] See *amplius* the first paper of this thesis.

[37] As already mentioned, within the European Union Basel II has been transposed into hard law my means of the Capital Requirements Directive.

[38] See Suvova et al. (2005).

stage of ECAIs'[39] recognition and still did not have extensive information about the potential candidates at their disposal. The overall picture was as follows:

- S&P, Moody's and Fitch seemed to operate in almost every MS;
- World or European-wide firms located in EU like Coface (France), Creditreform and Lindorff (Deutschland) were mentioned by Slovenia, France and Norway;
- Other countries mentioned Dun & Bradstreet (now incorporated into Fitch) and Capital Intelligence (a rating firm specialized in emerging markets);
- Except seven MSs[40] which did not have potential candidates, every other MS had at least one local candidate to be eligible for prudential purposes.

In sum, while the widespread coverage of the big three ECAIs was confirmed, the CEBS's stock-take found preliminary evidence of the presence of an European market of local agencies. This is consistent with the fact that only few entities (big corporations, banks and some municipalities), especially in some smaller countries in Europe, possess an assessment from a major ECAI. Conversely most of the SA banks have lending relationships with small and medium firms and thus have clear advantages in making use of the services provided by local ECAIs.

Having surveyed the market, on July 29th 2005 the CEBS started a consultation process on a proposed common approach to the recognition of eligible External Credit Assessment Institutions (ECAIs). As mentioned, this process was aimed at providing the basis for consistent decision-making across countries, enhancing the single market playing field and reducing the burdens for supervised institutions, ECAIs and supervisory authorities. In doing so, the CEBS had three items in its agenda:

1. achieving a common recognition process;

[39] See Suvova et al. (2005).

[40] These are: Denmark, Spain, Luxemburg, Slovenia, Slovakia, Norway and Litvia.

2. implementing the CRD recognition criteria consistently in each MS;
3. share common criteria for the mapping of external credit assessment to the CRD risk weights.

In CEBS's view, by adopting a common procedure for recognition and by sharing a common understanding of the recognition criteria, MSs would have been able to ensure a consistent treatment to different agencies located across the EU. Each "recognized" ECAI was in turn supposed to guarantee a consistent, high quality and robust external credit assessment to issuers. ECAI's grades would then have been used for prudential purposes under the SA or the IRB (securitization) approaches after competent authorities had associated them with the CRD credit quality steps.

In the following sections, the way these three objectives were planned to be attained in the guidelines, some of the resulting feedback from the industry and the way they were actually achieved are discussed.

IV) Harmonizing ECAIs recognition in Europe

IV.1- Achieving a common recognition process

In CEBS's consultative guidelines, the recognition process starts when the competent (national) authority receives an application for being recognized as an eligible ECAI[41]. Depending on the preferences of the competent authority, an application can be submitted by the bank that intends to use that ECAI's assessments, by the ECAI itself or even by both[42]. Competent authorities have then to be provided with all the necessary information to judge whether an ECAI is compliant with the CRD eligibility standards and this might be a first area of policy fragmentation. Different national requirements would on one side be

[41] CEBS (2006a).

[42] This possibility was confirmed in the final guidelines despite part of the industry had argued during the consultation process that it would be easier if only ECAIs were entitled to apply.

able to give undue regulatory advantages or disadvantages to different ECAIs located across Europe, on the other side big international players would need to fill several dissimilar applications with obvious diseconomies of cost.

CEBS has thus worked to standardize the characteristics of the required information across Europe and identified a *common basis application pack* that an ECAI can submit as a minimum to obtain authorization. In doing so, CEBS has tried to strike a balance among two needs: on one side that the information is sufficiently exhaustive to allow supervisors to make an informed decision, on the other that it does not exceed their needs under the CRD (i.e. the eligibility for use for prudential purposes). In particular each application has to include four main sections with the information summarized in table 2.

Table 2: Contents of the Common Application Pack

General information	• The first part of this section is aimed at identifying the type of application (SA vs. IRB securitization), the market segment(s) for which it is seeking recognition, the type of credit assessment offered (solicited vs. unsolicited, with a brief indication of the rationale behind the choice). Also, it must be communicated where the applicant is active and the competent authorities where it is asking for recognition • The competent authority must be provided with an overview of the legal structure of the ECAI and the group it belongs to. In particular, information regarding the ownership structure (with a list of relevant shareholders), the services the group provides, its subsidiaries (if any), its employees, the total revenues and major customers must be made available. Also, the ECAI has to demonstrate its financial soundness with relevant documentation.

	• While avoiding duplications with the information on methodology, each ECAI needs to include in this first part of the application a description of the core rating process for each area of recognition they are seeking (ie market segment or securitization position and geographical area).
Methodology	• This is the key part of the application pack and must provide the supervisor with the relevant information to assess the ECAI's o objectivity, o independence, o the existence of an on-going review process, o a proper disclosure of the methodology.
Individual credit assessment	▪ The third part of the application pack should provide the supervisor with sufficient evidence that the market rely on the ECAI's credit assessments. An ECAI is then expected to give indication of its market share, the number of issuers it covers, how long it has been active in the market and its track record, etc. ▪ Also, it must be evidenced that the credit assessments are accessible to both domestic and non domestic institutions that have a legitimate interest in it.
Mapping	▪ This final part is aimed at providing the competent authority with the minimum information needed to map the credit assessment of exposures (for securitization positions the required information are slightly different). ▪ In particular, the supervisor should be informed of the ECAI's definition of default, the tree-year CDR for each category, how this

	latter is calculated (pool selection, aggregation, etc.) and the results' significance. Also, it should be indicated the range of credit assessments that the agency issues and the meaning of each category. The time horizon, the transition matrices and the geographical coverage are further essential information.

As it is clear, the extent of information required is wide and the industry has clearly expressed its concerns that this might be extremely costly. The CEBS has made clear though that, while it is true that the information package requires ECAIs to provide supervisors with a relevant amount of information, much of that is already available in ECAIs' documentation. Consequently it should be possible for them to minimize the burden of these requirements. Nonetheless, additional information might be needed by supervisors, especially on default data and on other quantitative items on which ECAIs rely to form their opinion on issuers' creditworthiness. Also, single countries may ask additional information when needed for country-specific issues. For this reason it is important that all applications are already supported by comprehensive and transparent documentation that allows the competent authorities to assess the granularity of the ECAI's methodology on both asset class, market segment and geographical basis so that the need for separate recognitions can be adequately pondered and thus kept to the minimum.

Despite its extent, the Common Application Pack has been warmly welcomed by the industry as it clearly reduces its regulatory burdens in terms of possible inconsistent national requirements. On the other side, it also reduces the space for regulatory competition and is likely to facilitate cooperation among national authorities and to foster trust in other countries' assessment (and in turn encourage the use of indirect recognition – see *infra*). Still, while an harmonized application package is key for cooperation, national authorities under the CRD requirements have to assess it at the national level, no matter if the

application for recognition has been submitted in more than one MS. To give the Common Application Pack real effectiveness a common process of analysis is instead needed.

For this reason CEBS's members have agreed that when the application is submitted in more than one country all the competent authorities have to meet and set up a Joint Assessment Process for reviewing it. This has to be done within one month, even though no further deadline is envisaged nor is there a provision regarding a common timing to announce the decision. Despite the CRD requirement of individual decisions by different national supervisors is of course still valid, when a common view is achieved, this is intended to be the basis for all MSs' decisions. Again, the CEBS had to clarify that this does not mean that national authorities cannot carry out additional assessment if they believe that an ECAI's organizational structure or methodology raises particular country-specific issues. Nor that these single evaluations cannot in turn be taken into account for their own eligibility decision. But of course the provision of a Joint Assessment was aimed in real fact to reduce this possibility to the minimum.

In spite of a Common Application Pack and a Joint Application Process, the CEBS was conscious that the system might still have been tricky and probably ineffective if it was simply left to a blurred co-decision procedure. A clear leader (or Process Facilitator, in the more diplomatic CEBS's language) was then needed to ensure a smooth functioning of the process. The industry as well was quite keen of this proposal, but how to select it? The CEBS decided not to make a clear choice but to appoint the facilitator on a case-by-case basis according to several criteria (i.e. country with greater coverage, administrative convenience, burden optimization, possible relationships between ECAIs and supervisors, etc). Strikingly, other possible and more objective criteria such as the country where the headquarters or the majority of senior management are located have not been explicitly mentioned (despite not excluded, as well).

Consequently, the Facilitator selection process appears quite subjective and casts some doubts over the real possibility to deal with possible disagreement, especially in consideration of the wide powers it has been assigned. As the CEBS itself states, "the role of the process facilitator consists of coordinating and ultimately producing the joint assessment report[43]", with the aim of "reaching a shared view on the ECAI's eligibility[44]". In doing that, it has to ensure that all the necessary information is shared among the members and that a reasonable timetable and division of tasks is established. Also, it has to ensure that participants deliver on time their work and that the resulting report is soon made available to all competent authorities. Finally, it acts as a reference point for all the external interested parties such as institutions, ECAIs and supervisors.

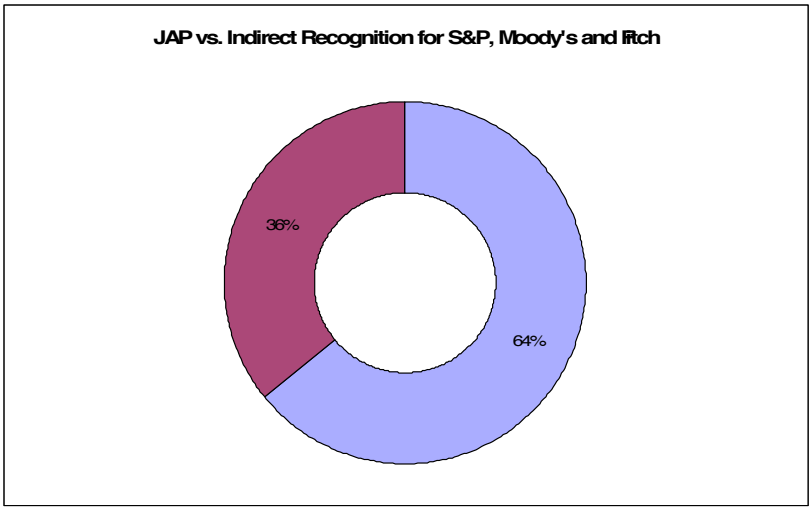
Given the market structure of the rating industry, the CEBS has maybe considered that, apart from the big three firms, most of the ECAIs in Europe operate predominantly in one single MS whose competent authority should naturally lead the Joint Assessment. As an alternative, under CRD rules other MSs might simply allow an indirect recognition based on the home authority's assessment, without performing their own evaluation process. This latter option is clearly welcomed by the industry which has asked to the CEBS to publish a guidance on this issue so to limit the possibility that MSs do not allow indirect recognition. While the CEBS didn't issue any guidance on this point, it has stated its belief that "the common understanding set out in the guidelines will provide a sound foundation for supervisors' use of the indirect recognition approach in relevant circumstances"[45].

Empirically, the Joint Application Process has demonstrated quite effective. It was first used for the big three ECAIs which applied for recognition in all European countries in early 2006 (immediately after the Guidelines' publication). The three market leaders had sought recognition for all three market segments and both with reference to

[43] CEBS (2006a:12).
[44] Ibid.
[45] CEBS (2006a:2).

the Standardized and the Securitization IRB approach, aiming to provide both solicited and unsolicited ratings. The CEBS provided secretariat for the assessment process, to which most of the European countries participated. In particular, eighteen MSs took part directly to the Joint Process by appointing a representative for both the PTG (Plenary Technical Group) and the SVFG (Shared View Finalization Group). The other ten members decided instead to rely at least on one of the two groups' views and indirectly recognize the three agencies (see table 3). Soon after, in August that year, "competent authorities across Europe reached a shared view on the Fitch Ratings, Standard and Poor's Ratings Services and Moody's Investor services eligibility for regulatory capital purposes"[46], following the requisites on methodologies required by the CRD and specified in the Guidelines (see *infra*).

Table 3 - Percentage of MSs which participated to Fitch, S&P and Moody's JAP vs. those which opted for indirect recognition. (Source: elaboration on CEBS data)



[46] CEBS (2006b:1).

Overall, the first three Joint Assessment Processes under CEBS's secretariat were fast and worked well. Also, they demonstrated able to reduce administrative burden and ensure a level playing field across those institutions that use ECAIs' ratings under the SA and the Securitization IRB approach. While nearly two thirds of the competent authorities participated to the JAP, several MSs' authorities recognized it was not cost-effective to join the process and thus relied – as auspicated by the CEBS - on indirect recognition. Later on, other ECAIs applied but a JAP was performed under CEBS's Secretariat only for DBRS (Deminion Bond Rating Services) which sought recognition in twelve MSs (see table 5). Other JAPs were performed at a more local level in collaboration between the competent authorities but without CEBS's assistance. For example, JCRA (Japan Credit Rating Agency) sought recognition in Belgium, France and Ireland, Coface did it in France and Portugal, while Creditreform Rating AG did it in Austria and Germany (see table 4). Others, like R&I (Rating and Investment Information), announced the intention to apply but haven't done it yet.

Table 4 - Local level JAPs (CEBS data)

ECAI	**Countries**
JCRA	Belgium, France, Ireland
Coface	France, Portugal
Creditreform	Austria, Germany

Table 5 - Countries in which DBRS sought recognition (CEBS data)

AT	1	IT	1
BE	0	LI	0
BG	0	LT	0
CY	0	LU	0
CZ	0	LV	0
DE	1	MT	0

DK	0	NL	1
EE	0	NO	1
EL	0	PL	0
ES	1	PT	0
FI	1	RO	0
FR	1	SE	1
HU	0	SI	0
IC	0	SK	0
IE	1	UK	1

However, in absence of CEBS's coordination, doubts can be casted over how consistently the CRD criteria are applied by local competent authorities. A key problem here is that most of the recognition criteria (e.g. methodology and individual credit assessment) envisaged in the CRD are rather vague, even though the CEBS has tried to achieve a common understanding regarding the way these should be processed across Europe. The following section will then assess whether CEBS's guidance on recognition criteria might be a sufficiently powerful tool for harmonization or whether, in absence of a CEBS–leaded JAP, problems of competitive neutrality might still arise.

IV.2- implementing the CRD recognition criteria consistently in each MS

As mentioned, "the key purpose of the recognition criteria is to identify ECAIs that produce external credit assessments of sufficiently high quality, consistency and robustness to be used by institutions for regulatory capital purposes under the Standardised Approach and the Securitisation Ratings Based Approaches[47]". In investigating whether ECAIs possess processes and procedures to ensure those standards, competent authorities must use the technical criteria as set out in the CRD[48] and must treat all ECAIs equally. Still, given different ECAIs'

[47] CEBS (2006a: 16).

[48] Cf. Annex VI, Part 2 and Annex IX Part III.

business models, they might need to take differentiated approaches and place different weights on different criteria depending on the ECAI they are assessing. What in any case supervisors must consider is the ability of the ECAI to issue credit assessments which can be proved robust on the basis of the underlying quantitative methods and of the relevant data track record. Another possible criterion is the degree of market acceptance, being a very strong credibility not a requisite but an important factor in determining the needed accuracy of the assessment process. Also, the adherence to a code of conduct (such as the IOSCO Code of Conduct Fundamentals for Credit Agencies) can be considered as an element to partially prove the ECAI's compliance with some of the CRD criteria.

To sum up, the recognition criteria are the basis for supervisors to reach a decision but the CEBS has explained that they are not the only elements to be considered and can be integrated by other parameters. Nonetheless, they clearly constitute the essential part of the assessment and a proper and homogeneous understanding of them is key to ensure an homogeneous treatment across Europe. So the CEBS has tried to circumstantiate the CRD criteria in the way as follows.

Objectivity

Regarding objectivity, competent authorities have to verify that the rating methodology is rigorous, systematic, continuous and subject to validation according to the historical experience. The key point that the CEBS has made clear on this issue is that the accuracy of the "core[49]" ECAI's methodology has to be supported by statistical evidence for all the three broad areas (namely structured finance, public finance and commercial entities) for which ECAIs use similar credit assessment methodologies and are thus separately assessed. In turn, ECAIs should demonstrate that they have put in place appropriate procedures so that their methodology is applied consistently within each asset class and/or market segment. The CEBS has clearly highlighted that supervisors

[49] Slightly different methodologies are generally used for different asset classes or market segments.

should not in any way endorse any particular methodology but they should simply verify whether the model is able to ensure sufficient consistency and discrimination to be used for capital requirements under the SA and the IRB Securitization approaches. In particular, regarding the model's discriminatory power, the provision of default studies and transition matrices is required. Quantitative evidence is also encouraged to demonstrate the consistency and predictive power of the model. In addition, ECAIs have to prove that they are able to identify systematic errors via back testing and consequently to correct (when needed) the methodology.

The rationale underlying the way objectivity is tested is based on the consideration that quantitative (output) measures that can demonstrate a robust credit assessment are also evidence of a reliable and objective methodological process (input). The industry endorses this evidence-based quantitative approach and has argued that supervisors should perform their monitoring activity on methodologies (see *infra*) only when the ECAI cannot demonstrate its objectivity through *backtesting*, market acceptance and credibility. While the CEBS believes that a partial assessment of methodology is to be carried out in any case, it recognizes that the supervisor's assessment will need to be deep only when quantitative evidence is partially lacking. However, in these latter cases, supervisory analysis is intended to remain at a high level, meaning that supervisors can look at the drivers' ability to guarantee sensible results but not to the exact methodology being used.

Internal CEBS's documents demonstrate that S&P's, Moody's, Fitch's and DBRS's methodologies have been judged "rigorous, systematic, continuous and subject to validation based on historical experience" on the basis of both qualitative and quantitative information provided by the applicants. However, most of the elements taken into consideration to verify the compliance with the objectivity criteria are quantitative. Also, while supervisors look at the ECAI's own default rates and transition studies, they carry themselves the main part of the quantitative analysis in line with what prescribed by the Guidelines. In particular, default rates series are taken as a good proxy for

discriminatory power when they show an inverse correlation with credit ratings[50]. Also, trend in default rates, if significant, are considered as indicators of a possible change in assessment criteria, thus signalling a low level of consistency. Finally transition matrixes are used to verify whether transitions from one grade to another are smooth and thus ratings can be assumed to be sufficiently stable.

Overall, the system in use to test objectivity seems able to ensure the necessary degree of objectivity and consistency across ECAIs, even in those cases in which the recognition process will be carried out merely at the national level. However, some market participants have argued that quantitative controls might not be feasible in the case of smaller/new-comers ECAIs which might not have been able to supply their services for enough time to build up a sufficiently long CDR[51] database and transition matrixes. Another problematic issue arises from the fact that some ECAIs have not always supplied supervisors with sufficiently updated data, so that the overall reliability of the assessment might in principle be biased.

Other criteria

Aside objectivity, the CEBS is less specific in providing further guidance on the other three principles indicated by the CRD, namely independence, on-going review and transparency. Regarding independence, it clarifies under which circumstances conflicts of interests may arise and it explicitly states that an institution cannot appoint for its own capital purposes an ECAI which is also its subsidiary. Also, it prescribes ECAIs to establish the needed procedures to avoid the risk of "external political inference or constrains" and "economic pressures that may influence the credit assessment" as mentioned by the CRD. Finally, it confirms that ECAI's procedures and policies should be able to guarantee the independence of its methodology in respect of ownership, other parts of the business (eg consulting services), the way financial resources are allocated, the level

[50] Supervisors make use of a Gini coefficient to assess the level of discriminatory power.
[51] i.e. "cumulative default rates".

of expertise and the corporate governance structure. As for on-going review, the CEBS's guidance is very much in line with the provisions of the CRD and simply highlights that credit assessments are supposed to be reviewed regularly by the ECAI itself which in turn will have to demonstrate to the competent supervisors that is has "procedures in place to ensure that the credit assessment remains appropriate[52]". Also, a review has to be performed at least annually and after any major event[53] and the competent authority must monitor this process and make sure that it is informed of any relevant change in the ECAI's methodology. Finally, regarding transparency and disclosure, the CEBS simply specifies that the methodology's disclosure has to be general but still thorough, promptly updated, easily understandable and available to potential users.

In sum, independence, ongoing review and transparency are specified in a more qualitative way than objectivity. Also, the way provisions are described is quite high level and appear less precise then the corresponding chapters in the IOSCO[54] Code. This is reflected in the way the assessment of the four biggest ECAIs has been performed. What is evident from CEBS's documentation is that the analysis is high level and at times somewhat superficial. Also, differently from objectivity, supervisors heavily rely on public available proprietary information and in any case cannot directly verify its contents. For example, evidence that staff are sufficiently skilled, that there are mechanisms in place to avoid undue interference from major shareholders, or that the fee policy is independent from the results of the assessment is unilaterally provided by the applicant. Similarly, it is the ECAI that illustrate the internal policy to ensure continuous monitoring of ratings or appropriately disclose its methodology.

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[52] CEBS (2006a:22).

[53] In CEBS's view this is an event which is "large enough to change the credit assessments assigned by an ECAI to an entity" (Ibid.) Also, CEBS guidelines specify what is meant by the one year back-testing requirement as in §5(a) of Annex VI of the CRD and considers it as a synonymous of the "validation based on historical experience" under the "objectivity" criterion.

[54] The IOSCO is the International Organization of Securities Commissions.

The second bunch of criteria (i.e. the Individual credit assessments, namely ratings' credibility and transparency) envisioned in Annex VI of the CRD are also described in CEBS's guidelines. In particular, regarding credibility and market acceptance, the CEBS assumes that when market participants widely use an ECAI's assessments they must consider them as credible and reliable and this should allow the competent authorities to be more confident and perform a lower level of assessment (see *supra*). As for transparency and disclosure, the CEBS specifies that there is a level-playing field rationale at the basis of the requirement to make individual credit assessments available "at equivalent terms to all credit institutions having a legitimate interest[55]" in it, regardless of their jurisdiction. In particular, it highlights that "equivalent terms" does not mean identical terms, so that some price discrimination is still possible when the economic circumstances are different. Differently, when an ECAI does not charge subscribers, it must make available to the public a full list of its public credit assessments and update it any time it is needed.

Both the credibility and transparency criteria seem to be well circumstantiated and not too difficult to be proved, at least for the big four players. Evidence from the recognition process confirms this point and shows that credibility and market acceptance are generally demonstrated on the basis of a) existing recognition by other authorities, b) inclusion in Fixed Income Indexes and c) industry awards or other evidence of wide market acceptance. As for transparency, competent authorities are satisfied that the requirements are fulfilled when ratings are accessible by the public at large and the relevant rating actions are available to subscribers. Also, a distinction between solicited and unsolicited ratings is considered of help.

Differently, the demonstration of credibility and transparency of credit ratings might not be so straightforward for smaller local agencies. In particular, despite no evidence is available, it seems reasonable to

[55] Annex 6, Part II of the Basel Accord. CEBS states that every institution that use the Standardizes Approach or the Securitization Rating Based Approach can be considered as having a legitimate interest.

assume that it is not always possible for them to provide substantial evidence on market acceptance, at least in the ways specified above. In CEBS's view, this should lead at the minimum to a deeper assessment of methodology through the objectivity, independence, on-going review and transparency criteria. However, as discussed, the objectivity test might not be feasible as well, being it strongly based on quantitative data which might be rarely available to smaller agencies.

While in these cases it is reasonable of course to allow more room for a qualitative assessment of methodologies' objectivity, a word of caution should be spent here as, again, this might be done in substantially different ways across countries. In order to ensure consistency, requisites would need to be well specified ex ante but this is not always the case, being the required (qualitative) methodological criteria and procedures to prove objectivity rather vague (see supra). The same considerations can be applied to the requisites necessary to prove independence, on-going review and transparency. Most of these controls are in fact "meta-regulatory[56]" in that they verify the existence of internal controls and procedures to guarantee the relevant standards but do not analyze them directly, so more precise (and thus, consistent) standards cannot be verified. Hence further work is needed in this area if supervisors want to ensure consistency across countries while at the same time guaranteeing that quantitative requirements do not constitute an undue barrier to entry that would further restrict the access to an already strongly oligopolistic market.

IV.3 - sharing common criteria for the mapping of external credit assessment to the CRD risk weights.

In order to ensure that credit assessments are associated with the right credit quality steps, ECAIs should perform an objective and consistent

[56] Cf. Morgan (2003).

mapping process[57]. A correct mapping process is key in that it jointly guarantees an appropriate level of capital for banks, a level playing field for institutions and a fair treatment for ECAIs. Of course, absolute accuracy is neither possible nor necessary and it is important that further requirements are not imposed on ECAIs. Also, supervisors should not in any way intend to influence or change the ECAI's models but need to be constantly updated on default rates so that they are able to verify whether the mapping process is always well functioning. Finally, in order to guarantee consistency across MSs, the cooperative arrangement already described for the recognition process is to be followed, i.e. that competent authorities jointly carry out the mapping of ECAIs under the lead of the process facilitator.

The mapping process is intended to be mainly quantitative, even though qualitative factors that impact on the comparability with the benchmark may (and should, when data are scarce) be taken into account. In particular, the CRD requires supervisors to take into account several pieces of information such as the definition of default, the statistical significance of ECAIs default rates, the pool of issuers covered, the range of credit assignments and the meaning of each assignment. The CEBS also highlights other important factors such as the variables used to weight default events, the geographical coverage and the dynamic properties of the rating system. A typical situation in which qualitative factors might play a crucial role is when an ECAI uses methodologies which are different from those that are used by international entities upon which the Basel Committee constructed its benchmark. If this is the case, the ECAI should qualitatively explain these differences to the supervisor in order to let it understand what is represented by a credit assessment and the risk level associated with it[58].

[57] CEBS considers the Basel Committee's guidance for supervisors set out in Annex 2 of the Basel II framework published in June 2004, to be valuable and appropriate, and it is recommended that supervisors follow it. (CEBS, 2006a).
[58] CEBS (2006a:29).

However, quantitative factors are pivotal to ensure consistency between different ECAI's assessments and at the same time to appropriately differentiate between relative degrees of risk. The key indicator here is the "cumulative default rates" (CDRs) over a period of three years, meaning the sum of the defaults that have happened in a three years period for all the rated items within the same group. The most recent ten-year average of the three-year CDR has then to be compared by the supervisor with the "long run" reference three-year CDRs. The two most recent three-year CDRs are instead compared with the "monitoring level" and the "trigger level" (as established by Annex II of Basel II) to verify whether they are systematically higher (cf. table 6 and 7). If this happens, competent authorities can assign a lower credit quality step, unless the ECAI is able to demonstrate that the results observed were not a consequence of a faulty methodology or miscalculations. In the case of new-built ECAIs, which of course are not able to show the ten year CDR average, supervisors will ask for a projection of it and will review it with appropriate conservatism when needed.

Table 6: Comparisons of CDR Measures (source: Basel text, Annex 2, Table 1)

Comparisons of CDR Measures[2]

International Experience (derived from the combined experience of major rating agencies)	Compare to	External Credit Assessment Institution
Set by the Committee as guidance		*Calculated by national supervisors based on the ECAI's own default data*
Long-run "reference" CDR	⟺	Ten-year average of the three-year CDR
CDR Benchmarks	⟺	Two most recent three-year CDR

CEBS's internal documentation corroborates the quantitative nature of the mapping process and gives evidence of its great importance within the process of recognition. As discussed, the supervisory analysis is mainly based on the CDRs' statistics and has been divided in five steps.

In the first stage, competent authorities look at the default definitions used by the applicant so to verify whether the default rates supplied by the applicant are comparable to the benchmark values. In other words, before comparing data on defaults by rating category, competent authorities familiarize with the definitions and assumptions underpinning the data. In the second and third stage, the two comparisons as illustrated above are performed. In particular, ECAIs' long run CDRs are compared with the "reference" levels as recommended by the Basel Committee and the two most recent three-years CDRs are contrasted with the "monitoring" and "trigger" level benchmarks.

Table 7: Long-run "reference" three-year CDRs and three-year CDR benchmarks (source: Basel text, Annex 2, Table 1)

S&P Assessment *(Moody's)*	**AAA-AA** *(Aaa-Aa)*	**A** *(A)*	**BBB** *(Baa)*	**BB** *(Ba)*	**B** *(B)*
20-year average of three-year CDR	0.10%	0.25%	1.00%	7.50%	20.00%

S&P Assessment *(Moody's)*	**AAA-AA** *(Aaa-Aa)*	**A** *(A)*	**BBB** *(Baa)*	**BB** *(Ba)*	**B** *(B)*
Monitoring Level	0.8%	1.0%	2.4%	11.0%	28.6%
Trigger Level	1.2%	1.3%	3.0%	12.4%	35.0%

As a fourth step supervisors focus on the past oscillations of the three-years CDRs for each rating grade, while referring to CDR monitoring and trigger levels as a benchmark. What it is observed here is the past reliability of the ECAI's standards. Looking at CEBS's documentation, excesses of the monitoring and trigger level do not necessarily lead to the assignment of a higher credit quality step[59] as long as these are transitory and are justified on the basis of macroeconomic factors. In fact, the analysis of CDRs time series goes further and looks at the

[59] For a description of the mapping of ECAIs' assessments to credit quality steps, cf. *infra*, Appendixes II and III.

number of CDR standard deviations that separate the average from the monitoring level, i.e. a reflection of how frequently the CDR might get close to the threshold. In view of these results, as a fifth step supervisors examine whether significant trend are the consequence of the loosening/tightening of the assessment criteria or if, viceversa, they are due to other factors such as the economic cycle[60].

Overall, the Joint Process appears fundamental here to guarantee a good degree of consistency and avoid confusion and arbitrage for institutions adopting the standardized approach. As mentioned, "disparities in mapping across jurisdictions could result in inconsistent treatment of comparable credit risk by banks, where for example banks may be required to hold different quantities of capital for the same amount of credit risk depending on the jurisdiction[61]". This is a risk that the Joint Process as established by the CEBS has been able to avoid: internal CEBS data indicate that long term averages of the 3-years CDRs are quite similar across the three biggest ECAIs in all the rating categories and are way below the monitoring levels. Nonetheless (as discussed above when the recognition process was analyzed) there is no evidence to prove that smaller Joint Processes that have been carried out without CEBS's assistance have worked in the same way. Also, it is not clear how "domestic" ECAIs will be mapped at the national level. Despite the mapping process has been well specified in the CEBS Guidelines and heavily relies on quantitative (objective) standards, there might still be room for national discretion.

IV.4. Has the CEBS been successful?

To summarize, while it is true that the CEBS has been quite successful in guaranteeing an harmonized recognition and mapping process across Europe, it is to be highlighted that the scope and depth of this task has been very limited. As for the scope, Joint Processes under

[60] The trend's significance analysis is based on t-tests for least squares estimates in a linear regression, with weights accounting for the different year-to-year pool sizes. The T statistic is also corrected for the overlap of consecutive years.
[61] Moody's (2004:6).

CEBS's secretariat have only been established to recognize the four biggest rating agencies. Other (smaller) Joint Processes have been ran by competent countries but there is no sufficient evidence on the way they were actually carried out. The same is true for merely domestic ECAIs: some of them have applied for recognition but most of the times these processes have not even been communicated to the CEBS, Consequently, doubts can be casted on whether domestic assessments are being and will be carried out consistently across countries.

Regarding the depth of analysis, the way some of the criteria are verified seems sometimes too formal. This is particularly true when qualitative analysis is used to verify the existence of a proper methodology. To be sure, CEBS's requisites on methodology are narrower in scope but quite similar to those required by the IOSCO Code, which according to a recent analysis performed by CESR[62] have not proved particularly effective. What is clear from the recent market turbulence is that rating agencies' methodologies are not immune from biases and technical problems and the way standards are currently prescribed seems not stringent enough to ensure a sufficient level of quality on an ongoing basis.

It is in light of this reasons that the CESR has urged the Commission to build up a European supervisory body on Credit Rating Agencies (CRAs) that monitors compliance with the IOSCO code. This proposal has recently been endorsed by the Commission which has supported the need for a strengthened oversight on European rating agencies by means of a EU registration system. In the following section, this paper aims at analyzing this regulatory initiative and to understand its possible impact on the ECAIs recognition system as established by the CEBS.

[62] CESR (2008).

V. The Commission proposal for a new oversight regime for rating agencies in Europe: how will it impact on the harmonization process?

Following a late 2007 Commission request to re-evaluate regulatory options regarding credit rating agencies[63], the CESR issued in May 2008 a proposal that urges the Commission as an immediate step to "form an international monitoring body to develop and monitor compliance with international [IOSCO] standards". Also in light of the recent market turmoil, the Commission has soon decided to support the need for an enhanced European approach to ensure a more stringent implementation of internationally approved principles for CRAs and in late July has published a proposal for consultation based on a new regulation with respect to authorization, operation and supervision of CRAs[64]. Organizations will need to respect these substantive requirements in order to be able to operate in the EU. In Commissioner Mc Creevy's words: "CRAs will have to register and become subject to supervision in the EU"[65]. The aim of the new regulation is to improve assessments' quality while making the system more transparent and minimizing conflicts of interests.

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[63] This followed a through reform by the Securities and Exchange Commission (SEC) in the US, which established in 2007 an oversight regime for Credit Rating Agencies registered as Nationally Recognized Statistically Rating Organization (NRSROs). The Credit Rating Agency Reform Act 2006 and the Commission's new rules require registered credit rating agencies to disclose their procedures and methodologies for assigning ratings. The NRSROs are required as well to publish some measures of their performance such as historical downgrades and default rates. Overall, clearer criteria have been established to determine which CRAs qualify as NRSROs. Similarly to what is currently happening in Europe, the US Congress considered that granting oversight powers to the securities regulators was the best way to guarantee further reliability as well as accountability, transparency and competition in the credit rating industry. However, this intervention was probably insufficient and more recently the SEC has released a critical report about the practices of CRAs in the light of the role they played in determining credit ratings for securities collateralized by or linked to subprime residential mortgages. A threefold set of comprehensive reforms have been proposed to regulate conflicts of interest, disclosures, internal policies and business practices in CRAs.

[64] Also, several policy options that may address the problem of excessive reliance on rating agencies have been taken into consideration, but this is outside the scope of the paper.

[65] Thait (2008).

To achieve this result the Commission aims to introduce a strengthened oversight regime for rating agencies through a EU registration system. In particular, the Commission has illustrated to the market two different possibilities:
1) option 1 is based on a reinforced coordinatory role for CESR while home MS competent authorities would be responsible for authorization, supervision and sanctioning;
2) option 2 would combine the establishment of a European agency (probably CESR), which would be responsible for the authorization process, with the reliance on MSs' authorities for supervision and sanctioning.

Regardless the option that will eventually be chosen[66], what it is clear is that registering a CRA means recognizing that its rating system is sufficiently reliable. However, as already discussed with reference to CEBS's recognition system, there are two main ways to verify whether a rating system is reliable:

1. a qualitative input or process-oriented analysis (i.e. looking at which information is used and with which methodology it is processed to verify whether ratings as issued by CRAs are trustful);
2. a more quantitative output-oriented analysis (i.e. looking at how effective the rating system has proved, e.g. by crossing rating time series with actual defaults by rated companies to understand whether they constitute an effective proxy for credit worthiness).

The EU proposal is apparently following the first solution, but, as mentioned in the previous analysis of the CEBS's recognition system, monitoring standards which are qualitative and process-oriented might be tricky on several grounds. Firstly, in order to enact a process-

[66] On November 12th the European Commission actually adopted a proposal to regulate CRAs. The contents of the proposal are wide and involve many aspects of the rating agencies' market. Regarding supervision, the Commission broadly endorsed the first of the two options it had consulted the market on.

oriented supervision independent authorities have to look closely to CRAs' forecasting models and to the information they are processing. This postulates that they are provided with clear-cut supervisory powers[67] that allow them to carefully assess whether the internal process is compliant with standards. In their absence, mistakes can easily be made with the risk of being blamed by media and politicians. Also, process-oriented supervision might easily bias the incentive structure of CRAs because, by (subjectively) judging their methodologies, supervisors in real fact share with them the responsibility for possible mistakes[68]. Finally, when regulation is qualitative and principle-based, developing material rules to be used in the supervision process is definitely not easy. This is because qualitative standards are very complex to verify when issues have a clear technical character.[69] As it was shown in the previous section, quantitative standards work better on two main grounds: they are easier to monitor and ensure a more consistent supervisory assessment.

However, what is even more compelling in the context of this paper, is that by providing MSs with national supervisory powers the Commission's proposal (at least in its first version[70]) might add a further element of competitive bias to the European financial system and consistency might become even more difficult to guarantee across different CRAs and countries. A further effect is that the Commission proposal is likely to alter the equilibrium that the current CEBS's recognition regime on ECAIs has been able to achieve. While as mentioned the monitoring process was at times too formal and probably not always effective, the CEBS's Joint Process has been able to ensure some consistency of treatment across Europe, at least for the big

[67] Indeed, if enforcing powers are limited to a name and shame approach, this doesn't mean that supervisory powers are not needed

[68] In such a system, CRAs would maintain quite a comfortable position: on one side issuers are expressly required by regulators to use CRAs' services, on the other the same regulators act as certifier of CRAs' work.

[69] As Kerwer argues, "Should there be stronger public supervision of rating agencies, the public supervisors will have to develop their own material rules; and this is an extremely challenging task."Kerwer (2001)

[70] See note 64 above.

players. In order to preserve the favourable results of the JAP process, banking supervisors have then suggested that a similar system should be established also for the CRAs' registration process, in which they could be jointly involved with their securities counterparties. However, while establishing a JAP for authorization would certainly reduce the extent of the level playing field problem, it would not certainly be a panacea. As it was showed in the previous section, a model of coordination with qualitative standards might work well for big international players but it cannot guarantee that the same standards are consistently applied by domestic authorities to small local players.

Differently, if the Commission will opt for the second option (i.e. a centralized authorization), consistency would appear much easier to achieve not only for international CRAs, but also for smaller local players. Unfortunately, by looking at the first political reactions, the second option suggested by the Commission seems quite unlikely to be chosen[71]. Thus concerns regarding the ability to ensure competitive neutrality of a reinforced supervision which is both local based and process oriented remain: when subjectivity is associated with a local implementation, the resulting regulatory environment is hardly harmonized.

Given the difficulty in establishing a centralized oversight, an alternative and more effective option would be not to focus on how to build up smoother cooperative arrangements, but change the regulatory strategy and establish an output based system, ie verifying on a systematic basis if CRAs have worked well in forecasting defaults. This way there would be less room for discretion, thus avoiding the main problem associated with process-oriented and geographically fragmented supervision. Also, the reputation incentives in CRAs market would be reinforced so that supervisors would not be forced to step into the tricky field of subjective assessments and more incentives would be given to the market to work properly. Finally, as demonstrated by the CEBS's experience in recognition, quantitative

[71] See note 64 above.

rules would be more transparent and easy to use and pose a minimal administrative burden[72].

A ultimate possibility to overcome competitive neutrality problems and make the market work better would be simply to reduce the area of use of credit ratings for regulation. This would force issuers to use ratings only when they believe in their quality and, at the same time, investors would take them into account only if they constitute a real effective proxy for the probability of default. As mentioned, many academics endorse this thesis by arguing that rating agencies have been more and more powerful after public authorities incorporated them in their substantive regulation. Incorporating ratings into legislation does in fact generate regulatory licences that have a value[73], and these are key in constituting "private authority"[74] for credit agencies. What it is striking here is that even CRAs seem to agree with this point. As argued by Moody's, "(…) the widespread use of ratings in regulation threatens to undermine the quality of credit over time by increasing rating shopping, decreasing rating agency independence, and reducing incentives to innovate and improve the quality of ratings[75]". Within this framework, supervising rating agencies is likely to further bias CRAs' structure of incentives by reducing the degree of accountability in front of the market and exposing supervisors to political blame. As White[76] argues, "these suggestions do not mean that the credit rating firms should be prevented from playing a continuing role in helping issuers and investors pierce the fog of asymmetric information in financial markets. But that role should be determined by the market participants

[72] While of course there are several problems associated with quantitative-based supervision as objective rules are difficult to define, are rarely flexible and might increase regulatory barriers (that are already quite high in the rating market industry), they are still quite useful as a basis for a more holistic system that is based on quantitative thresholds but, in case a few of these are not met, it is still able to open a discussion and verify on more qualitative grounds whether there is sufficient evidence to justify authorization.

[73] Partnoy (2001).

[74] Kerwer 2001.

[75] Moody's Investors Service (2000: 10).

[76] White (2001).

themselves, not by additional regulation that artificially increases demand and restricts supply. The latter is a recipe for shortages, rents, and distortions. This is not a welcome prospect."

VI. Conclusion

Under the Basel II SA approach rating agencies have been given a key power in that they can indirectly determine the amount of capital that SA banks need to keep aside to cover credit risk. But, as much as internal ratings, also external ratings might be faulty or inconsistent at times and thus their ability to assess risks correctly and consistently has to be monitored. For this reason the quality of ECAIs' standards needs to be recognized by competent supervisors which in turn have to map their ratings and match them with the relative risk weights. However, there is a connected problem in that different supervisors might perform this task differently, depending on their regulatory style and institutional characteristics, and thus the level playing field might be altered.

Given this framework, this paper has tried to assess whether CEBS's efforts have been effective in ensuring an harmonized recognition process across Europe. It has been found that the establishment of a Joint Application Process under CEBS's secretariat has been a relative success in ensuring a consistent treatment to ECAIs across Europe, but its scope and depth have been very limited. As for the scope, a proper JAP under CEBS's assistance was in fact performed only for the biggest four players, while the assessment processes of more local agencies have been sometimes not even communicated to the Committee.

Regarding depth, to make even local recognition processes consistent across Europe, the CEBS has specified the meaning of the criteria for recognition, but it has done so in a very qualitative and broad way. Consequently, they hardly appear able to be implemented consistently in absence of a centralized co-ordinatory entity. Differently, due in part to a better specified regulatory framework, the mapping process has

been structured in a more objective and technical way. While most of the recognition standards have a "metaregulatory" character (ie they are based on ECAI's internal assessments of their compliance with certain rules), mapping is carried out directly by supervisors on the basis of ad hoc data that have to be prepared and submitted by the ECAIs themselves. So there are good reasons (but no evidence) to assume that, even in absence of a joint process, clearly specified mapping rules will allow competent supervisors to ensure sufficient consistency across Europe.

From a more theoretical standpoint, by analyzing the dichotomy among output-based and process-based regulation, this paper enriches the long lasting parallel debate between the advocates of "principle-based" and (detailed) "rule-based" regulation. While flexibility is associated with general rules, certainty, consistency and predictability are generally believed to come together with more detailed rules. So, when international regulatory regimes are linked with local supervision, objective rules seem the only way to guarantee consistency in implementation and thus avoid regulatory arbitrage. On the opposite, when qualitative and more principle-based rules are established, only a centralized oversight might be able to ensure a shared approach to supervision.

Institutionally, this work makes a case in favour of enhanced European financial integration, not only at the regulatory but also at the supervisory level. While with the Lamfalussy process achieving consistent regulation has resulted way easier and effective, there is still a long road to establish consistent supervision across Europe. In particular, despite the three level three (3L3) committees (ie CEBS, CESR, CEIOPS) are doing a big effort to develop a common approach to supervision by issuing recommendations and guidelines, these are adopted by the supervisory authorities only on a voluntary basis. So there might often be disagreement on specific topics which are subject to mutual recognition and 3L3 committees are given the difficult role to facilitate co-operation through mediation mechanisms. As a consequence, while the process towards supervisory integration for

current regulation will need a long time to achieve ultimate results, there is a case to argue that at least when new EU rules are established greater attention should be devoted to which level supervision might be better allocated and to the possible consequences that reliance on local supervision might bring about for the achievement of competitive neutrality.

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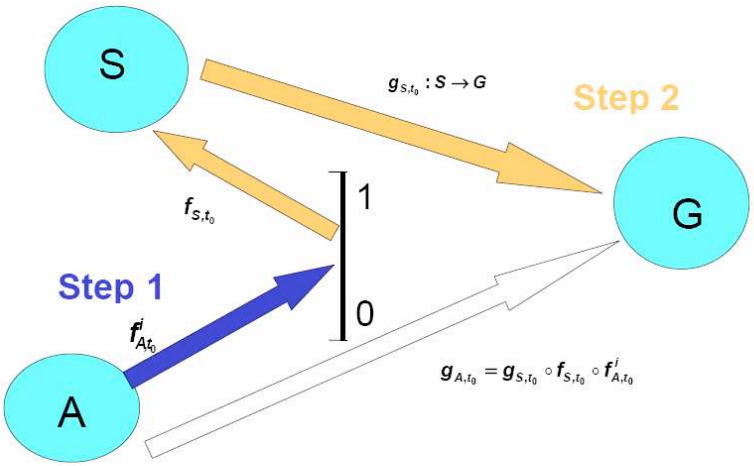
VIII. APPENDIXES:

Appendix I - How does a Mapping process work (Assoulin and Sigrist, 2005)

Under the CRD, mapping functions are constructed through the 3-year probabilities of default for issuers within each rating class. The mapping process can be split up into two steps:

1- in step 1 the rating class is mapped into the probability of default [0,1];
2- in step 2 the PD interval is mapped into G (the set of risk weights) by:
    a. mapping PD values into S&P' rating classes,
    b. assigning to each S&P's class the risk weight as required by §53 of the CRD.



Example: To determine the risk weight for a claim on the central bank of Buma Buma, the regulator assigns a 3-year PD level e.g. 0.005 =0.5%, to Alpha's rating class A3 (mapping f^i_{A,t_0}). Then the regulator determines the S&P's rating class which, in some way fits best to a 3-year PD of 0.005 (mapping f_{S,t_0}). Imagine this was S3=A, then §53 leads to a risk weight of 20% (mapping g_{S,t_0}).

Appendix II - Mapping of ECAIs' credit assessments to credit quality steps: Standardised Approach (Source: CEBS)

Credit quality step	Risk weight
1	20%
2	50%
3	100%
4	150%
5	150%
6	150%

Long and short term mapping

		DBRS	Fitch	Moody's	S&P
Mapping to credit quality steps - Long term credit assessment	1	AAA to AA-	Aaa to Aa3	AAA to AA-	AAA to AAL
	2	A+ to A-	A1 to A3	A+ to A-	AH to AL
	3	BBB+ to BBB-	Baa1 to Baa3	BBB+ to BBB-	BBBH to BBBL
	4	BB+ to BB-	Ba1 to Ba3	BB+ to BB-	BBH to BBL
	5	B+ to B-	B1 to B3	B+ to B-	BH to BL
	6	CCC+ and below	Caa1 and below	CCC+ and below	CCCH and below
Mapping to credit quality steps - Short term credit assessment	1	F1+ to F1	P-1	A-1+ to A-1	R-1 (high), R-1 (middle), R-1 (low)
	2	F2	P-2	A-2	R-2 (high), R-2 (middle), R-2 (low)
	3	F3	P-3	A-3	R-3
	4	below F3	NP	below A-3	R-4 and R-5
	5	---	---	---	---
	6	---	---	---	---

Appendix III - Mapping of ECAI's securitisation credit assessments to credit quality steps (Source: CEBS)

Securitization - Short term mapping**:** Standardised approach

Credit quality Step	Risk weight and associated securitisation short-term rating	Risk weight and associated securitisation short-term rating	Risk weight and associated securitisation short-term rating
	Moodys	**Fitch**	**S&P**
1	20% P-1	20% F-1+, F-1	20% A-1+, A-1
2	50% P-2	50% F-2	50% A-2
3	100% P-3	100% F-3	100% A-3
All other Credit assessments	1250% NP	1250% Below F-3	1250% All short-term ratings below A3

Securitization - Short term mapping**:** IRB approach

Credit quality Step	Securitisation short-term rating	Securitisation short-term rating	Securitisation short-term rating
	Moodys	**Fitch**	**S&P**
1	P-1	F-1+, F-1	A-1+, A-1
2	P-2	F-2	A-2
3	P-3	F-3	A-3
All other Credit assessments	All short-term ratings below A3, P3 and F3	Below F3	All short-term ratings below A3

Securitization - Long term mapping**:** Standardised approach

Credit Quality Step	**Risk Weights**
1	20%
2	50%
3	100%
4	350%
5	1250%

		DBRS	Fitch	Moody's	S&P
Specific mapping to credit quality steps for long term securitisation positions (SA)	1	AAA to AA-	Aaa to Aa3	AAA to AA-	AAA to AAL
	2	A+ to A-	A1 to A3	A+ to A-	AH to AL
	3	BBB+ to BBB-	Baa1 to Baa3	BBB+ to BBB-	BBBH to BBBL
	4	BB+ to BB-	Ba1 to Ba3	BB+ to BB-	BBH to BBL
	5	B+ and below	B1 and below	B+ and below	BH and below

Securitization -. Long term mapping: IRB approach

Credit Quality Step	**Risk Weights**		
	Most senior tranche	**Base**	**Non-granular pool**
1	7%	12%	20%
2	8%	15%	25%
3	10%	18%	35%
4	12%	20%	35%
5	20%	35%	35%
6	35%	50%	50%
7	60%	75%	75%
8	100%	100%	100%
9	250%	250%	250%
10	425%	425%	425%
11	650%	650%	650%
Below 11	1250%	1250%	1250%

		DBRS	Fitch	Moody's	S&P
Specific mapping to credit quality steps for long-term securitisation positions (IRB)	1	AAA	Aaa	AAA	AAA
	2	AA	Aa	AA	AA (including AAH to AAL)
	3	A+	A1	A+	AH
	4	A	A2	A	A
	5	A-	A3	A-	AL
	6	BBB+	Baa1	BBB+	BBBH
	7	BBB	Baa2	BBB	BBB
	8	BBB-	Baa3	BBB-	BBBL
	9	BB+	Ba1	BB+	BBH
	10	BB	Ba2	BB	BB
	11	BB-	Ba3	BB-	BBL
	12	below BB-	below Ba3	below BB-	below BBL