

## 8. THE EVOLUTION OF FINANCIAL SUPERVISION: THE CONTINUING SEARCH FOR THE HOLY GRAIL

*Donato Masciandaro and Marc Quintyn*<sup>1</sup>

“...the conduct of supervision is a thankless task which is all too likely to tarnish the reputation of the supervisor ... The best that a supervisor can expect is that nothing untoward happens. A supervisor is only noticed when either he/she angers the regulated by some restrictive or intrusive action, or when supervision “fails” in the sense that a financial institution collapses or a customer gets ripped-off. One can talk oneself blue in the face about the desirability of allowing some freedom for banks or other financial institutions to fail, etc... but supervisors will always tend to get a bad press when that does happen, come what may.”

(C. Goodhart (2000), p. 28)

### 8.1. INTRODUCTION

Financial regulation and supervision (or “regulators” and “supervisors”) are terms that are often used interchangeably. Yet, they reflect separate activities and are typically performed by different people, even though they are (by necessity) complementary in their contribution to the final objective which is to maintain a sound financial system. While *regulation* concerns the drafting and implementation of rules and regulations governing the activities of the financial system, supervision is about ensuring that financial institutions obey the regulatory framework, and imposing sanctions on those institutions that do not abide by the rules and regulations. Such sanctions can go as far as “closing” insolvent institutions, with attendant consequences on individuals’ property rights.

This chapter presents an overview of the evolution of financial supervision. Supervision, as we know it now, emerged as an autonomous policy area between the mid-to-late seventies and the early eighties of last century and grew to maturity during the eighties and nineties. During the seventies, several advanced economies had begun the move from strategies of financial repression, to financial liberalization (or deregulation) – first domestically and gradually also internationally. The newly emerging environment led to a dissociation of fiscal policy,

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<sup>1</sup> The views expressed in this chapter are those of the authors and do not necessarily represent those of the IMF or IMF policy. The authors would like to thank the referees for very constructive and useful comments and suggestions.

monetary policy and financial regulation and supervision. While these policy areas were intensely intertwined in the first two post-war decennia, they now started to emerge as independent (but also interdependent) policy areas. In the late eighties and early nineties, emerging and developing economies got also engaged in this liberalization process.

In this new environment, the need for a coherent financial regulation and supervision framework was in fact spurred by the first banking (or financial) crises – such as the secondary or “fringe” bank crisis in the UK (1973-75) and the Herstatt failure (1974), later followed by crises in several Latin American countries. Once the need for a supervisory system was recognized, academic interest in the topic emerged as well. From here onward the debate about, and the evolution of, financial supervision has been evolving along a number of themes related to its *efficiency* and *effectiveness*. The first debate focused on the relationship between monetary policy and supervision, once two intertwined and now two separate policy domains. The key question was whether central banks should perform both activities, or whether these policies should be separated institutionally.

While the foregoing debate was exclusively on banking supervision – *prudential* supervision of other financial activities such as securities, insurance and pensions funds was nearly nonexistent in the first decades – the gradual blurring of the boundaries among financial institutions’ activities led to a new debate in the mid-1990s. The question was whether supervision of banks and other types of financial institutions should be conducted under one roof (one single agency) in order to enhance efficiency and effectiveness.

A third area of discussion – the governance of supervision – emerged in two steps. In the wake of the Savings and Loans (S&L) crisis in the United States in the latter part of the 1980s, prominent scholars pointed at weaknesses in supervisory governance (without, however, using that term). More specifically, self-interest capture was mentioned as a key contributor to this crisis. It was, however, the East Asian financial crisis (1997-98) that led to a more fundamental debate about supervisory governance because scholars and practitioners alike had pointed at the fact that the string of national crises was, among others, provoked by the fact that many supervisors had been operating too close to – and under pressure of – their governments.

Then came the global crisis<sup>2</sup>. This crisis led to the full development of macro-prudential supervision as a new policy domain next to the traditional, and henceforth called, micro-prudential supervision. The institutional organization of both, naturally, has a bearing on all of the previous themes. So, all the themes

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<sup>2</sup> Chapter 12 in this volume by Ayuso and Blanco deals specifically with financial crises.

mentioned above are back at the discussion tables, both at the national and the international levels.

So, here we are, into the fourth decade of evolution in our thinking about, and fixing of, supervision. While it seems that the literature has identified and discussed all the essential themes that have an impact on supervisory efficiency and effectiveness, there is also a widespread feeling that the search, and research, remains unaccomplished. Indeed, none of the discussions on the various themes has come up with clear black-and-white conclusions, and each of the issues is being reopened after every financial crisis. Post-mortems of each and every financial crisis point (rightly or wrongly) at supervisory failures and the cry for change resonates loudly.

Why is this the case? And is it typical for financial supervision? This chapter will explore these questions. The answers come from two angles, which also reinforce each other. On the one hand, in a liberalized financial system, the search for supervisory effectiveness is eternally caught by the tension that exists between the need for control of financial systems and the latter's aspiration to operate as freely as possible. In this environment, supervision is supposed to *monitor* (and sanction if needed) the financial system, more than strictly *control* it. This means that supervision's essential mission is "to bring about an appropriate governance for banks" (Dewatripont and Tirole's (1994) "representation hypothesis" of regulation and supervision.) Even though the objective of regulation and supervision is to ensure the soundness of the financial system, the implication of the representation hypothesis is that the *ultimate* responsibility for financial soundness remains with the financial institutions themselves (and their corporate governance) and not with the supervisors. The upshot of this tension – and the concomitant challenge for supervisors – is perfectly reflected in Goodhart's quote at the beginning of this chapter: if financial institutions are free, failing is part of this freedom, but supervisors will always be blamed for it.

On the other hand, since the objective of soundness of the financial system remains hard to define and is certainly not strictly measurable, supervisors and their principals have, from day one of financial deregulation onward, been struggling with agency problems. Supervisors' contract (in a principal-agent sense) will always be incomplete because of the definition and measurement problems with their objective and the multiple contingencies that they are facing in executing their jobs.

Both explanations are at the source of an important "gap between the expectations of the public (*and often the politicians – our addition*) about the roles of (banking) supervision (that no one should ever lose any part of their deposit as a result of a (bank) failure), and the objective of the supervisors (i.e. to prevent systemic collapse and the alleviate asymmetric information by the partial protec-

tion of uninformed clients.” (Goodhart and Schoenmaker (1995a), p. 342). This discrepancy leads, as Goodhart and Schoenmaker (*ibid.* p. 343) state, to the well-known recurring situation where “...the public and politicians will blame the regulatory authority for the crises that do occur ...while taking the regulators for granted otherwise.” To a large extent, this blame game is at the origin of the ever recurring efforts to revisit the various aspects of supervision by the political class.

The truth is that both perspectives should lead us to understand that supervision can never (and, in Corrigan’s (1992) words should never) be failsafe. This rather disconcerting finding should not be a reason to give up the search for more efficient and effective supervision. After all, supervision is the vital link between regulation and financial sector stability. Even the most effective regulatory framework (if such a thing would ever exist) would not succeed, if it is not carried through by effective supervision. In addition, financial supervisors have powers that go far beyond the typical powers of most other regulators. Their enforcement and sanctioning powers potentially have a far reaching impact on individual rights, particularly the right to property, as in the case of the closure of a bank. For these two crucial reasons, the profession should remain focused on the main supervisory questions of our times, draw lessons from crises and try to improve its efficiency and effectiveness. In the last section of this paper, we propose a new architecture that could lead to better supervisory governance, and thus improved effectiveness.

This chapter will review the evolution of supervision from the angle of the key moments that defined and colored it. The next section presents an overview of the evolution of financial supervision. The subsequent sections discuss in detail the various individual steps in the evolution. They deal with the architecture of supervision, the role of the central bank, the governance of supervision, and the new twists in the ongoing debate in the wake of the global financial crisis, from which our proposal follows.

## 8.2. EVOLUTION OF FINANCIAL SUPERVISION – A TIMELINE

Financial supervision, as we know and define it now, has emerged less than four decades ago. Since then, it has come a long way, but the conclusions summarized above are telling us that it still has some way to go to be the effective link between the regulatory framework and the objective of financial sector soundness and stability. This section lays out the evolution of financial supervision by identifying the major milestones since its emergence as an autonomous policy field. Our presentation will follow Table 8.1, which presents these milestones, in conjunction with their main drivers and developments in other macroeconomic policy fields of relevance for developments in shaping financial supervision.

### 8.2.1. Emergence as an Autonomous Policy Area

Bank supervision emerged as an autonomous policy field in the wake of financial liberalization which started to gain ground in most advanced economies in the late-1970s. Before that time, and since the end of the Second World War, economies were dominated by what McKinnon (1973) and Shaw (1973) labeled as financial repression. Financial repression was an essential part of a government strategy that aimed at rebuilding war-torn economies and fostering economic growth and development through a centralized control over the financial system. Key features of this strategy were a predominance of state-owned banks, the use of such instruments as credit ceilings, directed lending, interest rate controls and high reserve requirements for commercial banks, and monetary financing of government deficits by the central banks – who were typically under the strict control of the government. More generally, the activities of commercial banks were strictly regulated.

Table 8.1: Milestones in the Evolution of Financial Supervision

	Drivers	Financial Supervision	Financial Regulation	Monetary Policy	Financial Stability
1950s and 1960s	“financial repression” is dominant model	Monetary policy, bank regulation and supervision, and fiscal policy are all intertwined and the former two are subordinate to fiscal policy. Credit controls, interest rate ceilings, interest rate controls serve multiple purposes, these instruments are implemented by the central bank, which is tightly controlled by the government.			
1970s	Starting mid-1970s: domestic financial liberalization, mainly in advanced countries 1973-75 Fringe bank crisis (UK) – 1973 Franklin National Failure (US) – 1974 Herstatt Failure	Recognition of prudential banking supervision as a stand-alone financial policy area	Emergence of “prudential regulation and supervision” (in addition to legal control).	Move from direct to indirect instruments – development of financial markets – convergence onto notion of “price stability” as single objective of monetary policy	
1980s	1981 Banco Ambrosiano Gradual international financial liberalization leading to internationalization of big financial institutions  financial crises in Latin America	1974 – Basel Committee on Banking Supervision (BCBS)	1988 Basel Concordat – first attempt to harmonize key prudential regulations in order to create level playing field among internationally active banking institutions. Focus is on capital as anchor for prudential regulations.	Central bank independence is being promoted as the institutional device to avoid time inconsistency in monetary policy and achieve the price stability objective	
1990s	1991 BCCI Failure – 1995 Barings failure	Supervision inside or outside central bank? Relationship with monetary policy			

Drivers	Financial Supervision	Financial Regulation	Monetary Policy	Financial Stability
<p>Continued blurring of borders between activities of several types of financial institutions. Formation of big financial conglomerates.</p>	<p>1996 Basel Core Principles for Effective Banking Supervision (followed by similar principles for other segments) – core principles have a bearing on effective supervision as well as effective regulation.</p>	<p>Inflation targeting becoming the dominant monetary policy strategy in advanced economies, with growing emphasis on accountability and transparency (central bank governance)</p>	<p>Recognition of importance of financial stability as an independent policy goal</p>	<p>Several central banks establish “Financial Stability Departments.” However, there is no generally agreed and measurable objective and central banks have no clearly defined set of instruments to pursue financial stability</p>
<p>Supervisory architecture debate starts (unification? Inside versus outside central bank?). Trigger is establishment of FSA in the UK (1997)</p>	<p>Start work on Basel II</p>	<p>Discussion about supervisory governance, inspired by debate on central bank governance</p>		
<p>1997 East Asian Crisis, followed by Russia (1998) and others</p>	<p>Great moderation</p>			
<p>2007 – start of global financial crisis followed by sovereign debt crisis</p>				

	Drivers	Financial Supervision	Financial Regulation	Monetary Policy	Financial Stability
2010s		Lessons from the crisis include definitive split between micro- and macro-prudential supervision – this leads to the reopening of the debate on supervisory architecture and governance including the role of the central bank.	Basel III	As the result of the crisis, questions are being raised about appropriateness of inflation targeting and unique focus on price stability by central banks	Financial stability accepted as second central bank objective, in addition to price stability – gives rise to recognition of macro-prudential supervision as key policy domain. Instruments are being defined.



While all advanced countries shared the basic philosophy of this strategy, the application of the instruments varied. The United States for instance, used interest rate controls but never applied credit ceilings to their commercial banks. In Germany, the Bundesbank had, for that time, an exceptionally great degree of autonomy and a clear mandate to control inflation, while still using some of those direct instruments.

Under this all-encompassing government strategy, all macroeconomic policy domains were narrowly intertwined. Monetary policy was de facto subservient to fiscal policy and had no clear objectives of its own. Central banks, as an arm of the government, were key instruments for quasi-fiscal activities. As economic entities, commercial banks were subject to a set of strict regulations governing their activities. Many among them were state-owned banks. What is known now as “prudential regulations” was non-existent<sup>3</sup>. In theory, monetary controls served indirectly as prudential controls (Hall (1993)) as they put limits on the commercial banks’ activities. However, the reality in most countries was different: credit controls, directed lending and subsidized interest rates served the politically well-connected and gradually led to a culture of non-repayment of loans and corruption, thereby eroding the banks’ capital and forcing the governments to recapitalize them. If there was some form of “supervision” it was limited to a “box checking”-activity.

In the end, the strategy behind financial repression did not yield the expected results in terms of growth and development – and in addition, increasingly produced negative side effects as discussed above. Leading authors, such as McKinnon (1973) and Shaw (1973) argued in favor of letting the financial system play its role more freely in order to arrive at a better allocation of scarce financial resources. With the Anglo-Saxon world in the lead, several countries embraced financial liberalization (or deregulation), first domestically and gradually also by opening their borders.

The new paradigm – financial liberalization – implied that financial institutions would compete for resources and in their allocation process. And competition means taking risks – finance in general is about taking risks. Against this background the concept of “prudential regulation and supervision” came into existence. In fact, just like many subsequent episodes in the evolution of financial regulation and supervision, the recognition of the need for a prudential regulatory and supervisory framework was crisis-driven. In several countries, financial liberalization soon became associated with financial crisis (as epitomized in the

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<sup>3</sup> Since the mid-1930s, the US had some form of bank supervision, but it consisted in essence of a set of strict bureaucratic controls over the banks’ activities (Lacoue-Labarthe, 2003). The UK had a system of self-regulation for commercial banks (Goodhart, 2007), but this system was rather cartel-protecting and enforcing and did not serve prudential purposes.

early liberalization literature by Diaz-Alejandro's (1985) "Good-bye Financial Repression, Hello Financial Crash" who observed that in the case of Latin America, liberalization in many cases led to financial crises and that lax prudential supervision in a liberalized environment contributed to these outcomes). Thus, the need for a prudential regulatory framework became pressing because of growing evidence that financial institutions' internal risk management and governance were not strong enough – or did not get the attention needed – to control, or avoid, negative externalities.

Literature has justified government regulation in three types of situations: (i) to curb monopoly power; (ii) to protect investors (or consumers); and (iii) to preserve systemic stability. Reasons two and three have commonly been put forward to justify more stringent regulations for the financial sector, than for any other sector in the economy. In fact, under financial repression, financial institutions merely operated, and were regulated, like other utilities companies, whereas in a "liberalized" world, the financial system was elevated to a key role in the economy. So, systemic stability became a major concern, justifying a new set of regulations, prudential in nature. The Cooke Committee was the first attempt to formulate a harmonized set of "prudential regulations" supposed to guide the banking business<sup>4</sup>.

The need for an elaborate supervisory framework (again, much more elaborate than for other economic sectors) stems from two reasons. First, the 'public good'-role of the financial system, as the fulcrum of the economy, justified that the prudential regulation framework be complemented by an intrusive supervisory framework (consisting of "off-site monitoring" and "on-site supervision"). Secondly, there was a growing consensus that banks were "special." They are special, not only because they are pivotal in the economy, but also because growing risk-taking in an increasingly competitive environment led to a growing opaqueness of their balance sheets. The opaqueness is a big barrier for an important group of stakeholders, the (small) depositors who had an increasingly hard time to get accessible information about the state of their financial institution. So supervision in protection of this group of stakeholders was justified. Supervisors were entitled to participate in, and have a say about, the governance of the individual financial institutions, such as their risk management (Dewatripont and Tirole (1994)).

Once "prudential regulation" and "prudential supervision" had been established as autonomous policy areas, academic interest in the topics started to grow, as

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<sup>4</sup> The "Basel Committee on Banking Regulation and Supervisory Practices" saw the light of day in 1974. The First Basel Concordat was agreed in response to the failures of Franklin National and Herstatt. Subsequent failures, and the fact that growing international competition was driving down bank capital ratios led to the 1988 Basel Accord, a first set of harmonized prudential rules (Goodhart, 2007).

was recognized by Richard Schmalensee in the foreword to Ed Kane's 1985 book on deposit insurance and supervision:

“Until quite recently this regulation (of financial services) has not received scholarly attention commensurate with its economic importance; it seemed to fall into a large crack, separating students of regulation, whose background rarely equipped them to analyze financial markets, and students of finance, who were not generally much interested in regulation and its effects.”

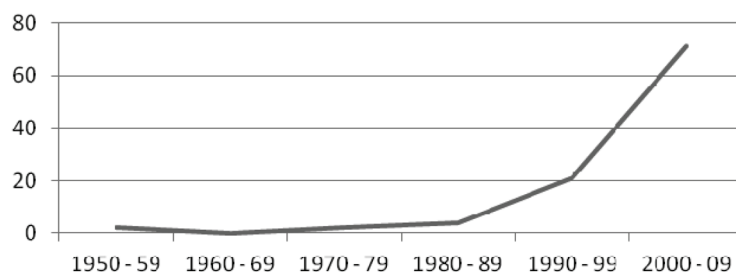
In effect, Kane's book, together with a few other publications in the mid-1980s, was among the first ones to offer an economic perspective on prudential regulation and supervision<sup>5</sup>. To confirm the above observation, and give an indication of the growing interest since then, we conducted a (non-exhaustive) search of the economics literature on the terms “bank supervision” and “financial supervision”<sup>6</sup>. In the period 1970-79, two papers were published that had “bank supervision” in the title or the abstract (Figure 8.1)<sup>7</sup>. For the 1980s, the number was four. It increased exponentially to 21 in the 1990s and 71 in the period since 2000. Supervision of other parts of the financial system was largely irrelevant for research until the 1990s. The first papers with “financial supervision” in title or abstract appeared after 1990 (five for the decade, which are included in the 21 above), and 61 in the period since 2000, meaning the larger part of the 71 publications referred to above.

Results of a search into the broader category of news articles (as an indication of the broader public's interest in the topic) with both terms in the headline or the lead paragraph are reflected in Figure 8.2. Bank supervision appeared only once or a few times in the seventies and early eighties. Around the time of the Savings and Loans crisis (S&L) in the US we notice a first peak. The next peak is at the time of the Asian crisis, when also “financial supervision” makes its appearance. Since the early 2000s, the latter overshadowed the former significantly, and the global crisis led – as could be expected – to an explosion of references to financial supervision. Thus, besides the increase in general interest in the topics in the broader news, it is also clear – but not surprising – that the interest in the topic is highly crisis-driven.

<sup>5</sup> See also Gardener, (1986) on the UK, and Benston, Eisenbeis, Horvitz, Kane and Kaufman, (1986) on the US. Hall (1993) offers an analysis of UK bank supervision in a historical perspective.

<sup>6</sup> We searched with the help of Econlit. Books and book chapters are not included in this search.

<sup>7</sup> We found two references in the 1950s but those were analyses of supervision in the intrawar period. No references were found in the 1960s.

**Figure 8.1: Number of Papers on Supervision in Journals (per decade)**

Source: EconLit

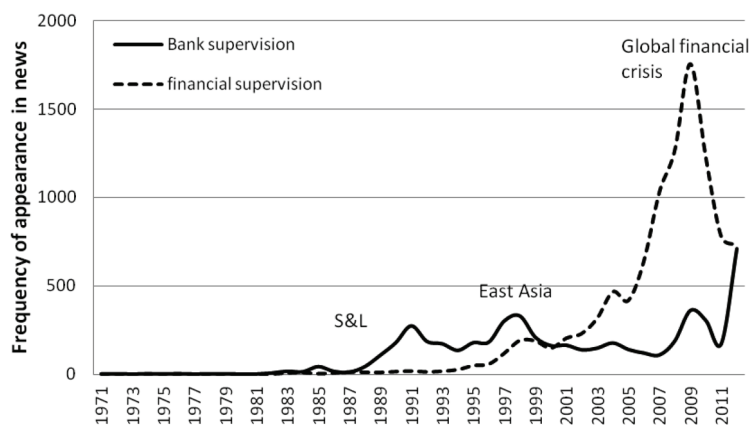
### 8.2.2. Milestones and their Drivers

Once the economic profession had recognized the importance of supervision, the thinking about its position vis-à-vis other policy areas, as well as its own efficiency and effectiveness started to take shape.

The first topic that attracted a broad audience was the question as to whether supervisors should be housed in the central bank, or more broadly about the relationship between supervision and monetary policy. The seminal paper by Goodhart and Schoenmaker (1995a) set out arguments in favor and against separation. It was followed by a number of other contributions that shed some additional light on the topic. The question emerged from a number of drivers: first, with monetary policy and central banks becoming more independent from governments, and supervision becoming a separate activity, the question was justified as to whether central banks should be (or remain) in charge of supervision. Historically both models had emerged, as Goodhart (2007) stated, in most cases not by design. Secondly, a number of “accidents” in banking (most notably BCCI in 1991) had threatened to tarnish reputations of central banks that were in charge of supervision. Thirdly, the first signs of blurring of boundaries between financial institutions had become visible, opening the debate as to whether central banks should also be in charge of supervising those financial institutions with which they had no direct dealings.

This last driver, an outcome of growing international financial integration and the formation of large financial conglomerates, brought a new topic to the table in the second half of the 1990s, namely the supervisory architecture. Other segments of the financial system were gradually growing out of the shadow of the banking industry and the traditional boundaries among the operations of financial institutions started to become blurred. With this development, prudential supervision of these other segments of the financial system (securities markets, insurance companies and pension funds) had taken shape and the question that

Figure 8.2: Frequency of Appearance in News



Source: EconLit

emerged was whether supervision should remain organized according the traditional silos model (one supervisor for each segment of the financial system), or whether supervisors should be brought together under one roof (integration or unification) in order to enhance supervisory efficiency and effectiveness. Another model that was put at the table (Taylor (1995 and 1996)) was the organization of supervision along functional lines: the twin peaks model proposed a separation between conduct of business supervision and prudential supervision. The role of the central bank remained of course intertwined with this search for an appropriate financial architecture.

The next theme that entered the spotlight was *supervisory governance*. A first discussion of some aspects thereof emerged at the time of the S&L crisis. Several authors, such as Kane (1989) and Randall (1993) argued that supervisory forbearance was one of the main contributing factors to the S&L crisis. Supervisory forbearance implies that supervisors refrain from addressing an institution's problems head on, which is bound to lead to a deepening of the problems in that specific institution, and ultimately to an increase in the costs of addressing them, among others because these problems could be contagious. Thus, forbearance revealed a fundamental commitment problem on the part of supervisors, analogous to the time consistency problem confronted in monetary policy. Hence, supervisory governance arrangements that align their incentives are needed. In an influential paper, Benston and Kaufman (1988) proposed "prompt corrective actions" as an instrument to align supervisors' incentives. This proposal introduced the "rules versus discretion" debate in the supervisory discussion.

The systemic banking crises that hit a number of countries in the period between, broadly, 1994 and 2003 led to a more fundamental and wider debate about

supervisory governance<sup>8</sup>. Lack of supervisory independence was often mentioned as one of the contributing factors to these crises. Finally, the debate also received attention in its connection with the searches for a new supervisory architecture: countries where supervision was taken out of the central bank, wondered if supervisors should enjoy similar levels of independence to what they had in the central bank. In other cases, governments moved supervision into the central bank to ensure that its level of independence matches that of the central bank. Those were also the glory days of central bank independence, which led to demonstration effects.

The most striking feature of the impact of the *global financial crisis* on the supervisory debate is that it has put all the previous themes back on the table, colored by one additional new important trend: the separation of macro-prudential and micro-prudential supervision. This paradigm shift has an impact on all the issues discussed before: the role of the central bank in supervision, the institutional structure of supervision in light of the emergence of macro-prudential supervision as an independent policy area, and the governance of both sides of supervision. The answers to all these questions are still under debate and given the newness of the debate, will certainly go on for a while.

The next sections will go deeper into each of these four themes, highlighting the main issues in the respective debates and indicating the trends. For the smooth flow of the arguments, we will start with the debate on the architecture of supervision, and not with the debate on the role of the central bank (which came chronologically first), because this argument is also embedded in the discussion on the architecture (and both debates emerged within a few years from each other).

### 8.3. THE ARCHITECTURE OF FINANCIAL SUPERVISION

The discussion about the most appropriate supervisory architecture started in earnest with the 1997 decision of the UK government to move bank supervision out of the Bank of England and into the Financial Services Authority (FSA), a new agency in charge of conducting supervision over all segments of the financial markets. As a matter of fact, this decision was preceded by earlier changes in the supervisory architecture in the Scandinavian countries. In the wake of the “Scandinavian crisis” – often labeled the first systemic financial crisis – the respective governments decided to integrate their supervisory agencies at the national level. One of the arguments used was that their financial sectors were too small to

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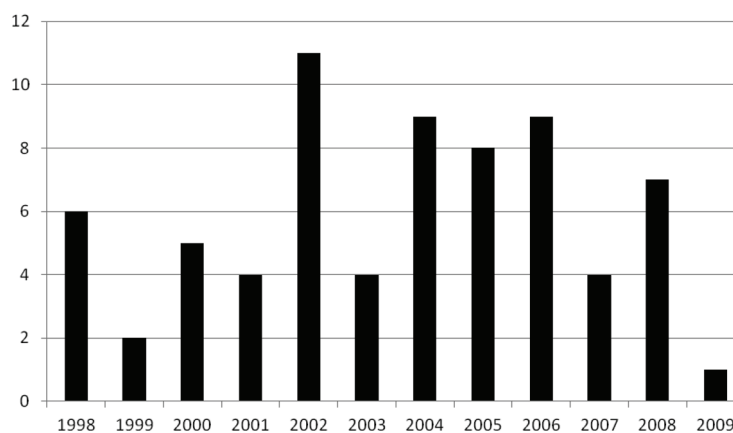
<sup>8</sup> It should be noted that the first version of the Basel Core Principles for Effective Banking Supervision, issued in 1997 just ahead of the Asian Crisis, mentioned (Principle 1) that supervisors should have a fair degree of “operational independence” (Basel Committee on Banking Supervision, 1997).

justify separate supervisory agencies (“small economy argument” – see Abrams and Taylor (2000)).

However, it was the UK decision that actually stirred the debate worldwide, and the consecutive systemic crises of the late 1990s and early 2000s added to the reform zeal. Based on a dataset of a heterogeneous sample of 102 countries, we observe that in the decade before the Global Crisis a large number of countries reformed the structure of their financial supervision. In the ten years since 1998, 64 percent of the countries included in our sample – 66 out of 102 – chose to reform their financial supervisory structure (Figure 8.3), by establishing a new supervisory authority and/or changing the powers of at least one of the already existing agencies.

The reform trend is even more evident when we add a regional and country-income perspective. Figure 8.4 provides a breakdown by country groups and shows that the European, the EU and OECD countries account for respectively 82 percent, 77 percent and 73 percent of the countries that have undertaken reforms. Therefore, the shape of the supervisory regime seems to have been a relevant issue in particular in more advanced countries, and particularly in Europe.

Figure 8.3: Number of Reforms of the Supervisory Architectures per Year (1998-2008)

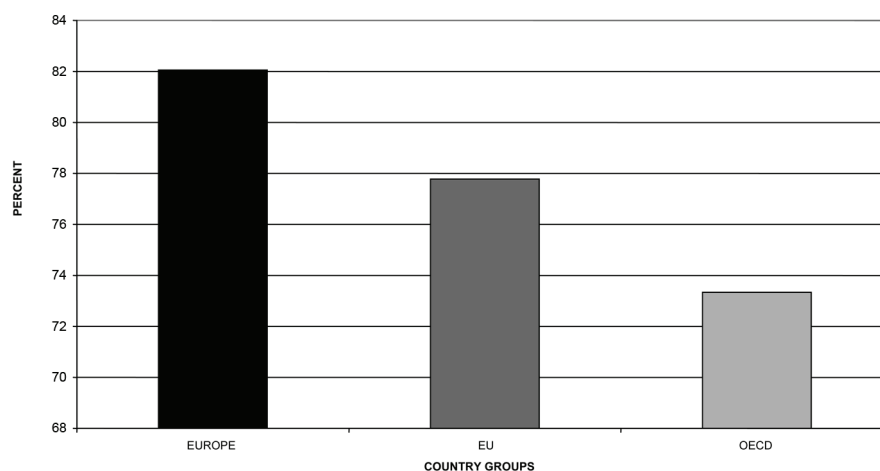


Source: Masciandaro and Quintyn (2009)

Europe was clearly the laboratory of this new consolidation trend in the supervisory architectures. In addition to Norway – the first country to establish a single supervisor in 1986 – and Iceland (1988), five other countries, members of the EU – Austria, Denmark (1988), Germany (2002), Sweden (1991) and United Kingdom (1997) – assigned the task of supervising the entire financial system to a single authority different from the central bank, while in Ireland (2003) the super-

visory responsibilities were concentrated in the central bank's hands. Also, four countries involved in the 2004 EU enlargement process – Estonia (1999), Latvia (1998), Malta (2002) and Hungary (2000) – reformed their structures, concentrating all the powers in a single authority. Outside Europe the unified agency was established, among others, in Korea (1997) and Japan (2001).

Figure 8.4: Reforms of the Supervisory Architectures by Country-groups (1998-2008, % of the total)



Source: Masciandaro and Quintyn (2009).

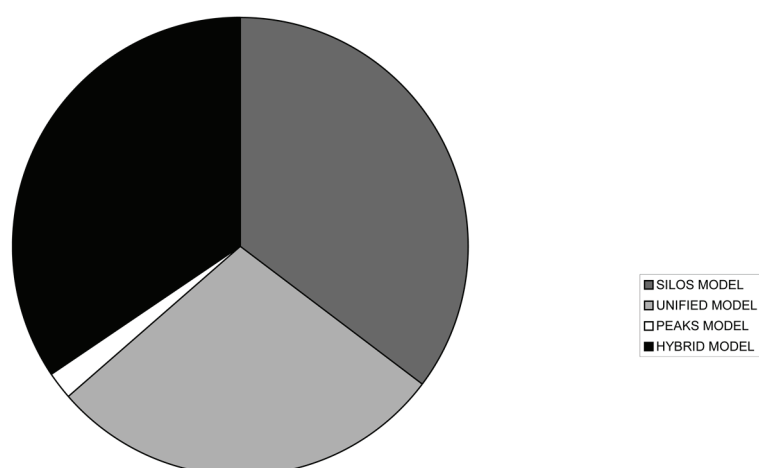
Figure 8.5 summarizes the state of affairs at the eve of the global crisis. We group the supervisory regimes along the three main models that theory so far proposed: the vertical (silos) model, which follows the boundaries of the financial system in different sectors of business, and where every sector is supervised by a different agency; the horizontal (peaks) model, which follows the differences among the public objectives of regulation, and where every objective is supervised by a different authority; and the unified (integrated) model, where a single authority supervises all objectives for the entire financial system. We do not consider the model by function, which follows the functions performed by banking and financial firms, given its very limited historical use.

In 36 countries (35 percent of our sample) the supervisory regime still followed the vertical model, with separate agencies for banking, securities, and insurance supervision. The classic silos model worked well in a structure of the financial industry with a clear demarcation between banking, security markets and insurance companies. In the regimes consistent with this model a monopolist agency operates in each sector.



In another 24 percent of our sample (24 countries), a new regime of supervision was established with the introduction of a single authority, covering banking, securities and insurance markets supervision. The single supervisor acts as a monopolistic agency on the overall financial system. In the small ‘peaks’ group we classify the two countries – Australia and the Netherlands, two percent of our sample – where supervision aimed at preserving systemic stability is concentrated in one peak, and the conduct of business supervision in another. Both the unified model and the peaks model represent examples of the consolidation process that seems to dominate the reforms of the supervisory architectures before the Global Crisis.

Figure 8.5: Models of Financial Supervision Architectures (102 countries)



Source: Masciandaro and Quintyn (2009)

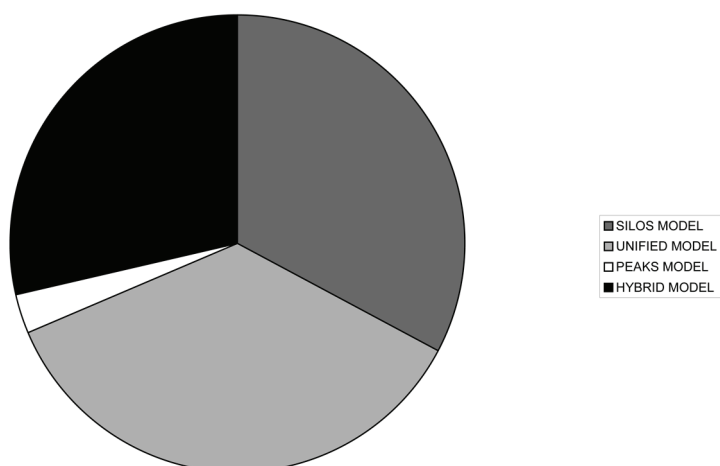
Finally, other countries adopted hybrid supervisory regimes, with some supervisors monitoring more than one segment of the market and others only one. We bring them all together in a residual class (40 countries, 39 percent of our sample). The group comprises countries such as France, Italy and the US. The dimension of the residual class is unsurprising if we recognize that the drivers of each national supervisory setting can be more than one, which are often intertwined and hidden in their historical patterns.

The evolution in the supervisory regimes becomes clearer if we focus on the 66 countries that implemented reforms in the period 1988-2008 (Figure 8.6): the weights of the three main regimes (unified, silos and hybrid) become essentially equal – respectively 30 percent, 33 percent and 33 percent – while the peaks regime is the least common one (four per cent). In other words, 40 percent of the sample (20 countries) adopted an ‘innovative’ regime of supervision – unified or

peaks regime – while the remaining 60 percent (31 countries) opted for a ‘conservative’ approach, i.e., maintaining the more traditional regime (silos or hybrid regime).

From a theoretical point of view, the alternative between the single authority (integrated or unified) model and the multi-authority model became the more relevant one in the debate on the supervisory architecture. Identifying the optimal supervisory regime between the two models is a truly interesting problem. *Prima facie*, the single supervisor model seems to be the “natural” and best answer to the challenges posed by the financial market blurring<sup>9</sup>. If, in the long run, the expected financial structure is a perfectly integrated and unique market, the best design for the supervisory architecture would seem to be the single authority<sup>10</sup>. But the answer seems to be not so simple. One strand of literature<sup>11</sup> pointed out that, given different institutional settings, it was possible to highlight the corresponding gains and losses<sup>12</sup>, and to perform a rational cost-benefit analysis to choose between alternative models<sup>13</sup>.

Figure 8.6: Models of Financial Supervision Regimes after the Reforms Implemented before the Global Crisis (66 countries)



Source: Masciandaro and Quintyn (2009)

<sup>9</sup> See De Luna Martinez and Rose (2001). The importance of financial conglomerates in explaining the supervisory architecture reforms before the Crisis is claimed in Abrams and Taylor (2002), Grünbichler and Darlap (2003), Schoenmaker (2003).

<sup>10</sup> See Lanoo (2000) and Briault (1999).

<sup>11</sup> See explicitly Hawkesby (2000), but most of the quoted studies seem to be consistent with the cost-benefit approach.

<sup>12</sup> For a complete analysis on the arguments in favor of and against integrated supervision see De Luna Martinez and Rose (2001).

<sup>13</sup> In the specific banking regulation area, Kahn and Santos (2001), provide a theoretical analysis of several alternative institutional allocations of regulations.

If it is possible to agree with the initial intuition – the importance of the cost-benefit analysis<sup>14</sup> – it is also worth noting that the relative conclusion on the possibility to find an optimal supervisory regime seem to be rather unsatisfactory and inconclusive. First, one can say that, given a single authority, it is possible to increase the efficiency in the relationship between supervisor and regulated firms, because the cost of supervision and the possibility of supervisory arbitrage decrease<sup>15</sup>. But one can also say that, given the single supervisor model, efficiency in the supervisor-regulated firm relationships decreases because, with a single authority, capture risks could increase<sup>16</sup>, while the innovation-incentive in the regulated industry could decrease<sup>17</sup>. Therefore, the sign and the magnitude of the single supervisor model effects, with respect to the regulated firm relationship issues, seem rather vague and ambiguous.

The same kind of conclusion is reached by analysing the relationship between the single authority and the political system (independence and accountability<sup>18</sup>, discretionary<sup>19</sup> or capture<sup>20?</sup>), the effects in terms of supervisory organization and resource allocation (economies<sup>21</sup> or diseconomies of scale<sup>22</sup>, benefits or costs of goal conflicts' internalization<sup>23?</sup>), and the consequences on the financial services costumers behaviour (confidence<sup>24</sup> or over-confidence<sup>25?</sup>). At the end of the day the consensus was that a “superior” model of supervision cannot be identified.

Empirical analysis confirms these insights: the evidence gathered before the Global Crisis on the impact of institutional features on enhancing supervisory effectiveness remained ambiguous. Barth *et al.* (2003) used a difference of means test to ascertain whether differences in the supervisory architecture correlate in a significant way with key differences in banking industry structure. For a sample of 133 countries, for the period 1996-1999, they found no correlation between the number of supervisory authorities and any of the key features of a banking system. Consolidation does not matter.

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<sup>14</sup> The pros and cons of the integrated model are analysed in Barth, Nolle, Phumiwasana and Yago (2002), Kremers, Schoenmaker and Wierds (2003).

<sup>15</sup> Briault (1999), Llewellyn (1999b), Goodhart (2002).

<sup>16</sup> Taylor (1995).

<sup>17</sup> Barth, Nolle, Phumiwasana and Yago (2002).

<sup>18</sup> Briault (1999), Llewellyn (1999b), Lannoo (2000), Abrams and Taylor (2000). On the meaning of regulatory and supervisory independence see Quintyn and Taylor (2002). Beck, Demirgüç-Kunt and Levine (2003) examine the impact of bank supervision independence on the corporate financing obstacles.

<sup>19</sup> Goodhart *et al.* (1998). See also Laslett and Taylor (1998), Quintyn and Taylor (2002). On the risks of excessive power of a single regulator see also Taylor (1995), Briault (1999), Llewellyn (1999b).

<sup>20</sup> Fender and Von Hagen (1998), Ciocca (2001).

<sup>21</sup> Briault (1999) and (2002), Llewellyn (1999b), Lannoo (2000). Abrams and Taylor (2001) and Goodhart (2002) claim that the economies of scale argument is most applicable in small countries or those with small financial systems. Abrams and Taylor (2001) argue that the shortage of supervisory resources is a serious problem particularly in emerging market economies.

Goodhart *et al.* (1998).

<sup>22</sup> Goodhart *et al.* (1998).

<sup>23</sup> Briault (1999), Llewellyn (1999b), Lannoo (2000), Wall and Eisenbeis (2000).

<sup>24</sup> Llewellyn (1999b).

<sup>25</sup> Lannoo (2000).

Čihák and Podpiera (2007) suggested that the unified regime is associated with higher quality and consistency of supervision across supervised institutions, measured by the degree of compliance with BCP, IOSCO and IAIS standards. Whether the unified supervisor is located inside or outside the central bank does not have a significant impact on the quality of supervision.

Arnone and Gambini (2007) used the degree of compliance with the BCPs to investigate the relationship between the compliance capacity of each country and the way these countries have organized their supervisory architecture, with particular reference to the two fundamental issues: the supervisory model and the role of the central bank. Two econometric tests based on an OLS specification with heteroskedasticity-robust standard errors show that a higher degree of compliance is achieved by those countries applying the unified supervisory model, with some evidence in favor of those established inside the central bank.

In contrast, Eichengreen and Dincer (2011) found, for a sample of 140 countries for the period 1998-2006, that the presence of independent supervisors located outside the central bank was associated with fewer nonperforming loans as a share of GDP, and that those countries were less prone to systemic banking crisis<sup>26</sup>.

Finally, and as a transition to the next section, one more interesting finding in the supervisory evolution before the global crisis is that the ‘conservative’ countries show one common feature: the central bank is the sole (or the main) banking supervisor in 80 percent of the sample (61 out of 76) (Figure 8.7).

At the same time, the adoption of an ‘innovative’ model of supervision is centered on the role of the central bank in only very few cases (5 on 26 cases, 20 percent). In other words, the ‘conservative’ approach seems to have been more likely when the central bank was already deeply involved in supervision, while the ‘innovative’ approach seems to have been more likely if the main supervisor was historically different from the central bank.

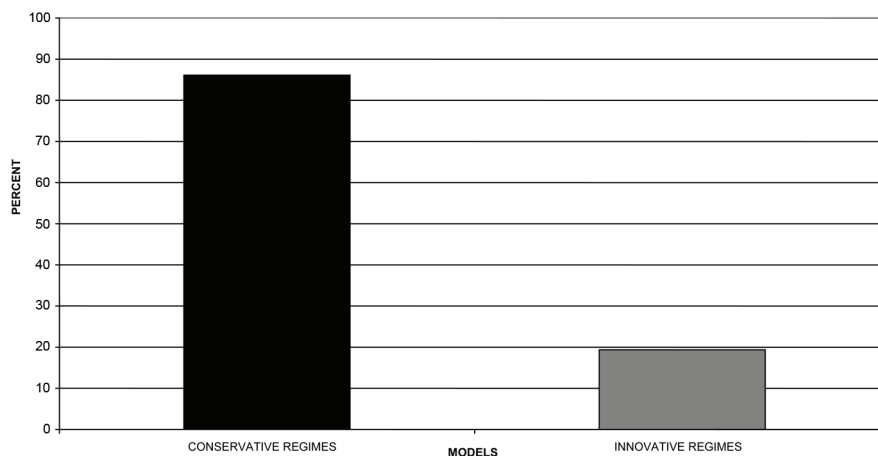
#### 8.4. THE ROLE OF THE CENTRAL BANK IN SUPERVISION

As discussed earlier, monetary policy and supervision both emerged from the financial liberalization period as stand-alone policy fields, in the sense that they were assigned objectives of their own. Traditionally, the functions of monetary policy and lender of last resort were assigned to the central bank (Goodhart *et al.* (1988) and Goodhart and Schoenmaker (1995a)). Supervision – to the extent that there was such a function – was either housed in the central bank or in a separate

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<sup>26</sup> However their results become insignificant when the data of the 2008-2009 crisis are included.

**Figure 8.7: The Central Bank as Main Supervisor: Conservative (silos) vs. Innovative (single and peak) Models (in %)**



Source: Masciandaro and Quintyn (2009)

institution, or countries had a hybrid situation. For instance, Bank of England was in charge of banking supervision. The European continent had both models, and in the US, the function was divided between the FED and some specialized agencies (FDIC, OCC).

The separation of these policy fields led very quickly to the critical question as to whether their combination in one institution might lead to conflicts of interest. This paragraph discusses the economics of the role of central bank as supervisor (CBS). The aim is to show that the most relevant contributions of this huge literature dealing with the issue of CBS, provide contrasting recommendations.

From our current perspective (in 2013), to which we will come back later in this chapter, CBS can be evaluated from a theoretical perspective under two different points of view: macro supervision and micro supervision. Nowadays the central bank is generally considered the monetary authority, i.e. the agent designated by society to manage liquidity in order to pursue monetary policy goals. Being a source of liquidity and acting as lenders of last resort, central banks are naturally involved in preventing and managing systemic banking crisis<sup>27</sup> (macro supervision)<sup>28</sup> – in advanced, emerging<sup>29</sup> and developing

<sup>27</sup> Goodhart and Schoemaker (1995), Masciandaro (1995 and 2007), Lacoue-Labarthe (2003), Rochet (2004), Nier (2009), Blinder (2010), Goodhart (2010), Brunnermeier *et al.* (2010), Borio (2007) and (2011), Nier *et al.* (2011), (Bernanke) 2011, Lamfalussy (2010), Bean (2011), CIEPR (2011).

<sup>28</sup> Gersbach (2011) claims that macro prudential supervision should be outside the central bank responsibilities, in order to avoid time inconsistency in pursuing the monetary policy goals.

<sup>29</sup> Kawai and Morgan (2012).

countries – in close coordination with government agencies entrusted with responsibility for financial stability<sup>30</sup>.

But should central banks also be in charge of pursuing financial stability through prudential oversight of individual banks, i.e. micro-supervision? That question is a long standing one. That is where the actual discussion started (long before the distinction between macro and micro supervision was introduced).

On one side, micro-supervision is a task that historically has not always been assigned to central bankers<sup>31</sup>. Furthermore the last two decades (the age of the “Great Moderation”<sup>32</sup>) have been characterized by a decrease in CBS<sup>33</sup>. On the other side, in the previous decades several central banks were actively and deeply involved in pursuing tight structural controlling activities<sup>34</sup>, which were considered thoroughly integrated in the overall responsibility of the central bank for managing liquidity.

Going beyond historical cyclical patterns and focusing on the economics of the relationship between monetary and supervision policies, is it possible to disentangle the pros (integration view) and cons (separation view) of having monetary and supervisory functions under one roof<sup>35</sup> (Table 8.2).

The justification for the central bank’s high involvement in supervision (integration view) is usually supported by arguments related to the informational advantages and economies of scale that derive from bringing all functions under the umbrella of the authority in charge of managing liquidity<sup>36</sup>. One additional argument is that human capital employed by the central banks is presumably better equipped to also manage supervisory issues<sup>37</sup>. Having access to all information would help the more highly skilled central bankers to act as more effective supervisors. In other words, setting up a supervisory authority different from the central bank is not considered efficient, i.e. CBS brings potential gains to both activities.

At the same time, the economic literature acknowledges that central bankers involved in supervision can produce greater policy failure costs (separation view), i.e. limited CBS is better. The crucial argument supporting this point of view is that if the central banker – i.e. the liquidity manager – is also the supervisor, the risk of policy failure is greater. It is important to highlight that the risk of policy

<sup>30</sup> De Graeve *et al.* (2008), Gerlach (2010), Angelini *et al.* (2012). For a survey see Oosterloo and de Haan (2004).

<sup>31</sup> Ugolini (2011).

<sup>32</sup> See among others, Bean (2011).

<sup>33</sup> Masciandaro and Quintyn (2009), Eichengreen and Dincer (2011).

<sup>34</sup> Cagliarini *et al.* (2010), Goodhart (2010), Bordo (2011), Toniolo (2011).

<sup>35</sup> The integration versus separation approach was introduced in Masciandaro (2012).

<sup>36</sup> See, among others, Bernanke (2011), Herrings and Carmassi (2008), Klomp and de Haan (2009), Blanchard *et al.* (2010), Blinder (2010), Lamfalussy (2010), Papademos (2010).

<sup>37</sup> Apinis *et al.* (2010), Ito (2010), Lamfalussy (2010).

failure is endogenous with respect to the distribution of power: it exists only if the supervisor is the central bank, acting as liquidity manager. The risk of policy failure can be differently motivated, shedding light on the various sources of the policy failure risk.

First of all, if the supervisor can discretionally manage liquidity, the risk of moral hazard in supervised banks can increase<sup>38</sup> (moral hazard risk). If the supervisor is not the liquidity manager this source of moral hazard does not exist. Secondly, the discretionary action of the central bank can increase the uncertainty in supervised markets, as the recent on-again/off-again rescues of financial firms in the US have demonstrated<sup>39</sup> (uncertainty risk). If the supervisor is the liquidity manager greater moral hazard and greater uncertainty are likely to be produced.

Table 8.2: Integration and Separation Views on Central Bank Involvement in Supervision (CBS)

INTEGRATION VIEW (PROS ): MOTIVATIONS	SEPARATION VIEW (CONS: POLICY FAILURE RISK): MOTIVATIONS
CBS can produce informational advantages and economies of scale (INFORMATION GAINS)	CBS can increase moral hazard uncertainty in supervised banks (MORAL HAZARD)
CBS can be more efficient, given that the human capital employed by central banks is better equipped to manage and oversee supervisory issues (HUMAN CAPITAL GAINS)	CBS can increase uncertainty in the markets (UNCERTAINTY)
	CBS can be less effective, given that monetary policy responsibilities can affect the behavior of central bank as supervisor, due to reputational and conflict-of-interest risks (DISTORTED INCENTIVES)
	CBS can be less effective, given that a central banker can use his/her powers to favor banking constituents, with related risk of capture (CAPTURE)
	CBS can be less effective: the more the supervisor is powerful (as the central bank is), the greater the risk of bureaucratic misconduct (BUREAUCRATIC OVERPOWER)

Thirdly, it has been highlighted that monetary policy responsibilities can negatively affect the central bank's behavior as supervisor<sup>40</sup>, given the existence of reputational risks<sup>41</sup>, as well as conflicts of interest between monetary policy and

<sup>38</sup> Masciandaro (2007), Lamfalussy (2010).

<sup>39</sup> Taylor (2010).

<sup>40</sup> Ioannidou (2005).

<sup>41</sup> Papademos (2010).

supervision management<sup>42</sup> (distorted incentives risk). Fourthly, the central banker can use his/her powers in liquidity management to please the banking constituencies, instead of pursuing social welfare. In this respect, the central bank can be the most dangerous case of a supervisor being captured by bankers<sup>43</sup>, given that the banking industry may be more inclined to capture supervisors which are powerful<sup>44</sup> (*capture risk*).

Finally, the unification of banking supervision and monetary policy in the hands of the central bank can create an overly powerful bureaucracy with related risks of misconduct and raising fears of a “democratic deficit”<sup>45</sup> (*bureaucratic over-power risk*).

From this overview, it has become clear that the comparison between the integration and separation views remains inconclusive. There is simply no optimal solution in the CBS debate. This conclusion is confirmed by the empirical work undertaken in this context, although, it should be said, analyses so far of this topic are rare and very recent. The integration view finds empirical support in a study by Arnone and Gambini (2007), who use the degree of compliance with Basel Core Principles to investigate the possible relationship between the compliance capacity of each country and the way these countries have organized the role of the central bank in the supervisory process. The separation view seems to find support in a paper by Eichengreen and Dincer (2011), which indicates that the performance of financial markets is better when supervision is delegated to an agency different from the central bank<sup>46</sup>. However, results also show some evidence in favor of supervisory consolidation being established within the central bank. Finally other research has claimed that the fact the (unified) supervisor is located inside or outside the central bank does not have a significant impact on the quality of supervision<sup>47</sup>.

A new dimension was added to the CBS discussion when the architecture of supervision became a topic for discussion (see previous section). While unified (or integrated) supervisors were recommended in some cases because of efficiency and effectiveness gains, the question as to whether this unified supervisor should be housed in the central bank remained open. The integration-view argued that this would allow the central bank to better prevent systemic issues from arising because the central bank would also be informed about imbalances arising in nonbank segments of the financial sector. The separation view argued that if all supervision was housed in the central bank, the latter would now also be respon-

<sup>42</sup> Goodhart and Schoenmaker (1995), Blinder (2010), Gerlach *et al.* (2009), Masciandaro *et al.* (2011).

<sup>43</sup> Barth *et al.* (2004), Djankov *et al.* (2002), Quintyn and Taylor (2002), Boyer and Ponce (2011a) and (2011b).

<sup>44</sup> Boyer and Ponce (2011a) and (2011b).

<sup>45</sup> Padoa Schioppa (2003), Masciandaro (2007), Blinder (2010), Oritani (2010), Goodhart (2010), Eichengreen and Dincer (2011).

<sup>46</sup> Eichengreen and Dincer (2011).

<sup>47</sup> Čihák and Podpiera (2007).



sible for supervision of institutions with which it has traditionally never dealt, neither as lender of last resort, nor as monetary policy agent. So, the argument went, extending its supervisory powers to those other financial institution would put pressure on extending its lender-of-last-resort web as well, hence creating more opportunities for moral hazard and reputational risk.

Thus, at the end of the day, the review of the literature shows that all the various arguments lead to conflicting predictions in terms of what the optimal involvement of the central bank in supervision should be. No consensus has been reached on what should be in principle the best degree of CBS, since it is impossible to evaluate in general, objective and invariable terms the pros and cons of each specific aspect of supervision being delegated to the central bank. In other words, it is not possible to conclude that the integration view is superior to the separation view, and vice versa. The same conclusion can be reached if we consider the integration versus separation dilemma from the monetary policy point of view<sup>48</sup>. In view of all conflicting arguments, it is not a surprise that there is no agreement on the appropriate degree of the central bank involvement.

If this line of thinking is correct, one additional conclusion can be reached: the cyclical pattern of CBS that we observe in the reality cannot be explained by the existence of a superior setting for delegating powers to central banks. Rather, the different arguments supporting the integration view or the separation view can be more or less important in the minds of those who design and implement the supervisory regime. What we are saying is that the research attention has to focus on the agent responsible for monetary and financial settings, i.e. the policymaker, using both the economic and the political economy approaches<sup>49</sup>.

Moving from the theoretical to the institutional analysis and wondering if the role of central bank as supervisor has changed in the last two decades, toward integration rather than separation, a question naturally arises: How can CBS be evaluated? Or in a more challenging way: it is possible to measure the evolution of CBS, using the qualitative narrative of the actual central bank regimes to arrive at quantitative analyses? This was the motivation to construct the indexes for the central bank's involvement in supervision<sup>50</sup>. The indexes were created with a view to analyzing which, and how many, authorities are empowered to supervise the three traditional sectors of financial activity: banking, securities, insurance.

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<sup>48</sup> See Goodhart and Schoemaker (1995), Arnone *et al.* (2007), Masciandaro (2007) and Hussain (2009) for comprehensive reviews of the literature, that consider the question also from the monetary policy effectiveness point of view. On this issue, as well as on the related consequences on central bank governance, see also Goodhart *et al.* (2009), Crockett (2010), Papademos (2010), Svensson (2010), Aydin and Volkan (2011) and Woodford (2012). For the specific relationship between central bank involvement in supervision and the (internal and external) monetary regimes see Dalla Pellegrina, Masciandaro and Pansini (2011) and (2012).

<sup>49</sup> Masciandaro (2006, 2007 and 2009), Masciandaro and Quintyn (2008).

<sup>50</sup> Masciandaro (2006, 2007 and 2008), Masciandaro and Quintyn (2009).

To transform qualitative information into quantitative indicators, the Central Bank as Financial Supervisor (CBFS) Index<sup>51</sup> was constructed. The CBFS is a measure of the level of central bank involvement in supervision; it is derived by applying the classical numerical index proposed by Herfindahl and Hirschman to this novel field<sup>52</sup>. The CBFS index is used to calculate the degree of CBS. The robustness of the application of the CBFS index depends on the following two key hypotheses<sup>53</sup>.

First, it must be possible to define the different sectors to be supervised (institutional dimension) for every given country (geographical dimension). In other words, in every country, each single financial market constitutes a distinct market for supervision. In fact, it is still possible to identify both the geographical dimension – the existence of separate nations – and the institutional dimension – the existence of separate markets – notwithstanding the fact that the blurring of the traditional boundaries between banking, securities, and insurance activities and the formation of large financial conglomerates have diluted the definition of intermediaries. Then, for each sector, in case of the presence of more than one agency, the distribution of the supervisory powers among different authorities, and consequently their share of involvement, in supervision was defined without ambiguity. In each sector, as the degree of supervision consolidation falls, the greater is the number of authorities involved in monitoring activity.

Secondly, the power of supervision was considered as a whole. Given different kinds of supervisory activity (banking supervision, securities markets supervision, insurance supervision) there is perfect substitutability in terms of supervisory power and/or supervisory skills. Supervisory power is a feature of each authority as agency, irrespective of where this power is exercised (agency dimension). Consequently, in each country and for each authority, we have summed the share of the supervisory power it enjoys in one sector with the share it owns in another one (if any). For each authority, as the degree of supervisory power increases, the greater is the number of sectors over which that agency exercises monitoring responsibility. All three dimensions – geographical, institutional and agency – have legal foundations and economic meaning.

The intuition behind this methodology is quite simple: the greater the share of the central bank's supervisory powers, the greater the odds that the central bank will be involved in the overall supervisory organization. In other words, CBS is likely to be at a maximum when the central banker is the unified supervisor in charge, while the involvement is likely to be low, the smaller the number of sectors over which the central bank has supervisory responsibilities. In order to construct the

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<sup>51</sup> Masciandaro and Quintyn (2011) Masciandaro, Pansini and Quintyn (2011).

<sup>52</sup> Hirschman (1964).

<sup>53</sup> Masciandaro and Quintyn (2011).

CBFS index, it is just sufficient to measure the share of supervision assigned to the central bank in each country, which can go from 0 to 1.

By using this index, it is possible to show how CBS has changed before and after the Crisis<sup>54</sup>. The evolution of the CBFS index was described by drawing upon an 88-country database for the 1998-2009 period. Inspection of this database before the crisis highlights a trend toward supervision consolidation outside central banks, where outliers are those central banks without monopoly over monetary policy responsibilities.

In other words, before the crisis the trend of change in supervision structures seemed to be leading to two distinctive features: consolidation and specialization. The reforms were driven by a general tendency to reduce the number of agencies, in order either to reach a unified model of supervision or the so-called twin peaks model<sup>55</sup>. In both models, supervisors are specialized, and have a well-defined mission. The trend towards specialization becomes particularly evident noting the route that national central banks are following. Those banks with full responsibility for monetary policy – the FED, the ECB, the Bank of England, the Bank of Japan – did not have full responsibility for supervisory policy. The worldwide rise of specialization in monetary policy led to central bank reforms that gave a clear mandate, focused on price stability, and greater political and economic independence; the best practices in the monetary regime design can be summarized as: flexible policy rules, conducted by an independent and accountable central bank acting in a flexible exchange rate environment<sup>56</sup>.

This does not mean that these banks were not concerned with financial stability – actually the opposite was true, as we would later observe during the Crisis – but they usually tended to address it from a macroeconomic perspective, as a function of their primary mission, i.e. monetary policy. Amidst the central banks which did not have full responsibility for monetary policy, such as those belonging to the European Monetary Union, several banks chose to specialize in supervision<sup>57</sup>. In general, it was noted that the central banks of EMU members were becoming financial stability agencies. The explanation is simple: when the central banker is no longer the unique manager of liquidity – as in the case of the central banks who joined the Euro-zone – the expected downsides of involving them in supervision become weaker, and the integration view gains momentum.

In general, analyses based on the CBFS Index concluded that before the crisis the distance between central banks and supervisory responsibilities was substantially increased. The separation view dominated. On political economy grounds we can

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<sup>54</sup> Masciandaro, Pansini and Quintyn (2011).

<sup>55</sup> Masciandaro and Quintyn (2009 and 2011).

<sup>56</sup> Cukierman (2008).

<sup>57</sup> Herring and Carmassi (2008).

say that, on average, policymakers gave more weight to the expected gains for specializing the central bank as monetary agent and another authority as supervisory agency, with respect to the benefits of delegating both functions to the central bank and facing the potential costs connected with the risk of policy failures. The optimal degree of CBS was likely to decrease.

## 8.5. THE GOVERNANCE OF SUPERVISION

The next theme that got into the spotlight was supervisory governance. A first discussion of some aspects thereof emerged at the time of the S&L crisis in the US. Supervisory forbearance was seen as one of the main contributing factors to this crisis. Forbearance can be a result of political, industry or self-interest capture – in other words, of misaligned incentives for supervisors, hence a governance failure.

Let us take a step back. Financial supervisors' main task is to monitor the actions of the supervised institutions and, when necessary, impose sanctions and enforce them. So a key component of the supervisory framework is the nature, timing and form of intervention in case the health of an individual institution fails. In the new, deregulated environment, it became quickly clear that the decision as to when and how to intervene in a problem bank is the Achilles heel of the supervisory process, for a number of reasons<sup>58</sup>. First, a weak regulatory framework inherently leads to weak supervision and lack of enforcement rules<sup>59</sup>. Secondly, politicians may dissuade supervisors from intervening in a problem institution for fear that this (connected) institution gets a bad press, or worse. Weak judgment is a third factor that could influence the supervisory decisions. Supervisors, faced with bank problems may believe that these problems are temporary and will go away without supervisory action. Finally, some form of self-interest may also be at play. Supervisors, faced with a problem bank, may take a “not on my watch”-approach and hide the problems as long as possible. This behavior can be explained by the fact that society may see the problems in a bank as a reflection of weak supervision which is damaging for the supervisor's reputation.

Whatever their cause, these situations typically lead to forbearance, i.e. refraining from addressing an institution's problems head on. Forbearance is bound to lead to a deepening of the problems in that specific institution, and ultimately to an increase in the costs of addressing them, among others because of the danger of contagion. Thus, forbearance revealed a fundamental commitment problem on

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<sup>58</sup> Barth *et al.* (2006), Quintyn (2009).

<sup>59</sup> For instance, the regulatory framework may lack pointers for supervisors regarding the timing of an intervention, may not be specific enough regarding the intervention instruments, or may leave the supervisors without the power to collect the critical data to properly analyze a financial institution's health.

the part of supervisors, analogous to the time consistency problem confronted by monetary policy agents. Hence, supervisory governance arrangements that align their incentives are needed. Several authors, such as Kane (1989) and Randall (1993) demonstrated that supervisory forbearance was one of the main contributing factors to the S&L crisis. Kane, in particular was of the view that self-interest capture was strongly present (the “not on my watch” syndrome)<sup>60</sup>.

The ensuing debate highlighted the need to pay close attention to the regulators’ incentive structures, remuneration arrangements, and accountability measures. The proposed solutions did not focus on an all-encompassing approach of governance but emphasized that supervisors, even politically independent ones would benefit from the presence of intervention rules to avoid succumbing to political and other pressures. An influential proposal by Benston and Kaufman (1988) promoted a system of predetermined capital/asset ratios that would trigger structured actions by supervisors. They called it structured early intervention and resolution (SEIR). A version of SEIR was adopted by the US Government as “prompt corrective action (PCA) in the 1991 Federal Deposit Insurance Corporation Improvement Act (FDICIA). Their proposal opened the “rules versus discretion” debate for supervisory intervention. Instead of leaving the decision as to when and how to intervene in ailing banks (discretion) in the hands of supervisors, they proposed rules specifying when and how supervisors need to intervene. The main objective behind systems of SEIR is to minimize the losses for depositors, deposit insurance and, by extension taxpayers, but it also serves as an instrument to align supervisors’ incentives. From a governance point of view, such rules could be an effective instrument as they shield the supervisors from all three types of capture (political, industry and self) in the sense that they offer some “objective” and binding thresholds as to how and when to intervene in weak and failing institutions.

Since the adoption of PCA in the US, a number of countries, including Japan, Korea and Mexico, have followed this example and more are contemplating its adoption. In the aftermath of the 2007-08 Crisis, the debate has been reopened with calls from various circles, academic and policy, for more rules in the intervention process<sup>61</sup>. PCA certainly has a lot of appeal as a governance device to address the supervisors’ commitment problem, but it should be seen in the broader context of governance arrangements.

The “rules versus discretion” debate, of which the PCA discussion is a part, is now, more than ever before at the table in the context of the policies and instruments that are part and parcel of macro prudential supervision. Many scholars argue that, given the political economy aspects of macro prudential supervision

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<sup>60</sup> See also Boot and Thakor (1993) on this topic.

<sup>61</sup> Three publications in support of PCA in the EU are The European Shadow Financial Regulatory Committee (2005), Mayes, Nieto and Wall (2008) and Dermine and Schoenmaker (2010).

(best summarized as “taking away the punch bowl when the party gets going”), some form of a rules-based system in support of the decision-making process will be more effective than a system solely based on discretion. We will come back to this in the last section of this chapter.

By the late 1990s, three interconnected drivers accelerated the discussion on the broader governance features of supervision: first, in several of the systemic financial crises of the 1990s, the lack of supervisory independence from political influences, leading to forbearance, was cited as one of the contributing factors to the deepening of the crisis (Lindgren *et al.* (1999) and Rochet (2003)). Secondly, the governance debate came to the surface as part of the institutional questions that we discussed earlier. During the two decades before the Global Crisis, we had observed a tendency to move supervision out of the central bank. While in the central bank, supervision “piggybacked” in several countries explicitly or implicitly on the central bank’s independence in matters of monetary policy. So, when supervision was relocated, the issue of independence needed to be addressed explicitly.

The third driver is closely related to the second one. Central bank independence (CBI) started to gain more and more ground as an institutional arrangement that countered time-inconsistency in policymaking. In particular the tendency to resort to forbearance – often under political pressure – in the face of systemic banking crises, showed that time-inconsistency is also an issue in supervision.

Given the special nature of financial supervision, it soon became clear that, in order to align the incentives for supervisors, independence was a necessary but not sufficient governance feature in the face of pressures coming from the political and the industry side. The major difference between a monetary policy agency and a financial supervisor lies in the fact that the former has a well-specified and measurable objective (maintaining low and stable inflation, often specified in a numerical target), while it is difficult – if not impossible – to specify the objective of the latter in the same precise way<sup>62</sup>. So applying a contractual approach in the principal-agent sense would be flawed because any such contract is bound to be radically incomplete given the great range of contingencies that occur in regulation and supervision, as well as the difficulty of specifying the agent’s objectives precisely (Quintyn and Taylor (2007) and Quintyn (2007)). As Majone (2005) pointed out, incomplete contracts lead to problems of imperfect commitment, opening the door to time inconsistency.

Hence, supervisors should be considered as a fiduciary of the government whose duties are defined by relational contracting: the parties do not agree on a detailed plan of action, but on general principles and procedures, on types of actions to be

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<sup>62</sup> For more details regarding this comparison, see Hüpkes, Quintyn and Taylor (2005).

taken and instruments to be used. The key feature is the choice of a mechanism for adapting the contract to unforeseen contingencies. The great range of contingencies is certainly one of the reasons why politicians are reluctant to grant supervisors far-reaching independence. However, because this reintroduces the risk for political capture, the better alternative is to establish a detailed structure of accountability arrangements, whereby supervisors are accountable to all major stakeholders (Hüpkes, Quintyn and Taylor (2005) and Masciandaro, Quintyn and Taylor (2010)). The design of accountability arrangements is all the more important because well-designed arrangements can help buttress agency independence<sup>63</sup>. So the complementarity between accountability and independence needs to be exploited at its fullest. Das and Quintyn (2002) and Quintyn (2007) proposed to add transparency and agency-integrity as two additional pillars to the supervisory governance framework.

In order to find out to what extent the governance debate caught on among policymakers, measures of governance needed to be defined. Quintyn, Ramirez and Taylor (2007) set the stage by defining criteria of supervisory independence and accountability and using them as yardsticks to rate supervisory agencies, very much like what had become standard practice in the central bank independence literature<sup>64</sup>. They selected a sample of 32 countries that had reformed their supervisory agency in the decade-and-a-half before the Global Crisis and compared governance arrangements for supervisors before and after these reforms. A general trend towards more independence and accountability was indeed observed following reforms (Table 8.3).

However, the table also shows that (i) across agencies, supervisors in central banks remain more independent than their counterparts elsewhere, but their accountability arrangements are weaker; (ii) within categories of agencies, the gap between independence and accountability is wide for central banks, while arrangements for agencies outside central banks are more balanced (65-64 for unified supervisors). At the same time, these scores are not extremely high; and (iii) over time, the gap between independence and accountability arrangements for central banks hardly narrowed, while it did narrow for the other categories. So, while the institutional reforms were used to grant higher independence to supervisors in general, similar strides were not made in the area of accountability, probably because of a fair degree of unfamiliarity with accountability.

Masciandaro, Quintyn and Taylor (2010) econometrically surveyed the determinants of the shifts in the supervisory governance. They found that politicians' decisions on the degree of independence and accountability of their supervisors

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<sup>63</sup> Wide-ranging accountability is also consistent with the "representation hypothesis" of Dewatripont and Tirole (1994): supervisors are accountable to those whom they represent.

<sup>64</sup> See Quintyn, Ramirez and Taylor (2007) for the criteria that were used and the way the ratings were done.

**Table 8.3: Accountability and Independence before and after Reforms of the Supervisory Architecture: Trends by Location of Institution (Average rating)**

	Inside Central Bank	Outside Central Bank	Of which Unified Supervision
Total rating			
Before reforms	46	46	48
After reforms	64	64	65
Independence			
Before reforms	58	51	52
After reforms	73	66	65
Accountability			
Before reforms	36	41	44
After reforms	56	62	64

Ratings are on a scale for 0 (low) to 100 (high independence and accountability).

Source: Quintyn, Ramirez and Taylor (2007)

seem to be driven by a different set of considerations. Only polity plays a role in both, meaning that the more mature a democracy is, the more likely it is that higher degrees of independence and accountability will be granted. Accountability is additionally driven by crisis experiences and the quality of public sector governance, while independence is influenced by a kind of demonstration effect. The paper also confirmed that the location of the supervisor has an influence. The paper modeled a two-stage decision making process by the policymaker (inside or outside central bank, unified or not). Location and functional integration do not seem to have a great impact on the probability of high independence, but they do have an impact on the degree of accountability. Indeed, the likelihood for more elaborate accountability increases when the central bank is not the supervisor. This is obviously related to the fact that central bank accountability arrangements are and remain predominantly geared toward monetary policy, which is less demanding than supervision<sup>65</sup>.

## 8.6. THE BIG SUPERVISORY QUESTIONS AFTER THE CRISIS

On the eve of the Global Crisis financial supervision had evolved a lot, compared to some 30 years before that. Many countries had attempted to make their supervisory framework more efficient and effective. Academic interest in the topic had increased, although, as we have seen, the debates themselves remained highly inconclusive. The accumulation of systemic crises had also generated the involve-

<sup>65</sup> See Hüpkes, Quintyn and Taylor (2005) on this topic.



ment of international financial institutions (BIS, IMF and World Bank) in supervisory issues<sup>66</sup>. Given the open-ended nature of the academic debates, it does not come as a big surprise that the empirical evidence on the impact of the various reform agendas on financial sector stability too remained inconclusive, as we have demonstrated in the previous paragraphs.

But then came the Global Crisis, which put into question a lot of the acquired wisdom in both the regulatory and supervisory areas, and led to some important paradigm-shifts. While the literature on the causes and origins of the Crisis focuses heavily on macroeconomic imbalances, macroeconomic policy failures, as well as regulatory failures in all segments of the financial system as major contributing factors<sup>67</sup>, a more specialized literature provides a detailed account of the contribution of supervisory failures to the crisis<sup>68</sup>.

Failures attributable to supervisory architectures as such are only mentioned in two specific cases. In the United States, some pointed at the fragmented US supervisory system as a major contributor to the crisis (Leijonhufvud (2009)). In the United Kingdom coordination failures between FSA and Bank of England (and UK Treasury) were mentioned in the Northern Rock episode, thereby indirectly referring to the supervisory architecture (Buitier (2008) and FSA (2009)). The other generally heard claim is that, in all of the countries stricken by the crisis, no institution was in charge of macro-prudential or systemic supervision, which is now generally recognized as an architectural failure. Finally there are also the counterfactuals: in the wake of the crisis several countries revamped their supervisory architecture (Belgium, Germany, Ireland, and the UK) which could serve as an indication that flaws in the architecture were blamed in part for the crisis in these countries.

Flaws in supervisory governance are well-documented. Most authors identify more or less the same issues, often named somewhat differently, with Palmer and Cerutti (2009) presenting the most thorough and complete account. Thus, authors identify weak supervisory independence and accountability, industry or political capture, wrong incentive structures provided by the political establishment, lack of audacity to probe or to take matters to their conclusion and to be intrusive, as well as the difficulties of supervisors to match the financial engineering skills of financial experts in private institutions<sup>69,70</sup>.

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<sup>66</sup> The Basel Core Principles for Effective Supervision, for instance, had several principles that were concerned with supervisory practices. Principle 1 stated that supervisors should have “operational autonomy.”

<sup>67</sup> See among others, Allen and Carletti (2009), Brunnemeier *et al.* (2009), Buitier (2008) and Roubini (2008).

<sup>68</sup> See for instance Financial Services Authority (2009), Palmer and Cerutti (2009), Tabellini (2008), Viñals *et al.* (2010) and Weder di Mauro (2009).

<sup>69</sup> At the international level (with respect to cross-border supervision) most authors point at a misalignment of incentives for supervisors to voluntarily cooperate, a lack of binding coordinating mechanisms, and differences in levels of supervisory quality.

<sup>70</sup> On this last point, see also Goodhart, Chapter 7 in this volume.

Figure 8.8 shows some evidence of governance failures: among the “victims” of the 2008 Crisis, we count several countries that scored among the highest on the governance index. As it turns out, 11 of the 15 first ranked in this figure were affected severely. The five countries with the highest governance rankings were confronted with failing institutions or institutions that needed government assistance representing anywhere between 20 and 80 percent of total assets of the sector (note that the numbers from Laeven and Valencia (2010) did not yet reflect the problems in Spain, number six in the figure). Further down these high rankings, we observe two other clusters of countries that faced intense banking problems. So, only a few countries escaped these dramatic developments.

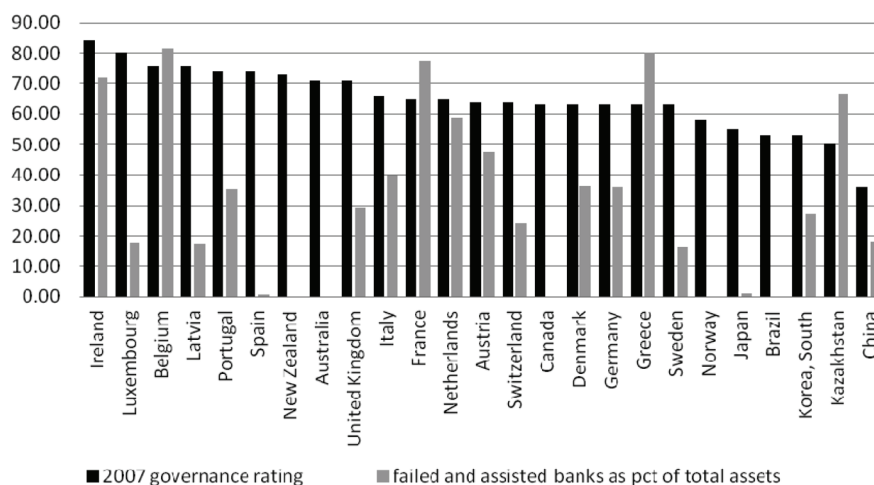
In sum, the narrative account of the role of supervision in the Global Crisis indicates that several of the hoped-for improvements in the effectiveness and the incentive structure for supervision did not work. The same behaviors, documented during previous crises, such as the “not on my watch” approach and the “sweeping of problems under the carpet” had occurred again, sometimes at massive scales. A recent empirical analysis (Masciandaro, Pansini and Quintyn (2012)) confirms that neither supervisory architecture nor improvements in supervisory governance were able to prevent or mitigate the crisis, putting into question a large number of assertions that were made before the Crisis.

### 8.6.1. What have been the Responses?

While most of the policymakers’ and the academics’ attention has been going towards reforming the regulatory framework, supervisory issues have also received due attention. Below we will discuss the new trends regarding supervisory architecture and governance. However, these trends need to be interpreted against the most important new development that is affecting supervision in the wake of the crisis, the emergence of macro prudential supervision as a stand-alone supervisory domain (with specific mandate, instruments and dedicated staff). The neglect, or lack of understanding, of systemic risks in the financial system in the run-up to the Global Crisis has made it clear that it is crucial to monitor and assess the threats to financial stability arising from macroeconomic as well as macro financial developments. This growing emphasis on macro supervision forces policymakers to identify specific agencies responsible for systemic stability.

Two trends prevail in this regard: although the institutional forms vary and are evolving, a dominant trend is to assign this task to the central bank, or for the central bank to play a pivotal role. Nier *et al.* (2011a) report that in 19 out of 21 countries that have a formal mandate for macro prudential supervision, the central bank is the sole institution in charge, or plays a key role together with one

Figure 8.8: The Global Crisis: Supervisory Governance and Failed and Assisted Banks



Source: own calculations for governance indicators and Laeven and Valencia (2010) for bank data.

or more other institutions<sup>71</sup>. We also notice a significant level of government involvement in this new policy field in some countries, at least at the decision-making level (Nier *et al.* (2011a and b))<sup>72</sup>.

To carry out macro-prudential tasks, information on the economic and financial system as a whole is required. The current turmoil has stressed the role of the central banks in the prevention, management and resolution of financial crisis. Therefore, the view is gaining momentum that central banks are in the best position to collect and analyze this kind of information, given their role in managing monetary policy in normal times and the lender of last resort function in exceptional times.

Therefore, from the policymakers' point of view the involvement of the central bank in macro supervision involves potential benefits in terms of information gathering and sharing (Cecchetti (2008)). At the same time they can postulate that the potential costs of the involvement in macro prudential supervision are smaller than with respect to micro prudential supervision. Thus, the general acceptance of macro prudential supervision as a new policy domain has reopened the debate about the role of the central bank in supervision, but with new and additional arguments<sup>73</sup>.

<sup>71</sup> These institutions include financial stability council, ministry of finance, bank supervisor, integrated supervisor, supervisor of other subsector or deposit insurance agency.

<sup>72</sup> For a complete discussion of the institutional models for macro prudential supervision, see Nier *et al.* (2011a and 2011b).

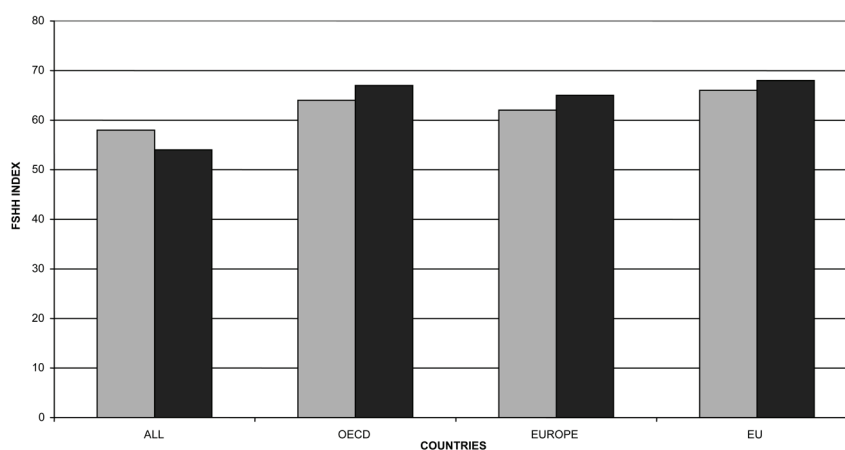
<sup>73</sup> For overviews, see among others Borio (2003), Galati and Moessner (2011), Jacome *et al.* (2011), Goodhart (2012) and Agur and Sharma (2013).

### 8.6.2. Trends in Supervisory Architecture and the Role of the Central Bank

Starting with the degree of consolidation, Figure 8.9 compares the situation before and after the crisis for groups of countries. Before the crisis – 2007, grey bars – the degree of consolidation was on average greater in the EU than in the industrial countries as a whole, or Europe; these three groups score higher than the overall country sample. The consolidation process in the above three groupings of countries has continued during the crisis – 2009, black bars – while for the entire sample, we notice a slight reduction in the degree of consolidation. In sum, during the crisis supervisory reforms in the advanced countries continued to be driven by a general tendency to reduce the number of agencies to reach the unified model or the peak model – which dominated the trends in the two decades 1986-2006 (Masciandaro and Quintyn (2009))<sup>74</sup>.

Figure 8.10 compares the CBSS Index before and after the crisis. Two facts emerge. Before the crisis – 2007, grey bars – advanced countries show on average a lower level of central bank involvement in micro supervision than the entire sample. In turn, among advanced countries, the European countries and the EU members demonstrate higher degrees of central bank involvement in supervision. However, after the crisis we witness a sort of “Great Reversal”: the 2009 data (black bars) show that in advanced, European and EU countries, central bank involvement has increased, while it decreased slightly for the entire sample.

**Figure 8.9: Financial Supervision Unification**  
(grey bar= before the Crisis; black bar=after the crisis)



Source: Masciandaro, Pansini and Quintyn (2012)

<sup>74</sup> The cases of Belgium, Germany, Italy, and UK – where authorities have decided to reduce the degree of supervisory consolidation--are not reflected in our data because they are not yet implemented.

**Box 8.1: Some country-specific examples**

The general trend is confirmed by the reforms undertaken in a number of advanced countries, where policymakers have legislated an extension of the supervisory powers assigned to the central banks. On July 2010, US President Barack Obama signed the Dodd-Frank Act into law, which is considered to be the most important overhaul of financial regulation since the Great Depression. A rethinking of the role of the Fed is part of the restyling of financial legislation. Despite the fact that during the discussion of the bill US lawmakers debated the possibility of restricting some of the Fed's regulatory responsibilities (supervision of small banks, emergency lending powers), as well as increasing the political control over the central bank with changes in its governance (congressional audits of monetary policy decisions, presidential nomination of the Presidents of the New York Federal Reserve), the Dodd-Frank law ended up increasing the powers of the Fed as banking supervisor.

In Europe, policymakers are moving to finalize reforms concerning the central banks' involvement in supervision both at international and national levels. In 2010, the European governing bodies established the European Systemic Risk Board (ESRB) for macro prudential supervision which is dominated by the ECB and in 2012 the same bodies proposed to increase the ECB powers also in micro supervision, with the ECB becoming the hub of the European Single Supervisory Mechanism in 2014.

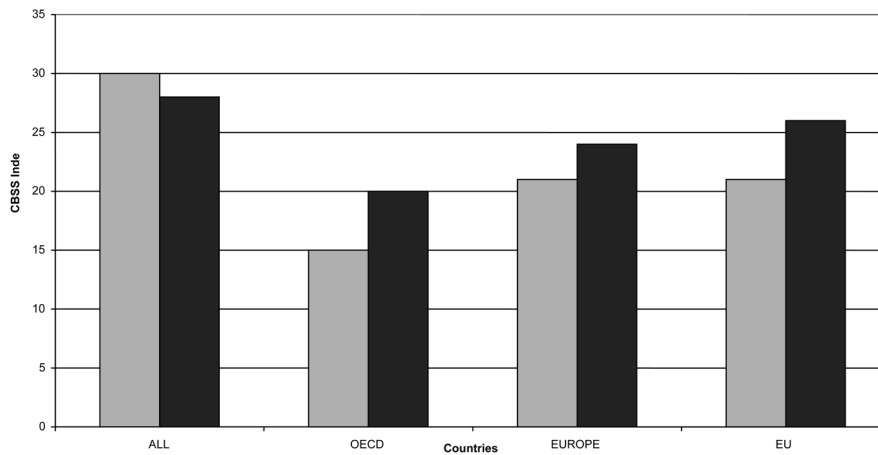
Concerning individual EU members, in 2008 the German grand coalition government expressed its willingness to dismantle its sole financial supervisor (BAFIN) in favor of the Bundesbank. In June 2010 the UK government also unveiled the reform of the bank supervisory system aimed at consolidating the supervision powers in the Bank of England, which will be implemented in April 2013. The key functions of the Financial Services Authority (FSA) might then be moved within the Bank of England, which is set to become the Prudential Regulatory Authority. In the summer of 2010 the Irish Financial Services Regulatory Authority was legally merged with the central bank. Finally in the summer of 2012 the Italian Government proposed to increase the role of the Banca d'Italia in monitoring financial stability cross banking, insurance and pension fund markets.

The main explanation for this divergence is that Euro-zone central banks have continued to become more involved in micro supervision because their monetary policy responsibilities are limited. They have chosen the route of specialization in surveillance. The most emblematic cases are Belgium, Germany, Ireland, the Netherlands and the Slovak Republic. In that context, Herring and Carmassi (2008) noted that national central banks of the Euro zone have predominantly become financial stability agencies.

### 8.6.3. Trends in Supervisory Governance

Figure 8.11 presents the shifts in the wake of the Global Crisis. Before the crisis – 2007, grey bars – the quality of governance arrangements was rated the highest in the EU, followed by Europe and finally the industrial countries. The scores of these three groupings are significantly higher than the overall country sample. In the wake of the crisis, and in response to what happened during the crisis – 2009 – all the groupings show further efforts to strengthen governance.

**Figure 8.10: Central Bank Involvement in Supervision**  
(grey bar = before the Crisis, black bar= after the Crisis)



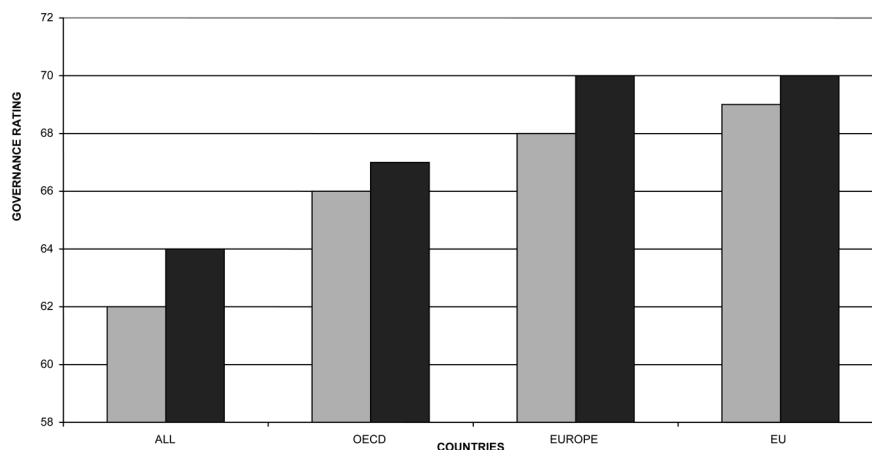
Source: Masciandaro, Pansini and Quintyn (2013)

## 8.7. SUPERVISION, QUO VADIS?

The crisis has shaken up all aspects of the supervisory debate. Going forward, policymakers should internalize the lessons learned, as well as the new insights in order to improve on the experience with supervision. This last section provides our input into the debate to make supervision more effective. Table 8.4 brings together our views as to how the future supervisory constellation could be conceived with a view to enhancing its effectiveness. These views culminate in our proposal to separate the agencies that conduct macro- and micro-supervision as a way for creating checks and balances that would strengthen the governance of oversight.

The next sections justify this proposal. We start off by underlining some limitations to supervisory governance and go from there on to propose a new architecture that can potentially strengthen governance. While we believe strongly in the merits of this proposal, we also notice that trends in some regions in the world,

**Figure 8.11: Supervisory Governance Ratings**  
(grey bar = before the Crisis, black bar= after the crisis)



Source: Masciandaro, Pansini and Quintyn (2013)

most notably the EU, go in a different direction, the direction of more concentration of monetary and supervisory powers into one institution or network of institutions. The concentration is likely to be tempered by using “Chinese walls”- procedures to separate monetary and supervisory responsibilities. However, even with impenetrable Chinese walls, there is still a big chance that the public at large and politicians will consider any decision as being taken by “the” central bank. So the reputational risk and the perception of a democratic deficit might still live on.

### 8.7.1. The Limitations to Supervisory Governance

While further strengthening of supervisory governance is critical, we also need to realize that the Global Crisis has brought its limitations and potential pitfalls to the surface. It is beyond doubt that financial supervision needs to rest on solid governance pillars to cope successfully with the three types of capture discussed earlier (Schuler (2003), Masciandaro, Quintyn and Taylor (2010) and Dijkstra (2010)). Supervisory independence is on average still much lower than monetary policy independence. Accountability arrangements – the indispensable complement to independence – are often poorly developed.

However, experience of the last two decades also points in the direction of some critical limitations with respect to the potential impact of supervisory governance. These limitations go back to an argument that was developed earlier in this chapter: by the nature of the supervisory work, the contract between the supervisor and society will always be radically incomplete given the great range

of contingencies that can occur in regulation and supervision. Hence, it is misleading to believe that supervisory governance arrangements can be defined and implemented in such a way that each and every possibility of political, industry and self-capture will be eliminated. So, the first best solution, i.e., define the right governance arrangements to address the supervisors' incentive and commitment problems has its own limitations.

**Table 8.4: Key Considerations for Building Effective Supervisory Frameworks**

	Macro-prudential supervision	Micro-prudential supervision
Degree of unification/ integration/consolidation across sectors	Some form of consolidated (i.e. across sectors) supervision is necessary to arrive at all-encompassing overview of risks in the system	Considerations pro and con are basically the same as developed in the section on the architecture, i.e. they are country-specific.
Degree of central bank involvement	Central bank should play a key role in macro-prudential supervision because it is in the best position to collect and analyze the information needed, and the proximity of the lender-of-last resort function. Yet, conflicts of interest might also arise between monetary policy and macroprudential supervision and policy.	Arguments pro and contra housing in central bank are the same as those presented in the section on the role of the central bank. However, there is one new argument: checks and balances between macro- and micro-prudential argue for having micro prudential outside central bank (if macro is in central bank) In addition, having both in central bank makes the latter a very powerful (perhaps too powerful) institution
Governance arrangements	Given the nature of macro-prudential supervision, strong governance arrangements are needed. Ideally, macro-supervisors should rely on a set of strong rules (more than discretion) because the political economy considerations will be challenging	Strong governance arrangements are needed  There is some need for rules (as opposed to discretion) in particular in area of bank intervention and closures.
	Strong consideration should be given to organize macro- and micro-prudential supervision in separate agencies. This would introduce checks and balances between both which is likely to strengthen and improve supervisory governance and would avoid that one institution becomes too powerful.	



Moreover, the crisis experience has demonstrated that some of the more successful approaches to supervision are the result of long-established and long-fostered corporate cultures that have helped to brace the institution against various forms of capture. In other words, effective supervisory governance needs to be nurtured by the right corporate culture. Or, *de facto* independence seems at least as important as *de jure* independence. The crisis record shows indeed that, on the one hand, several countries with strong (*de jure*) governance arrangements were most severely hit by the crisis, while others with relatively weaker arrangements on paper emerged relatively unscathed from the crisis. Palmer and Cerutti (2009), point in this respect to the case of Canada: the supervisory agency lists not among the highest scores on *de jure* independence, but its *de facto* independence is high, which, combined with a strong supervisory culture, has contributed to escaping from the crisis. So the bottom line is that improvements in supervisory governance *per se*, are not a panacea for all supervisory failures. Improvements in supervisory governance must be supported by changes in supervisory approaches and cultures, and that takes time.

Combining these two major arguments – governance arrangements will always have their limitations, because of the impossibility to write a contract (in the principal-agent sense) that fully aligns incentives, and governance arrangements do not *per se* lead to improvements in supervision if their spirit is not fully embraced by the institution – forces us to think in other directions to limit the potential risk for supervisory failures.

Finally, it worth noting that macro prudential supervision will be confronted with exactly the same governance issues. This new policy domain will also be working under a hard-to-define and hard-to-measure objective, and its contract will also be incomplete because of the wide range of contingencies. Such issues will be magnified in the macro prudential domain because the impact of macro prudential decisions will be even more visible and more felt throughout society.

### 8.7.2. The Way Forward: “*divide et impera*”

Our proposal for enhancing supervisory effectiveness takes advantage of the current trends in the supervisory architecture: the separation of macro and micro prudential supervision offers a great opportunity to conceive a solution that offsets some of the inherent weaknesses that we just discussed: let us combine the new architecture with good governance practices to better align supervisory incentives.

Here is the reasoning: we argue for an institutional separation between macro and micro prudential supervision. The presence of two institutions involved in the same field of operation, but with a different mandate, would allow for checks and

balances to exist among both institutions which could reduce the likelihood of capture (of any type), and thus strengthen supervisory governance. “*Divide et impera*” in this context means: divide the responsibilities so that better governance can reign. This proposal is inspired by a model developed by Laffont and Martimort (1999) and a recent extension of their work by Boyer and Ponce (2012).

Laffont and Martimort’s model starts from the idea that the power of a supervisory agency is its ability to use some piece of information it has learned on the supervised entity to improve social welfare. They show that, when benevolent supervisors are in charge of implementing the socially optimal contract, there is no reason for the separation of powers. They always use their possible discretion, i.e., their power, to maximize social welfare. However, non benevolent supervisors may use their power to pursue personal agendas, for example by colluding with the supervised entity. In this case separation has advantages. Separation of supervisors divides the information and thus limits their discretion in engaging in socially wasteful activities. Instead of having a unique supervisor implementing the privately efficient collusive offer to the regulated firm, separation introduces a Bayesian-Nash behavior between partially informed supervisors which reduces the total collusive offers they make. As a result, the transaction costs of collusive activities increase and preventing collusion becomes easier. Separation improves social welfare.

Boyer and Ponce (2012) adapt this framework to analyze the implications of capture on the optimal allocation of micro and macro prudential supervision. They conclude that concentration of both supervisory powers in one agency could be harmful because the monopoly of information acquisition may be a curse when capture is a concern. In other words, institutional separation of the micro- and the macro-pillar of supervision now offers a unique opportunity to create a system of checks and balances that should have a positive impact on the incentive structure of supervisors and – provided both agencies have good governance arrangements – would enhance effectiveness and responsiveness of supervision.

An effective architecture from a supervisory governance point of view would therefore be to house macro prudential supervision in the central bank and micro prudential supervision in an agency at arms’ length from the central bank. The advantages of this architecture would be that (i) it provides checks and balances that would better align supervisors’ incentives; (ii) not all power is concentrated in one mega-agency. So the separation of the two sides of supervision can be used to reduce the fear of too much central bank involvement (or dominance); (iii) synergies are created because the analytical scope of macro prudential supervision is closer to the core focus of the central bank; (iv) the link between macro-prudential supervision and the central bank’s function of liquidity provisioning be

preserved; and (v) if central banks are not involved in micro prudential supervision the classical moral hazard risk (banks become less risk averse if the lender of last resort function is also with the supervisor) becomes weaker.

The proposed division of labor would also entail some costs in terms of reporting to two agencies and the need for coordination and communication between these agencies. Finally, these arrangements could potentially introduce some competition among supervisors but since their mandates would be different it would not be the type of competition that financial institutions could exploit. In any case, the models on which this proposal is founded indicate that these costs are lower than the potential benefits.

Governance of the oversight framework can be further strengthened by resorting, in some critical areas, to a more rule-based system, such as PCA. This is all the more true for macro-prudential area. While micro prudential supervision traditionally has had to cope with various forms of capture, this is much truer with macro prudential supervision which will have to cope with a wide variety of the political economy constraints. While it might be challenging to close a bank when there is political pressure, it will be all the more difficult to “take away the punch bowl” when politicians and the industry only see the advantages of certain booms. For an overview of pros and cons of rules based decision-frameworks, see e.g. Agur and Sharma (2013).

## 8.8. CONCLUSIONS

Banking supervision is an art, not a science. It cannot be, and should not be failsafe. (...). But it is up to the supervisory community itself to understand and to articulate the objectives and limitations of the supervisory process. To the extent that the supervisory community does this well, it will flourish in the sunshine of its heightened public profile.

G. Corrigan (1992)

Bank supervision is a crucial and essential complement to bank regulation in the authorities' pursuit of financial stability. Yet, as this overview has shown, the grand debates about key features of supervision aimed at making it more effective, have not yielded clear conclusions in any specific direction. The empirical evidence is also inconclusive: supervision could be effective when housed in the central bank, or it could show failures. Consolidating all supervisory agencies under one roof might be good, but at the next crisis, it might be blamed for not having been effective. Financial crises occur in countries that have a high degree of supervisory independence, while in countries with lower independence, supervisors might be hailed for having prevented a crisis.

Will the Holy Grail for effective supervision ever be found? Probably not. Supervision will probably never be failsafe – and, in line with Goodhart, we say that it should not be. Supervisors will always find themselves between Scylla and Charybdis, but the economics profession and policymakers need to continue the search to improve supervisory effectiveness. In order to do that, any misconception about supervision and its role needs to be wiped out, and its limitations need to be clearly pointed out.

The misconception, which lives with the broad public and politicians alike, is that supervisors should avoid any bank failure. A bank failure is not tantamount to supervisory failure. It can even be good for the system that a bank fails, as long as the soundness of the system improves as a result of that. When faced with a crisis, politicians reveal often the same instincts: the existing supervision and regulation is at fault and heads must roll. And, as Goodhart (2007) says “since politicians do not want it to be their own heads that become parted from their bodies, they feel the need to be seen to be taking actions to make sure that that particular disaster never happens again” (witness for instance the number of reversals in changes in supervisory architecture in the wake of the global crisis).

In order to get rid of this misconception it is important to understand and point out the limitations of supervision. First, in a world of “prudential regulations” as opposed to “prohibitive regulations”, supervisors have more a monitoring (supervising) function than a strictly controlling function. However, if they cannot strictly control financial institutions, the implication is that they can ultimately not be held responsible for an institution’s behavior, but that the final responsibility lies with the corporate governance of the financial institutions.

Secondly, the supervisors’ mandate can never be perfectly defined and measurable. This means that their contract (in the principal-agent sense) will always be incomplete because of the wide range of contingencies in the execution of their mandate. So, simple accountability will not work. Supervisors should be considered “fiduciaries” whose duties are defined by relational contracting whereby the parties do not agree on a detailed plan of action, but on general principles and procedures, on types of actions to be taken and instruments to be used. Such a relationship requires multiple accountability arrangements to create trust.

Once these limitations have been understood, supervision can be organized in a way that it can work effectively within these boundaries. The new paradigm that has emerged after the crisis offers a great opportunity in this context: if macro- and micro-prudential supervision are housed in a different agency (or, if that is not possible, with strict “Chinese walls” between the operations and the decision-making of both), both agencies should be endowed with strong governance arrangements. Relying on a set of rules, rather than full discretion in some parts of the decision making process should be part of these governance arrangements.

The arguments for resorting to some rules are even stronger in macro-prudential supervision in light of the political economy pressures on this policy domain.

In such a constellation, there would be a system of checks and balances between both agencies, because they analyze and monitor the same subject matter, but from different angles. Such checks and balances would go a long way in reducing the risks of political, industry and self-capture. At the same time, they offer the opportunity for better supervisory effectiveness within the limitations that we outlined above. This could be an important step forward in our search for the Holy Grail.

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