"GOVERNANCE OF FINANCIAL SUPERVISORS AND ITS EFFECTS – A STOCKTAKING EXERCISE"

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GOVERNANCE OF FINANCIAL SUPERVISORS AND ITS EFFECTS – A STOCKTAKING EXERCISE

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Abstract

The attention for the governance of financial sector supervisors is of a recent date. The debate has risen to the fore as part of the wider discussion about the appropriate institutional organization of financial supervision and the drive for compliance with international best practices in the regulatory field. This paper takes stock of the regulatory governance debate. We first discuss the main premise of the paper, that regulatory governance plays a pivotal role in instilling financial sector governance, which in turn is a key source of corporate governance in the nonfinancial sector (the governance nexus). Having established this premise, we identify the main pillars for regulatory governance-independence, accountability, transparency, and integrity. The next two sections take a look at where we stand in practice. First, we review to what extent recent reforms of supervisory structures worldwide are embracing the four pillars underlying regulatory governance. We find that

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policy makers are gradually making efforts to improve the foundations for regulatory governance. However, further convincing, in particular of the beneficial effects of accountability, seems necessary. Secondly, we review a number of studies that assess the impact of (aspects of) regulatory governance on the soundness of the banking system (an indicator of good financial system corporate governance), or other aspects of the governance nexus. Most studies show a positive impact of stronger regulatory governance frameworks on the soundness of the financial system. However, further empirical evidence to strengthen the case for good regulatory governance seems desirable.

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1. Introduction

While corporate governance in the nonfinancial sector has been receiving a great deal of attention, both in academic and policy making circles, it is striking how little emphasis, in comparison, has been put on aspects of corporate governance of financial institutions, in spite of the general recognition that the financial sector plays a key role in the economy.[2] Even lesser attention has been paid to the corporate governance aspects of regulators and supervisors of the financial system (hereafter called regulatory governance[3]), despite the fact that a majority of scholars and policy makers would agree that they play a crucial role in preserving financial stability.[4]

The need for attention for corporate governance issues in financial institutions and their supervisors stems from three intimately related reasons. First, the financial system contributes to the production of a public good-financial stability. Worldwide experience shows that failure to produce this good is bound to result in deep and costly systemic crises. Secondly, financial sector institutions (and commercial banks in particular) pose a number of unique corporate governance issues for all stakeholders-managers, regulators, investors and depositors. Third, it is widely accepted that the two aforementioned reasons combined, justify a level of, and approach to, regulation and supervision that is qualitatively different from that in many other sectors that are also involved in the production of public goods (e.g. utilities). To be able to live up to these high standards of regulation and supervision, financial sector regulatory agencies need appropriate corporate governance arrangements.

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[2] Leading contributions on financial institutions governance include, in chronological order, Prowse (1997) as well as a number of other contributions in a special issue of Banca Nazionale del Lavoro (March 1997), Halme (2000), Caprio and Levine (2002), Harm (2002), Macey and O' Hara (2003), and a number of contributions in a special issue on the topic of Journal of Banking Regulation (January 2006).

[3] The term "regulatory governance" is being used in two meanings in the literature. Some authors use the term in reference to the emerging mode of governance of social and economic life in a large number of countries through regulation. In that sense, regulatory governance is intimately linked with the notion of a "regulatory state" (for an overview, see for instance Phillips, 2006). In our paper, regulatory governance is used in a narrower sense and refers to the corporate governance of regulatory agencies as they emerge in the regulatory state.

[4] The terms "regulator" and "supervisor" are used interchangeably in this paper, although strictly speaking they refer to related, but different functions. The main task of the regulator is to define and implement the regulatory framework, while the supervisor's main task is to enforce the regulatory framework and take sanctions against individual institutions in case of noncompliance.

In contrast with the corporate governance issues of financial institutions, which are different in grade and nature from those of the nonfinancial sector, regulatory governance poses an entirely different set of issues. Regulatory agencies are relatively new creatures in our liberalized economies, and policymakers are still trying to position them within the constitutional and democratic framework. On the one hand, these agencies are extensions of the government through which the latter regulates the markets (mainly to correct market imperfections), and yet, on the other hand, they are supposed to operate at arm's length from the government. Financial sector regulators are certainly not the only agencies for whom these questions are pertinent, but for the reasons indicated above and further discussed in this paper, they occupy a unique position among the regulatory agencies. In addition, they are in the midst of redefining and repositioning themselves to meet the challenges posed by fast-evolving financial systems.

This paper focuses on the why's and how's of high quality regulatory governance. As a stocktaking exercise, the paper tries to answer four main questions: (i) what makes financial sector regulatory governance so important; (ii) what are the necessary foundations for achieving good regulatory governance; (iii) what are the current trends with respect to these foundations; and (iv) do we see any impact of good regulatory governance practices on the performance of the financial sector.

In light of the earlier statement that research on this topic is still rather thin, one may wonder whether a stocktaking exercise is not premature at this stage. We don't think so. A large number of countries are in the middle of an intense debate about the appropriate institutional structure of financial supervision, so this is the right time to endow these new agencies with appropriate governance features. The world is moving away at a high speed from the times when a bank supervisor was a compliance officer. We have entered an era where the supervisor is a "governance regulator," i.e. a regulator who ensures, in a forward-looking manner, that sound governance practices are applied in the supervised entities. So any stocktaking exercise of emerging trends and issues is probably welcome and should be helpful in setting out some beacons to help direct the debate.

To answer the four questions above, the paper is structured as follows. To fully appreciate the crucial role of financial supervision, section 2 reiterates the notion of the "governance nexus" which lays out how the quality of governance arrangements at the different segments of the nexus-public sector, regulator, financial sector, and nonfinancial firms-has an impact on the quality of governance at the other segments.[5] As financial sector regulators stand at the beginning of this nexus, these agencies bear a great responsibility and their governance arrangements have a demonstration effect (Carmichael (2002)) on the financial system. Having established this principle, Section 3 identifies independence, accountability, transparency and integrity as the four prerequisites for good regulatory governance. Section 4 reviews evidence from recent supervisory reforms. The evidence reveals that governments are starting to pay attention to these prerequisites. However, it is also noted that there is certainly not yet a uniformly accepted governance template for financial supervisory agencies. Section 5 reviews empirical work regarding the impact of regulatory governance on other segments of the nexus. The results point fairly unequivocally in the direction of a positive impact of good regulatory governance practices on the soundness of the financial system. However, more research is needed to persuade the unconvinced. So, this section concludes with some suggestions for further research. Section 6 brings together the conclusions.

[5] In this context the term "governance nexus" was first coined by Das and Quintyn (2002) and Das, Quintyn and Chenard (2004).

2. Regulatory Governance and the "Governance Nexus"

In today's economies the quality of corporate governance at the level of each individual agent in a nation's economy has become one of the most important contributing factors to economic performance, growth and development. The significance of governance can best be analyzed if we model the economy for the purpose of this paper as consisting of three groups of agents: the public sector, which includes the regulators, the financial sector, and the nonfinancial firms.

The notion of a "governance nexus" brings out the idea that the quality of the corporate governance in each of these three groups of agents has a critical impact on the quality of the governance in the other groups, and, in the end, on the performance of a country's economy as a whole.[6] This section brings together theoretical and empirical insights in the working of this nexus. The main purpose is to highlight the pivotal role of financial sector regulation and supervision in the operation of the nexus. The notion of a nexus also implies that a country's corporate governance system is only as strong as its individual components, i.e. the weakest link has a strong impact on the outcomes for the economy as a whole.

Corporate governance of nonfinancial firms

Few topics have received as much attention in the past decade and a half, as corporate governance of firms. This growing attention stems from a number of developments. First, worldwide economic liberalization has reduced, by definition, the impact of government interference in business in general and, thus, has put more responsibilities in the hands of owners and managers of corporations. Addressing these growing responsibilities has put the spotlight squarely on strengths and weaknesses in governance arrangements which had hitherto somewhat remained out of the limelight. Secondly, the transition of the economies of the former Soviet Union to market economies confronted scholars and policymakers face-on with the need for solid corporate governance arrangements in order to make these new market economies function properly, reduce corruption and promote equality. Finally, a number

[6] This is far from claiming that the causality is unidirectional from governance to economic performance. The literature on economic growth and development amply demonstrates that the linkages are far more complex. The entire debate about governance only underlines its importance as one of the contributing factors for economic growth and development.

of big scandals in industrialized countries around the turn of the century further heightened the discussions about the quality of corporate governance arrangements, even in countries, such as the US, which had been considered for a long time as having solid arrangements.

From a theoretical point of view, it has been evident since Berle and Means (1932) and Coase (1937), that the neoclassical description of a firm as a homogeneous agent that maximizes a utility function needed to be enriched by identifying the various agents that interact at the level of a firm (shareholders, managers, stakeholders), as well as their preferences. Thus, the corporate governance problem was identified as an agency problem-the separation of ownership and control. As Shleifer and Vishny (1997) state it in their excellent survey "corporate governance deals with the ways in which suppliers of finance to corporations assure themselves of getting a return on their investment." Behind this "down-to-earth" presentation of the problem is the key issue that the quality of corporate governance is in the end a critical determinant of whether a firm, or the productive sector of an economy in general, can raise funds to produce goods and services efficiently. This ability has a clear and direct impact on every nation's economic performance, growth and development. Thus, corporate governance is crucial and central to understanding economic growth in general, and the role of the financial factor therein, in particular (Levine (2004)).[7]

The standard theory (Berle and Means (1932)) states that corporate control is exerted by diffuse shareholders, by directly voting on crucial issues (mergers, liquidations, business strategy), and by electing the board of directors to represent their interests and oversee management. However, one of the main conclusions of Shleifer and Vishny's (1997) survey is that in large parts of the world, a number of market frictions actually prevent the diffuse shareholdership from effectively exerting corporate governance. They find that, instead, large equity holders and large debtholders-more specifically banks-are the primary sources of corporate governance.[8]

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[7] In a recent paper, De Nicoló, Laeven and Ueda (2006) empirically assess the impact of changes in governance quality on aggregate and corporate growth and productivity in the period 1994-2003. One of their main conclusions is that improvements in governance quality are found to have a positive and significant impact on traditional measures of real economic activity.

[8] Shleifer and Vishny (1997) and Caprio and Levine (2002) cite a long list of reasons why the diffuse shareholders cannot effectively exert corporate control: (i) large information asymmetries between managers and small shareholders; (ii) lack of expertise and incentives on the part of the latter to close the information gap; (iii) boards of directors that are captured by management and therefore do not represent the small shareholders; (iv) voting rights that do not work because managers have wide discretion over flows of information; and (v) legal systems that do not protect the rights of minority shareholders, or that do not properly enforce these rights.

The key role of financial intermediaries in improving corporate governance of the borrowers was first modeled by Diamond (1984). Diamond defines "delegated monitoring," as one of the key functions of financial intermediation. Financial intermediaries collect savings from individuals and lend these resources to firms. In doing so, savings are realized on aggregate monitoring costs and the free-rider problem (among depositors) is eliminated because the intermediary does the monitoring on behalf of all investors. This solves the incentive problems between borrowers and lenders. In addition, as financial intermediaries and firms develop long-term relationships, information acquisition costs are further lowered over time.

Despite some shortcomings, Diamond's model has been considered a great step forward in formalizing the central role of banks in monitoring nonfinancial firms.[9] Other authors have built upon this model (for an overview, see Levine (2004)) and shown that well-functioning intermediaries more generally, have a central role in boosting corporate governance in the nonfinancial firms. Given the prevalence of banks in many financial systems around the world, it follows that banks are a critical source of corporate governance of their borrowers, for capital allocation, and thus for industrial and economic expansion. So the first link in the governance nexus is between financial institutions-more specifically banks-and the nonfinancial sector.[10]

Some scholars (see e.g. Dewatripont and Tirole (1994)) go as far as claiming that the role of the banking sector as a source of governance for the nonfinancial sector is its most important role, and indeed the only role that is uniquely performed by banks as financial intermediaries. It is recognized that banks play a number of (other) significant roles in the economy-notably the transformation and liquidity creation function, mobilization and pooling of savings, and providing ex-ante information about investments and capital allocation, but these roles are not necessarily unique for the banking system. They can be-and in fact are-performed by other agents as well, whereas their role as a key source of governance is in fact unique to them.

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[9] Dewatripont and Tirole (1994) and Prowse (1997) for instance point out that the model focuses on debt only and cannot explain outside equity. However, Prowse notes that it is not clear whether inclusion of equity would change the results of Diamond's model.

[10] Banks are certainly not the only players in this regard. Securities markets also play a part, but given the evidence presented by Shleifer and Vishny (1997) that large share- and debtholders de facto have a greater influence, the role of banks dominates. On the relative strengths and weaknesses of banks and markets as a source of corporate governance, see among others, Levine (2004).

Governance of financial institutions

Diamond (1984) was the first to note that the financial institutions' task of "delegated monitoring"-of being a major source of corporate governance-puts a special burden on their corporate governance-the issue of "who monitors the monitor?" Indeed, if the role of the financial sector as a guardian of good governance practices at the (nonfinancial) firm level is so crucial, the quality of their corporate governance matters significantly.

More recently, a second reason why the quality of corporate governance in financial institutions matters, has gained prominence. Financial institutions play a key role in attaining and preserving a country's financial stability, generally accepted as an important public good. So, because financial stability provides the foundations on which economic growth and development can thrive, corporate governance of the financial system contributes in two ways to a country's economic performance.

Having established the importance of high quality corporate governance of financial institutions, we now turn to the specific issues related to their governance. There is a growing consensus that banks face corporate governance issues that are different in grade and nature from those that nonfinancial firms face. In light of the importance of bank corporate governance, these issues require special attention and specific solutions.

The main reason that attention for this topic is of a recent date is that financial systems were, by and large, among the last economic sectors to be liberalized. Since the mid-to-late-1970s, financial sector liberalization has unleashed a number of interrelated forces-competition, technological innovations, and more risk-taking-which undoubtedly have complicated their governance and, thus, brought to the surface the existence of a number of financial sector-specific governance issues. In addition, the large number of bank insolvencies in the 1980s and 1990s, where corporate governance problems were identified as a contributing factor, has further intensified the interest in the efficiency and effectiveness of the governance systems of banks (Prowse (1997)).

The corporate governance problems for managers, investors and depositors of financial firms stem from a number of unique features of their operations and operating environment (Prowse (1997)), Caprio and Levine (2002), Harm (2002), and Macey and O'Hara (2003)):

- First of all, banks are *opaque organizations and their risks are complex*. While information asymmetries are present in all sectors, they are more pronounced in financial institutions, notably banks. The nature of their business makes it simply more difficult for outside investors to assess their ongoing performance. The opaqueness creates a number of problems for equity and debt financiers alike, and causes a number of governance mechanisms to become less effective than in the nonfinancial sector: (i) with greater informational asymmetries, it is very difficult for diffuse equity and debt holders to monitor bank managers. While debt holders (depositors) have always been diffuse by the nature of the banking business, the current trend of financial institutions becoming much larger, is also diminishing shareholder control. Tošovský (2003) notes that ownership has become more dispersed, majority shareholders have become more interested in their investment than in operating control, and as a result, only few shareholders are able to influence or control the bank; and (ii) opaqueness makes governance by competition more difficult, and thus less effective in the banking industry than in the nonfinancial industry. Takeovers as a sanction are likely to be less effective because insiders typically have more information than potential purchasers.

- Secondly, by the nature of their business, banks are a typical category of firms where *shareholders and stakeholders have interests*. The stakeholder philosophy is discussed in detail in Tirole (2001). His point is that any party with significantly specific assets committed to the firm will demand property rights. The recognition of depositors as stakeholders who deserve an allocation of property rights adds another level of complication to bank governance. If we combine these rights with the finding in the first bullet, that these stakeholders are dispersed and typically not well informed, we start to get a clear picture why bank governance is more complicated than corporate governance in a nonfinancial firm. To deal with the issues posed by the opaqueness of the banking business and the complexity of its risks, a number of internal and external safeguards have gradually been put in place. On the internal side, it has been suggested that board and management oversight mechanisms be established, as well as mechanisms for internal control and internal audit.[11] Externally, accounting requirements and external audits have been imposed, rating agencies established, and last but not least, prudential regulation and supervision promoted. Among these safeguards, regulation and supervision undoubtedly play a pivotal role, a point that will be further elaborated below. Before doing that however, a third feature deserves attention.

[11] The BIS has been instrumental in promoting a number of these safeguards. See in particular BIS (2006), as well as the Basel Core Principles for Effective Banking Supervision (BCP).

- The reference to regulation and supervision by the government leads to a third reason why bank governance is complex and different from the standard corporate governance model: *the relationship between the financial system and the government*. Indeed, despite widespread liberalization of the financial sector, governments remain more involved in the financial sector than in most other sectors of the economy. This involvement can take many forms. First, in the previous bullet it was pointed out that the role of the government as regulator and supervisor is justified to fill voids in the financial institutions' governance mechanisms. Furthermore, in many countries the government provides additional protection to the (small) depositors through deposit insurance and stands ready with lender-of-last resort support to avoid systemic crises. Finally, several countries still have a significant presence of government owned-banks (although the numbers have been shrinking significantly over the past decade). While the first two types of government involvement are typically seen as remedies against weak governance in financial institutions or their consequences, it needs to be recognized that they can potentially complicate and weaken bank governance, rather then remedy them. First, an ill-designed regulatory framework can undermine financial sector governance mechanisms, instead of strengthening them. Because this topic goes to the heart of the discussion in this paper, it will be further developed later in the paper. The same argument goes for deposit insurance. The pros and cons of such protection are the subject of intense debate. Several scholars see it as a type of government intervention that weakens corporate governance mechanisms as it reduces the incentives of depositors to monitor banks and gives an incentive to banks to take more risks.[12] Others claim that limited deposit insurance can be effective and have minimal interference with bank governance, if properly designed and implemented at the right time.[13] Likewise, ill-designed lender-of-last resort facilities can also undermine corporate governance of banks (Heremans (2007)). Finally, it is also generally recognized that government ownership of financial institutions could easily lead to conflicts of interest situations and weak governance with the government being owner and regulator.

The above step-by-step analysis of bank governance problems can be summarized as follows: the nature of the banks' operations (opaqueness and complexity) renders some standard governance mechanisms less effective.

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[12] For a representative paper of this school of thought, see Demirgüç-Kunt and Kane (2002). The authors argue that increased risk-taking by banks owing to an explicit deposit insurance system manifests itself in an increased probability of experiencing a systemic banking crisis.

[13] For an overview of best practices and trends, see Hoelscher, Taylor and Klueh (2006).

The banks’ mandate and their governance are further complicated by the combined presence of shareholders and (diffuse) stakeholders. To ensure effective bank governance, governments have stepped in through regulation and supervision.

Thus, regulation and supervision are the central elements of the answer to the initial question-who monitors the monitor. From here, it is only one small step to conclude that the primary role of regulation and supervision is to strengthen the governance of the financial institutions, by addressing in particular their specific governance issues-those that cannot be effectively addressed by standard governance mechanisms.

This view of regulation is closely aligned with Dewatripont and Tirole’s (1994) “representation hypothesis” of regulation.[14] Prudential regulation “...is primarily motivated by the need to represent the small depositors and to bring about an appropriate corporate governance for banks.” (p.35) This view sees the supervisor as performing the role of one important stakeholder in the banks’ corporate governance (Halme (2000)), representing the set of diffuse stakeholders, i.e. the depositors. From this, it follows that bank regulation becomes part of the overall corporate governance regime of banks (Harm (2002) and Adams and Mehran (2003)). In such a framework, bank governance consists of two parts (Harm (2002 and 2007)): the regulators ensure debt governance, and shareholders ensure equity governance.[15,16] As a result, bank managers have to serve two masters, the shareholders and the regulators, the latter representing the bulk of the uninformed stakeholders. These governance arrangements thus induce, or force, management to internalize the welfare of *all stakeholders*, not just shareholders (Tirole (2001)).[17]

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[14] See also Harm (2002 and 2007) and Alexander (2006) for similar views.

[15] Harm (2002) also notes that equity governance typically dominates in normal times, while debt governance dominates in bad times.

[16] Wood (2006) tends to disagree with this complementarity view. He argues that the importance of bank regulation-because of its negative effects on banking and the fact that there is always a tendency to circumvent them-should be downplayed, and that governments instead should strengthen bank governance (by law, by contract) to achieve the goals that are now pursued through bank regulation.

[17] The thrust of this discussion has been in terms of corporate governance of banks, and their supervision and regulation. However, as Dewatripont and Tirole (1994) claim, the representation hypothesis of regulation and supervision also holds for other financial intermediaries, in particular pension funds, insurance companies and securities market participants. These institutions also count among their creditors, large numbers of small debt holders who need to be represented. What is different however, is the degree of opaqueness of these institutions and the degree of complexity of their operations. To the extent that risks are smaller for the small debt holders, a lighter regulatory and supervisory framework can be established.

Regulatory governance

A majority among scholars agrees on the rationale for financial sector regulation because of the specific functions the sector fulfills in the economy and because of the specifics of the financial system’s operation (see among others, Goodhart (1998a), Llewellyn (1999) and (2001)).

In the framework established in this paper, we have stated that one of the unique roles of banks is to be a source of governance for nonfinancial firms. Regulatory and supervisory agencies, who step in to address weaknesses in the banks’ governance frameworks, should thus in the first place be “governance regulators”-regulators that derive their rationale for existence primarily from the correction of imperfections in the governance of banks. The implication of the latter is obvious: in order to fill the voids in the banks’ governance in a credible manner, supervisors themselves need to set a credible example, i.e. have a good governance framework. So, the next chain in the governance nexus is now established and the next section will focus on how to establish high quality regulatory governance-to create the proper incentive structure for the supervisors to promote good corporate governance in the supervised entities, so that these can play their role as delegated monitors. We should remind ourselves here that, if rules and regulations are ill-designed, and supervision is weak-and by extension if other government interventions are ill-designed-bank governance is further complicated or undermined, instead of cured.

Public sector governance

Before we turn to that next section, we need to highlight the final segment of the governance nexus. Regulators and supervisors obviously do not operate in a vacuum. They are influenced and conditioned by the economic and political realities surrounding them. This is tantamount to saying that the broader concept of public sector governance can make or break regulatory governance. We adopt the following definition of public sector governance, suggested by Kaufman, Kraay and Ziodo-Lobaton (2000):

> *“The traditions and institutions that determine how authority is exercised in a particular country. This includes (1) the process by which governments are selected, held accountable, monitored and replaced; (2) the capacity of governments to manage resources efficiently, and to formulate, implement, and enforce sound policies and regulations; and (3) the respect of citizens and the state for the institutions that govern economic and social interactions among them.”*

The quality of public sector governance not only makes or breaks regulatory governance, it has pervasive effects on all aspects of the chain. There is abundant empirical evidence showing that corruption, weak rule of law, weak institutions, such as the legal and judicial system have a negative impact on corporate governance in all layers of the society.[18] Good public governance is almost a precondition for good governance in the rest of the economy. The latter includes the absence of corruption, a sound approach to competition policies, effective legal and judicial systems, and an arm's length approach to government ownership.

The governance nexus

To sum up, the "governance nexus" provides an intuitive presentation of an important economic reality: in our modern, liberalized market economies, the quality of governance at each layer of the economic machinery has an impact on the quality of governance at the other layers. Chart 1 visualizes the chain.

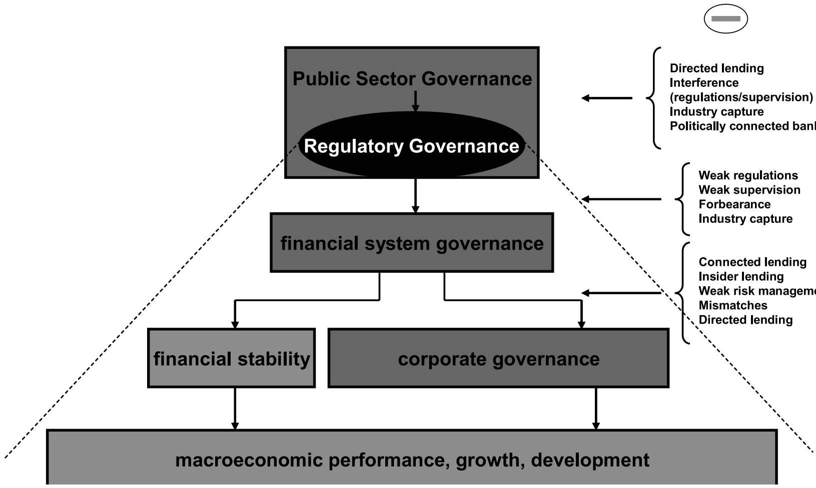
The solid lines in the middle of the flow chart show the virtuous impact to be expected from good governance at each level. The chart shows the crucial position of the financial sector regulator, and thus the crucial role of regulatory governance. The triangular presentation of the nexus points to another feature with importance for the analysis of this paper: the mechanisms of "delegated monitoring" and of the "representation hypothesis" underline that the responsibilities at each layer in the chain are in the hands of fewer agents than in the next layer. While this, in principle, should facilitate the coordination problem, it also shows an increasing responsibility the higher one goes in the triangle.

Behind the accolades on the right of the chart we list a (nonexhaustive) number of bad practices that may emerge in the presence of weak corporate governance at the various levels of the nexus. They are all well-known and are all bound to undermine financial stability and economic performance. The multiple financial crises of the 1990s and early 2000s, without any exception, had roots in weak governance practices at some or various levels of the nexus.

Starting from the top of the chart, there is ample empirical evidence to underscore the point that weak public sector governance leads to weak regulatory frameworks. Weak public sector governance is also bound to make

[18] See, among many, for instance, Mauro (1995) and Kaufmann et al. (1999).

Chart 1: Regulatory Governance and the Governance Nexus



intermediation more expensive as banks will charge higher costs to hedge against potential losses stemming from weak legal and judicial systems. Weak public sector governance is also typically associated with political capture by enterprises and financial firms and with politically connected banks (and firms).

Another symptom of countries with weak public sector governance is interference in the supervisory process, leading to forbearance and weak enforcement. Absence of checks and balances in the government system also opens the door to regulatory capture (a special form of political capture).[19]

At the next level, weak regulatory governance opens the door to weak financial sector governance which surfaces under numerous forms such as insider lending, connected lending, and weak risk-management practices. These practices disturb the allocation of capital and hold back economic performance and growth.

[19] Hardy (2006) argues that regulatory capture is not always negative. In an environment with weak banks (typically the result of weak governance at higher levels of the triangle) banks may try to force the supervisor to establish stronger regulations and apply stricter enforcement in order to protect their business from systemic contagion. Related to this is the role that foreign banks often play in weak systems: they have a demonstration effect on the supervisor (and other banks) by promoting good governance practices. There is empirical evidence of the virtuous effects of these mechanisms.

3. How to Achieve Good Regulatory Governance

The recognition that financial regulators occupy an important position in our modern, corporate governance-driven economies is being reflected in the growing attention that academic and policy-making circles are paying to the institutional and governance features of financial sector regulators. Without exaggeration, one can state that financial regulators are "emancipating" as an agency, after having been neglected for decades.[20] In the past decade and a half, a great number of countries have restructured their supervisory agencies and have started to pay attention to governance features.[21]

The attention for the organization of supervision and for supervisory governance is to a very large extent in response to the developments in the financial system outlined above. However, on the other hand, this attention also needs to be seen as part of a broader attention that is being given to the emergence of regulatory agencies in various sectors of the economy. For most countries, the concept of a regulatory agency that operates at arm's length of the government is a new phenomenon indeed. Majone's (1993 and 2005) overview of the origin of regulatory agencies within the government structure demonstrates clearly that, until recently, outside the United States, there is no well-rooted tradition of delegating government tasks to regulatory agencies, let alone independent ones-central banks being the only exceptions since the 1980s. The United States have a longer tradition, but their agency-culture cannot be easily transplanted to other countries. So, most countries are now accepting that in their liberalized economies, independent agencies with specific mandates have become a necessary component of effective governance. However, the fact that such agencies are accepted, does not imply that governments are not struggling to fit these new institutions into their constitutional and political systems. Endowing them with the right governance attributes is one of the great challenges in this regard. So we are witnessing a growing literature, with contributions from political scientists, economists and public administration experts on the position of this new

[20] In the pre-1970s environment of largely repressed financial systems there was hardly a need for them to perform the tasks put forward under the "representation hypothesis." Hence, regulation and supervision was of far lesser importance than it is now. Supervisors were rather box-checking (compliance) officers, whereas now they have evolved into "governance supervisors".

[21] There is a growing body of literature reviewing and analyzing these trends and developments. For comprehensive overviews see for instance, Carmichael, Fleming and Llewellyn (2004), and Masciandaro (2006).

generation-type of agency within the government structure as well as on their governance attributes.[22]

To define the governance attributes of regulatory agencies, it is useful to reiterate the OECD definition of what corporate governance involves:

> *"The set of relationships between a company's management, its board, its shareholders and other stakeholders. Corporate governance also provides the structure through which the objectives of the company are set, and the means of attaining those objectives and monitoring performance are determined."* (OECD (1999))

Although the above definition is in the first place geared toward private sector companies, it provides a useful starting point to identify the underpinnings of regulatory governance, as it also allows us to draw a number of parallels with private sector governance.

Starting from the above definition, Das and Quintyn (2002) identified four essential pillars of good regulatory governance: independence, accountability, transparency and integrity.[23] If well-designed, these four principles can underpin most of the key elements of internal and external governance arrangements for regulatory agencies. They lay down principles for dealing with shareholders (the government) and stakeholders (supervised entities, customers of financial institutions, and the public at large) and for setting up *internal* governance arrangements in support of the *external* ones. They underpin mechanisms for attaining the agency's stated objectives and for monitoring its performance.

Although references to these four principles are seldom explicitly made in the private sector governance literature, some parallels can be easily made: the need for an arm's length relation between managers and shareholders in the private sector finds its parallel in the need for independence for the regulator from the share- and stakeholders (government and supervised industry, respectively). In this regard, Majone (2005) and Quintyn and Taylor (2007) drew a parallel between the fiduciary relationship between managers and

[22] For recent contributions and overviews, see for instance Christensen and Lægreid (2006), Crew and Parker (2006) and Vibert (2007). For criteria as to when to establish agencies separate from the government bureaucracy, see Alesina and Tabellini (2004).

[23] See also Carmichael (2002). His emphasis is mainly on independence and accountability.

shareholders on the one hand and regulators and their stakeholders on the other hand. To be effective, these fiduciary responsibilities of managers need to be complemented with accountability arrangements between them and the owners and other stakeholders. Furthermore, transparency mechanisms are there to facilitate accountability, and integrity measures to avoid conflicts of interest. One point of difference-or emphasis-is that regulatory agencies, and in particular financial supervisors, have a greater number of stakeholders than private nonfinancial firms. To meet the requirements of this group, in our view accountability needs to assume a greater role for government agencies than for private firms (see also below).

As can already be observed from the discussion above, a major feature of this quartet of pillars is that they reinforce each other. Weakening one of them tends to undermine the effectiveness of the others, and in the end, the quality of the agency's governance. The next sections briefly highlight the main features of these four pillars.

Independence

Quintyn and Taylor (2003 and 2007) discuss the why's and how's of independence for financial regulators. As a starting point for good governance, the regulatory agency should be insulated from improper influence from the political sphere and from the supervised entities. A fair degree of independence from both sides will increase the possibility of making credible policy commitments.

Having said this, it should be stressed that agency independence can never be absolute. In our political systems, these "unelected officials" are an integral part of the government system and need to share the government's broad objectives and responsibilities. This important premise is further emphasized by the fact we identify independence as a pillar of regulatory governance, and not as an end in itself.

Quintyn and Taylor (2003) argue that independence for financial sector regulators should cover the regulatory and supervisory aspects of the work, i.e. the essential parts of their mandate. These two should be supported by a fair degree of independence in institutional and budgetary matters. Elements of internal governance (composition of board(s), selection of board members, functions of boards, voting rights of board members, collegial nature of board decisions) need to be in place to support the external independence arrangements.

Accountability

Accountability is the indispensable, other side of independence. Yet it is a problematic one, because policymakers and agencies seem to have trouble getting a practical grasp of its workings. Hüpkes, Quintyn and Taylor (2005) and Quintyn and Taylor (2007) discuss the virtuous interaction between independence and accountability, and present a set of practical arrangements for financial regulators. Briefly, these papers argue that accountability can be thought of as fulfilling at least four functions:[24]

- *provide public oversight*, its classical role. The agency needs to "give account" of the way it pursues its mandate and objectives;

- *maintain and enhance legitimacy*. Only if the actions of a fiduciary have legitimacy in the eyes of the political principals, the regulated firms, and the broader public can it use the granted independence effectively. If the agency's actions are perceived as lacking legitimacy, its independence will not be long lasting. Legitimacy can be generated through various accountability mechanisms and relations. Accountability permits the agency to explain the pursuit of its mandate to a broader public. This is essential to build understanding of, and broad-based support for, the way it performs its duties, and hence provides a necessary precondition for strengthening its reputation. At the same time, accountability arrangements provide a public forum in which different stakeholder groups can make representations about agency policies.[25] By creating opportunities for transparent and structured public influence, the incentives for private influence are reduced. Once it has been accepted that accountability generates legitimacy, and legitimacy supports independence, it becomes clear that the relationship between accountability and independence does not imply a trade-off, but is one of complementarities;[26]

- *enhance integrity of public sector governance*; this should be the outcome of the dynamics between accountability and the other three prerequisites; and

[24] See also Bovens (2004).

[25] This function of accountability is consistent with the "representation hypothesis" of Dewatripont and Tirole (1994). Supervisors are accountable to those they represent.

[26] The concept of a 'trade-off' is flawed to the extent that it assumes that stronger accountability mechanisms must *necessarily* mean a less independent regulatory agency. The point made here is that accountability strengthens independence.

- *improve agency performance*. Accountability is not only about monitoring, blaming, and punishment. It is also about enhancing the agency's performance. If properly structured, accountability lays down rules for subjecting decisions and actions of the agency to review. Thus, by reducing the scope for ad hoc or discretionary interventions, the agency's performance can be enhanced. In addition, by giving account to the government, the agency provides input to the government as to how to (re)shape its broader economic and financial policies. The agency has a domain of expertise that it should share with the government. In this sense, accountability stimulates coordination with the government and enhances the agency's legitimacy, without encroaching on its independence.

Finally, the line between accountability and control remains very thin-leading to another set of misunderstandings about the arrangements. Following Moe (1987) the purpose of designing accountability arrangements is to put in place a combination of monitoring arrangements and instruments, so as to arrive at a situation where no one controls the agency, but the agency is nonetheless 'under control,' i.e. it can be monitored – not just by the government, but by other stakeholders as well-to see if it fulfills its fiduciary obligations.

Transparency

Transparency refers to an environment in which the agency's objectives, frameworks, decisions and their rationale, data and other information, as well as terms of accountability are provided to the stakeholders in a comprehensive, accessible, and timely manner (IMF (2000)).

Transparency has increasingly been recognized as a "good" in itself, but it also serves other purposes related to the other components of governance. As a "good" in itself, policy makers have been recognizing that it is a means of containing market uncertainty. In addition, transparency has become a powerful vehicle for countering poor operating practices and policies. Transparency has become a main conduit of accountability to a large number of stakeholders (Lastra and Shames (2001)).

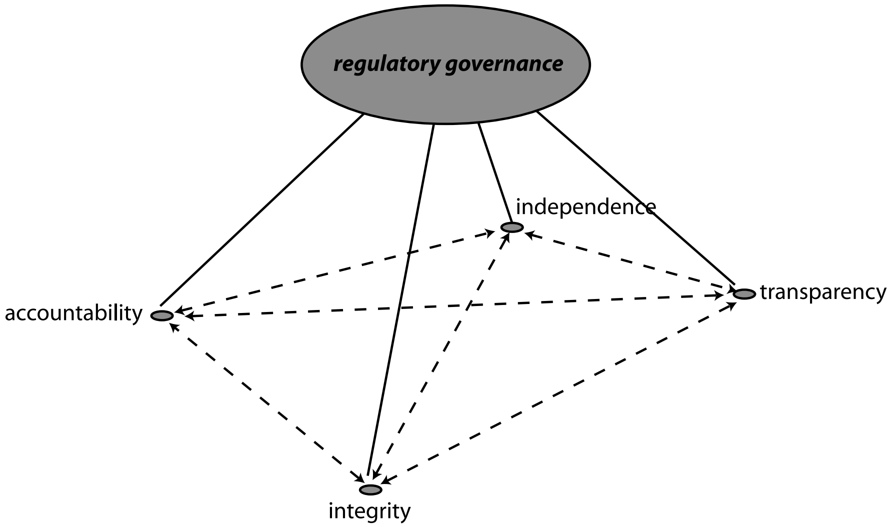
Integrity

Integrity is often the forgotten pillar. Yet, it is an essential one as it provides several of the underpinnings for good internal governance in support of the external elements (Das and Quintyn (2002)). Integrity refers to the set of mechanisms that ensure that staff of the agencies can pursue institutional goals without compromising them due to their own behavior, or self-interest. Integrity affects staff of regulatory agencies at various levels. Procedures for appointment of heads, their terms of office, and criteria for removal should be such that the integrity of the board-level appointees (policy making body) is safeguarded. Second, the integrity of the agency's day-to-day operations is ensured through internal audit arrangements, which ensure that the agency's objectives are clearly set and observed, and accountability is maintained. Ensuring the quality of the agency's operations will maintain the integrity of the institution and strengthen its credibility to the outside world. Third, integrity also implies that there are standards for the conduct of personal affairs of officials and staff to prevent conflicts of interest. Fourth, assuring integrity also implies that the staff of the regulatory agency enjoys legal protection while discharging their official duties. Without legal protection, objectivity of staff would be prone to contest-and staff to bribery or threat-and the overall effectiveness and credibility of the institution would suffer.

Mutual reinforcement

A key feature of these four pillars is that they hold each other in balance and reinforce each other as governance pillars (chart 2). The previous paragraphs have already illustrated this, and a few more examples should further reinforce the point. Independence and accountability are two sides of the same coin. Independence cannot be effective without proper accountability. Without proper accountability measures in place, agencies (or their heads) can lose their independence easily in disputes with the government. Transparency is a key instrument to make accountability work. It is also a vehicle for safeguarding independence. By making actions and decisions transparent, chances for interference are reduced. Transparency also helps to establish and safeguard integrity in the sense that published arrangements provide even better protection for agency staff. Independence and integrity also reinforce each other. Legal protection of agency staff, as well as clear rules for appointment and removal of agency heads, support both their independence and their integrity. Finally, accountability and integrity also reinforce each other. Because of accountability requirements, there are additional reasons for heads and staff to keep their integrity.

Chart 2: The four pillars of regulatory governance



4. What are the Trends?

Having established the key role of financial sector regulators in the governance nexus, as well as the four necessary pillars for high quality regulatory governance, the next question is: what is happening in the real world? Are these principles being embraced now that more attention is going to the institutional setup of supervisory agencies? A great deal of analysis has recently been devoted to the institutional overhaul of supervisory agencies around the globe, but the attention for the governance arrangements is just emerging.

This section mainly draws on one of the few comprehensive studies that has been done so far in this field. Quintyn, Ramirez and Taylor (2007) (hereafter QRT) analyzed independence and accountability arrangements for a set of 32 supervisory agencies that went in the past decade-and-a-half through institutional (cum legislative), or purely legislative changes. The survey compared independence and accountability arrangements as proclaimed in the laws before and after the reforms in order to get a feel for the trends. The paper defined 19 criteria to measure independence and 21 for accountability.[27] These criteria are derived from the authors' earlier work on both topics.[28]

The main reason for singling out the independence-accountability pair for this study is that among the four components, they seem the hardest to achieve.[29] Establishing proper independence and accountability arrangements needs endorsement by the politicians in the enabling legislation. Once independence and accountability have been established by law, the agency itself is in an ideal position to make the other two components-transparency and integrity

[27] See QRT for more details. A rating "2" is given for compliance. A "1" indicates partial compliance, a "0" noncompliance. In a number of cases, a "-1" was given for what are considered bad practices.

[28] On independence, Quintyn and Taylor (2003 and 2007), and on accountability, Hüpkes, Quintyn and Taylor (2005).

[29] Empirical evidence supports the view that independence and accountability are harder to implement than the two other pillars. IMF and World Bank (2002) and Arnone, Darbar and Gambini (2007) both find that Basel Core Principle 1.2 which deals with operational independence, is one with the lowest number of "fully compliant" assessments (31 countries out of 116 in Arnone et al.). In addition, in their analysis of the IMF Transparency Code for Bank Supervisors, Arnone et al. (2007) find that observance of Practice 8 on transparency of accountability arrangements is lower than observance of the other practices. Although this code is in the first place about transparency of practices, the lack of transparency often shows the absence of the practice, supporting the point made in this chapter.

arrangements-operational, although anecdotal evidence shows that there is not always a guarantee that independent agencies will establish sound integrity principles.

Table 1 reproduces the total ratings and the ratings on independence and accountability from QRT. Chart 3 provides a scatter-plot of the ratings before and after reforms and Charts 4 and 5 show the ratings before and after for the individual criteria in the categories accountability and independence, respectively. What are the trends?

- There is an unmistakable upward trend in both independence and accountability throughout the sample. At the individual country-level, however, trends differ widely. Progress in independence and accountability is certainly not uniform and in a few cases, we even note reversals.

- Accountability, starting from a low level (average of 40 percent before), made the greatest progress (after reforms at 61 percent). Independence moved from 52 to 68 percent.

- The move toward higher independence ratings has been hindered by the introduction (or continuation) by some governments of control-arrangements (such as appointing a minister as head of the board, or putting a clause in the law allowing the minister to intervene in the agency's operation, if necessary). Such arrangements are often introduced under the name of accountability. However, according to our definition and views (see above), they are clear control mechanisms that undermine independence.

This first set of findings demonstrates that the governments' revealed preferences only go cautiously in the direction of a full grant of independence for the financial supervisors. This is, among other things, reflected in the number of control measures that remain, or are put in place. While more attention is being paid to accountability than before, this trend may also reveal in a number of cases a concern that the experience with central banks that are considered too independent by the political class, should not be repeated. The German example is telling in this regard (see QRT and Westrup (2007) for a detailed account): the newly established financial supervisor is less independent and more accountable than the central bank. In Germany, as the only case in the sample, the new supervisory agency's accountability rating is even higher than the independence rating, and by a wide margin.

Table 1. Independence and Accountability: Overview of Ratings Before and After Reforms (In percent of benchmark)

	Total		Independence		Accountability	
Country	Before	After	Before	After	Before	After
Australia	48	71	53	76	43	67
Austria	35	64	37	79	33	50
Bahamas	49	70	66	84	33	57
Belgium	50	76	63	92	38	62
Canada	59	63	55	55	62	69
Chile	56	66	66	66	48	67
China	16	36	13	34	19	38
Colombia	45	70	47	68	43	71
Denmark	45	63	53	63	38	62
Ecuador	55	66	79	87	33	48
Estonia	61	66	82	79	43	55
Finland	34	69	24	71	43	67
Germany	55	63	47	47	62	76
Guatemala	30	35	16	21	43	48
Hungary	34	63	34	63	33	62
Indonesia	41	78	50	95	33	62
Ireland	61	84	76	87	48	81
Japan	51	55	61	47	43	62
Korea	40	53	42	47	38	57
Latvia	61	76	82	87	43	67
Mauritius	51	56	71	71	33	43
Mexico	31	71	18	82	43	62
Netherlands	68	75	79	84	57	67
Nicaragua	58	65	79	79	38	52
Norway	39	58	39	53	38	62
Poland	48	59	42	55	52	62
South Africa	33	54	37	55	29	52
Sweden	58	63	47	47	67	76
Trinidad and Tobago	43	63	58	74	29	52
Turkey	19	71	29	82	10	62
Uganda	40	59	58	66	24	52
United Kingdom	61	76	76	82	48	71
Mean	46	64	52	68	40	61
Standard Deviation	12.7	10.6	20.2	17.7	12.1	9.8

Source: Quintyn, Ramirez, and Taylor (2007).

Table 2 compares the trends in the governance of the supervisory agencies according to their location (inside or outside central bank). This table confirms the previous observation: supervisory agencies that are now outside the central bank, and in particular the unified ones (all sectoral supervisors under one roof), enjoy on average less independence and have more accountable arrangements than the ones who are housed in the central banks. The table also shows that accountability arrangements in central banks remain the least developed. These arrangements are typically geared towards the monetary policy objectives, which are less demanding in terms of accountability.

Table 2. Accountability and Independence: Trends by Location of Institution
(Average rating)

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

Source: Quintyn, Ramirez and Taylor (2007)

The hypothesis advanced by QRT to explain these trends rests on a combination of *unfamiliarity* and a certain *reluctance* for granting independence, two narrowly related factors. Unfamiliarity is certainly at play. As stated before, the phenomenon of regulatory agencies operating at arm's length from the government is new and governments are still exploring ways to position these agencies in the constitutional framework and give them the right governance attributes. Chart 3 supports this point: if the independence-accountability dynamics were fully understood (and accepted), one would expect most observations more or less along the 45 degree line. This is not the case. Observations are spread all over the diagram and the correlation between independence and accountability after reforms remains at 0.26 (insignificant at the 10 percent level). In other words, trial and error seems to prevail and the revealed preference seems to be to err on the side of control, instead of independence.

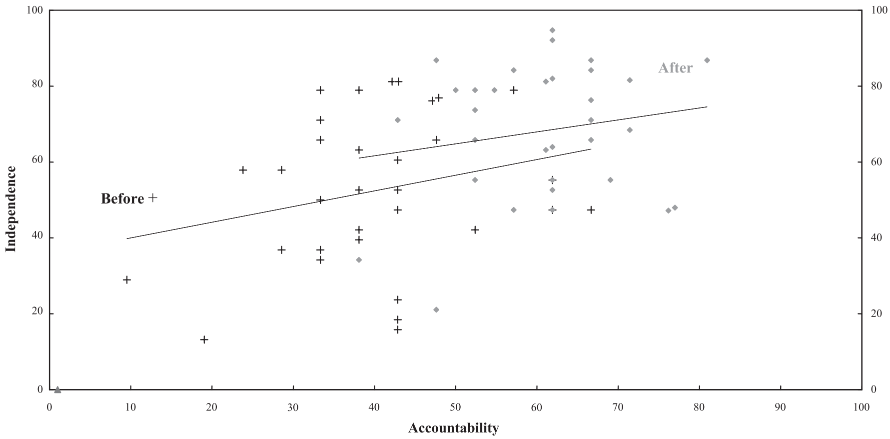
This should not come as a surprise. There is no agreed-upon model available for a financial supervisor. A question that follows naturally from this observation is: could the arrangements for central banks as monetary policy agents serve as a model? While both functions (monetary policy and supervision) play a complementary role in safeguarding financial stability, the legal objectives and the modes of operation and of decision-making are very different in both areas. Central banks as monetary policy agents typically have a well-specified objective (price stability). They have a fairly complete contract in the principal-agent sense, and independence with respect to the narrow field of their mandate is therefore widely accepted.[30] Accountability can be specific and limited in this context. Supervisors on the other hand, are operating under a highly incomplete contract given the great range of contingencies that can occur in regulation and supervision, as well as the difficulty of precisely specifying and measuring their objectives. The great range of contingencies is certainly one of the reasons why politicians are reluctant to grant them full independence. So the independence model for the pursuit of monetary policy objectives should be considered unique and not necessarily ready for simple duplication.

However, there seems to be more at play than just unfamiliarity with the agency model and its governance. Charts 4 and 5 plot the ratings for the individual criteria for accountability and independence before and after reform. Chart 4 shows the progress with regard to the accountability arrangements. While accountability arrangements before reforms were, by and large, limited to 7 arrangements, we now have a wider range of arrangements, spanning the entire spectrum of stakeholders (before, the arrangements in use were the classical ones, reflecting mainly lines of accountability towards the government). The chart also shows the decisive impact of the internet. Websites have made transparency less expensive, from which accountability has benefited.[31] Newer areas such as accountability towards consumer boards and the public at large are still in their infant stages, but they are being considered.

[30] For more details regarding this comparison, see Hüpkes, Quintyn and Taylor (2005).

[31] As the most striking example, disclosure of policies and supervisory decisions (through the website) has jumped from the bottom to the top of the ranking.

Chart 3. Scatter Plot of Ratings Before and After Reforms



Source: Quintyn, Ramirez, and Taylor (2007).

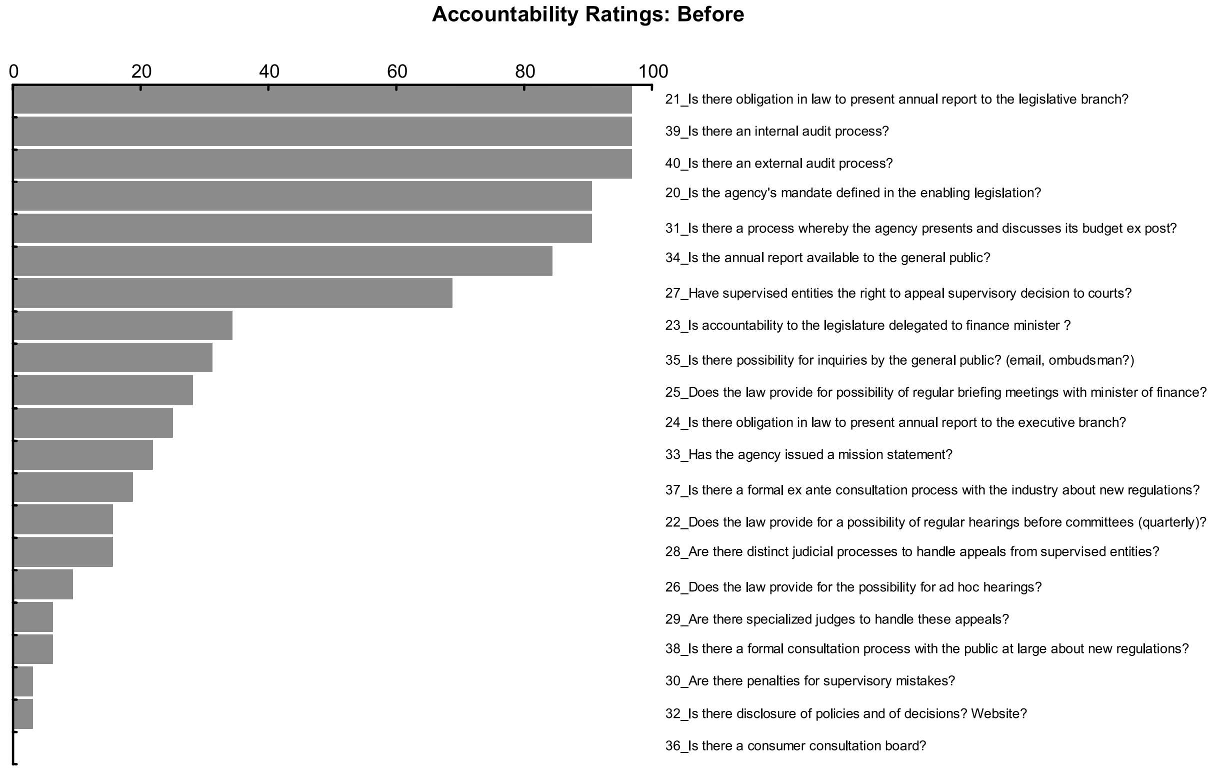
The independence chart is where we see signs of reluctance. First, on the institutional side, several agencies have government officials on their policy boards (either as chair or as member) and several laws give the minister (of finance) the right to intervene in the operation of the agency if deemed necessary. Second, on the mandate, we observe a lingering reluctance to give the agency the sole right to issue and withdraw licenses. In a (limited) number of cases, the agency does not have the full power to impose sanctions or enforce them. Finally, a fairly significant number of supervisors still do not enjoy legal immunity for actions undertaken in good faith, which also undermines their independence to act against noncomplying banks.

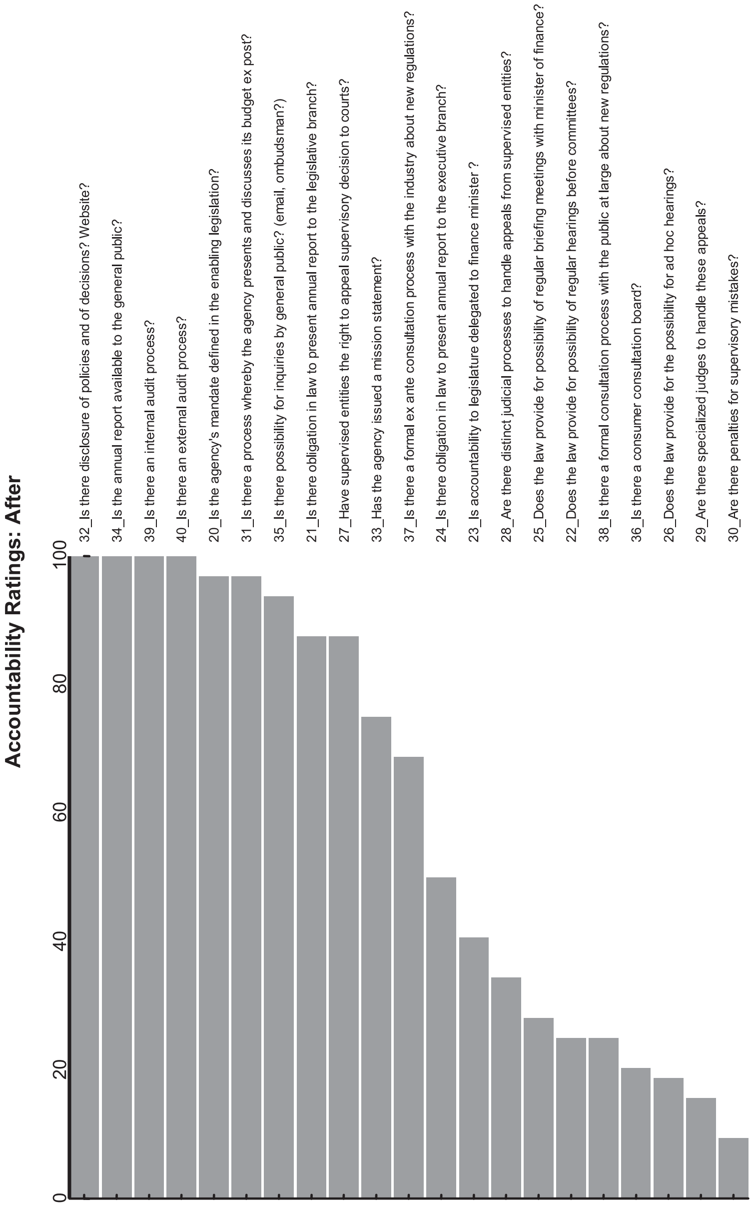
The reluctance to grant full independence to the supervisory agency – expressed in the desire to exert direct control over the agency, or by keeping a say in important supervisory decisions such as licensing or withdrawing licenses – hints to the fact that politicians have lingering doubts (or fears) about ceding their entire influence over the financial system. Such tendencies can be explained by reference to Alesina and Tabellini (2004) who model the politicians' choice between keeping government functions under their control or delegating them. The model shows that governments are reluctant to cede those functions to (independent) agencies which in their opinion provide opportunities for redistribution or political rent-seeking. The financial system has traditionally served these purposes well through mechanisms such as directed lending and networks of politically connected banks. Financial sector liberalization has created obstacles to the use of such manipulative techniques and the existence of political connections. So, influence through the regulatory and supervisory process is seen as a last resort by some governments to keep their interests alive.[32]

In sum, recent developments are sending a mixed message. On the one hand, the idea that solid independence and accountability arrangements are keystones for regulatory governance seems to be embraced in general. On the other hand, policy makers are still struggling with a number of nontrivial issues. In the interest of further improvements in regulatory governance, the policy agenda seems to contain at least two critical topics. First, efforts should be undertaken to make decision-makers better understand the role of accountability and its dynamics with independence. This seems to be the key to many of the lingering issues identified in the survey discussed above. More confidence in accountability and a further elaboration of the arrangements will be beneficial for regulatory governance. The second topic is harder to tackle. Research needs to continue to demonstrate that the "grabbing hand" view of regulation and supervision does not provide the right incentives to regulators, and weakens the governance nexus and thus, in the medium and long run, financial stability and economic performance.

[32] In this view, the reluctance of governments to provide sufficient independence to supervisors is associated with the "grabbing hand" view of the government. This view states that government regulations are their to favor certain interest groups and political constituencies, and not the general interest. See Shleifer and Vishny (1998). For applications of this view to the financial system, see Djankov et al (2001), and Barth, Caprio and Levine (2004).

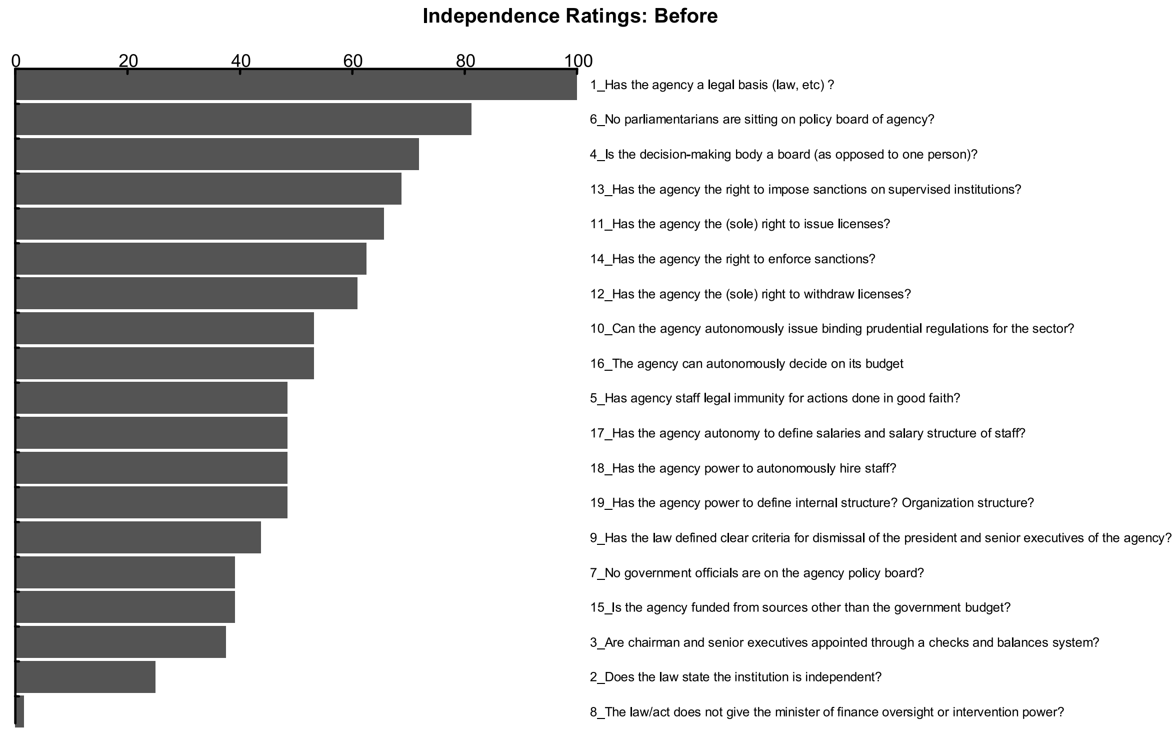
Chart 4: Accountability Ratings: Before and After

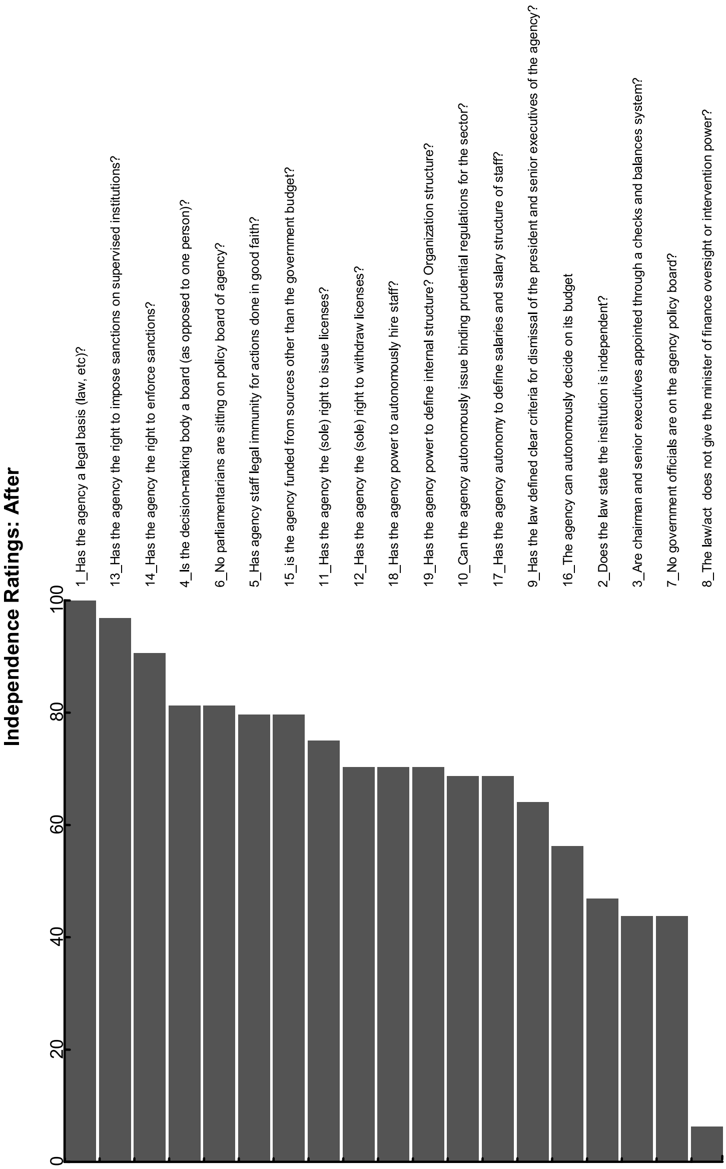




Source: Quintyn, Ramirez, and Taylor (2007).

Chart 5: Independence Ratings: Before and After





Source: Quintyn, Ramirez, and Taylor (2007).

5. What are the Effects?

The final question that this paper wishes to address is the following: is the greater attention for the quality of regulatory governance at the policy level showing an impact on the various elements of the governance nexus as we would expect on the basis of the theory. Empirical research on this topic is popping up, although the field is still thinly populated. This paper reviews some of the work undertaken so far and tries to provide some input into the research agenda going forward.

Given the focus of this paper, we limit ourselves to those studies that focus on the impact of regulatory governance (or aspects thereof) on the upstream elements of the governance nexus (governance and soundness of banks, financial stability, and economic performance more generally). As such, we excluded from this review (i) a number of studies that analyze the origins of recent systemic crises (even though some of them also look at governance of the supervisors); and (ii) studies that measure the impact of improvements in financial institutions corporate governance on the quality of governance in the nonfinancial firms, or on economic performance in general.

Eleven papers fall within the above defined domain, all of them written in the current millennium, which underscores how recent the debate is. Most of the studies originate from World Bank and IMF staff, most likely because of the involvement of both institutions in the Financial Sector Assessment Program (FSAP) which undertakes the assessments of the various international standards and codes.[33] The results of these assessments have become a bountiful source of information for this type of analysis. In addition, the database by Barth, Caprio and Levine (Barth, Caprio and Levine (2001)) is one of the most detailed databases on supervisory frameworks and practices.

Table 3 provides an overview of the relevant studies. They can roughly be divided into six types of analysis. The first one assesses the impact of public sector governance and the quality of institutions on the financial system (1 study in this group). The second group analyzes the impact of regulator

[33] The Basel Core Principles for Effective Banking Supervision (BCP), the International Association of Insurance Supervisors (IAIS) Insurance Core Principles (ICP), the International Organization of Securities Commissions (IOSCO), Objectives and Principles of Securities Regulation (OPSR), and the IMF's Code of Good Practices on Transparency in Monetary and Financial Policies IMF (2000).

governance on the soundness of the financial system or the access of nonfinancial firms to finance (2). The third group studies the impact of compliance with standards and codes on measures of financial system soundness (4). While this third approach does not introduce any measure of the quality of regulatory governance as explanatory variable, implicitly they assume that agencies with higher quality governance are also more compliant with the various standards and codes. So a positive impact of compliance with standards and codes is seen as an indication that the agency is well-run. In fact, there is thus far only one study, which fields our fourth category, and which tries to empirically assess this assumption, by linking the quality of (elements of) regulatory governance with the compliance with the BCPs. The fifth category tests the relationship between the institutional structure of the agency (unified versus sector-specific agencies, whether or not in the central bank) and the compliance with standards and codes. Two studies fall under this heading. The sixth category covers 1 study assessing the impact of regulatory and supervisory features on financial sector performance and development.

Overview of findings

Public sector governance and financial soundness

The evidence of a positive and significant impact of the quality of institutions and public sector governance on financial soundness is quite compelling, and by now generally accepted. Kaufman (2002) identifies strong and significant effects of a series of variables related to the quality of the public sector on indicators of financial soundness (after controlling for GDP per capita). Specifically, the study finds that the variable "control of corruption" dominates all other governance components, including the "quality of regulation." His work also finds that the quality of financial regulation is significantly influenced by the "control of corruption" variable. So this study sets the tone in corroborating two parts of the nexus. The same study also provides evidence of regulatory and political capture by powerful financial and nonfinancial firms, based on survey results.

While only one study on the impact of public sector governance on the financial system was retained, several studies in the other categories below introduce variables on the quality of institutions and public sector governance as control variables in their equations and their findings strongly support Kaufmann's findings.

Table 3: Overview of Empirical Work on Aspects of Regulatory Governance and the Governance Nexus

Authors	Purpose	Dependent variable (s)	Explanatory variables	Results and Comments
1. Impact of public sector governance on financial sector performance				
Kaufmann (2002)	Impact of quality of institutional and public sector governance and financial soundness indicators	Firms' ratings of quality of financial markets, soundness of banking system and financial sector regulatory quality (survey by Global Competitiveness Report)	Several measures of quality of institutions and public sector governance (Kaufmann, Kraay and Zoido-Lobaton database)	Significant impact of quality of public sector on financial soundness, plus evidence of regulatory and political capture.
2. Impact of regulatory governance on financial sector performance and access to finance				
Beck, Demirgüç-Kunt, and Levine (2003)	Impact of type of bank supervision on the firms' financing obstacles (59 countries)	Firm-level data (5000 firms) on obstacles that firms encounter in raising external capital (World Business Environment Survey)	Indices of bank supervision, categorizing bank supervision in three categories: "official supervision view" "political/regulatory capture view" and "independent supervision view" Control variables on macroeconomy, institutions and public sector governance	"Official supervision view" is associated with higher obstacles to access to capital. The independence of the supervisor reduces financing obstacles. Quality of institutions is significant.
Das, Quintyn and Chenard (2004)	Impact of regulatory governance quality of bank soundness	Soundness index based on capital adequacy ratio (CAR) and nonperforming loans (NPL)	Index of regulatory governance calculated from BCP and Transparency Code. Control variables pertaining to the macroeconomy and public sector governance	Regulatory governance has positive impact on soundness index. Public sector governance has significant impact through interactive term

3. Impact of compliance with principles of financial sector performance				
Sundararajan, Marston and Basu (2001)	Impact of BCP compliance on financial stability (limited sample)	Credit risk and spread between lending and risk-free rates	BCP compliance control variables pertaining to the macroeconomy	No direct impact found. Indirect impact found via interactive effect with relevant macro variables
Podpiera (2006)	Impact of BCP compliance on bank performance (65 countries)	NPL and net interest margin	BCP compliance control variables pertaining to the macroeconomy	Use of panel data 1998–2002 shows that higher degree of BCP compliance has positive effect on quality of bank assets and lowers the net interest margin
Das, Iossifov, Podpiera and Rozhkov (2005)	Impact of quality of financial policies on index of financial stress for financial system (broader than banking) (68 countries)	Index of financial stress based on variables that measure the first, and when possible second moments of price date from sectors	Index of quality of "financial policies" based on compliance with BCP, IOSCO and OPSR Control variables pertaining to the macroeconomy	Use of panel data 1998–2003. Level of financial stress of a country is positively related to government budget deficits and the terms of trade index. The higher the quality of financial policies, the smaller this impact is.
Demirgüç-Kunt, Detragiache, and Tressel (2006)	Impact of BCP compliance on bank soundness (39 countries)	Bank soundness as measured by Moody's financial strength ratings	BCP compliance (aggregate and disaggregated) Control variables pertaining to the macroeconomy and public sector governance	Positive impact on bank soundness of all principles but strongest impact of those principles related to information provisioning (transparency). Positive impact of public sector governance variables
4. Impact of regulatory governance on compliance with standards and codes				
Arnone, Darbar, and Gambini (2007)	Analyze relationship between quality of supervision (based on a BCP index) and independence, accountability and transparency	Independence, accountability and transparency indices are derived from relevant BCP principles and IMF Transparency code.	Index of BCPs pertaining to regulation and supervision	Based on correlations between variables, authors find that (a) agencies with high BCP compliance are also highly transparent; and (b) that independent agencies tend to have an effective supervisory framework.

5. Impact of institutional structure on compliance with standards and codes				
Arnone and Gambini (2007)	Measure impact of institutional reform on compliance with BCPs	Index of degree of compliance with BCPs	Various variables specifying the location of the supervisor (integrated, inside or outside central bank, separate agencies)	Integrated supervisors tend to have higher compliance with BCPs. Models where all supervisors are integrated in central bank have highest compliance ratios
Čihák and Podpiera (2007)	Assess whether fully integrated regulators have better regulatory governance and higher quality of supervision	Regulatory governance: compliance with those principles that have a bearing on independence Quality of supervision: compliance with those principles that have a bearing on the quality of supervision	Dummy for fully integrated supervisor GDP per capita	Fully integrated supervisors have significantly better regulatory governance arrangements and higher quality supervision than other supervisory models
6. Impact of regulatory framework on financial sector performance and development				
Barth, Caprio and Levine (2004)	Assess impact of regulatory “philosophy” on bank performance and financial sector development	Various regressions with the following dependent variables: Net interest margin Overhead costs Nonperforming loans crisis Bank credit to private sector as percentage of GDP	A list of variables from the authors’ supervisory database, describing features of the regulatory framework and supervisory practices	Intrusive regulation and supervision does not help in alleviating market failures but in general leads to more corruption and hampers financial sector development. On the contrary, approaches that help empower private sector monitoring of banks foster financial development

Regulatory governance, financial soundness, and obstacles to finance

Moving on to the next step in the nexus-the heart of the discussion in this paper-only two studies so far have measured the impact of the quality of regulatory governance on financial soundness. Das, Quintyn and Chenard (2004) used the framework laid out in this paper and constructed an index of regulatory governance based on the quality of independence, accountability, transparency and integrity, derived from standards and codes assessments under the FSAPs. They find a positive and significant impact of the quality of regulatory governance on financial soundness.[34] Moreover, the interaction term between public sector governance and regulatory governance showed that the positive impact of regulatory governance was stronger in environments with sound public sector governance, a finding that is in line with Kaufmann's findings.

Beck, Demirgüç-Kunt and Levine (2003) proxied regulatory governance by defining three competing views on the supervisory philosophy ("official supervision" view, "political/regulatory capture" view, and "independent supervision" view) and relating them to a measure of obstacles to finance by firms. Their main findings are that the "official supervision" model is consistent with the existence of obstacles to finance, i.e. chokes the banking and nonbanking sectors. On the other hand, they find that the "independent supervision" model is conducive to fewer obstacles to finance. While the authors include only one of the four pillars of regulatory governance in their analysis, they find evidence that an arm's length relation with the government improves the quality of supervision and removes obstacles to finance.

Compliance with standards and codes and financial soundness

Assessing the impact of compliance with regulatory standards and codes on the soundness of the financial system is the most popular area of research related to the topic discussed here. Most researchers have stayed with the impact of BCP compliance on some measure of soundness of the banking system.
Only a few have ventured out into the other standards and attempted to estimate the impact of compliance with them on the soundness of the supervised entities. Several reasons explain this: after all, in most countries banking systems are the key sector within the financial system, the sector is

[34] Financial soundness is an index composed of the aggregate capital adequacy ratio and the share of nonperforming loans in total loans.

more homogeneous than the others which facilitates analysis and interpretation, and more data are readily available.
The earliest attempt to assess the impact of BCP compliance was by Sundararajan, Marston and Basu (2001). They could not identify a direct impact. Indirectly, they found that compliance has an impact on bank soundness via interactive effects with relevant macro variables. This paper, which came early in the process of standard and code assessments, suffers from its small sample. Podpiera (2006) in contrast, working with a larger sample and therefore able to use more sophisticated techniques and robustness tests, showed that higher degrees of BCP compliance have positive effects on the quality of bank assets and also lower the net interest margin. The work of Demirgüç-Kunt, Detragiache and Tressel (2006) comes in general to the same conclusions as Podpiera's. However, they also dissect the BCP assessments in an effort to find out whether various parts of the regulatory framework have a different impact on bank soundness. The conclusion is that compliance with those regulations that have a bearing on disclosure and transparency-in particular principle 21-has the most significant impact on financial sector soundness.[35] This is in line with the findings of Beck, et al. (2003).

Das et al. (2005) use a different and broader approach. They construct an index of the quality of financial policies in two sectors (banking and securities) based on the BCP and IOSCO assessments and measure its impact on an index of financial stress. The latter is based on Illing and Liu (2003) who define financial stress as a continuous variable, the extreme realizations of which occur in the panic/crash phase.[36] They find that the level of financial stress of a country is influenced by government budgetary deficits and the terms of trade index, and that the quality of financial policies in general mitigates their negative impact.

Seen from the topic of this paper, these papers adopt an indirect and implicit way of measuring the impact of the quality of regulatory governance. The approach assumes that compliance with BCPs is a result of good regulatory

[35] Principle 21 states that "Each bank must maintain adequate records that enable the supervisor to obtain a true and fair view of the financial condition of the bank, and must publish on a regular basis financial statements that fairly reflect this condition."

[36] The index of financial stress is constructed from variables that reflect symptoms of financial system disruption, including (i) falling asset prices; (ii) exchange rate depreciation and/or losses of official foreign reserves; (iii) insolvency of market participants; (iv) defaults of debtors, including sovereign defaults; (v) rising interest rates; and (vi) increased volatility of financial market returns.

governance, which is possible but needs empirical underpinning. This notwithstanding, the approach certainly has its own merits and yields useful insights into the dynamics underlying the governance nexus.

Regulatory governance and compliance with standards and codes

Only one paper, Arnone, Darbar and Gambini (2007) has attempted to bridge the gap mentioned in the preceding section and estimates the link between regulatory governance and compliance with standards and codes. Based on correlations between indices of independence, accountability and transparency (derived from various elements of the BCP and IMF Transparency Code) on the one hand, and an index of compliance with the BCP principles pertaining to effective supervision, the authors find that (a) agencies with high BCP compliance are also highly transparent; and (b) that independent agencies tend to have a more effective supervisory framework. However, their analysis does not allow to determine causality.

Institutional structure and compliance with codes.

Two recent papers attempt to estimate the impact of the institutional structure of supervision on compliance with standards and codes. Arnone and Gambini (2007) perform simple correlation analyses between the supervisory architecture (integrated (or unified) supervisor, sector-specific supervisors, central bank involvement) and find that integrated supervisors tend to have higher compliance with BCPs. Fully integrated supervisors, located in the central bank have the highest compliance ratios according to their study. Čihák and Podpiera (2007) take this approach one step further, by introducing in the analysis not only BCP compliance, but also compliance with securities and insurance standards (IOSCO and IAIS). Their regression analysis shows that integrated supervisors have (statistically significantly) higher compliance ratios both with regulatory governance principles (mainly independence) and quality of supervision principles. Their results on regulatory governance are consistent with the findings of QRT i.e. that integrated supervisors score higher than other supervisory structures.

Regulatory and supervisory framework and financial sector performance and development

Barth, Caprio and Levine (2004) present an extensive battery of tests based on their supervisory database. The focus is not on regulatory governance per se, but since the study touches upon the “philosophy” of supervision we include it in this overview. They first test two competing theories of government regulation: the helping-hand approach (regulation is there to correct market failures), and the grabbing-hand approach (governments regulate to support political constituencies). In addition they assess the impact of an array of regulatory and supervisory practices on financial sector performance and development. In general, they conclude that any type of intrusive regulation and supervision does not help in alleviating market failures, but in general leads to more corruption and hampers financial sector development. On the contrary, approaches that help empower private sector monitoring of banks, foster financial development. The latter finding is consistent with Beck et al. (2003) and Demirgüç-Kunt (2006).

In sum

This domain of research is clearly still waiting for a comprehensive approach. Several authors have lifted the veil on a number of aspects of the issue before us, so any attempt to draw conclusions at this stage is like trying to figure out what the final picture of the puzzle will look like, while we are still missing a number of pieces. Even with this caveat in mind, the emerging picture seems fairly coherent: better regulatory governance principles lead to better supervisory practices which have a beneficial impact of financial sector soundness. In addition, there is empirical support that the new generation of supervisory agencies (the reformed ones) adheres to higher regulatory governance standards and that supervisory practices that foster private market monitoring by promoting transparency have a positive impact. The greatest consensus, not surprisingly, exists on the impact of public sector governance on financial sector soundness. The effects of the quality of public sector governance and of institutions in general, even dominate the impact of the quality of regulatory governance in a number of studies.

Having said this, the missing pieces of the puzzle are as important as the pieces that we already have. More evidence is needed to assess the impact of the quality of regulatory governance of financial system soundness. To build up this evidence, the research agenda should probably focus on the following issues:

- The impact of the quality of regulatory governance on financial system soundness has only been tested a few times. The sample used by Das, Quintyn and Chenard was small, which had an impact on the robustness of the results. An extension of the survey data in QRT could open new avenues for research.

- Fundamental questions remain about causality and endogeneity in the findings. Several authors test for causality, but even then admit that reverse causality cannot be totally excluded. Relevant questions in this regard are: What is the relative impact of public sector governance and regulatory governance? To what extent is the quality of regulatory governance influenced by the soundness of the financial system and by the degree of development of the economy?

- Most evidence thus far is gathered through de iure approaches (as opposed to a de facto approach). Countries may have high compliance ratios on paper, but implementation and enforcement may be weak, something that cannot always be brought out in the BCP assessments. While having in place a balanced regulatory framework is a strong indication of good governance practices, it is no guarantee. Governments may have agreed, under international pressure, to adopt a strong regulatory framework, but may not have given the agency the governance mechanisms to enforce it consistently, for instance. It is the presence of good governance practices that will provide the agency with the right incentives to implement and enforce their regulatory and supervisory framework. More research is needed on these linkages.[37]

- Further refinements on the choice of the dependent variable are useful but not as critical as some of the other issues. Two types of regressions have been run, with different interpretations. One is to focus on the *output* of the supervisory process. Securing financial sector soundness is the main objective of the supervisor. There is no common view as to how financial soundness should be measured. So experimenting is healthy. Authors have been using a range of dependent variables (including capital adequacy, nonperforming loans, interest rate spreads) on the basis of which they composed an index, or estimated the impact on each of them separately to check for consistency in the results. Demirgüç-Kunt et al. (2006) took a different route by using Moody's financial strength ratings.[38] Given that these ratings should include the abovementioned elements, this could be a promising route, at least for the advanced countries. Measuring the

[37] We recognize that the measurement of the quality of regulatory governance, as for instance done in Das, Quintyn and Chenard (2004) and QRT is also based on a de iure approach. So in weak institutional environments supervisors may have the right incentives, and the right instruments, but the environment may not be conducive to high quality supervision (or we may not see the results of high quality supervision reflected in the soundness of the banks).

[38] Das, Quintyn and Chenard (2004) compared their aggregate soundness index (based on CAR and NPL levels) with Moody's ratings and found that the differences were small.

impact on *outcomes* should also be encouraged to test the impact on more remote legs in the governance nexus (as Beck et al. (2003) did). Measuring the impact on financial stability has not been attempted yet, probably because of the definitional and measurement problems with this concept.

As time goes by, and more data become available, several of the above issues will be easier to address. Samples will become larger, both over time and geographically. As time goes by, more evidence will become available to compare the impact of changes in the regulatory governance framework over time. Related to that, we also need to bear in mind that reforms themselves (e.g. in the governance framework) need time to take root-it takes a number years to build up credibility in the markets-and that it takes time before the impact of these reforms is being felt in financial sector soundness indicators and further down the governance nexus.

6. Conclusions

Little has been written about regulatory governance and its role. By taking stock of where the debate stands, both in theory and practice, the paper attempts to advance the understanding of the importance of regulatory governance, of its essential pillars, and of the issues that are surfacing in countries that are changing the governance arrangements of their financial supervisors.

The paper started from the premise that the financial sector is a key source of corporate governance in the nonfinancial firms of the economy, and that financial supervisors have a great responsibility in promoting and instilling good governance practices in the financial sector so that the latter can fulfill its role. The existence of these linkages-in this paper labeled the "governance nexus"-also implies that financial sector regulators have the right incentive structure, or in other words appropriate governance arrangements, to live up to these responsibilities. We reiterated that regulatory governance should be based on four pillars, or principles: independence, accountability, transparency and integrity. We showed that these four complement and reinforce each other.

From there, the paper went on to see what the evidence in the real world is: in those countries that have undertaken work to modify the regulatory governance framework of their financial supervisors, are these four principles being embraced, and what are the (controversial) issues that surface? Related to this, do we discern any impact of changes to the regulatory governance framework to the other segments down the governance nexus-in particular on the soundness of the financial system (the first point of impact and an important indicator of good financial sector corporate governance)?

With respect to the first question, from the recent QRT survey (which focused on independence and accountability) we learn that there is indeed a trend to endow supervisory agencies with more independence and accountability. However, the survey also reveals that policy makers are still struggling with this new agency model, and that there is a reluctance to grant more independence, most likely because the workings of accountability are not always fully understood. The survey also notes a lingering reluctance on the part of the political class to cede the responsibility over some parts of the regulatory framework to regulatory agencies. Going forward, the top of the agenda lists the need to improve the understanding of all stakeholders of the workings of accountability as the mechanism to make independence effective, while at the same keeping the agency's work in line with the government's broader economic and social objectives.

On the second question, emerging empirical evidence fairly unambiguously demonstrates that improvements in regulatory governance, among others by implementing more adequate regulatory frameworks, have a beneficial impact on the soundness of the financial system. This is encouraging and underlines the importance of pursuing the agenda on regulatory governance outlined above. Since modifications in governance and regulatory frameworks, as well as in supervisory practices, need time to take root, and need even more time to sort positive effects on financial sector soundness, it can be expected that in a few years from now, more positive findings will further underscore the case for good regulatory governance.

This stocktaking exercise has revealed that the regulatory governance discussion is still in its early phases. While we seem to have the four principles for regulatory governance right, and while actual implementation in a good number of countries seems to follow this path, more thinking and explaining needs to be done to convince all stakeholders to ensure that financial supervisors have the right incentives in place to fulfill their role in the governance nexus.

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