

The Design and Governance of Bank Supervision

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I. Introduction

In recent years, following the high inflation experience of the 1970s and 1980s, it has become generally accepted that central banks should be independent agencies to allow them to perform better their key function of maintaining monetary and financial stability (Alesina and Summers, 1993; Posen, 1993; Rogoff, 1985; and Walsh, 2003). However, there has been much less attention paid to the governance and independence of the supervisory function, whether it is housed in a central bank (as is still the case in a number of countries) or in a separate agency. Yet, this latter issue is both important and timely, as supervision is in the process of changing significantly, and there is a serious threat – and opportunity -- on the horizon regarding the design of bank supervision.

In the last several decades, countries around the world liberalized the interest rate and portfolio restrictions that were adopted during the Depression and the immediate postwar period and moved instead to rely more on a system of prudential regulation and supervision. Gradually, however, bank supervision has become significantly more intrusive and discretionary. In the United States, hardly a bastion of a socialist approach to government intervention, about two dozen supervisors report to work daily in their offices – at Citibank. And surveys of bankers recently reveal that the cost of regulatory compliance for the first time is their most important concern. Capital requirements and powerful supervisors have replaced reserve requirements and interest rate controls to promote safe and sound banking. Basel II significantly re-enforces this trend, as capital requirements will become more complex and bank supervision will take on an even more intrusive role. Indeed, supervisors will be validating and constraining banks' modeling of

risks and, to the extent that one takes pillar 2 seriously, imposing varying capital requirements for individual banks above and beyond that suggested by mere formulae. The threat that arises is that supervisors (whether in central banks or not) might not be able to do this job well, and will in the process become much more exposed to political forces and possible corruption, in particular where the degree of their discretionary powers is high and transparency is low. A political backlash could even ensue, especially in countries that significantly boost resources for bank supervision (needed to implement Basel II), with sharp limits on supervisory independence being the result. Central banks housing the supervisory function might then find that their independence to conduct monetary policy is impaired as well. This situation provides an opportunity, however, because there is still time to reconsider bank supervision, and a new database helps in this regard by permitting an assessment of what works in this area. Thus we can examine whether the aforementioned threat is one that needs serious consideration, or not.

Although it is common for recommendations on bank regulation to be based on experts' theoretical priors and personal experiences – what used to be called armchair empiricism -- this paper will start with a look at what the data actually tell us works with respect to bank regulation. The next section accordingly summarizes the evidence from Barth, Caprio, and Levine (2006), which assesses what works best in bank regulation, using a large cross-country database. The major findings are that there is no robust evidence that stricter capital requirements help in securing better outcomes in the banking sector, and that stronger supervisory powers lead to worse outcomes except in the very best institutional settings. Unfortunately, we find that there are few countries that have a sufficiently developed institutional environment that satisfy this requirement. Virtually

all low- and middle-income countries do not, and as the recent crisis of confidence in the Italian central bank showed, not all high-income countries meet this test. In other words, the two pillars of Basel II that have received the most attention are pillars that at best do not hurt the banking system, and at worst might do some harm or distract officials' attention from more important areas of focus. But on a more positive note there is considerable evidence from our global database that market discipline, the third and much-neglected pillar, can be effective in improving the banking system, and that incentives matter in ensuring the safety and soundness of banking.

Accordingly, in the subsequent section we propose a model for supervision that puts the emphasis on having supervision support market monitoring, rather than supplant it. Moreover, in view of our findings that there are important interactions between political and institutional variables and the impact of supervision, with more open and transparent systems providing superior performance, we pointedly emphasize the need for disclosure of supervision and supervisory actions as much as possible, with less supervisory discretion. At present, the Core Principles for Bank Supervision of the Basel Committee focus exclusively on the information that must be disclosed to the supervisor. And in the more sophisticated variants of Basel II, bank supervisors are to become experts in risk modeling, which demands far higher mathematical skills than supervisors hitherto have demonstrated. We believe that rather than focusing almost exclusively on training bank supervisors to have state of the art risk management skills (for pillar one) and using discretionary powers to shape bank behavior (pillar two), substantially greater emphasis should be placed on disclosing information to the public, providing private investors with the incentives to use this information to monitor banks, and developing the

legal mechanisms that permit private investors to exert sound governance over banks after monitoring them. The role of supervisors should then be to verify the accuracy of this information, punish those providing faulty or misleading disclosures, and assist in the intervention and potential closure of banks according to the information revealed by the market. In other words, the key components of bank regulation, according to the empirical findings review here are: disclosure, incentives for market discipline, supervisory verification and support of the market, and diversification requirements.¹

We conclude by arguing that the greatest danger for supervision (and for central banks that have a role here) is that it will follow an unworkable model, despite evidence to the contrary, because this apparently is the model that supervisory groups prefer, notwithstanding the lack of supporting empirical evidence. Most supervisory agencies will *never* have sufficient human capital or budgets to implement successfully Basel II, especially as the increased demand for scarce risk management skills is increasing the premium to these skills, and the push for more resources for supervision (which we expect in some cases is a consideration behind the popularity of Basel) could increase political interest in revisiting and weakening supervisory agencies' charters. And most countries do not have the institutional framework in which granting greater discretion to supervisors will have benign results. Although attempting to improve factors such as the strength of democratic institutions, the independence and skills of the media, and the degree of transparency is warranted, there are few experts in institutional reform, and it is likely that the process will take some time. In the meantime, central banks and other supervisory agencies that abuse the trust that society instills in them risk a loss of power

¹ As noted below, BCL also find that diversification requirements in banking are critical for most economies, since most financial systems are small, with a high degree of covariant risk.

and independence, as for example might still happen in the case of the Banca d'Italia. Thus we propose that central banks with supervisory powers (and other supervisory agencies) move to adopt a model of banking supervision that is workable, and hence will not only provide benefits to the economy at large but to the agencies themselves.

II. **Bank Supervision: What the Data Say²**

Those interested in central bank governance need to take into account all of the functions that central banks perform, not just their monetary policy functions. Yet the literature on central bank independence reads as if central banks only conduct monetary policy (e.g., Alesina and Summers, 1993). However, as seen in Table 1, in the majority of countries, central banks serve as either the sole supervisor or as one of several supervisory agencies. So bank supervision needs to be taken into account, at least for about 90 countries, when recommendations are made on how central banks should be governed. In this section we look first at how countries should supervise their banking systems before making recommendations as to how they should want the supervisory agency in their central bank governed. Employing the sensible approach of James Madison, the strategy is that ...”you must first enable the government to control the governed; and in the next place oblige it to control itself.”³ Hence we first look at what is the best way to supervise banks, and then discuss the controls on the supervisors.

² This section draws on BCL (2006, 2006a) and Caprio (2006).

³ This quote, referenced in BCL, 2006, in its entirety is: “If men were angels, no government would be necessary. If angels were to govern men, neither external nor internal controls would be necessary. In framing a government which is to be administered by men over men, the great difficulty lies in this: you must first enable the government to control the governed; and in the next place oblige it to control itself (James Madison, Federalist Papers, Number 51).”

Table 1. Countries with the Central Bank as a Supervisory Authority

	Central Bank only (69 countries)			Central Bank Among Multiple Supervisors (21 countries)		Central Bank Not a Supervisory Authority (61 countries)		
Africa (33 countries)	Botswana Burundi Egypt Gambia Ghana	Guinea Lesotho Libya Namibia Rwanda	South Africa Sudan Swaziland Tunisia Zimbabwe	Morocco	Nigeria	Algeria Benin Burkina Faso Cameroon Central African Republic Chad	Congo Côte d'Ivoire Equatorial Guinea Gabon Guinea Bissau Kenya	Madagascar Mali Niger Senegal Togo
Americas (21 countries)	Argentina Brazil	Guyana Suriname	Trinidad and Tobago Uruguay	United States		Bolivia Canada Chile Colombia Costa Rica	Ecuador El Salvador Guatemala Honduras Mexico	Nicaragua Paraguay Peru Venezuela
Asia/Pacific (31 countries)	Bhutan Cambodia Fiji Hong Kong, China India Israel Jordan Kuwait	Kyrgyzstan Malaysia New Zealand Pakistan Papua New Guinea Philippines Qatar Russia	Samoa Saudi Arabia Singapore Sri Lanka Tajikistan Tonga Turkmenistan United Arab Emirates	China Taiwan, China	Thailand	Australia Japan	Korea	Lebanon
Europe (39 countries)	Armenia Azerbaijan Belarus Bulgaria Croatia Greece	Ireland Italy Lithuania Moldova Netherlands Portugal	Romania Serbia & Montenegro Slovenia Spain Ukraine	Albania Czech Republic Germany	Macedonia Slovakia	Austria Belgium Bosnia and Herzegovina Denmark Estonia Finland	France Hungary Iceland Latvia Luxembourg Norway	Poland Sweden Switzerland Turkey United Kingdom
Offshore Centers (26 countries)	Aruba Bahrain Belize	Macau, China Mauritius	Oman Seychelles	Anguilla Antigua and Barbuda Commonwealth of Dominica Cyprus Grenada	Montserrat Saint Kitts and Nevis Saint Lucia Saint Vincent and The Grenadines Vanuatu	British Virgin Islands Gibraltar Guernsey	Isle of Man Jersey Liechtenstein	Malta Panama Puerto Rico

Barth, Caprio, and Levine, 2006, Table 3.3

Until recently, authorities interested in improving their supervisory or regulatory framework could only rely on the opinions of international experts. To be sure, expert opinion can be valuable, but the expertise is derived virtually entirely from advanced countries, and the supervisory approach that they recommend – let us call it the Basel approach – represents a system that has been agreed upon with little or no empirical evidence. The Basel approach, agreed to by bank supervisors, places a significant amount of emphasis on official supervision and on capital regulation, neither of which played much of a roll when these advanced countries were in their industrialization stage. It is likely that countries attempting to adhere to the advanced parts of Basel II will need to step up substantially the resources devoted to bank supervision, and embark on a difficult path of obtaining and keeping highly scarce risk management skills in the supervisory agency, again not a choice that has been made in the past by a country in its high-growth phase.

Developing countries, either explicitly or implicitly, are being encouraged to follow in the recent footsteps of their rich country counterparts. This is a fine path to follow, even if difficult to do, if the movement will lead to stronger financial systems. However, it is important to ask whether or not this is the case. Even better, it would be nice not just to ask if this is a good thing, but rather to use actual data to try and see what has been working around the world in the area of bank supervision. Measurement of the results of supervision is key. As Lord Kelvin put it,

When you can measure what you are speaking about, and express it in numbers, you know something about it; but when you cannot measure it, when you cannot express it in numbers, your knowledge is of a meager and unsatisfactory kind: it may be the beginning of knowledge, but you have

scarcely, in your thoughts, advanced to the state of science. ... If you cannot measure it, you cannot improve it.⁴

Measurement is, or should be, even more important when additional resources are being requested. Fortunately, as a result of a new database (Barth, Caprio, and Levine, 2006), it is now possible to assess what works and what does not in the area of bank supervision. This database, now available for 152 countries, includes information on the powers permitted to banks; bank entry requirements; capital regulations; bank supervisory powers; deposit insurance; liquidity requirements; private monitoring, accounting practices, and disclosure requirements; external governance; and the structure of supervision. The database was created from extensive interviews with bank supervisors, essentially trying to codify the key information that supervisors would like to have in order to understand better the quality of a country's regulatory environment. In addition, questions related to the incentives of the various actors in the banking sector were included in the survey.

It is important to be clear that this database does not, and cannot, measure the effectiveness of supervision "on the ground." First, this survey is a survey -- it is not an attempt by anyone to assess the supervisory systems of different countries. Rather than an assessment, the survey is composed of a long list of (about 300) highly detailed questions, many of which can be answered in the affirmative or the negative, regarding characteristics of the supervisory environment, and it was completed by national authorities in consultation with the authors of the aforementioned volume.

Second, no one has a good way to evaluate how supervision functions in reality. Assessments of regulatory systems, such as the Basel Core Principles Assessment,

⁴ From his *Popular Lectures and Addresses (1891-94)*, as quoted in Bartlett's Familiar Quotations.

usually done in the context of a World Bank-IMF Financial Sector Assessment, are not always published, and may be subject to bias due to the political process through which they are cleared. For example, as of 2005, based on both the published and unpublished assessments, one of the highest scoring regions on the Basel Core Principles Assessment was Sub-Saharan Africa. This ranking is highly implausible, as that region is mostly composed of exceedingly poor countries, whose financial reforms are relatively recent, and their supervisory agencies are generally starved of resources. It is likely therefore that this ranking is not without some political bias, and in fact Bank-Fund staff have suggested that certain industrial country authorities have been sympathetic to the appeals of some developing countries, such as those from their former colonies. Moreover, staffing these assessments is difficult, and environments that have more tropical diseases and other hazards generally do not get the best supervisors to check BCP compliance, making it easier to override their judgments at IMF headquarters.

There are many ways to use the BCL database. Supervisory authorities can use it to benchmark their systems, and researchers can use it to see what works regarding bank regulation. BCL (2006) adopted a specific methodology: rather than examine each of the many individual regulations, they compiled broad indices of bank supervision. For example, their index of bank supervisory powers includes a long list of the powers possessed by supervisors.⁵ They compiled a variety of other indices related to allowable

⁵ These include: Does the supervisory agency have the right to meet with external auditors to discuss their reports without the approval of the bank; Are auditors required by law to communicate directly to the supervisory agency any presumed involvement of bank directors or senior managers in illicit activities, fraud, or insider abuse; Are off-balance sheet items disclosed to the supervisors; Can supervisors: take legal action against external auditors for negligence?; force a bank to change its internal organizational structure; order a bank's directors or management to constitute provisions to cover actual or potential losses; suspend the directors' decision to distribute dividends; suspend the directors' decision to distribute bonuses; suspend the directors' decision to distribute management fees. It also asks who can legally declare - such that this declaration supersedes some of the rights of shareholders - that a bank is insolvent;

bank activities, bank entry requirements, capital regulation, prompt corrective action powers, the degree of private monitoring, and moral hazard, among others. Although these indices combine several individual survey questions, the advantages of this aggregation are important. First, it is econometrically impossible to include all the many individual variables at once in a regression. Second, at least in initial investigations with the database, it is more interesting to look for some ‘big picture results’ before even attempting to delve into the details. Third, the current focus of many authorities is whether and how to adopt Basel II, and with these broader indices, BCL (2006) were able to test the performance of the proposed three pillars of Basel II.⁶ Ultimately, this approach also allows them to test broad views of supervision – the framework that is elaborated in the next section – and to a reconsideration of how financial supervision might be viewed.

Using the aforementioned database, BCL (2006) examine the impact of the regulatory regime on the development of the banking sector, its efficiency, its stability, the integrity of the lending process (basically, the degree of corruption in the banking sector), and also the governance of the banking sector. Stated another way, rather than select one measure of what is meant by a ‘good’ supervisory framework, they look at a variety of measures.

Turning to the first measure of the effectiveness of the regulatory environment, BCL first regressed the development of the banking sector on a matrix of supervisory

who has authority to intervene - that is, suspend some or all ownership rights in - a problem bank; and regarding bank restructuring and reorganization, can the supervisory agency or any other government agency: supersede shareholder rights; remove or replace management; and remove and replace directors? See BCL (2006) for more detail.

⁶ Note that they do not test Basel II in practice, because it has not yet been implemented, but rather they test the effectiveness of capital regulation, supervisory powers, and market monitoring, which correspond with the three pillars of the proposed system.

variables, as well as some exogenous control factors, and found a positive relationship between the regulations that boost private monitoring and banking development. This finding holds when controlling for the possibility that the level of banking development affects the enactment of bank regulations (reverse causality) and controlling for other regulations and national institutions. Regulations that forced reliable, comparable information disclosure and that gave markets the incentive to monitor banks were found to promote bank development.

Figure 1a depicts this finding, and the econometricians will rightly suspect from looking at the labels on the axes that this is the result of a two-stage

Figure 1a. Private monitoring and bank development

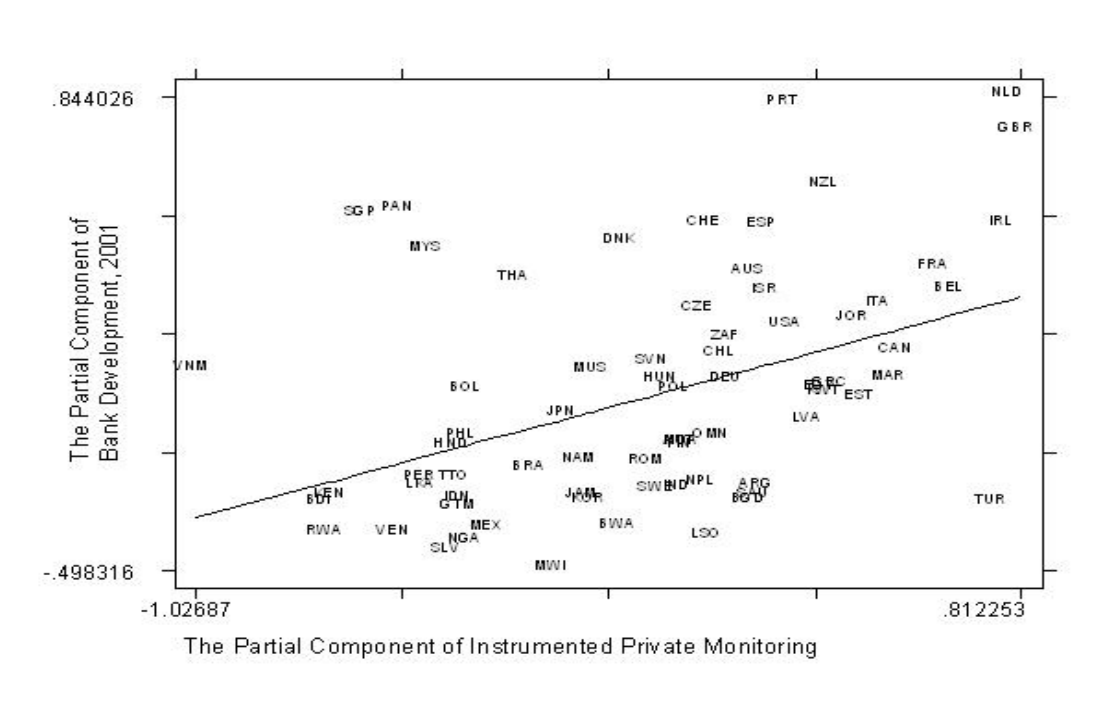
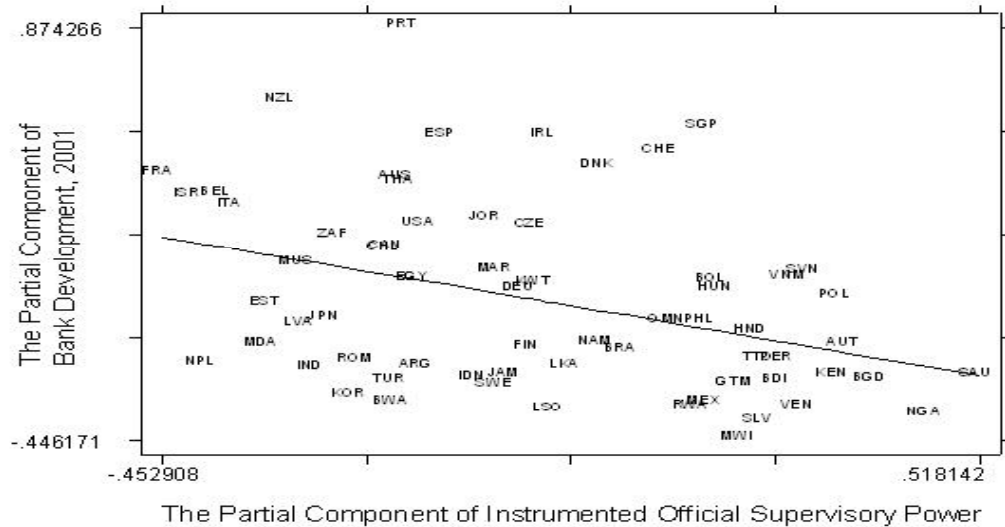


Figure 1b. Official supervision and bank development



Source: Barth, Caprio, and Levine, 2006, Chapter 4.

process.⁷ BCL also redid this analysis after removing some outliers and still found highly significant results. Even more interesting perhaps is that when they examined the relationship between bank development and supervision, they found (Figure 1b) precisely the opposite result: more supervisory powers were associated with less bank development, though in a multivariate framework, that is when accounting for other supervisory variables, the negative relationship fades. Unfortunately for proponents of

⁷ As BCL (2006, Chapter 4) explain, to construct this figure, “first compute the predicted value of Private Monitoring from the first stage regression. Second, regress these predicted values of Private Monitoring from the first stage regression on the included exogenous variables and collect the residuals. This is called the partial component of instrumented Private Monitoring. Third, regress Bank Development on the included exogenous variables and collect the residuals. This is called the partial component of Bank Development. Finally, plot the partial component of Bank Development against the partial component of instrumented Private Monitoring.”

strengthening supervision the “Basel” way, there is no evidence of a positive link. Interestingly, La Porta et al (2006) reach a similar conclusion with respect to securities market regulation, namely that private monitoring supports securities market development, and official supervision does not help.

However, there is some good news for this group: when BCL take account of a variety of variables that describe the level of development of democratic institutions—constraints on the executive, other checks and balances in government, etc.— they find some evidence, not strong though, that supervision can help with banking sector development. The bad news is that the level of development of institutions is only strong enough in a very few (about 10) of the most advanced countries to avoid doing much harm. The problem for many other countries is that democracy is poorly developed, and/or transparency is so limited, that supervisory powers can be used to reinforce the position of the ruling authorities or of wealthy groups, rather than to promote the safety and soundness of the financial system. For example, during the Suharto era in Indonesia, it would have been unlikely that even the ‘state-of-the-art’ supervisory powers would have allowed Bank Indonesia to enforce disciplinary actions against banks with Suharto-family connections. The resignation last year of former Bank of Italy Governor Fazio in the wake of allegations of improper usage of supervisory powers to block foreign entry into the banking system and to assist a favored domestic banker is a vivid demonstration that not all wealthy countries appear to meet this institutional development standard. Had one particular bank CEO not been subject to wiretapping for other crimes, it is doubtful that there would have been any repercussions for the former Governor.

As noted above, BCL (2006) investigate other measures for assessing the supervisory environment. Rather than review all of these results in detail, Table 1 summarizes the findings. The first row, capital regulation, in effect represents the first pillar of Basel, and what stands out in the table is the absence of any positive relationship between more stringent capital requirements and any of the variables here about which we care.⁸ Supervisory power, a proxy for pillar 2 and shown in the second row, also displays an absence of any positive effect, and in some cases has a negative impact. In sharp contrast, private monitoring, the third and much neglected pillar of Basel, looks as though it is due for a promotion to pillar 1, because it has a desirable effect on all of the variables except for bank stability.⁹ On the other hand, for those concerned about stability, reading down that column shows what helps: reducing activity restrictions, reducing the moral hazard associated with deposit insurance, and increasing diversification requirements.

⁸ Note that the term “lending integrity” rather than corruption is used, so that a positive sign will be ‘good’ and a negative sign ‘bad.’ This variable is based on a separate survey of borrowers who were asked about the extent to which they had to pay a bribe in order to get a bank loan.

⁹ True, some would say that the latter is all they care about, but this view ignores the tendency for a financial system that does not promote development to end up being destabilized by a variety of special schemes that will be created in order to promote the excessive extension of credit – as for example occurred in the 1960s and 1970s in many low- and middle-income countries.

Table 1. Summary of What Works in Bank Supervision

	Bank Development	Efficiency	Stability	Lending Integrity
Capital Regulation				
Supervisory Power	-			--
Private Monitoring	++	++		++
Activity Restrictions	--		--	
Entry Restrictions		--		
Deposit Insurance			--	
Government Banks	--	-		
Diversification			++	

Note: a single positive or negative sign indicates statistical significance, a double positive or negative means highly significant, and the absence of any sign means that no relationship was found

Still, the message from empirical research as to how to promote stability in the table is to encourage banks to diversify their risks and to discourage or curtail deposit insurance, which tends to reduce the incentive of market participants to monitor banks. Also, activity restrictions on banks, which when present can lead to greater concentration in fewer lines of business for a bank, reduce the stability of the banking system. This is an important message: the advanced features of risk management in Basel II were not necessary to have spared developing countries from the trillion dollar plus loss in the last two decades of banking crises. Rather, the culprits were easy to see: excessive concentrations of risk, and highly skewed incentive systems, which in some cases accommodated outright looting of the banking system. All of these dire signs were visible without sophisticated risk management tools, yet many did not want to see them – a problem that any supervisory system needs to address, namely human weakness. Greater transparency, so that as many eyes will be able to see a problem as possible,

might at least contribute to earlier recognition of problems, and thus hopefully less costly resolutions of those problems

The strength of the BCL (2006) study is that it uses different cross-country, bank-level, and firm-level datasets and employs different econometric techniques, each of which may have different drawbacks, but together provide the same basic message: bank regulations and supervisory practices that force banks to disclose accurate information to the public tend to: (1) boost the development of the banking system as measured by private credit relative to GDP, (2) increase the efficiency of intermediation as measured by lower interest margins and bank overhead costs, and (3) reduce corruption in bank lending as measured by survey information from firms around the world.¹⁰ The signs shown in Table 1 are not just statistically significant but matter economically as well. For example, Beck, Demirguc-Kunt, and Levine (2005) estimate that the probability that a firm reports bank corruption as a major obstacle to firm growth would decrease by over half if a country moved from the 25th percentile of the measure of the degree to which regulations force information disclosure and foster private sector monitoring to the 75th percentile. Furthermore, information disclosure rules have a particularly strong effect on reducing corruption in lending in countries with well-functioning legal institutions. Thus, private investors need both information and legal tools to exert sound governance over banks, as well as incentives. If Mexico changed its very generous deposit insurance to the sample average, then the improvement of incentives would have led to a lower probability of suffering a systemic crisis by as much as 12 percentage points.¹¹

¹⁰ Also see Barth, Caprio, and Levine, 2004; Demirguc-Kunt, Laeven, and Levine, 2004; Beck, Demirguc-Kunt, and Levine, 2003; Beck, Demirguc-Kunt, and Levine, 2005 for corroboration.

¹¹ J. Barth, G. Caprio, and R. Levine, "Bank Regulation and Supervision: What Works Best?," NBER Working Paper No. 9323, November 2002, and Journal of Financial Intermediation, 13, (2004), pp. 205-48.

As summarized in Barth, Caprio, and Levine (2006), the bulk of “hands on” or interventionist government policies lowers bank development, induces less efficient banks, exacerbates corruption in bank lending, and intensifies banking system fragility. Specifically, countries that grant their official supervisors greater disciplinary powers have lower levels of bank development and greater corruption in lending. Governments that heavily regulate bank activities and restrict entry into banking have banks with higher interest rate margins and larger overhead costs.¹² Furthermore, countries with greater government ownership of the banking industry have less banking system development. And as noted, restricting banks from diversifying into non-lending activities and prohibiting banks from lending abroad increases banking system fragility.

One caveat to this research is that it is still in its infancy. Further probing of the database might reveal, for example, whether the absence of any impact of higher required capital ratios was due to a convergence in capital ratios and definitions of capital. Alternatively, it might just be demonstrating what the literature has acknowledged for some time, namely that increases in capital ratios above levels deemed optimal by banks might induce a deliberate increase in risk taking to show the same risk-adjusted return on capital, or other means of avoidance. Further refinements in the database are welcomed, and the World Bank has already commissioned an updating of the survey this year.

¹² For example, Demirguc-Kunt, Laeven, and Levine (2004) compute that if Mexico had the same level of restrictions on bank activities as Korea, its interest rate margins would be a full percentage point lower.

III. Interpretation and Implication for Central Banks

Essentially, there are two opposing views of supervision and regulation. The first, often referred to as the public interest view, dates back to Pigou (1938), and is based on the presence of market failures, as well as on the assumption that governments have the incentive and the ability to correct these failures.¹³ In sharp contrast, the private interest school, usually associated with Stigler (1971, 1975), views regulation as a product determined by supply and demand. Although market failures are also assumed to exist, according to this view government officials will attempt to maximize their own welfare. Since the industry being regulated has a pronounced interest in the outcome, it is to be expected that industry members will attempt to influence officials. And as public officials often are motivated by a desire to retain their positions, and occasionally by the desire to enrich themselves personally, industry may well be successful in obtaining the kind of regulation that it wants.

Figure 2 (taken from BCL, 2006) attempts to provide a broader framework with which to analyze supervision. According to the public interest view, supervision is relatively straightforward -- it is a technical matter of getting the rules and procedures correct. Thus it is consistent in this view for developing and emerging markets to borrow best practice from advanced countries, as only the rectangle labeled 'regulators and supervisors' is of concern. In the private interest view, regulation is much more complex, and what is outside this rectangle is of great importance, as suggested in the figure. At each level in the diagram, there is a principal – agent problem: just as banks have imperfect methods at their disposal to control clients, banks supervisors and

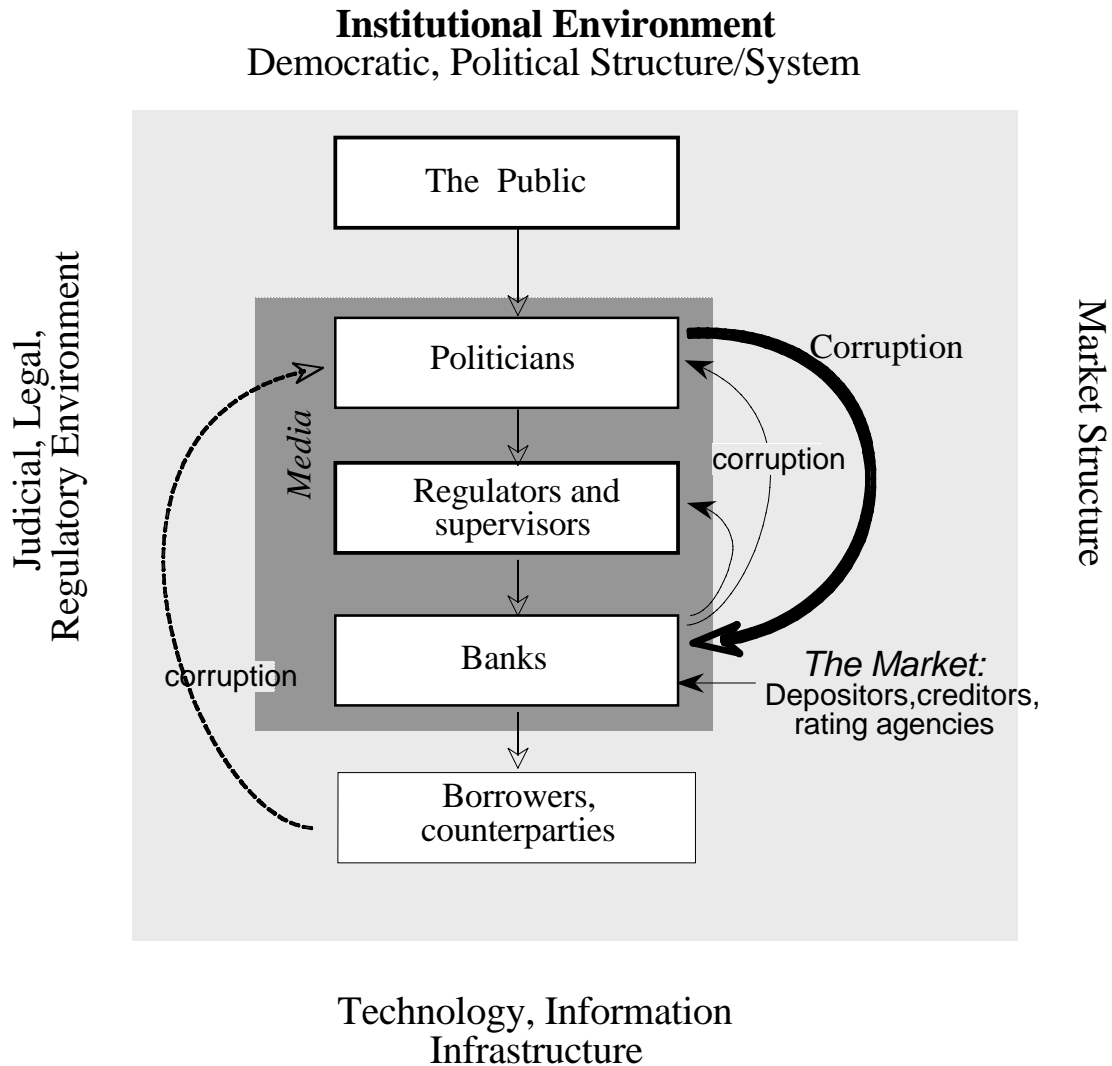
¹³ See BCL (2006) for a more elaborate explanation.

regulators, the next level up in the diagram, face similar issues when trying to control banks. Regulators face information asymmetries, and their reward function differs from that of the bank owners and managers. Politicians similarly face control issues in trying to influence government regulators.¹⁴

Perhaps the most difficult control problem is faced by the public, which would like to have both politicians and supervisors behave so as to maximize social welfare, but their control mechanism, periodic elections, is a highly imperfect tool. Much discussion of supervision takes for granted that its aim is to improve public welfare. Yet, in Figure 2, we see other forces that may be important. Beyond the series of agency problems (the straight lines with vertical arrows pointing down), the framework for bank regulation and supervision is further complicated by possible corruption, as powerful individuals try to influence the flow of society's savings (the upward-pointing arrows). Bankers may try to influence regulators and supervisors with offers of jobs or other emoluments. Perhaps even more commonly, banks may try to buy influence with politicians who in turn can affect the actions of regulators and supervisors. Wallis (2006), in an NBER study of corruption in U.S. history, refers to this channel as venal corruption, illustrated by the upward-curved arrows (in the figure) from banks to politicians and also to regulators and supervisors. Perhaps more insidious is what he describes as systematic Corruption (with a capital C, and depicted by the downward-curved arrows), which is when politicians try to use their influence to maintain or augment their political position, such as by leaning on or conspiring with bankers to extend credit only to those supporting

¹⁴ To be sure, one can argue that we should be thankful when they cannot directly influence regulators too easily!

Figure 2. A Framework for Bank Regulation



the ruling party, restricting entry to those who will play by these rules and so on, as captured in the curved line pointing from politicians to banks. This type of corruption could evince itself in a variety of forms, including government willingness to restrict entry into the banking system in return for favors from the existing bankers. Porfirio Diaz, who came to power in Mexico in 1876, the 76th ruler in a 50 year period, was intent on staying in power. Accordingly (Haber, 2004; BCL 2006), Diaz immediately shut off bank entry, limiting the number of banks to two at the national level and one at the state

level. He then put family relations, important cabinet ministers, and state governors on the boards of the banks and turned the business of regulation over to them. These banks *only* lent to bank directors. Needless to say, the support for Diaz was impressive, and when he requested, for instance, that a railroad be built so that his troops could move around the country more efficiently (and to help economic development in specific areas), these bank directors responded with alacrity.

Concern about systematic corruption pre-dates Polybius and Macchiavelli, the 18th-century Whigs in Britain, and certainly was a great preoccupation of the U.S. ‘Founding Fathers,’ including Alexander Hamilton and especially James Madison. Although many lines may complicate Figure 2, the crucial point is that it is potentially misleading to examine banking policies without considering the private interests of those setting and implementing policies in each country. Thus, notwithstanding how well a given set of technical recommendations work in one country, it would be dangerous to presume that taking those recommendations – as represented by the rectangle in the Figure labelled ‘Regulators and Supervisors’ – and inserting or recommending them in another institutional environment will work equally well.

It is also critical to consider the institutional setting, as these institutions influence the degree to which the above forces become important or are held in check. In the Figure we frame the sequence of principal-agent relationships and political connections within an even broader institutional setting. For example, the presence and quality of checks and balances in government influence the degree to which politicians behave in a public or private interest manner. The power and independence of the judiciary as well as legal statutes shape the level of corruption, the extent to which rules and regulations

are actually followed, and the ability of private market participants to exert corporate control over banks. An independent and active media can play a key role in monitoring corruption and investigating and publicizing wrong doing in each of the relationships in the sequence of agency problems depicted in Figure 2—or as Justice Louis Brandeis put it, “Sunshine is the best disinfectant.”¹ Furthermore, the level of information technology affects the accuracy, speed and flow of information about banks and borrowers, which can influence both official and private oversight of banks. This framework suggests that an array of factors influences how banking policies affect social welfare.

The private interest view, including the importance of the broader institutional context, is consistent with the empirical results reported in section II. For example, although the public interest view would predict that limits on bank activities or entry would have a positive impact, as supervisors would impose these limits to improve the safety and soundness of the banking sector, BCL (2006) found that these had a negative impact on bank development and stability (activity restrictions) and efficiency (entry limits), as the private interest view would argue. Similarly, the public interest school would promote stronger supervisory powers so that supervisors could ensure a safer system, but as reported above, strengthening supervision leads to less bank development, no improvement in stability, and significantly more corruption in the lending process (after holding constant the degree of economy-wide corruption).

Several implications follow. First, in considering whether supervision should be conducted by a central bank (or a separate supervisory agency) or how the supervisory function should be governed, the issue that is rarely addressed is how different this function is, compared with monetary policy, in terms of the impact on economies and

societies. Monetary policy as conducted in most countries focuses on such economic aggregates as inflation, employment, and sometimes (though this is controversial) asset prices. Although there may be large groups that want low interest rates, and others that benefit from high interest rates, and although at any one point in time there are individual winners and losers from specific monetary policy actions, the impact of these decisions are highly dispersed across society. More than at any time in history, there appears to be remarkable consensus around the world that societies benefit from relatively low inflation rates. In short, it is easy to believe that officials are acting in the public interest when they take monetary policy decisions and, accordingly, the idea that central banks should be independent is well accepted. To be sure, in recent years more emphasis has been given to making monetary policy more transparent, but still the degree of transparency is relatively low.

In contrast, the effects of bank supervision are much more specific. Although supervisors can adopt actions or practices that have a systemic impact, the day-to-day business of a supervisor is bank specific. Whereas pillar one of Basel II prescribes a complex, formulaic approach to determining minimum capital ratios, pillar two offers, or at least is described by Basel officials as offering, much discretion to supervisors.¹⁵ Indeed, the fact that Basel II is so highly complicated essentially reduces the transparency of any supervisory activity. Perhaps the clearest contrast between monetary policy and bank supervision is that none of the authors of this paper can recall ever hearing about a monetary policy official who was bribed for taking a certain monetary policy action, whereas the occurrence of corruption in supervision is less infrequent, in particular in

¹⁵ Some from the Basel Committee even described the purpose of pillar two as allowing supervisors to set the 'optimal' capital ratios for individual banks!

countries with a weak institutional setting. To be sure, regulators might respond to other rewards as well. For example, Calomiris (2006, p. 6) reviews the regulatory record of the Greenspan Fed, and proposes an algorithm for Fed decision making in which

The Fed supports beneficial deregulation so long as doing so does not (1) stir up significant political opposition to the Fed within Congress or the Administration, which might threaten its monetary policy independence, (2) harm the large commercial banks (...who are key allies of the Fed in its political battles in Washington), or (3) undermine the Fed's competitive position vis-à-vis other regulators. Furthermore, these three constraints (opposition by politicians, opposition by big banks, and erosion of Fed regulatory power) may lead the Fed not only to fail to support beneficial deregulation, but to actively support harmful regulation, or in the case of antitrust regulation, to fail to enforce beneficial regulation (i.e., against undesirable anticompetitive mergers).

This particular view of the private interest approach is one in which the protection of or advancement of the interests of the regulatory institution takes priority. One can imagine variants of this algorithm in which the advancement of particular politicians, family/individual interests, or other objectives would also play a role in the calculus of regulatory decision-making.

So the first implication of this discussion is that in order to increase the likelihood that bank supervision will lead to an improvement in society's welfare, it is important that supervision be made as transparent as possible. Central banks that maintain a supervisory function, whatever the views on the optimal degree of transparency for monetary policy, should focus on this issue. The greater the discretion for supervisors, the greater the required degree of transparency and the more developed should be the institutional and incentive environment.

A second implication is that it is critical that the supervisory function be reconsidered. As seen above, empirical analysis finds no positive impact from stringent capital requirements or increased supervisory powers, but a significant payoff to improved market monitoring and better market-oriented incentives. These findings suggest a very different role for bank supervision – one that supports market monitoring by forcing banks to disclose material and lawful information, verifying the accuracy and timeliness of the information disclosed, and penalizing bankers for deliberately disclosing faulty or misleading information. This framework for supervision is much more amenable to greater transparency, as it is easier for outsiders to understand. In other words, central banks that wish to preserve their independence in the monetary policy sphere and still maintain the supervisory function should want to ensure first, that the approach to supervision is effective, in terms of the various possible goals and second, that the approach is as transparent as possible. The less transparent is the approach to supervision, the more it will require oversight, including by other parts of government, with the risk being that monetary policy will also become involved. Also, intervention in the supervisory process by politicians is more attractive the less the available ‘sunshine.’ Central bankers who wish to reduce interventions in the monetary policy process should find it appealing to adopt this model. Another approach would be for central banks that still have responsibility for supervision to shed this function, though we presume that central bankers who attach great importance to the synergies between supervision and monetary policy would favor retaining this function but adopting an approach that would work, namely relying more on market discipline.

Unfortunately, there is a less optimistic finding that bears on this debate. What determines the supervisory choices that countries make? Do countries not pick the best supervisory framework due to ignorance, or due to other factors? BCL (2006) investigate the determinants of the choices that countries make on bank supervision, and find that domestic political factors are of overwhelming importance. Countries with more open, competitive, and democratic political systems tended to choose an approach to bank supervision that puts more emphasis on private monitoring. These systems also tended to be more open to bank entry, to impose fewer restrictions on what banks can do, and to have fewer and smaller state-owned banks. Countries with closed political systems tended to choose a supervisory environment that would keep the banking system uncompetitive, as this helps reinforce the government's own power.¹⁶ In short, neither the opinions of experts nor empirical evidence might influence the decisions that countries make about bank supervision.

One implication of this last finding is that both the authors and readers of this paper have less influence than they would like on what countries choose. A second is that much more research needs to focus on how governments make their supervisory choices and on what might influence those choices. Certainly some might argue that with the increased availability of information about what other countries do, the greater ease (lower cost) of delivering experts or research results around the world, and the prominent role of international agencies and treaties (WTO), that international forces are becoming more important in affecting what countries do. However, research (The World Bank, 2001) suggests that thus far many countries, though they have adopted 'headline'

¹⁶ See BCL (2006, Chapter 5) for examples, with the clearest being from 19th century Mexico. The contrast between that example and the U.S. system in the same era is made by Haber et al (2003).

regulations, such as the 8% minimum capital ratio, have done far less in implementing the underlying regulations that would make this effective – exactly what an approach that recognized the important role of politics would predict.

IV. Conclusions

The trend towards a heavier hand of government in the financial system took off during the depression and in the immediate postwar world, but has been transformed since the late 1970s. Countries rely much less on direct controls on banks and more on official supervision. Basel II will greatly increase the role of government in the banking sector, which in effect will give technical ‘advice’ to banks on the intricacies of capital (and risk) management and extensive discretion to supervisors. This paper reviews findings that this approach does not work but that one relying more on market discipline and incentives, with a more supportive role for supervision, is preferable in terms of its impact on social welfare. Moreover, we argue that the governance of central banks should be determined by their functions, and that the governance requirements of supervision are significantly different from that for central banking, at least to the extent to which the Basel view of supervision is followed.

Basel II is an exceptionally complex proposal because it tries to replace market forces, which as Soviet planners discovered requires an ever-increasing level of detail and oversight. Even in the run-up to Basel II, a backlash against heavier regulation is already building. Surveys of bankers report the cost of regulation as a growing concern, and the U.K. has created a commission to review the regulatory reach of government in banking. Thus it is timely for central bankers to rethink their role in the sector – before it

is too late. Implementing the Basel approach will be quite expensive – how else (if at all) to get highly quantitative skills into supervision – and we predict will increase opposition to supervision and to agencies that supply it for the reasons noted above. Central bankers should instruct the Basel Committee to go back to the drawing board. The foundation of a regulatory system that supports the development, efficiency, stability, integrity and governance of the banking system is comprised of information and its disclosure, incentives for market discipline, supervisory verification and support of market monitoring, and diversification requirements. All central banks, regardless of their role with respect to supervision, should care about the regulation of the banking sector. But for central banks with supervisory responsibility, an approach to regulation that focuses on market monitoring and incentives, with a supportive role for supervision, will be more conducive to safeguarding the relatively high degree of independence that those central banks enjoy today, as well as to achieving better outcomes in banking.

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