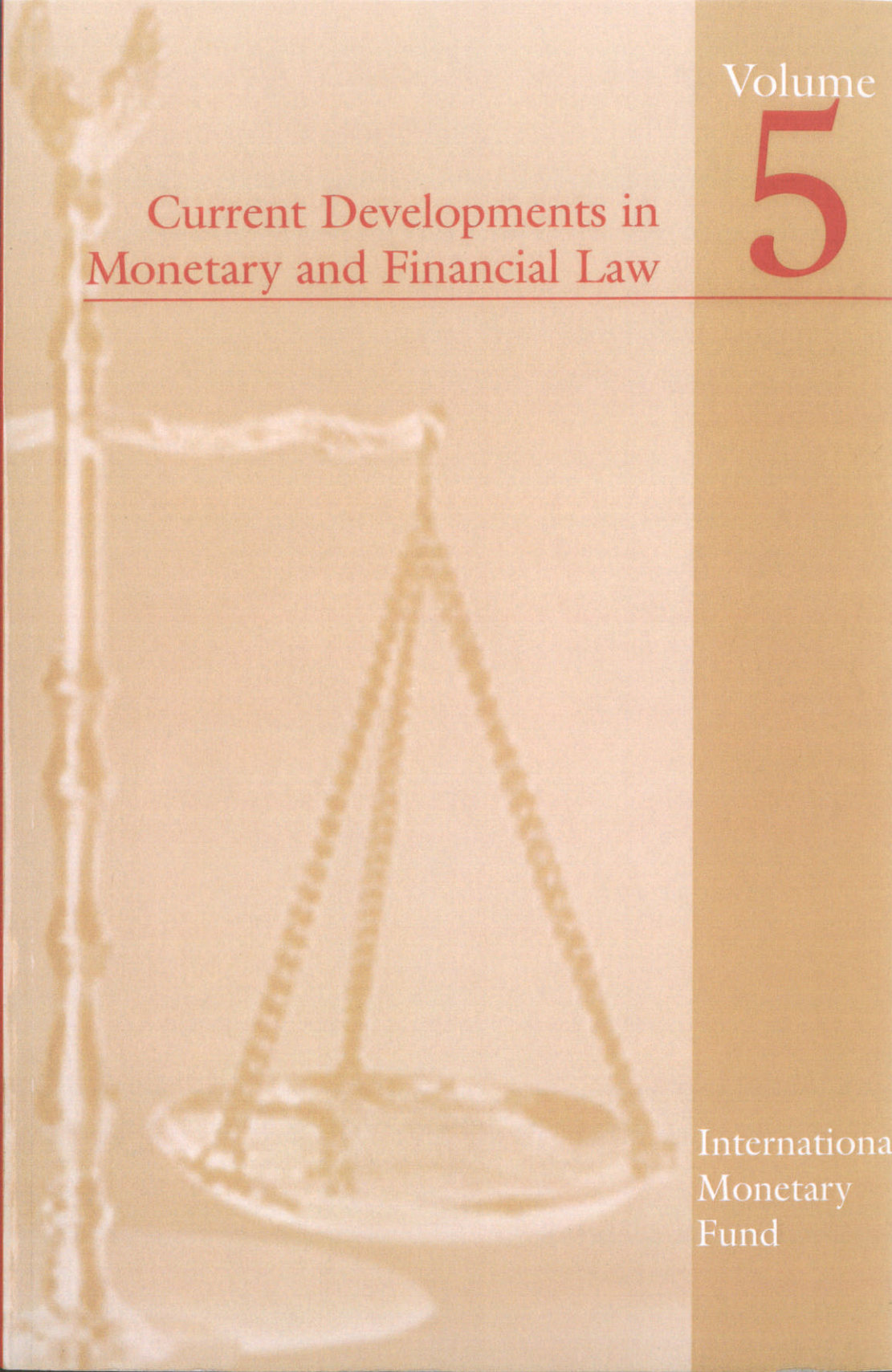


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**Reassessing the Rationale and Practice
of Bank Regulation and Supervision
after Basel II**

JAMES R. BARTH, GERARD CAPRIO, JR., AND ROSS LEVINE

In recent decades, countries around the world have liberalized the interest rate and portfolio restrictions that had been adopted during the Great Depression and immediately following World War II, and moved instead to rely more on a system of prudential regulation and supervision. Gradually, however, bank supervision has grown 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 as the tools of choice for promoting safe and sound banking. Basel II, the 2006 revision of the Basel Core Principles on Banking Supervision (BCP), significantly reinforced this trend. The unfortunate effect of Basel II will be to make capital requirements more complex and bank supervision even more intrusive. Indeed, supervisors will be validating and constraining banks' modeling of risks and, to the extent that one takes Basel II's pillar 2 seriously, imposing capital requirements for individual banks above and beyond that suggested by mere formulae.

The danger that arises from Basel II is that supervisors (whether in central banks or not) might not be able to do this job well, and will in the process become more exposed to political forces and possible corruption, in particular in countries where the degree of their discretionary powers is high and transparency is low. A political backlash might then ensue, especially in countries that significantly

boost the resources for bank supervision to implement Basel II, resulting in sharp limits on supervisory independence. Central banks housing the supervisory function might then find that their independence to conduct monetary policy is impaired as well.

There is still time, however, to reassess the rationale and practice of bank regulation and supervision. To do so, we can now rely on a worldwide database on banking regulation, compiled and analyzed by the authors of this chapter, to evaluate what actually works. Using this database, which is described in some detail in the next section, it is possible to examine whether the threat from Basel II is one that merits serious consideration.

Drawing on the database and its subsequent analysis, this chapter summarizes the evidence in regard to what works best in bank regulation. The major findings are that (1) there is no robust evidence that stricter capital requirements help in securing better outcomes in the banking sector, and (2) stronger supervisory powers lead to worse outcomes except in the very best institutional settings.

The two pillars of Basel II that have received the most attention—more complex capital requirements and increased supervision—at best do not hurt a 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 the World Bank database that market discipline, the third and much-neglected pillar of Basel II, can be effective in improving the banking system, and that incentives matter in ensuring the safety and soundness of banking.

Accordingly, this chapter proposes a model in which supervision supports market monitoring, rather than supplanting it. Moreover, there are important interactions between the political and institutional variables that have an impact on supervision, with more open and transparent systems providing superior performance. There is, therefore, a need for disclosure of supervision and supervisory actions as much as possible, with less supervisory discretion. At present, the BCP 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 most supervisors hitherto have demonstrated.

Rather than focusing almost exclusively on training bank supervisors to have state-of-the-art risk management skills (for Basel pillar 1) and using discretionary powers to shape bank behavior (pillar 2), 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 of the database, are disclosure, incentives for market discipline, supervisory verification and support of the market, and diversification requirements.¹

The greatest danger for supervision (and for central banks that have a role in it) 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 Basel II successfully, especially as the increased demand for scarce risk-management skills increases the premium on these skills, and the push for more resources for supervision (which we expect in some cases is a consideration behind the popularity of Basel II) could have the reverse effect of increasing 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 produce benign results. Although attempting to improve certain factors—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 and

independence. Thus central banks with supervisory powers (as well as other supervisory agencies) should 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.

Bank Supervision: What the Data Say

Those interested in central bank governance need to take into account all 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.² As seen in Table 1, however, the majority of central banks also serve as either the sole supervisor or as one of several supervisory agencies. Bank supervision therefore needs to be taken into account, at least for about 90 countries, when recommendations are made on how central banks should be governed.

This section looks first at how countries should supervise their banking systems. It then makes recommendations as to how the supervisory agency in their central bank should be governed. Employing the sensible approach of James Madison, the fourth president of the United States, 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 it is first necessary to look at what is the best way to supervise banks, and then discuss the controls on the supervisors.

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, Guinea, South Africa, Burundi, Lesotho, Sudan, Egypt, Libya, Swaziland, Gambia, Namibia, Tunisia, Ghana, Rwanda, Zimbabwe	Morocco, Nigeria	Algeria, Congo, Madagascar, Benin, Côte d'Ivoire, Mali, Burkina Faso, Equatorial Guinea, Niger, Cameroon, Gabon, Senegal, Central African Republic, Guinea Bissau, Togo, Chad, Kenya
Americas (21 countries)	Argentina, Guyana, Trinidad and Tobago, Brazil, Suriname, Uruguay	United States	Bolivia, Ecuador, Nicaragua, Canada, El Salvador, Paraguay, Chile, Guatemala, Peru, Colombia, Honduras, Venezuela, Costa Rica, Mexico
Asia/Pacific (31 countries)	Bhutan, Kyrgyzstan, Samoa, Cambodia, Malaysia, Saudi Arabia, Fiji, New Zealand, Singapore, Hong Kong, China, Pakistan, Sri Lanka, India, Papua New Guinea, Tajikistan, Israel, Philippines, Tonga, Jordan, Qatar, Turkmenistan, Kuwait, Russia, United Arab Emirates	China, Thailand, Taiwan, China	Australia, Korea, Lebanon, Japan
Europe (39 countries)	Armenia, Ireland, Romania, Azerbaijan, Italy, Serbia and Montenegro, Belarus, Lithuania, Slovenia, Bulgaria, Moldova, Spain, Croatia, Netherlands, Ukraine, Greece, Portugal	Albania, Macedonia, Czech Republic, Slovakia, Germany	Austria, France, Poland, Belgium, Hungary, Sweden, Bosnia and Herzegovina, Iceland, Switzerland, Denmark, Latvia, Turkey, Estonia, Luxembourg, United Kingdom, Finland, Norway,
Offshore Centers (26 countries)	Aruba, Macau, China, Oman, Bahrain, Mauritius, Seychelles, Belize	Anguilla, Montserrat, Antigua and Barbuda, Saint Kitts and Nevis, Commonwealth of Dominica, Saint Lucia, Cyprus, Saint Vincent and The Grenadines, Grenada, Vanuatu	British Virgin Islands, Isle of Man, Malta, Gibraltar, Jersey, Panama, Guernsey, Liechtenstein, Puerto Rico

Source: Barth, Caprio, and Levine, 2006

Until recently, authorities interested in improving their supervisory or regulatory framework could only rely on the opinions and theoretical positions of international experts—what used to be called “armchair empiricism.” To be sure, expert opinion can be

valuable, but that expertise is derived almost entirely from the experiences of advanced countries, and the supervisory approach that those experts 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 places a significant amount of emphasis on official supervision and on capital regulation, neither of which played much of a role when these advanced countries were in their industrialization stage. 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 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 it will lead to stronger financial systems*. However, it is important to ask whether this is the best path for a developing country. Even better, it would be useful not just to ask if this is a good thing, and not just rely on expert opinion, but instead to use actual data to try and describe what has been working around the world in the area of banking 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

More than ten years ago the authors began assembling the first cross-country database on commercial bank regulation and supervision. Based on guidance from bank supervisors, financial economists, and our own experiences, we began putting together an extensive survey of bank regulation and supervision. The original survey, Survey I, had 117 country respondents between 1998 and 2000. The first update in

2003, Survey II, characterized the regulatory situation at the end of 2002, and had 152 respondents. Survey III was made available in July 2007, with responses from 142 countries. Survey III is special because barring a postponement in Europe on par with that in the United States; it represents the last look at the world before many countries formally begin implementing Basel II, the revised Capital Accord.

The Survey of Bank Regulation and Supervision Around the World assembles and makes available a database to permit international comparisons of various features of the bank regulatory environment. Current and previous surveys and responses are on the World Bank website and the earlier surveys, responses, and indices are available on a CD containing the research of Barth, Caprio, and Levine (hereinafter BCL).⁵ The initial survey in 1998–99 was composed of about 180 questions, and was substantially expanded to approximately 275 questions in 2002. Changes to the current survey were more limited, with many aimed at achieving greater clarity and precision, and others made in anticipation of Basel II. Although the most recent version has over 300 questions, much of the expansion was in the form of making explicit separate categories for responses or otherwise clarifying issues. Some of the entirely new questions in the latest survey explicitly or implicitly refer to Basel II, such as those enquiring as to the plans for the implementation of Basel II, and if so then the variant of the first pillar to be adopted. Similarly, some of the questions relating to capital, provisioning, and supervision have been modified to keep abreast of current thinking and emerging practice in these areas.

The latest survey continues to group the survey questions and responses into the same twelve sections as previously, namely,

- Entry into banking
- Ownership
- Capital
- Activities

- External auditing requirements
- Internal management/organizational requirements
- Liquidity and diversification requirements
- Depositor (savings) protection schemes
- Provisioning requirements
- Accounting/information disclosure requirements
- Discipline/problem institutions/exit, and
- Supervision.

Also, the majority of questions are structured to be in a yes/no format, or otherwise require a precise, often quantitative, response. Experience suggests that simple and precise questions increase the response rate and reduce the potential for misinterpretation.

The databases now enable us to assess what works and what does not in the area of bank supervision, as a result of the most recent update of the database and its analysis in BCL (2006). The argument and conclusions of this chapter are based on BCL (2006).

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 in order to understand 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, the

database is based on a survey—it is not an attempt to rate the supervisory systems of different countries. Rather than an evaluation, the survey is composed of a long list of (about 300) highly detailed questions, many of which can be answered simply 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 BCL.

Second, there is no good way to evaluate how supervision functions in reality. Evaluations of regulatory systems, such as the Basel Core Principles Assessment, usually done in the context of a World Bank-IMF Financial Sector Assessment (FSAP), 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 certain 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 adopted a specific methodology: rather than examine each of the many individual regulations, it compiled broad indices of bank supervision. For example, the index of bank supervisory powers includes a long list of the powers possessed by supervisors.⁶ BCL compiled a variety of other indices related to allowable 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 was able to test the performance of the proposed three pillars of Basel II.⁷ Ultimately, this approach also allowed BCL to test broad views of supervision—the framework that is elaborated in the next section—and to reconsider how financial supervision might be viewed.

Using the database, BCL examined 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 the governance of the banking sector. Stated another way, rather than select one measure of what is meant by a “good” supervisory framework, BCL looked 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 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.

BCL also redid this analysis after removing some outliers and still found highly significant results. Even more interesting, perhaps, is that when examining the relationship between bank development and supervision, BCL found precisely the opposite result: more supervisory powers were associated with less bank development, although in a multivariate framework, which is when accounting for other supervisory variables, the negative relationship fades. Unfortunately for proponents of strengthening supervision the “Basel

way,” there is no evidence of a positive link. Interestingly, Rafael La Porta and his colleagues reach a similar conclusion with respect to securities market regulation, namely that private monitoring supports securities market development, and official supervision does not help.⁸

However, there is some good news for this group: when BCL took 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, and so on—it find some evidence, although not strong, 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, 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 state-of-the-art supervisory powers would have allowed Bank Indonesia to enforce disciplinary actions against banks with connections to the Suharto family. The resignation last year of former Bank of Italy governor Antonio 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 standard of institutional development. 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 investigated other measures for assessing the supervisory environment. Rather than review all of these results in detail, the findings are summarized as follows:

- First, as regards bank capital regulations, which in effect represent the first pillar of Basel, what stands out is the absence of any positive relationship between more stringent capital requirements and any of the variables here about which we care.⁹

- Second, supervisory power, a proxy for pillar 2, also displays an absence of any positive effect, and in some cases has a negative impact.
- Third, in sharp contrast, private monitoring, the third and much neglected pillar of Basel, appears due for a promotion to pillar 1 because it has a desirable effect on all of the variables except for bank stability.¹⁰

On the other hand, for those concerned about stability, what helps is reducing activity restrictions, reducing the moral hazard associated with deposit insurance, and increasing diversification requirements.

Still, the message from empirical research by BCL as to how to promote stability 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, 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 losses of more than a trillion dollar 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, which raise 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 perhaps to less costly resolutions of those problems.

The strength of the BCL 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 when taken 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.¹¹ These results are not just statistically significant but matter economically as well. For example, Beck, Demirguc-Kunt, and Levine (2006) 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 to the 75th percentile when measuring the degree to which regulations force information disclosure and foster private-sector monitoring. Furthermore, rules on information disclosure have an especially 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, the improvement of incentives would have led to a lower probability of suffering a systemic crisis by as much as 12 percentage points.¹²

As summarized in BCL, the bulk of “hands on” or interventionist government policies lowers bank development, encourages 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.¹³ 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 commissioned the authors to provide an updating of the survey, which was completed in July 2007.

Interpretation and Implication for Central Banks

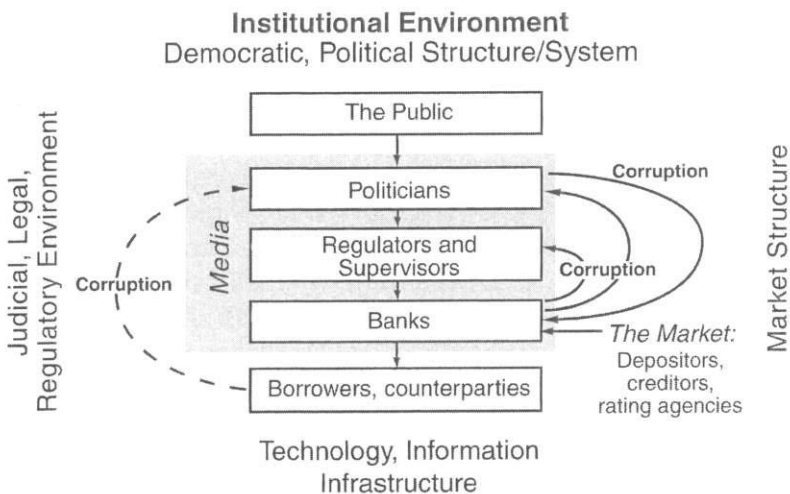
In recent years, following the high inflation of the 1970s and 1980s, it has become generally accepted that central banks should be independent agencies in order to allow them to perform better their key function of maintaining monetary and financial stability.¹⁴ However, there has been less attention 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, as well as an opportunity, on the horizon regarding the design of bank supervision.

Essentially, there are two opposing views of supervision and regulation. The first, often referred to as the public-interest view, dates back to Arthur C. Pigou¹⁵ and is based on the reality of market failures, as well as on the assumption that governments have the incentive and the ability to correct these failures.¹⁶ In sharp contrast, the private-interest school, usually associated with Stigler,¹⁷ views regulation as a product determined by supply and demand. Although market failures are also assumed to exist, according to Stigler 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 1 provides a broader framework with which to analyze supervision. According to the public-interest view, supervision is relatively straightforward, 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 because 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 regulators, the next level up in the diagram, face similar issues when trying to control banks. Regulators face information asymmetries, and their reward differs from that of the bank owners and managers. Politicians similarly face control issues in trying to influence government regulators.¹⁸

Figure 1. A Framework for Bank Regulation



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 the public’s 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 Figure 1 illustrates that other forces 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.

John Wallis, in a 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.¹⁹ 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 the ruling party and restricting entry to those who will play by these rules, as captured in the curved line pointing from politicians to banks. This type of corruption could evidence itself in a variety of forms, including government willingness to restrict entry into the banking system in return for favors from the existing bankers. An example is Porfirio Diaz, who came to power in Mexico in 1876 as the seventy-sixth ruler in just a 50-year period and was intent on staying in power. As described by Stephen Haber and Barth, Caprio, and Levine,²⁰ 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 lent only to bank directors. Needless to say, the support for Diaz among his coterie 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 eighteenth century Whigs in Britain, and it was certainly a great preoccupation of the U.S. "Founding Fathers," including Alexander Hamilton and especially James Madison. Although many lines may complicate Figure 1, 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. 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 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. Figure 1 frames 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 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 wrongdoing in each of the relationships in the sequence of agency problems depicted in Figure 1—or as U.S. Supreme Court Justice Louis Brandeis put it, “Sunshine is the best disinfectant.” 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 the prior section. For example, although the public interest-view would predict that limits on bank activities or entry would have a positive impact, BCL found that when supervisors impose those limits to improve the safety and soundness of the banking sector, they 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 discussed 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, one issue that is rarely addressed is how different this function is, compared with monetary policy, in terms of its 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 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, easy to believe that central banks should be independent. 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 to monetary policy, 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 1 of Basel II prescribes a complex, formulaic approach to determining minimum capital ratios, pillar 2 offers, or at least is described by Basel officials as offering, much discretion to supervisors.²¹ 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 countries with a weak institutional setting. To be sure, regulators might respond to other rewards as well. For example,

Charles Calomiris reviews the regulatory record of the Greenspan Fed, and proposes an algorithm for Fed decision making in which

[t]he 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).²²

The first implication of this discussion is that in order to increase the likelihood that bank supervision will lead to an improvement in a 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 the institutional and incentive environment should be.

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 from 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 because it is easier for

outsiders to understand. In other words, central banks that wish to preserve their independence in the sphere of monetary policy and still maintain their supervisory function should want to ensure, first, that the approach to supervision is effective in its various possible goals and, second, that the approach is as transparent as possible. The less transparent 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 when there is less “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 investigated the determinants of the choices that countries make on bank supervision and found that domestic political factors are overwhelmingly important. 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 because it reinforces the government’s own power.²³ 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 chapter have less influence than they would like on what countries choose. A second implication is that much more research needs to focus on how governments make their supervisory choices and on what influences 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) have caused international forces to become more important in affecting what countries do. However, research by the World Bank suggests that thus far many countries, though they have adopted "headline" regulations, such as the 8 percent 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.²⁴

Conclusions

The trend towards a heavier hand of government in the financial system began during the Great Depression and accelerated in the immediate postwar period, but it 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 chapter reviewed findings that this approach does not work but that one relying more on market discipline and incentives, with more of a supporting role for supervision, is preferable. Moreover, the chapter has argued 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 was already building. Surveys of bankers report the cost of regulation as a growing concern, and the United Kingdom 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 is likely to increase opposition to supervision and to agencies that supply it. 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.

Notes

¹ As noted below, the authors' research found that diversification requirements in banking are critical for most economies, since most financial systems are small and have a high degree of covariant risk. See James R. Barth, Gerard Caprio, Jr., and Ross Levine, *Rethinking Bank Regulation: Till Angels Govern* (New York and Cambridge: Cambridge University Press, 2006).

² See, e.g., Alberto Alesina and Lawrence H. Summers, "Central Bank Independence and Macroeconomic Performance: Some Comparative Evidence," *Journal of Money, Credit and Banking*, Vol. 25, No. 2 (May 1993), at 151-162.

³ The quote in its entirety, from *Federalist Papers*, Number 51: "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."

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

⁵ James R. Barth, Gerard Caprio, Jr., and Ross Levine, "The Regulation and Supervision of Banks around the World: A New Database," in Robert E. Litan and Richard Herring, eds., *Brooking-Wharton Papers on Financial Services* (Washington, DC: Brookings Institution, 2001), at 183-250; "Bank Supervision and Regulation: What Works Best?" *Journal of Financial Intermediation*, Vol. 13 (2004), at 205-248; *Rethinking Bank Regulation: Till Angels Govern* (New York and Cambridge: Cambridge University Press, 2006)[hereinafter BCL 2006]. The data are available on the web at <http://econ.worldbank.org/WBSITE/EXTERNAL/EXTDEC/EXTRESEARCH/0,,contentMDK:20345037~pagePK:64214825~piPK:64214943~theSitePK:469382,00.html>.

⁶ The questions in the survey 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; and suspend the directors' decision to distribute management fees? It also asks who can legally declare—such that the declaration supersedes some of the rights of shareholders—that a bank is insolvent; and who has authority to intervene—that is, suspend some or all ownership rights—in a problem bank. 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 Barth Caprio, and Levine (2006), *supra* note 1, for more detail.

⁷ 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.

⁸ Rafael La Porta, Florencio Lopez-de-Silanes, and Andrei Shleifer, "What Works in Securities Laws?" *Journal of Finance*, Vol. 61 (2006), at 1–32.

⁹ 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.

¹⁰ Some would say that they only care about the latter, but that view ignores the tendency for a financial system that does not promote development to become destabilized by a variety of special schemes that will be created in order to promote the excessive extension of credit—as occurred, for example, in the 1960s and 1970s in many low- and middle-income countries.

¹¹ For corroboration, see also Barth, Caprio, and Levine (2004), *supra* note 5; Asli Demirgüç-Kunt, Luc Laeven, and Ross Levine, "Regulations, Market Structure, Institutions, and the Cost of Financial Intermediation," *Journal of Money, Credit, and Banking*, Vol. 36 (2004), at 593-622; Thorsten Beck, Asli Demirgüç-Kunt, and Ross Levine, "Law, Endowments, and Finance," *Journal of Financial Economics*, Vol. 70 (2003), at 137-181; Beck, Demirguc-Kunt, and Levine (2005) for corroboration.

¹² James Barth, Gerard Caprio, and Ross Levine, "Bank Regulation and Supervision: What Works Best?," NBER Working Paper No. 9323, November 2002, and *Journal of Financial Intermediation* 13, (2004), at 205-48.

¹³ See, for example, Demirgüç-Kunt, Laeven, and Levine, "Regulations, Market Structure, Institutions, and the Cost of Financial Intermediation," *supra* note 11. They 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.

¹⁴ Alesina and Summers, "Central Bank Independence and Macroeconomic Performance," *supra* note 2; A. Posen, "Why Central Bank Independence Does Not Cause Low Inflation: There is No Institutional Fix for Politics," in R. O'Brien, ed., *Finance and the International Economy* (Oxford: Oxford University Press, 1993), at 40-65; K. Rogoff, "The Optimal Commitment to an Intermediate Monetary Target," *Quarterly Journal of Economics*, Vol. 100 (1985), at 1169-1189; C.E. Walsh, *Monetary Theory and Policy*, 2nd ed. (Cambridge, MA: MIT Press, 2003).

¹⁵ See Arthur C. Pigou, *The Economics of Welfare*, 4th Edition (London: Macmillan, 1938).

¹⁶ See Barth, Caprio, and Levine (2006), *supra* note 5, for a more elaborate explanation.

¹⁷ George Stigler, "The Theory of Economic Regulation," *Bell Journal of Economics and Management Science*, Vol. 2 (1971), at 3-21; and *The Citizen and the State: Essays on Regulation* (Chicago: University of Chicago Press, 1975).

¹⁸ To be sure, one can argue that we should be thankful when they cannot directly influence regulators too easily.

¹⁹ John Wallis, "The Concept of Systematic Corruption in American History," in Edward L. Glaeser and Claudia Goldin, eds., *Corruption and Reform: Lessons from America's History*, (Chicago: University of Chicago Press, 2006).

²⁰ Stephen Haber, “Political Institutions and Economic Development: Evidence from the Banking Systems of the United States and Mexico,” mimeo, Stanford University, 2004; BCL 2006, *supra* note 5.

²¹ Astoundingly, some members of the Basel Committee even described the purpose of pillar 2 as allowing supervisors to set the “optimal” capital ratios for individual banks.

²² Charles W. Calomiris, “The Regulatory Record of the Greenspan Fed,” mimeo (Washington, D.C.: American Enterprise Institute, 2006).

²³ See Barth, Caprio, and Levine (2006), chapter 5, for examples, with the clearest being from nineteenth century Mexico. The contrast between that example and the U.S. system in the same era is made by Haber et al. (2003).

²⁴ World Bank, *Finance for Growth: Policy Choices in a Volatile World*, World Bank Policy Research Report, (Washington D.C.: Oxford University Press, 2001).