Banking on Basel?

by

Gerard Caprio, Jr.
Williams College
July 2006

This paper was prepared for the July 2006 KDI conference**,** "ADOPTING THE NEW BASEL ACCORD: Impact and Policy Responses of Asian-Pacific Developing Countries." The author greatly benefited from discussions with and comments from James Barth and Ross Levine**.**

I. Introduction

In recent years, the world appears to be embarking, for the first time in its history, along a path of regulatory convergence in the financial sector, and especially in banking. Twenty years ago, if an extraterrestrial econometrician had landed on Earth, he, she, or it would have observed national experts from individual rich countries advocating their own country's regulatory system for poor countries[1], and perhaps would have concluded either that all those who believed in particular regulatory approaches had decided to live in the same country, or that belief in different regulatory approaches was related to unobserved cultural factors. No doubt a clever journal article would have resulted – at least if extraterrestrial econometricians value publications as highly as their earthly counterparts. Now, although some important differences remain, there has been a remarkable degree of regulatory convergence, in no small part due to the Basel Committee on Bank Supervision. And developing countries are being encouraged to follow in the footsteps of their rich country counterparts. This would be a fine trend if the movement were likely to make emerging market financial systems stronger, but it important to ask whether or not this is the case.

Before authorities move to adopt one of the variants of Basel II, they should understand the lessons of empirical research, in particular what has worked in recent years to improve and weaken the regulatory systems around the world. Also, authorities receive many recommendations for regulatory improvements, but these changes – either piecemeal, one-off changes or regime shifts as significant as Basel II – often are evaluated 'on their own merits,' meaning on the basis of some prior views

[1] That is, Belgian supervisors would have been recommending their system, those from the United States a different approach, etc.

without an overall framework or strategy for regulation in mind. As Mark Twain stated, "It ain't what you don't know that gets you into trouble. It's what you know for sure that just ain't so."[2] A framework for evaluating financial sector regulation and, more broadly, an understanding of the factors that influence the impact of regulatory changes in different countries would help inform the decision making process. Finally, it is important that authorities reflect on the origins of Basel II and what is likely to be implemented when and by which countries, as these factors may affect the decision to 'implement Basel II.'

This paper will try to accomplish the above objectives. Section II will review the latest empirical evidence on what works best in banking regulation, drawing heavily – but succinctly – on the latest study (Barth, Caprio, and Levine, 2006, henceforth BCL) and related research. Section III will then will provide a framework for understanding these findings, drawing on BCL and Shleifer (2005). Next, Section IV examines briefly the origins of Basel II, and offer views as to what is likely to be implemented and at what pace around the world. No one can accurately predict individual country decisions, especially as they are likely to change as authorities become more aware of the pitfalls and costs of implementing Basel II. This section therefore will be somewhat speculative, but it will draw on the analysis in BCL as to the determinants of regulatory choices. It will also review the possible impact of whatever is implemented on the stability and developmental impact of the banking sector, drawing on the material in Section II. Finally, Section V will conclude.

The bottom line of the paper is that although the encouragement of modern risk management techniques is useful, the core of Basel II, namely the highly sophisticated parts of pillar 1, will be both expensive to implement and may lead

---

[2] This quote is found at http://www.brainyquote.com/quotes/quotes/m/marktwain109624.html.

countries into a very expensive and even a welfare-reducing regulatory system. As reported below, there is no evidence from cross-country studies that attention to tightening or raising capital requirements helps improve the financial sector along any of a number of dimensions. Moreover, increased discretionary supervisory powers, at the heart of pillar 2, are shown to have the potential to impair the functioning of the financial system. Instead, there is robust empirical support only for the much-neglected third pillar, market discipline. The conclusion that emerges from an empirical investigation is that the role for supervision should be re-cast into supporting the disclosure process, penalizing bank directors and senior managers for the disclosure of faulty or misleading information, and closing banks that are revealed to need closure. That is, supervisors' role should be to actively support market monitoring, and to learn from it (e.g., which banks are candidates for closure will become apparent from interbank credit lines and interest rates). This approach is vastly different from that embedded in the Basel approach. Basel II also appears to be enormously expensive to implement, and the implementation process is fraught with uncertainties and problems that will occupy regulatory authorities for years to come (unless the international community decides to return to the drawing board). So at the very least, authorities in emerging markets interested in adopting the more sophisticated parts of Basel II should intentionally be late adopters, as this will allow them time to learn the advantages and pitfalls of high income countries' implementation efforts, as well as time to prepare their systems so as to maximize the benefits of any implemented measures.

Jaime Caruana compared the Basel approach to the Windows operating system for personal computers, noting that Basel I was analogous to Windows 95, Basel II to Windows 98. Officials should recall that Windows 98 was highly unstable and crashed often, and that in regulation, as with computer software, early adopters of a new regulatory model can pay a high price. A safe conclusion for emerging market officials is to let the rich countries pay the high price and learn the most expensive lessons. In the meantime, officials can be preparing their systems for a more modern approach to risk management, encouraging the development of accounting, auditing, and other parts of the financial infrastructure and emphasizing market discipline, the one pillar of Basel II that actually seems to work. For many countries this will entail a significant change in the degree of transparency and in the incentives for market participants to monitor. Evidence indicates that this approach works.

II. **What Works Best in Banking?**

Until recently, authorities interested in improving their regulatory framework could only rely on the opinions of international experts. To be sure, expert opinion can be valuable, but the experts have been virtually entirely from advanced countries, and the regulatory 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. Moreover, 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 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 footsteps of their rich country counterparts. This is a fine trend, even if difficult to implement, if the movement will make their financial systems stronger, but 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 actually to use data to try and see what has been working around the world, in the area of bank regulation. Measurement of the results of regulation 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 can not measure it, you can not improve it.[3]

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 regulation and 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, and disclosure requirements; external governance; and the structure of regulation and supervision. The database was born 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 regulatory and supervisory system of different

---

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

countries. Rather than an assessment, the survey is composed of a long list of (about 300) questions, many of which can be answered in the affirmative or the negative, regarding characteristics of the regulatory and 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, 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.[4]

There are many ways to use the BCL database. Regulatory 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 put together broad indices of bank supervision and regulation. For example, their index of bank supervisory powers includes a long list of the powers that possessed by supervisors.[5] They form a variety of other indices related to bank activities, bank entry requirements, capital regulation, prompt corrective action powers, private monitoring, moral hazard, etc. Although

[4] For example, as of 2005, one of the highest scoring regions on the Basel Core Principles Assessment was Sub-Saharan Africa. This ranking is highly implausible, as this 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 bias.

[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; 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.

these indices essentially average over some information, their advantages are several. 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 get 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 pillars of Basel II.[6] Ultimately, this approach also allows them to test broad views of regulation – the framework that is elaborated in section IV – and to a reconsideration of how financial regulation might be viewed.

IIA. Regulating Banks: What works?

Using the aforementioned database, BCL (2006) 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 also the governance of the banking sector. In other words, rather than select one measure of what is meant by a ‘good’ regulatory 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 and regulatory variables, as well as some exogenous control factors, and found a positive relationship between the regulations that boost private monitoring and banking development, when controlling for endogeneity issues[7] and also when

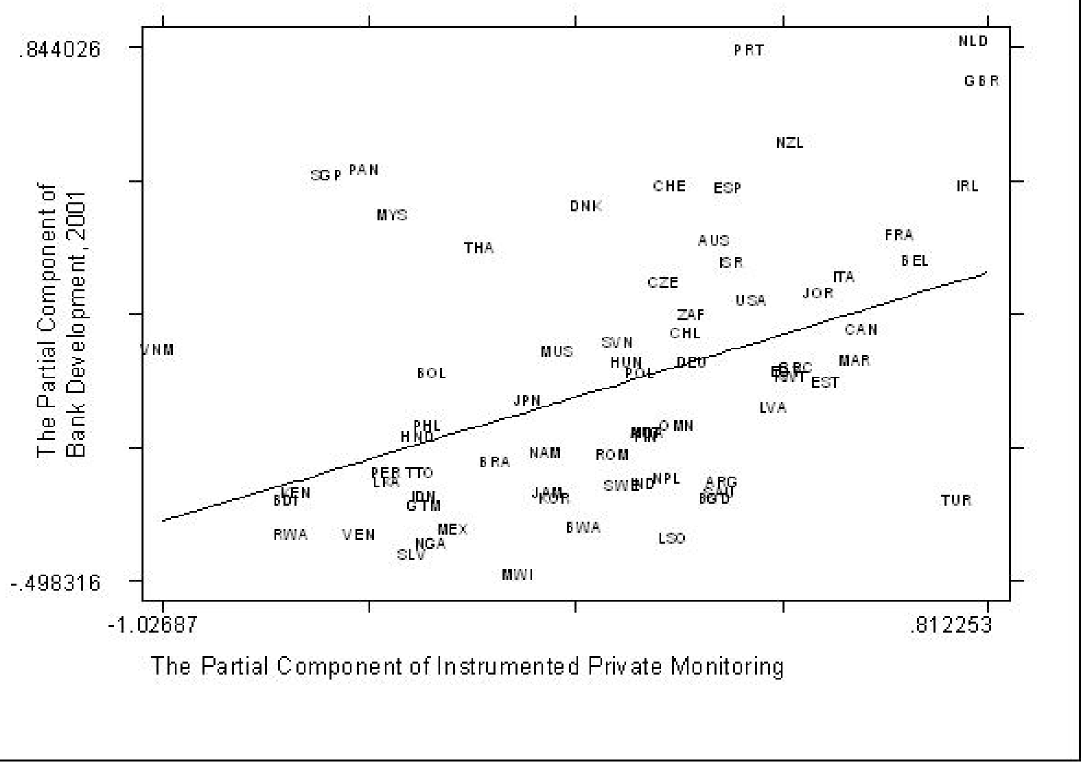
[6] Note that they do not test Basel II in practice, because it has not yet been implemented, but rather they test the effectiveness of capital regulation, supervisory powers, and market monitoring, which are the three pillars of the proposed system.

[7] This refers to the problem that a particular regulatory characteristic might be the result of bank development, rather than its cause.

controlling for other features of the regulatory and supervisory regime and various institutional factors. Regulations that forced reliable, comparable information disclosure and that gave markets the incentive to monitor banks were found to promote bank development.

Figure 1 visually 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 process. 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 1. Private monitoring and bank development



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

precisely the opposite result: more supervisory powers were associated with less bank development, though in a multivariate framework, that is when accounting for other regulatory and supervisory variables, the negative relationship fades. Unfortunately for proponents of strengthening supervision, there is no evidence whatsoever of a positive link. However, there is some good news for this group: when BCL take account of a variety of variables that described 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 so weakly developed, and/or transparency is so poorly developed, that supervisory powers can be used to reinforce the position of the ruling authorities or of wealthy groups, rather than the safety and soundness of the financial system. 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 have met this standard. 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.

As noted above, BCL (2006) investigate other measures for assessing the regulatory environment. Rather than review all of these 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 capital and any of the variables here about which we care.[8] Supervisory

---

[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 loan.

power, a proxy for pillar 2 and shown in the second row, also sees 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. True, some would say that the latter is all that they care about, but this view should be a minority view, since a financial system that does not promote development will end up being destabilized by a variety of special schemes that will be created in order to promote the extension of credit.

Table 1. Summary of What Works in Bank Regulation

	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, as well as activity restrictions, which when present can lead to a greater concentration of a bank’s business. This is an important message: the advanced features of risk management in Basel II do 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 these were visible without sophisticate risk management tools, yet many did not want to see them – a problem that any regulatory system needs to address – human weakness. Greater transparency, so that as many eyes will be able to see a problem as possible, appears to be the best solution.

The strength of the BCL (2006) study is that it uses different cross-country, bank-level, and firm-level datasets and employing different econometric techniques, each of which may have different drawbacks, but together provide the same 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 lending as measured by survey information from firms around the world.[9] The signs shown in Figure 2 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

[9] 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.

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.[10]

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 bloated interest rate margins and larger overhead costs.[11] 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 might reveal, for example, whether the absence of any impact of higher required capital ratios was due to convergence in capital ratios and definitions. Alternatively, it might just be demonstrating what the literature has acknowledged for some time, namely that increases in capital ratios above that 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. But further refinements in the database are welcomed, and the World Bank has already commissioned an updating of the survey this year.

---

[10] 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.

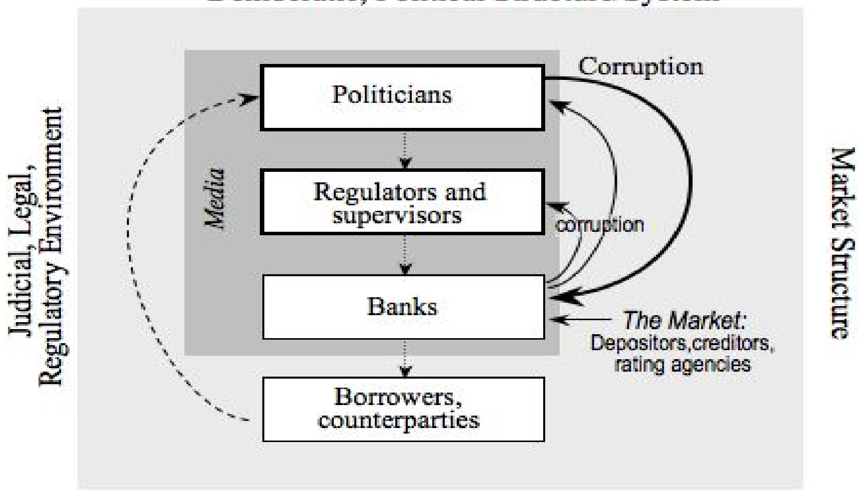
[11] For example, Demirguc-Kunt, Laeven, and Levine (2004) compute that if Mexico had the same level of restrictions on bank activities as Korea, its interest rate margins would be a full percentage point lower.

III. **A Framework for Regulation**

How can the above results be understood? In addition to assembling a database and examining which regulatory and supervisory practices work best, we also spent quite a lot of time on assessing the proper role of government in society and investigating the determinants of banking policies. Now, what, you should ask, is a discussion of government's role doing in a book or talk about bank regulation. After all, many consider bank regulation to be a technical specialty, akin to the mechanics of clearing and settling equity transactions. From this technical perspective, bank regulation and supervision involve defining and measuring capital, determining the number of days a loan needs to be in arrears before classifying it as nonperforming, etc. This technical view would not place much weight on viewing bank supervision and regulation within a broader political economy context that stresses how political philosophies and institutions shape both policy choices and the impact of those decisions. Although we began our investigation with this technical perspective, the data quickly induced us to rethink our approach to bank regulation.

Figure 2 below illustrates a broader framework in which to view bank regulation and supervision that involves a sequence of agency problems surrounded by the entire apparatus of political, legal, cultural, and technological forces influencing the operation of banks. At each level in this figure (shown by the rectangles in the figure), there is a principal-agent problem. For example, in the lending relationship, the bank is the principal, the borrower is the agent, and the bank's problem is how to induce the borrower to behave in a responsible way and service the debt. Information asymmetries – the borrower having better information about issues such as their own business activities, behaviors, and effort than the bank-

Institutional Environment
Democratic, Political Structure/System



Technology, Information Infrastructure

Figure 2. A Framework for Understanding Bank Regulation

make this problem difficult, and lead to a variety of loan characteristics, such as the demand for collateral and short maturities. Similar agency problems continue at the next level as bank regulators and supervisors with imperfect information about banks seek to design rules and enforcement procedures that induce banks to behave in desirable ways. At this same level, traditional corporate governance problems plague the oversight of banks: informational asymmetries make it difficult for supervisors or the market – depositors, equity holders, other creditors, and rating agencies – to monitor and control bank managers. The series of agency problems continues at the next level, where "politicians," including officials from all branches of government, seek to influence bank regulators. Just as regulators face agency problems in controlling banks, politicians face similar problems in controlling the regulators, though perhaps we should be happier about this last problem. Regulators have much more information about bank activities, regulatory policies, and enforcement procedures than politicians, which may make it difficult for politicians sitting in national capitals to control regulators throughout the country.

At the highest level of the sequence of complex agency problems lies the most difficult problem: how does the public induce politicians to act in the best interests of society? Much discussion of regulation takes for granted that its aim is to improve public welfare. This view, dubbed the public interest view, dates back to Pigou (1938), and is based on the assumptions that market failures exist and that government has the ability and incentive to correct them. However, it is also possible that politicians and regulatess (here, meaning bankers) will tend to promote their own private well-being to the detriment of society (the "private interest" view), a view that dates back to Stigler (1971, 1975). Public officials often are motivated by a desire to retain their positions, and occassionally by the desire to enrich themselves personally – with both motives illustrated so well by the Abramoff scandal in the United States. The private interest view in effect sees regulation as the outcome of supply and demand --- government supplying regulation, withnot just consumers but also industry on the demand side. Since the industry being regulated experiences the concentrated benefits and costs of regulation, whereas the impact on society will be much more dispersed, it is the regulated industry (that is, the banks) that is likely to be more organized in pressing to receive the type of regulation that is most beneficial to its own interests.

In Figure 2, these forces are evident. 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 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 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 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.[12] Concern about systematic corruption dates back to Polybius and Macchiavelli, the 18th-century Whigs in Britain, and certainly was a great preoccupation of two key U.S. 'Founding Fathers,' James Madison and Thomas Jefferson. Although many lines may complicate Figure 3, 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.

It is also critical to consider the institutional setting. In the Figure we frame the sequence of principal-agent relationships and political connections within an even broader institutional setting. Banks are inextricable parts of a nation's social fabric.

[12] Furthermore, borrowers may seek to influence politicians by lobbying for regulatory/supervisory policies that will favor their own interests.

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 and 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 each of the relationships in the sequence of agency problems depicted in Figure 2. Furthermore, the level of information technology affects the 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.

In sum, this framework rejects the narrow, technical approach and instead adopt a broader, more complex approach to banking policies. People have a powerful interest in the supervision and regulation of banks, as these policies influence who gets to use society’s savings and who does not, and in effect who becomes or remains economically and politically powerful and who will never realistically contemplate entrepreneurial and political success. Thus, powerful people will try to influence politicians, supervisors, and regulators in ways that promote their selfish interests. Their ability to manipulate the rules of the banking game successfully depends, importantly, on each nation’s political, legal, and cultural institutions. This view suggests that to have banks that promote social welfare, a country needs political and other institutions that “oblige” its officials to develop policies that maximize social welfare, not private welfare.

James Madison understood this well when he said:

> But what is government itself, but the greatest of all reflections on human nature. 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. (Federalist Papers, Number 51)

This quotation is consistent with a broad and necessarily complex view of bank regulation. Madison clearly recognizes a role for government ("If men were angels, no government would be necessary"). He was equally clear in recognizing that government would not necessarily strive to maximize social welfare ("If angels were to govern men, neither external nor internal controls would be necessary"). Thus, although recognizing the necessity of government, Madison stressed in the last sentence of the above quotation that to maximize social welfare, political systems must unequivocally reject the presumption that governments naturally maximize public welfare and instead must adopt mechanisms that induce governments to promote the public interest and limit government officials from abusing their power to maximize their private interests.

Madison's view has direct implications for bank supervisory and regulatory strategies. Popular approaches to bank supervision assume either that bank supervisors and politicians naturally behave like angels or that sufficient institutional mechanisms exist to ensure such behavior. Strengthening official supervision may not have desirable outcomes, however, when politicians and bankers – with or without the cooperation of supervisors – conspire to promote the interests of narrow elites. Strengthening official oversight of banks may only work when political institutions minimize political and regulatory capture, thwart officials from using their public power for private gain, and oblige supervisors to act in the best interests of society. In fact, the findings reported in Section II are quite consistent with a Madisonian, private interest view of regulation. Giving supervisors more powers – except in the very best of institutional settings – either did not improve social welfare or was actually harmful. On the other hand, improving market monitoring was associated with better outcomes, which is precisely what the private interest view predicts.[13]

Beyond the empirical results, the framework discussed here would imply that it is misguided and potentially counterproductive to develop a unified checklist of best practice recommendations with the belief that closer adherence to the checklist will produce better functioning banks. While the attempt to codify international best practice is laudable, it should remain in a library so that developing authorities can consult it, rather than be urged on them by the international community. Basel contributes to this checklist, or 'one-size-fits-all,' view, and diverts attention from the underlying institutional environment. It is fair to note that relatively little is known about how to effect institutional change, as the new institutional economics only took off in the last decade – in part as economists saw seemingly sensible policies not working as planned in emerging markets. Still, a focus on institutions is the recommendation that emerges both from empirical research as well as this proposed framework for understanding regulation.

IV. Basel II: Origins and Implementation

So how did the world get to the point at which it seems as though an unsuitable regulatory framework is being encouraged as a model for countries? As is well-

[13] For more on the detailed predictions of the private and public interest views, see BCL (2006), Chapter 2.

known, the Basel process originated in an attempt to level the playing field for internationally active banks, in the wake of the Herstatt failure of 1973. However, consistent with the private interest view is the interpretation that banks in some countries, in particular the United Kingdom and the United States, wanted protection from the rapidly expanding Japanese banks, and minimum capital requirements were selected as a way to at least level the playing field. To be sure, it is possible to argue that regulators were acting in the public interest. However, it is unclear why it was optimal to protect U.S. and U.K. consumers from lower cost of Japanese banks. It also is not clear that Basel I had much impact on Japanese banks, but rather it appeared likely that their retrenchment was virtually entirely due to the bursting of the asset market bubble.

Understanding how countries decide on bank regulation should help us predict what will happen with the adoption of Basel II. BCL (2006) investigate the determinants of the choices that countries make on bank regulation, 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 regulation that put 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 regulatory environment that would keep the banking system uncompetitive, as this helped reinforce the government's own power.[14]

Calomiris (2006, p. 6) reviews the regulatory record of the Greenspan Fed, and proposes an algorithm for Fed decision making in which

[14] 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).

> 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 relation is one in which but 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 pecuniary objectives would also play a role in the calculus of regulatory decision-making.

What does this have to do with who will adopt Basel II and how they will do it? Over 100 countries have said that they will adopt Basel II, but not only are there several variants of Basel II, it is also likely that there will be substantial variation in what actually gets implemented. As is well known, the Federal Reserve Board already decided to postpone U.S. implementation until 2009, ostensibly out of concern they have banks' capital ratios could decline. If the Fed were to recommend a system with lower capital ratios, it could well be that this would stir up opposition from other regulators, and perhaps some members of Congress. Although the decision was taken while Chairman Greenspan was still in power, it is possible that he was reluctant to leave a thorny political problem to his successor in the early years of in his tenure as a new chairman, hence the decision to postpone.

It is quite likely that such domestic political considerations will play an important role in countries' decisions about Basel II. This system promises to be extremely difficult to implement, even in high- income countries, due to the shortage, both in banking and in the regulatory agencies, of those with state-of-the-art risk management skills. In developing countries, the shortages tend to be even more severe, as is the scarcity of high quality data needed to implement a more technical version of Basel II. Although prediction is fraught with difficulty, it is plausible that these technical considerations will slow down implementation plans. However, it should be recognized that there are many forces pushing emerging market countries in the direction of a hurried adoption. For example, by number of supervisory authorities have argued that the rating agencies are or will pressure them into quick adoption. Also, consulting firms are actively selling ' Black Box' risk management models where the absence of data it is said that not to be problematic; they just use U.S. parameters! The real danger of course is that the use of these models, with imported or invented data, can present highly misleading picture of the safety and soundness of banking systems.

It should also be recognized that regulatory authorities motivated to advance the interests of their own agency could easily push for an advanced variant of Basel II in order to justify a substantial increase in the resources available to their regulatory agency. This 'regulatory aggrandizement' view is I think both realistic and quite dangerous. It is dangerous not only because of the dangers of increased supervisory discretion in weak institutional settings, but also because it inevitably will produce a backlash against regulatory authorities.

Given these considerations, it would not be surprising to see a few emerging market countries rush ahead, while many opt for a (sensible) 'go-slow' approach.

Even among the high income countries, further differences in implementation are likely to emerge in response to the ad hoc way in which Basel II deals with portfolio risk. And countries that attempt to apply Basel II to all banks will see a significant reduction in competition as small banks will not be able to bear the costs of the system.[15] Ironically, Basel II therefore is likely to promote regulatory divergence.

Finally, what will be the impact of implementation on emerging markets? In view of the uncertainties of implementation, definitive answers are in short supply. The above research suggests that the desired improvement in banking sector stability will not result. However, it is possible that the flow of credit to developing countries will be affected, at least from banks. Yet as has been seen, when interest rates are low in high-income countries, there is a powerful drive for diversification and a consequent increase in capital flows to developing countries. To the extent that Basel II reduces the scope for banks to hold this exposure, nonbanks will become involved. Thus it is difficult to see any significant, overall impact except possibly one of adjustment, and even this is doubtful given the drawn out nature of implementation. Therefore, the major impact of Basel II will depend on what emerging market countries themselves decide to implement, yet another reason for authorities to be cautious.

V. Conclusions

Of the current industrial countries, none of them devoted their best trained mathematical minds to bank supervision when they were in the stages of their most

[15] At a 2005 conference sponsored by the LSE and World Bank, representatives of the major banks – including former officials who had been involved with Basel II (such as Tom De Swann and Andrew Crockett) sharply criticized Basel II as an absurd attempt at over-regulation. Nonetheless, they said that it was fine from the perspective of their banks. The only way to reconcile these views is that the major banks understand that the consequence of implementation will be reduced competition.

rapid economic growth. Yet unless there is an explosion of mathematical talent in emerging markets, this is precisely what the adoption of an advanced version of Basel II would require. In fact, when rich countries were growing fast, they depended greatly on market monitoring -- and the absence of deposit insurance -- to keep banks safe. For the most part, this strategy was successful – to be sure, less so in United States due to the highly balkanized of nature of its banking system until recently. This paper does not recommend a return to that relatively laissez-faire approach, but rather recommends a regulatory model appropriate to the state of institutional development. In most countries this will mean a model in which the job of bank supervision it is to support the disclosure and monitoring process on the part of the private sector. Market monitoring requires both good information and good incentives. Thus the role for the authorities is to help build the infrastructure in the financial system and to limit the presence of generous safety nets for the banks. Countries that have not yet adopted deposit insurance should not do so until they reach a relatively advance state of institutional development (See World Bank, 2001). Those that have it, and those that cannot avoid it, need to focus on reducing the damage that deposit insurance does to market monitoring through judicious design and realistic (higher than in the past) pricing. (BCL, 2004, 2006; Demirguc-Kunt and Detragiache, 2002; the World Bank, 2001).

To put these results in sharp relief, does this imply reliance on market monitoring in a very low-income country where capital markets are severely limited? Some argue that this is precisely where reliance on bank supervision and capital is most important. The BCL response is that creating more elaborate capital regulations and giving official supervisors more power are especially unlikely to improve the operation of the banking system in such an environment! Moreover, strengthening supervisory power may simply enhance the tools available to the government for directing society's resources toward politically advantageous ends. Market monitoring does not require formal capital markets; interbank markets, present in virtually all financial systems, are often the locus of much monitoring, and large depositors, if they are convinced that they will not be rescued, will also serve in this role.

Others will argue that the expert advice embodied in Basel II's first two pillars will improve banking if applied sensibly and maintain that this more extensive checklist of best practice recommendations is a practical step toward ensuring that countries sensibly implement sound bank regulations. Although at one level this argument is tautological, depending on how one interprets "sensibly," it is important to recognize that best practice recommendations are ultimately implemented by national governments after international experts have returned home. For example, in Basel I, the credit risk weight on government debt was set at zero and this scheme was followed by developing countries, even by those whose debt was trading at much less than par in international markets. This misguided application of Basel weakened banking systems, as in the case of Argentina, and provided a false sense of comfort to investors purchasing bank securities. Clearly, an international expert would say – especially ex post – that if countries applied their guidance sensibly, with a higher risk weight where warranted, all would be well. Unfortunately, even assuming that the "best practice" is a good one, this recommendation overlooks the power of politicians, who have a clear preference that banks purchase government securities at artificially low prices, which they can enjoy by applying the popular interpretation of Basel I (a low risk weight for government paper). Related to the earlier discussion, the ability of politicians and private investors to circumvent the best intentions of international experts seems to far outstrip the ability of these experts to develop capital regulations and official supervisory practices that induce countries to implement best practices sensibly. For our purposes, the conclusion is inescapable: as there is no empirical support for the first two pillars of Basel II and noteworthy evidence in favor of the efficacy of pillar three, authorities should therefore build on what works, and do their best to make sure that conditions are as favorable for market monitoring as possible. This means that authorities should concentrate on building the infrastructure that supports a healthy financial sector: improved information and incentives.

The data provide ample support for the private interest view of government and surprisingly little support for the public interest view. From the laboratory of bank supervision and regulation, it appears that angels do not govern! Across the world there are insufficient checks and balances on government officials to induce them to behave in a way that boosts the functioning of banks. As stressed, the bulk of "hands-on" policies by the government tends to hinder bank development, reduce bank efficiency, intensify banking system fragility, and increase corruption in lending. These results are inconsistent with the public interest view. We are not the first to make this argument: the Shadow Regulatory Committees of the U.S., Japan, Europe, and Latin America have suggested that Basel is heading in the wrong direction, and Charles Goodhart and others at the Financial Markets Group of the London School of Economics have argued against Basel II as well.

To be sure, some regulation is good – specifically, regulatory policies that actively promote information disclosure and private sector governance lead to better functioning banks, but the effectiveness of these public policies actually validates the predictions of the private interest view, not those of the public interest view. In sum, the evidence is consistent with the view that politicians and government officials frequently act to promote their own private interests even if this hurts society in general.

In the discussion on Basel implementation, how countries decide on bank regulation was discussed, and evidence that this decision directly reflects political institutions was reviewed. Specifically, the data indicate that countries with more open, competitive, democratic political institutions that have effective constraints on executive power tend to adopt an approach to bank supervision and regulation that relies more on private monitoring, imposes fewer regulatory restrictions on bank activities and bank entry, and has less of a role for government-owned banks. In contrast, countries with more closed, uncompetitive, autocratic political institutions that impose ineffective constraints on the executive tend to rely less on private monitoring, impose more restrictions on bank actions and new bank entry, and create a bigger role for government banks. If domestic considerations dominate decisions on bank regulatory policy and implementation, it would be advisable for the international community to spend far less time and effort on developing best practice standards and a great deal more on understanding these institutional constraints, and how they can be modified over time. As Dani Rodrik and co-authors have put it, institutions rule! So one had best understand them.

Lastly, it is difficult to conclude without noting that in encouraging the Basel approach to bank regulation in emerging markets, the international community is in danger of repeating an unfortunate litany of development disasters, most notoriously the Kongwa Groundnut Scheme. For those who are not familiar with this episode, in the late-1940s the British Labor government, reflecting the very best development thinking at the time, concluded that poor countries were only poor because they lacked capital equipment, and that once they had it, with a bit of training, they would be developed. Since postwar Britain was short of vegetable oils, a plan was hatched to cultivate 325 million acres in Tanganyika to grow groundnuts, thus aiding development and solving the shortage. Kongwa was the first site selected, and the last.

The fiasco was almost breathtaking. The clearing of the forest looked like a war zone, as the tractors were broken into pieces attempting to till soil that these machines had never encountered before. Stronger tractors—part Sherman tank, part tractor—were brought in, and suffered the same fate. Large Baobab trees, unlike anything seen in Europe, with an immense root structure, were difficult even to dynamite, and the unfortunate workers who were hospitalized discovered that these trees were the favorite nests for African bees. Their colleagues had worse luck, having to face off elephants and rhinos, also not a problem confronting European farmers. Once the field was cleared, it was discovered that the removal of the vegetation made the soil unfit for any kind of agriculture because exposure to the sun in that climate converted the soil into a hard material resembling baked clay. Flash floods and scorpions also plagued efforts to harvest groundnuts. An attempt to switch to an alternative crop also failed. The message here is that the domestic environment in developing countries is quite complex and its neglect can cause many ‘obvious’ solutions to fail.

It is a natural conclusion to this line of research to note that in democratic societies it is important that the debate on regulation, whatever the sector, be as broad and open as possible. Otherwise, narrow interests will see to it for that the solution adopted will at the very least coincide with their interests. To be sure, specialists must be involved, hence in banking the role of the Basel committee can be useful (as an adjunct) as societies debate their regulatory choices. Empirical analysis would be an important component of this debate as well. But an even greater concern is that the debate is not taking place in many societies, rather, many are going along with Basel. Developing country supervisory officials in private say that they think that Basel is not speaking to their needs, and may be proclaiming that they will adopt Basel II because they think that their ratings will suffer if they do otherwise. In some cases, an added motive is that they see Basel II as a way to get more resources in their never-ending battles for turf at home. We hope that all governments will carefully consider not just the empirical results here but the need to open up the process by which they arrived at regulatory choices, and that the international community will contribute to the opening up of this process.

References

Barth, James R., Gerard Caprio, Jr., and Ross Levine, 2001a, The regulation and supervision of banks around the world: a new database, In: *Brooking-Wharton Papers on Financial Services*, Eds: Litan, Robert E. and Richard Herring, Washington, DC, Brookings Institution, 183-250.

Barth, James R., Gerard Caprio, Jr., and Ross Levine, 2001b, "Banking systems around the globe: Do regulations and ownership affect performance and stability?" in Frederic S. Mishkin, Editor: *Prudential Supervision: What Works and What Doesn't*, University of Chicago Press, 2001, p.31-88.

Barth, James R., Gerard Caprio, Jr., and Ross Levine, 2004, Bank supervision and regulation: What works best?, *Journal of Financial Intermediation*, 13, 205-248.

Barth, James R., Gerard Caprio, Jr., and Ross Levine, 2006. *Rethinking Bank Regulation: Till Angels Govern*, New York and Cambridge: Cambridge University Press.

Beck, Thorsten, Asli Demirgüç-Kunt, and Ross Levine, 2003. Law, endowments, and finance, *Journal of Financial Economics*, 70, 137-181.

Beck, Thorsten, Asli Demirgüç-Kunt, and Ross Levine, 2005a, Bank supervision and corruption in lending, World Bank mimeo.

Beck, Thorsten, Asli Demirgüç-Kunt, and Ross Levine, 2005b, Bank concentration and crises, *Journal of Banking and Finance*, forthcoming.

Beck, Thorsten, Asli Demirgüç-Kunt, and Ross Levine, 2005c, Bank concentration and fragility: Impact and mechanics, in *Risk of Financial Institutions* (Eds: Mark Carey and Rene), Cambridge, MA: National Bureau of Economics Research, forthcoming.

Calomiris, Charles W. 2006. "The Regulatory Record of the Greenspan Fed," mimeo, the American Enterprise Institute. But that that could have

Caprio, Gerard, Jr., Luc Laeven, and Ross Levine, 2003, Governance and bank valuation, *NBER Working Paper NO. 10158*, Cambridge, MA: National Bureau of Economic Research.

Coase, Ronald H. 1960. "The Problem of Social Cost," *Journal of Law and Economics* 3, 1-44.

Demirgüç-Kunt, Asli, and Enrica Detragiache, 2002, "Does Deposit Insurance Increase Banking System Stability? An Empirical Investigation." *Journal of Monetary Economics*, 49 (7), pp.1373-1406.

Demirgüç-Kunt, Asli, Luc Laeven, and Ross Levine. 2004, Regulations, market structure, institutions, and the cost of financial intermediation. *Journal of Money, Credit, and Banking,* 36, 593-622.

Easterly, William and Ross Levine. 1997, Africa's growth tragedy: policies and ethnic divisions. *Quarterly Journal of Economics* 112, 1203-1250.

Haber, Stephen H., A. Razo, and N. Maurer. 2003. *The Politics of Property Rights: Political Instability, Credible Commitments, and Economic Growth in Mexico* (Cambridge University Press).

Hamilton, Alexander, Lay, John and James Madison. 1788. *Federalist Papers* (In C. Rossiter, Ed., New York: New American Library, 1961).

Kaufmann, D., A. Kraay, and P. Zoido-Lobaton (1999), "Governance Matters", Policy Research Working Paper 2196, World Bank.

La Porta, Rafael, Florencio Lopez-de-Silanes, and Andrei Shleifer, 2006. "What Works in Securities Laws?" *Journal of Finance*.

Levine, Ross, 1997, Financial development and economic growth: Views and agenda, *Journal of Economic Literature* 35, 688-726.

Levine, Ross, 2005, Finance and growth: Theory and evidence, In *Handbook of Economic Growth*. Eds. P. Aghion and S. Durlauf, Amsterdam: North-Holland Elsevier Publishers, forthcoming.

Shleifer, Andrei, 2005. "Understanding Regulation," European Financial Management, Vol. 11, No. 4, 439-451.

Shleifer, A. and R.W. Vishny. 1998. *The Grabbing Hand: Government Pathologies and Their Cures*. Cambridge, MA: Harvard University Press.

Stigler, G. 1971. "The Theory of Economic Regulation," *Bell Journal of Economics and Management Science* 2, 3-21.

Stigler, G. 1975. *The Citizen and the State: Essays on Regulation*, University of Chicago Press.

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

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