



The Thirteenth Dubrovnik Economic Conference

Organized by the Croatian National Bank



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Hotel "Grand Villa Argentina",
Dubrovnik
June 27 - June 30, 2007

Draft version

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CROATIAN NATIONAL BANK

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June 2007

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I. Introduction

A decade after the East Asian crisis and the dramatic ramping up of the focus on developing-country-banking systems, interest in the degree of progress in regulatory reform commands attention for a variety of reasons. Those concerned with the fragility of financial systems, whether from a social welfare or an investor's perspective, want to know if developing country's financial systems are safer now than in the 1990s, or whether they merely appear safer as a result of continuing generous inflows of foreign capital. Would-be financial sector reformers, including the World Bank (Bank) and the International Monetary Fund (IMF), want to know what to do next in improving the efficacy of financial systems, which presumably necessitates an understanding of what has been accomplished thus far. Moreover, in 1999 the Bank and the IMF began the Financial Sector Assessment Program (FSAP), an attempt to assess systematically financial systems in countries and to make recommendations for reform, including in the area of bank regulation. Bank and Fund officials and their critics want to know the extent to which recommendations were adopted and whether these reforms were beneficial.

Many seem to know what has happened in countries and to have drawn optimistic conclusions about recent reforms. After all, investors are putting their money into emerging market economies at very narrow interest rate spreads. Also, an influential columnist for the Financial Times (FT), Martin Wolf, commented that '...there have been substantial structural improvements in Asian economies, notably in the capitalization and regulation of financial systems' (FT, May 23, 2007). Others believe that bank regulation and supervision are now sufficiently effective to warrant more aggressive capital account liberalization. For example, Ken Rogoff (2007) recently suggested that while IMF recommendations in the 1990s to liberalize fully capital account transactions might have been premature, now is the time for the IMF, still searching for a new direction for itself, to resume this effort.

Yet, what has actually happened and what are the likely consequences? Have changes in the bank regulatory environment enhanced the creditworthiness of developing countries? Is bank regulation so much better that we need not expect crises to follow from increased capital account liberalization? In addition to these important questions about the stability of financial systems, policy makers are also concerned about other features of their financial systems. Will the bank regulatory frameworks prescribed by the Basel Committee on Bank Supervision increase access to financial services by more people? Have changes in regulation contributed to financial sector development and the ability of banks to allocate capital to those firms most likely to promote growth and reduce poverty? Others enquire about the efficiency of banks, or their corporate governance, and increased attention to corruption issues raises concerns over the extent of corruption in the lending process itself. In each of these cases, the contribution, or lack thereof, of any recent improvements in the regulatory environment is a natural area of inquiry.

More than ten years ago, a similar set of questions motivated us to start 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.¹ The original survey had 117 country respondents between 1998 and 2000, and the first update in 2003, characterizing the regulatory situation at the end of 2002, saw a rise in the sample to 152 respondents. Survey III is now available, with responses from 142 countries at present, though this number is expected to rise somewhat as countries send in late responses. 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.

¹ As in Barth, Caprio, and Levine (2006) we sometimes use the term regulation generically to apply to banking sector policies and compliance mechanisms, while at other times to discuss particular, specific regulations or special aspects of supervision.

This paper is structured as follows. Section II will very briefly review the structure of the survey and the types of responses. Next, Section III looks at the state of bank regulation around the world in 2006, and how it has changed in the last 10 years. Section IV then turns to a first analysis of the data, asking whether the changes in bank regulation are contributing more to financial sector development (and thus we hope to the availability of financial services) and to the stability of banking systems around the world. Section V concludes with lessons for Basel II, and for countries that are grappling with a response to it.

Based on our empirical analysis of what works best in bank regulation (BCL, 2006) and the subsequent changes that have taken place since the late 1990s in the regulatory environment around the world, there is no reason for believing that countries around the world have primarily reformed for the better. While many have followed the Basel guidelines and strengthened capital regulations and empower supervisory agencies, existing evidence does not suggest that this will improve banking system stability, enhance the efficiency of intermediation, or reduce corruption in lending. True, some countries have reformed their regulations to empower private monitoring, consistent the third pillar of Basel II, but there are many exceptions and reversals along this dimension. Moreover, many countries intensified restrictions on the non-lending activities, which existing evidence suggests hurts banking system stability, lowers bank development, and reduces the efficiency of financial intermediation. Indeed, our simulations advertise two countries.

Our advice continues to be that countries will benefit from an approach to bank regulation that is grounded in what has worked in practice. In our earlier work, we found that an approach that favors private monitoring, limits moral hazard, removes activity restrictions on banks, encourages entry, especially by foreign banks, and requires or encourages greater diversification appears to work best to foster more stable, more efficient, and less corrupt financial sector development with better governed banks. Based on existing evidence, we

continue to believe that this approach is the most sensible for country authorities. Critically, the data in this new survey provide the raw material for research that will confirm, refute, or refine this private monitoring view. Thus, rather than rushing into Basel II, we encourage developing country authorities to let others experiment with the efficacy of these policies, and instead to focus attention on developing the legal, information, and incentive systems in which financial systems flourish to the benefit of everyone.

II. The 2006 Survey

The Survey of Bank Regulation and Supervision Around the World assembles a database to permit international comparisons of various features of the bank regulatory environment. Appendix 1 lists the questions as they appear in the survey, while the earlier surveys and the responses are available on a CD in BCL (2006) and on the World Bank website.² The initial survey in 1998-99 was composed of about 180 questions, and was greatly 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 in anticipation of Basel II. Although the current version has over 300 questions, much of the expansion was in the form of making explicit separate categories or otherwise clarifying issues. The entirely new questions in the latest survey are those shown in bold in Appendix 1. Some of these 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 (questions 12.3, 12.3.1). Similarly, some of the questions related to capital, provisioning, and supervision have been modified to keep abreast of current thinking and emerging practice in these areas.

²<http://econ.worldbank.org/WBSITE/EXTERNAL/EXTDEC/EXTRESEARCH/0,,contentMDK:20345037~pagePK:64214825~piPK:64214943~theSitePK:469382,00.html>.

Given the earlier explanations of the survey, we will not go into the depth that was included in BCL (2006, 2004, and 2001). 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, as is evident in the Appendix, 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 mis-interpretation.

With the third survey, we now have data spanning almost a decade, as the first responses to the initial survey were recorded in 1998. Since Survey I was the initial launch of the survey, and as internet penetration in a number of developing countries was still on the increase, many of the responses came in gradually during 1998-99, but a number in 2000 as well. The second survey (Survey II) was conducted in early 2003, assessing the state of regulation as of the end of 2002. Survey III, the latest update, sought a characterization as of the end of 2005. However, although it might be expected to take at least 6-9 months to clean the data, which involves going back to country authorities for clarifications, technical problems at the World Bank website

delayed the processing of Survey III, so that the exercise was only completed in the first half of 2007. Thus it is perhaps accurate to interpret these results as describing the situation in 2006. We expect that some additional responses are yet to be received and that a few revisions will be made once the data are posted.

We have noted in past work that the individual responses in the survey likely are of interest in their own right, especially for authorities who want to compare particular features of their own banking system with those in other countries. For example, we can readily tell that in 2006, 108 of the 142 countries that replied to Survey III responded that they intended to adopt Basel II, though not all of the countries in this group were prepared to tell which of the approaches (standardized, foundation IRB, or advanced IRB) they planned to adopt. Notwithstanding interest in individual responses, it is difficult to extract lessons from so many responses, and policy makers want to know the general direction in which to proceed with reforms (e.g., whether to emphasize bank activity restrictions, capital requirements, bank supervision, or private monitoring) to improve banking systems. Consequently, this group will appreciate a greater degree of grouping and aggregation (and thus quantification) of the variables, as will empirical researchers bound by degrees of freedom (and a need for quantifiable variables). So we follow our earlier practice (BCL 2006, 2004, and 2001) and aggregate the data into broader indices, the principal ones being: Overall Restrictions (on bank activities), Entry Requirements, Official Supervisory Powers, Private Monitoring, and Capital Regulation. As in the past, we stress that there is no unique grouping or aggregation (or even quantification), and we still encourage researchers to experiment with their own groupings.³

³ See BCL (2006) for the description of the indices, and the caveat on their arbitrary nature. For example, we include the Certified Audit Required variable, which measures whether an external audit by a licensed or certified auditor is required of banks, in the index of Private Monitoring. Yet, in the countries in which this is a requirement imposed by supervisors, one could instead include this variable in an index of supervision.

Before turning to the data, an obvious question concerns the accuracy of the responses. The survey was sent to the principal contacts in each country of the Basel Committee on Bank Supervision. Even though these contacts should know the regulatory environment, the survey's scope is such that for any country a number of people usually are involved in its completion, and some or all of the members of this group might change over time, raising the issue of differences in the interpretation of questions over time (in addition to changes in the wording noted above). In order to attain the greatest possible consistency over time, we adopted several approaches: going back to authorities for clarification, where there were notable changes, as well as posting the survey responses on the web, so that the data could be challenged and inconsistencies resolved.

We also did an analysis of the changes in survey responses. Thus in Table 1, we show the changes in the responses to the subcomponents of the Entry Index. The first row shows the relevant question and the 2nd row shows the direction of change (i.e., from Survey I to Survey II or from Survey II to Survey III). Suppose a change from Survey I to Survey III (Survey I → III): **1** (orange) defines a change from “no” to a question in Survey I to “yes” to the same questions in Survey III. Similarly, **-1** (in red) is equivalent to a change from “yes” in Survey I to “no” in Survey III. Positive values indicate higher stringency of entry requirements. The 3rd column in each question (“REV”) indicates a directional reversal regarding this question. A directional reversal occurs when there was a change between Survey I and II and an opposite (and possibly equal) change between Survey II and III for a specific question. Due to this second change, there might be no change between Survey I and III

The first factor evident in the Table 1 is that there are relatively few nonzero entries, meaning that there were few changes in entry requirements over the period for the countries with responses in all of the editions of the survey. Second, there were some reversals, but very few – 15 out of 568 possible cases (71 countries in Table 1, with 8 questions). This indicates a high

degree of consistency on this indicator. Also note that a reversal is not necessarily an indicator of an error in response, as policy could have changed, such as due to a change in government or to political economy forces.

Other indices showed more reversals. Table 2 shows the changes in the components of the overall restrictiveness of bank activities, and here reversals are more a source of concern, occurring in 57 of 284 cases, which clearly merits further investigation. A quick check indicates that most of the reversals are relatively minor, moving only one place on a scale of four. Furthermore, in some cases, countries provided supplementary information in one survey that assisted in better interpreting the responses in the other two surveys that has led to some changes. Fortunately, this index appears to be the most extreme case. As seen in Table 3, reversals in any of the components of the Capital Regulatory Index were less common, occurring in 50 of 639 possible cases. Official Supervision (Table 4) and Private Monitoring (Table 5) also are characterized by relatively few reversals: 69 of 994 cases for the former, and 30 of 639 in the latter. Again, these reversals are not necessarily an indication of errors, especially for those questions that require a simple yes or no answer. Surveys I and II have been posted for several years, moreover, so one would assume that authorities, especially after prompting from the Bank, would have reported errors.

However, since Survey III has not yet been posted, it is possible that there are some errors in these responses, and error checking is being done by us and should continue by others. Indeed, we recommend the investigation of each of the reversals, an effort that will take the effort and time of many researchers or experts in the field.

To summarize, we have invested significant effort in cleaning the data, though did not always receive clear responses from the authorities and are concerned that they suffer from survey fatigue. Thus we recommend ongoing efforts to clean (and update) the data. It might also be noted that some countries chose not to respond to any surveys, not to respond to some

surveys but to others, and not to answer some questions but others, which raises the question as to whether this was a strategic decision or simply survey fatigue.

III. **Bank Regulation and Supervision around the world: what the data say**

With three surveys over almost a decade, one can ask to what extent have there been changes in the regulatory environment in countries around the world. As Survey III is just becoming available, analysis of these changes understandably is in an early stage, and we hope that with the data available on the web, more people will investigate the impact of variations in bank regulation on various outcomes. Also, in principle this analysis can be done for all of the individual questions and countries that are available over the surveys. Here we restrict our attention to the major indices that we highlighted in BCL (2006). As noted, that focus was motivated by the view that country authorities were interested in the strategy that they should take in reforming their financial systems, a view that we continue to hold. As also noted and reemphasized above, others may identify more appropriate ways of constructing indices based on particular questions or circumstances.

Figure 1 shows the changes in overall restrictiveness of bank activities. Although it would be possible to compute a single score by adding up or taking the average degree of restrictiveness in each country, it is not clear how to interpret such a number. One could weight all countries equally, or by their share in world GDP or world banking assets, and likely get different results. Figure 1 shows the countries for which we were able to make comparisons on restrictiveness in Surveys I and III, and since a change in a positive direction indicates a move toward greater restrictiveness, it appears as though restrictions on what banks can do are on the increase. We highlight in black 3 large, high-income countries, namely Japan, the United Kingdom and the United States, as well as 7 countries whose banking crises for different reasons were the focus of attention in the 1990s: Argentina, Indonesia, Korea, Malaysia, Mexico,

Philippines, and Russia. The contrast between two crisis countries is of interest: Mexico responded to the 1994 crisis by easing restrictions on banks, while Argentina saw tightened restrictions and policies that led foreign banks to withdraw. Most other crisis countries also moved in the direction of greater restrictions. The U.S. move in the opposite direction reflects the ending of the Glass-Steagall restrictions on barriers between commercial and investment banking and insurance.

Domestic bank entry requirements (Figure 2) mostly remained unchanged, though there was some tightening in crisis countries, as well as in the U.S. case. Note that this index essentially counts number of the requirements for a banking license: (1) Draft by-laws; (2) Intended organizational chart; (3) Financial projections for first three years; (4) Financial information on main potential shareholders; (5) Background/experience of future directors; (6) Background/experience of future managers; (7) Sources of funds to be used to capitalize the new bank; and (8) Market differentiation intended for the new bank. Thus this index is a proxy for the hurdles that entrants have to overcome to get a license, but the absence of changes does not necessarily imply that the banking sector was not undergoing significant change, as foreign entry was expanding sharply in a number of countries.

In the original survey, we did not have a separate question for the ease of foreign entry, as this was captured in a parallel survey by the U.S. Office of the Comptroller of the Currency, and is not directly comparable to the question on foreign entry in the current survey. However, as seen in Figure 2a, we did collect information on the percentage of assets in majority-owned foreign banks, and here the changes have been dramatic. In the aftermath of their crises, foreign entry rose significantly in Mexico, Korea, and Indonesia, barely changed in Malaysia, the Philippines, and Russia, and fell significantly in Argentina. Some countries rely on foreign entities either to take over insolvent banks and/or to expand their intermediation activities while insolvent banks are restructured, downsized or closed, similar to the way Texas first permitted

banks from outside its state to takeover its banking system during the crisis in the 1980s. Others, like Argentina, foisted such a large share of the costs of the crisis on already present foreign banks that some left and some potential entrants surely stayed away.

Figures 3, 4, and 5 show the changes in the three pillars of Basel II, Capital Regulation, Supervisory Powers, and Private Monitoring, respectively. Interestingly, those countries easing capital requirements are only slightly less numerous than those moving in the opposite direction. Once again, Argentina stands out, with the weakening in its capital requirements having been part of the effort to ease regulation in advance of the crisis, with Korea and Japan making similar moves but in the aftermath of their crises. Argentina did not change its official supervisory powers, though it should be noted that any weakening in the exercise of these powers is not measured here. There is a more noticeable balance of countries moving to strengthen official supervision, or at least provide supervisors with more explicit powers, notably in Korea, Mexico, Malaysia, and some in Russia. Unfortunately, as we will return to below, increases in supervisory powers were not found to be helpful in our earlier work (BCL 2006), in particular in countries with a weak institutional environment, and actually were associated with increased corruption in the lending process.⁴ Interestingly, the U.K. authorities moved in the opposite direction, and have established a working group, whose report is due shortly, that is concerned about excessive regulation and supervision.

Private Monitoring, a proxy for the third pillar of Basel II, has been found to be positively linked with a number of desirable outcomes in the banking sector, and appears generally to be on the rise in number of countries, with Mexico once again in the lead. Only a few countries, notably including the United Kingdom, Malaysia, and Korea, have seen a decline in their score on this index.

⁴ This based on a survey of bank borrowers on the extent to which they had to pay a bribe to get a bank loan. Since in this effort we controlled for economy-wide corruption, it is not the case that our results reflect countries stepping up supervision in response to greater corruption.

As with all of these changes, it is possible to look at the changes in the individual components of the indices (shown in Tables 1-5) to discover which factors account for the variations in the indices. Thus in the U.K. case, private monitoring weakened slightly because of the change to an affirmative in the response to the question, “Does accrued, though unpaid interest/ principal enter the income statement while the loan is still non-performing? Here the rationale is that allowing accrued but unpaid interest for a non-performing loan makes it more difficult for market participants to perceive the underlying health of a bank. Readers are welcome to investigate the sources of other changes with these tables. They might also be interested in the levels of countries’ responses to the main indices, which we show in Figures 6-10. We remind the reader that these indices are the result of answers to the disaggregated questions (see the notes to Tables 1-5), and for example do not imply that supervision in Switzerland, Kenya, or Brazil is superior to that in New Zealand, Canada, or Bhutan, but rather that the former group of countries has a more extensive set of supervisory powers (and those that skilled supervisors tell us matter in the conduct of their job), compared with the latter. We do not, nor does anyone else, have a reliable measure of how supervision functions ‘on the ground.’

We will now turn our attention instead to a more systematic extension of our earlier research to gauge the impact of the aforementioned changes in the regulatory environment on the development of the banking sector, its fragility, and other variables of interest.

IV. **Bank Regulation and Supervision around the world: what the data mean**

IV.A. How reforms affect banking systems: Overview

How have reforms to bank regulations and supervisory practices affected national banking systems? In countries that changed their regulatory policies, have these reforms reduced banking system fragility and boosted banking system development? Have these policy changes enhanced the efficiency of intermediation and moderated corruption in the lending process? Answers to these questions will help some countries adjust their reforms and help other countries avoid mistakes and select more appropriate reform strategies.

Ideally, we would examine how changes in regulatory reforms affect banking system fragility, development, efficiency, and corruption. This would involve first computing changes in bank regulations for each country, which we documented above in Section III. Second, we would need to compute changes in banking system fragility, development, efficiency, and corruption from the 1999 (Survey I) through 2007 (Survey III). Unfortunately, these data are not yet available. Thus, this difference-in-difference examination, where one examines how changes in banking regulation affect changes in banking system characteristics, will have to wait until these data are constructed.

In light of these data constraints, we implement an alternative strategy for estimating how bank regulatory reforms over the last decade influenced national banking systems. We first take estimates of the relationships between bank regulations and banking system fragility, development, efficiency, and corruption based on Survey I that we identified in earlier research (BLC, 2006). We then use these estimates to compute the impact of regulatory reforms between Survey I and Survey III on banking system fragility, development, efficiency, and corruption. We make these computations for each country. One difference between the estimates reported in this paper and our earlier work is that here we use now use indexes base on the summation of the individual questions, rather computing the principal component of the individual questions

underlying the indexes. We do this because it makes it much more transparent to see how changes in individual question, changed the index, and hence the estimated probability of a systemic banking crisis.

IV.B Baseline regressions

Table 6 presents estimates of the relationships between various bank regulations and banking system fragility, development, efficiency, and corruption. Since BCL (2006) explain these estimation processes in great detail, we provide a very brief synopsis of that description.⁵

First, consider banking system fragility, which we measure as dummy variable that equals one if the country experienced a systemic crisis during the period 1988-1999 and zero if it did not. While inherently arbitrary, we classify a systemic crisis as one where (1) emergency measures were taken to assist the banking system (such as bank holidays, deposit freezes, blanket guarantees to depositors or other bank creditors), or (2) large-scale nationalizations took place, or (3) non-performing assets reached at least 10 percent of total assets at the peak of the crisis, or (4) the cost of the rescue operations was at least 2 percent of GDP. We conduct a logit estimation based on key regulatory variables. Since many studies find that macroeconomic instability induces banking sector distress, we also include the average inflation rate during the five years prior to the crisis in countries that experienced a banking crisis. In countries that did not, we include the average inflation rate during the five years prior to the survey of bank regulatory and supervisory indicators (1993-1997).

One key finding on fragility is that regulatory restrictions on banking activities (Activity Restrictions) increase banking system fragility. Many argue that restricting banks from engaging

⁵ Due to poor response quality in Survey III on question 8.3.1, we made a small adjustment to the Private Monitoring Index for conducting the baseline regressions based on Survey I. We do not include 8.3.1 in the private monitoring index for the Table 6 regressions below based on the Survey I indexes. This has little effect on the estimated results.

in nonlending services such as securities market activities, underwriting insurance, owning nonfinancial firms, or participating in real estate transactions will reduce bank risk taking and therefore increase banking system stability. We find no support for this claim. Rather, we find that restricting bank activities increases bank fragility. Fewer regulatory restrictions may increase the franchise value of banks and thereby augment incentives for more prudent behavior. Or, banks that engage in a broad array of activities may find it easier to diversify income streams and thereby become more resilient to shocks, with positive implications for banking system stability.

The second key finding on fragility involves the diversification index, which includes information on whether there are regulatory guidelines concerning loan diversification and the absence of restrictions on making loans abroad. Diversification is negatively associated with the likelihood of a crisis but diversification guidelines have less of a stabilizing effect in bigger economies, as measured by the logarithm of GNP. The inflection point is quite high; diversification guidelines have significant stabilizing effects in all but the nine largest countries.

Second, consider bank corruption, which is measured by asking firms whether corruption of bank officials is an obstacle to firm growth. In particular, a value of one signifies that corruption is an obstacle, while a value zero means that firms responded that corruption of bank officials is not an obstacle. The survey covers 2,259 firms across 37 countries in our sample. In the regressions, we control for many firm level characteristics besides the bank regulation indexes. This data allows us to test conflicting theoretical predictions regarding the impact of specific bank supervisory strategies on the extent to which corruption of bank officials impedes the efficient allocation of bank credit. The public interest view holds that a powerful supervisory agency that directly monitors and disciplines banks can enhance the corporate governance of banks, reduce corruption in bank lending, and thereby boost the efficiency with which banks intermediate society's savings. In contrast, the private interest view argues that politicians and

supervisors may induce banks to divert the flow of credit to politically connected firms, or banks may “capture” supervisors and induce them to act in the best interests of banks rather than in the best interests of society. This theory suggests that strengthening official supervisory powers – in the absence of political and legal institutions that induce politicians and regulator to act in the best interests of society -- may actually reduce the integrity of bank lending with adverse implications on the efficiency of credit allocation.

As shown in Table 6, there are two key findings concerning corruption and bank regulation. First, the results contradict the public interest view, which predicts that powerful supervisory agencies will reduce market failures, with positive implications for the integrity of bank-firm relations. Rather, we observe that Official Supervisory Power never enters the Bank Corruption regressions with a positive and significant coefficient. Second the results are broadly consistent with the private interest view. The positive coefficient on Official Supervisory Power is consistent with fears that governments with powerful supervisors further their own interests by inducing banks to lend to politically-connected firms, so that strengthening official supervision accommodates increased corruption in bank lending. Beck et al (2006) show that sound political and legal systems reduce the pernicious effects of official supervisory power, but they never find that empowering official supervisors significantly reduces corruption in lending. Furthermore, Table 6 shows that Private Monitoring enters negatively and significantly, which further supports the private interest view of bank regulation. Firms in countries with stronger private monitoring tend to have less of a need for corrupt ties to obtain bank loans. This is consistent with the assertion that laws that enhance private monitoring will improve corporate governance of banks with positive implications for the integrity of bank-firm relations.

Third, consider bank development, which is measured as the ratio of bank credit to private firms as a share of Gross Domestic Product. Although bank development is an imperfect indicator of banking system performance, past research shows that this specific bank

development variable is a good predictor of long-run economic growth (Levine, 2006). Thus, we include it our simulations. In these analyses, we also control for the legal origin of each country since Beck et al (2006) show that legal origin helps explain cross-country differences in bank development. Furthermore, in these simulations we simply use the OLS estimates, though the instrumental variable results produce similar findings.

In terms of bank development, there are two major results reported in Table 6. First and foremost, policies that strengthen the rights of private sector monitors of banks are associated with higher levels of bank development. Our results on strengthening private sector monitoring of banks emphasize the importance of regulations that make it easier for private investors to acquire reliable information about banks and exert discipline over banks. This finding underscores Basel II's third pillar. Second, regulatory restrictions on bank activities retard Bank Development. The results do not support the view that financial conglomerates impede governance and hurt the operation of the financial system. These findings are more consistent with the existence of economies of scope in the provision of financial services; though see Laeven and Levine (2007).

Finally, consider banking system efficiency, which we measure as (i) the net interest income margin relative to total assets and (ii) overhead costs relative to total assets for a large cross-section of banks in each country. High net interest margins can signal inefficient intermediation and greater market power that allows banks to charge high margins. High overhead costs can signal unwarranted managerial perquisites and market power that contradict the notions of sound governance of banks and efficient intermediation. To identify the independent relationship between these bank efficiency measures and bank regulations, we control for an array of bank-specific traits, including the bank's market share, its size, the liquidity of its assets, bank equity, and the proportion of income that the bank receives non-interest bearing assets.

The results again advertise the benefits of regulations that empower private sector monitoring of banks. Private Monitoring is associated with greater bank efficiency, as measured by lower levels of Net Interest Margin and Overhead Costs. These findings, and those in Demirguc-Kunt, Laeven, and Levine (2004), suggest bank regulatory and supervisory policies that foster private sector monitoring enhance bank efficiency.

IV. C. Simulation mechanics

The simulation mechanics for the bank development and efficiency regressions are straightforward. These are simple linear regressions from the estimated relationships in Table 6:

$$Y = \alpha + \beta X,$$

where Y is either bank development, the net interest margin, or overhead costs, X is the matrix of explanatory variables from Survey I listed in Table 6 for each regression, α and β are the estimated parameters shown in Table 6.

Differencing, yields

$$\Delta Y = \beta \Delta X,$$

where ΔX is the change in the explanatory variables between Survey I and Survey III. Specifically, it is the value in Survey III minus the value in Survey I. This equation then provides the simulated change in Y (bank development, the net interest margin, or overhead costs) resulting from reforms to the regulatory system between Survey I and Survey III, based on the estimated relationships from Survey I reported in Table 6. We assume that the non-regulatory variables remain fixed and therefore only focus on estimating the effects of the change in regulatory policies on the banking system. We provide the estimated effects of regulatory reforms for each country in the survey that was (i) included in the Table 6 regressions and (ii) has complete data for Survey III.

The simulation mechanics are bit more involved for the logit regressions because this is a nonlinear estimator. In our case, let P equal the probability that the country suffers a systemic crisis (or the probability that the firm responds that corrupt bank official are an impediment to firms growth. Then, in Table 6, we estimate the following

$$\text{Logit}(P) = \alpha + \beta X.$$

In order to compute the estimated change in the probability of a crisis resulting from a change in a particular index x_k within the full matrix of explanatory variables X , however, we cannot simply use the estimated β_k for that particular index. The coefficients from the logit model have to be rescaled in order to illustrate the marginal effect on the probability of a crisis. This rescaling must account for the initial conditions for each country. In order to compute country specific marginal effects on a particular regulatory variable x_k , therefore, we apply the standard formula for each country in the sample:

$$\frac{\partial P_i}{\partial x_k} = \frac{\exp(X' \beta)}{(1 + \exp(X' \beta))^2} \cdot \beta_k$$

The ratio on the right-hand-side of the equation is a country specific scale effect. For this scale effect, we use the initial reported valued from Survey I. Thus, we are assessing the estimated impact on the probability of a crisis from changes in regulatory policies from Survey I to Survey III based on the initial conditions defined by Survey I. The country specific marginal effects for the change in a particular index, x_k , are then obtained by multiplying this scale factor with the estimated logit coefficient, β_k . In this manner, we present the estimated change in the probability of a crisis in each country from the change in each regulatory index from Survey I to Survey III.

IV.D. How reforms affect banking systems: Illustrative simulations

Given changes in bank regulations around the world over the last decade, this subsection provides estimates of the impact of these changes on national banking systems. For each country, we illustrate the impact of changes in relevant regulatory indexes on (1) banking system fragility, (2) corruption in lending, (3) bank development, and (4) banking system efficiency. By “relevant regulatory indexes,” we refer to regulatory indexes that enter statistically significantly in Table 6. We present the simulation results for each of these indexes for every country in the sample. We emphasize that these simulations subject to the many qualifications regarding the underlying estimates presented in Table 6 that detail in our book (BCL, 2006). It is difficult to overstress these qualifications. Yet, given all of these qualifications, we use the systematic, consistent estimates provided in Table 6 to illustrate the potential impact of recent regulatory changes on national banking systems. Also, to continue our narrative on ten particular countries, we focus the discussion on Argentina, France, Indonesia, Japan, Korea, Malaysia, the Philippines, Russia, the United Kingdom, the United States, even though other countries have frequently undertaken the biggest regulatory reforms, which will be illustrated in the figures. Finally, for each regulatory index and for each country, we show which individual regulations changed by documenting changes question-by-question. Thus, readers can readily which individual regulatory reforms produce the changes in the indices that we use when conducting the simulations.

IV.D.1 *banking crises*

Figures 11 and 12 present the estimated changes in the probability of a crisis for each country resulting from the change in regulatory restrictions on bank activities from Survey I (1997) to Survey III (2007). In presenting the simulations, we use terms such as “increased fragility” or “enhanced stability” to describe increases or decreases, respectively, in the estimated

probability of a systemic banking system crisis in a particular country. Crucially, we examine the impact of on country changing bank regulations on the probability of a systemic crisis in that country. We do not examine contagion. We also do not aggregate regulatory changes across individual countries and weight the resultant fragility effects by the financial importance of each country to derive an estimate of world financial system. These are valuable extensions. In this paper, we simply build don the admittedly limited estimates conducted by BCL (2006).

By intensifying regulatory restrictions on bank activities, many countries increased banking system fragility according to our simulations. The simulations suggest that Argentina, Korea, and Russia imposed additional restrictions on bank activities and these reforms will crease the probability of a systemic crisis by between 20 and 40 percent. Other countries relaxed restrictions on bank activities, allowing banks to diversify income flows with positive effects on banking system stability. According to our estimates, Mexico's reduction in regulatory impediments to banks engaging in non-lending services will have a large stabilizing effect on Mexico's banking system. On a much smaller level, the U.S., Japan, and the U.K. also reduced activity restrictions, with corresponding boosts to stability.

In Figure 12, we turn to diversification guidelines. A large number of countries implemented diversification guidelines with positive ramifications on banking system stability. Besides, Indonesia, Mexico, and Korea, many other countries implemented regulatory reforms that cut the probability of suffering a systemic crisis by more than 30 percent.

IV.D.2 *corruption in lending*

Figures 13 and 14 present the simulation results of changes in official supervisory power and private monitoring on corruption in lending. As discussed above, regulations that empower official supervisors are associated with greater corruption in lending, except in countries with exceptionally high levels of democratic political institutions, while private monitoring reduces

corruption in lending by inducing a more transparent banking environment. The simulations provide some stark warnings and encouragement regarding reforms during the last decade.

The simulations suggest that some countries increased the likelihood of corruption of bank officials by increasing official supervisory powers and by reducing private monitoring. In particular, Malaysia increased the probability that corrupt bank officials will act as a barrier to firm growth by boosting the power and discretion of official supervisors. Moreover, Malaysia also enacted regulations that reduced private monitoring, which -- according to our simulations -- will further intensify corruption in lending in these two economies. Taken together, the simulations suggest that the probability that a firm will view the corruption of bank officials as an impediment to firm growth will rise by almost ten percent in Malaysia.

In turn, other countries reduced the likelihood of corruption in lending by adjusting bank regulations to facilitate private monitoring of banks, including Mexico. Mexico is an interesting case. They enacted regulations that both enhanced private monitoring and boosted official supervisory power. According to our estimates, these should exert countervailing effects on corruption in lending within Mexico. Taken together, the simulations suggest that the probability that a firm will view the corruption of bank officials as an impediment to firm growth will fall by about two percent in Mexico. Furthermore, based on information not included in the survey, the strengthening of democratic institutions over the last decade provides some support for the view that the harmful effects of strengthening official supervisory power will be mitigated so that the beneficial effects of stronger private monitoring will be even more dominant in Mexico.

IV.D.3 bank development

Two regulatory indexes dominate the relationship with overall banking system development: Activity restrictions and Private monitoring. As illustrated in Figures 15 and 16, Mexico both reformed to boost private monitoring and reformed to reduce activity restrictions.

Based on our simulations, these reforms should reinforce each other and boost banking system development substantially in Mexico. The combined effects are potentially huge. While subject to ample qualifications, the simulations suggest that banking development in Mexico could rise by as much as 50 percent of GDP due to these two regulatory changes. Korea and Malaysia lie at the other extreme because they made regulatory changes that tend to weaken private monitoring, while also imposing greater restrictions on the activities of banks. According to our estimates, these bank regulatory reforms will lower banking system development in Korea and Malaysia by about 15 percent of GDP. There are also more mixed, nuanced country cases. The strengthening of private monitoring in Indonesia, Russia, and Argentina will tend to boost bank development. However, these countries also increased regulatory restrictions on banks, which our estimates suggest will counteract the beneficial effects of boosting private monitoring. On net, we forecast little change in bank development in these economies.

IV.D.4 *bank efficiency*

Finally, we present the simulation results based on two indicators of bank efficiency. The first measures the net interest margin as a fraction of total interest earning assets and the second measures overhead costs as share of total assets. Since the private monitoring index is the only regulatory indicator that significantly enters both the regression where net interest margin and the regression where overhead costs are the dependent variables, we only run simulations on this regulatory index.

As shown in Figures 17 and 18, Mexico, Indonesia, Japan, and Argentina reformed their policies in ways that are likely to enhance banking system efficiency. In contrast, Korea, Malaysia, and the United Kingdom changed regulations in a manner that is likely to reduce private monitoring, with adverse effects on bank efficiency. For example, the simulations suggest that interest margins are likely to fall by over one percentage point in Mexico, and rise by over one-half of a percentage point in Korea.

V. **Conclusions**

Over the last ten years, many countries have substantially reformed components of their commercial bank regulatory regimes. Based on our analyses of the pros and cons of a wide range of bank regulations (BCL, 2006), there is no reason for believing that countries around the world have primarily reformed for the better. While many have followed the Basel guidelines and strengthened capital regulations and empower supervisory agencies, existing evidence does not suggest that this will improve banking system stability, enhance the efficiency of intermediation, or reduce corruption in lending. While some countries have reformed their regulations to empower private monitoring, consistent the third pillar of Basel II, there are many exceptions and reversals along this dimension. Furthermore, many countries intensified restrictions on the non-lending activities, which existing evidence suggests hurts banking system stability, lowers bank development, and reduces the efficiency of financial intermediation. Indeed, our simulations advertise two countries. Korea empowered official supervision, reduced private monitoring regulations, and imposed greater restrictions on the non-lending activities of banks after its crisis. Mexico, while also strengthening official supervisory powers, substantively increased regulations that enhance private monitoring and reduced restrictions on bank activities. While many other factors change in a country and many institutional characteristics shape the efficacy of bank regulations, our estimates suggest greater optimism about Mexico's reforms than Korea's. In sum, our examination of the latest data on bank regulation around the world does not provide a uniformly positive view of recent reforms.

While our preliminary examination of the data challenges the confident proclamations of many observers about improvements in bank regulation and supervision, the qualifications associated with these results must be prominently and repeatedly explicated. We do not relate changes in bank regulations to changes in outcomes. Thus, we do not run any regressions of

changes in bank fragility, development, efficiency, or corruption on changes in bank regulations. We leave that to future research. Rather, in this paper, we first document the responses in Survey III and illustrate changes in bank regulations over the last decade. Then, based on our early estimates from Survey I, we simulate how changes in bank regulations may influence. In sum, the conclusion of this paper is where the analytics begins. Given these new data on banking system reforms, researchers must assess the direct impact of these reforms on national banking systems.

The following questions are shown in the table:

Which of the following are legally required to be submitted before issuance of the banking license?

- | | |
|--|---|
| 1.8.1 Draft by-laws? | 1.8.2 Intended organization chart? |
| 1.8.3 Financial projections for first three years? | 1.8.4 Financial information on main potential shareholders? |
| 1.8.5 Background experience of future directors? | 1.8.6 Background experience of future managers? |
| 1.8.7 Sources of funds to be disbursed in the capitalization of new banks? | 1.8.8 Market differentiation intended for the new bank? |

Table 2. Changes in Components of Overall Banking Restrictions

	4.1			4.2			4.3			4.4		
	I II	II III	REV									
Argentina	0	-1	0	1	0	0	1	1	0	2	0	0
Australia	1	0	0	1	0	0	1	-1	1	0	0	0
Austria	0	0	0	1	0	0	0	0	0	1	0	0
Bahrain	0	0	0	0	0	0	0	0	0	1	0	0
Belarus	0	0	0	0	0	0	0	-2	0	-1	0	0
Belgium	-1	0	0	1	0	0	0	-2	0	0	0	0
Bhutan	-1	0	0	0	0	0	-1	0	0	0	0	0
Bolivia	0	1	0	1	-1	1	0	0	0	0	0	0
Botswana	1	2	0	-2	1	1	0	0	0	0	-1	0
Brazil	-1	1	1	0	0	0	1	-1	1	-2	1	1
Burundi	0	-2	0	0	0	0	-2	3	1	1	0	0
Canada	1	0	0	0	0	0	0	1	0	-1	0	0
Chile	0	0	0	1	1	0	0	0	0	1	0	0
Croatia	-1	1	1	1	-1	1	0	0	0	1	0	0
Cyprus	-1	1	1	1	-1	1	3	0	0	0	0	0
Czech Republic	1	-1	1	1	1	0	2	0	0	0	0	0
Denmark	1	-1	1	0	1	0	1	0	0	0	-1	0
El Salvador	N/A	1	N/A	N/A	0	N/A	N/A	0	N/A	N/A	0	N/A
Estonia	-1	1	1	-1	1	1	-1	1	1	0	0	0
Finland	1	0	0	-1	1	1	1	0	0	0	0	0
France	0	0	0	0	1	0	0	2	0	0	0	0
Germany	0	0	0	2	0	0	0	0	0	0	0	0
Ghana	0	1	0	0	-1	0	-2	1	1	0	0	0
Greece	0	-1	0	0	0	0	1	-1	1	0	0	0
Guatemala	-1	1	1	-1	2	1	-2	2	1	-1	0	0
Guyana	2	1	0	1	0	0	1	0	0	1	0	0
Honduras	0	0	0	2	-1	1	0	1	0	0	0	0
Hungary	0	-1	0	1	1	0	1	1	0	0	-1	0
Iceland	0	0	0	0	0	0	-1	1	1	-1	0	0
India	1	0	0	-1	-1	0	0	0	0	2	0	0
Ireland	0	0	0	-1	0	0	0	0	0	0	0	0
Italy	0	1	0	1	0	0	0	0	0	-1	1	1
Japan	-1	0	0	-2	0	0	1	0	0	0	0	0
Jordan	0	0	0	-2	1	1	0	1	0	0	0	0
Kenya	0	2	0	-2	2	1	-1	2	1	2	-1	1
Korea	0	1	0	1	0	0	2	-1	1	0	-1	0
Kuwait	0	0	0	0	1	0	-2	2	1	-1	0	0
Latvia	1	0	0	0	0	0	-2	1	1	0	0	0
Lebanon	0	0	0	0	0	0	-1	1	1	0	0	0
Lesotho	-1	0	0	0	0	0	0	0	0	2	0	0
Lithuania	0	-1	0	0	2	0	-1	2	1	0	0	0
Luxembourg	0	0	0	-1	2	1	0	2	0	1	-1	1
Malaysia	0	0	0	1	0	0	0	0	0	0	0	0
Malta	1	1	0	-1	1	1	1	-2	1	0	-1	0
Mauritius	0	-1	0	0	-2	0	-1	1	1	0	0	0
Mexico	-1	-1	0	-1	-1	0	-1	-1	0	1	-2	1
Moldova	2	-2	1	2	0	0	2	0	0	0	0	0
Morocco	0	0	0	-2	1	1	-1	1	1	0	0	0
Netherlands	0	1	0	1	-1	1	0	0	0	-1	0	0
New Zealand	0	0	0	0	1	0	0	0	0	0	0	0
Oman	-1	0	0	0	-1	0	0	0	0	0	0	0
Panama	0	0	0	2	0	0	1	0	0	0	0	0
Peru	0	1	0	-1	2	1	0	2	0	0	0	0
Philippines	0	0	0	0	1	0	0	0	0	0	0	0
Poland	0	-1	0	-1	1	1	-1	1	1	-1	0	0
Portugal	0	1	0	1	0	0	0	1	0	0	0	0
Romania	0	-1	0	-1	0	0	0	0	0	0	0	0
Russia	1	0	0	-2	2	1	1	1	0	0	0	0
Saudi Arabia	-1	1	1	1	0	0	0	0	0	0	0	0
Singapore	0	0	0	0	1	0	0	0	0	2	-1	1
Slovenia	0	-1	0	1	1	0	1	0	0	0	-1	0
South Africa	0	0	0	-1	2	1	0	0	0	1	0	0
Spain	0	0	0	1	0	0	-2	3	1	0	1	0
Sri Lanka	1	-1	1	2	1	0	2	0	0	N/A	N/A	N/A
Sweden	1	-1	1	0	1	0	0	1	0	-2	1	1
Switzerland	0	0	0	2	1	0	0	0	0	0	0	0
Tajikistan	2	1	0	3	0	0	2	-1	1	-1	0	0
Thailand	1	1	0	1	0	0	1	0	0	0	0	0
Trinidad & Tobago	-1	-1	0	2	0	0	0	2	0	0	1	0
United Kingdom	0	0	0	0	-1	0	0	0	0	0	0	0
United States	-1	0	0	-1	0	0	1	0	0	0	0	0
Venezuela	N/A	N/A	N/A	0	2	0	-1	2	1	0	0	0

-  Positive values show an increase in the relevant restriction between two surveys
-  Negative values show a decrease in the relevant restriction between two surveys

Positive values indicate higher stringency with respect to entry into banking requirements. The following questions are shown in the table:

- 4.1 What is the level of regulatory restrictiveness for bank participation in securities activities (the ability of banks to engage in the business of securities underwriting, brokering, dealing, and all aspects of the mutual fund industry)?
- 4.2 What is the level of regulatory restrictiveness for bank participation in insurance activities (the ability of banks to engage in insurance underwriting and selling)?
- 4.3 What is the level of regulatory restrictiveness for bank participation in real estate activities (the ability of banks to engage in real estate investment, development, and management)?
- 4.4 What is the level of regulatory restrictiveness for bank ownership of nonfinancial firms?

3.9.1 Are market value of loan losses not realized in accounting books deducted?

3.9.2 Are unrealized losses in securities portfolios deducted?

3.9.3 Are unrealized foreign exchange losses deducted?

REVGA Equal to "yes" if less than 75% if revaluation gains are allowed as part of capital.

This table shows changes in questions that are combined in the index “Official Supervisory Power” between Survey I, II and III. The first row shows the relevant question and the second row shows the direction of change, i.e., from Survey I to Survey II or from Survey II to Survey III. Suppose a change from Survey I to Survey II (i.e. Survey I → II):

For all questions:

- **1** defines a change from “no” to a question in Survey I to “yes” to the same questions in Survey II.
- **-1** is equivalent to a change from “yes” in Survey I to “no” in Survey II.

For questions 11.6, 11.7, 11.9.1, 11.9.2 and 11.9.3

- **0.5** shows that if no authority had the relevant power previously, the court is granted it in the more recent survey,
or
that if the court had the power previously, that it was granted also to the supervisory agency in the more recent survey.
- **-0.5** shows that if the supervisory agency had the relevant power previously, the court is now the only one with this power in the more recent survey
or
that if the court had the power previously, it is not granted to the court or the supervisory agency in the more recent survey.

Positive values indicate higher power for the official supervisory authority.

The third column in each question (“REV”) indicates a directional reversal. A directional reversal in an answer occurs when there was a change between Survey I and II and an opposite change in the answer between Survey II and III for this question. Due to this, there no change identified between Survey I and III.

- 5.5 Does the supervisory agency have the right to meet with external auditors to discuss their report without the approval of the bank?
- 5.6 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?
- 5.7 Can supervisors take legal action against external auditors for negligence?
- 6.1 Can the supervisory authority force a bank to change its internal organization structure?
- 10.4 Are off-balance sheet items disclosed to supervisors?
- 11.2 Can the supervisory agency order the bank’s directors or management to constitute provisions to cover actual or potential losses?
- 11.3 Can the supervisory agency suspend the director’s decision to distribute:
 - 11.3.1 Dividends?
 - 11.3.2 Bonuses?
 - 11.3.3 Management fees?

- 11.6 Can the supervisory agency legally declare- such that this declaration supersedes the rights of bank shareholders- that a bank is insolvent?
- 11.7 Does the Banking Law give authority to the supervisory agency to intervene that is, suspend some or all ownership rights – a problem bank?
- 11.9 Regarding bank restructuring and reorganization, can the supervisory agency or any other government agency do the following:
 - 11.9.1 Supersede shareholder rights?
 - 11.9.2 Remove and replace management?
 - 11.9.3 Remove and replace directors?

Table 5 Changes in Components of Private Monitoring Index

	CAUDIT			8.1			10.1.1			10.3			10.6			10.4.1			10.5			BICRA			3.5		
	I → II	II → III	REV	I → II	II → III	REV	I → II	II → III	REV	I → II	II → III	REV	I → II	II → III	REV	I → II	II → III	REV	I → II	II → III	REV	I → II	II → III	REV	I → II	II → III	REV
Argentina	0	0	0	0	0	0	-1	0	0	0	0	0	0	0	1	0	0	-1	0	0	0	0	0	0	0	0	0
Australia	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Austria	0	0	0	0	0	0	N/A	N/A	N/A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bahrain	-1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
Belarus	0	0	0	0	0	0	1	-1	1	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Belgium	0	0	0	0	0	0	-1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bhutan	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	-1	1	0	0	0	0	N/A	N/A	N/A	1	0	0
Bolivia	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	-1	0	0	0	1	0	0	0	0	0
Botswana	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-1	0	0	0	0	0	1	0	0	-1	1	1	0
Brazil	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Burundi	-1	1	1	0	0	0	0	0	0	0	0	0	0	0	-1	0	0	-1	0	0	0	N/A	N/A	N/A	0	0	0
Canada	0	0	0	0	0	0	0	0	0	0	0	0	1	-1	1	0	0	0	0	0	0	N/A	N/A	N/A	0	0	0
Chile	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Croatia	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cyprus	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
Czech Republic	0	0	0	0	0	0	-1	1	1	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0
Denmark	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	N/A	N/A	N/A	0	0	0
El Salvador	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-1	1	1	0	1	0	1	0	0	0	0	0	0
Estonia	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
Finland	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	-1	0	0	0	0	0
France	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	N/A	N/A	N/A	0	0	0
Germany	0	0	0	0	0	0	0	0	0	-1	1	1	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0
Ghana	0	0	0	0	0	0	0	0	0	1	0	0	0	0	-1	0	0	0	0	0	0	N/A	N/A	N/A	0	-1	0
Greece	0	0	0	0	0	0	-1	0	0	0	0	0	0	0	-1	1	1	1	0	0	0	0	0	0	0	0	0
Guatemala	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
Guyana	0	0	0	0	0	0	0	0	0	-1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Honduras	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hungary	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	1	-1	1	-1	1	1
Iceland	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
India	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	N/A	N/A	N/A	0	0	0
Ireland	0	0	0	0	0	0	0	0	0	0	0	0	1	-1	1	0	0	0	0	0	0	1	0	0	0	0	0
Italy	0	0	0	0	0	0	0	-1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
Japan	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
Jordan	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
Kenya	0	0	0	0	0	0	-1	0	0	1	0	0	0	0	0	0	0	1	-1	1	0	N/A	N/A	N/A	1	0	0
Korea	0	0	0	0	0	0	0	0	0	0	0	0	0	-1	0	0	0	0	0	0	0	0	0	0	0	0	0
Kuwait	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	N/A	N/A	N/A	0	0	0
Latvia	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
Lebanon	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	N/A	N/A	N/A	-1	0	0	0	N/A	N/A	N/A
Lesotho	0	0	0	0	0	0	N/A	N/A	N/A	1	0	0															
Lithuania	0	0	0	0	0	0	1	-1	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
Luxembourg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	-1	1	0	0	0	0	0	0	0
Malaysia	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	-1	0	0	0	0	0
Malta	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mauritius	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
Mexico	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0
Moldova	0	0	0	0	1	0	0	0	0	-1	0	0	0	0	1	-1	1	0	1	0	0	0	0	0	1	0	0
Morocco	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
Netherlands	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	-1	1	1	1	1	0	0	0	0	0
New Zealand	0	0	0	0	0	0	-1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Oman	0	0	0	0	0	0	0	0	0	0	-1	0	0	0	-1	0	0	0	1	-1	1	0	0	0	0	0	0

Table 6 Regression Results

Logit Regression; Dependent variable:				Cross-Country OLS:		Cross-Bank OLS		
Banking Crisis (cross country)		Corruption (firm level)		Bank Development		Net Interest Margin	Overhead Costs	
Activity Restriction	0.413 (0.015)**	Government Firm	-0.116 (0.572)	Activity Restriction	-0.061 (0.000)***	Activity Restriction	1.215 (0.001)***	0.26 (0.328)
Entry into Banking Requirements	-0.062 (0.82)	Foreign Firm	-0.303 (0.010)***	Entry into Banking Requirements	0.025 (0.354)	Bank Size	-0.214 (0.000)***	-0.143 (0.000)***
Capital Regulatory Index	-0.146 (0.571)	Exporter	-0.153 (0.141)	Capital Regulatory Index	0.002 (0.915)	Capital Regulatory Index	0.219 (0.113)	0.108 (0.299)
Private Monitoring	0.356 (0.238)	Private Monitoring	-0.138 (0.002)***	Private Monitoring	0.084 (0.000)***	Private Monitoring	-0.603 (0.000)***	-0.454 (0.000)***
Government Owned Banks	1.336 (0.545)	Official Supervisory Power	0.122 (0.000)***	Official Supervisory Power	-0.012 (0.358)	Official Supervisory Power	-0.08 (0.321)	-0.072 (0.234)
Inflation	0.065 (0.036)**	Sales	-0.051 (0.000)***	Legal Origin--UK	-0.057 (0.775)	Liquidity	-0.019 (0.000)***	0.006 (0.029)**
Diversification index	-16.508 (0.006)***	Number of Competitors	0.798 (0.000)***	Legal Origin--France	-0.008 (0.971)	Market Share	1.586 (0.006)***	0.99 (0.060)*
Diversification Index*LnGNP	0.597 (0.007)***	Growth	-14.711 (0.000)***	Legal Origin--Germany	0.459 (0.057)*	Fee Income	-0.027 (0.287)	
		Manufacturing Sector	0.14 (0.338)	Legal Origin--Socialist	-0.265 (0.208)	Bank Equity	0.024 (0.000)***	0.026 (0.000)***
		Services Sector	0.129 (0.368)			Growth	-0.24 (0.009)***	-0.14 (0.051)*
Constant	-4.072 (0.215)	Constant	-0.623 (0.101)	Constant	0.565 (0.070)*	Constant	7.319 (0.000)***	6.726 (0.000)***
Observations	52	Observations no clustering	2259	Observations	69	Observations	1362	1365
				R-squared	0.547	Number of icountry	68	68

Robust p values in parentheses

* significant at 10%; ** significant at 5%; *** significant at 1%

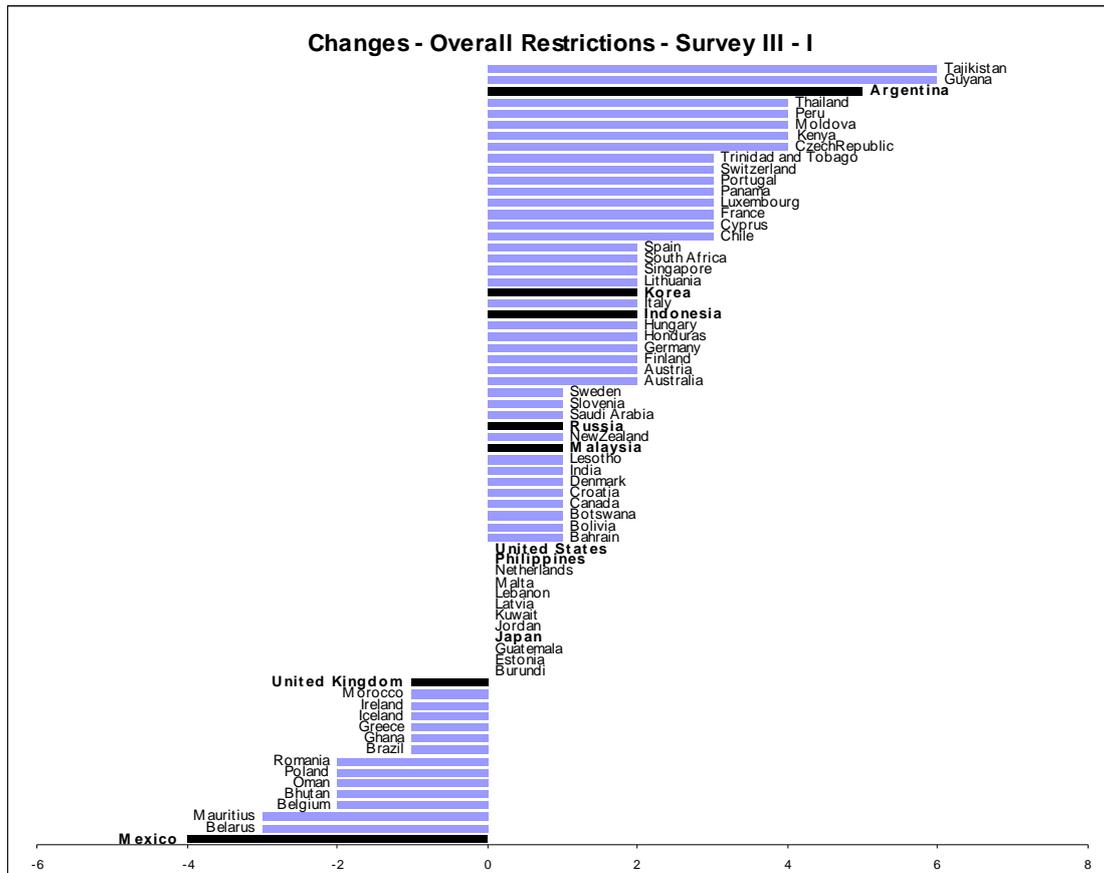


Figure 1. Changes in Overall Restrictions on Bank Activities, Survey III-Survey I

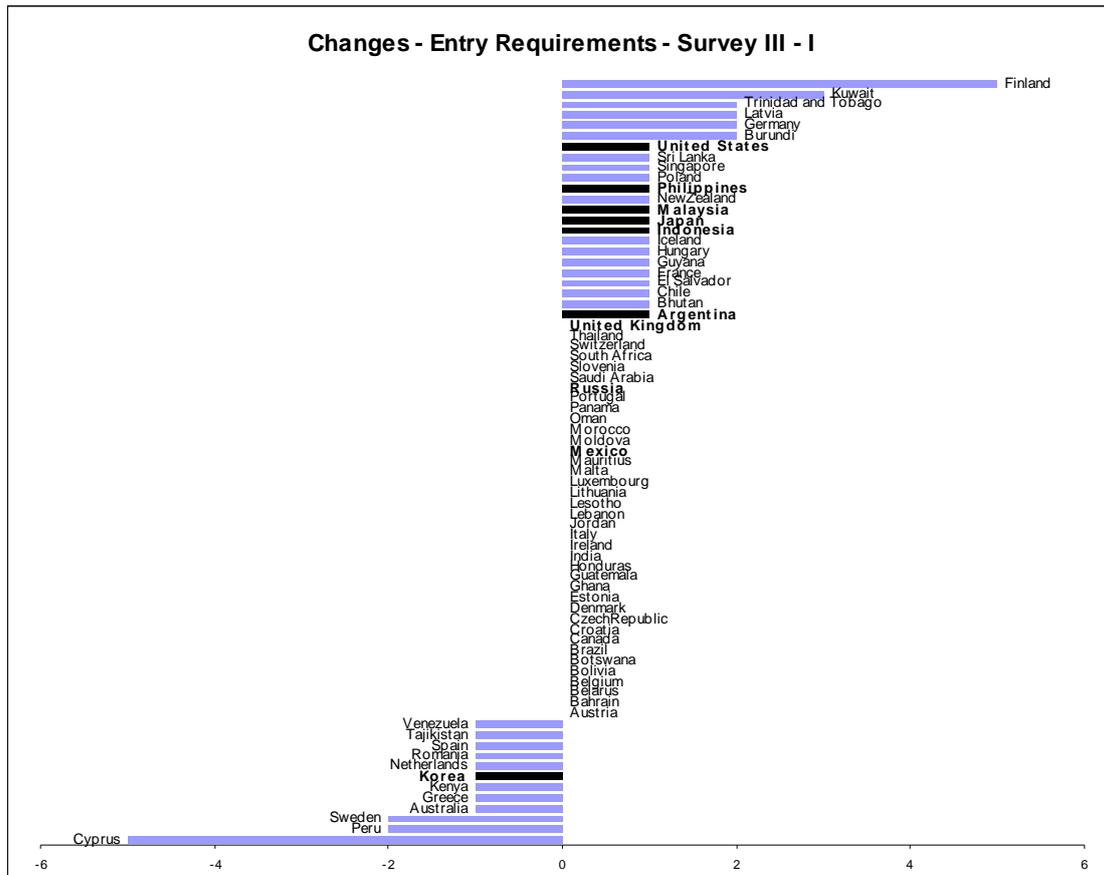


Figure 2 Changes in the Index “Entry into Banking Requirements” between Survey III and I

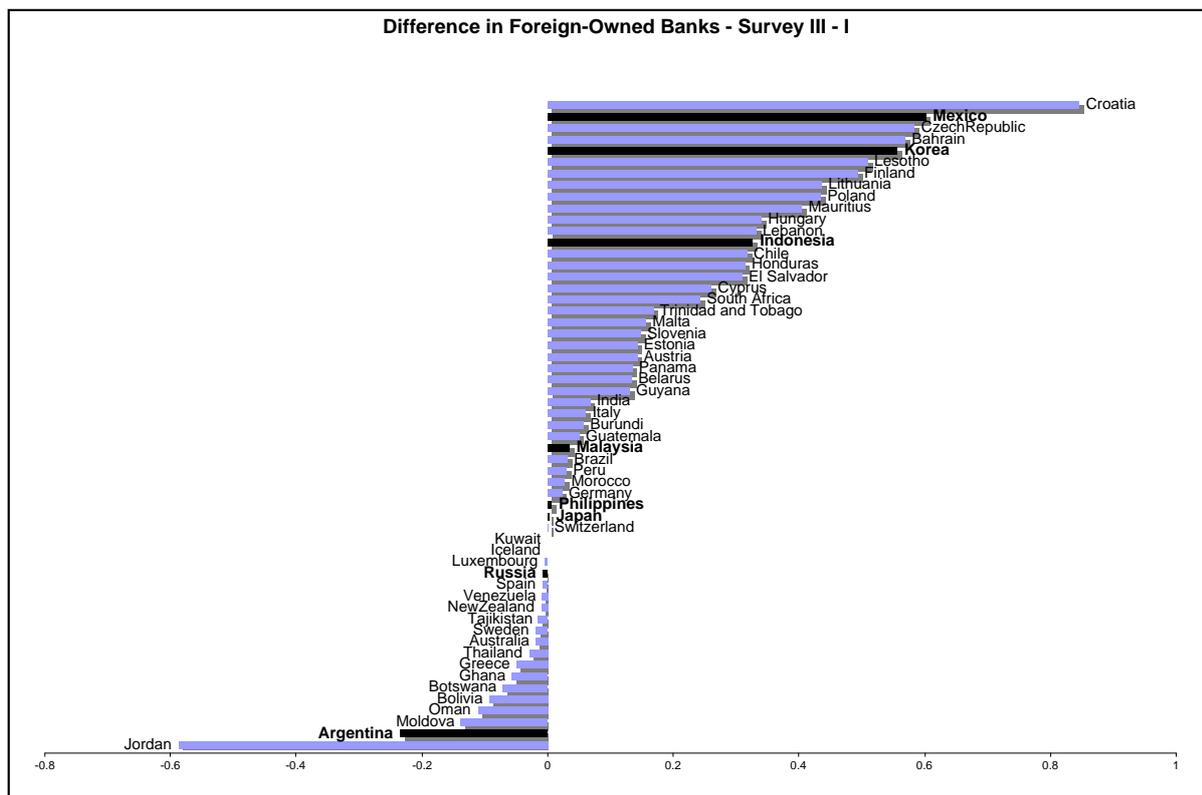


Figure 2a Change in the ratio of foreign-owned banks between Survey III and I

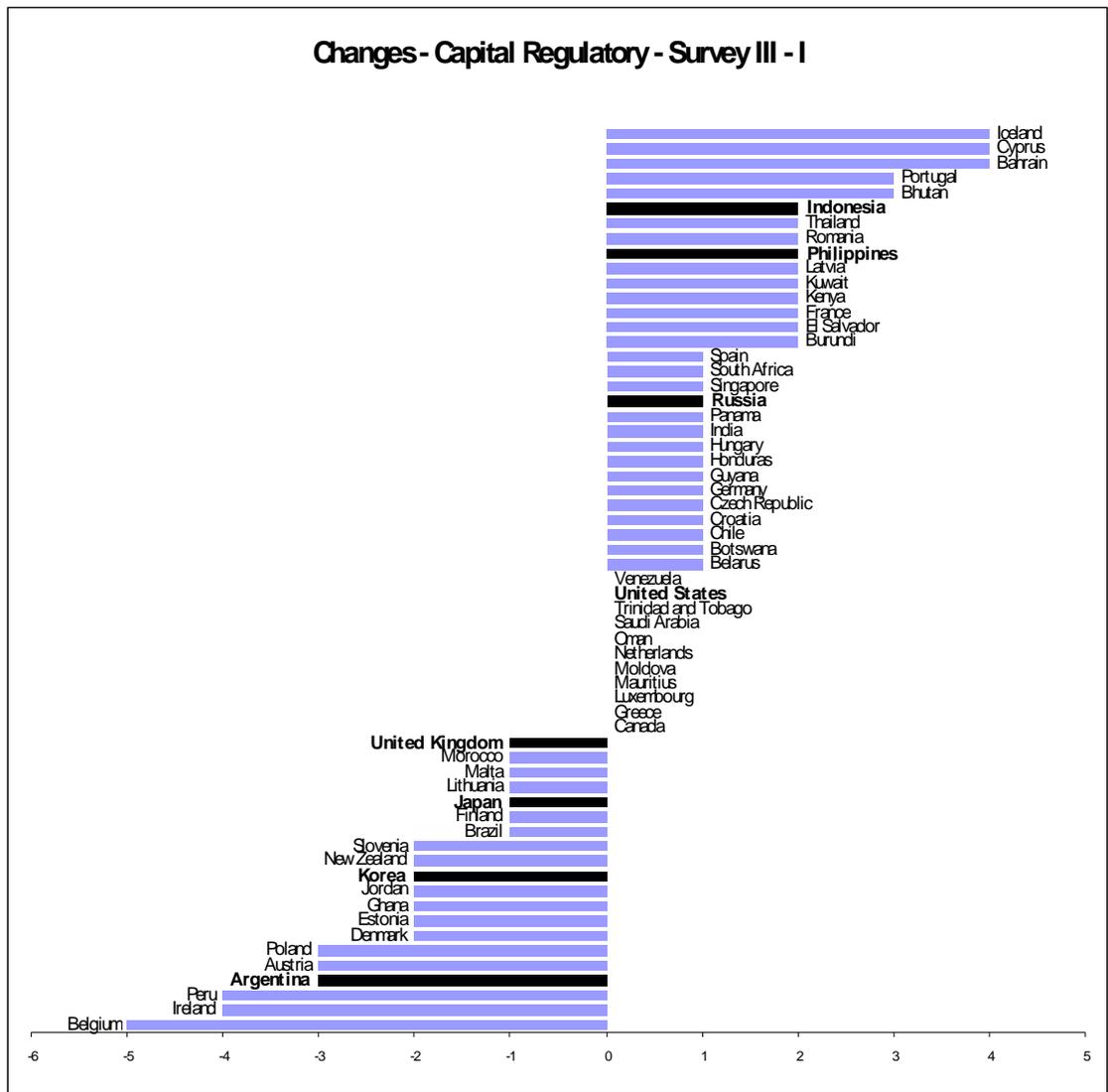


Figure 3 Changes in the Index “Capital Regulatory” between Survey III and I

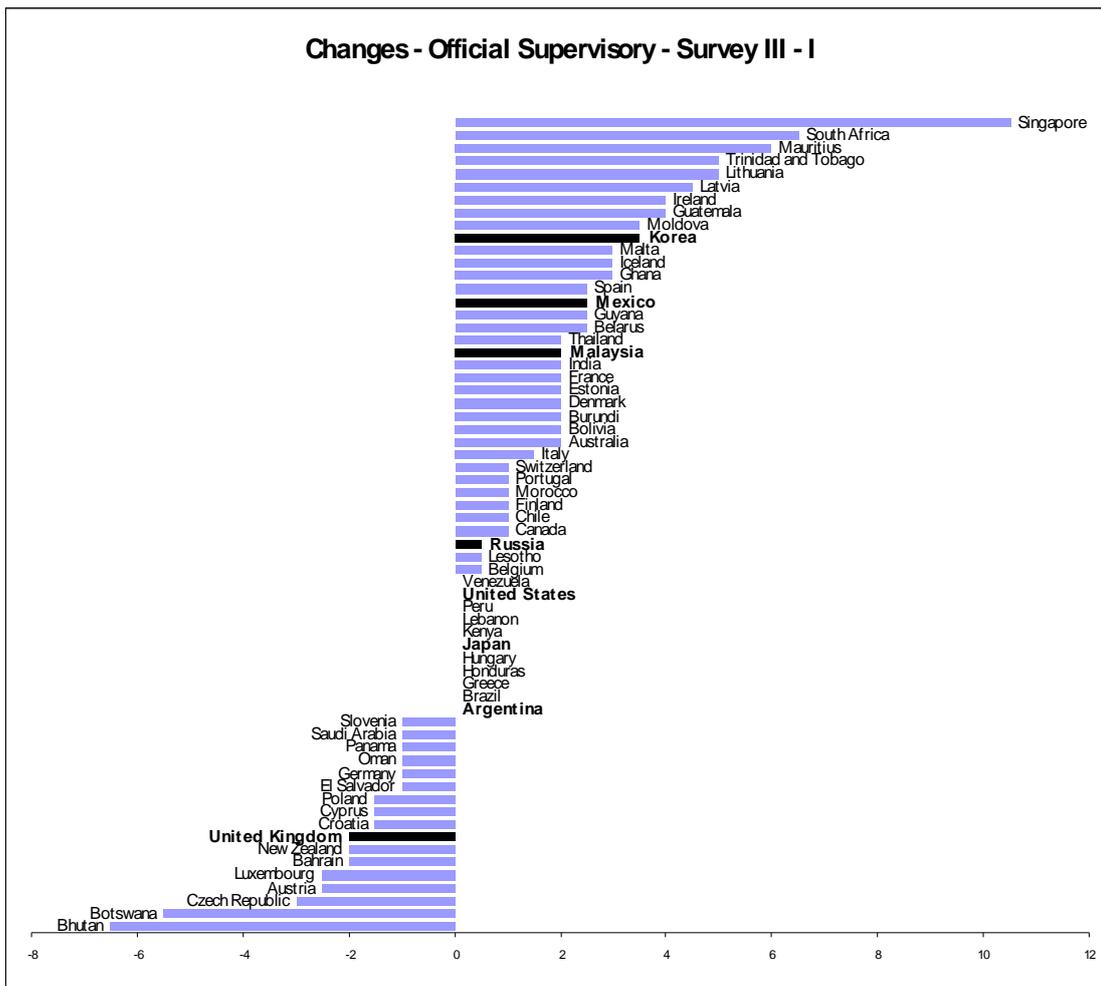


Figure 4 Changes in the Index “Official Supervisory Power” between Survey III and I

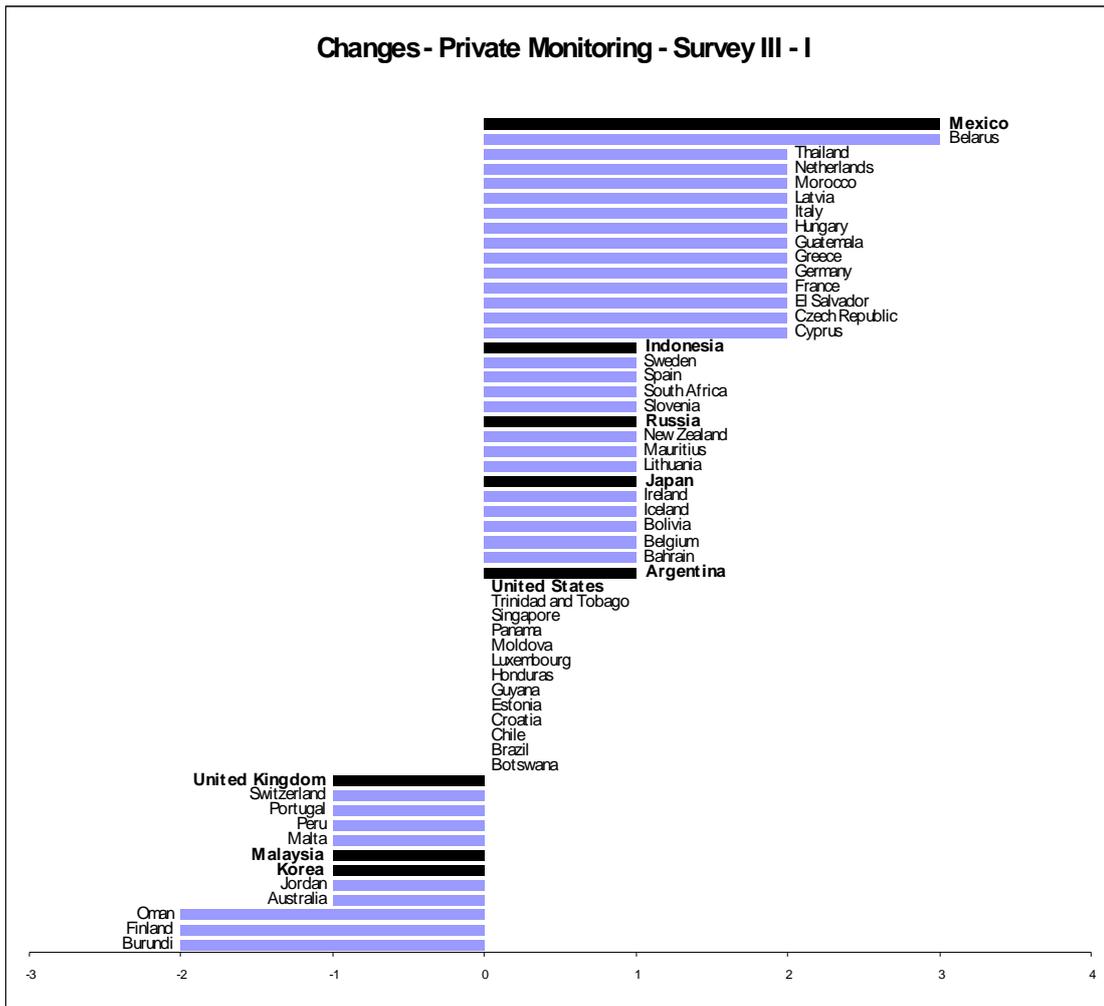


Figure 5 Changes in the Index “Private Monitoring” between Survey III and I

SURVEY III - Levels

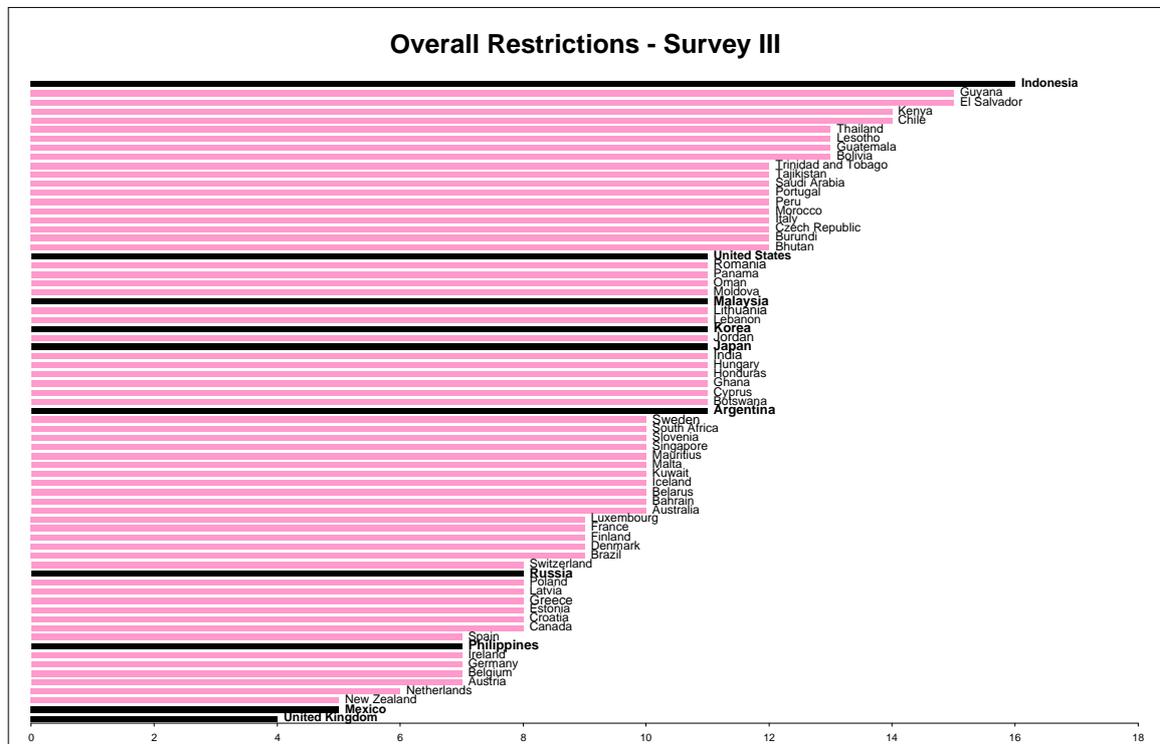


Figure 6 "Overall Banking Restrictions" - Survey III

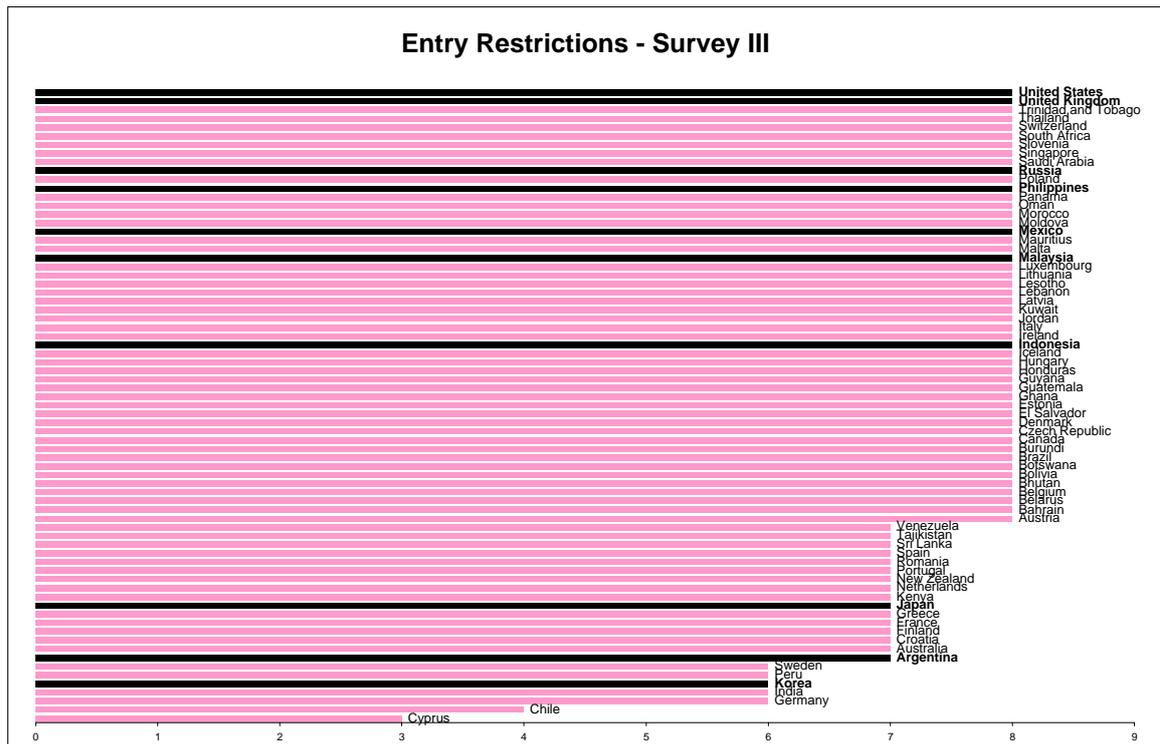


Figure 7 Index "Entry into Banking Requirements" - Survey III

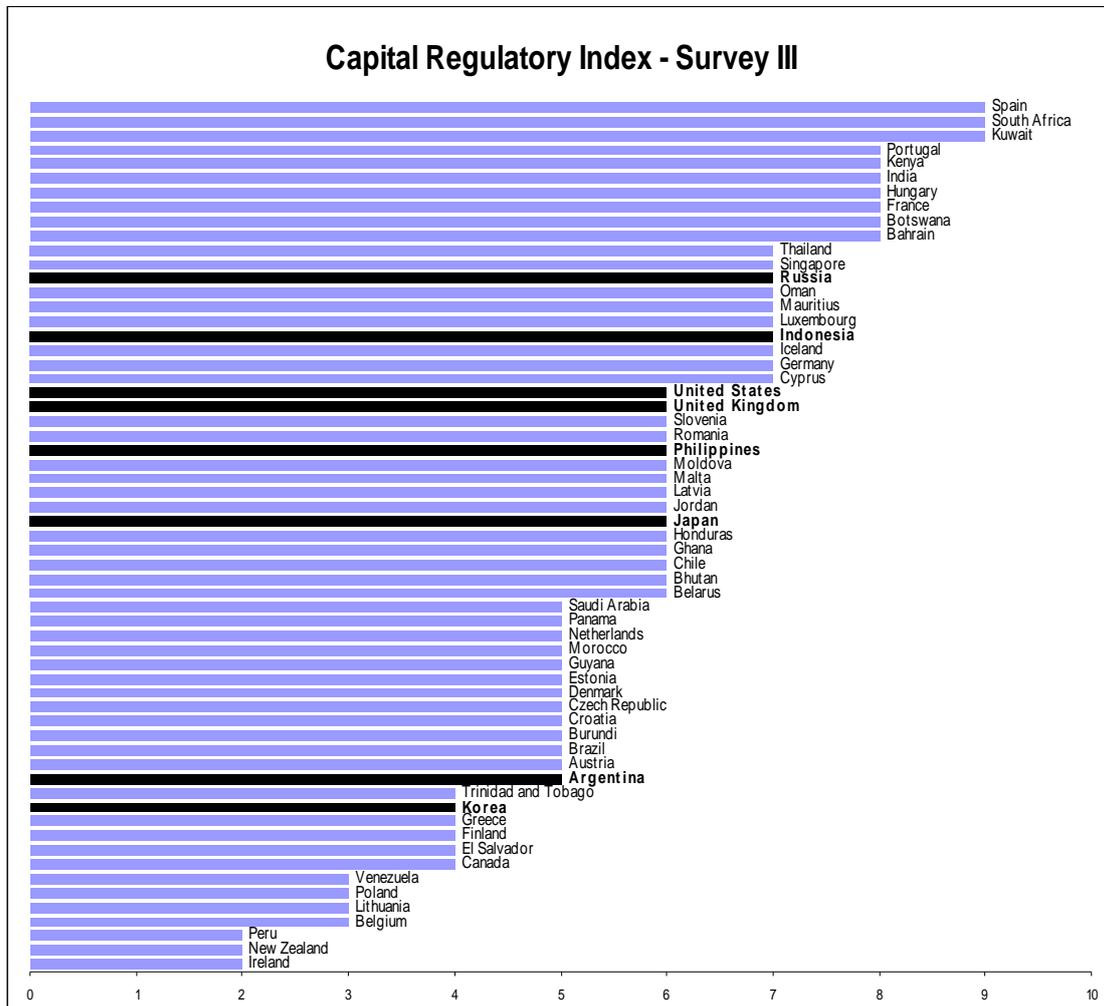


Figure 8 "Capital Regulatory Index" - Survey III

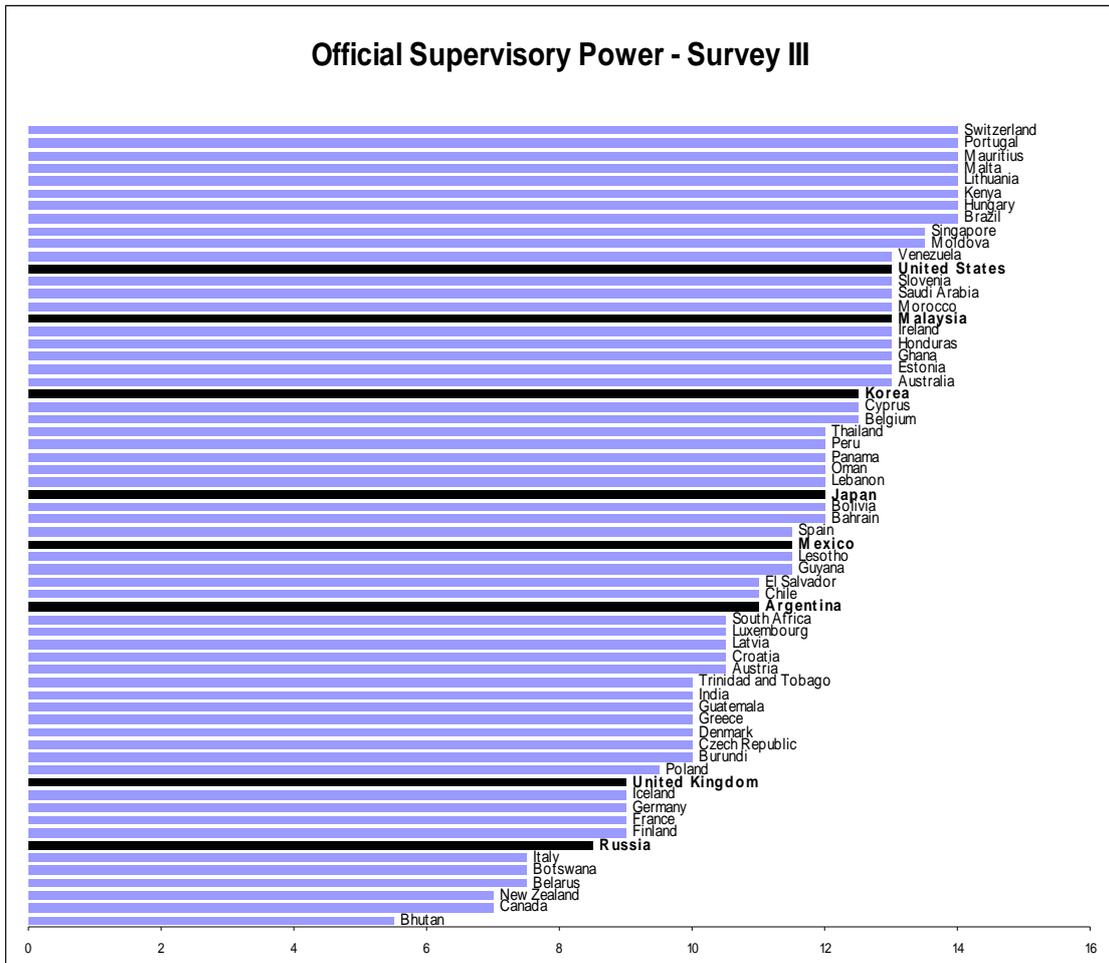


Figure 9 Index "Official Supervisory Power" - Survey III

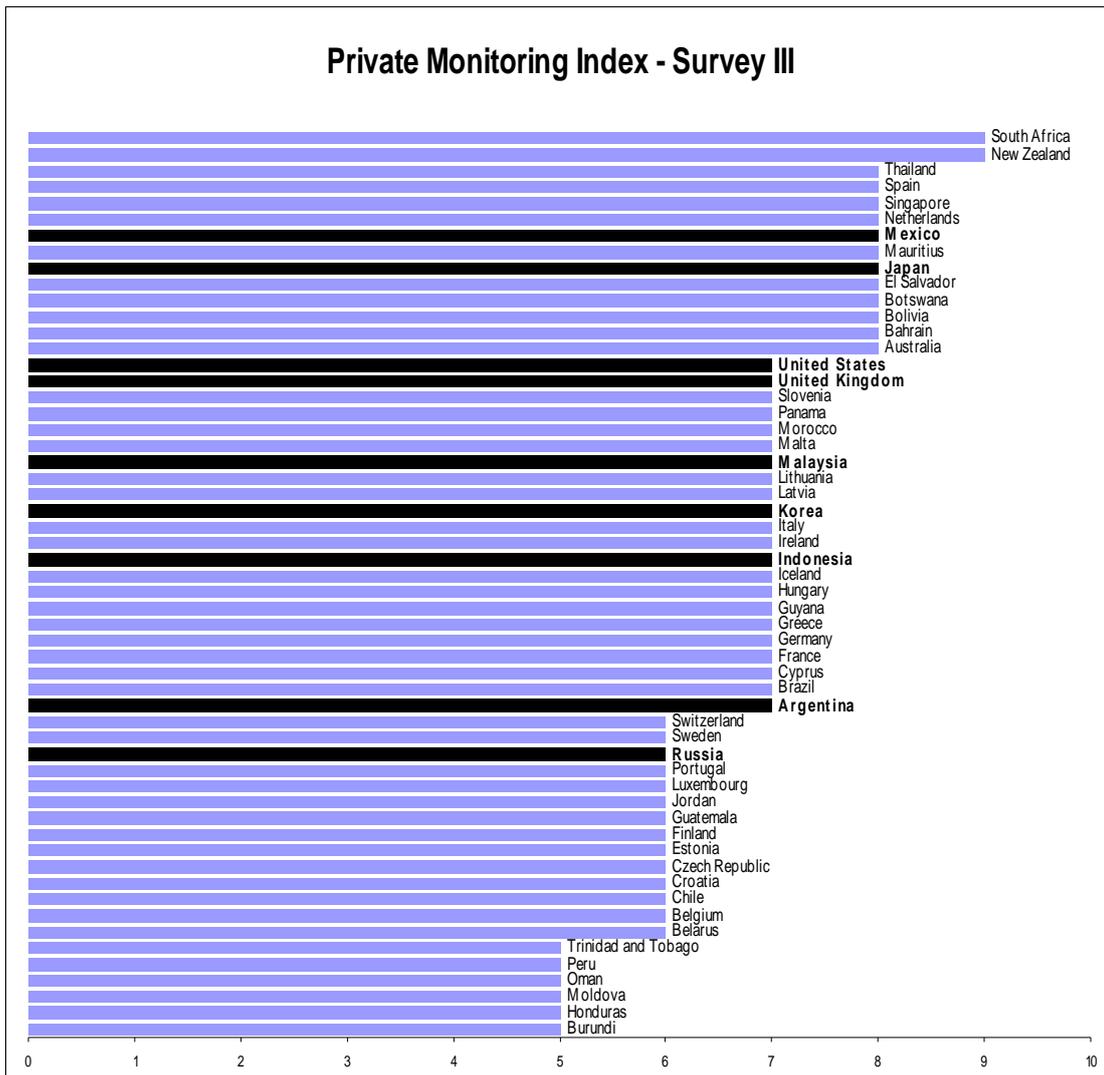


Figure 10 "Private Monitoring Index" - Survey III

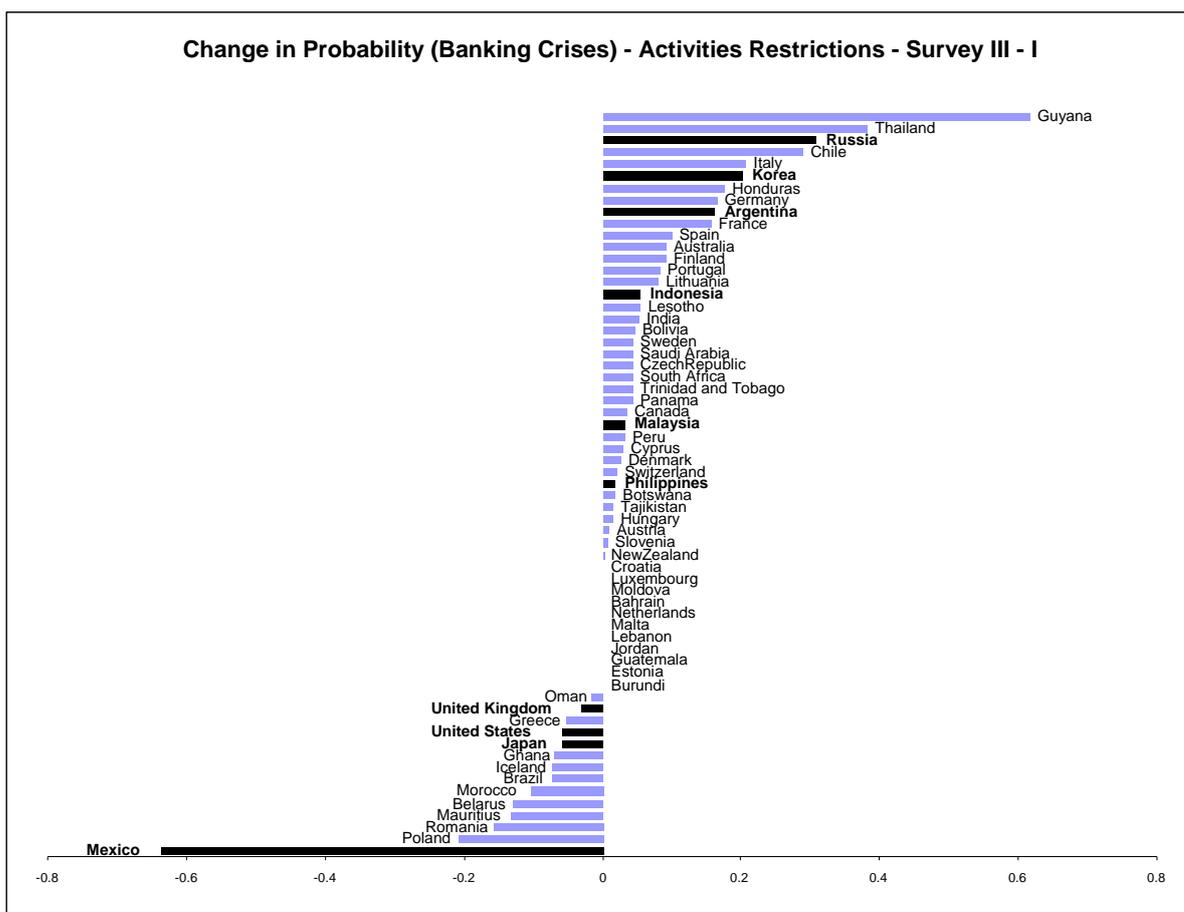


Figure 11 Difference in the probability of experiencing a banking crises due to changes in the overall restriction of banking activities between Survey III and I

This graph shows the difference in the simulated probability of banking crises between Survey III and I, considering the effect of banking activities restrictions. Hereby, the independent variable is an index that accounts for imposed restrictions on securities, insurance, real estate and nonfinancial activities of banks.

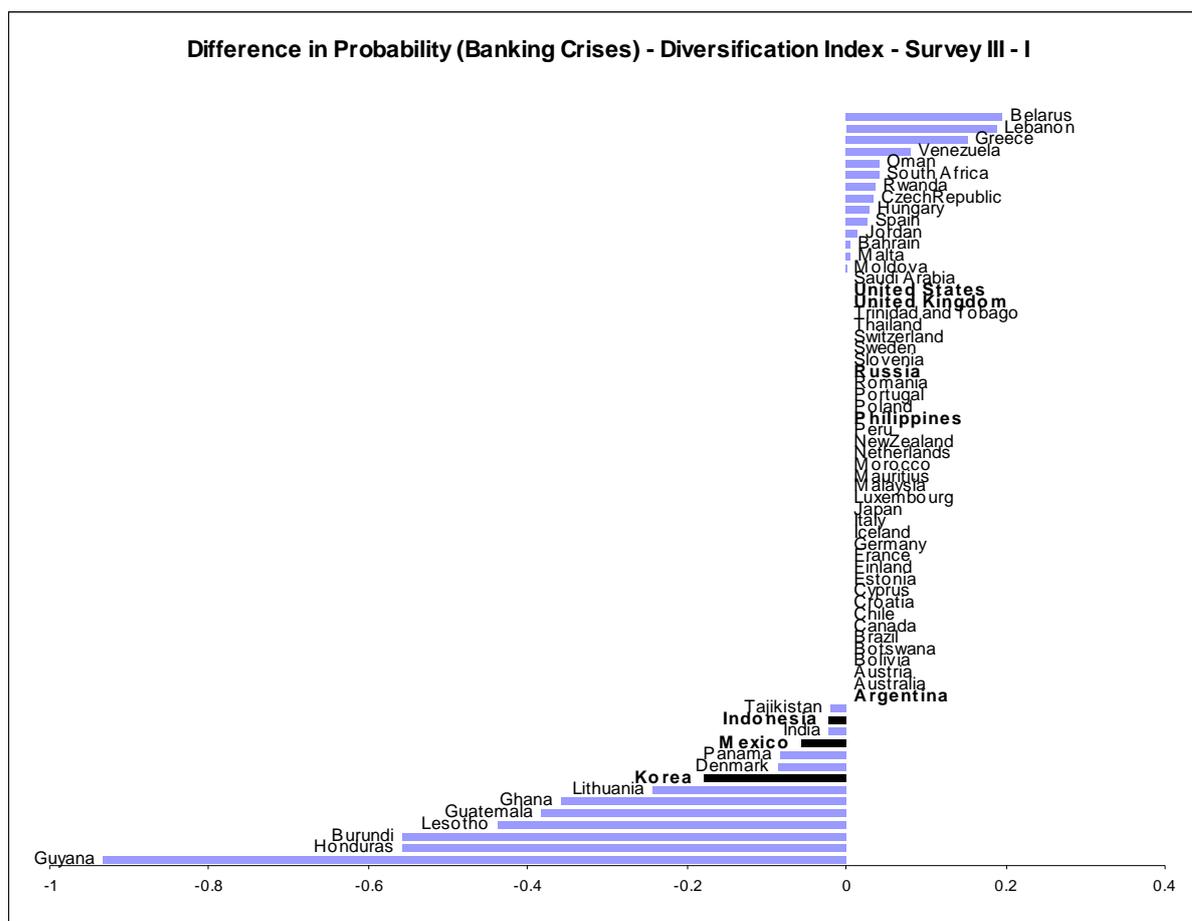


Figure 12 Difference in the probability of experiencing a banking crises due to changes in the diversification index between Survey III and I

This graph shows the difference in the simulated probability of banking crises between Survey III and I, considering the effect of diversification. Hereby, the independent variable is an index that accounts for the possibility of banks to diversify their activities, ie. whether there are explicit, verifiable, quantifiable guidelines for asset diversification, and banks are allowed to make loans abroad.

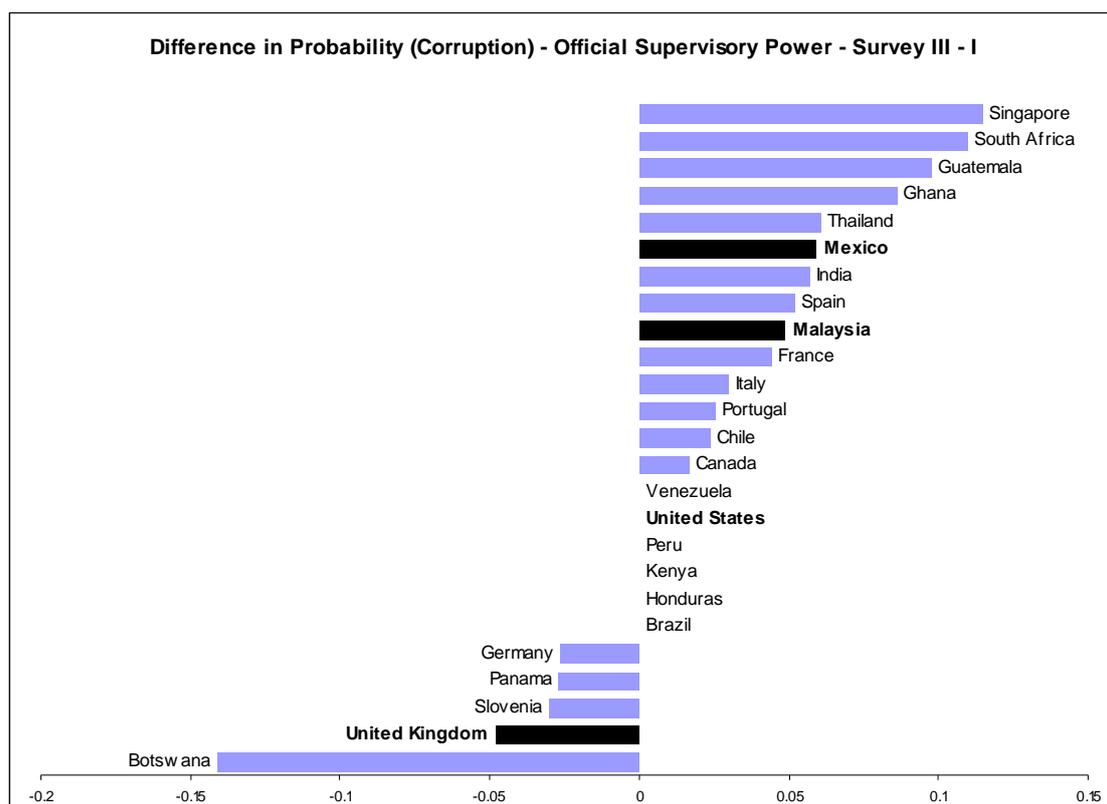


Figure 33 Difference in the probability of bank officials' corruption due to changes in Official Supervisory Power between Survey III and I

This graph shows the difference between Survey III and I in the simulated likelihood of corruption of bank officials harming the operation of a business. Hereby, the independent variable (Official Supervisory Power) is an index that characterizes the granted power to the supervisory authority.

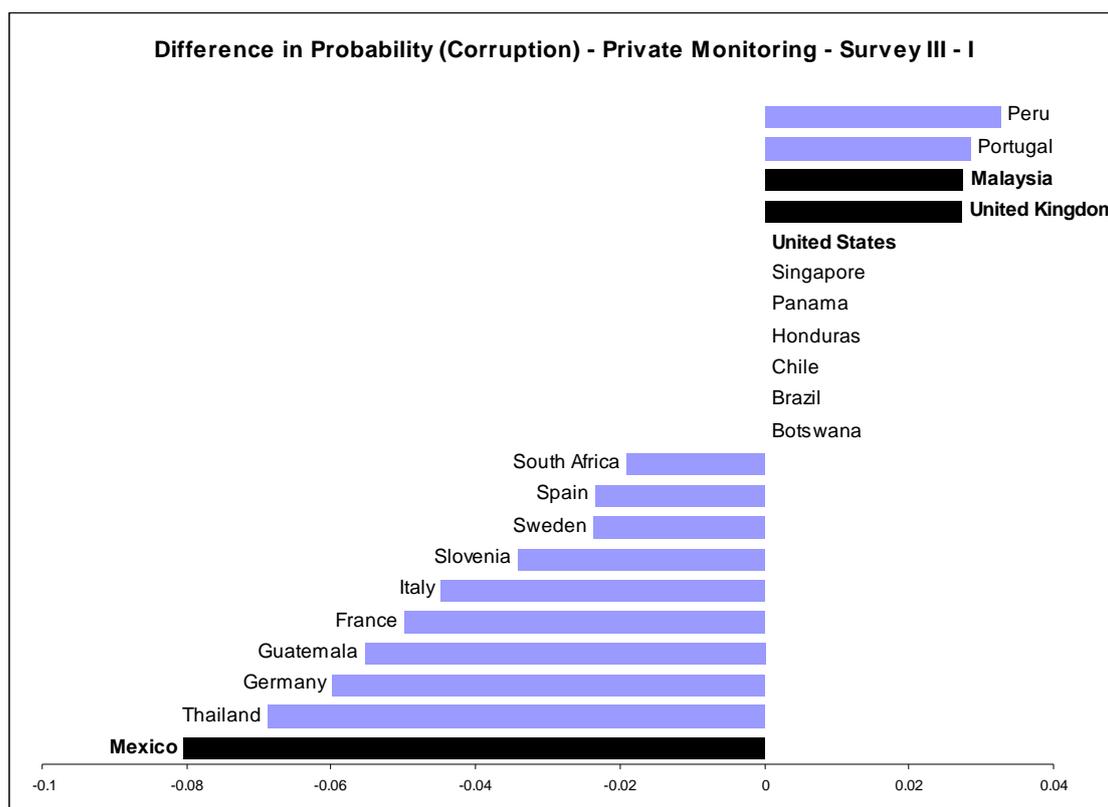


Figure 14 Difference in the probability of bank officials' corruption due to changes in private monitoring of banks between Survey III and I

This graph shows the difference between Survey III and I in the simulated likelihood of corruption of bank officials harming the operation of a business. Hereby, the independent variable (Private Monitoring) is an index that characterizes the degree of private bank monitoring.

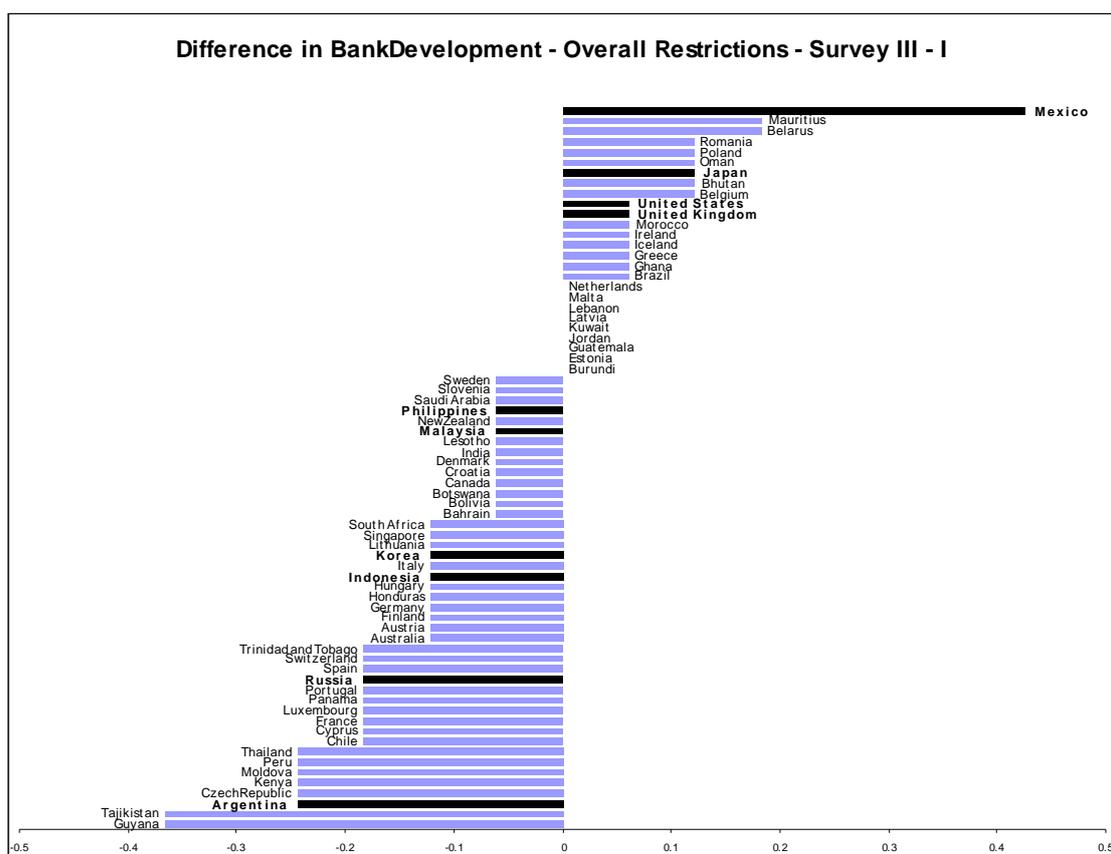


Figure 45 Difference in Bank Development due to changes in the overall restriction of banking activities between Survey III and I

This graph shows the difference in simulated bank development between Survey III and I, considering the effect of private monitoring. Hereby, the independent variable is an index that accounts for imposed restrictions on securities, insurance, real estate and nonfinancial activities of banks.

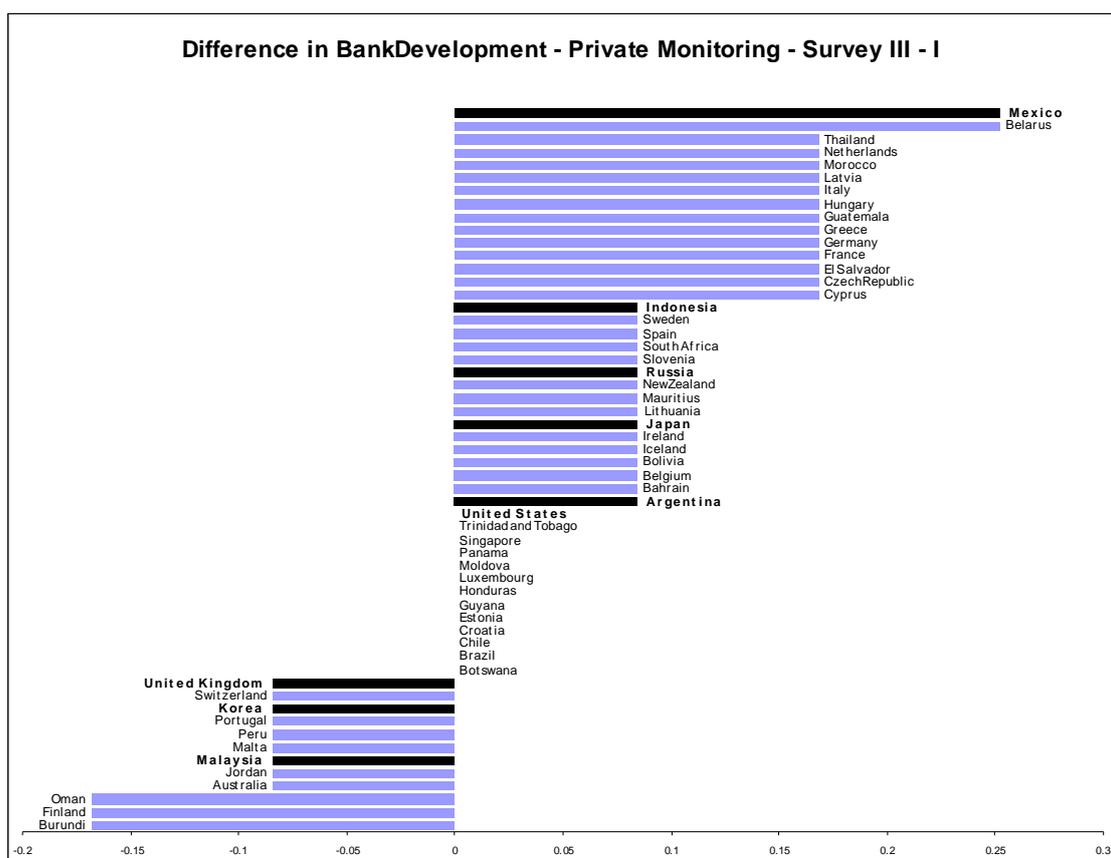


Figure 16 Difference in Bank Development due to changes in private monitoring of banks between Survey III and I

This graph shows the difference in simulated bank development between Survey III and I, considering the effect of banking activities restrictions. Hereby, the independent variable is an index that characterizes the degree of private monitoring of banks.

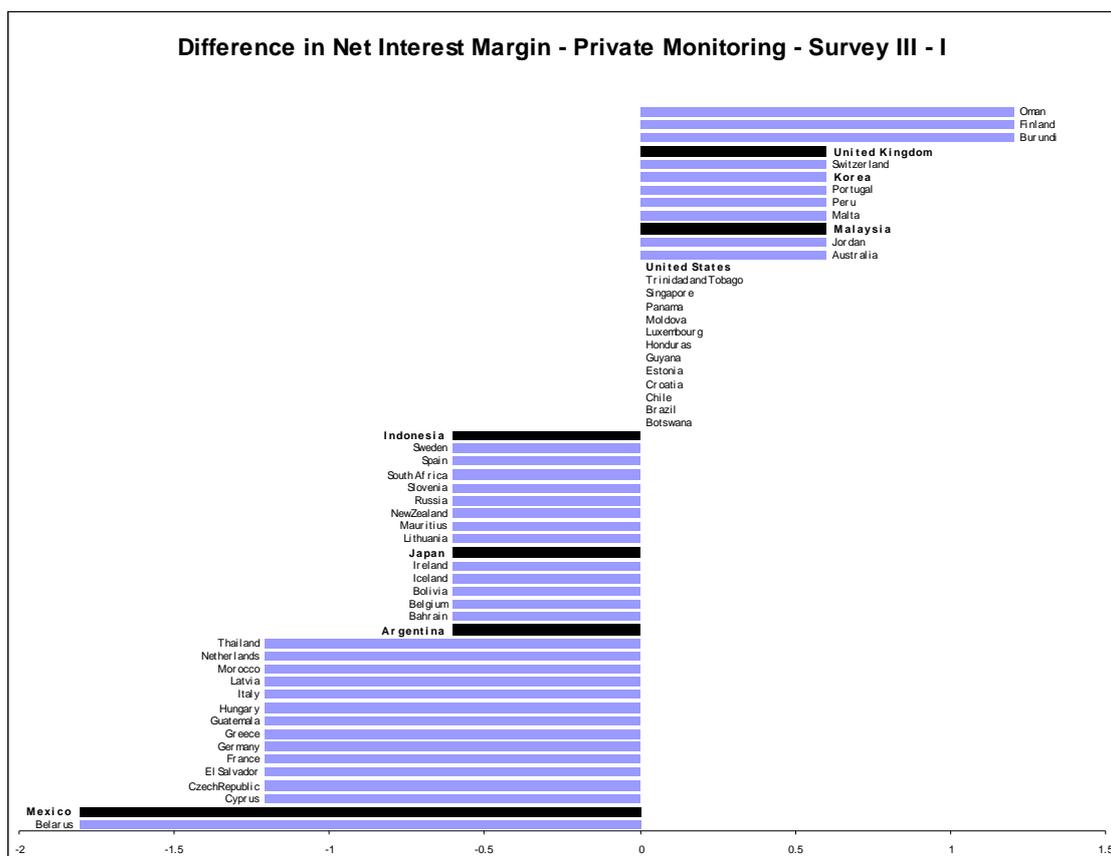


Figure 17 Difference in Net Interest Margin due to changes in private monitoring of banks between Survey III and I

This graph shows the difference between Survey III and I in the net interest margin, considering the effect of 'Private Monitoring'. Hereby, the independent variable is an index that characterizes degree of private monitoring of banks.

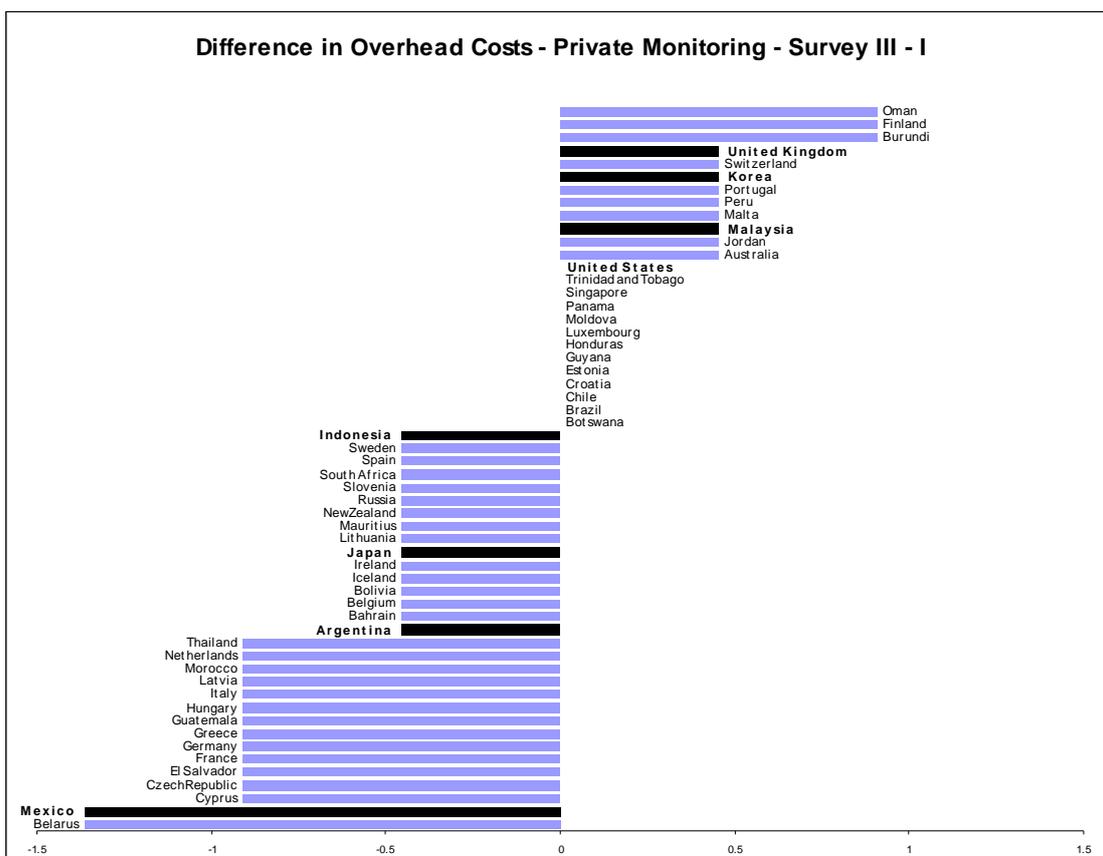


Figure 18 Difference Overhead Costs due to changes in private monitoring of banks between Survey III and I

This graph shows the difference between Survey III and I in the overhead costs of banks, considering the effect of ‘Private Monitoring’. Hereby, the independent variable is an index that characterizes the degree of private monitoring of banks.

Appendix: Guide to the 2005-06 World Bank Survey

1. Entry into Banking

1.1 What body/agency grants commercial banking licenses?

1.1.1 Is there more than one body/agency that grants licenses to banks? Yes
 No

1.1.2 Is more than one license required (e.g., one for each banking activity, such as commercial banking, securities operations, insurance, etc.)? Yes
 No

1.1.3 If more than one license is required, what is the maximum number required for a bank to engage in the broadest legally permissible range of activities?

1.2 How many commercial banks were there at year-end 2005?

1.2.1 What are the total assets of all commercial banks at year-end 2005?

1.2.2 What are the total deposits of all commercial banks at year-end 2005?

1.2.3 What are the total loans of all commercial banks at year-end 2005?

1.3 What is the minimum capital entry requirement? (in US\$ and/or domestic currency, state which)

1.3.1 For a domestic bank _____

1.3.2 For a subsidiary of a foreign bank _____

1.3.3 For a branch of a foreign bank _____

1.4 Is it legally required that applicants submit information on the source of funds to be used as capital? Yes
 No

1.5 Are the sources of funds to be used as capital verified by the regulatory/supervisory authorities? Yes
 No

1.6 Can the initial disbursement or subsequent injections of capital be done with assets other than cash or government securities? Yes
 No

1.7 Can initial disbursement of capital be done with borrowed funds? Yes
 No

- 1.8 Which of the following are legally required to be submitted before issuance of the banking license?
- 1.8.1 Draft by-laws? Yes
 No
- 1.8.2 Intended organization chart? Yes
 No
- 1.8.3 Financial projections for first three years? Yes
 No
- 1.8.4 Financial information on main potential shareholders? Yes
 No
- 1.8.5 Background/experience of future directors? Yes
 No
- 1.8.6 Background/experience of future managers? Yes
 No
- 1.8.7 Sources of funds to be disbursed in the capitalization of new bank? Yes
 No
- 1.8.8 Market differentiation intended for the new bank? Yes
 No
- 1.9 In the past five years, how many applications for commercial banking licenses have been received from domestic entities (e.g., those 50% or more domestically owned)?
- 1.9.1 How many of those applications have been denied? _____
- 1.9.2 How many of those applications were accepted?** _____
- 1.9.3 How many of those applications were withdrawn?** _____
- 1.10 In the past five years, how many applications for commercial banking licenses have been received from foreign entities? And how many have been denied?
- 1.10.1 Number of applications from foreign entities to enter through the acquisition of domestic bank?
Received _____ Denied _____ Withdrawn _____
- 1.10.2 Number of applications from foreign entities to enter through new, capitalized subsidiary?
Received _____ Denied _____ Withdrawn _____
- 1.10.3 Number of applications from foreign entities to enter through opening a branch?
Received _____ Denied _____ Withdrawn _____
- 1.10.4 Number of applications from foreign entities to enter through some other means?
Received _____ Denied _____ Withdrawn _____
- 1.11 What were the primary reasons for denial of the applications in 1.9.1 and 1.10.1?

- 1.11.1 Capital amount or quality? Yes
No
- 1.11.2 Banking skills? Yes
No
- 1.11.3 Reputation? Yes
No
- 1.11.4 Incomplete application? Yes
No
- 1.11.5 Other reason(s). Please list.
- 1.12 Are foreign entities prohibited from entering through
- 1.12.1 Acquisition: Yes, prohibited No, not prohibited
- 1.12.2 Subsidiary: Yes, prohibited No, not prohibited
- 1.12.3 Branch: Yes, prohibited No, not prohibited
- 1.12.4 Joint Venture: Yes, prohibited No, not prohibited
- 1.12.5 If acquisitions are not prohibited, what is the maximum percentage of total shares that is legally allowable in a foreign acquisition?

2. Ownership

- 2.1 Is there a maximum percentage of bank capital that can be owned by a single shareholder? Yes
No
- 2.1.1 If yes, what is the percentage? _____
- 2.2 Can related parties own capital in a bank? Yes
No
- 2.2.1 If yes, what are the maximum percentages associated with the total ownership by a related party group (e.g., family, business associates, etc.)? _____
- 2.2.2 Are there penalties for violating this rule? Yes
No
- 2.3 Can nonfinancial firms own any shares in commercial banks? Yes
No
- 2.3.1 Can nonfinancial firms own voting shares in commercial banks? Yes
No

2.3.2 If any voting shares can be owned by nonfinancial firms, what are the limits?

- a. Non-financial firm may own 100% of the equity in a commercial bank Yes
No
- b. Non-financial firm may own 100% of the equity in a commercial bank; but prior authorization or approval is required Yes
No
- c. Limits are placed on ownership; such as maximum percentage of a commercial bank's capital or shares Yes
No
- d. Nonfinancial firms cannot own any equity investment in a commercial bank whatsoever. Yes
No

2.4 What fraction of capital in the largest 10 banks (in terms of their domestic assets) is owned by commercial/industrial and/or financial conglomerates? If there are fewer than 10 banks, use that number in your answer.

2.5 Can non-bank financial firms (e.g., insurance companies, finance companies, etc.) own any voting shares in commercial banks?

- a. Non-bank financial firms may own 100% of the equity in a commercial bank Yes
No
- b. Non-bank financial firms may own 100% of the equity in a commercial bank; but prior authorization or approval is required Yes
No
- c. Limits are placed on ownership of banks by nonfinancial firms, such as maximum percentage of a commercial bank's capital or shares Yes
No
- d. Non-bank financial firms cannot own any equity investment in a commercial bank whatsoever Yes
No

2.6 Of commercial banks in your country, what percentage of:

2.6.1 deposits is held by the five (5) largest banks (ranked by domestic deposits) at year-end 2005?

2.6.2 assets is held by the five (5) largest banks (ranked by domestic assets) at year-end 2005?

2.7 Of all deposit-taking institutions in your country, what fraction of their assets is held by just commercial banks?

3. Capital

3.1 What is the minimum capital-asset ratio requirement?

3.1.1 Is this ratio risk weighted in line with the 1988 Basel guidelines? Yes
No

3.2 Does the minimum ratio vary as a function of an individual bank's credit risk? Yes
No

3.3 Does the minimum ratio vary as a function of market risk? Yes
No

3.3.1 Does the minimum ratio vary as a function of operational risk? Yes
No

3.3.2 Is there a simple leverage ratio that is required? Yes
No

3.3.3 If yes, what is the leverage ratio? _____

3.4 What is the actual risk-adjusted capital ratio in banks as of year-end 2005, using the 1988 Basle Accord definitions?

3.4.1 What is the actual ratio between shareholders' equity (Tier 1 regulatory capital) and total risk-weighted assets of banks as of year-end 2005?

3.5 Is subordinated debt allowable as part of regulatory capital? Yes
No

3.6. Is subordinated debt required as part of regulatory capital? Yes
No

3.7 What fraction of revaluation gains is allowed as part of regulatory capital?

3.8 What fraction of the banking system's assets is in banks that are:

3.8.1 50% or more government owned as of year-end 2005?

3.8.2 50% or more foreign owned as of year-end 2005?

3.8.3 How many government owned banks are there as of year-end 2005? _____

3.8.4 **How many foreign owned banks are there as of year-end 2005?** _____

3.9 Before minimum capital adequacy is determined, which of the following are deducted from the book value of capital?

3.9.1 Market value of loan losses not realized in accounting books? Yes
 No

3.9.2 Unrealized losses in securities portfolios? Yes
 No

3.9.3 Unrealized foreign exchange losses? Yes
 No

3.10 Are accounting practices for banks in accordance with International Accounting Standards (IAS)? Yes
 No

3.11 Are accounting practices for banks in accordance with U.S. Generally Accepted Accounting Principles (GAAP)?

Yes
 No

3.12 What fraction of the banking systems' deposits are in banks that are:

3.12.1 50% or more government owned as of year-end 2005?

3.12.2 50% or more foreign owned as of year-end 2005?

3.13 What fraction of the banking systems loans are in banks that are:

3.13.1 50% or more government owned as of year-end 2005?

3.13.3 50% or more government owned as of year-end 2005?

4. Activities

4.1 What are the conditions under which banks can engage in securities activities?

4.1.1 A full range of these activities can be conducted in directly in banks Yes
 No

4.1.2 A full range of these activities are offered but all or some of these activities must be conducted in subsidiaries or in another part of a common holding company Yes
 No

4.1.3 Less than the full range of activities can be conducted in banks or subsidiaries or in another part of a common holding company Yes
 No

4.1.4 None of these activities can be done in either banks or subsidiaries or in another part of a common holding company Yes
 No

- 4.2 What are the conditions under which banks can engage in insurance activities?
- 4.2.1 A full range of these activities can be conducted in directly in banks Yes
No
- 4.2.2 A full range of these activities are offered but all or some of these activities must be conducted in subsidiaries or in another part of a common holding company Yes
No
- 4.2.3 Less than the full range of activities can be conducted in banks or subsidiaries or in another part of a common holding company Yes
No
- 4.2.4 None of these activities can be done in either banks or subsidiaries or in another part of a common holding company Yes
No
- 4.3 What are the conditions under which banks can engage in real estate activities?
- 4.3.1 A full range of these activities can be conducted directly in banks Yes
No
- 4.3.2 A full range of these activities are offered but all or some of these activities must be conducted in subsidiaries or in another part of a common holding company Yes
No
- 4.3.3 Less than the full range of activities can be conducted in banks or subsidiaries or in another part of a common holding company Yes
No
- 4.3.4 None of these activities can be done in either banks or subsidiaries or in another part of a common holding company Yes
No
- 4.4 Can banks own voting shares in nonfinancial firms? Yes
No
- 4.4.1 If yes, what are the limits:
- 4.4.1 A bank may own 100% of the equity in any nonfinancial firm Yes
No
- 4.4.1 A bank may own 100% of the equity in a nonfinancial firm but ownership is limited based upon a bank's equity capital Yes
No
- 4.4.3 A bank can only acquire less than 100% of the equity in a nonfinancial firm Yes
No
- 4.7.4 A bank may not have any equity investment in a nonfinancial firm whatsoever. Yes
No
- 5. External Auditing Requirements**
- 5.1 Is an external audit a compulsory obligation for banks? Yes
No
- 5.1.1 Are auditing practices for banks in accordance with international auditing standards?

- Yes
- No

5.1.2 Is it required by the regulators that bank audits be publicly disclosed? Yes No

5.2 Are specific requirements for the extent or nature of the audit spelled out? Yes
 No

5.3 Are auditors licensed or certified? Yes
 No

5.4 Do supervisors get a copy of the auditor's report? Yes
 No

5.5 Does the supervisory agency have the right to meet with external auditors of banks to discuss their report without the approval of the bank? Yes
 No

5.6 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? Yes
 No

5.6.1 Are external auditors legally required to report to the supervisory agency any other information discovered in an audit that could jeopardize the health of a bank? Yes
 No

5.7 Can supervisory agencies take legal action against external bank auditors Yes
 No

for negligence?

5.8 Has legal action been taken against a bank auditor in the last 5 years? Yes
 No

6. Internal Management/Organizational requirements

6.1 Can the supervisory authority legally force a bank to change its internal organizational structure? Yes
 No

6.2 Has this power been utilized in the last 5 years? Yes
 No

7. Liquidity & Diversification Requirements

7.1 Are there explicit, verifiable, and quantifiable guidelines regarding asset diversification? (for example, are banks required to have some minimum diversification of loans among sectors, or are their

industrial or sectoral concentration limits)? Yes
No

7.1.1 Are banks limited in their lending to single or related borrowers? Yes
No

7.1.1.a If yes, what is the limit? _____

7.1.2 Are banks limited in their sectoral concentration? Yes
No

7.1.3 Are banks required to meet geographical diversification requirements (by region within the country, or some minimum international diversification)? Yes
No

7.2 Are banks prohibited from making loans abroad? Yes
No

7.3 Are banks required to hold either liquidity reserves or any deposits at the Central Bank?
Yes
No

7.3.1 If so, what are these requirements? _____

7.4 Do these reserves earn any interest? Yes
No

7.4.1 What interest is paid on these reserves? _____

7.5 Are banks allowed to hold reserves in foreign denominated currencies or other foreign denominated instruments? Yes
No

If yes, please state the ratio

7.6 Are banks required to hold reserves in foreign denominated currencies or other foreign denominated instruments? Yes
No

If yes, please state the ratio

7.7 What percent of the commercial banking system's assets is foreign-currency denominated?

7.8 What percent of the commercial banking system's liabilities is foreign-currency denominated?

7.9 What percent of the commercial banking system's assets is in central government bonds or other government or central bank securities?

7.10 What percent of the commercial banking system's assets is funded with deposits?

7.10.1 What percent of the commercial banking system's assets is funded with insured deposits?

8. Depositor (Savings) Protection Schemes

- 8.1 Is there an explicit deposit insurance protection system? ○Yes
 ○No

If no, you may skip to question 8.2. If yes:

8.1.1 Is it funded by (check one) : the government, the banks, or both ?

○the government

○the banks

○both

- 8.1.2 Are premia collected regularly (ex ante) ○Yes
○No

only when there is a need (ex post) ○Yes
○No

or both? ○Yes
○No

- 8.1.3 Do deposit insurance fees charged to banks vary based on some assessment of risk?
○Yes
 ○No

8.1.4 If pre-funded, what is the ratio of accumulated funds to total bank assets?

8.1.5 What is the deposit insurance limit per account (in US\$ and local currency)?

8.1.5.1 US\$: _____

8.1.5.2 Domestic currency: _____

- 8.1.6 Is there a limit per person? ○Yes
○No

8.1.6.1 If yes, what is that limit (in domestic currency)? _____

8.1.7 Is there formal co-insurance, that is, are depositors explicitly insured for less than 100% of their deposits?

○Yes
 ○No

8.1.8 Does the deposit insurance scheme also cover foreign currency deposits?

○Yes
 ○No

- 8.1.9 Are interbank deposits covered? Yes
No
- 8.1.10 Does the deposit insurance authority make the decision to intervene a bank? Yes
No
- 8.1.10.1 If no, who does? _____
- 8.1.11 Does the deposit insurance authority by itself have the legal power to cancel or revoke deposit insurance for any participating bank? Yes
No
- 8.2 As a share of total assets, what is the value of large denominated debt liabilities of banks (e.g., subordinated debt, bonds, etc.) that are definitely not covered by any explicit or implicit savings protection scheme?

- 8.3 As part of failure resolution, how many banks closed or merged in the last 5 years?

- 8.3.1 As part of failure resolution, how many banks were nationalized or recapitalized with official funds in the last 5 years?**

- 8.4 Were insured depositors wholly compensated (to the extent of legal protection) Yes
No
the last time a bank failed?
- 8.4.1 On average, how long does it take to pay depositors in full?

- 8.4.2 What was the longest that depositors had to wait to be paid in the last 5 years?

- 8.5 Were any deposits not explicitly covered by deposit insurance at the time of the failure compensated when the bank failed (excluding funds later paid out in liquidation procedures)? Yes
No
- 8.6 Can the deposit insurance agency/fund take legal action for violations against laws, regulations, and bylaws (of the deposit insurance agency) against bank directors or other bank officials? Yes
No
- 8.7 Has the deposit insurance agency/fund ever taken legal action for violations against laws, regulations, and bylaws (of the deposit insurance agency) against bank directors or other bank officials? Yes
No

- 8.8 Are non-residents treated less favorably than residents with respect to deposit insurance scheme coverage (either in terms of coverage for which they are entitled or the actual protection provided)?
Yes No
- 8.9 Who manages the insurance fund? Is it managed:
- a. solely by the private sector? Yes
No
- b. jointly by private-public officials? Yes
No
- c. solely by public sector? Yes
No
- 8.10. Is participation in the deposit insurance system compulsory for all banks? Yes
No

9. Provisioning Requirements

- 9.1 Is there a formal definition of a "non-performing loan" ? Yes
No
- 9.1.1 The primary system for loan classification is based on (PLEASE PICK ONE):
- (a) the number of days a loan is in arrears Yes
No
- (b) a forward looking estimate of the expected loss Yes
No
- (c) other Yes
(For other, please send attachment either electronically or by mail.)
No
- 9.2 After how many days is a loan in arrears classified as:
- 9.2.1 Sub-standard ?
- 9.2.2 Doubtful?
- 9.2.3 Loss?
- 9.3 What is the minimum provisioning percentage required as loans become:
- 9.3.1 Sub-standard?
- 9.3.2 Doubtful?
- 9.3.3 Loss?
- 9.4 What is the ratio of non-performing loans to total assets as of year-end 2005?

9.5 If a customer has multiple loans and one loan is classified as non-performing, are the other loans automatically classified as non-performing? Yes
No

9.6 What is the aggregate net interest margin-to-asset ratio for all banks as of year-end 2005?

9.7 What is the aggregate overhead costs-to-asset ratio for all banks as of year-end 2005?

9.8 What is the tax deductibility of provisions:

9.8.1 **Specific provisions can be deducted** Yes
No

9.8.2 **General provisions can be deducted** Yes
No

9.8.3 **Provisions cannot be deducted** Yes
No

9.9 **What is the tax rate on domestic bank income?** _____

9.10 **What is the tax rate on foreign bank income?** _____

10. Accounting/Information Disclosure Requirements

10.1 Does accrued, though unpaid, interest/principal enter the income Yes
No

statement while the loan is still performing?

10.1.1 Does accrued, though unpaid, interest/principal enter the income Yes
No

statement while the loan is non-performing?

10.2 After how many days in arrears must interest income accrual cease?

10.3 Are financial institutions required to produce consolidated accounts covering all bank and any non-bank financial subsidiaries (including affiliates of common holding companies)?

Yes
No

10.4 Are off-balance sheet items disclosed to supervisors? Yes
No

10.4.1 Are off-balance sheet items disclosed to the public? Yes
No

10.4.2 What is the total amount of off-balance sheet items at year-end 2005? _____

10.5 Must banks disclose their risk management procedures to the public? Yes
 No

10.6 Are bank directors legally liable if information disclosed is erroneous or misleading? Yes
 No

10.6.1 What are the penalties, if applicable?

10.6.2 Have they been enforced in the last 5 years? Yes
 No

10.6.3 If yes, how many times have penalties been imposed during that period?

10.7 Do regulations require credit ratings for commercial banks? Yes
 No

10.7.1 How many of the top ten banks (in terms of total domestic assets) are rated by international credit rating agencies (e.g., Moody's, Standard and Poor)?

10.7.2 How many of the top ten banks (in terms of total domestic assets) are rated by domestic credit rating agencies ?

10.7.3 Which bank activities are rated?

10.7.3.1 Bond issuance? Yes
 No

10.7.3.2 Commercial paper issuance? Yes
 No

10.7.3.3 Other activity (e.g., issuance of bank certificates of deposit, pension and mutual funds, insurance companies, financial guarantees, etc.)? Yes
 No

11. Discipline/Problem Institutions/Exit

11.1 Are there any mechanisms of cease and desist-type orders, whose infraction leads to the automatic imposition of civil or penal sanctions on a bank's directors and managers? Yes
 No

11.1.1 Are bank regulators/supervisors required to make public formal enforcement actions, which include cease-and desist orders and written agreements between a bank regulatory/supervisory body and

- a banking organization? Yes
 No
- 11.2 Can the supervisory agency order the bank's directors or management
to constitute provisions to cover actual or potential losses? Yes
 No
- 11.3 Can the supervisory agency suspend the directors' decision to distribute:
- 11.3.1 Dividends? Yes
 No
- 11.3.2 Bonuses? Yes
 No
- 11.3.3 Management fees? Yes
 No
- 11.4 Have any such actions been taken in the last 5 years? Yes
 No
- 11.5 Which laws address bank insolvency?

11.5.1 Is there a separate bank insolvency law? Yes
 No

11.6 Who can legally declare - such that this declaration supersedes the some of the rights of shareholders - that a bank is insolvent (check all that apply):

- 11.6.1 Bank supervisor Yes No
- 11.6.2 Court Yes
 No
- 11.6.3 Deposit insurance agency Yes No
- 11.6.4 Bank restructuring or Asset Management Agency Yes No
- 11.6.5 Other (please specify) _____

11.7: According to the Banking Law, who has authority to intervene - that is, suspend some or all ownership rights - a problem bank? (check all that apply)

- 11.7.1 Bank supervisor Yes No
- 11.7.2 Court Yes
 No
- 11.7.3 Deposit insurance agency Yes No
- 11.7.4 Bank restructuring or Asset Management Agency Yes No
- 11.7.5 Other (please specify)
-
-

11.8 Does the Banking Law establish pre-determined levels of solvency (capital or net worth) deterioration which forces automatic actions (like intervention)? Yes
 No

11.9 Regarding bank restructuring and reorganization, can the supervisory agency or any other government agency listed below do the following: In each case, check all that apply.

11.9.1 Supersede shareholder rights?

11.9.1.1 Bank supervisor Yes No

11.9.1.2 Court Yes No

11.9.1.3 Deposit insurance agency Yes No

11.9.1.4 Bank restructuring or Asset Management Agency Yes No

11.9.1.5 Other (please specify) _____

11.9.2 Remove and replace management?

11.9.2.1 Bank supervisor Yes No

11.9.2.2 Court Yes No

11.9.2.3 Deposit insurance agency Yes No

11.9.2.4 Bank restructuring or Asset Management Agency Yes No

11.9.2.5 Other (please specify) _____

11.9.3 Remove and replace directors?

11.9.3.1 Bank supervisor Yes No

11.9.3.2 Court Yes No

11.9.3.3 Deposit insurance agency Yes No

11.9.3.4 Bank restructuring or Asset Management Agency Yes No

11.9.3.5 Other (please specify) _____

11.9.4 Forbear certain prudential regulations?

11.9.4.1 Bank supervisor Yes No

11.9.4.2 Court Yes No

11.9.4.3 Deposit insurance agency Yes No

11.9.4.4 Bank restructuring or Asset Management Agency Yes No

11.9.4.5 Other (please specify) _____

11.9.5 Insure liabilities beyond any explicit deposit insurance scheme?

11.9.5.1 Bank supervisor Yes No

11.9.5.2 Court Yes No

11.9.5.3 Deposit insurance agency Yes No

11.9.5.4 Bank restructuring or Asset Management Agency Yes No

11.9.5.5 Other (please specify) _____

11.10.1 During the last five years, how many banks have been resolved in the following way, and what was the percentage of assets of the banking system accounted for by each)

a. Closure and liquidation Number: _____

Percentage of banking system assets _____

b. Intervention (or taking control) and open bank assistance (liquidity support)

Number: _____

Percentage of banking system assets _____

c. Transfer of assets and liabilities (incl. purchase and assumption) or merger and acquisition

Number: _____

Percentage of banking system assets _____

d. Other

(please specify)

11.10.2 What percentage of total banking system assets did each of these resolution methods account for?

11.10.2.1 Closure and liquidation _____

11.10.2.2 Intervention and open bank assistance _____

11.10.2.3 Transfer of assets and liabilities (incl. purchase and assumption) or merger and acquisition _____

11.10.2.4 Other _____

11.10.3 How many months did each of these resolution techniques take on average, from the moment of intervention by the responsible authority to the moment of resolution?

11.11 Who is responsible for appointing and supervising a bank liquidator/receiver:

- 11.11.1 Bank supervisor Yes No
- 11.11.2 Court Yes No
- 11.11.3 Deposit insurance agency Yes No
- 11.11.4 Bank restructuring or Asset Management Agency Yes No
- 11.11.5 Other (please specify) Yes No

11.12 Is court approval required for supervisory actions, such as superceding shareholder rights, removing and replacing management, removing and replacing director, or license revocation?

Yes No

11.13 Is court order required to appoint a receiver/liquidator in the event of liquidation?

Yes No

11.14 Can the bank shareholders appeal to the court against a decision of the bank supervisor?

Yes No

11.14.1 If yes, how many appeals were made in the past five years? _____

12. Supervision

12.1 What body/agency supervises banks? (Check all that apply)

12.1.1 The Central Bank? Yes
 No

12.1.2 A Single Bank Supervisory Agency/Superintendency? Yes
 No

12.1.3 Multiple Bank Supervisory Agencies/Superintendencies? Yes
 No

12.1.4 Is there a single financial supervisory agency for all of the main financial institutions (insurance companies, contractual savings institutions, savings banks)?

Yes

No

If yes, what is its name? _____

12.1.5 Is there a single financial supervisory agency for all of the activities in which commercial banks are allowed to do business? Yes No

If yes, what is its name? _____

12.2 To whom are the bank supervisory bodies responsible or accountable?

- (a) the Prime Minister Yes
 No
- (b) the Finance Minister or other cabinet level official Yes
 No
- (c) a legislative body, such as Parliament or Congress Yes
 No
- (d) other Yes
 No

12.2.1 How is the head of your supervisory agency (and other directors) appointed?

- (a) the decision of the head of government (e.g., President, Prime Minister) Yes
 No
- (b) the decision of the Finance Minister or other cabinet level authority Yes
 No
- (c) a simple majority of a legislative body (Parliament or Congress) Yes
 No
- (d) a supermajority (e.g., 60%, 75%) of a legislative body Yes
 No
- (e) other Yes
 No

12.2.2 Does the head of the supervisory agency (and other directors) have a fixed term?

- Yes
 No

If yes, how long is the term?

12.2.3 Can the head of the supervisory agency be removed by:

- (a) the decision of the head of government (e.g., President, Prime Minister) Yes
 No
- (b) the decision of the Finance Minister or other cabinet level authority Yes
 No
- (f) a simple majority of a legislative body (Parliament or Congress) Yes
 No
- (g) a supermajority (e.g., 60%, 75%) of a legislative body Yes
 No
- (h) other Yes
 No

**12.3 Is your country planning on adopting Basel II Yes
 No**

12.3.1 If yes, which variant are you planning on adopting:

- a. **The Standardized Approach** _Yes
 No
- b. **The Foundation IRB Approach** _Yes
 No
- c. **The Advanced IRB Approach** _Yes
 No

12.4 How many professional bank supervisors are there in total?

12.5 How many onsite examinations per bank were performed in the last five years?

12.6 What is the total budget for supervision in local currency or dollars (please specify) in 2005 ?

12.6.1 What is the source of this funding? _____

12.7 How frequently are onsite inspections conducted in large and medium size banks?

- Annually Every two years Less frequently

12.8 How many of the total bank supervisors have more than 10 years of experience in bank supervision?

12.8.1 What is the average tenure of current supervisors (i.e., what is the average number of years current supervisors have been supervisors)?

12.9 If an infraction of any prudential regulation is found in the course of supervision,

12.9.1 Are there mandatory actions that the supervisor must take in these cases?

- Yes
 No

12.9.2 Who authorizes exceptions to such actions?

12.9.3 How many exceptions were granted last year?

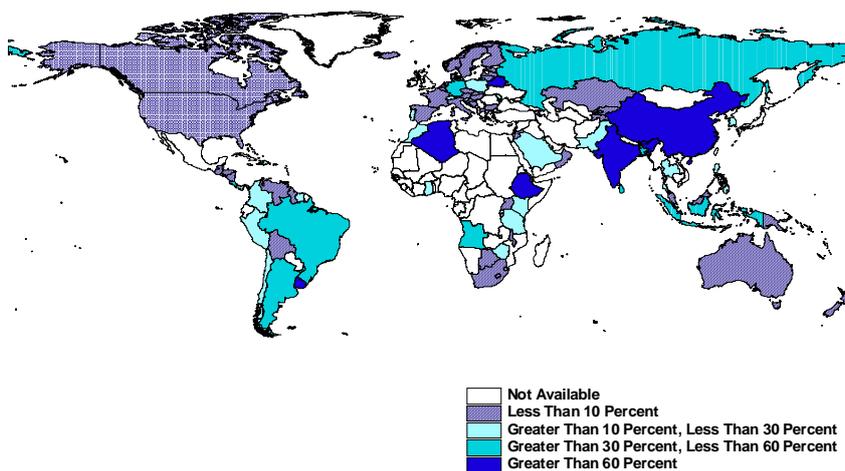
12.10 Can individual supervisory staff be held personally liable for damages to a bank caused by their actions or omissions committed in the good faith exercise of their duties

- Yes
 No

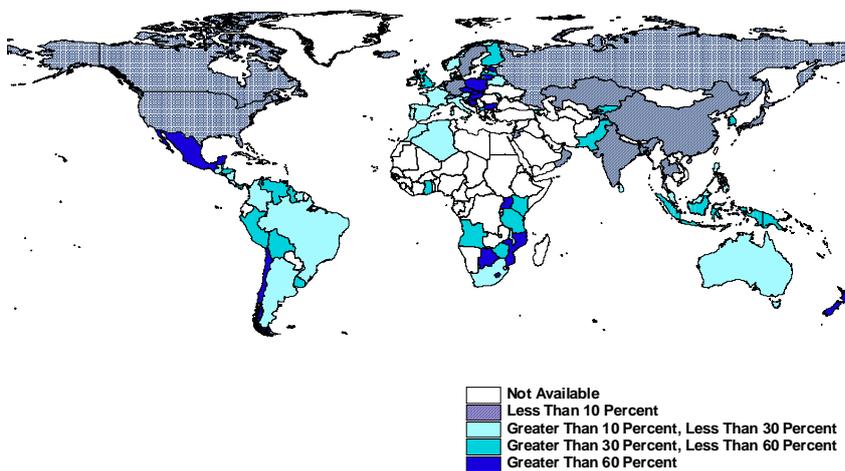
12.10.1 Can the supervisory agency be held liable for damages to a bank caused by its actions?

- Yes
 No

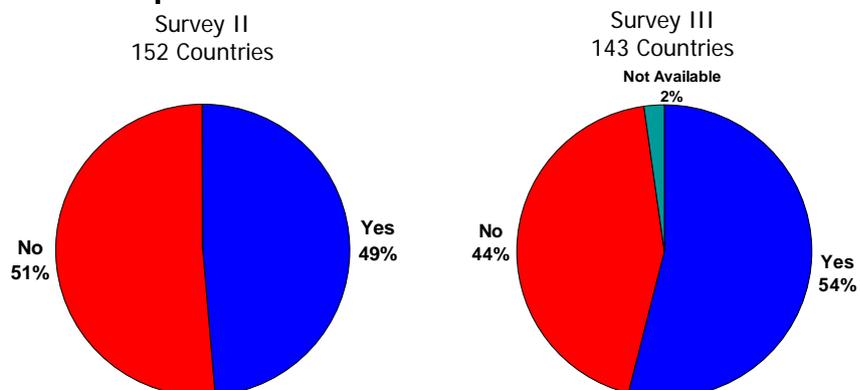
Government-Owned Banks



Foreign-Owned Banks

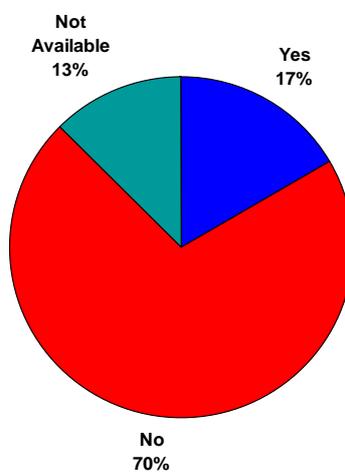


Do Countries Have Explicit Deposit Insurance Schemes?



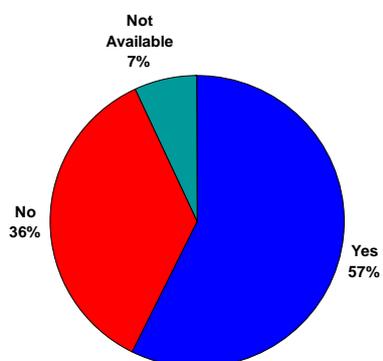
Countries recently adopting deposit insurance: Armenia, Hong Kong, Malaysia, Moldova, Russia, Singapore, Tajikistan, Uruguay, and Zimbabwe

Do Countries Require a Simple Leverage Ratio?

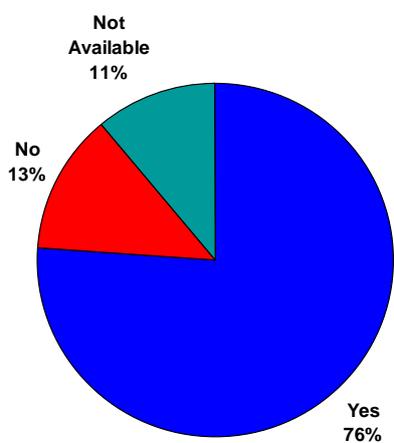


Single vs. Multiple Financial Supervisory Agencies

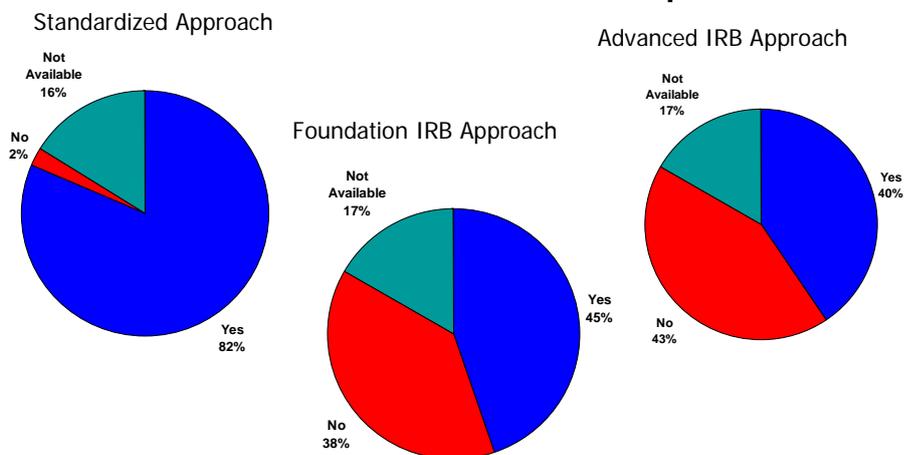
Is there a single financial supervisory agency for all of the activities in which commercial banks are allowed to do business?



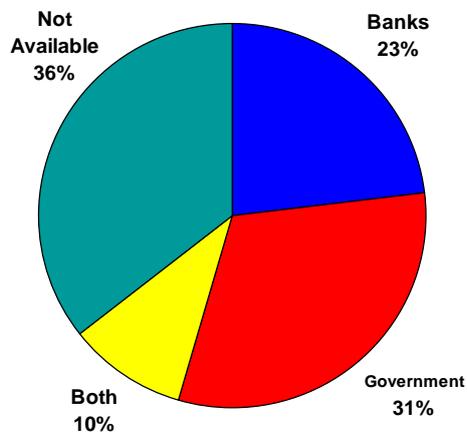
Countries Planning on Adopting Basel II?



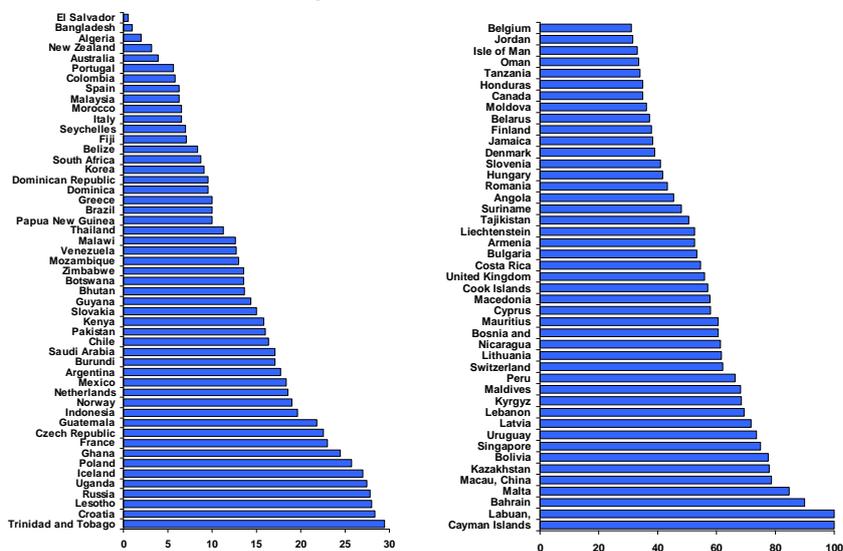
Which Approach Do Countries Plan to Adopt?



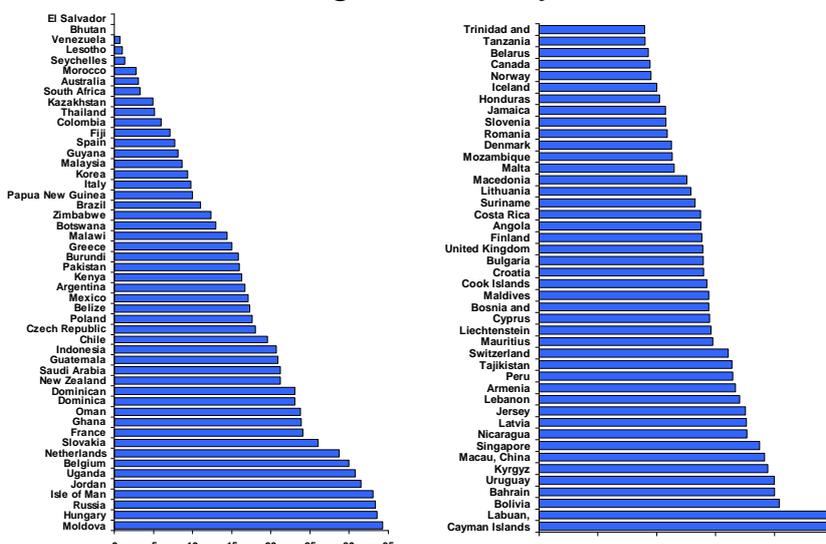
Who Funds Supervision in Countries?



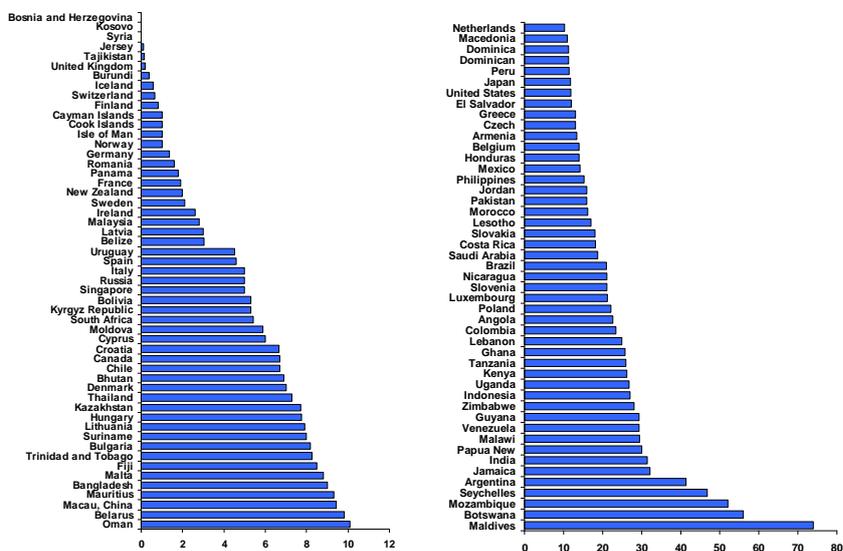
Percent of the Commercial Banking System's Assets Foreign-Currency Denominated



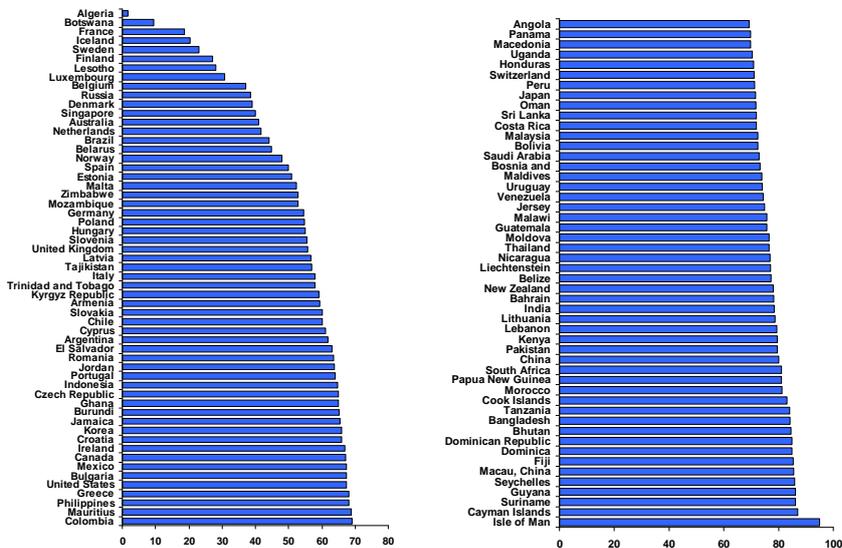
Percent of the Commercial Banking System's Liabilities Foreign-Currency Denominated



Percent of the Commercial Banking System's Assets in Government Securities



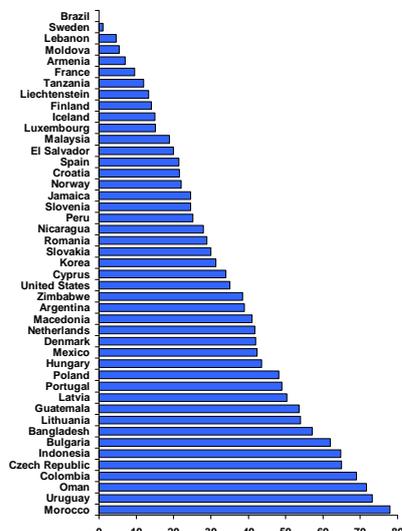
Percent of the Commercial Banking System's Assets Funded by Deposits



Percent of the Commercial Banking System's Assets Funded with Insured Deposits

62 countries with no assets funded with insured deposits

Angola, Anguilla, Antigua and Barbuda, Australia, Belize, Benin, Bhutan, Bolivia, Botswana, British Virgin Islands, Burkina Faso, Burundi, Cameroon, Cayman Islands, Central African Republic, Chad, China, Congo, Cook Islands, Costa Rica, Cote d'Ivoire, Dominica, Dominican Republic, Equatorial Guinea, Ethiopia, Fiji, Gabon, Ghana, Grenada, Guernsey, Guinea Bissau, Guyana, Jersey, Kosovo, Kuwait, Kyrgyz Republic, Lesotho, Macau, China, Malawi, Maldives, Mali, Mauritius, Montserrat, Mozambique, New Zealand, Niger, Pakistan, Panama, Papua New Guinea, Senegal, Seychelles, South Africa, Sri Lanka, St. Kitts and Nevis, St. Lucia, St. Vincent and the Grenadines, Suriname, Syria, Thailand, Togo, Vanuatu



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