The Regulation and Supervision of Banks Around the World

A New Database

James R. Barth

Gerard Caprio, Jr. and

Ross Levine*

May 2001

* James R. Barth, Lowder Eminent Scholar in Finance, Auburn University and Senior Finance Fellow, Milken Institute (jbarth@business.auburn.edu); Gerard Caprio, Jr., Director, Financial Strategy and Policy Group and Manager, Financial Sector Research, World Bank (gcaprio@worldbank.org); Ross Levine, Finance Professor, University of Minnesota (rlevine@csom.umn.edu). Comments on the data (and a related paper) from George Kaufman and other participants at the January 2001 Brookings-Wharton Papers on Financial Services, 4th Annual Conference, "Integrating Emerging Market Countries Into Global Financial System," are gratefully acknowledged. This research could not have been completed without the help of Iffath Sharif and Cindy Lee, as well as financial support from the World Bank's Financial Sector Board and the Research Committee. Xin Chen provided extraordinary research assistance. The authors wish to acknowledge the assistance of the Basel Committee of Bank Supervisors and the Financial Stability Forum Working Group on Deposit Insurance. The findings do not necessarily represent the opinions of The World Bank, its management, the Executive Directors, or the countries they represent.

Abstract

This paper presents and discusses a new and comprehensive database on the regulation and supervision of banks in 107 countries. The data are based upon surveys sent to national bank regulatory and supervisory authorities, and are now available to researchers and policy makers around the world. The data cover various aspects of banking, including entry requirements, ownership restrictions, capital requirements, activity restrictions, external auditing requirements, deposit insurance scheme characteristics, loan classification and provisioning requirements, accounting/disclosure requirements, troubled bank resolution actions, and uniquely the "quality" of supervisory personnel and their actions. Thus, the database permits the identification of the existing regulation and supervision of banks, as well as selective features of bank structure and deposit insurance schemes, for a broad cross-section of countries. In addition to providing a basic description of the data, the paper also provides ways in which the variables may be grouped and aggregated as well as some simple correlations among selected variables.

I. Introduction

Notwithstanding all the accomplishments in the fields of finance and financial economics in the last two decades, if a survey were taken of all the international consultants on appropriate bank regulation and supervision for developing countries, what would be the best way to predict the advice they would offer? Anecdotal evidence accumulated over the years suggests that an astonishingly high degree of accuracy could be obtained merely by knowing each consultant's country of origin: experts almost always view their own regulatory and supervisory framework as an appropriate model for developing countries. Beyond some inevitable 'home bias,' what would explain such a good fit? The answer is that until now there was no systematically assembled database on the way in which countries regulate and supervise their banking systems, and thus no comprehensive analysis of which regulation and supervisory practices are most appropriate. This ignorance of the facts provides fertile ground for reform recommendations based instead on bias.

To contribute to a better understanding of bank regulatory and supervisory regimes, this paper presents and discusses a new and comprehensive database based upon a survey sent to national bank regulatory and supervisory authorities. These data are available to researchers on the World Wide Web.[1] For the first time, the data enable one to identify the existing regulation and supervision of banks (and selective features of bank structure and deposit insurance schemes) in 107 countries at all levels of income and in all parts of the world.[2] With this database one can now determine more fully the "stylized facts" for banking on a global basis.

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[1] This database can be found at the World Bank's website for financial sector research, http://www.worldbank.org/research/interest/intrstweb.htm, under the heading 'Data.'

[2] Admittedly, some individuals have assembled significant "bits and pieces" of this type of database for selected countries. But there has been no truly broad and detailed database from official sources that would enable one to assess as many different and important aspects of the banking systems for as many countries as presented and discussed here.

Most importantly, we compiled these data to lower the marginal cost of doing empirical research on bank regulation and supervision. We expect these data and the ensuing research to provide a much firmer foundation on which authorities around the world can implement reforms. In a companion paper [Barth, Caprio, and Levine, 2001], we use these data to identify those regulatory and supervisory practices most closely associated with better bank performance and more stability. This effort is clearly a beginning, not an end, based upon our database.

The remainder of the paper proceeds as follows. The next section describes the data and how they were obtained. It also draws upon our new and comprehensive database to provide a selective overview of some of the important ways in which banking systems differ across countries. The third section discusses and examines ways to group and aggregate variables from this dataset to provide a potentially more meaningful characterization of a country's banking system. It also discusses ways in which these variables may be, if not already, quantified to better assess the degree to which countries differ.[3] The fourth section provides a description of the differences in the variables when countries are aggregated by income level or region, and also presents some correlations among key variables. The final section concludes with some early and illustrative findings (Barth, Caprio, and Levine, 2001) using this database.

II. Survey and Data

In 1998 we designed and then implemented a two-year survey funded by the World Bank to collect detailed and comprehensive information on the regulation and supervision of commercial banks in as many countries as possible.[4] We also requested information on selected

[3] Such quantification is also important in assessing the relationship between different features of a banking system and various financial and economic outcomes as discussed in the final section.
[4] We started the process with Joaquin Gutierrez's (formerly of the World Bank and now with the Central Bank of Spain) detailed questionnaire and then supplemented it based upon significant advice from bank supervisors at the World Bank. Both David Scott and Vincent Polizatto have extensive experience in emerging markets and thus were

aspects of bank structure and deposit insurance schemes. The formulation and completion of the survey entailed a number of inter-related steps. The Basel Committee on Banking Supervision provided us with contact information on bank supervisory personnel in countries around the world so that we could contact appropriate individuals at national regulatory and supervisory agencies. Furthermore, since the World Bank routinely conducts seminars for bank supervisors from emerging market countries, participants at these sessions were asked to complete the survey. In some cases, World Bank personnel traveling to countries that had not yet responded to the survey delivered the survey to the appropriate officials.

Despite these efforts, neither all countries responded to the survey nor were all the returned surveys complete.[5] In numerous cases different officials from the same country or even the same agency provided conflicting answers to the same questions. Thus, we had to follow-up with authorities to resolve these issues. In addition, the Office of the Comptroller of the Currency (OCC) conducted a much narrower survey that nonetheless overlaps with a subset of the information we collected. Consequently, we checked responses from the two surveys and attempted to reconcile any inconsistencies.[6] The Financial Stability Forum's Working Group on Deposit Insurance also provided input on the accuracy of responses regarding certain individual country's deposit insurance schemes. Most of the information from the responses is for 1999.[7]

The survey is comprised of twelve separate parts, with about 175 questions, covering the following aspects of a country's banking system:

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particularly important in this regard. We next condensed the survey to a manageable form after adding questions related to economic incentives and vetting it with other banking experts as well as those skilled in conducting surveys. We also simplified the survey after receiving feedback from a few countries early in the process to reduce ambiguities and facilitate accurate responses. The authors, of course, retain sole responsibility for the final form of the survey.

[5] Responses were received from 107 countries. However, many of these countries did not respond to each and every question. More information about the response rate to different questions is presented below.

[6] This overlap and checking only affected selected activity and ownership variables as indicated below. We also checked our data with information collected by the Institute of International Bankers.

- 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

Since our database is readily available on the web,[8] the remainder of this section provides a sample of the information we have collected and assembled into more useable form. Tables 1 and 2 provide an overview of some basic differences in banking systems for 107 countries at all levels of income and in all parts of the world. This information covers the administrative structure of bank supervision, selective aspects of the banking industry, and the regulatory and supervisory environment in which banks operate. Specifically, Table 1 shows what body or agency supervises banks, whether there is more than one supervisory body, and to whom supervisory bodies are responsible or accountable. Of 107 countries, 89 have a single supervisory body and 18 countries have two or more. Of those countries with only one supervisory body, moreover, in about two-thirds of the cases it is the central bank. Furthermore, with respect to whom the supervisory bodies are responsible or accountable, it is usually the finance ministry. This type of administrative-structure information is helpful in assessing

[7] Of the 107 responses received, 13 were received in November 1998, 65 were received in 1999, and 29 in 2000, with 19 of the latter received in either January or February.
[8] See footnote 1 for the location. Those without access to the web can contact Agnes Yaptenco (The World Bank, 1818 H St., N.W., Washington, D.C. 20433, 202-473-1823, fax: 202-522-1155; Ayaptenco@worldbank.org).

whether the number, location and independence of supervisory bodies matters, in addition to its benchmarking value.

Table 2 shows the differences in the size and structure of the banking industry. It also shows the extent to which overall bank activities are restricted. Furthermore, information is provided on the number of professional supervisors per bank and whether supervisors are legally liable for their actions. The table shows, moreover, whether there is an explicit deposit insurance scheme. Lastly, information on the degree to which the biggest banks are rated by international rating agencies is provided. This type of data is very important in understanding what the term "bank" signifies in different countries as well as in assessing what matters for the performance and stability of a country's banking industry, and ultimately for overall financial and economic activity.

There are two measures of the size of a country's banking industry in Table 2. One measure is total bank assets as a percentage of GDP. [9] A second measure is the number of banks per 100,000 people. Both of these measures show substantial variation across countries, even when excluding countries with offshore banking centers. Two countries that many point to when emphasizing differences in banking industries and in ways of regulating banks[10] are Germany and the U.S. As may be seen, total bank assets as a percentage of GDP are 313 percent in Germany, but a much lower 66 percent in the U.S. It is in large part due to these figures that Germany is described as having a bank-based financial system, while the U.S is described as having a capital market-based financial system. At the same time, however, the number of banks per 100,000 people is about the same in the two countries. Yet, the latter figures for both

[9] The information on total bank assets is obtained from the OCC survey.
[10] German banks are frequently referred to as "universal" banks because of the wide range of activities in which they are allowed to engage. In this regard, compare the position of Germany relative to the U.S. (and other countries) in Figure 6. The differences between Germany and the U.S. with respect to regulations regarding the activities in which banks may engage have narrowed significantly as a result of a change in banking law in the U.S. in late 1999.

Germany and the U.S. are considerably higher than the corresponding figures for most other countries.

Table 2 indicates that there is substantial variation in the bank structure variables across countries. There are three types of structural variables: (1) the percentage of deposits accounted for by the 5 largest banks; (2) the percentage of total assets that are government owned; and (3) the percentage of total bank assets that are foreign owned. The concentration measure for the U.S. is relatively low at 21 percent as compared to every other economy except Germany, Guyana, and Taiwan (China). The degree of concentration is quite high even in some countries that have many banks, such as Russia with more than 1,300 banks but also a 5 bank concentration figure of 80 percent.

As regards government ownership, there are a large number of countries for which the share of total bank assets accounted for by government-owned banks is not only positive but also fairly high. In nine countries the figure exceeds 60 percent. In India the figure is 80 percent. Germany has a figure that is much lower than this but still relatively high at 42 percent. At the other end of the spectrum are countries like the U.K. and the U.S. for which the government-ownership figures are zero percent.

The share of total commercial bank assets accounted for by foreign-owned banks also displays wide variation, ranging from a low of zero percent in India to a high of 99 percent in New Zealand. The latter country has essentially "outsourced" its entire banking industry. Germany, the U.S., and Japan all report relatively low figures of 4, 5 and 6 percent, respectively. Some countries have laws limiting entry by foreign banks, as will be discussed later, which helps account for some of these differences across countries. It might be noted that among the European Union (EU) countries listed in the table, consolidation across national borders is still relatively modest.

A particularly important variable in Table 2 is labeled Overall Bank Activities and Ownership Restrictiveness. More will be said about the exact way in which this variable is constructed in the next section. For now it is enough to say that it measures the overall degree to which banks are permitted to engage in securities, insurance and real estate activities as well as to own nonfinancial firms. It ranges in value from 1 to 4. The lowest value indicates that no restrictions are placed on this type of diversification by banks, whereas the highest value indicates that such diversification is prohibited. This particular variable largely defines what is meant by the word "bank". Given the substantial variation in this variable among countries, it is clear that a bank is not the same thing in different countries. Countries like Germany (1.3) and New Zealand (1.0) allow their banks unrestricted access to this type of diversification. Other countries like China (3.5) and Indonesia (3.5) are severely restrictive. Even Japan and the U.S were quite restrictive until very recently when changes in banking laws and regulations were made. More generally, this variable clearly indicates that the regulatory environment, not just unfettered market forces, importantly determines what banks in different countries around the world may do.

Table 2 also shows that the supervisory environment variables vary substantially among countries. Although only two variables are presented in the table - Supervisors per Bank and Are Supervisors Legally Liable for Their Actions- they are indicative of the types of differences that exist. Some economies have relatively high ratios of professional supervisors per bank, such as Taiwan (China) with 18 and Honduras with 12. Others like the U.S. and Turkey have relatively low ratios, which are 0.1 and 0.4, respectively. As regards holding supervisors legally liable for their actions, countries are fairly evenly split, with 42 countries (including Argentina and Brazil) doing so and 56 countries not doing so (such as the U.K. and U.S.).

It is clear from Table 2 that there are a relatively large number of countries that do not yet have an explicit deposit insurance scheme. Indeed, of the 107 countries, 50 do not have a scheme.[11] Presumably, depositors in countries without one must monitor closely the banks in which their funds reside. To assist in monitoring, international credit rating agencies rate the bigger banks in some countries. The extent to which this is done is indicated in the table by the variable named Percentage of the 10 Biggest Banks Rated by International Agencies. The percentage differs significantly among the countries, with many reporting that no banks are rated and also many reporting that all banks are rated. In Cambodia no banks are rated, whereas in Botswana all banks are rated. And in Chile 50 percent of the ten biggest banks are rated. These examples nicely illustrate the type of diversity that exists.

Some pictures help depict the high degree of cross-country variation in the data. Figure 1 shows the dramatic divergences in what banks can do, and whether they can own or be owned by nonfinancial firms. Clearly, individual countries can 'mix and match' from these individual categories, but even at an aggregate level, the degree of dispersion is notable. The most restricted bank activity among countries is real estate and the least restricted is securities. Indeed, in the 107 countries, 37 percent prohibit real estate activities, whereas only 7 percent prohibit securities activities.[12] The way in which the mixing of banking and commerce is treated also indicates significant differences across countries. Interestingly enough, a much higher percentage of countries (36 percent) permit unrestricted ownership of banks by nonfinancial firms than bank

[11] In the World Bank database on deposit insurance, which is believed to be the most comprehensive, about 70 countries have explicit deposit insurance as of 2000, out of approximately 200 countries.

[12] It is clear that most countries consider securities activities to be much more acceptable banking activities than either insurance or real estate activities. Until the enactment of the Gramm-Leach-Bliley Act on November 12 , 1999, this was also the case in the U.S. Now securities and insurance activities are treated equally as unrestricted activities, with only real estate activities remaining severely restricted.

ownership of nonfinancial firms (13 percent). More generally, it is clear that the mixing of banking and commerce is prohibited in a relatively small percentage of the 107 countries.

Banks differ dramatically also in their size relative to the economy (Figure 2). In some countries, such as the U.S., the relatively small size of banking reflects the development of other forms of intermediation, but in many more it simply depicts the underdevelopment of the financial sector. Bank concentration also differs dramatically (Figure 3): in small economies, the 5 largest banks account for all or almost all deposits, while in larger economies they control far less of the market for deposits.

Ownership of banks by governments (Figure 4)[13] and by foreign entities (Figure 5) could hardly vary more. Figure 6 shows the variation in overall restrictiveness, mentioned above. Capturing the way bank supervisors operate is challenging – more on this below -- but Figure 7 gives one a sense that there are real differences here: from Taiwan (China), where there are 18 supervisors per bank, to the U.S., Cayman Islands, and the Maldives, where there are 10 or more banks per supervisor. Market or private monitoring also is complex – again, more below – but Figure 8 shows the presence of international rating agencies – those which might be more likely to operate at arms length from their clients – covers a wide range.

All the figures just discussed reveal substantial variation across countries. Lest one conclude that this is the case for each and every variable in our database, we direct the reader to Figure 9. This figure shows the minimum risk-based capital requirement for banks among countries. Clearly, there is not the variation shown in the other figures. Of 106 countries, 60

[13] Researchers who have employed data on foreign ownership from Bankscope undoubtedly know that this series differs significantly from that source in numerous cases. The variable reported here defines foreign ownership as 50% or more control, and our responses are the views of supervisory agencies, whereas Bankscope data are based on survey responses from individual banks. This creates biases depending upon which types (i.e., government owned, domestic, private owned, or foreign owned) and number of banks respond.

percent set the minimum requirement at 8 percent and another 14 percent set it at 10 percent. [14] Not surprisingly, given this lack of variation, when countries were asked in the survey whether the minimum capital requirement was in line with Basle guidelines, of 107 countries, 93 percent answered yes. Such near unanimity across so many countries with differences in bank risk exposure obviously reinforces questions about the accuracy and usefulness of these guidelines at an aggregated level. Figure 10, moreover, shows that, of 92 countries, in 96 percent of them the actual capital-to-asset ratio equals or exceeds the required minimum.[15] The fact that these particular ratios are not necessarily comparable from one country to the next, however, only reinforces the previous concern about accuracy and usefulness. The reason for the lack of comparability is that based upon our database selected items are deducted from capital in some countries, while in others they are not before the ratio is calculated. Of 104 countries, for example, 57 deduct the market value of loan losses not yet realized, whereas the remaining 47 do not. Our database helps alert one to some of these types of potential pitfalls when comparing variables across countries and hence to avoid drawing inappropriate conclusions.

Table 3 contains summary information about selected variables that we analyze further below.[16] It also indicates the number of countries upon which the variables are based. Lastly, it groups and aggregates (after quantification in many cases) the information into different headings, a discussion of which we now turn.

III. Grouping, Aggregating and Quantifying the Data

[14] Japan is excluded from this count and the figure. It reports an 8 percent requirement for international banks.
[15] Japan is excluded from this count and the figure. It reports a ratio of 11.8 percent among internationally active banks.
[16] Appendix 1 contains information on selected other variables in our database either not mentioned in this paper or mentioned only in passing.

All the individual responses in the survey may be 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. Policy makers who want to know the general direction in which to proceed with reforms, such as whether to emphasize bank activity restrictions, capital requirements, bank supervision, or private monitoring, however, 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). It is important to make clear, however, that there is no unique grouping or aggregation (or even quantification). Further consideration on our part and reaction to comments received from others no doubt will lead to modifications in the exact variables put into various groups and the specific variables that are aggregated (or the specific quantification of variables) compared with what is presented below.

Indeed, it should be noted at the outset that some of the variables are grouped under one heading when they could alternatively be grouped under another. A case in point is the Certified Audit Required Variable, which indicates whether or not an external audit by a licensed or certified auditor is a compulsory obligation of banks. We have included this variable with the Private Monitoring Variables. But to the extent that supervisory authorities require and rely upon such audits this variable could also be easily viewed as one of the Official Supervisory Action Variables. This means that one must not place undue emphasis at this stage on the specific headings under which all the different variables are listed. That said, the groupings shown in Table 3 reflect our judgement of sensible ways in which to view the data, knowing full well that some variables may actually belong under more than one of the headings, or even a new heading not yet listed.

To assist the reader in better understanding the meaning and interpretation of the specific variables indicated in Table 3 , we now attempt to explain more fully their construction, quantification and importance. This is done by following the order in which the variables are listed in the table.

1. *Bank Activity Regulatory Variables*. There are three regulatory variables that affect important activities in which banks may engage. The three variables involve securities, insurance and real estate activities. We specifically measure the degree to which the national regulatory authorities in countries allow banks to engage in the following three fee-based rather than more traditional interest spread-based activities:

(a) **Securities:** the ability of banks to engage in the business of securities underwriting, brokering, dealing, and all aspects of the mutual fund industry.
(b) **Insurance**: the ability of banks to engage in insurance underwriting and selling.
(c) **Real Estate**: the ability of banks to engage in real estate investment, development, and management.

The World Bank and OCC surveys provided information in response to a series of individual questions regarding each country's regulations concerning these activities. Using this information, we quantified the degree of regulatory restrictiveness for each aggregate or composite activity on a scale from 1 to 4, with larger numbers representing greater restrictiveness. The definitions of the 1 through 4 designations are as follows:

(1) **Unrestricted** – A full range of activities in the given category can be conducted directly in the bank.
(2) **Permitted** – A full range of activities can be conducted, but all or some must be conducted in subsidiaries.
(3) **Restricted** – Less than a full range of activities can be conducted in the bank or subsidiaries.
(4) **Prohibited** – The activity cannot be conducted in either the bank or subsidiaries.

The difference between a 1 and 2 indicates only the locations in which the activity may be conducted, not whether the activity is restricted in any way. This type of difference, however, may matter for various measures of banking industry performance as well as bank stability. Indeed, there has been considerable controversy over which organizational structure is most appropriate for different bank activities to better ensure a safe and sound banking industry. More generally, these types of regulations determine the degree to which a bank may diversify its business operations as well as to attempt to capitalize on any synergies that may arise from complimentary activities. [17] Figure 1, which was mentioned earlier, shows the variation among countries with respect to the degree to which each of these three activities is restricted.

2. *Mixing Banking / Commerce Regulatory Variables.* We constructed two aggregate variables also based on both surveys to measure the degree of regulatory restrictiveness on the mixing of banking and commerce. We once again quantified the regulatory restrictiveness for each variable on a scale from 1 to 4. The specific variable definitions and the definitions of the 1-4 designations are as follows: [18]

(a) **Nonfinancial Firms Owning Banks**: the ability of nonfinancial firms to own and control banks.

(1) **Unrestricted** – A nonfinancial firm may own 100 percent of the equity in a bank.
(2) **Permitted** – Unrestricted with prior authorization or approval.
(3) **Restricted** – Limits are placed on ownership, such as a maximum percentage of a bank's capital or shares.
(4) **Prohibited** – No equity investment in a bank.

(b) **Banks Owning Nonfinancial Firms**: the ability of banks to own and control nonfinancial firms.

(1) **Unrestricted** – A bank may own 100 percent of the equity in any nonfinancial firm.
(2) **Permitted** – A bank may own 100 percent of the equity in a nonfinancial firm, but ownership is limited based on a bank's equity capital.
(3) **Restricted** – A bank can only acquire less than 100 percent of the equity in a nonfinancial firm.
(4) **Prohibited** – A bank may not acquire any equity investment in a nonfinancial firm.

[17] It should be noted that this particular quantification required judgement on the part of the authors taking into account information in the two surveys as well as information obtained from follow-up questions and the Institute of International Bankers.
[18] Ibid.

These particular regulations are quite important and, needless to say, controversial. As Figure 1 shows, many countries freely allow for the cross-ownership of shares between banks and commercial firms. The regulation regarding the extent to which a bank may own shares in a nonfinancial firm clearly affects the ability of a bank to diversify its revenue stream and is therefore similar in some ways to the regulatory restrictions on its activities as described above. For this reason, we also combine this particular regulation with the three activity regulations to create an overall restrictiveness variable, which ranges in value from 1 to 4, and its variation across countries is shown in Figure 6, as mentioned earlier. The higher values, as in the case discussed earlier, indicate greater restrictiveness.

3. *Competition Regulatory Variables*. There are three variables that qualitatively capture the extent to which competition within the banking industry is restricted. The variables all relate to the ability of existing or new banks to enter the banking business. More specifically, the three variables are defined and quantified as follows: [19]

(a) **Limitations on Foreign Ownership of Domestic Banks**: whether there are any limitations placed on the ownership of domestic banks by foreign banks. If there are any restrictions, this variable is assigned a value of 1 and a value of 0 otherwise.
(b) **Limitations on Foreign Bank Entry**: whether there are any limitations placed on the ability of foreign banks to enter the domestic banking industry. If there are any restrictions, this variable is assigned a value of 1 and a value of 0 otherwise.
(c) **Entry into Banking Requirements**: whether there are specific legal submissions required to obtain a license to operate as a bank. We considered different types of submissions that could potentially be considered by the banking authorities when deciding upon whether or not to grant a license. These are as follows:

(1) Draft by-laws. Of 106 countries, 100 say yes and 6 say no.
(2) Intended organizational chart. Of 107 countries, 102 say yes and 5 say no.
(3) First 3-year financial projections. Of 107 countries, 102 say yes and 5 say no.
(4) Financial information on main potential shareholders. Of 107 countries, 101 say yes and 6 say no.
(5) Background/experience of future directors. Of 107 countries, 106 say yes and 1 says no.

[19] The first two variables are obtained from the OCC survey.

(6) Background/experience of future managers. Of 106 countries, 97 say yes and 9 say no.
(7) Sources of funds to be used to capitalize the new bank. Of 105 countries, 91 say yes and 14 say no.
(8) Intended differentiation of new bank from other banks. Of 105 countries, 84 say yes and 21 say no.

Each of these types of submissions was assigned a value of 1 if it was required and a value of 0 otherwise. This means that the more information required by the regulatory authorities of the type indicated when deciding upon whether or not to issue a license, the more restrictive will be entry into banking. The Entry into Banking Requirements variable is created by adding these eight variables together. It therefore may range in value from 0 to 8, with higher values indicating more restrictiveness. The higher the score presumably the more entry into banking would be restricted because there are more grounds for rejecting a license request. The higher the score, moreover, presumably the greater the quality of the new entrants and therefore the less likely a banking crisis and the bigger the overall enhancement in bank performance.

More generally, the variables relating to regulations regarding the ability of foreign banks to enter the banking business within a country are quite important for capturing the competitive environment. Foreign bank entry through branches may have different effects on a banking industry, the overall financial system, or even bank fragility than entry through the acquisition of domestic banks. It may therefore be worthwhile to consider each of these variables separately in any empirical work.

4. *Capital Regulatory Variables*. It is widely agreed that regulatory requirements on the magnitude of capital and its relationship to total assets may be important in understanding bank performance and bank fragility as well as the overall development of the banking industry. These are, of course, different ways of measuring the importance of capital requirements on various financial and economic outcomes deemed to be important. We have compiled alternative quantitative measures of capital regulatory stringency based upon the survey information to indicate the way in which our database may be used. Specifically, there are four different capital regulatory variables that capture different but complementary

measures of the stringency of regulatory capital requirements across countries. The specific measures are as follows:

(a) **Overall Capital Stringency**: whether there are explicit regulatory requirements regarding the amount of capital that a bank must have relative to various guidelines. We consider several guidelines to determine the degree to which the leverage potential for capital is limited. These are as follows:

(1) Does the minimum required capital-to-asset ratio conform to the Basle guidelines? Of 107 countries, 100 say yes and 7 say no.
(2) Does the minimum ratio vary with market risk? Of 105 countries, 24 say yes and 81 say no.
(3) Is the market value of loan losses deducted from reported accounting capital? Of 104 countries, 57 say yes and 47 say no.
(4) Are unrealized losses in the securities portfolio deducted from reported accounting capital? Of 104 countries, 60 say yes and 44 say no.
(5) Are unrealized foreign exchange losses deducted from reported accounting capital? Of 102 countries, 62 say yes and 40 say no.

We assign a value of 1 to each of the above questions if the answer is yes and a 0 otherwise. In addition, we assign a value of 1 if the fraction of revaluation gains that is allowed to count as regulatory capital is less than 0.75. Otherwise, we assign a value of 0. By adding together these variables we create the variable Overall Capital Stringency. It ranges in value from 0 to 6, with higher values indicating greater stringency. Notice that this particular measure of capital stringency is to some degree capturing whether or not regulatory capital is solely an accounting concept or at least partially a market-value concept. Figure 11 shows the variation among countries for this variable.

(b) **Initial Capital Stringency**: whether the source of funds counted as regulatory capital can include assets other than cash or government securities and borrowed funds as well as whether the sources are verified by the regulatory or supervisory authorities. More specifically, the following three questions were asked:

(1) Can initial and subsequent infusions of regulatory capital include assets other than cash or government securities? Of 102 countries, 45 say yes and 57 say no.
(2) Can the initial infusion of capital be based on borrowed funds? Of 101 countries, 34 say yes and 67 say no.
(3) Are the sources of funds that count as regulatory capital verified by the regulatory or supervisory authorities? Of 105 countries, 86 say yes and 19 say no.

For questions (b1) and (b2) that are answered <u>no</u>, we assign a value of 1. Otherwise, values of 0 are assigned; whereas for (b3), we assign a value of 1 to a positive response . This means that when adding these three variables together our newly created variable may range from a low of 0 to a high of 3, with a higher value indicating <u>greater</u> stringency.

(c) **Capital Regulatory Index**: is simply the sum of the previous two measures of capital stringency. It therefore may range in value from 0 to 9, with a higher value indicating greater stringency. Figure 12 shows the variation among countries for this variable.

(d) **Maximum Capital Percentage by Single Owner**: the maximum allowable percentage ownership of a bank's capital by a single owner. This variable may reach 100 percent if there is no maximum set by the regulatory/supervisory authorities. Many countries have limits, perhaps reflecting concerns about a dominant owner gaining too much control at the expense of minority interests.

5. *Official Supervisory Action Variable*. The four types of variables discussed so far are regulatory variables. These variables basically implement various laws that define a bank in terms of what it takes to enter banking, who may own a bank, how much is required and what counts as regulatory capital, and what encompasses the businesses of banking. Once a bank is operating within the regulatory environment, it is subject to monitoring and control through and by various official supervisory actions. We now describe the various variables that we have constructed from the survey responses to capture quantitatively the degree to which supervisory authorities may intervene to promote a "safe and sound" banking industry.

(a) **Official Supervisory Power**: whether the supervisory authorities have the authority to take specific actions to prevent and correct problems. This variable is based upon yes or no responses to the following 16 questions:

(1) Can supervisors meet with any external auditors to discuss their reports without bank approval? Of 107 countries, 78 say yes and 29 say no.
(2) Are auditors legally required to report any misconduct by managers or directors to the supervisory authorities? Of 107 countries, 65 say yes and 42 say no.
(3) Can the supervisory authorities take legal action against external auditors for negligence? Of 107 countries, 55 say yes and 52 say no.
(4) Can the supervisory authorities force a bank to change its internal organizational structure? Of 107 countries, 78 say yes and 29 say no.
(5) Can the deposit insurance agency take legal action against bank directors or officers? Of 59 countries, 20 say yes 39 say no.[20]

[20] Cambodia answered no to this question, while reporting having no explicit deposit insurance scheme.

(6) Are off-balance sheet items disclosed to the supervisory authorities? Of 106 countries, 104 say yes and 2 say no.
(7) Does failure to abide by a cease-desist type order lead to the automatic imposition of civil and penal sanctions on the directors and managers of a bank? Of 102 countries, 63 say yes and 39 say no.
(8) Can the supervisory authorities order a bank's directors/mangers to provide provisions to cover actual or potential losses? Of 102 countries, 88 say yes and 14 say no.
(9) Can the supervisory authorities suspend the directors' decision to distribute dividends? Of 106 countries, 84 say yes and 22 say no.
(10) Can the supervisory authorities suspend the directors' decision to distribute bonuses? Of 103 countries, 62 say yes and 41 say no.
(11) Can the supervisory authorities suspend the directors' decision to distribute management fees? Of 103 countries, 54 say yes and 49 say no.
(12) Can the supervisory authorities supercede shareholder rights and declare a bank insolvent? Of 101 countries, 74 say yes and 27 say no.
(13) Can the supervisory authorities suspend some or all ownership rights of a problem bank? Of 103 countries, 85 say yes and 18 say no.
(14) Regarding bank restructuring and reorganization, can the supervisory authorities supercede shareholder rights? Of 102 countries, 81 say yes and 21 say no.
(15) Regarding bank restructuring and reorganization, can the supervisory authorities remove and replace management? Of 105 countries, 94 say yes and 11 say no.
(16) Regarding bank restructuring and reorganization, can the supervisory authorities remove and replace directors? Of 105 countries, 91 say yes and 14 say no.

The answers to these 16 questions collectively constitute our measure of Official Supervisory Power. We specifically assign a value of 1 to a "yes" answer and a value of 0 to a "no" answer. This variable is the sum of these assigned values and therefore may range from 0 to 16, with a higher value indicating more power. Figure 13 shows the variation among countries for this variable. We also decompose this variable into three constituent parts. The resulting three variables are as follows:

[1] **Prompt Corrective Action**: whether a law establishes pre-determined levels of bank solvency deterioration which forces automatic enforcement actions such as intervention.[21] If this is indeed the case, we assign a value of 1; 0 otherwise. We then multiply this by (4), (7), (8), (9), (10) and (11) as described immediately above. The Prompt Corrective Action variable may therefore range from 0 to 6, with a higher value indicating more promptness in responding to problems. Figure 14 shows the variation among countries for this variable.

[21] The specific survey question asks: "Does the Law establish pre-determined levels of solvency deterioration which forces automatic actions (like intervention)?" This question is also used below in the Supervisory Forbearance Discretion variable, which some may view as a "negative" Prompt Corrective Action variable. It should also be noted that the labeling of the latter variable may be somewhat misleading because some of the variables employed in its construction are based upon the authority to engage in an action rather than the action being mandatory.

[2] **Restructuring Power**: whether the supervisory authorities have the power to restructure and reorganize a troubled bank. This variable is simply the sum of (14), (15) and (16) as described above. It may range in value from a low of 0 to a high of 3, with a higher value indicating more power. Figure 15 shows the variation among countries for this variable.

[3] **Declaring Insolvency Power**: whether the supervisory authorities have the power to declare a deeply troubled bank insolvent. This variable is simply the sum of (12) and (13) as described above. It may range in value from 0 to 2, with a higher value indicating greater power. Figure 16 shows the variation among countries for this variable.

(b) **Supervisory Forbearance Discretion**: Even when authorized, supervisory authorities may engage in forbearance when confronted with violations of laws or regulations or with other imprudent behavior on the part of banks. To capture the degree to with this type of discretion is allowed, we constructed a variable based on the following questions:

(1) Regarding bank restructuring and reorganization, can the supervisory authorities or any other government agency forbear certain prudential regulations? Of 101 countries, 84 say yes and 17 say no.
(2) Are there pre-determined levels of solvency deterioration that force automatic actions, such as intervention? Of 104 countries, 49 say yes and 55 say no.
(3) Must infractions of any prudential regulations be reported? Of 104 countries, 103 say yes and 1 says no.
(4) With respect to (3), are there any mandatory actions to be taken in these cases? Of 103 countries, 81 say yes and 22 say no.

We assign a value of 1 when the answer is yes and a value of 0 otherwise, except for (1) in which case the reverse is done for purposes of the variable being constructed here. This variable is calculated as the sum of these assigned values. It may therefore range in value from 0 to 4, with a higher value indicating less discretion. Figure 17 shows the variation among countries for this variable.

(c) **Loan Classification Stringency**. This variable measures the degree to which loans that are in arrears must be classified as sub-standard, doubtful, or loss. More specifically, we were provided with the actual number or a range of days beyond which a loan would be put into one of these three classifications. We simply summed the minimum numbers provided across the three classifications so that higher values of this variable indicate less stringency.

(d) **Provisioning Stringency**. This variable measures the degree to which a bank must provision as a loan is classified first as sub-standard, then as doubtful, and lastly as loss. We have been provided with the minimum percentage of the loan for which provisioning must be provided as a loan progresses through each of the three problem loan classifications. We therefore sum the minimum required provisioning percentages when a loan is successively classified as sub-standard, doubtful, and loss. This sum is then the value of our variable Provisioning Stringency, with higher values indicating more stringency.

(e) **Liquidity / Diversification Index**. It was decided to include a variable capturing the degree to which banks are encouraged or restricted with respect to liquidity as well as asset and geographical diversification. In particular, our variable or index was based on the following three questions:

(1) Are there explicit, verifiable, and quantifiable guidelines for asset diversification? Of 107 countries, 38 say yes and 69 say no.
(2) Are banks prohibited from making loans abroad? Of 106 countries, 15 say yes and 91 say no.
(3) Is there a minimum liquidity requirement? Of 103 countries, 77 say yes and 26 say no.

On the basis of "yes or no" answers to these questions, we calculated a Liquidity / Diversification Index. A value of 1 was assigned to yes, except in the case of question (2) where a 1 was assigned to no since this response is associated with greater diversification. These three values are summed and may range in value from 0 to 3, with a higher value indicating greater liquidity and diversification.

6. *Official Supervisory Resource Variables*. It is, of course, important to know the official actions that the supervisory authorities are required or may take in response to various banking situations. But it is also important to know the official supervisory resources available to take these actions. More specially, we attempt to measure the "quantity and quality" of bank supervision. This is done on the basis of 5 variables. We also recognize that it is important to know the degree to which the supervisory authorities are independent and therefore include a variable to capture such independence. All these variables are as follows :

(a) **Supervisors per Bank:** This variable is the number of professional bank supervisors per bank. Figure 7 shows the variation among countries, as mentioned earlier.
(b) **Bank Supervisor Years per Bank:** This variable is the total number of years for all professional bank supervisors per bank.
(c) **Supervisor Tenure:** This variable is the average years of tenure of professional bank supervisors.[22] Figure 18 shows the variation among countries for this variable.
(d) **Onsite Examination Frequency:** This variable is the frequency of onsite examinations conducted in large and medium size banks, with 1 denoting yearly, 2 denoting every 2 years, and so on.
(e) **Likelihood Supervisor Moves into Banking:** This variable is the fraction of supervisors employed by the banking industry subsequent to retirement, with 0 denoting

[22] An attempt was made to obtain data on the ratio of bank supervisory salaries (at entry, on average, with 10 years experience, and the maximum) relative to estimates of private bankers' compensation, but the latter were either most unavailable or difficult to obtain with any degree of confidence. Thus the "turnover" variable is the best approximation--but still a slippery one -- to the incentives that supervisors face, in addition to information on supervisory independence and prompt corrective action requirements.

never, 1 denoting rarely, 2 denoting occasionally, and 3 denoting frequently. Figure 19 shows the variation among countries for this variable.

(f) **Independence of Supervisory Authority:** This variable measures the degree to which the supervisory authority is independent. It is based upon the following three questions:

(1) How is the head of the supervisory agency (and other directors) appointed?
(2) To whom are the supervisory bodies responsible or accountable?
(3) How is the head of the supervisory agency (and other directors) removed?

Depending upon the answers to these questions, especially the last, the degree of independence is rated as 1 for low independence, 2 for medium independence, and 3 for high independence.[23]

7. *Private Monitoring Variables*. Bank behavior clearly is circumscribed by various regulations and supervisory actions as indicated above. But it is also affected by private market forces. It is therefore important to try to capture to some degree the extent to which market or private "supervision" exists in different countries. To this end, we constructed and quantified five different measures of this type of variable using information from the survey and based essentially on information that is disclosed and thus available to the public. These measures are as follows:

(a) **Certified Audit Required:** This variable captures whether an external audit is required of the financial statements of a bank and, if so, by a licensed or certified auditor. Such an audit would presumably indicate the presence or absence of an independent assessment of the accuracy of financial information released to the public. If both factors exist a 1 is assigned; 0 otherwise.

(b) **Percent of 10 Biggest Banks Rated by International Rating Agencies:** The percentage of the top 10 banks that are rated by international credit rating agencies. The greater the percentage, the more the public may be aware of the overall condition of the banking industry as viewed by an independent third party.

(c) **Accounting Disclosure and Director Liability:** Whether the income statement includes accrued or unpaid interest or principal on nonperforming loans and whether banks are required to produce consolidated financial statements, including nonbank financial affiliates or subsidiaries. The release of this type of information or its absence affects the ability of private agents to monitor and hence influence bank behavior. Also, whether bank directors' are legally liable if information disclosed is erroneous or misleading. If all three factors exist a 1 is assigned; 0 otherwise.

[23] For example, Canada was assigned a 3 because the head or "The superintendent can only be removed for cause. If removed, a report disclosing such reasons must be tabled in parliament." Some also responded flatly that "The Governor cannot be dismissed during his original or renewed period of appointment" or can only be removed for specified cause and with parliamentary approval.

(d) **No Explicit Deposit Insurance Scheme:** This variable takes a value of 1 if there is no explicit deposit insurance scheme and if depositors were not wholly compensated the last time a bank failed, and 0 otherwise. A higher value would indicate more private monitoring.
(e) **Private Monitoring Index:** the sum of (a), (b) [which equals 1 if the percentage is 100; 0 otherwise], (c), and (d). In addition, three other measures are included in the index based on 'yes or no' answers. Specifically, a 1 is assigned if off-balance sheet items are disclosed to the public; a 1 if banks must disclose risk management procedures to the public; and a 1 if subordinated debt is allowable (required) as a part of regulatory capital. This variable therefore ranges from 0 to 7, with higher values indicating more private oversight. Figure 20 shows the variation among countries for this variable.

8. *Deposit Insurance Scheme Variables.* Regulations and supervisory practices clearly are important parts of a banking system . But they do not operate in a vacuum. Instead, their effect on various economic outcomes may depend importantly on the existence (or lack thereof) and features of a country's deposit insurance scheme. We therefore construct or rely on five different quantitative variables to capture the type of the deposit insurance regime a country has chosen to adopt. These are as follows:

(a) **Deposit Insurer Power:** This variable is based on the assignment of 1 (yes) or 0 (no) values to three questions assessing whether the deposit insurance authority has the authority to make the decision to intervene in a bank, to take legal action against bank directors or officials, or has ever taken any legal action against bank directors or officers. The sum of the assigned values ranges from 0 to 3, with higher values indicating more power.
(b) **Extra Deposit Insurance Coverage:** captures whether any deposits not covered at the time of a bank failure were nonetheless compensated. If so, it takes on a value of 1, and is 0 otherwise. Of 45 countries, 16 say yes and 29 say no.
(c) **Deposit Insurance Payout Delay:** the average time in months that it takes to pay depositors of a failed bank in full (the latter being defined by the amount covered in relevant statutes).
(d) **Deposit Insurance Funds-to-Total Bank Assets:** the size of the deposit insurance fund relative to total bank assets. In the case of the U.S. savings and loan debacle during the 1980s, the insurance agency itself reported insolvency. This severely limited its ability to effectively resolve failed savings and loan institutions in a timely manner. In weak institutional environments, inadequate funds could actually increase inappropriate behavior of banks.
(e) **Moral Hazard Index:** based on Demirguc-Kunt and Detragiache (2000), who used principal components to capture the presence and design features of explicit deposit insurance systems, with the latter including no coinsurance, foreign currency deposits covered, interbank deposits covered, type of funding, source of funding, management,

membership, and the level of explicit coverage. The higher the value, the greater is moral hazard.

9. *Market Structure Indicators*

The structure of the banking industry necessarily interacts with regulations, supervisory practices and design features of a deposit insurance scheme to produce various economic outcomes. We note the following indicators of market structure available in the survey:

(a) **Bank Concentration:** the fraction of deposits held by the five largest banks. Figure 3 shows the variation among countries for this variable, as mentioned earlier.
(b) **Foreign Bank Ownership**: the fraction of the banking system's assets that are 50% or more foreign owned. Figure 5 shows the variation among countries for this variable, as mentioned earlier.
(c) **Government-Owned Banks:** the fraction of the banking system's assets that are 50% or more government owned. Figure 4 shows the variation among countries for this variable, as mentioned earlier.
(d) **Number of New Banks:** number of applications approved from (e).
  (1) **New Domestic Banks:** number of applications approved from (e1).
  (2) **New Foreign Banks:** number of applications approved from (e2).
(e) **No Entry Applications:** whether any applications for banking licenses, with a positive number assigned a 1; 0 otherwise.
  (1) **No Domestic Applications:** whether any applications for domestic banking licenses, with a positive number assigned a 1; 0 otherwise.
  (2) **No Foreign Applications:** whether any applications for banking licenses, by foreign entities, with a positive number assigned a 1; 0 otherwise.
(f) **Fraction of Entry Applications Denied:** fraction of applications denied.
  (1) **Foreign Denials:** fraction of foreign applications denied.
  (2) **Domestic Denials:** fraction of domestic applications denied.
  Figures 21, 22, and 23 shows the variation among countries for these latter three variables.

We conclude by re-emphasizing that these particular groupings and aggregations (as well as quantification) are not unique, and they refer not only to our judgement but to the rules more than the implementation.[24] The Private Monitoring Index, for example, may not comport with everyone's priors regarding individual country rankings. In this regard it must be remembered that the value assigned to the U.S. as compared to other countries reflects the responses of

[24] The careful user of our database will notice the questions on the extent to which authorities actually enforce given regulations or use the powers with which they were endowed.

countries, and not necessarily reality as perceived by those studying it. In any event, as we have noted, there is, of course, an important difference between regulations and practices. There may be regulations pertaining to certain bank activities or actions. The regulatory or supervisory authorities may nonetheless ignore them. Stated another way, it may be the practice of the authorities to forbear certain regulations. To some degree, we attempt to account for divergences between what the regulations say and what the authorities do. For example, we have information as to whether the supervisory authorities or any other government agency can forbear prudential regulations regarding bank restructuring and reorganization--- of 101 countries, 84 say yes and 17 say no. As another example, we also know whether infractions of any prudential regulation found by a supervisor must be reported. Furthermore, we know whether there are any mandatory actions in such cases, and if so, who, if anyone, is authorized to grant exceptions. Lastly, we know in some cases how many, if any, exceptions were actually granted and who authorized them. This information is presented in Table 4. It shows that most countries require that infractions be reported and have mandatory actions in such cases. The table shows, more generally, that there are indeed instances in which rules and regulations may not tell the whole story about what goes on in a country. It is for this reason that some of the variables included in our database may help to assess the "credibility" of stated or formal regulations and supervisory practices.

A final point is that while it would be important to have information for the variables in our database for a lengthy period of time, the data simply do not exist for the countries that responded to our surveys, and we have found it impossible to backdate our information for all the variables. In no small part, this is because of changes of the governments in countries, changes even in the borders and number of countries, and a fundamental re-orientation of bank regulation and supervision since the 1980s. In any event, in an earlier study Barth, Caprio and

Levine (2000) found evidence that the specific regulatory powers accorded to banks for many countries appeared to change relatively little from the 1970s until quite recently. This is probably also true of supervisory practices, for which it may take a long time to effect meaningful change. Efforts will be made, however, to obtain more information on the regulation and supervision of banks over time for countries.

IV. Characterizing the Data

A. Differences Among Countries by Income Level and Development Status

Table 5 presents information on our variables when the countries are grouped by income level and development status. Some of the more interesting differences among countries when grouped in this way are as follows:

- There is a clear trend for the restrictiveness of bank activities to decline as one moves from the lower income countries to the higher income countries. It is generally the case, however, that real estate activities are more restricted than securities or insurance activities in countries regardless of income level.
- Countries at all income levels on average place fewer restrictions on non-financial firms owning banks than vice versa. In addition, lower income countries as a group are no more restrictive than upper income countries. More generally, the least restricted activity or cross-ownership arrangement is the ownership of banks by non-financial firms among lower income countries.
- Developing countries place more limitations on foreign bank ownership of domestic banks and foreign bank entry through branching than developed countries.
- The maximum percentage ownership of a bank's capital is higher among higher income countries than lower income countries.
- The stringency of capital requirements is lower for lower income countries than for upper income countries. This is the case for all the three measures of capital regulatory stringency.
- The overall power of the official supervisory authorities to take action is generally the same in countries across all four income levels. The Prompt Corrective Action variable, however, is lower for higher income countries than lower income countries and for developed countries as compared to developing countries or emerging market economies.

- The stringency of loan classification is lower for lower income countries than higher income countries, but the reverse holds with respect to the stringency of provisioning.[25]
- The independence of the supervisory authority is lower in developing countries than in developed countries.
- The number of supervisors per bank is more than three times greater in developing countries than in developed countries.
- The degree of private monitoring increases as one moves from lower income countries to high income countries.
- Both bank concentration and foreign bank ownership are essentially invariant to which of the four income categories countries are placed.
- Government ownership of banks increases in countries on average as one moves from the high income level to the lower income level.
- The fraction of entry applications denied, including both domestic and foreign, are quite different in countries across the four income level categories, with the highest rejection rates being in lower income countries.
- Lastly, as compared to other groupings, banks in offshore centers display the highest degree of foreign ownership, highest fraction of domestic entry applications denied, and least degree of supervisory authority independence.

B. Differences Among Countries by Geographical Region

Table 6 shows the difference in the averages for our variables in countries when they are grouped by geographical region. While clearly there are differences across regions, some of the more striking and uniform differences are for the European Union (EU) countries and the South Asian countries. First, the EU countries are uniformly the less restrictive when it comes to securities, insurance and real estate activities as well as bank ownership of nonfinancial firms. At the same time, they are the least restrictive with respect to nonfinancial firm ownership of banks. Second, the EU countries place no limitations on foreign bank entry in contrast to other regional groupings. Third, the EU countries display the greatest stringency as regards capital regulation. Fourth, the EU countries have the fewest supervisors per bank. Fifth, the EU countries display the greatest degree of independence with respect to the supervisory authority. Sixth, both

[25] Although provisioning may be understandably lower in richer countries to the extent that the collection rate is superior, there was substantial under-reporting for this variable among higher income countries compared to all the other income categories. Also, Cavallo and Majnoni (2000) show that whereas industrial countries build up

foreign-bank ownership and government-bank ownership are the lowest in the EU countries as compared to the other groupings.

South Asian countries, in contrast to the EU countries, are the most restrictive with respect to the ownership of banks by nonfinancial firms. These countries also place the most limitations on foreign bank entry, with the East Asian and Pacific countries a close second. The South Asian countries have the highest number of supervisors per bank, again with the East Asian and Pacific countries not far behind. In addition, the South Asian countries have the lowest value for the Private Monitoring Index and the highest value for the Moral Hazard Index. Lastly, these countries have nearly the lowest percentage of foreign bank ownership, while simultaneously having the highest percentage of government-bank ownership.

C. Correlations in Variables from Our Database

As discussed above, some of our variables may be placed under one heading when they could easily be placed under another. One or more of the private monitoring variables, for instance, may alternatively be reviewed as being a part of the official supervisory regime. Aside from this issue, it may also be the case that some of our variables are correlated with one another regardless of the heading under which they are placed. So to assist with a better understanding of the data, we calculated the pairwise Pearson correlation coefficients for all the variables in Table 3. We also assessed their significance levels and found that most of the correlation coefficients were not significantly different from zero. Here, we focus on those variables that are generally either significant or among the more important variables in terms of inter-relationships. Tables 7a through 7d present these variables and the associated correlations. We conduct these correlations only for countries with a population greater than 100,000.

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provisions in good times and draw them down as the business cycle weakens, there was no such variation in the developing countries in their sample.

Table 7a shows the correlations among the three bank activity restrictiveness variables and the two mixing of banking and commerce variables. The three restrictiveness variables are all positively and significantly correlated with one another. Two of these variables, moreover, are positively and significantly correlated with the two cross-ownership variables. Only insurance activities are not significantly correlated with the ownership variables. The two ownership variables themselves, however, are not significantly correlated with each other. Given the positive and significant correlations among the bank restrictiveness variables (i.e., banks engaging in securities, insurance, and real estate activities and banks owing nonfinancial firms) , it makes sense to combine them as discussed earlier into an overall bank restrictiveness variable.

Table 7b shows the correlations among some of our regulatory, supervisory and deposit insurance variables. It may be seen that 17 of the 20 correlations are not significant. The bank activity restrictiveness variables and the bank ownership restrictiveness variables are generally not significantly correlated with the Moral Hazard Index, Private Monitoring Index, Official Supervisory Power, or Prompt Corrective Action. The three exceptions are securities and insurance activities. Both of these variables are negatively and significantly correlated with the Private Monitoring Index. Securities activities, in addition, are positively and significantly correlated with Prompt Correction Action.

Table 7c presents the pairwise correlations among four of the variables discussed in the immediately preceding paragraph: Moral Hazard Index, Private Monitoring Index, Official Supervisory Power, and Prompt Corrective Action. It is not surprising that Official Supervisory Power and Prompt Corrective Action are positively and significantly correlated insofar as the latter variable is a component of the former. What is interesting is that the Private Monitoring Index is significantly correlated with two of the other variables and nearly so with the remaining third variable. It is negatively and significantly correlated with the Moral Hazard Index and positively and significantly correlated with Official Supervisory Power. It is positive and nearly significantly correlated with Prompt Corrective Action. These latter two findings may be interpreted as meaning that supervisory practices are to some extent embodied within the private monitoring variable.

Table 7d contains information on the correlations for 23 other pairs of variables. Perhaps not surprisingly, the three supervisory resource variables are all positively and significantly correlated. Perhaps surprisingly, on the other hand, they are not correlated with Onsite Frequency of Examinations. The two bank entry variables are also positively and significantly correlated. The Government Owned Bank variable provides some interesting results. It is positively and significantly correlated with both Limits on Foreign Bank Entry and Fraction of Entry Applications Denied. Furthermore, it is negatively and significantly correlated with Foreign Bank Ownership and the Private Monitoring Index.

Still other results indicate that Supervisory Forbearance Discretion, perhaps reassuringly, is negatively and significantly correlated with the Private Monitoring Index, Declaring Insolvency Power, Loan Classification Stringency, and Prompt Corrective Action. The Private Monitoring Index is positively and significantly correlated with Loan Classification Stringency and the Capital Regulatory Index. Prompt Corrective Action is positively and significantly correlated with both Loan Classification and Provisioning Stringency. Lastly, the Moral Hazard Index, somewhat surprisingly, is not significantly correlated with either Deposit Insurance Authority Power or Deposit Insurance Funds-to-Total Bank Assets.

V. Summary and Conclusions

As authorities around the world attempt to decide how best to reform bank regulation and supervision, an important input should be a thorough understanding of what other countries do and eventually of the implications of these choices. This paper represents a key step towards the first goal. In a companion paper, we study the relationship between bank performance and stability with differences in bank regulations and supervision [Barth, Caprio, and Levine, 2001]. The main conclusions we draw from this preliminary research on performance and stability are as follows. First, regulatory and supervisory strategies that promote private sector forces work. Countries with policies that promote private monitoring of banks have better bank performance and more stability. Furthermore, countries with more generous deposit insurance schemes tend to have poorer bank performance and greater bank fragility, which confirms research by Cull, Senbet, and Sorge (2000) and Demirguc-Kunt and Detragiache (2000). The private sector theme is reinforced by our results on government banks. Government ownership is negatively linked with both bank performance and stability.

Second, diversification of income streams and loan portfolios also works toward improving performance and stability. We find that diversifying income streams – by not restricting bank activities – is positively linked with bank performance and stability. Diversifying income streams, not surprisingly, works best when there is an active securities market in which to diversify. Furthermore, countries in which banks can – and are encouraged to – diversify their portfolios domestically and internationally suffer fewer crises. The old "don't put all your eggs in one basket" adage still seems relevant for bank regulation in the 21st century.

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Table 1
Administrative Structure of Bank Supervision Around the World

	What body/agency supervises banks?	Is there more than one supervisory body ?	To whom are supervisory bodies responsible or accountable?
Argentina	Central Bank of Argentina via the Superintendency of Financial and Foreign Exchange Institutions	yes	Central Bank
Aruba	Central Bank of Aruba	no	CBA is independent
Australia	Australian Prudential Regulation Authority; all banks are also subject to the Corporations Law administered and enforced by the Australian Securities and Investments Commission (ASIC)	yes	Commonwealth Parliament
Austria	Ministry of Finance	no	Parliament
Bahrain	Bahrain Monetary Agency	no	Board of Directors
Bangladesh	Bangladesh Bank	no	Government
Belarus	National Bank of Belarus	yes	President
Belgium	Banking & Finance Commission	no	Minister of Finance and Minister of Economic Affairs
Bhutan	Royal Monetary Authority of Bhutan	no	Central Bank Governor, Finance Sectretary, Finance Minister and Board of Directors
Bolivia	Superintendency of Banks	no	Finance Ministry
Botswana	Financial Institutions Department, Bank of Botswana	no	Minster of Finance and Development Planning
Brazil	Central Bank of Brazil	no	Ministry of Finance
British Virgin Islands, The	Banking Inspectorate, Financial Services Dept.	no	Minister of Finance
Burundi	Central Bank Inspection	no	Governor of CB
Cambodia	Bank Supervision of the National Bank of Cambodia	no	Governor of National Bank of Cambodia
Canada	OSFI	no	Minister of Finance
Cayman Islands	Cayman Islands Monetary Authority	no	Governor in Council
Chile	Superintendency of Banks	no	Ministry of Finance
China	People's Bank of China	no	State Council
Croatia	Croatian National Bank	no	Parliament
Cyprus	Bank Supervision Dept., Central Bank of Cyprus	no	Board of Directors, Ministry of Finance, and President
Czech Republic	Banking Supevision of CNB; Committee for Securities (for securities activities)	yes	Board of Directors, CNB
Denmark	Danish Financial Supervisory Authority	no	Ministry of Economics
Egypt	Central Bank of Egypt	no	Central Bank is an autonomous authority
El Salvador	Superintendence of the Financial System	no	President and Congress
Estonia	Banking Supervision Department	no	Parliament
Finland	Financial Supervision Authority	no	Parliament
France	Commission Bancaire	no	Parliament
Gambia, The	Central Bank	no	Department of State for Finance and Economic Affairs
Germany	Bundesaufsichtsamt, with the help of the Deutsche Bundesbank for a wide range of supportive tasks	yes	Ministry of Finance
Ghana	Banking Supervision Dept., Bank of Ghana	no	Governor, Bank of Ghana
Gibraltar	Commissioner of Banking, Financial Services Commision	yes	Governor of Gibraltar and the UK Government
Greece	Bank of Greece	no	Parliament
Guatemala	Superintendency of Banks	no	La Junta Monetaria
Guernsey	Guernsey Financial Services Commission	no	Government
Guyana	Bank of Guyana	no	Minister of Finance
Honduras	National Commission of Banks	no	President
Hungary	State Banking and Capital Market Supervision; Central Bank of Hungary	yes	Ministry of Finance
Iceland	Financial Supervisory Authority	no	Minister of Commerce
India	Board for Financial Supervision (BFS)	no	Reserve Bank of India
Indonesia	Bank of Indonesia (starting from 2002, supervisory function will be transferred to a new institution)	no	Parliament
Ireland	Central Bank	no	Not reported
Israel	Banking Supervision Dept., Bank of Israel	no	Governor
Italy	Bank of Italy	no	administrative courts
Jamaica	Central Bank	no	Minister of Finance

Table 1
Administrative Structure of Bank Supervision Around the World

	What body/agency supervises banks?	Is there more than one supervisory body ?	To whom are supervisory bodies responsible or accountable?
Japan	FSA is the sole supervisor of banks	no	Cabinet, the Diet and the Public
Jordan	Central Bank of Jordan	no	Parliament
Kenya	Central Bank of Kenya	no	Treasury
Korea, Rep of.	Banking Supervisory Authority (BSA) and Financial Supervisory Commission ; Ministry of Finance and economy supervises specialized banks	yes	Government
Kuwait	Central Bank of Kuwait	no	Ministry of Finance
Latvia	Bank of Latvia; Credit Institutions Supervision Department	yes	Not reported
Lebanon	Banking Control Commission	no	High Banking Council headed by the Governor of the Central Bank
Lesotho	Central Bank of Lesotho (Bank Supervision Division)	no	Governor/Board of Directors, Central Bank
Liechtenstein	Financial Services Authority	no	Prime Minister
Lituania	Supervision Department, Bank of Lituania	no	Central Bank Board, which is accountable to the Parliament
Luxembourg	Commission de Surveillance du Secteur Financier (CSSF)	no	Minister of Finance
Macau	Monetary and Foreign Exchange Authority of Macau	no	Secretary for Economy and Finance
Macedonia	Supervision Department, National Bank of the Republic of Macedonia	no	Parliament
Malawi	Reserve Bank of Malawi	no	Minister of Finance
Malaysia	Central Bank of Malaysia	no	Minister of Finance
Maldives	Maldives Monetary Authority	no	Board of Directors of MMA
Malta	Central Bank of Malta	no	Minister of Finance
Mauritius	Bank of Mauritius	no	Board of the Bank of Mauritius
Mexico	National Banking and Securities Commission	no	Ministry of Finance
Moldova	Banking Supervision and Relation Department	no	Council of Administration of NBM
Morocco	Bank Al-Maghrib	no	Governor of Bank Al-Maghrib
Namibia	Central Bank	no	Ministry of Finance
Nepal	Inspection and Supervision Dept., Nepal Rastra Bank (CB)	no	Central Bank
Netherlands	De Nedelandsche Bank NV	no	nobody
New Zealand	Reserve Bank of New Zealand	no	Treasurer
Nigeria	Central Bank of Nigeria (Banking Supervision Dept.)	no	Ministry of Finance
Oman	Central Bank of Oman	no	Board of Governors of CB
Panama	Superintendency of Banks	no	Superintendency of Banks is not responsible or accountable to any other entity
Peru	Superintendencia de Banca y Seguros	no	To none according to the Constitution
Philippines	Central Bank of Philippines	no	general public
Poland	Commission for Banking Supervision	yes; there are different supervisors for other financial institutions	Accountable to the Public
Portugal	Banco de Portugal	no	Depositors
Puerto Rico	Office of the Commission of Financial Institutions	yes	Departmento de Hacienda
Qatar	Qatar Central Bank	no	Ministry of Finance
Romania	National Bank of Romania	no	Board of Directors, NBR and the Parliament
Russia	Central Bank of Russia Federation		State Duma (Parliament)
Rwanda	Banque Nacional du Rwanda	yes	Minister of Finance
Samoa (Western)	Financial Institutions Dept, Central Bank of Samoa	no	Governor, CBS
Saudi Arabia	Saudi Arabian Monetary Authority	no	Board of Directors appointed by the Govt. At an institutional level, to the Minister of Finance
Seychelles	Central Bank of Seychelles	no	Board of Directors; Governor of the Central Bank
Singapore	Monetary Authority of Singapore	no	Government
Slovenia	Bank of Slovenia	no	Parliament
Solomon Islands	Central Bank	no	Head of State

Table 1
Administrative Structure of Bank Supervision Around the World

	What body/agency supervises banks?	Is there more than one supervisory body ?	To whom are supervisory bodies responsible or accountable?
South Africa	Office of Registrar of Banks/Bank Supervision Dept.	no	Central Bank Governor (operationally); Ministry of Finance (legally)
Spain	Bank of Spain	no	All administrative decisions of the Banco de Espana can be appealed before the Ministry of Finance (except regulations which are to be appealed before the Courts)
Sri Lanka	Bank Supervision Dept., Central Bank of Sri Lanka	no	Monetary Board comprising of The Governor of the CB; Secretary-General of the Treasury, and a Member appointed by the President
St. Kitts	Eastern Caribbean Central Bank for domestic banks; respective govts. Supervise off-shore banks	no	Monetary Council
Sweden	Finansinspektionen	no	Government
Switzerland	Federal Commission of Banks (CFB)	no	Parliament and the government
Taiwan (China)	Central Bank, Ministry of Finance, Central Deposit Insurance Corporation	yes	prime minister
Tajikistan	Bank Supervision Department of the National Bank of Tajikistan	no	National Bank of Tajikistan
Thailand	Ministry of Finance and Bank of Thailand	yes	Ministry of Finance
Tonga	National Reserve Bank of Tonga	no	Government
Trinidad & Tobago	Central Bank	no	Minister of Finance
Turkey	Central Bank and Treasury conduct supervisory operations. The Banks' Regulatory and Supervisory Agency which will begin operation from Sept. 2000	yes	Ministry of Finance
Turks and Caicos Islands	Superintendent of Banking	no	Governor and Permanent Secretary of Finance
United Kingdom	Financial Services Authority	Depending on the type of	Her Majesty's Treasury
United States	Office of the Comptroller of Currency	Depending whether the bank is part of a holding company or conducts securities or insurance activities in an operating subsidiary, other supervisors such as FDIC or SEC may have some supervisory authority	Department of Treasury
Vanuatu	Reserve Bank of Vanuatu -Domestic Banks; Financial Services Commission	yes	Parliament
Venezuela	Superintendent of Banks and other Financial Institutions	no	Ministry of Finance
Vietnam	State Bank Inspectorate	no	Governor of the Central Bank (State Bank of Vietnam)
Zambia	Bank of Zambia	no	Ministry of Finance

Table 2
Some Basic Differences in Banking Systems Around the World

	Total bank assets / GDP (percent)	Number of banks per 100,000 People	Percent of deposits accounted for by 5 largest banks	Percent of total bank assets government owned	Percent of total bank assets foreign owned	Overall bank activities and ownership restrictiveness	Professional supervisors per bank	Are supervisors legally liable for their actions?	Explicit deposit insurance scheme	Percent of 10 biggest banks rated by int'l agencies
Argentina	54	0.3	48	30	49	1.8	2.4	Yes	Yes	100
Aruba		8.7	94	0	77	1.0	1.0	Yes	No	30
Australia		0.3	73	0	17	2.0	2.0	No	No	100
Austria		11.9	38	4	5	1.3	1.0	Yes	Yes	80
Bahrain	186	3.0	71	4	28	2.3	1.5	No	Yes	0
Bangladesh		0.0	65	70	6	3.0	8.0	No	Yes	0
Belarus		0.3	83	67	3	3.3	4.0	No	Yes	30
Belgium	315	1.2	74			2.3	0.7	Yes	Yes	50
Bhutan		0.1	100	60	20	3.5		Yes	No	0
Bolivia	52	0.2	68	0	42	3.0	6.0	Yes	No	20
Botswana	29	0.3	100	2	98	2.5	9.0	No	No	100
Brazil	55	0.1	58	52	17	2.5	4.0	Yes	Yes	100
British Virgin Islands		21.1	85	0	100	3.3	4.3		No	100
Burundi		0.1	91	63	0	3.0	1.0	No	No	0
Cambodia		0.3	67	16	71	3.5		No	No	0
Canada	154	0.2	76	0		1.8		No	Yes	100
Cayman Islands		1,151.3		0	98	1.8	0.0		No	
Chile	97	0.2	59	12	32	2.8	3.0	Yes	Yes	50
China		0.0	75			3.5	1.0	Yes	No	100
Croatia		1.2	57	37	7	1.8	0.8	Yes	Yes	20
Cyprus	76	1.5	80	3	11	2.0	1.5	No	Yes	27
Czech Republic	125	0.5	74	19	26	2.0	2.0	Yes	Yes	
Denmark	121	3.6	79	0		2.0	0.2	Yes	Yes	40
Egypt		0.0	65	67	4	3.3	8.0	No	No	70
El Salvador	62	0.2	75	7	13	3.3	1.0	Yes	Yes	90
Estonia	59	0.4	95	0	85	2.0	2.5	Yes	Yes	33
Finland		0.2	97	22	8	1.8	0.1	Yes	Yes	100
France	147	0.6	70	0		1.5		Yes	Yes	
Gambia	40	0.4	100	0	76	3.5	1.0	Yes	No	0
Germany	313	3.9	12	42	4	1.3	1.0	No	Yes	100
Ghana	19	0.1	78	38	54	3.0	1.0	No	No	0
Gibraltar		86.2	40	0	100	2.5	6.3	No	Yes	
Greece	100	0.2	70	13	5	2.3	1.5	Yes	Yes	50
Guatemala	28	0.3	38	8	5	3.3	2.5	Yes	Yes	0
Guernsey		121.5	48	0	100	2.0	0.1	No	No	
Guyana		1.0	14	19	16	2.3	1.7	Yes	No	0
Honduras		0.4	52	1	2	2.3	12.0	No	Yes	
Hungary		0.4		3	62	2.3	1.0	No	Yes	
Iceland		1.5		64	0	2.8		Yes	Yes	
India	48	0.0	42	80	0	2.5	5.5	No	Yes	
Indonesia	101	0.1	53	44	7	3.5	3.0	Yes	Yes	100
Ireland		1.6				2.0	0.3	No	Yes	0
Israel	147	0.4	80			3.3		No	No	50
Italy	150	1.6	25	17	5	2.5		Yes	Yes	

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Some Basic Differences in Banking Systems Around the World

	Total bank assets / GDP (percent)	Number of banks per 100,000 People	Percent of deposits accounted for by 5 largest banks	Percent of total bank assets government owned	Percent of total bank assets foreign owned	Overall bank activities and ownership restrictiveness	Professional supervisors per bank	Are supervisors legally liable for their actions?	Explicit deposit insurance scheme	Percent of 10 biggest banks rated by int'l agencies
Jamaica	74	0.2	94	56	44	3.0	1.4	No	Yes	0
Japan		0.2	31	1	6	3.3		No	Yes	100
Jordan	214	0.4	68	0	68	2.8	3.0	No	No	
Kenya	56	0.2	62			2.5	1.0	No	Yes	0
Korea S.	98	0.0	48	30	0	2.3	5.7	No	Yes	100
Kuwait	109	0.4		0	0	2.5	1.4	No	No	100
Latvia		1.0				2.0			Yes	
Lebanon		2.0	40	0	27	2.8	2.5	Yes	Yes	100
Lesotho		0.1	56	51	49	3.0	2.0	Yes	No	0
Liechtenstein		40.6	90	4	1	2.3	0.5	Yes	Yes	10
Lithuania		0.3	90	44	48	2.3	0.8	No	Yes	40
Luxembourg		48.3	27	5	95	1.5	0.2	Yes	Yes	70
Macau	252	5.0	74	1	12	2.3	3.0	No	No	40
Macedonia		1.1	77	1	93	3.3	0.6		Yes	
Malawi		0.1	73	49	8	3.3	1.0	No	No	0
Malaysia	166	0.2	30	0	18	2.5	4.7	No	No	100
Maldives		1.3		75	25	2.5	0.0		No	0
Malta	291	1.3	100	0	49	2.5	2.0	Yes	No	30
Mauritius	96	1.8	91	0	26	3.3	3.0	Yes	No	10
Mexico	30	0.1	80	25	20	3.0	11.5	Yes	Yes	
Moldova	25	0.4	71	7	33	1.8	1.1	No	No	0
Morocco	89	0.1	75	24	19	3.3	3.0	No	Yes	40
Namibia		0.3	100			2.8	5.0	No	No	
Nepal	32	0.1	55	20	35	2.0	4.0	No	No	0
Netherlands	358	5.1	88	6		1.5		No	Yes	30
New Zealand	154	0.5	91	0	99	1.0	0.6	No	No	100
Nigeria	28	0.0	51	13	0	2.3		No	Yes	0
Oman	64	0.7	77	0	11	3.3	3.0	Yes	Yes	100
Panama	386	3.0	30	12	38	2.0	0.6	Yes	No	
Peru	36	0.1	81	3	40	2.0	3.6	Yes	Yes	50
Philippines	91	0.1	46	12	13	1.8	7.0	Yes	No	60
Poland	54	0.2	57	44	26	2.5	2.4	No	Yes	80
Portugal	238	0.6	82	21	12	2.3	0.5	Yes	Yes	100
Puerto Rico		0.4	76	0	31	3.5	4.0	No	Yes	
Qatar		1.9	76	43	15	2.8	1.0	No	No	
Romania	25	0.2	59	70	8	3.3	2.0	Yes	Yes	100
Russia	16	0.9	80	68	9	2.0	2.4	No	No	
Rwanda	16	0.1	100	50	50	3.3	1.0	No	No	
Saint Kitts and Nevis	171	102.3	24	21	65	3.3	0.5		No	
Samoa (Western)		1.3	100	0	93	3.5	1.0		No	
Saudi Arabia	93	0.0	69	0		2.8	7.0	Yes	No	100
Seychelles		7.6		0	0	2.0		No	No	
Singapore		3.9		0	50	2.0	1.0	No	No	
Slovenia	66	1.2	64	40	5	2.3	0.2	No	No	70

Table 2
Some Basic Differences in Banking Systems Around the World

	Total bank assets / GDP (percent)	Number of banks per 100,000 People	Percent of deposits accounted for by 5 largest banks	Percent of total bank assets government owned	Percent of total bank assets foreign owned	Overall bank activities and ownership restrictiveness	Professional supervisors per bank	Are supervisors legally liable for their actions?	Explicit deposit insurance scheme	Percent of 10 biggest banks rated by int'l agencies
Solomon Islands		0.7	100	10	90	3.3	0.5		No	0
South Africa	90	0.1	85	0	5	2.0	3.0	No	No	70
Spain	156	0.8	49	0	11	1.8	0.6	Yes	Yes	100
Sri Lanka		0.1		55		1.8		No	No	
Sweden	129	0.2		0	2	2.3		No	Yes	40
Switzerland	539	5.5	65	15	9	1.3		No	Yes	40
Taiwan		0.2	15	43		3.0	18.0	No	No	100
Tajikistan	9	0.3		7	6	1.5	2.1	Yes	Yes	
Thailand	117	0.0	75	31	7	2.3	10.0	Yes	No	90
Tonga	52	2.8	100	0	100	2.5	1.0	No	No	
Trinidad and Tobago		0.5	75	15	8	2.3	6.0	Yes	Yes	
Turkey		0.1	50	35	66	3.0	0.4	No	Yes	70
Turks and Caicos Islan	6	52.9	100	5	90	2.8	0.1	Yes	No	
United Kingdom	311	0.8		0		1.3	0.7	No	Yes	100
United States	66	3.9	21	0	5	3.0	0.1	No	Yes	100
Vanuatu	126	2.6	100	10	25	3.5	1.0	No	No	
Venezuela	6	0.1	64	5	34	2.5	1.0	No	Yes	40
Vietnam		0.1	65			3.5	3.0		No	
Zambia		0.2	83	23	64	3.3	2.0	No	No	0

Table 3
Information on Bank Structural, Regulatory, Supervisory and Deposit Insurance Variables

Variable	Number of countries providing information	Mean	Median	Standard deviation	Minimum value	Maximum value
1. Bank Activity Regulatory Variables						
(a) Securities Activities	107	1.87	2.00	0.88	1.00	4.00
(b) Insurance Activities	107	2.73	2.00	1.00	1.00	4.00
(c) Real Estate Activities	107	2.90	3.00	1.07	1.00	4.00
2. Mixing Banking / Commerce Regulatory Variables						
(a) Bank Ownership of Nonfinancial Firms	107	2.45	3.00	0.80	1.00	4.00
(b) Nonfinancial Firm Ownership of Banks	107	2.04	2.00	0.91	1.00	4.00
3. Competition Regulatory Variables						
(a) Limitations on Foreign Bank Ownership of Domestic Banks	76	0.24	0.00	0.43	0.00	1.00
(b) Limitations on Foreign Bank Entry	76	0.13	0.00	0.34	0.00	1.00
(c) Entry into Banking Requirements	105	7.33	8.00	1.09	2.00	8.00
4. Capital Regulatory Variables						
(a) Overall Capital Stringency	105	3.45	4.00	1.49	1.00	6.00
(b) Initial Capital Stringency	104	1.56	2.00	0.83	0.00	3.00
(c) Capital Regulatory Index	104	4.99	5.00	1.79	1.00	9.00
(d) Maximum Capital Percentage by Single Owner	106	66.93	100.00	40.58	2.00	100.00
5. Official Supervisory Action Variables						
(a) Official Supervisory Power	105	11.10	12.00	2.76	3.00	16.00
(1) Prompt Corrective Action	105	2.00	0.00	2.43	0.00	6.00
(2) Restructuring Power	103	2.57	3.00	0.81	0.00	3.00
(3) Declaring Insolvency Power	102	1.53	2.00	0.70	0.00	2.00
(b) Supervisory Forbearance Discretion	104	1.61	2.00	0.98	0.00	4.00
(c) Loan Classification Stringency	60	401.67	411.00	390.31	31.00	2,520.00
(d) Provisioning Stringency	105	107.73	160.00	77.33	0.00	205.00
(e) Liquidity / Diversification Index	105	1.93	2.00	0.82	0.00	3.00
6. Official Supervisory Resource Variables						
(a) Supervisors per Bank	92	2.68	1.50	3.05	0.00	18.00
(b) Bank Supervisor Years per Bank	73	27.22	9.80	47.24	0.09	270.00
(c) Supervisor Tenure	79	7.45	6.00	4.87	1.00	25.00
(d) Onsite Examination Frequency	91	1.53	1.00	0.71	0.50	5.00
(e) Likelihood Supervisor Moves into Banking	101	1.82	2.00	0.88	0.00	3.00
(f) Independence of Supervisory Authority	103	1.71	1.00	0.84	1.00	3.00
7. Private Monitoring Variables						
(a) Certified Audit Required	105	0.93	1.00	0.25	0.00	1.00
(b) Percent of 10 Biggest Banks Rated by International Rating Agencies	76	51.58	50.00	40.83	0.00	100.00
(c) Accounting Disclosure and Director Liability	97	2.63	3.00	0.56	1.00	3.00
(d) No Explicit Deposit Insurance Scheme	105	0.40	0.00	0.49	0.00	1.00
(e) Private Monitoring Index	106	6.71	7.00	1.65	2.00	11.00
8. Deposit Insurance Scheme Variables						
(a) Deposit Insurer Power	60	0.73	0.00	1.02	0.00	3.00
(b) Extra Deposit Insurance Coverage	46	0.37	0.00	0.49	0.00	1.00
(c) Deposit Insurance Payout Delay	37	6.71	3.00	11.46	0.03	60.00
(d) Deposit Insurance Funds-to-Total Bank Assets	39	1.45	0.22	5.52	0.00	34.70
(e) Moral Hazard Index	34	0.70	1.82	2.48	-2.49	3.98
9. Market Structure Indicators						
(a) Bank Concentration	95	68.26	73.30	22.92	12.00	100.00
(b) Foreign Bank Ownership	91	33.13	19.90	32.60	0.00	100.00
(c) Government Owned Banks	99	19.29	7.61	23.18	0.00	80.00
(d) Number of New Banks	84	22.69	4.00	109.31	0.00	999.00
(1) New Domestic Banks	92	17.22	1.50	104.45	0.00	996.00
(2) New Foreign Banks	88	5.19	1.00	7.96	0.00	36.00
(e) No Entry Applications	95	0.09	0.00	0.29	0.00	1.00
(1) No Domestic Applications	96	0.26	0.00	0.44	0.00	1.00
(2) No Foreign Applications	91	0.26	0.00	0.44	0.00	1.00
(f) Fraction of Entry Applications Denied	75	23.16	6.67	31.54	0.00	100.00
(1) Foreign Denials	65	20.11	0.00	32.95	0.00	100.00
(2) Domestic Denials	67	21.12	0.00	30.27	0.00	100.00

Table 4
Prudential Bank Regulations and Their Enforcement

	Must infractions of any prudential regulation found by a supervisor be reported?	Any mandatory actions in these cases?	Who authorizes exceptions to such actions	How many exceptions were granted last year?
Argentina	yes	no	not applicable	not applicable
Aruba	yes	no	not applicable	not applicable
Australia	yes	no	APRA	0
Austria	yes	yes	Supervisory Authority	0
Bahrain	yes	yes	Governor, Deputy Governor	few
Bangladesh	yes	no	Head of Supervisory Authority	0
Belarus	yes	yes	Board of National Bank	not available
Belgium	not reported	not reported	not reported	not reported
Bhutan	no	no	Governor	0
Bolivia	yes	yes	No exceptions though banks have the provision to appeal to the Superintendencia de Recursos Jerarquicos	0
Botswana	yes	yes	Board of the Bank of Botswana	0
Brazil	yes	yes	no one	
British Virgin Islands	yes	yes	Governor in Council on recommendations of the Director of Financial Services or the Inspector of Banks	negligible and generally relating to minor matters such as transfer or small shareholding without prior approval
Burundi	yes	yes	Governor of CB	
Cambodia	yes	yes	Governor	0
Canada	yes	no	not applicable	not applicable
Cayman Islands	yes	yes	CIMA	not available
Chile	yes	yes	Superintendent	not available
China	yes	yes	Vice Governor of the People's Bank of China	not reported
Croatia	yes	yes	not reported	not reported
Cyprus	yes	yes	Bank Supervision Department and the Governor	very few
Czech Republic	yes	yes	Governor or head of banking supervision or head of banking inspection	many
Denmark	yes	yes	Danish Financial Supervisory Authority	0
Egypt	yes	yes	Central Bank of Directors	6
El Salvador	yes	yes	Board of Directors of the Superintendence	not reported
Estonia	yes	yes	Court	0
Finland	yes	yes	FSA, if it is stipulated in legislation	24
France	yes	not reported	not reported	not reported
Gambia, The	not reported	no	not reported	not reported
Germany	yes; internally only	no	not reported	not reported
Ghana	yes	yes	Governor	0
Gibraltar	yes	yes	Commissioner of Banking	0
Greece	yes	yes	A committee presided by the Governor of the Bank of Greece takes the decision to impose sanctions or authorize exceptions	5
Guatemala	yes	yes	no exceptions	not applicable
Guernsey	yes	no	Commissioners	not reported
Guyana	yes	yes	Governor/Director of Bank Supervision Dept.	not available
Honduras	yes	yes	Commision of Banks	not reported
Hungary	yes	yes	no exceptions	not applicable
Iceland	yes	yes	Board of the FSA	0
India	yes	no	Board of each respective bank	not available
Indonesia	yes	yes	no exceptions	0
Ireland	yes	no	not applicable	not applicable
Israel	yes	yes	Supervisor of Banks	0
Italy	yes	yes	no exceptions	not applicable
Jamaica	yes	yes	none allowed	not applicable
Japan	yes	yes	no exceptions	no exceptions
Jordan	yes	yes	Borad of Directors or the Governor	0
Kenya	yes	yes	Ministry of Finance	0
Korea	yes	yes	no exceptions	not applicable
Kuwait*	yes	yes	Governor or CB Board of Directors	rarely
Latvia	yes	yes	not reported	not reported

Table 4
Prudential Bank Regulations and Their Enforcement

	Must infractions of any prudential regulation found by a supervisor be reported?	Any mandatory actions in these cases?	Who authorizes exceptions to such actions	How many exceptions were granted last year?
Lebanon	yes	yes	Governor and higher Banking Council authorizes certain exceptions, taking into consideration the BCC recommendations and on condition that these infractions be cleared within a determined period of time	few
Lesotho	yes	yes	Governor/Minister of Finance	not available
Liechtenstein	yes	yes	not reported	not reported
Lituania	yes	no	not applicable	not applicable
Luxembourg	yes	yes	no exceptions	0
Macau	yes	yes	Secretary of Economy and Finance on the recommendation of Monetray Authority of Macau	0
Macedonia	yes	yes	not reported	not reported
Malawi	yes	yes	General Manager, Economic Services upon the advice of Director, Bank Supervision	0
Malaysia	yes	yes	Minister of Finance or Governor	0
Maldives	yes	yes	no exceptions	not applicable
Malta	yes	yes	Governor and senior officials of the supervisory department	0
Mauritius	yes	yes	no exceptions	not applicable
Mexico	yes	yes	National Banking and Security Commission	not reported
Moldova	yes	yes	no exceptions	not applicable
Morocco	yes	yes	Governor	not reported
Namibia	yes	yes	Governor	0
Nepal	yes	yes	Governor or Board of Directors of Central Bank	0
Netherlands	yes	yes	Nederlandsche Bank	0
New Zealand	yes	no	not applicable	not applicable
Nigeria	yes	yes	Governor of CBN	0
Oman	yes	yes	Executive President, CB	0
Panama	yes	no	Superintendent of Banks	0
Peru	yes	yes	no exceptions	0
Philippines	yes	yes	Monetary Board of the CB	0
Poland	yes	yes	Commision for Banking Supervision	0
Portugal	yes	no	not applicable	not applicable
Puerto Rico	yes	no	Commission	0
Qatar	yes	yes	Governor	not reported
Romania	yes	no	not applicable	not applicable
Russia	yes	yes	The procedure for inspecting credit institutions including determining the duties of credit insitutions in assisting inspection is set by the Board of Directors, Central Bank	not reported
Rwanda	yes	yes	Banque Nacional du Rwanda	0
Samoa (Western)	yes	yes	not reported	not reported
Saudi Arabia	yes	yes	no exceptions	0
Seychelles	yes	yes		0
Singapore	yes	not reported	not reported	not reported
Slovenia	yes	yes	Governing Board of the Central Bank	0
Solomon Islands	yes	no	not applicable	0
South Africa	yes	no	Registrar of Banks	many
Spain	yes	yes	Bank of Spain	0
Sri Lanka	yes	yes	Monetary Board	0
St. Kitts	yes	no	not applicable	not applicable
Sweden	yes	yes	Finansinspektionen	0
Switzerland	yes	yes	Federal Commission of Banks (CFB)	not reported
Taiwan (China)	yes	yes	Ministry of Finance	0
Tajikistan	yes	yes	National Bank of Tajikistan	0
Thailand	yes	yes	Senior Director or Director, Supervision Department	not reported
Tonga	yes	yes	NRBT Board of Directors	0

Table 4
Prudential Bank Regulations and Their Enforcement

	Must infractions of any prudential regulation found by a supervisor be reported?	Any mandatory actions in these cases?	Who authorizes exceptions to such actions	How many exceptions were granted last year?
Trinidad & Tobago	yes	yes	Inspector of Banks	0
Turkey	yes	yes	no exceptions	0
Turks and Caicos	yes	yes	Governor or Permanent Secretary of Finance	not reported
United Kingdom	yes	no	not applicable	not applicable
United States	yes	no	not applicable	not applicable
Vanuatu	yes	yes	Minister of Finance	0
Venezuela	yes	yes	no exceptions	0
Vietnam	not reported	not reported	not reported	not reported
Zambia	yes	yes	Bank of Zambia	few

Table 5
Information on Bank Structural, Regulatory, Supervisory and Deposit Insurance Variables: Averages by Income Level

Variable	High income	Upper middle income	Lower middle income	Lower income	Developed countries	Developing or emerging markets	Offshore centres
1. Bank Activity Regulatory Variables							
(a) Securities Activities	1.43	1.96	2.23	2.11	1.37	2.04	1.88
(b) Insurance Activities	2.32	2.60	2.81	3.58	2.22	2.90	2.75
(c) Real Estate Activities	2.38	3.00	3.15	3.42	2.04	3.19	3.00
2. Mixing Banking / Commerce Regulatory Variables							
(a) Bank Ownership of Nonfinancial Firms	2.27	2.36	2.77	2.47	2.22	2.53	2.00
(b) Nonfinancial Firm Ownership of Banks	1.97	2.00	2.19	2.00	1.77	2.13	2.59
3. Competition Regulatory Variables							
(a) Limitations on Foreign Bank Ownership of Domestic Banks	0.17	0.44	0.19	0.14	0.08	0.31	0.00
(b) Limitations on Foreign Bank Entry	0.07	0.11	0.24	0.14	0.04	0.17	0.00
(c) Entry into Banking Requirements	7.17	7.33	7.50	7.42	7.19	7.38	7.50
4. Capital Regulatory Variables							
(a) Overall Capital Stringency	3.89	3.54	3.00	3.11	4.19	3.20	2.13
(b) Initial Capital Stringency	1.69	1.58	1.48	1.37	1.85	1.46	1.13
(c) Capital Regulatory Index	5.60	5.13	4.42	4.47	6.08	4.65	3.25
(d) Maximum Capital Percentage by Single Owner	80.46	59.96	61.92	56.06	88.70	59.49	50.63
5. Official Supervisory Action Variables							
(a) Official Supervisory Power	10.64	11.67	11.04	11.37	11.08	11.11	10.00
(1) Prompt Corrective Action	1.25	3.08	1.69	2.47	1.19	2.27	0.75
(2) Restructuring Power	2.46	2.58	2.64	2.68	2.50	2.60	2.13
(3) Declaring Insolvency Power	1.21	1.75	1.77	1.50	1.27	1.62	1.00
(b) Supervisory Forbearance Discretion	1.92	1.33	1.35	1.72	1.96	1.49	2.13
(c) Loan Classification Stringency	331.00	284.12	342.29	631.00	280.33	408.05	290.00
(d) Provisioning Stringency	42.43	134.29	149.80	146.00	33.70	133.36	73.13
(e) Liquidity / Diversification Index	1.94	2.04	2.00	1.68	2.04	1.90	1.38
6. Official Supervisory Resource Variables							
(a) Supervisors per Bank	1.71	3.47	3.27	2.33	0.94	3.13	1.94
(b) Bank Supervisor Years per Bank	21.65	25.72	50.48	12.87	10.96	31.79	9.12
(c) Supervisor Tenure	7.86	7.28	8.80	5.64	8.57	7.14	4.25
(d) Onsite Examination Frequency	1.71	1.43	1.39	1.56	1.70	1.49	1.86
(e) Likelihood Supervisor Moves into Banking	1.94	1.75	1.96	1.53	1.92	1.79	1.57
(f) Independence of Supervisory Authority	2.00	1.54	1.63	1.47	2.19	1.55	1.38
7. Private Monitoring Variables							
(a) Certified Audit Required	0.92	1.00	0.92	0.89	0.96	0.92	0.88
(b) Percent of 10 Biggest Banks Rated by International Rating Agencies	68.82	66.65	47.50	6.67	68.50	44.69	32.50
(c) Accounting Disclosure and Director Liability	2.60	2.91	2.54	2.44	2.54	2.66	2.83
(d) No Explicit Deposit Insurance Scheme	0.33	0.28	0.44	0.63	0.08	0.51	0.63
(e) Private Monitoring Index	7.14	7.21	6.54	5.47	6.85	6.66	6.38
8. Deposit Insurance Scheme Variables							
(a) Deposit Insurer Power	0.83	0.76	0.46	0.86	0.83	0.68	0.50
(b) Extra Deposit Insurance Coverage	0.50	0.25	0.50	0.00	0.50	0.30	0.00
(c) Deposit Insurance Payout Delay	4.73	2.77	7.95	21.06	4.73	8.23	N/A
(d) Deposit Insurance Funds-to-Total Bank Assets	3.03	0.27	0.53	1.27	3.03	0.56	0.11
(e) Moral Hazard Index	0.92	0.84	-0.53	1.31	1.32	0.08	N/A
9. Market Structure Indicators							
(a) Bank Concentration	63.75	66.48	72.35	72.91	60.92	70.47	69.51
(b) Foreign Bank Ownership	33.57	31.72	33.75	33.59	24.81	35.47	70.55
(c) Government Owned Banks	10.28	12.32	28.32	35.36	10.27	22.34	12.38
(d) Number of New Banks	49.29	6.29	4.84	10.53	64.39	6.97	7.67
(1) New Domestic Banks	36.37	2.83	6.82	6.47	50.60	4.76	2.29
(2) New Foreign Banks	9.26	3.47	1.70	3.89	10.78	3.22	4.29
(e) No Entry Applications	0.09	0.14	0.13	0.00	0.04	0.11	0.13
(1) No Domestic Applications	0.31	0.25	0.30	0.11	0.24	0.27	0.25
(2) No Foreign Applications	0.16	0.30	0.43	0.22	0.08	0.33	0.25
(f) Fraction of Entry Applications Denied	7.69	11.99	32.22	49.32	3.21	31.45	36.67
(1) Foreign Denials	7.16	8.33	28.04	49.82	2.13	29.32	19.05
(2) Domestic Denials	6.91	16.85	30.83	37.85	3.21	28.21	40.99

Table 6

Information on Bank Structural, Regulatory, Supervisory and Deposit Insurance Variables: Averages by Region

Variable	Americas	East Asia & Pacific	Europe and Central Asia	Middle East and North Africa	South Asia	Sub-Saharan Africa	Non-OECD	OECD	Non-EU	EU	Non-Euroland	Euroland
1. Bank Activity Regulatory Variables												
(a) Securities Activities	2.18	2.41	1.51	1.45	1.67	2.07	2.00	1.50	1.99	1.13	1.96	1.09
(b) Insurance Activities	2.59	2.76	2.27	3.45	3.17	3.36	2.90	2.25	2.82	2.20	2.79	2.18
(c) Real Estate Activities	2.82	3.24	2.27	3.73	3.33	3.43	3.16	2.14	3.07	1.87	3.02	1.82
2. Mixing Banking / Commerce Regulatory Variables												
(a) Bank Ownership of Nonfinancial Firms	2.59	2.65	2.27	2.73	2.00	2.43	2.51	2.29	2.51	2.07	2.50	2.00
(b) Nonfinancial Firm Ownership of Banks	2.17	2.35	1.73	1.82	3.17	1.93	2.12	1.79	2.12	1.53	2.09	1.55
3. Competition Regulatory Variables												
(a) Limitations on Foreign Bank Ownership of Domestic Banks	0.20	0.63	0.06	0.50	0.67	0.14	0.27	0.16	0.29	0.00	0.28	0.00
(b) Limitations on Foreign Bank Entry	0.27	0.25	0.06	0.10	0.33	0.00	0.18	0.04	0.16	0.00	0.15	0.00
(c) Entry into Banking Requirements	7.32	7.12	7.39	7.36	6.67	7.77	7.40	7.15	7.38	7.07	7.40	6.73
4. Capital Regulatory Variables												
(a) Overall Capital Stringency	3.18	2.94	3.72	4.00	3.00	3.54	3.23	4.07	3.30	4.33	3.32	4.55
(b) Initial Capital Stringency	1.36	1.59	1.86	1.45	1.40	1.15	1.43	1.93	1.49	1.93	1.53	1.82
(c) Capital Regulatory Index	4.55	4.50	5.58	5.45	4.17	4.69	4.64	6.04	4.78	6.27	4.83	6.36
(d) Maximum Capital Percentage by Single Owner	74.09	51.19	80.41	61.09	41.50	53.57	62.77	78.54	61.48	100.00	63.11	100.00
5. Official Supervisory Action Variables												
(a) Official Supervisory Power	10.64	11.00	11.08	12.55	10.67	11.08	11.18	10.89	11.24	10.27	11.16	10.64
(1) Prompt Corrective Action	1.55	2.24	1.61	3.64	0.00	3.08	2.18	1.48	2.21	0.73	2.14	0.82
(2) Restructuring Power	2.55	2.88	2.51	2.55	2.67	2.38	2.58	2.56	2.61	2.33	2.60	2.36
(3) Declaring Insolvency Power	1.67	1.67	1.39	1.55	0.83	1.85	1.57	1.41	1.59	1.20	1.57	1.18
(b) Supervisory Forbearance Discretion	1.55	1.56	1.69	1.09	2.67	1.46	1.49	1.93	1.53	2.07	1.54	2.18
(c) Loan Classification Stringency	321.81	298.60	254.55	285.83	1303.00	411.25	414.63	285.00	397.80	630.00	397.80	630.00
(d) Provisioning Stringency	120.82	119.19	71.54	118.18	115.83	161.92	129.17	48.79	121.24	26.67	118.74	13.64
(e) Liquidity / Diversification Index	1.59	1.71	2.03	2.64	1.67	2.08	1.92	1.96	1.90	2.13	1.88	2.36
6. Official Supervisory Resource Variables												
(a) Supervisors per Bank	3.18	4.03	1.31	3.24	4.38	2.50	2.97	1.62	2.96	0.61	2.88	0.55
(b) Bank Supervisor Years per Bank	26.06	69.27	11.25	44.81	30.83	13.38	30.52	13.34	29.86	5.78	29.29	4.17
(c) Supervisor Tenure	7.76	9.14	7.08	9.46	4.90	6.20	7.12	8.84	7.19	9.48	7.27	9.35
(d) Onsite Examination Frequency	1.45	1.20	1.70	1.68	1.60	1.54	1.45	1.84	1.47	2.00	1.49	1.89
(e) Likelihood Supervisor Moves into Banking	2.09	1.59	1.97	1.67	1.40	1.57	1.84	1.77	1.78	2.07	1.79	2.10
(f) Independence of Supervisory Authority	1.59	1.47	1.97	2.00	1.50	1.33	1.55	2.15	1.61	2.27	1.62	2.45
7. Private Monitoring Variables												
(a) Certified Audit Required	1.00	0.82	0.94	0.91	1.00	0.92	0.92	0.96	0.93	0.93	0.94	0.91
(b) Percent of 10 Biggest Banks Rated by International Rating Agencies	55.71	74.17	56.92	65.56	0.00	16.36	42.04	75.00	48.57	66.15	49.10	70.00
(c) Accounting Disclosure and Director Liability	2.75	2.57	2.51	3.00	2.50	2.54	2.66	2.54	2.67	2.40	2.66	2.36
(d) No Explicit Deposit Insurance Scheme	0.32	0.76	0.11	0.55	0.67	0.57	0.51	0.07	0.47	0.00	0.45	0.00
(e) Private Monitoring Index	6.73	7.00	6.41	8.45	5.33	6.31	6.69	6.75	6.71	6.67	6.72	6.64

Table 6
Information on Bank Structural, Regulatory, Supervisory and Deposit Insurance Variables: Averages by Region

Variable	Americas	East Asia & Pacific	Europe and Central Asia	Middle East and North Africa	South Asia	Sub-Saharan Africa	Non-OECD	OECD	Non-EU	EU	Non-Euroland	Euroland
8. Deposit Insurance Scheme Variables												
(a) Deposit Insurer Power	1.27	1.00	0.50	0.50	0.50	0.67	0.80	0.64	0.82	0.47	0.76	0.64
(b) Extra Deposit Insurance Coverage	0.42	0.00	0.45	0.00	1.00	0.25	0.32	0.43	0.34	0.45	0.35	0.44
(c) Deposit Insurance Payout Delay	5.46	5.56	5.47	0.03	6.00	30.75	9.55	4.30	7.73	4.32	7.34	4.44
(d) Deposit Insurance Funds-to-Total Bank Assets	0.34	0.11	2.51	0.35	0.12	2.04	0.58	2.70	0.54	4.98	0.57	7.41
(e) Moral Hazard Index	1.24	-0.60	1.48	-2.49	2.95	0.77	-0.77	1.87	0.11	1.94	0.23	2.02
9. Market Structure Indicators												
(a) Bank Concentration	62.47	66.80	65.42	72.04	65.45	82.77	70.96	59.78	69.57	59.19	69.68	56.17
(b) Foreign Bank Ownership	39.27	42.20	28.70	24.56	17.29	35.89	36.18	22.97	34.98	16.29	34.23	19.97
(c) Government Owned Banks	12.20	13.20	19.33	13.76	59.98	24.10	21.17	14.03	20.70	9.98	19.93	12.97
(d) Number of New Banks	60.50	8.23	18.24	2.56	21.40	5.10	6.73	67.68	22.14	25.69	21.59	30.80
(1) New Domestic Banks	54.84	7.31	10.10	0.70	14.40	3.00	4.50	53.25	17.47	15.79	17.02	18.64
(2) New Foreign Banks	2.47	6.23	8.86	1.70	5.83	1.82	3.11	11.45	4.16	11.15	4.13	13.50
(e) No Entry Applications	0.14	0.20	0.03	0.20	0.00	0.00	0.11	0.04	0.11	0.00	0.11	0.00
(1) No Domestic Applications	0.19	0.50	0.19	0.60	0.20	0.00	0.28	0.21	0.27	0.21	0.26	0.27
(2) No Foreign Applications	0.29	0.31	0.13	0.50	0.50	0.18	0.32	0.09	0.29	0.08	0.28	0.10
(f) Fraction of Entry Applications Denied	14.82	43.50	8.19	19.05	69.41	37.01	30.43	4.48	27.25	3.67	26.23	3.23
(1) Foreign Denials	11.96	38.35	6.30	20.00	56.92	40.74	28.29	1.71	24.29	1.67	22.99	2.22
(2) Domestic Denials	13.74	38.96	12.95	12.50	64.63	24.09	26.45	7.67	24.21	5.42	23.53	3.37

Table 7a
Correlations Among Selected Variables

	Securities activities	Insurance activities	Real estate activities	Bank ownership of nonfinancial firms	Nonfinancial firm ownership of banks
Securities activities	-	0.37 (0.00) 104	0.41 (0.00) 104	0.16 (0.10) 104	0.29 (0.00) 104
Insurance activities	0.37 (0.00) 104	-	0.48 (0.00) 104	0.14 (0.15) 104	0.13 (0.20) 104
Real estate activities	0.41 (0.00) 104	0.48 (0.00) 104	-	0.29 (0.00) 104	0.19 (0.05) 104
Bank ownership of nonfinancial firms	0.16 (0.10) 104	0.14 (0.15) 104	0.29 (0.00) 104	-	0.07 (0.49) 104
Nonfinancial firm ownership of banks	0.29 (0.00) 104	0.13 (0.20) 104	0.19 (0.04) 104	0.07 (0.49) 104	-

Note: The top number is the Pearson correlation coefficient, the middle number the P-value, and the bottom number is the number of countries providing information for the two variables.

Table 7b
Correlations Among Selected Variables

	Securities activities	Insurance activities	Real estate activities	Bank ownership of nonfinancial firms	Nonfinancial firm ownership of banks
Moral hazard index *	0.01 (0.96) 34	-0.15 (0.39) 34	-0.22 (0.21) 34	-0.05 (0.77) 34	-0.11 (0.52) 34
Private monitoring index	-0.27 (0.01) 104	-0.26 (0.01) 104	0.02 (0.84) 104	0.03 (0.77) 104	0.01 (0.94) 104
Official supervisory power	0.07 (0.49) 104	-0.06 (0.56) 104	0.04 (0.67) 104	0.09 (0.38) 104	-0.03 (0.75) 104
Prompt corrective action	0.04 (0.71) 104	0.18 (0.07) 104	0.08 (0.43) 104	0.07 (0.48) 104	0.03 (0.79) 104

Note: The top number is the Pearson correlation coefficient, the middle number the P-value, and the bottom number is the number of countries providing information for the two variables.

* This variable is obtained from Demirgüç-Kunt and Detragiache (2000).

Table 7c
Correlations Among Selected Variables

	Moral hazard index	Private monitoring index	Official supervisory power	Prompt corrective action
Moral hazard index *	-	-0.34 (0.05) 34	0.18 (0.30) 34	0.09 (0.61) 34
Private monitoring index	-0.34 (0.05) 34	-	0.22 (0.03) 105	0.15 (0.12) 105
Official supervisory power	0.18 (0.30) 34	0.22 (0.03) 105	-	0.49 (0.00) 105
Prompt corrective action	0.09 (0.61) 34	0.15 (0.12) 105	0.48 (0.00) 105	-

Note: The top number is the Pearson correlation coefficient, the middle number the P-value, and the bottom number is the number of countries providing information for the two variables.

* This variable is obtained from Demirgüç-Kunt and Detragiache (2000).

Table 7d
Correlations Among Selected Variables

Variable	Pearson correlation coefficient	P-Value	Number of countries
Onsite Examination Frequency vs. Supervisors per Bank	-0.17	0.12	81
Onsite Examination Frequency vs. Bank Supervisor Years per Bank	0.21	0.10	66
Onsite Examination Frequency vs. Supervisor Tenure	-0.18	0.13	70
Supervisors per Bank vs. Bank Supervisor Years per Bank	0.88	0.00	73
Supervisors per Bank vs. Supervisor Tenure	0.38	0.00	74
Limits on Foreign Bank Entry vs. Limits on Foreign Bank Ownership of Domestic Banks	0.33	0.00	76
Government Owned Banks vs. Limits on Foreign Bank Entry	0.22	0.07	69
Government Owned Banks vs. Foreign Bank Ownership	-0.33	0.00	89
Government Owned Banks vs. Fraction of Entry Application Denied	0.39	0.00	71
Government Owned Banks vs. Private Monitoring Index	-0.33	0.00	95
Supervisory Forbearance Discretion vs. Declaring Insolvency Power	-0.20	0.05	102
Supervisory Forbearance Discretion vs. Loan Classification Stringency	-0.22	0.09	59
Supervisory Forbearance Discretion vs. Provisioning Stringency	0.34	0.00	103
Supervisory Forbearance Discretion vs. Private Monitoring Index	-0.11	0.27	104
Supervisory Forbearance Discretion vs.Prompt Corrective Action	-0.71	0.00	104
Private Monitoring Index vs. Loan Classification Stringency	0.21	0.10	60
Private Monitoring Index vs. Provisioning Stringency	-0.11	0.26	104
Private Monitoring Index vs. Capital Regulatory Index	0.17	0.09	104
Prompt Corrective Action vs. Loan Classification Stringency	0.22	0.10	60
Prompt Corrective Action vs. Provisioning Stringency	0.33	0.00	104
Moral Hazard Index* vs. Deposit Insurance Authority Power	-0.11	0.59	24
Moral Hazard Index* vs. Deposit Insurance Funds to Total Bank Assets	-0.13	0.68	13
Maximum Capital by Single Owner vs. Actual Risk-Adjusted Capital	0.24	0.02	91

* This variable is obtained from Demirgüç-Kunt and Detragiache (2000).

Note: The Loan Classification Stringency variable has been changed so that higher values indicate more stringency.

Figure 1
Regulatory Restrictions on Bank Activities and the Mixing of Banking and Commerce:
Percentage Distribution of 107 Countries by Degree of Restrictiveness

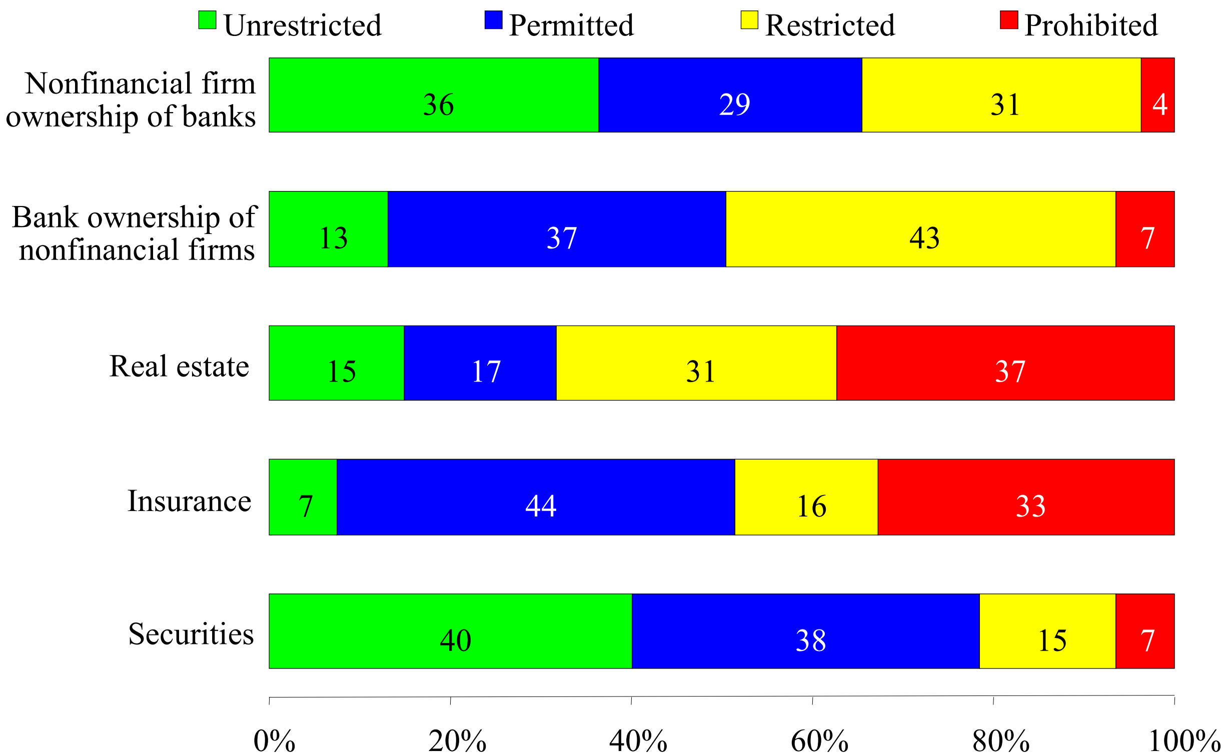


Figure 2
Total Bank Assets / GDP

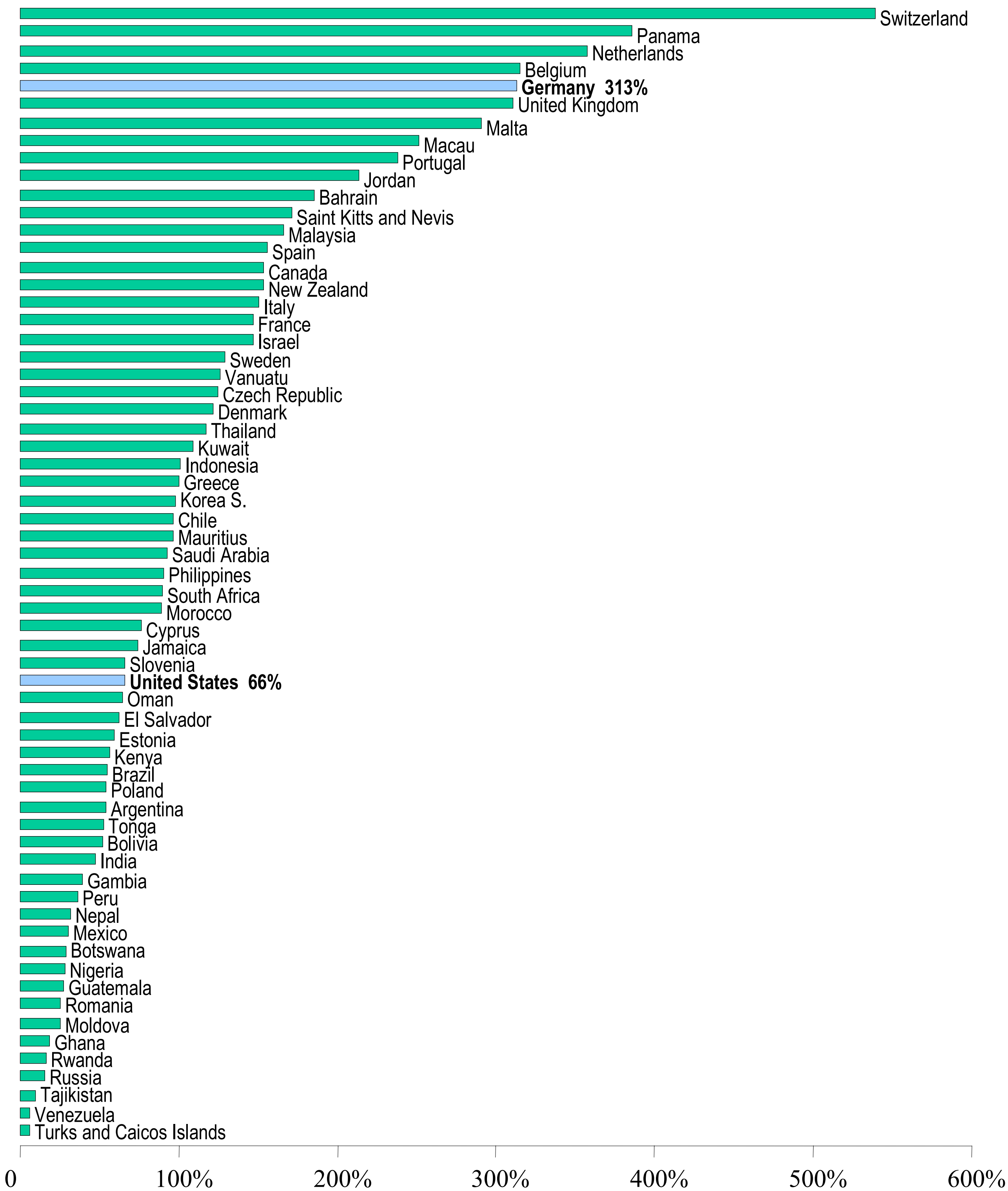


Figure 3
Percent of Deposits Accounted for by 5 Largest Banks

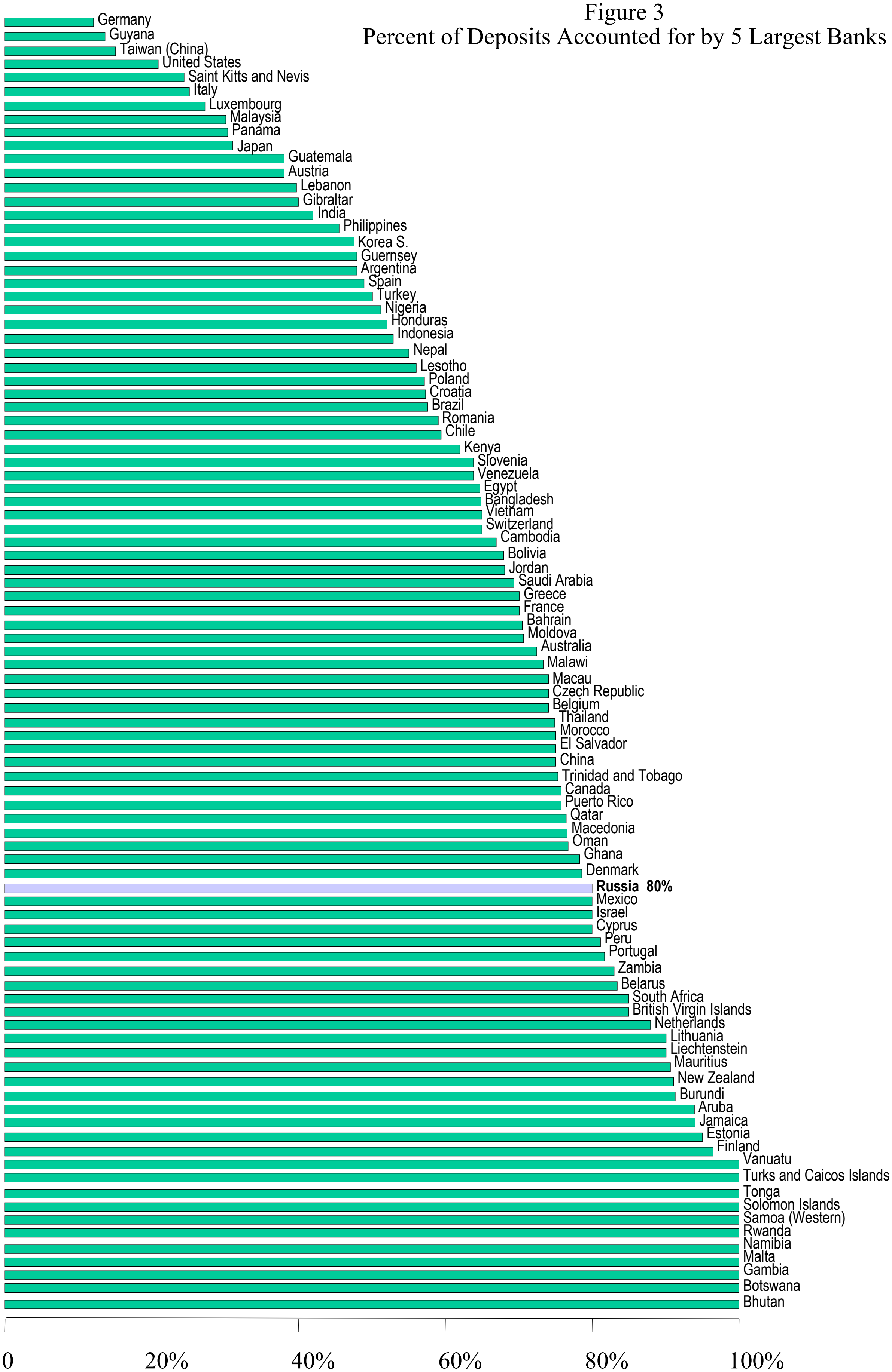
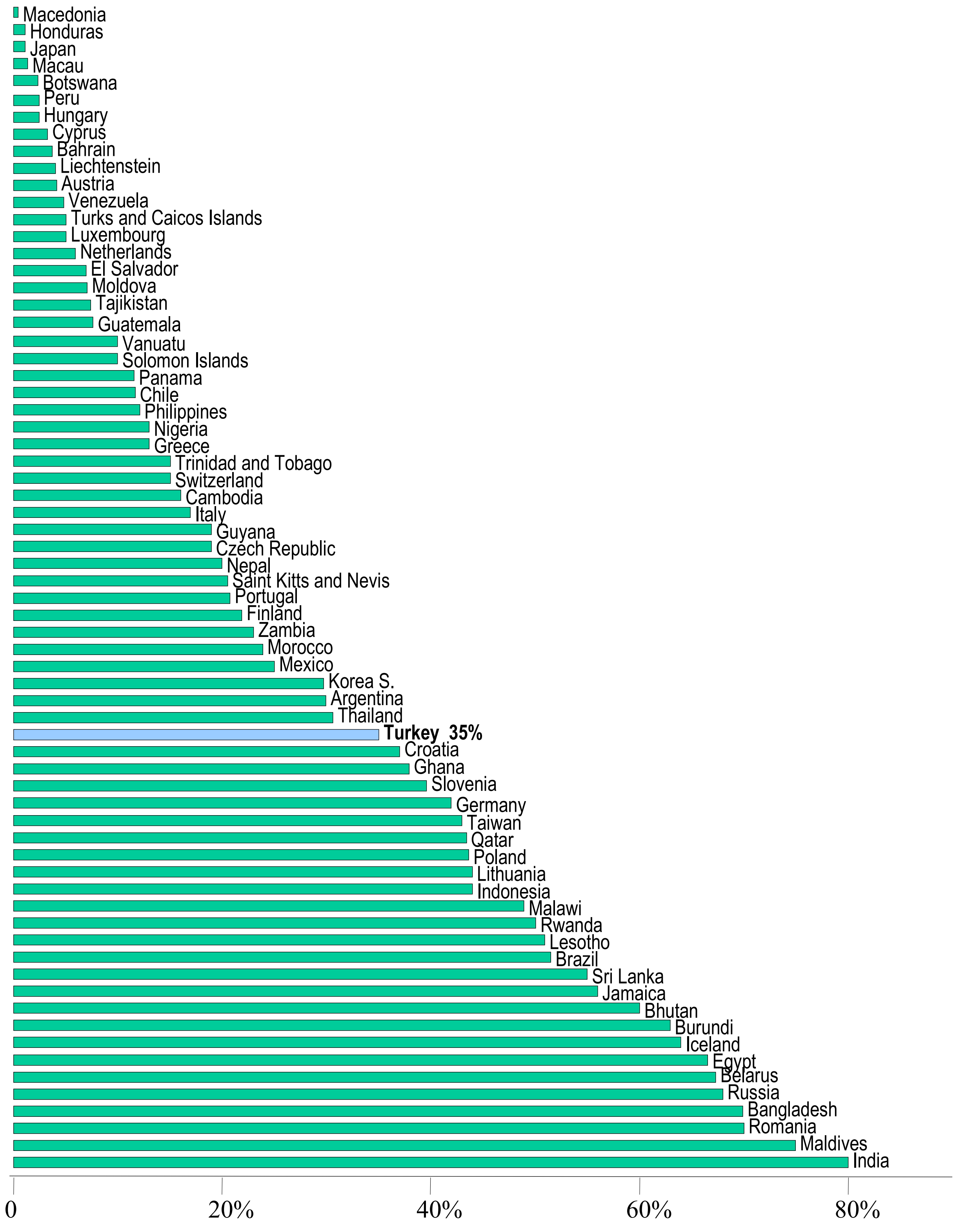
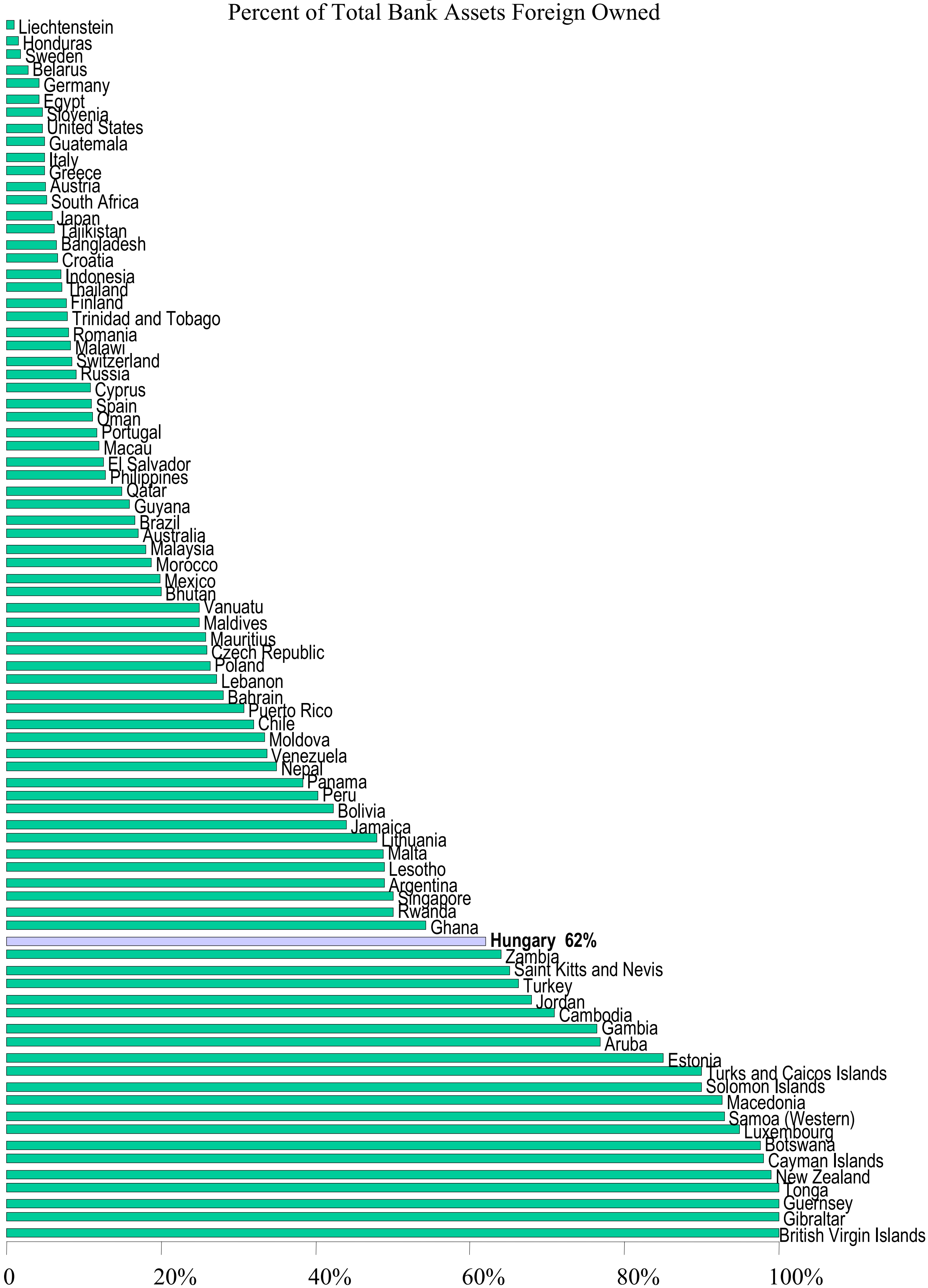


Figure 4
Percent of Total Bank Assets Government Owned



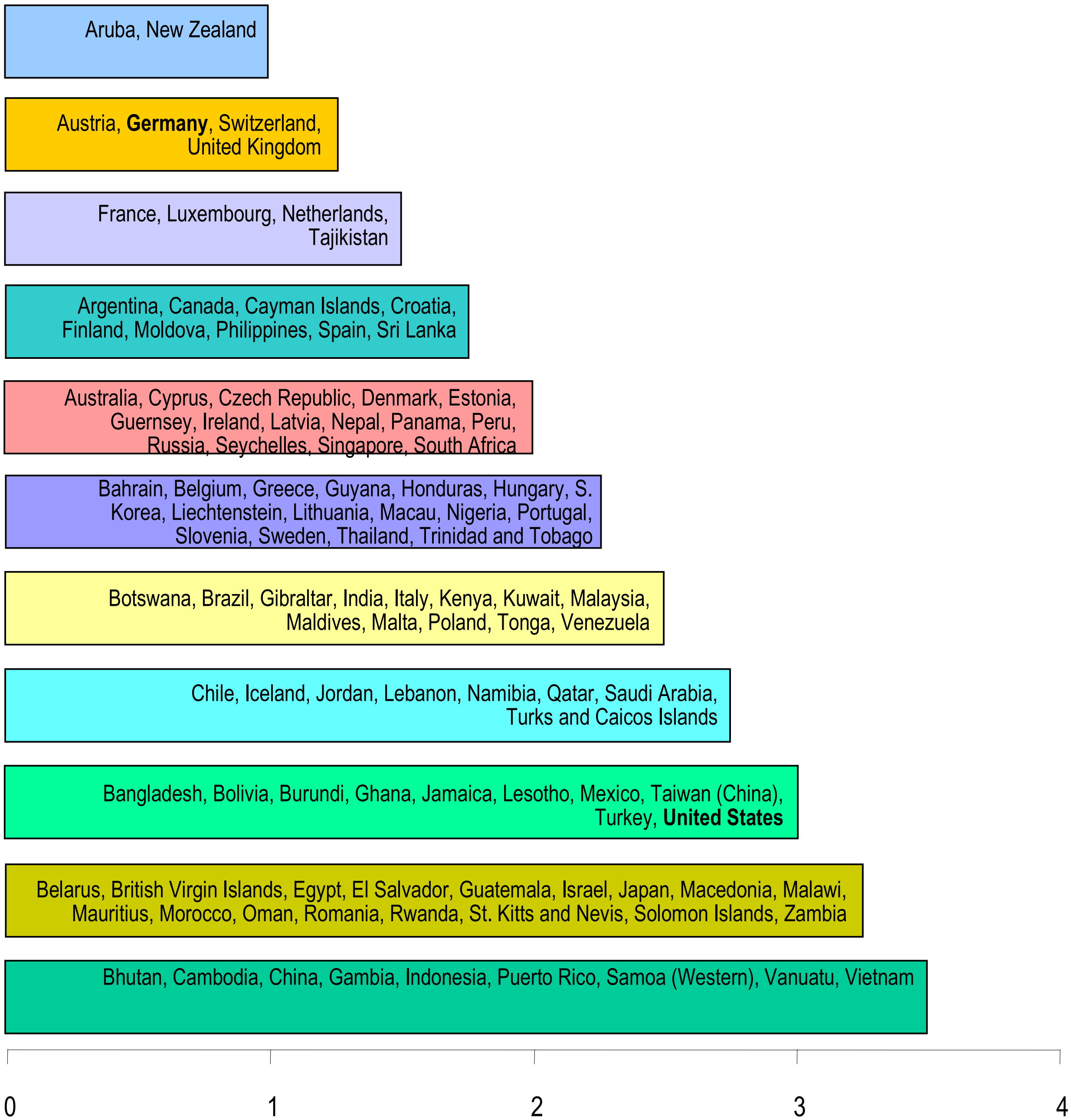
Percent of total bank assets government owned = 0 for:Aruba, Australia, Bolivia, British Virgin Islands, Canada, Cayman Islands, Denmark, Estonia, France, Gambia, Gibraltar, Guernsey, Jordan, Kuwait, Lebanon, Malaysia, Malta, Mauritius, New Zealand, Oman, Puerto Rico, Samoa (Western), Saudi Arabia, Seychelles, South Africa, Spain, Sweden, Tonga, United Kingdom, United States

Figure 5
Percent of Total Bank Assets Foreign Owned



Percent of total bank assets foreign owned = 0 for:Burundi, Iceland, India, S. Korea, Kuwait, Nigeria, Seychelles

Figure 6
Overall Bank Activities & Ownership Restrictiveness



Note: The higher the value the higher the restrictiveness.

Figure 7
Professional Supervisors per Bank

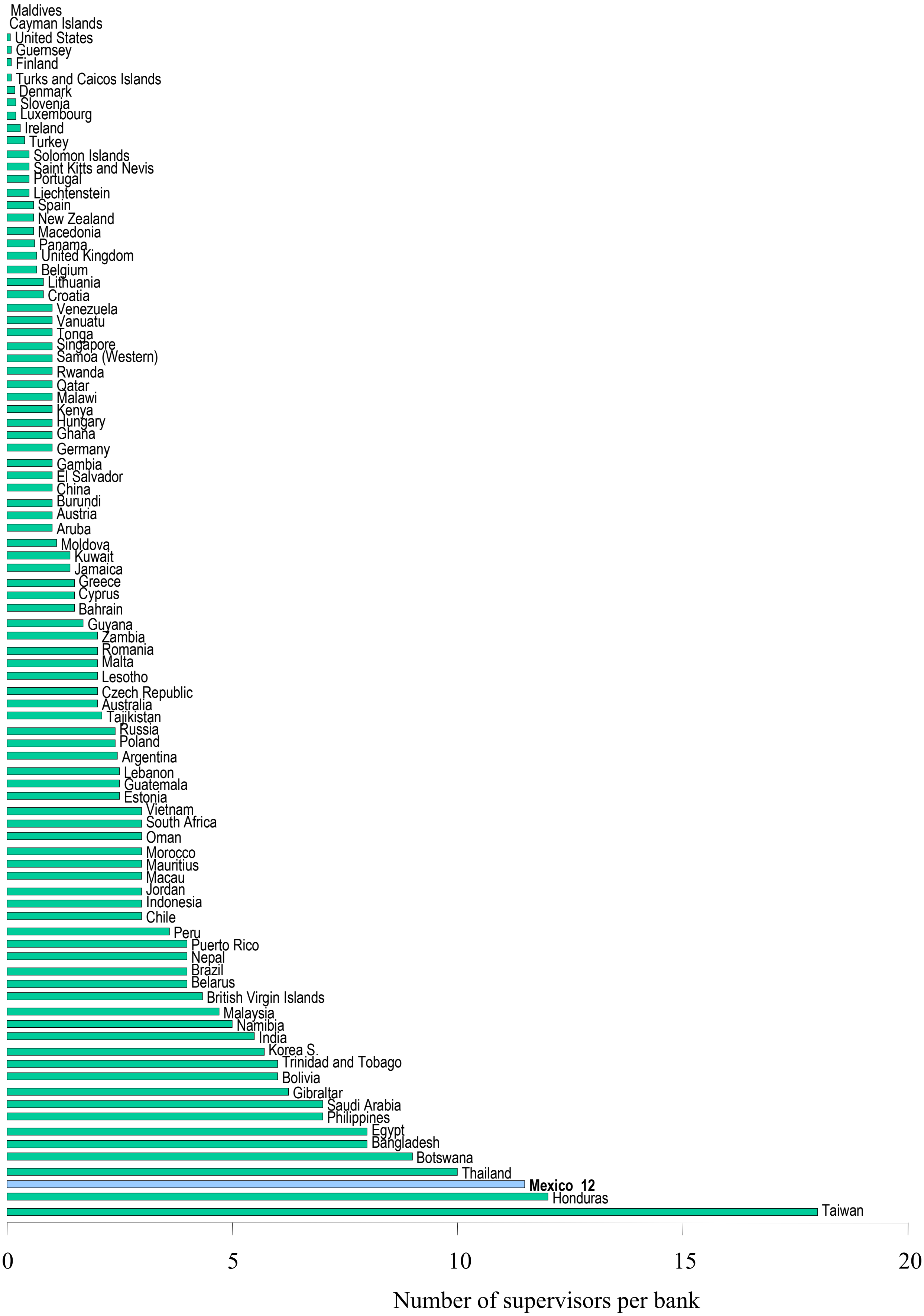
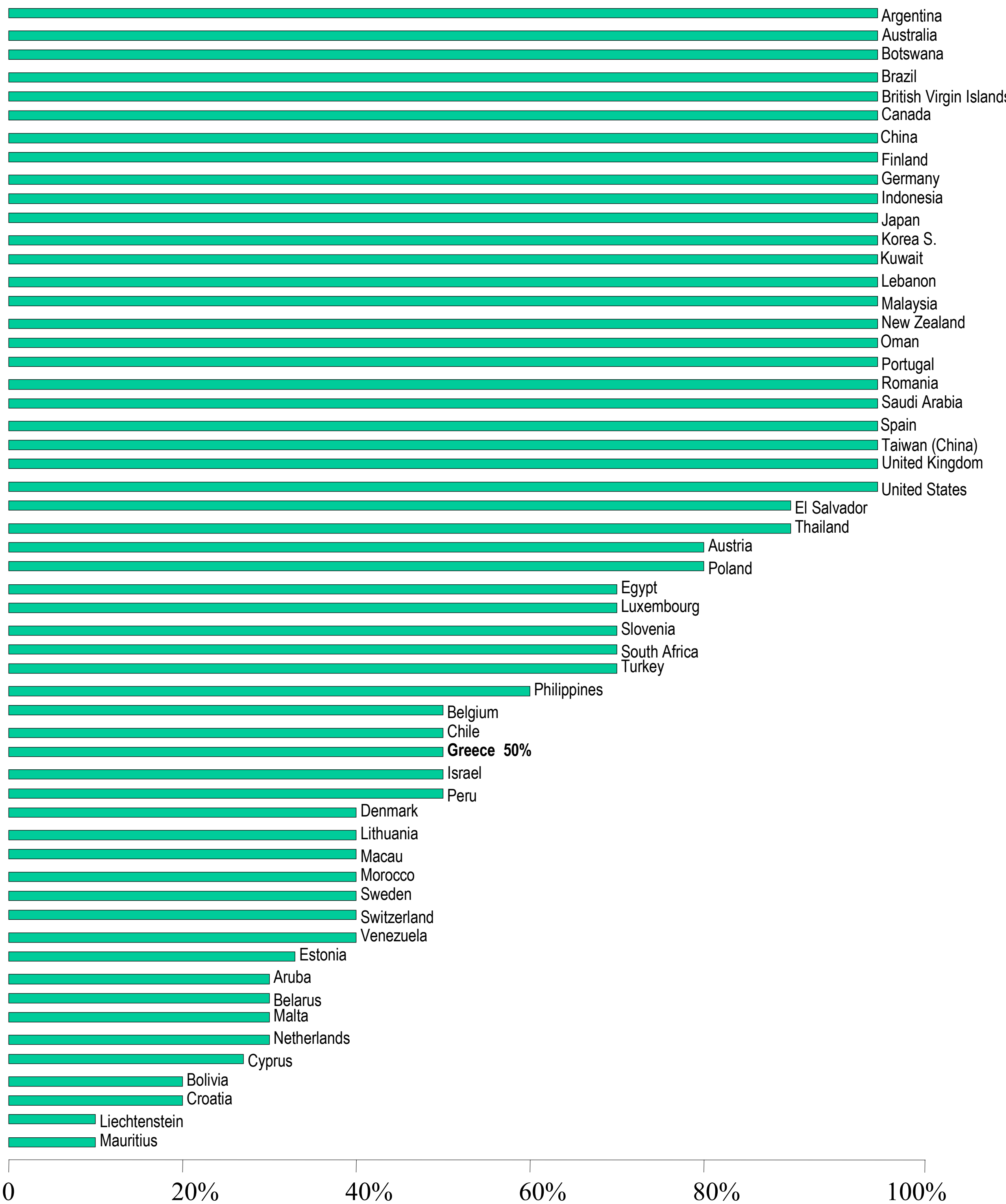


Figure 8
Percent 10 Biggest Banks Rated by International Agencies



Percent 10 Biggest Banks Rated by International Agencies = 0 for: Bahrain, Bangladesh, Bhutan, Burundi, Cambodia, Gambia, Ghana, Guatemala, Guyana, Ireland, Jamaica, Kenya, Lesotho, Malawi, Maldives, Moldova, Nepal, Nigeria, Solomon Islands, Zambia

Figure 9
Minimum Capital-to-Asset Ratio Requirement

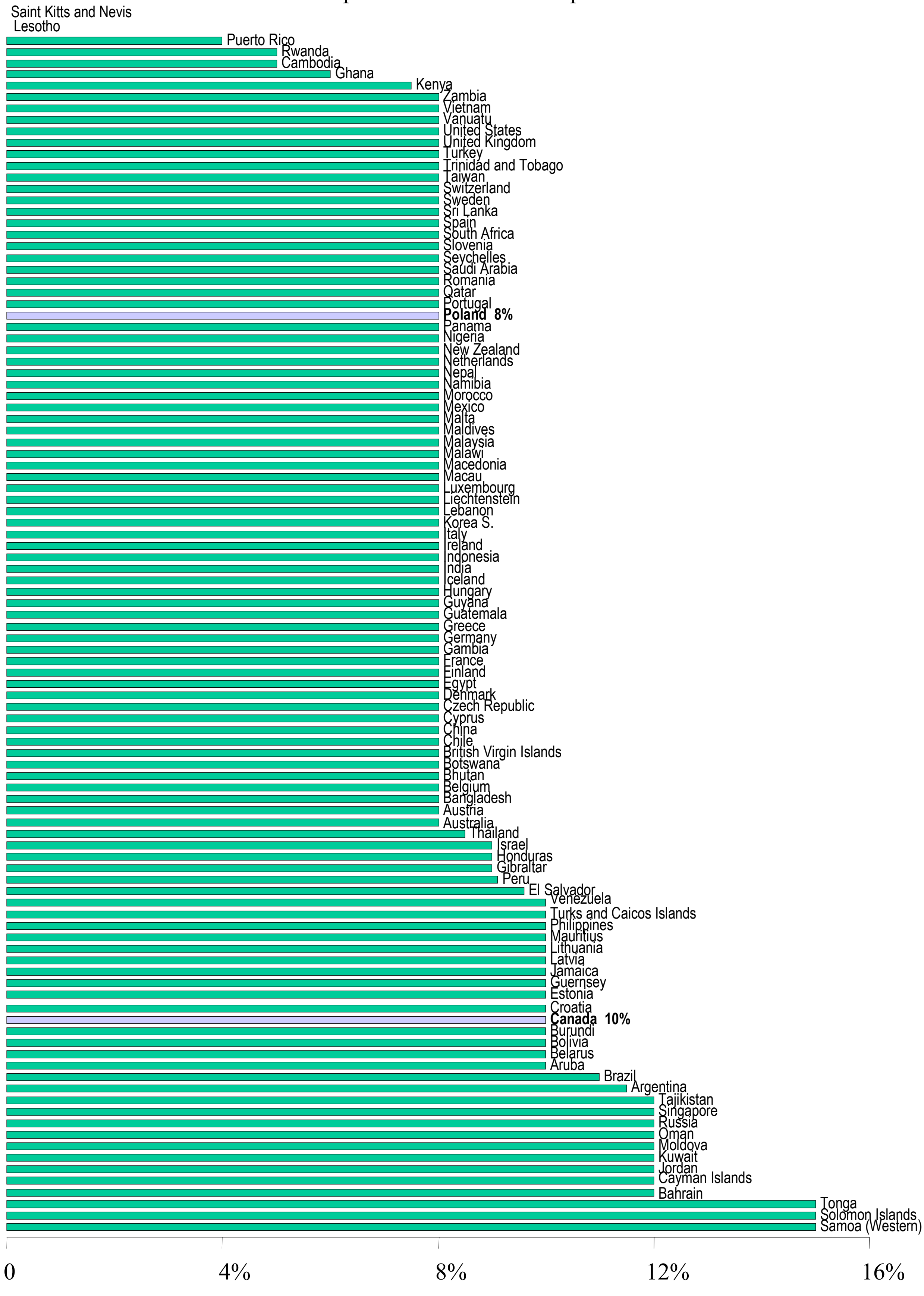


Figure 10
Actual Risk-Adjusted Capital Ratio

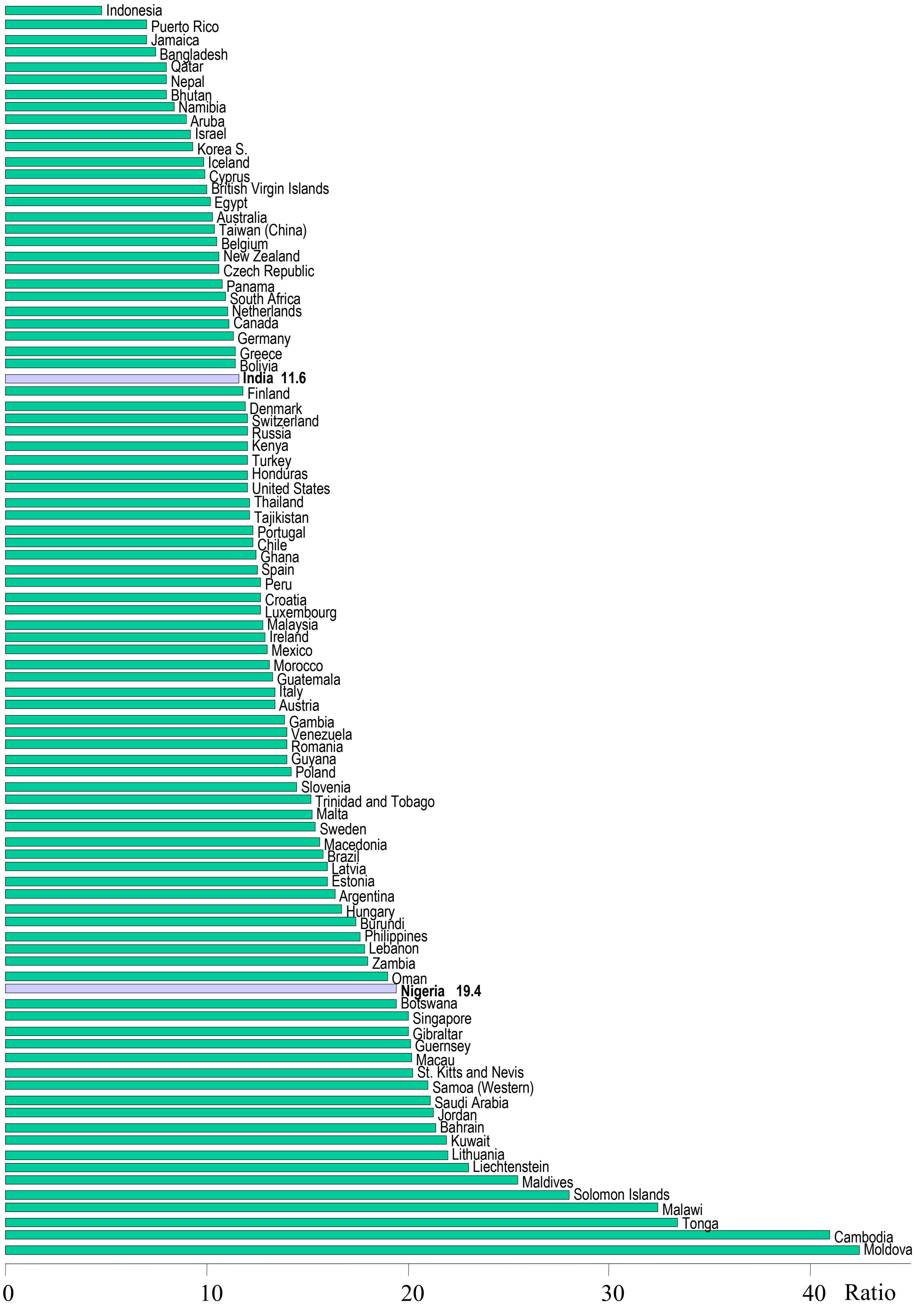
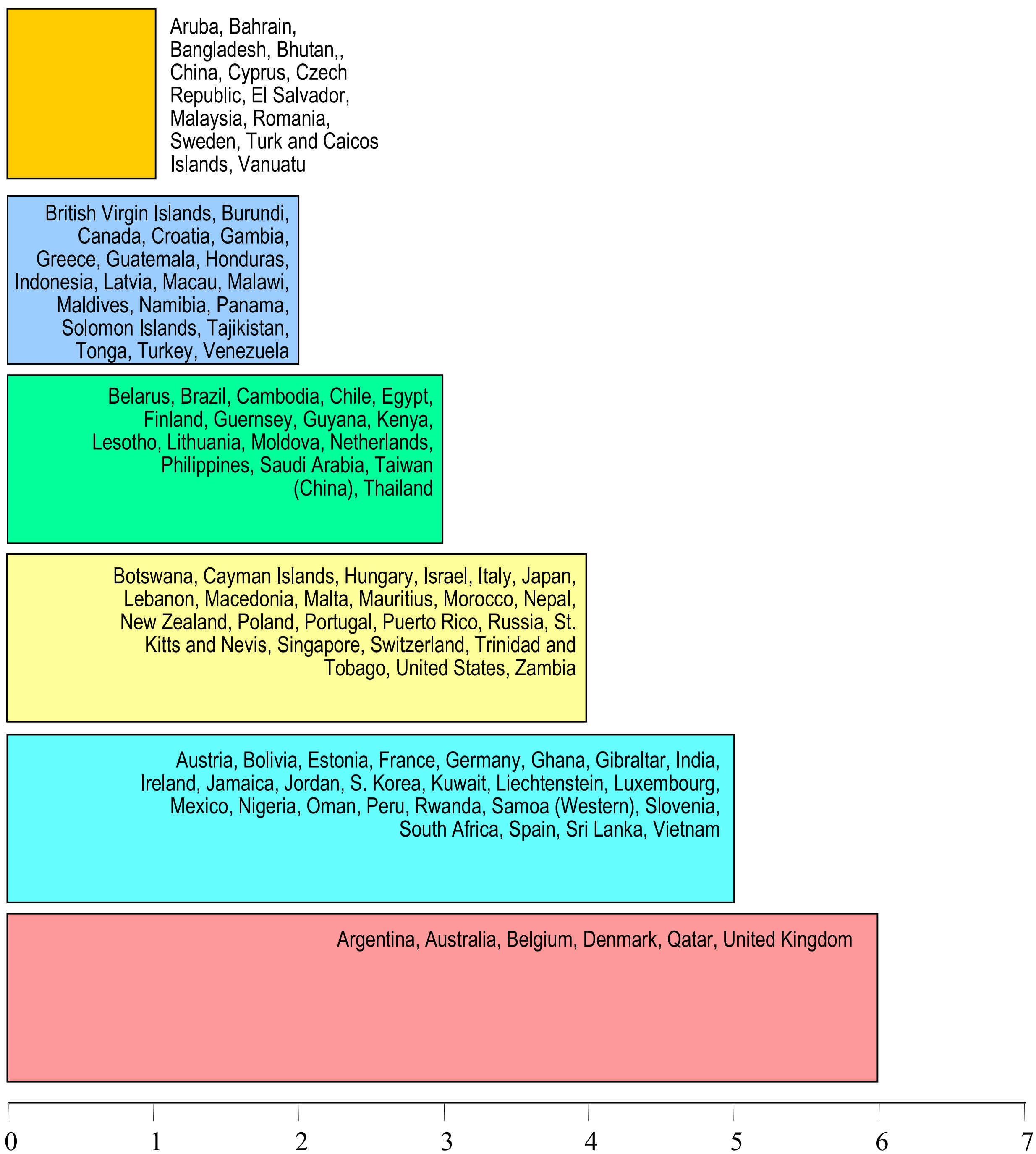
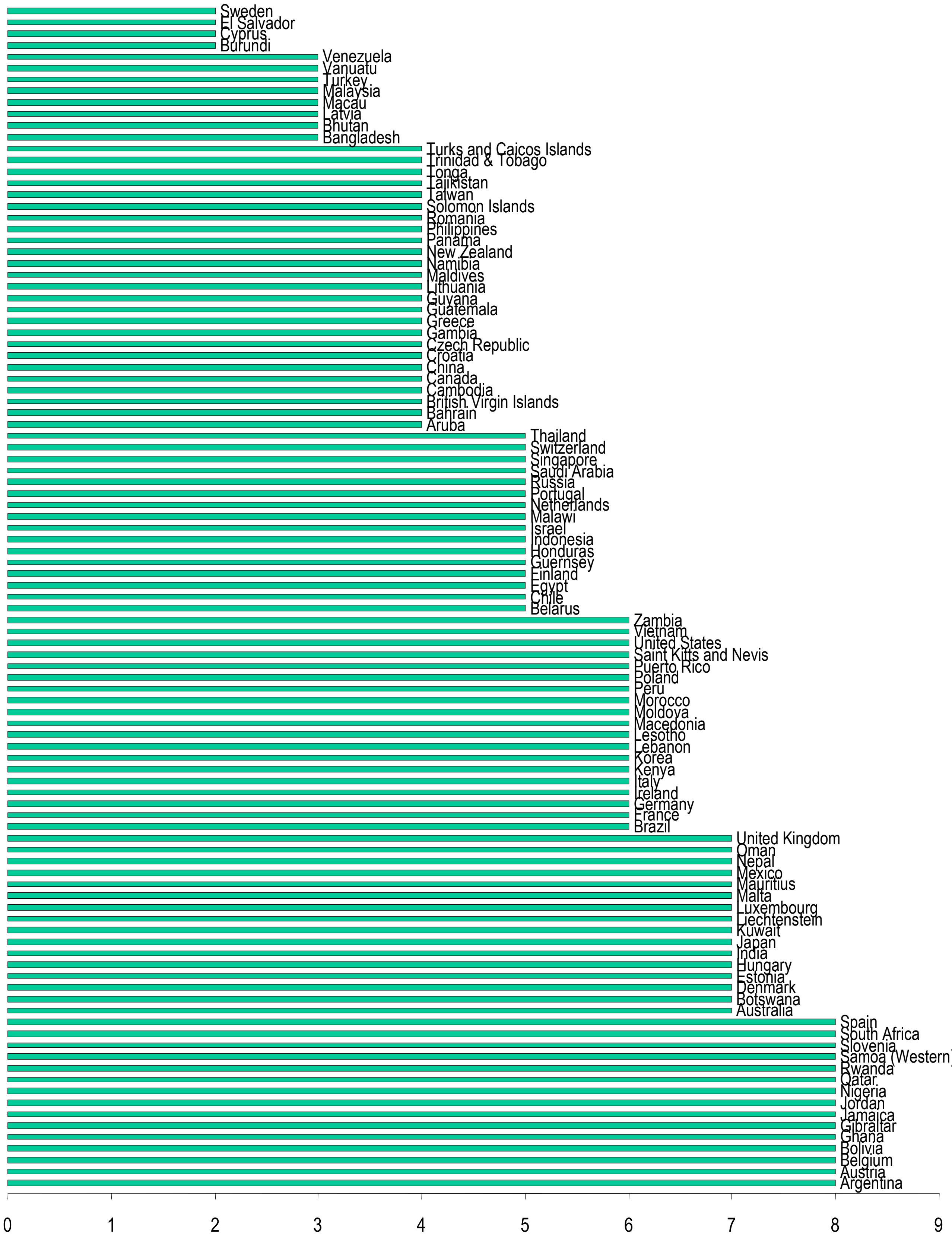


Figure 11
Overall Capital Stringency



Note: The higher the value the more prompt is corrective action

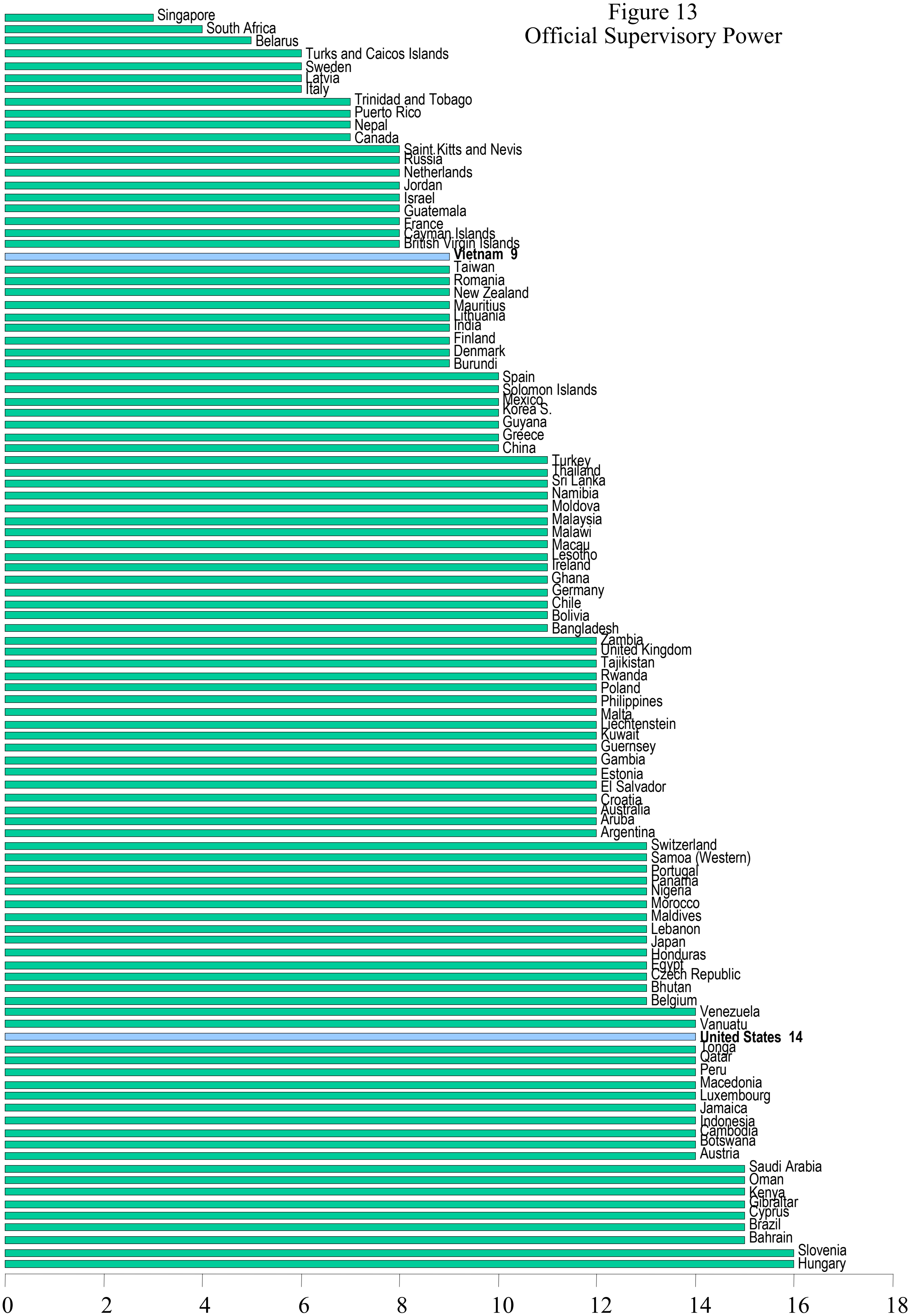
Figure 12
Capital Regulation Index



Note: The higher the value the greater the stringency

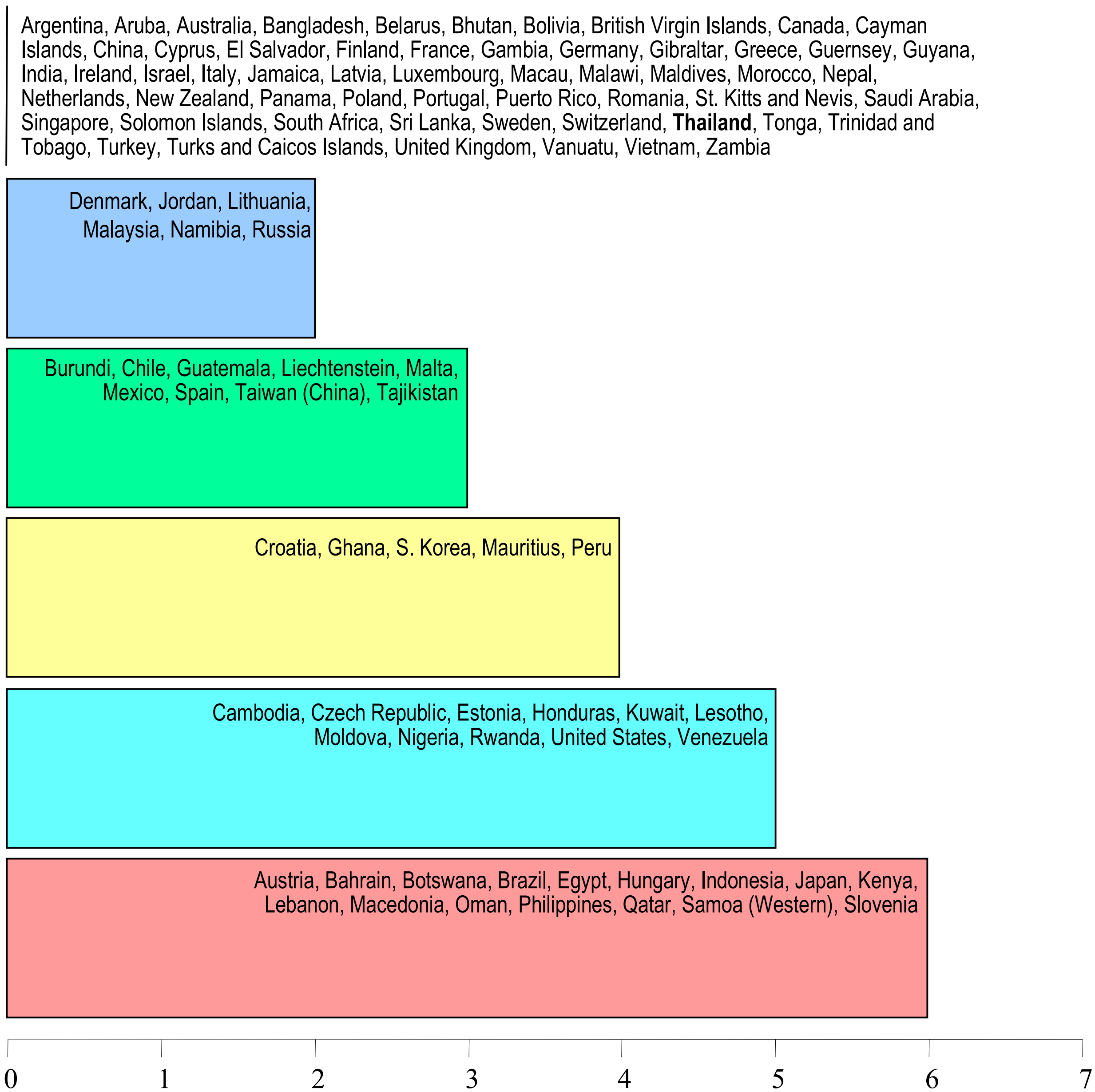
Note: The higher the value the greater the stringency

Figure 13
Official Supervisory Power



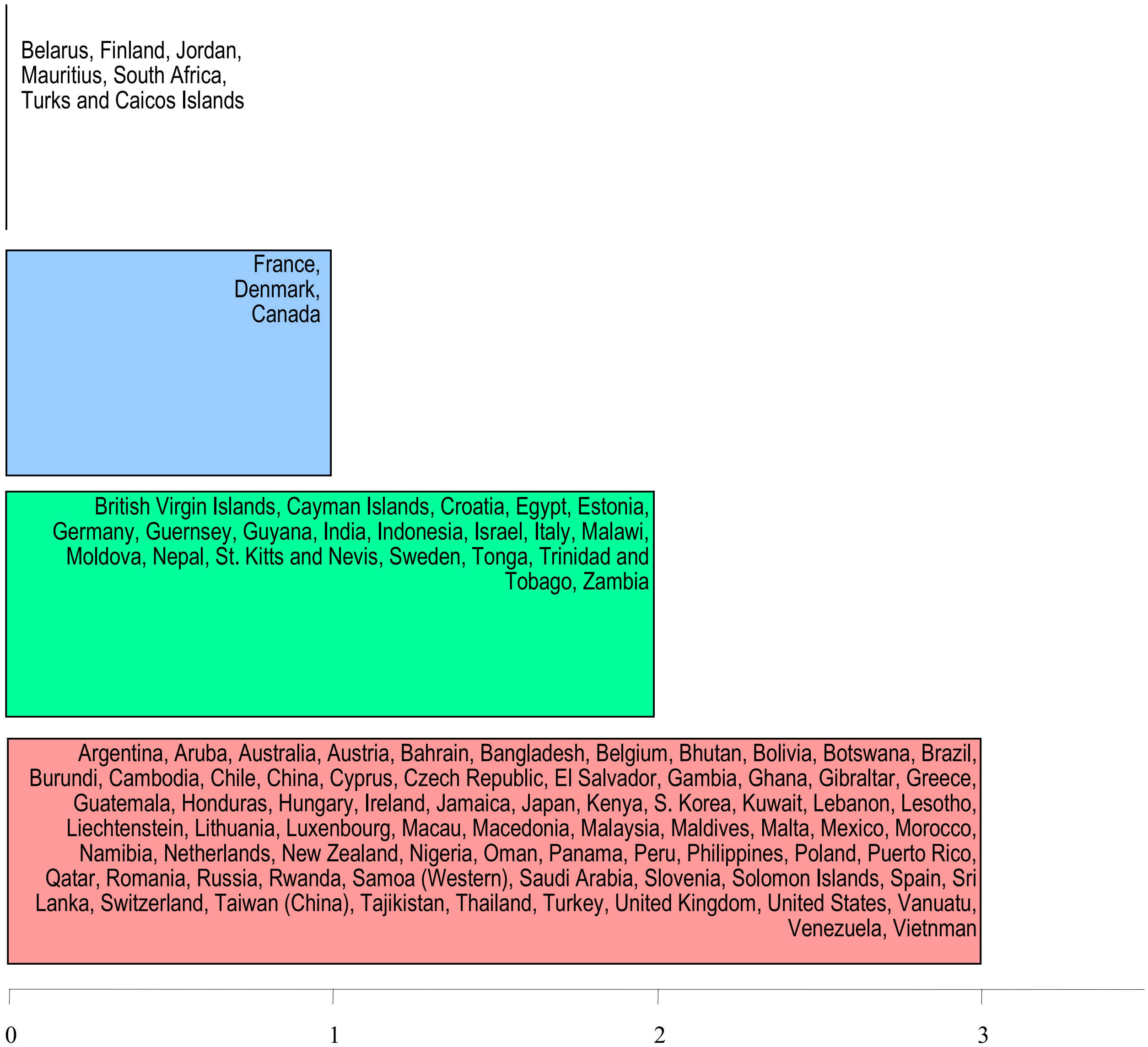
Note: The higher the value the greater the power

Figure 14
Prompt Corrective Action



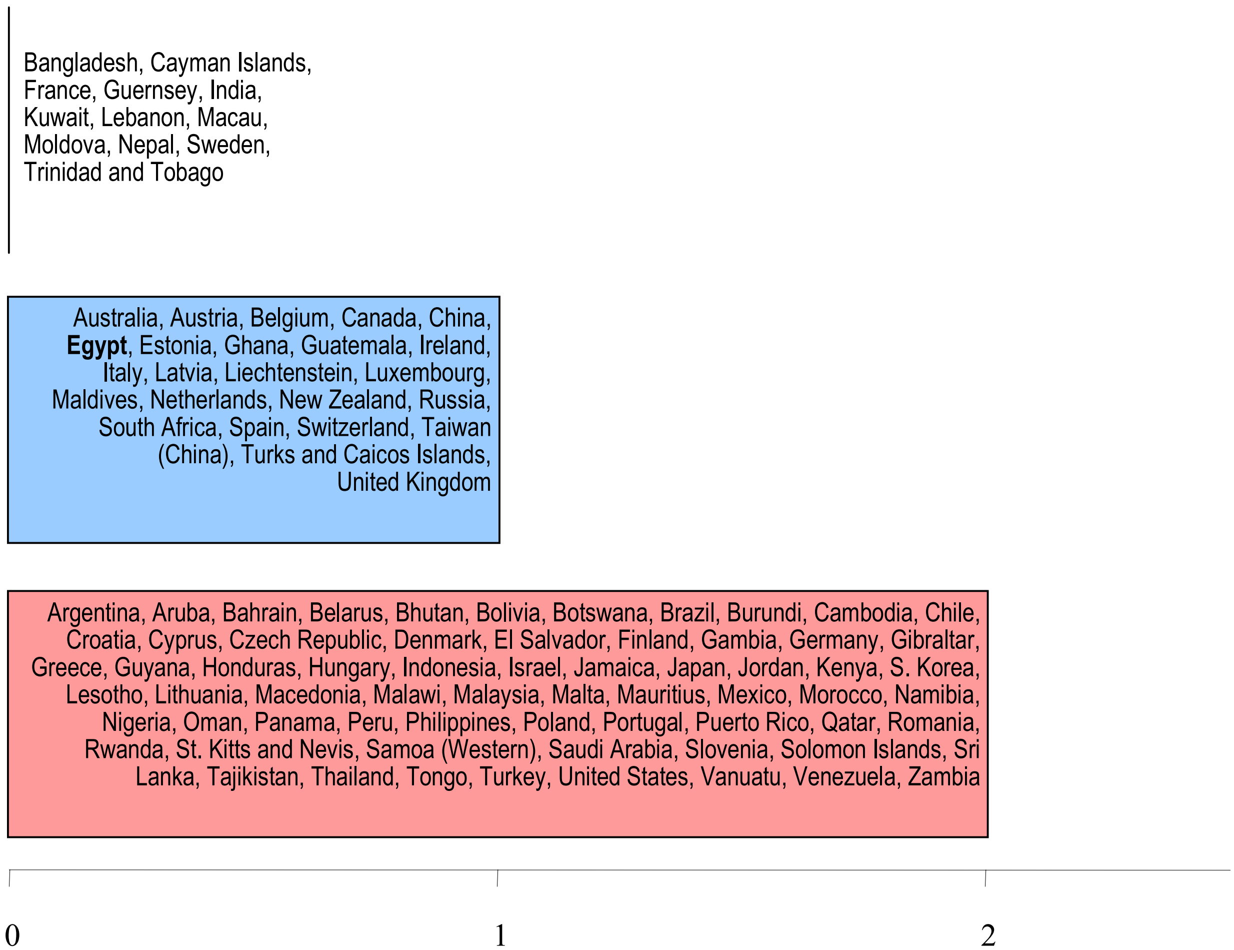
Note: The higher the value the more prompt is corrective action

Figure 15
Restructuring Power



Note: The higher the value the more prompt is the power

Figure 16
Declaring Insolvent Power



Note: The higher the value the greater the power

Figure 17
Supervisory Forbearance Discretion

Note: The higher the value the greater the discretion

Figure 18
Supervisor Tenure

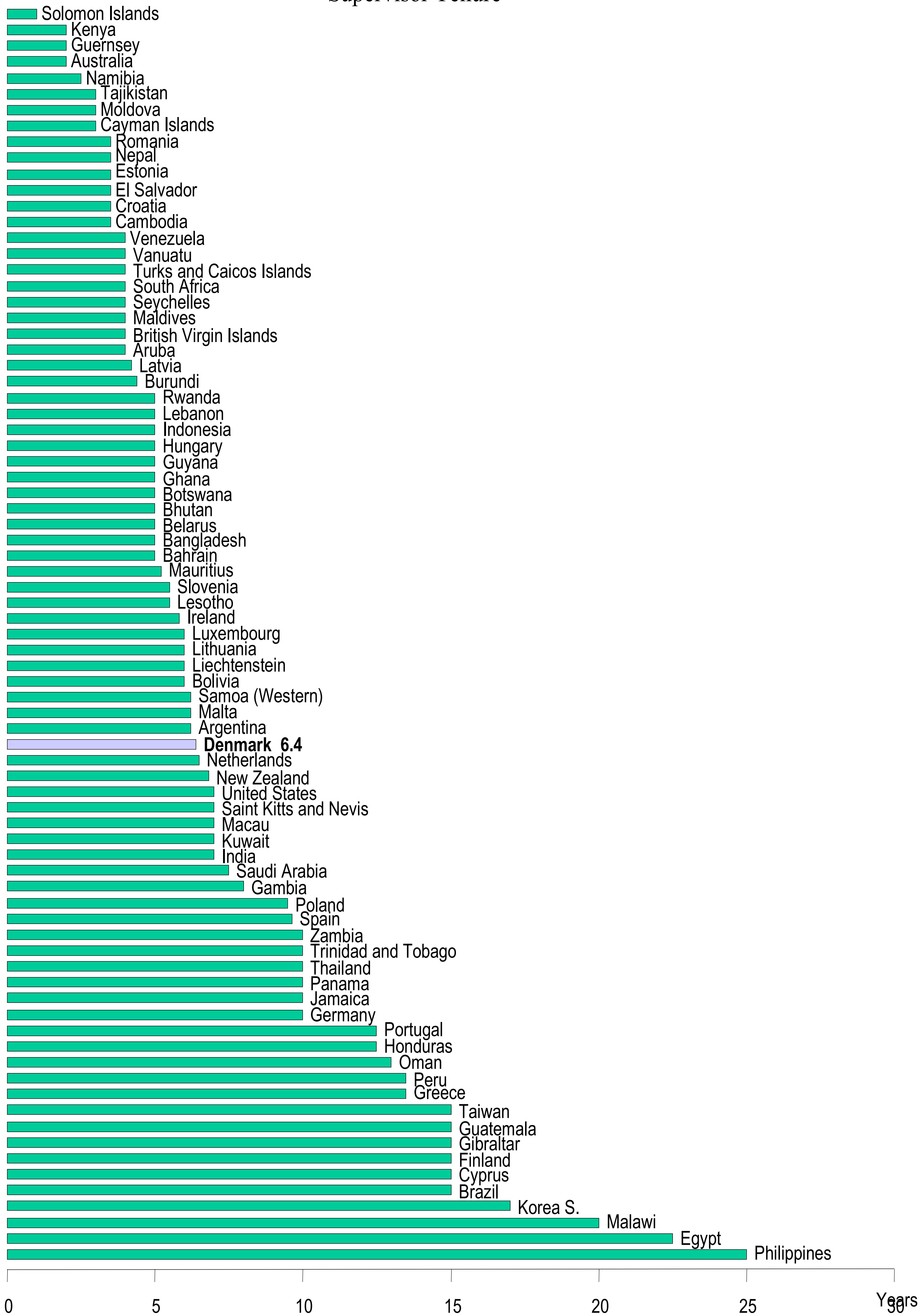
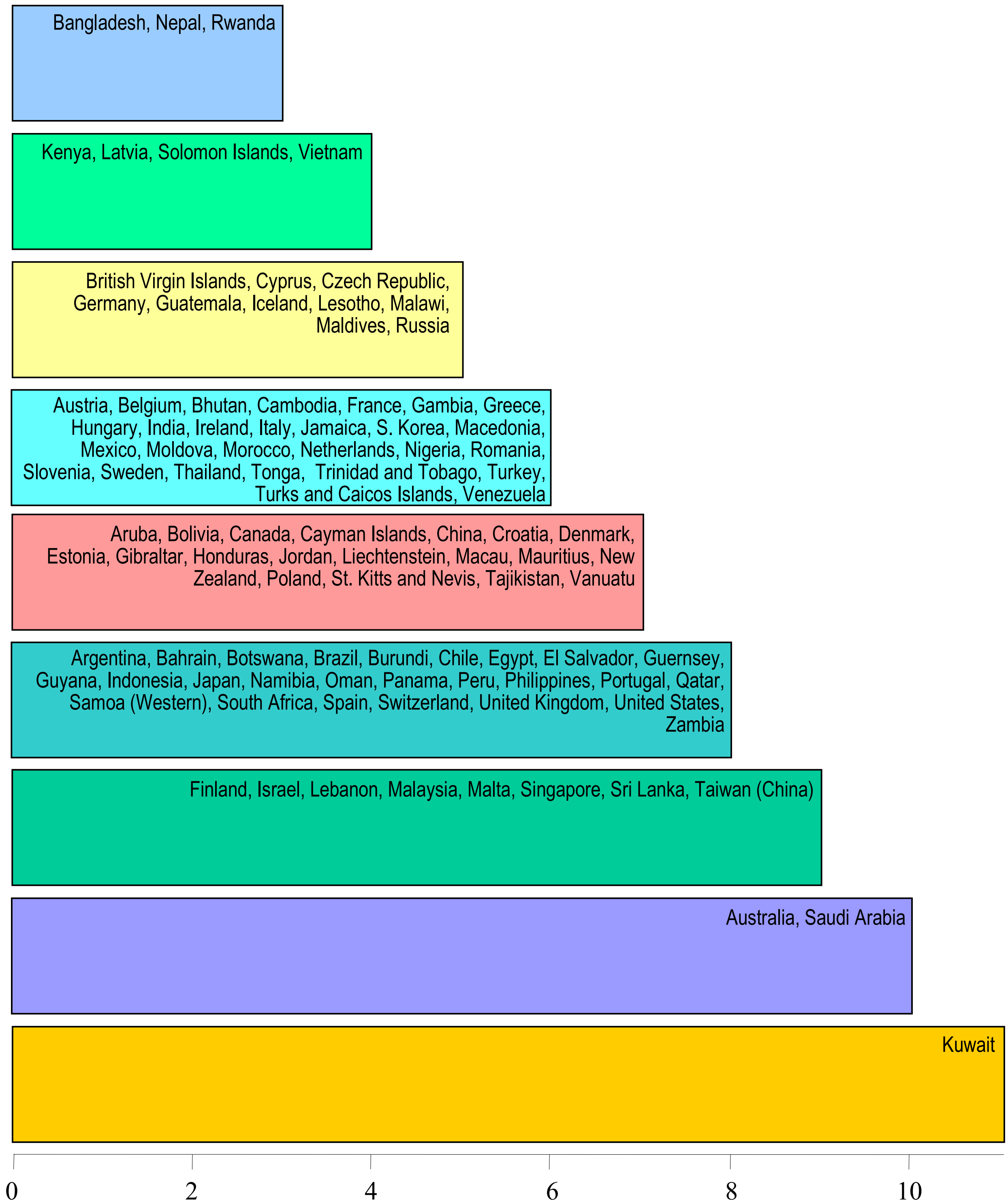


Figure 19
Likehood Supervisor Moves into Banking

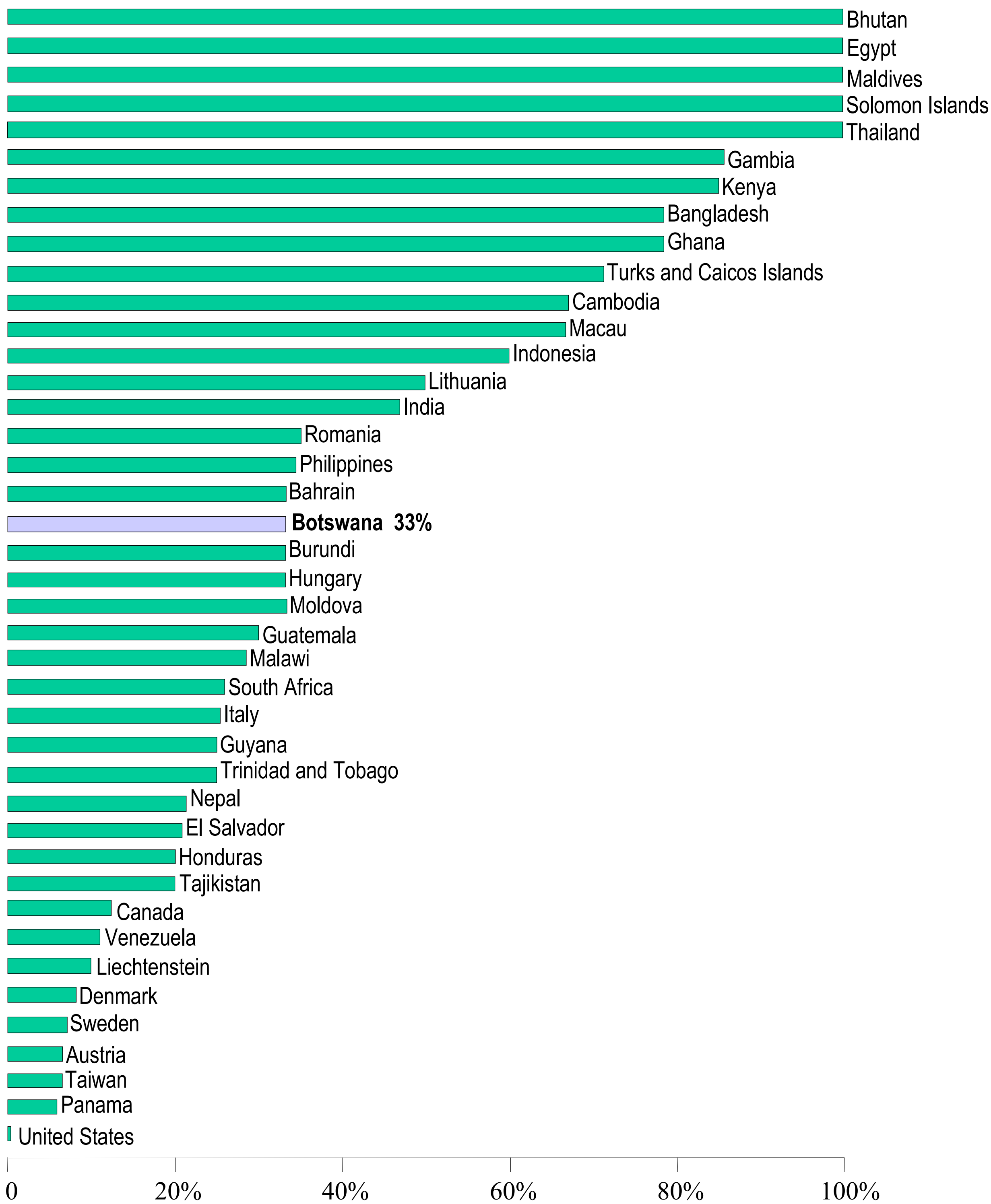
Note: The higher the value the greater the likelihood

Figure 20
Private Monitoring Index



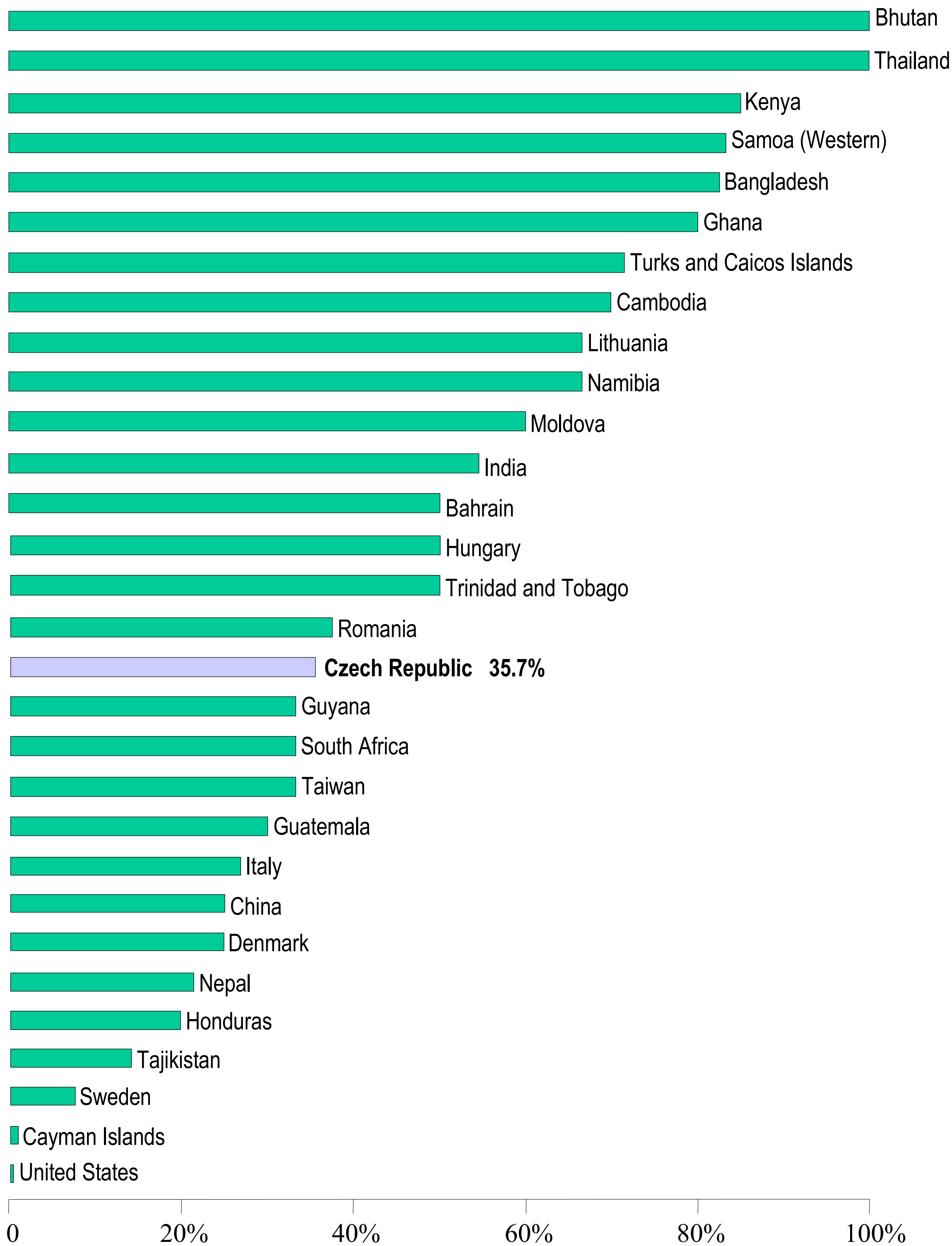
Note: The higher the value the greater private monitoring

Figure 21
Percent of Entry Applications Denied



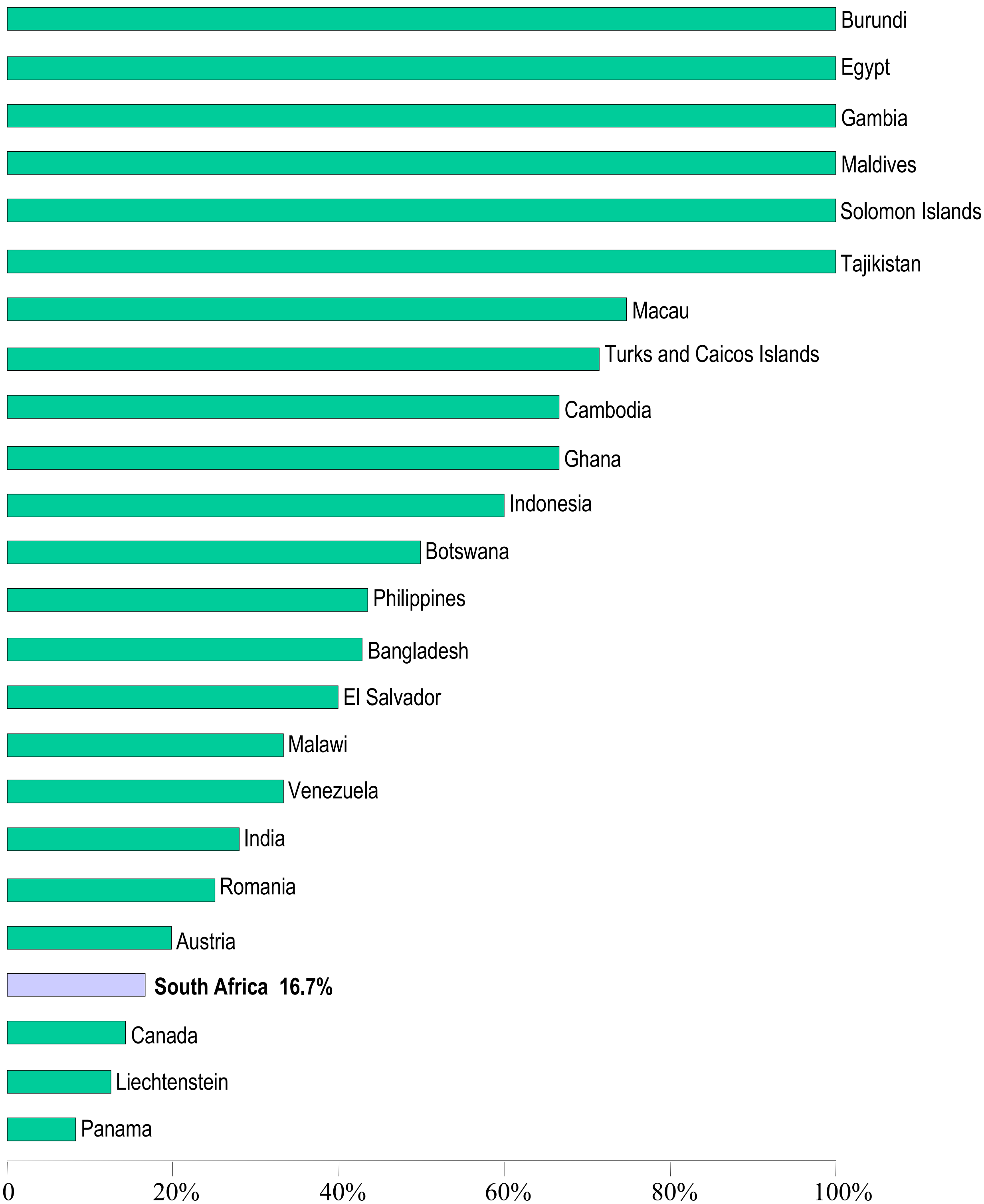
No denial of entry applicants: Argentina, Belarus, Belgium, Bolivia, British Virgin Islands, Cyprus, Estonia, Finland, Germany, Greece, Guernsey, Ireland, Japan, Latvia, Lebanon, Lesotho, Luxembourg, Malta, Morocco, Netherlands, New Zealand, Nigeria, Oman, Peru, Poland, Portugal, Puerto Rico, Qatar, Rwanda, Slovenia, Spain, Switzerland, Tongo

Figure 22
Percent of Domestic Entry Applications Denied



No denial of domestic entry applicants: Argentina, Australia, Austria, Belarus, Botswana, British Virgin Islands, Burundi, Canada, Cyprus, El Salvador, Estonia, Finland, France, Gambia, Germany, Greece, Japan, Latvia, Lesotho, Liechtenstein, Macau, Malawi, Morocco, Netherlands, Nigeria, Oman, Panama, Peru, Philippines, Poland, Portugal, Puerto Rico, Qatar, Rwanda, Spain, Switzerland, Venezuela

Figure 23
Percent of Foreign Entry Applications Denied



No denial of foreign entry applicants: Argentina, Australia, Bahrain, Belgium, Bolivia, British Virgin Islands, Cayman Islands, Cyprus, Denmark, Germany, Greece, Guernsey, Guyana, Hungary, Ireland, Italy, Japan, Latvia, Lebanon, Lithuania, Luxembourg, Malta, Moldova, Netherlands, New Zealand, Nigeria, Peru, Poland, Portugal, Puerto Rico, Rwanda, Saudi Arabia, Slovenia, Spain, Sweden, Switzerland, Taiwan (China), Tongo, Trinidad & Tobago, United States, Zambia

Appendix 1

Information on Selected Other Variables in the Database

World Bank Survey Questions	Number of countries providing information	Number answering yes	Number answering no	Mean	Median	Standard deviation	Minimum value	Maximum value
1.2 How many banks are there at present?	107	N/A	N/A	219.19	24.00	1,067.52	2.00	10,500.00
1.4 Is it legally required that applicants for banking licenses submit information on the source of funds to be used as capital?	105	21	84	0.80	1.00	0.40	0.00	1.00
1.5.1 Are law enforcement authorities consulted during the verification of the sources of funds to be used as bank capital?	101	57	44	0.56	1.00	0.50	0.00	1.00
1.11.1 Is the amount or quality of capital among the primary reasons for denial of applications for banking licenses?	53	33	20	0.62	1.00	0.49	0.00	1.00
1.11.2 Are banking skills among the primary reasons for denial of applications for banking licenses?	52	34	18	0.65	1.00	0.48	0.00	1.00
1.11.3 Is reputation among the primary reasons for denial of applications for banking licenses?	52	37	15	0.71	1.00	0.46	0.00	1.00
1.11.4 Is an incomplete application among the primary reasons for denial of applications for banking licenses?	52	26	26	0.50	0.50	0.50	0.00	1.00
2.2 Can related parties own capital in a bank?	106	99	7	0.93	1.00	0.25	0.00	1.00
2.4 What fraction of capital in the largest 10 banks is owned by commercial/industrial and/or financial conglomerates?	55	N/A	N/A	0.36	0.20	0.36	0.00	1.00
2.5 Can non-bank financial firms (e.g. insurance companies, financial companies, etc.) own commercial banks?	107	100	7	0.93	1.00	0.25	0.00	1.00
3.2 Does the minimum capital-asset ratio vary as a function of an individual bank's credit risk?	108	28	77	0.37	0.00	0.44	0.00	1.00
3.5 Is subordinated debt allowable (required) as part of capital?	106	92	14	0.87	1.00	0.34	0.00	1.00
5.1 Is an external audit a compulsory obligation for banks?	107	104	3	0.97	1.00	0.17	0.00	1.00
5.2 Are specific requirements for the extent or nature of the audit spelled out?	106	69	37	0.68	1.00	0.48	0.00	1.00
5.3 Are auditors licensed or certified?	107	101	6	0.94	1.00	0.23	0.00	1.00
5.4 Do supervisors get copies of bank external auditor reports?	107	104	3	0.97	1.00	0.17	0.00	1.00
5.8 Has legal action been taken by supervisors against an external bank auditor in the last 5 years?	55	14	41	0.25	0.00	0.44	0.00	1.00
6.2 Have supervisory authorities forced banks to change their internal organizational structure in the last 5 years?	76	40	36	0.53	1.00	0.50	0.00	1.00
7.4 Do liquidity reserves (or reserves deposited at the central bank) earn any interest?	71	30	41	0.42	0.00	0.50	0.00	1.00
8.1.4 Is there a per person limit on deposit insurance?	57	47	10	0.82	1.00	0.38	0.00	1.00
8.1.5 Does the deposit insurance authority make the decision to intervene in a bank?	58	14	44	0.24	0.00	0.43	0.00	1.00
8.1.7 Does the deposit insurance authority have the legal power to deal with (intervene / takeover) a troubled (though perhaps still solvent) bank to reduce the ultimate burden on the deposit insurance fund?	14	10	4	0.71	1.00	0.47	0.00	1.00
8.2 As a share of total assets, what is the value of large denominated debt liabilities of banks-subordinated debt, bonds, etc.-that are definitely not covered by any explicit or implicit savings protections scheme?	33	N/A	N/A	0.28	0.25	0.26	0.00	0.87
8.3 As part of failure resolution, how many banks closed or merged in the last 5 years?	85	N/A	N/A	6.24	1.00	14.01	0.00	80.00
8.4 Were depositors wholly compensated (to the extent of legal protection) the last time a bank failed?	53	41	12	0.77	1.00	0.42	0.00	1.00
8.7 Has the deposit insurance agency/fund ever taken legal action against bank directors or other bank officials?	37	11	26	0.30	0.00	0.46	0.00	1.00
9.1 Is there a formal definition of a "non-performing loan"?	106	71	35	0.67	1.00	0.47	0.00	1.00
9.6 If a customer has multiple loans and one loan is classified as non-performing, are the other loans automatically classified as non-performing?	102	37	65	0.36	0.00	0.48	0.00	1.00
10.1 Does accrued, though unpaid, interest / principal enter the income statement while the loan is still performing?	105	92	13	0.88	1.00	0.33	0.00	1.00

Appendix 1

Information on Selected Other Variables in the Database

World Bank Survey Questions	Number of countries providing information	Number answering yes	Number answering no	Mean	Median	Standard deviation	Minimum value	Maximum value
10.1.1 Does accrued, though unpaid, interest / principal enter the income statement while the loan is still non-performing?	103	14	89	0.14	0.00	0.34	0.00	1.00
10.2 After how many days in arrears must interest income accrual cease?	78	N/A	N/A	100.77	90.00	67.44	1.00	365.00
10.3 Are financial institutions required to produce consolidated accounts covering all bank and non-bank financial subsidiaries?	104	87	17	0.84	1.00	0.37	0.00	1.00
10.4.1 Are off-balance sheet items disclosed to the public?	103	72	31	0.70	1.00	0.46	0.00	1.00
10.5 Must banks disclose their risk managemnt procedures to the public?	103	29	74	0.28	0.00	0.46	0.00	1.00
10.6 Are bank directors legally liable if information disclosed is erroneous or misleading?	104	94	10	0.90	1.00	0.30	0.00	1.00
10.6.1 Have penalties been enforced?	96	33	63	0.34	0.00	0.48	0.00	1.00
10.7 Do regulations require credit ratings for commercial banks?	101	10	91	0.10	0.00	0.33	0.00	1.00
10.7.3.1 Are bonds rated?	70	47	23	0.67	1.00	0.47	0.00	1.00
10.7.3.2 Is commercial paper rated?	70	39	31	0.56	1.00	0.50	0.00	1.00
10.7.3.3 Are other activities rated (e.g. bank certificates of deposit, pension and mutual funds, insurance companies, financial guarantees, etc.)?	68	33	35	0.49	0.00	0.50	0.00	1.00
11.4 Have supervisory agencies suspended directors' decisions to distribute dividends, bonuses or management fees in the last 5 years?	98	49	49	0.50	0.50	0.50	0.00	1.00
11.9.5 Can supervisory autthorities insure liabilities beyond any explicit deposit insurance scheme?	98	16	82	0.16	0.00	0.37	0.00	1.00
11.10 How many banks have been closed in the last five years?	102	N/A	N/A	16.58	1.00	116.24	0.00	1,172.00
12.3 Are there important differences between what the supervisory agency is expected to do and what is mandated by the law?	93	6	87	0.06	0.00	0.25	0.00	1.00
12.4 How many professional bank supervisors are there in total?	100	N/A	N/A	155.40	42.50	363.62	0.00	3,200.00

Appendix 2. Guide to Database on Bank Regulation and Supervision

1.Entry into Banking

1.1 What body/agency grants commercial banking licenses?
1.2 How many commercial banks are there at present?
1.3 What are the minimum capital entry requirements (in U.S. $ and/or domestic currency)?
1.4 Is it legally required that applicants submit information on the source of funds to be used as capital?
1.5 Are the sources of funds to be used as capital verified by the regulatory/supervisory authorities?
  1.5.1 Are law enforcement authorities consulted in this process?
1.6 Can the initial disbursement or subsequent injections of capital be done with assets other than cash or government securities?
1.7 Can initial disbursement of capital be done with borrowed funds?
1.8 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 bank?
  1.8.8 Market differentiation intended for the new bank?
1.9 In the past five years, how many applications for commercial banking licenses have been received from domestic entities?
  1.9.1 How many of those applications have been denied?
1.10 In the past five years, how many applications for commercial banking licenses have been received from foreign entities?
  1.10.1 How many of those applications have been denied?
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?
  1.11.2 Banking skills?
  1.11.3 Reputation?
  1.11.4 Incomplete application?

2. Ownership

2.1 Is there a maximum percentage of bank capital that can be owned by a single owner?
  2.1.1 If yes, what is the percentage?
2.2 Can related parties own capital in a bank?
  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.)?
2.3 What is the level of regulatory restrictiveness of ownership by nonfinancial firms of banks?
  Unrestricted - A nonfinancial firm may own 100 percent of the equity in a bank.
  Permitted - Unrestricted with prior authorization or approval.
  Restricted - Limits are placed on ownership, such as a maximum percentage of a bank's capital or shares.
  Prohibited - No equity investment in a bank.
2.4 What fraction of capital in the largest 10 banks is owned by commercial/industrial and/or financial conglomerates?
2.5 Can non-bank financial firms (e.g. insurance companies, finance companies, etc.) own commercial banks?
  2.5.1 What are the limits?
2.6 Of deposit-taking institutions in your country, what fraction of deposits is held by the five (5) largest 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 Basle guidelines?
3.2 Does the minimum ratio vary as a function of an individual bank's credit risk?
3.3 Does the minimum ratio vary as a function of market risk?
3.4 What is the actual risk-adjusted capital ratio in banks today (latest available data)?
3.5 Is subordinated debt allowable (required) as part of capital?
3.6 What fraction of revaluation gains is allowed as part of capital?
3.7 What fraction of the banking system's assets is in banks that are 50% or more government owned?
3.8 What fraction of the banking system's assets is in banks that are 50% or more foreign owned?
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?
  3.9.2 Unrealized losses in securities portfolios?
  3.9.3 Unrealized foreign exchange losses?

4. Activities

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) ?
  Unrestricted - A full range of activities in the given category can be conducted directly in the bank.
  Permitted - A full range of activities can be conducted, but all or some must be conducted in subsidiaries.
  Restricted - Less than a full range of activities can be conducted in the bank or subsidiaries.
  Prohibited - The activity cannot be conducted in either the bank or subsidiaries.
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) ?
  Unrestricted - A full range of activities in the given category can be conducted directly in the bank.
  Permitted - A full range of activities can be conducted, but all or some must be conducted in subsidiaries.
  Restricted - Less than a full range of activities can be conducted in the bank or subsidiaries.
  Prohibited - The activity cannot be conducted in either the bank or subsidiaries.
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) ?
  Unrestricted - A full range of activities in the given category can be conducted directly in the bank.
  Permitted - A full range of activities can be conducted, but all or some must be conducted in subsidiaries.
  Restricted - Less than a full range of activities can be conducted in the bank or subsidiaries.
  Prohibited - The activity cannot be conducted in either the bank or subsidiaries.
4.4 What is the level of regulatory restrictiveness for bank ownership of nonfinancial firms?
  Unrestricted - A bank may own 100 percent of the equity in any nonfinancial firm.
  Permitted - A bank may own 100 percent of the equity in a nonfinancial firm, but ownership is limited based on a bank's equity capital.
  Restricted - A bank can only acquire less than 100 percent of the equity in a nonfinancial firm.
  Prohibited - A bank may not acquire any equity investment in a nonfinancial firm.

5. External Auditing Requirements

5.1 Is an external audit a compulsory obligation for banks?
5.2 Are specific requirements for the extent or nature of the audit spelled out?
5.3 Are auditors licensed or certified?
5.4 Do supervisors get a copy of the auditor's report?
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?

5.8 Has action been taken against an auditor in the last 5 years?

6. Internal Management/Organizational requirements

6.1 Can the supervisory authority force a bank to change its internal organizational structure?

6.2 Has this power been utilized in the last 5 years?

7. Liquidity & Diversification Requirements

7.1 Are there explicit, verifiable, and quantifiable guidelines regarding asset diversification?

7.2 Are banks prohibited from making loans abroad?

7.3 What are the requirements for bank in terms of liquidity reserves or any reserves whatsoever on deposits at the Central Bank?

7.4 What interest, if any, is paid on these reserves?

7.5 What is the minimum reserve requirment (%)?

7.6 How is the reserve requirement remunerated?

7.7 What domestic and foreign assets satisfy these liquidity reserve or any other reserve requirements?

8. Depositor (Savings) Protection Schemes

8.1 Is there an explicit deposit insurance protection system? If yes:

- 8.1.1 Is it funded by (check one) : the government, the banks, or both ?
- 8.1.2 What is the ratio of accumulated funds to total bank assets?
- 8.1.3 What is the deposit insurance limit per account?
- 8.1.4 Is there a limit per person?
  - 8.1.4.1 If yes, what is that limit (in domestic currency)?
- 8.1.5 Does the deposit insurance authority make the decision to intervene a bank?
- 8.1.6 If no, who does?
- 8.1.7 If yes, does the deposit insurance authority have the legal power to deal with (intervene/takeover) a troubled (though perhaps still solvent) bank to reduce the ultimate burden on the deposit insurance fund?

8.2 As a share of total assets, what is the value of large denominated debt liabilities of banks-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?

8.4 Were depositors wholly compensated (to the extent of legal protection) 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 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)?

8.6 Can the deposit insurance agency/fund take legal action against bank directors or other bank officials?

8.7 Has the deposit insurance agency/fund ever taken legal action against bank directors or other bank officials?

9. Provisioning Requirements

9.1 Is there a formal definition of a "non-performing loan" ?

- 9.1.1 If yes, what is it? Is the number of days in arrears the only or principal basis of asset classification and provisioning?

9.2 Classification of loans in arrears based on their quality: 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 are the minimum required provision as loans become:
  9.3.1 Sub-standard?
  9.3.2 Doubtful?
  9.3.3 Loss?
9.4 If you do not have a loan classification system based on sub-standard, doubtful and loss loans, please describe the type of classification system you do have.
9.5 What is the ratio of non-performing loans to total assets (latest available)?
9.6 If a customer has multiple loans and one loan is classified as non-performing, are the other loans automatically classified as non-performing?

10. Accounting/Information Disclosure Requirements

10.1 Does accrued, though unpaid, interest/principal enter the income statement while the loan is still performing?
  10.1.1 Does accrued, though unpaid, interest/principal enter the income statement while the loan is still 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?
10.4 Are off-balance sheet items disclosed to supervisors?
  10.4.1 Are off-balance sheet items disclosed to the public?
10.5 Must banks disclose their risk management procedures to the public?
10.6 Are bank directors legally liable if information disclosed is erroneous or misleading?
  10.6.1 Have penalties been enforced?
10.7 Do regulations require credit ratings for commercial banks?
  10.7.1 What percentage of the top ten banks are rated by international credit rating agencies (e.g. Moody's, Standard and Poor)?
  10.7.2 What percentage of the top ten banks are rated by domestic credit rating agencies ?
  10.7.3 Which bank activities are rated?
    10.7.3.1 Bonds?
    10.7.3.2 Commercial paper?
    10.7.3.3 Other activity (e.g., bank certificates of deposit, pension and mutual funds, insurance companies, financial guarantees, etc.)?

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 and penal sanctions on the banks directors and managers?
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 directors' decision to distribute:
  11.3.1 Dividends?
  11.3.2 Bonuses?
  11.3.3 Management fees?
11.4 Have any such actions been taken in the last 5 years?
11.5 Which laws address bank insolvency?
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?
11.8 Does the Law establish pre-determined levels of solvency deterioration which forces automatic actions (like intervention)?
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?
11.9.4 Forbear certain prudential regulations?
11.9.5 Insure liabilities beyond any explicit deposit insurance scheme?

11.10 How many banks have been closed in the last five years?

11.10.1 What percentage of total bank assets did those banks account for?

12. Supervision

12.1 What body/agency supervises banks?

12.1.1 Is there more than one supervisory body?

12.2 To whom are the supervisory bodies responsible or accountable?

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

12.3 Are there important differences between what the supervisory agency is expected to do and what is mandated by law?

12.4 How many professional bank supervisors are there in total?

12.4.1 How many professional bank supervisors are there per institution?

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 (in 1997 or 1998; please specify which)?

12.7 How frequently are onsite inspections conducted in large and medium size banks (annually equals 1 and every two years equals 2) ?

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

12.9 How often are bank supervisors employed by the banking industry once they quit their service as bank supervisors? Never, Rarely, Occasionally, or Frequently?

12.10 If an infraction of any prudential regulation is found by a supervisor, must it be reported?

12.11 Are there mandatory actions in these cases?

12.12 Who authorizes exceptions to such actions?

12.13 How many exceptions were granted last year?

12.14 Are supervisors legally liable for their actions (e.g., if a supervisor takes actions against a bank can he/she be sued) ?

Appendix 3

Groupings of Countries by Geographical Region, Income Level and Development Status

Appendix 2
Groupings of Countries by Geographical Region, Income Level and Development Status

Americas (22)	East Asia & Pacific (17)	Europe and Central Asia (37)	Middle East and North Africa (11)	South Asia (6)	Sub-Saharan Africa (14)
Argentina	Cambodia	Australia	Bahrain	Bangladesh	Botswana
Aruba	China	Austria	Egypt	Bhutan	Burundi
Bolivia	Indonesia	Belarus	Israel	India	Gambia
Brazil	Japan	Belgium	Jordan	Maldives	Ghana
British Virgin Islands	Korea	Croatia	Kuwait	Nepal	Kenya
Canada	Macau	Cyprus	Lebanon	Sri Lanka	Lesotho
Cayman Islands	Malaysia	Czech Republic	Malta		Malawi
Chile	New Zealand	Denmark	Morocco		Mauritius
El Salvador	Philippines	Estonia	Oman		Namibia
Guatemala	Samoa (Western)	Finland	Qatar		Nigeria
Guyana	Singapore	France	Saudi Arabia		Rwanda
Honduras	Solomon Islands	Germany			Seychelles
Jamaica	Taiwan (China)	Gibraltar			South Africa
Mexico	Thailand	Greece			Zambia
Panama	Tonga	Guernsey			
Peru	Vanuatu	Hungary			
Puerto Rico	Vietnam	Iceland			
Saint Kitts and Nevis		Ireland			
Trinidad & Tobago		Italy			
Turks and Caicos Islands		Latvia			
United States		Liechtenstein			
Venezuela		Lithuania			
		Luxembourg			
		Macedonia			
		Moldova			
		Netherlands			
		Poland			
		Portugal			
		Romania			
		Russia			
		Slovenia			
		Spain			
		Sweden			
		Switzerland			
		Tajikistan			
		Turkey			
		United Kingdom			

Appendix 2
Groupings of Countries by Geographical Region, Income Level and Development Status

Non-OECD (79)			OECD (28)
Argentina	India	Philippines	Australia
Aruba	Indonesia	Puerto Rico	Austria
Bahrain	Israel	Qatar	Belgium
Bangladesh	Jamaica	Romania	Canada
Belarus	Jordan	Russia	Czech Republic
Bhutan	Kenya	Rwanda	Denmark
Bolivia	Kuwait	Saint Kitts and Nevis	Finland
Botswana	Latvia	Samoa (Western)	France
Brazil	Lebanon	Saudi Arabia	Germany
British Virgin Islands	Lesotho	Seychelles	Greece
Burundi	Liechtenstein	Singapore	Hungary
Cambodia	Lithuania	Slovenia	Iceland
Cayman Islands	Macau	Solomon Islands	Ireland
Chile	Macedonia	South Africa	Italy
China	Malawi	Sri Lanka	Japan
Croatia	Malaysia	Taiwan (China)	Korea
Cyprus	Maldives	Tajikistan	Luxembourg
Egypt	Malta	Thailand	Mexico
El Salvador	Mauritius	Tonga	Netherlands
Estonia	Moldova	Trinidad & Tobago	New Zealand
Gambia	Morocco	Turks and Caicos Islands	Poland
Ghana	Namibia	Vanuatu	Portugal
Gibraltar	Nepal	Venezuela	Spain
Guatemala	Nigeria	Vietnam	Sweden
Guernsey	Oman	Zambia	Switzerland
Guyana	Panama		Turkey
Honduras	Peru		United Kingdom
			United States

Appendix 2
Groupings of Countries by Geographical Region, Income Level and Development Status

Non-EU (92)			**EU (15)**
Argentina	Iceland	Peru	Austria
Aruba	India	Philippines	Belgium
Australia	Indonesia	Poland	Denmark
Bahrain	Israel	Puerto Rico	Finland
Bangladesh	Jamaica	Qatar	France
Belarus	Japan	Romania	Germany
Bhutan	Jordan	Russia	Greece
Bolivia	Kenya	Rwanda	Ireland
Botswana	Korea	Saint Kitts and Nevis	Italy
Brazil	Kuwait	Samoa (Western)	Luxembourg
British Virgin Islands	Latvia	Saudi Arabia	Netherlands
Burundi	Lebanon	Seychelles	Portugal
Cambodia	Lesotho	Singapore	Spain
Canada	Liechtenstein	Slovenia	Sweden
Cayman Islands	Lithuania	Solomon Islands	United Kingdom
Chile	Macau	South Africa	
China	Macedonia	Sri Lanka	
Croatia	Malawi	Switzerland	
Cyprus	Malaysia	Taiwan (China)	
Czech Republic	Maldives	Tajikistan	
Egypt	Malta	Thailand	
El Salvador	Mauritius	Tonga	
Estonia	Mexico	Trinidad & Tobago	
Gambia	Moldova	Turkey	
Ghana	Morocco	Turks and Caicos Islands	
Gibraltar	Namibia	United States	
Guatemala	Nepal	Vanuatu	
Guernsey	New Zealand	Venezuela	
Guyana	Nigeria	Vietnam	
Honduras	Oman	Zambia	
Hungary	Panama		

Appendix 2
Groupings of Countries by Geographical Region, Income Level and Development Status

Non-Euroland (96)			Euroland (11)
Argentina	Hungary	Peru	Austria
Aruba	Iceland	Philippines	Belgium
Australia	India	Poland	Finland
Bahrain	Indonesia	Puerto Rico	France
Bangladesh	Israel	Qatar	Germany
Belarus	Jamaica	Romania	Ireland
Bhutan	Japan	Russia	Italy
Bolivia	Jordan	Rwanda	Luxembourg
Botswana	Kenya	Saint Kitts and Nevis	Netherlands
Brazil	Korea	Samoa (Western)	Portugal
British Virgin Islands	Kuwait	Saudi Arabia	Spain
Burundi	Latvia	Seychelles	
Cambodia	Lebanon	Singapore	
Canada	Lesotho	Slovenia	
Cayman Islands	Liechtenstein	Solomon Islands	
Chile	Lithuania	South Africa	
China	Macau	Sri Lanka	
Croatia	Macedonia	Sweden	
Cyprus	Malawi	Switzerland	
Czech Republic	Malaysia	Taiwan (China)	
Denmark	Maldives	Tajikistan	
Egypt	Malta	Thailand	
El Salvador	Mauritius	Tonga	
Estonia	Mexico	Trinidad & Tobago	
Gambia	Moldova	Turkey	
Ghana	Morocco	Turks and Caicos Islands	
Gibraltar	Namibia	United Kingdom	
Greece	Nepal	United States	
Guatemala	New Zealand	Vanuatu	
Guernsey	Nigeria	Venezuela	
Guyana	Oman	Vietnam	
Honduras	Panama	Zambia	

Appendix 2
Groupings of Countries by Geographical Region, Income Level and Development Status

High income (37)	Upper middle income (25)	Lower middle income (26)	Lower income (19)
Aruba	Argentina	Belarus	Bangladesh
Australia	Bahrain	Bolivia	Bhutan
Austria	Botswana	China	Burundi
Belgium	Brazil	Egypt	Cambodia
British Virgin Islands	Chile	El Salvador	Gambia
Canada	Croatia	Guatemala	Ghana
Cayman Islands	Czech Republic	Guyana	India
Cyprus	Estonia	Honduras	Indonesia
Denmark	Hungary	Jamaica	Kenya
Finland	Korea	Jordan	Lesotho
France	Lebanon	Latvia	Malawi
Germany	Malaysia	Lithuania	Moldova
Gibraltar	Malta	Macedonia	Nepal
Greece	Mauritius	Maldives	Nigeria
Guernsey	Mexico	Morocco	Rwanda
Iceland	Oman	Namibia	Solomon Islands
Ireland	Panama	Peru	Tajikistan
Israel	Poland	Philippines	Vietnam
Italy	Puerto Rico	Romania	Zambia
Japan	Saint Kitts and Nevis	Russia	
Kuwait	Saudi Arabia	Samoa (Western)	
Liechtenstein	Seychelles	Sri Lanka	
Luxembourg	South Africa	Thailand	
Macau	Trinidad & Tobago	Tonga	
Netherlands	Venezuela	Turkey	
New Zealand		Vanuatu	
Portugal			
Qatar			
Singapore			
Slovenia			
Spain			
Sweden			
Switzerland			
Taiwan (China)			
Turks and Caicos Islands			
United Kingdom			
United States			

Appendix 3
Groupings of Countries by Geographical Region, Income Level and Development Status

Developed countries (27)	Developing or emerging markets (80)			Offshore centres (8)
Australia	Argentina	Indonesia	Philippines	Aruba
Austria	Aruba	Israel	Poland	Bahrain
Belgium	Bahrain	Jamaica	Puerto Rico	Bangladesh
Canada	Bangladesh	Jordan	Qatar	British Virgin Islands
Cayman Islands	Belarus	Kenya	Romania	Cayman Islands
Cyprus	Bhutan	Korea	Russia	Guernsey
Denmark	Bolivia	Kuwait	Rwanda	Saint Kitts and Nevis
Finland	Botswana	Latvia	Saint Kitts and Nevis	Turks and Caicos Islands
France	Brazil	Lebanon	Samoa (Western)	
Germany	British Virgin Islands	Lesotho	Saudi Arabia	
Gibraltar	Burundi	Lithuania	Seychelles	
Greece	Cambodia	Macau	Singapore	
Iceland	Chile	Macedonia	Solomon Islands	
Ireland	China	Malawi	South Africa	
Italy	Croatia	Malaysia	Sri Lanka	
Japan	Czech Republic	Maldives	Taiwan (China)	
Liechtenstein	Egypt	Malta	Tajikistan	
Luxembourg	El Salvador	Mauritius	Thailand	
Netherlands	Estonia	Mexico	Tonga	
New Zealand	Gambia	Moldova	Trinidad & Tobago	
Portugal	Ghana	Morocco	Turkey	
Slovenia	Guatemala	Namibia	Turks and Caicos	
Spain	Guernsey	Nepal	Vanuatu	
Sweden	Guyana	Nigeria	Venezuela	
Switzerland	Honduras	Oman	Vietnam	
United Kingdom	Hungary	Panama	Zambia	
United States	India	Peru		

Notes to Appendix 3

Income: The World Bank classifies economies for operational and analytical purposes primarily by GNP per capita. Every economy is classified as low income, middle income (subdivided into lower middle and upper middle), or high income. Other Analytical groups, based on geographic regions and levels of external debt, are also used.

Low-income and middle-income economies are sometimess referred to as developing economies. The term is used for convenience; it does not imply that all such economies are experiencing similar development or that other economies have reached a preferred or final stage of development. Nor does classification by income necessarily reflect development status.

This table classifies all World Bank member economies as well as all other economies with populations of more than 30,000. Economies are divided among income groups according to 1999 GNP per capita, calculalated using the World Bank Atlas method. the groups are as follows: low income, $755 or les lower middle income, $756-2,995; upper middle income, $2,996-9,265; and high income, $9,266 or more.

Region: The regions are AME = Americas; MNA = Middle East and North Africa; ECA=Europe and Central Asia; SSA = Sub-Saharan Africa; SAS = South Asia; EAP = East Asia and Pacific;

GDP: Figures in italics are the most recent estimate from 1997 or 1998.*World Bank Development Indicators, CD-ROM 2000.*

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