PRICEWATERHOUSECOOPERS

The Opacity Index

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Launching a new measure of the effects of opacity on the cost and availability of capital in countries world-wide

A Project of the PricewaterhouseCoopers Endowment for the Study of Transparency and Sustainability

Contents

For more information about the Opacity Index Project, or to express views about the contents of this report, visit **www.opacityindex.com** .

Authors, Contributors, and Advisory Board

The co-authors of this report (in alphabetical order):

James R. Barth, Lowder Eminent Scholar in Finance, Auburn University, and Senior Finance Fellow, Milken Institute

Thomas W. Hall, Adjunct Professor of Economics, Pepperdine University Graduate School of Business and Management, and Research Economist, Milken Institute

Joel Kurtzman, partner, PricewaterhouseCoopers

Shang-Jin Wei, New Century Chair in International Economics, Brookings Institution, and Research Fellow, Harvard University Center for International Development

Glenn Yago, Director of Capital Studies, Milken Institute

The following individuals from numerous institutions contributed insight and efforts:

Craig Ammon, Alison Blair, Caglar Erdogan, Carlo di Florio, Mark Friedlich, Jill Hassan, Max Henderson-Begg, Cindy Lee, Roger Lipsey, Kay Ma, Juan Montoya, Michael Stavrianos, Susanne Trimbath, Wu Yi

The following individuals kindly reviewed certain aspects of the project at various stages:

Susan Rose-Ackerman, Professor, Yale Law School

Jermyn Brooks, former Global Managing Partner, PricewaterhouseCoopers, and current Executive Director, Transparency International

Jeffrey Garten, Dean, Yale School of Management

Barry Herman, Chief of Finance and Development, Department of Economic and Social Affairs, United Nations

Daniel Kaufmann, Director for Governance, Finance and Regulatory Reform, World Bank Institute

Robert Klitgaard, Dean, Rand Graduate School

Paolo Mauro, Economist, International Monetary Fund

Jennifer McCoy, Director of the Latin American and Caribbean Program, Carter Center

Vito Tanzi, Director of the Fiscal Affairs Department, International Monetary Fund

All participants in this challenging project are grateful to the following distinguished advisors:

Jimmy Carter (former President of the United States, Chairman of the Carter Center)

Peter Eigen (Chairman, Transparency International)

Frene Ginwala (Speaker of Parliament, South Africa)

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Introduction: Opacity and its Costs

Opacity is the lack of clear, accurate, formal, easily discernible, and widely accepted practices in the broad arena where business, finance, and government meet. As the globalisation of economic life advances, all participants recognise that the relative opacity or transparency of in-country capital markets varies enormously. A widely shared—but previously unquantified—view has emerged that greater opacity raises greater obstacles to the economic progress of countries and their citizens. Similarly, a shared but previously unquantified view prevails that greater transparency across many dimensions of capital markets encourages investor confidence and keeps the costs of doing business under control.

Is it possible to measure opacity and its costs? If so, the resulting numbers would confer a factual basis on these widely shared views, and contribute to an important world-wide dialogue. With this challenge in mind, the PricewaterhouseCoopers Endowment for the Study of Transparency and Sustainability assembled a team of senior economists, survey professionals, analysts, and distinguished advisors to explore the development of a world-wide Opacity Index.

This working group recognised from the outset that it would be inquiring in a complex area with many variables. Important data would in some instances escape observation, and much would depend on a survey of informed opinion. For these reasons, a well-constructed Index would offer reasonable estimates rather than numerical absolutes.

This first report on the Opacity Index, to be followed by others at regular intervals, provides estimates of the adverse effects of opacity on the cost and availability of capital in 35 countries. It offers a composite "O-Factor" for each country, based on opacity data in five different areas that affect capital markets: a) corruption, b) legal system, c) economic and fiscal policies, d) accounting standards and practices (including corporate governance and information release), and e) regulatory regime. From these elements a useful acronym emerges, CLEAR, as a means of keeping in mind the multiple aspects of opacity/transparency in capital markets. The numbers generated by the study correlate with the data in studies on related issues (see Appendix 5) and so give reason for confidence that the study has recorded substance, not "noise."

Thanks to the efforts of Transparency International and other organisations, measures of perceived corruption in countries world-wide have become important indicators for many participants in global markets. While the Opacity Index correlates significantly with other indices, it should be viewed as a new indicator, raising new questions in the five CLEAR areas of concern and giving new results.

The task of estimating the economic cost of opacity required several steps. First, a global survey team interviewed corporate leaders, banking executives, equity analysts, and well informed in-country staff of PricewaterhouseCoopers in selected countries in the third and fourth quarters of the year 2000. Second, a team of economists generated individual scores for the five areas to create an overall opacity score, the O-Factor, for each country in the sample. Third, the economists used the opacity score in conjunction with data on international capital flows (foreign direct investment and portfolio flows) to determine the economic impact of opacity on the cost and availability of capital in the 35 countries.

This overall exercise created three streams of related data: 1) the O-Factor scores, 2) measurements of the risk premium attributable to opacity when countries borrow through sovereign bond issuances in international or domestic capital markets, and 3) calculation of the effects of opacity as if it imposed a hidden surtax on foreign direct investment (FDI) – a tax

payable not to a government but, more obscurely, levied by and lost in the weave of opaque business practices. In a short time, we plan to publish a fourth data set, estimating the extent to which opacity deters foreign direct investment. This is an area of great interest and considerable complexity.

The O-Factor and related data on real yet unnecessary costs should encourage countries and businesses to promote more transparent practices in the five CLEAR areas. We invite you to join us in exploring the findings and implications of this genuinely new Index to key aspects of global economic life.

Exhibit 1
Summary Table: The Effects of Opacity on the Cost of Capital

Country	O-Factor	Tax-Equivalent (%)	Opacity Risk Premium (Basis Points)
Argentina	61	25	639
Brazil	61	25	645
Chile	36	5	3
China	87	46	1,316
Colombia	60	25	632
Czech Republic	71	33	899
Ecuador	68	31	826
Egypt	58	23	572
Greece	57	22	557
Guatemala	65	28	749
Hong Kong	45	12	233
Hungary	50	17	370
India	64	28	719
Indonesia	75	37	1,010
Israel	53	19	438
Italy	48	15	312
Japan	60	25	629
Kenya	69	32	848
Lithuania	58	23	584
Mexico	48	15	308
Pakistan	62	26	674
Peru	58	23	563
Poland	64	28	724
Romania	71	34	915
Russia	84	43	1,225
Singapore	29	0*	0*
South Africa	60	24	612
South Korea	73	35	967
Taiwan	61	25	640
Thailand	67	30	801
Turkey	74	36	982
UK	38	7	63
Uruguay	53	19	452
USA	36	5	0*
Venezuela	63	27	712

O-Factor is the score of a country based on the survey responses. High numbers indicate a high degree of opacity and low numbers indicate a low degree of opacity.

Tax Equivalent shows the effect of opacity when viewed as if it imposes a hidden tax. For example, the number 30 indicates that opacity in that country is equivalent to levying an additional 30-percent corporate income tax.

Risk Premium indicates the increased cost of borrowing faced by countries due to opacity, expressed in basis points (100 basis points = one percentage point). On average, countries with more opacity tend to have to pay a higher interest rate on the debt they issue. For example, a score of 900 would indicate that countries need to pay international investors an extra 9 percent on their sovereign debt due to opacity. Some opacity premiums in this tabulation are higher than the actual interest rate at which the corresponding country is able to borrow. This apparent anomaly, discussed on p. 20, is explained by certain capital markets dynamics and by hidden subsidies.

* Where zero (0) is reported in the table, that country served as the benchmark level of opacity for the calculations.

Why Measure Opacity? How to Measure Opacity?

This report is based on a major co-operative effort to assess the adverse impact of opacity on the cost of capital (the cost of borrowing funds) in a number of countries. While this topic has ethical, political, and cultural dimensions, our purpose here is to look from another vantage point, using quantitative tools to ask a seemingly simple question: how much do certain behaviours cost? This is, in reality, a difficult and methodologically demanding question to answer. On the way toward answers, we found it necessary to create a new set of metrics. We believe that the resulting Index will prove to be a practical tool. It should help businesses seek sites for investments. It should help governments evaluate their countries' current situations and, as time goes on, measure their progress in reducing the cost of capital.

In the pages that follow, we estimate the hidden differential effects of opacity on the cost and availability of capital by means of survey information, publicly available statistical data, and primary and secondary research. The goal is to derive a single score—the O-Factor—that realistically estimates the degree of opacity in each of 35 selected countries world-wide.

Our working definition of opacity is "the lack of clear, accurate, formal, easily discernible, and widely accepted practices." The potential for opacity exists in five principal areas and no country is likely to earn a perfect score. There may be corruption in government bureaucracy that allows bribery or favouritism. The laws governing contracts or property rights may be unclear, conflicting, or incomplete. Economic policies—fiscal, monetary, and tax-related—may be vague or change unpredictably. Accounting standards may be weak, inconsistent or unenforced, thus making it difficult to obtain accurate financial data. Business regulations may be unclear, inconsistent, or irregularly applied. Together, as noted earlier, these create the acronym CLEAR. A high degree of opacity in any of these areas will raise the cost of doing business as well as curtail the availability of investment capital.

Researchers have previously examined the impact of accounting transparency on economic growth and development,[1] and on the likelihood of financial crises.[2] So far, however, relatively little research has been conducted on the impact of opacity upon the cost and availability of capital across countries. In an effort to improve this situation, two participants in the present study produced an initial study of the incremental impact of opacity on government (sovereign) bond spreads.[3] Another participant determined how much a one-unit increase in transparency lowers the effective rate of the "corruption tax."[4]

Additional theoretical research indicates that the cost of capital can be affected by opacity in several ways. For example, to the extent that opacity inhibits the ability of corporate governance systems to overcome informational asymmetry and agency costs, it clearly represents an extra cost to domestic firms when raising external funds.[5] Informational asymmetry refers, for example, to the fact that managers know more about the true ability and willingness of their company to repay loans than do bankers or investors in the firm's securities. Agency costs include, for example, the due diligence and monitoring costs that bankers and investors incur in order to ensure that managers actually apply borrowed funds to their purported use.

[1] Bardhan, 1997

[2] Mehrez and Kaufman, 1999

[3] Hall and Yago, 2000

[4] Wei, 2000

[5] Stultz, 1999

Survey Design

RESPONDENT SELECTION AND QUESTIONNAIRE TYPES: We first posed a variety of questions to knowledgeable individuals working in the countries in our sample. Telephone and in-person interviews were conducted with four different groups of respondents: chief financial officers (CFOs) of medium and large firms based in the countries; equity analysts familiar with the countries; bankers in the countries; and PricewaterhouseCoopers employees residing in the countries. We set the goal of interviewing in each country at least 20 CFOs, five bankers, three equity analysts, and five PricewaterhouseCoopers employees.

In practice, the actual numbers of respondents in each category were sometimes higher, sometimes lower. At least 20 CFOs were interviewed in every country excepting China, where the survey population consisted of PricewaterhouseCoopers partners and staff. At least five bankers participated in all countries excepting China, the UK, and the US, in each of which the number was lower. And finally, at least three equity analysts were interviewed in every country (the exception is China, as noted just above).

The four survey instruments were not identical for each of the groups, although there was some overlap.[6] In general, questions relevant to the respondents' specific expertise predominated. Responses to similar questions were then aggregated in order to obtain a comprehensive O-Factor score for each country.[7] We relied only upon information from survey respondents who indicated that they were "very familiar" or "somewhat familiar" with the level of opacity in their countries.

COUNTRY COVERAGE: The survey was conducted during the third and fourth quarters of the year 2000 in 35 countries world-wide. We included countries in all major emerging markets as well as a few mature industrial countries, in order to obtain a scale that would allow meaningful comparisons among countries. The scale we established allows comparisons among countries today and, in future reports, will make it possible to determine on a year-to-year basis whether a given country's practices are becoming more or less opaque. The countries can be grouped both by geographical location and by relative income level (as Exhibit 2 indicates, the World Bank classifies countries into four income groups—upper, middle upper, middle lower, and lower). Throughout the report, we examine the effects of opacity both in individual countries and in groups of countries.

TYPES OF SURVEY RESPONSES: The survey responses were aggregated into two categories: information bearing directly on the O-Factor (i.e., specifically addressing the five CLEAR components of opacity) and supplemental information on a variety of issues, such as changes in opacity over time.

[6] For more information on how the four different survey instrument questions were aggregated into scores for each of the five components of the O-Factor, see Appendix 2, "Question Categorisation Cross-Walk".

[7] The various questions used to calculate each of the CLEAR components of opacity are also enumerated in Appendix 2.

Exhibit 2
Survey Countries by Income Category

Income Category	Countries
Upper Income	Greece, Hong Kong, Israel, Italy, Japan, Singapore, Taiwan, United Kingdom, United States
Middle Upper Income	Argentina, Brazil, Chile, Czech Republic, Hungary, South Korea, Mexico, Poland, Turkey, Uruguay, Venezuela
Middle Lower Income	Colombia, Ecuador, Egypt, Guatemala, Lithuania, Peru, Romania, Russia, South Africa, Thailand
Lower Income	China, India, Indonesia, Kenya, Pakistan

Quantifying the O-Factor

Opacity is difficult to measure quantitatively. As noted earlier, five distinct components of opacity were identified: corruption, legal opacity, economic opacity, accounting opacity, and regulatory opacity. There is good reason to believe that each of these components affects the cost and availability of capital.

Several survey questions assessed the effects of corruption on the cost of capital. Corruption will affect the cost of capital if firms are crowded out of capital markets because politically connected lending replaces lending based on fundamental economic factors.[8]

In order to determine the effect of legal opacity, we posed survey questions that address shareholder protection, the predictability of the judicial system, and the enforcement of laws, regulations, and property rights. These questions reflected the importance of these issues in determining the flow of portfolio and foreign direct investments.[9]

We examined economic opacity through survey questions addressing the predictability of government policy as reflected in fiscal, monetary, and foreign exchange policies. Research supports the contention that capricious and arbitrary government policy making increases the risk premium and hence the cost of capital.[10]

Accounting opacity was addressed by questions concerning disclosure standards and access to information about publicly traded corporations. We assume here that firms that disclose more information are more attractive to investors, because the relative risks of investing in these companies are more fully revealed.[11]

Regulatory opacity was the fifth focus of the survey, which inquired about the presence or absence of clearly established rules for changing and/or consistently applying regulatory rules and procedures.[12]

In addition, the survey asked respondents for a direct estimate of the incremental cost of capital associated with these five aspects of opacity in the selected countries.

Deriving Country-Specific O-Factor Scores

The composite O-Factor is calculated by averaging (on an equally weighted basis) the various components of opacity for each country in this report. The specific formula for computing the O-Factor is:

$$O_i = 1/5 * [C_i + L_i + E_i + A_i + R_i],$$

Where i indexes the countries and:

O refers to the composite O-Factor (the final score);
C refers to the impact of corrupt practices;
L refers to the effect of legal and judicial opacity (including shareholder rights);
E refers to economic/policy opacity;
A refers to accounting/corporate governance opacity; and
R refers to the impact of regulatory opacity and uncertainty/arbitrariness.

The composite O-Factor score is a linear transformation of the underlying average survey responses, all of which were weighted equally, as noted earlier, to avoid subjective bias. It is calculated as follows. We first converted all survey responses into a uniform four-point scale,[13] ranging from one (indicating greater opacity) to four (indicating greater transparency). We

[8] See, for example, Beim and Calomiris, 2000, Chapter Two.

[9] As shown in research by La Porta, et. al., 1998

[10] See Brunetti, Kisunko, and Weder, 1998.

[11] See La Porta, et. al., 1998.

[12] For information on the impact of regulation on capital markets and specifically how it relates to the likelihood of a banking crisis and the cost of its resolution, see Barth, Caudill, Hall, and Yago, 2000.

[13] This was necessary because some questions asked respondents to score opacity on a 10-point scale, other questions referred to a five-point scale, etc. In addition, for some questions high scores indicated opacity whereas for other questions, high scores indicated transparency. We normalised all of these responses to a four-point scale, with higher numbers corresponding to more transparency. Once inverted and placed on the 0 to 150 scale, higher numbers indicate more opacity (as explained at top of the following page).

then adjusted this score by subtracting it from four and multiplying by 50, in order to provide a more relevant range of scores. Thus, the best possible score would be a zero—which a country would receive if all respondents identified uniformly, perfectly transparent conditions. The worst possible score would be a 150—indicating that all respondents identified uniformly, perfectly opaque conditions. The results of this methodology are reported in Exhibit 3.

As you explore this key table, you will recognise O-Factor scores that seem contrary to received wisdom. The O-Factor is a complex measure, yielding new insights in part because it aggregates results from five zones of inquiry, rather than from any one zone. While the survey may report, for example, a relatively high level of corruption in a country, this may be offset in the composite O-Factor by a relatively low number for accounting or economic opacity.

Exhibit 3
Scores for O-Factor and Components

Country	C	L	E	A	R	O-Factor
Argentina	56	63	68	49	67	61
Brazil	53	59	68	63	62	61
Chile	30	32	52	28	36	36
China	62	100	87	86	100	87
Colombia	48	66	77	55	55	60
Czech Republic	57	97	62	77	62	71
Ecuador	60	72	78	68	62	68
Egypt	33	52	73	68	64	58
Greece	49	51	76	49	62	57
Guatemala	59	49	80	71	66	65
Hong Kong	25	55	49	53	42	45
Hungary	37	48	53	65	47	50
India	55	68	59	79	58	64
Indonesia	70	86	82	68	69	75
Israel	18	61	70	62	51	53
Italy	28	57	73	26	56	48
Japan	22	72	72	81	53	60
Kenya	60	72	78	72	63	69
Lithuania	46	50	71	59	66	58
Mexico	42	58	57	29	52	48
Pakistan	48	66	81	62	54	62
Peru	46	58	65	61	57	58
Poland	56	61	77	55	72	64
Romania	61	68	77	78	73	71
Russia	78	84	90	81	84	84
Singapore	13	32	42	38	23	29
South Africa	45	53	68	82	50	60
South Korea	48	79	76	90	73	73
Taiwan	45	70	71	56	61	61
Thailand	55	65	70	78	66	67
Turkey	51	72	87	80	81	74
UK	15	40	53	45	38	38
Uruguay	44	56	61	56	49	53
USA	25	37	42	25	48	36
Venezuela	53	68	80	50	67	63

These data are based on average survey responses for the five types of opacity. Using the simple averages derived from aggregating the survey responses, we derive the O-Factor by adjusting the scores so that larger scores reflect more opacity, while smaller scores reflect more transparency.

The Adverse Effects of Opacity

Opacity can adversely impact the cost and availability of capital in several different ways. Domestic capital markets may suffer from relative underdevelopment if proper disclosure of information is not made to investors who are deciding where to place their funds. International investors may be reluctant to fund projects if they are uncertain that funds will be allocated to their purported uses. In addition, the lack of clear, consistent, and reliable practices in the realms of legal disputes, regulation, and national economic policy may negatively impact the quantity of funds available for investment in countries. Similarly, awareness of unofficial (and often illegal) payments required by bureaucrats may dissuade investors from purchasing securities or investing in physical plants in the countries.

The "Tax-Equivalent" View of the Cost of Opacity

Exhibit 4 conveys our calculation of the cost of opacity, treated in this case as if it were a surtax imposed on foreign direct investment (FDI) through an increase in the corporate tax rate. Singapore is used as the benchmark for these calculations.

According to the estimates in Exhibit 4, an increase in opacity from the level of Singapore to the level of Colombia has the same negative effect on investment (domestic and international) as a 25-percent increase in corporate income tax. An increase in opacity from the Singaporean level to the Chinese level has the same negative effect on investment as raising the tax rate by 46 percent.[14] These examples are not chosen to call attention specifically to these countries, but simply to illustrate the uses of the chart.

There is irony in this finding. Many developing countries are eager to cut tax rates in order to boost investment, often by offering tax concessions to attract foreign investment. Exhibit 4 argues that a reduction in opacity can essentially substitute for a tax cut. To put the matter differently, domestic reforms that reduce opacity may be as effective as a tax cut in boosting domestic investment and attracting foreign investment—without sacrificing tax revenues.

[14] The tax-equivalent concept is more fully analysed in Appendix 1

Exhibit 4
Economic Cost of Opacity: "Tax-Equivalent" Estimates

Country	O-Factor	Tax-equivalent (%)
Argentina	61	25
Brazil	62	25
Chile	36	5
China	87	46
Colombia	60	25
Czech Republic	71	33
Ecuador	68	31
Egypt	58	23
Greece	57	22
Guatemala	65	28
Hong Kong	45	12
Hungary	50	17
India	64	28
Indonesia	75	37
Israel	53	19
Italy	48	15
Japan	60	25
Kenya	69	32
Lithuania	58	23
Mexico	48	15
Pakistan	62	26
Peru	58	23
Poland	64	28
Romania	71	34
Russia	84	43
Singapore	29	0*
South Africa	60	24
South Korea	73	35
Taiwan	61	25
Thailand	67	30
Turkey	74	36
United Kingdom	38	7
United States	36	5
Uruguay	53	19
Venezuela	63	27

*Singapore served as the benchmark for this calculation

Portfolio Flows

An additional method suggested itself to determine the economic effects of opacity. National governments often obtain funding from international capital markets in order to meet their spending needs and pursue their agendas for education, national defence, and infrastructure provision. Sovereign bonds—so-called because they are backed by the full faith and credit of national governments—are issued and traded in countries around the world. They represent an important aspect of a nation's participation in international capital markets. Exhibit 5 shows that countries with more opaque practices generally must reward investors by paying a premium (a spread) over what the benchmark United States pays. (The "risk-free" rate in Exhibit 5 corresponds to the United States, the nation with the lowest probability of default on its bonds.) While the price of an asset already reflects a market assessment of risk, in this study we are interested in decomposing that price to understand the portion resulting from opacity factors.

Using the composite O-Factor to calculate the risk premium imposed by opacity, we controlled for the fact that some governments have deep pockets in terms of accumulated foreign currency reserves (an indication that their price of borrowing should be lower). We found that a one-point increase in the O-Factor score leads to a 25.5 basis point increase in the interest rate that investors demand in order to purchase new-issue bonds originated in that country. The estimated risk premium for each country in the study appears in Exhibit 5. Interpretation of this exhibit can be straightforward. For example, were Poland to issue 4 billion zloty (approximately US$1 billion) in government bonds, the Opacity Risk Premium implies an interest expense of approximately 280 million zloty (or approximately US$70 million) per year, which could be avoided through the reduction of opacity to the level of Singapore.

Exhibit 5
Risk Premium due to Opacity

Country	O-Factor	Opacity Risk Premium (Basis Points)
Argentina	61	639
Brazil	61	645
Chile	36	3
China	87	1,316
Colombia	60	632
Czech Republic	71	899
Ecuador	68	826
Egypt	58	572
Greece	57	557
Guatemala	65	749
Hong Kong	45	233
Hungary	50	370
India	64	719
Indonesia	75	1,010
Israel	53	438
Italy	48	312
Japan	60	629
Kenya	69	848
Lithuania	58	584
Mexico	48	308
Pakistan	62	674
Peru	58	563
Poland	64	724
Romania	71	915
Russia	84	1,225
Singapore	29	0
South Africa	60	612
South Korea	73	967
Taiwan	61	640
Thailand	67	801
Turkey	74	982
UK	38	63
Uruguay	53	452
USA	36	0
Venezuela	63	712

Why the Risk Premium Can Exceed Actual Sovereign Bond Rates

Some countries listed in Exhibit 5 are currently able to borrow internationally in hard currency at low interest rates – in some instances at rates below the premium associated with opacity. This apparent anomaly is not an error in calculation; it results from a combination of market dynamics and government policies.

As to market dynamics, countries that borrow in international capital markets are typically obliged to service their debts in hard currency, such as US dollars. They are accordingly able to borrow at lower interest rates than Exhibit 5 estimates. However, when the same countries float domestic bond issuances, the interest rates are typically much higher. Opacity contributes to the inability of some countries to borrow in their own currencies.

When actual rates in domestic markets are lower than the opacity-based risk premiums in Exhibit 5, this may well be a symptom of what economists technically term "financial repression." This generally occurs when governments crowd out private investment through macroeconomic means such as the imposition of below-equilibrium interest rates.[15] The anomaly often indicates the absence of investment opportunities that can compete with government-issued debt. The end cost of such policies is borne by any individual who saves money, yet is unable to obtain the returns that would result from financial systems without government repression. A hidden and involuntary subsidy is thus provided by savers who are often unaware of the disadvantage imposed on their efforts.

[15] See Beim and Calomiris, 2000, Chapter 2.

Additional Survey Findings

In addition to the O-Factor scores in Exhibit 1 and additional data in Exhibits 3-5, which represent the primary findings of this report, we sought responses to a number of supplemental questions. Drawing on the resulting responses, this section opens a series of issues that are central to the understanding of opacity and its effects on the cost and availability of capital.

The Question of Accounting Opacity

The survey invited respondents to identify the most important aspects of accounting opacity/transparency in their countries. Their responses to this open-ended question are displayed in Exhibit 6. Given the large number of responses received, we broke them down into several categories in order to summarise them more effectively. Each category is listed in Exhibit 6, with select examples of specific issues raised by respondents. Responses differed somewhat among the four income groups. (Note: countries are identified by income group in Exhibit 2.) Respondents in the lower income countries tended to focus on issues such as physical security, dual book keeping, bureaucracy, and enforcement. In middle lower income countries, respondents tended to mention disclosure and issues such as exchange rates, dollarization, and inflation accounting. Middle upper income respondents identified a wide range of issues, including consolidated/related parties reporting, tax-driven accounting, and asset valuation. Respondents based in upper income countries expressed concern regarding valuation of intangible assets (goodwill), as well as impairment of long-lived assets and various labour and employee issues. These responses suggest a hierarchy, ranging from the fundamentals of sound accounting and regulation to the types of concerns that preoccupy executives and bankers involved in major mergers and acquisitions, and the management of well-established organisations.

Respondents were also asked to assess the quality of the accounting standards in their home countries. The findings summarised in Exhibit 8 show that the quality of accounting standards is reported to be highest in upper income countries, lower in middle upper and middle lower income countries, and lowest in lower income countries. (The results for individual countries are presented in Appendix 4, Exhibit L.)

Exhibit 6
Open Question Responses*

Country	Response Categories								Key Problems Mentioned**
	Specific Accounting Issues	Civil Society	Regulation/Policy	Banking	Labor/Pensions/Training	Open Economy	Disclosure	Taxes	
Argentina	X		X						Corporation Department control
Brazil	X		X		X	X	X	X	Disclosure; regulatory issues
Chile	X	X	X			X	X	X	Inflation accounting
China	X	X	X	X	X	X	X	X	Reliability of Exhibits
Colombia	X	X	X		X	X	X	X	Violence; inflation accounting
Czech Republic	X						X		Related parties disclosure
Ecuador	X					X			Dollarization issues
Egypt		X	X			X		X	Exchange rate; regulations
Greece	X		X	X		X	X	X	Substance vs. form of rules
Guatemala	X		X		X			X	Statutory requirements
Hong Kong	X					X	X	X	Related party transactions
Hungary	X	X	X			X	X	X	Disclosure; related party accounting.
India	X	X	X				X	X	Bureaucracy; disclosure
Indonesia	X	X	X			X	X	X	Enforcement; political instability
Italy	X	X	X	X			X	X	Governance; taxation
Japan	X			X	X			X	Impairment of long-lived assets
Kenya		X	X	X					Reliability of Exhibits
South Korea	X			X			X	X	Contingency accounting
Lithuania			X		X		X	X	Financial reporting; consolidation
Mexico			X			X		X	Exchange rate; govt. policies
Pakistan		X		X			X		Dual book keeping
Peru	X		X	X		X		X	Goodwill
Poland	X						X		Consolidated reporting; accruals
Russia	X		X			X	X	X	Unreliable Exhibits; tax-driven
Singapore	X	X			X		X		Goodwill; disclosure
South Africa	X		X			X	X	X	Goodwill; volatile exchange rates
Taiwan	X			X	X			X	Employee pensions and benefits
Thailand	X	X	X				X	X	Asset valuation; consolidation
Tunisia	X			X			X	X	Disclosure
Turkey	X	X	X			X	X	X	Inflation accounting; tax-driven
UK	X				X	X			Intangibles/goodwill
Uruguay	X				X	X	X	X	Pensions/labour regulations
USA	X						X		Business combinations/consolid.
Venezuela	X					X		X	Inflation accounting

* If respondents indicated a problem in a given area, that country received an "X" on the table. These responses are based on answers to the following question: "Please list up to three opacity-related accounting issues that influence the cost of capital in your country. Please list them in order of importance, from the issue having the greatest influence on the cost of capital to the issue having the least influence." Complete responses (in order of importance) by country are in Appendix 3.

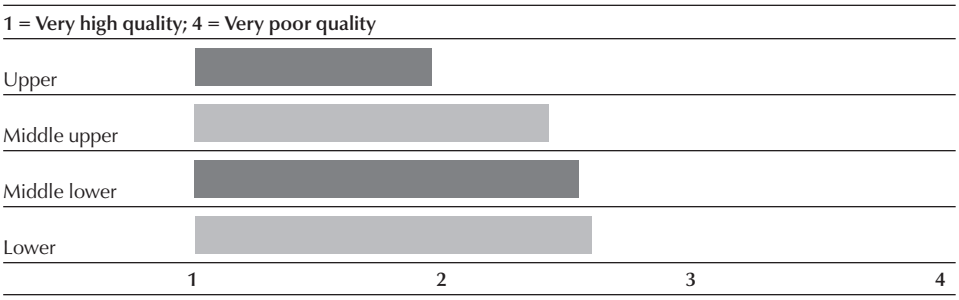
**Representative problem areas mentioned by respondents.

Exhibit 7
Sample Responses for Exhibit 6 Categories

Category	Typical Comments Related to
Specific Accounting Issues	Inventory valuation, book vs. market, goodwill, deferred charges, off balance-sheet activity, intangibles, IAS 29 (concerning inflation accounting), valuation of assets
Civil Society	Corruption, lack of interaction between government and accountant associations or organisations, physical security and violence, keeping double sets of books, governance
Regulation/ Policy	Macroeconomic policies (e.g., volatile inflation), enforcement of accounting practices, regulatory compliance, "red tape", license issuance, weakness of supervisor/regulator
Banking*	State-owned banks, bad debts provisions, loans to politically connected individuals, unfair practices while obtaining or using loans
Labour/ Pensions/ Training	Lack of well-trained accounting professionals, pension accounting, employee benefit costs, employee incentives distributed from retained earnings, labour contingencies due to vague laws
Open Economy	Differences between local accounting practices and internationally accepted practices, capitalisation of foreign exchange losses, exchange rate volatility
Disclosure	Limited disclosure rules and procedures, lack of standards for consolidated accounting, related-party transactions, transparency of disclosures
Taxes	Tax-driven as opposed to profit-driven accounting standards, evasion of tax liabilities, accounting for deferred taxes

*Includes financial services more broadly construed

Exhibit 8
"Rate the Quality of Accounting Standards"



The Actions of Governments

The survey asked whether the respondents were concerned with the imposition of new or additional controls (Exhibits 9-12) in four major areas: exchange rates, interest rates, free flow of capital, and import and export controls. Respondents in lower income countries showed the greatest degree of concern for the imposition of new or additional controls on the external sector. (The individual country scores are presented in Exhibits A through D in Appendix 4.)

Exhibit 9

"Are you concerned about unpredictable exchange rates?"

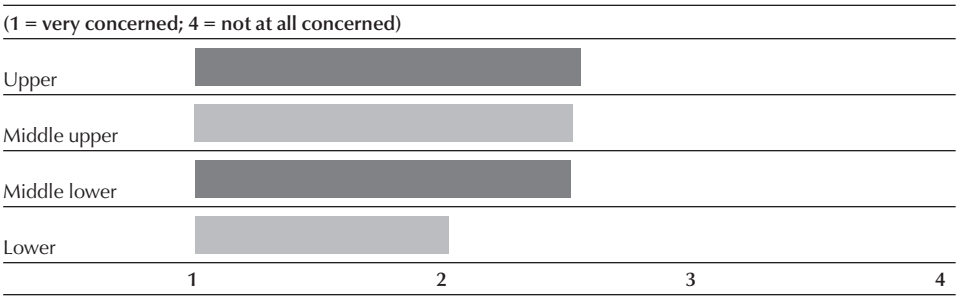


Exhibit 10

"Are you concerned about unpredictable interest rates?"

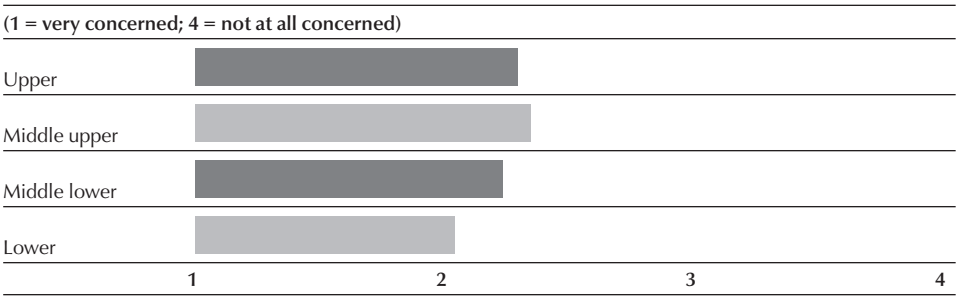


Exhibit 11

"Are you concerned about the imposition of new or added controls on capital flows?"

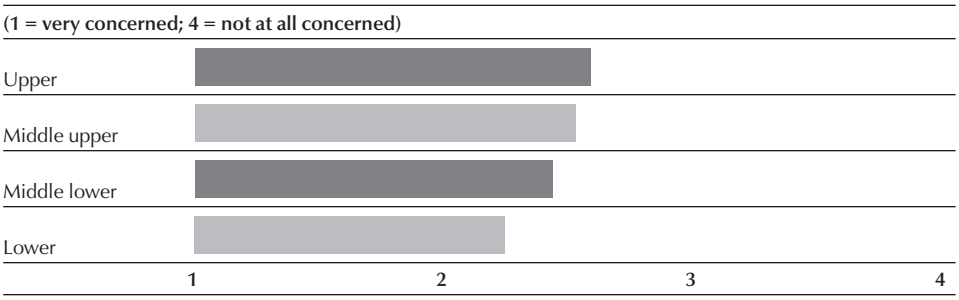
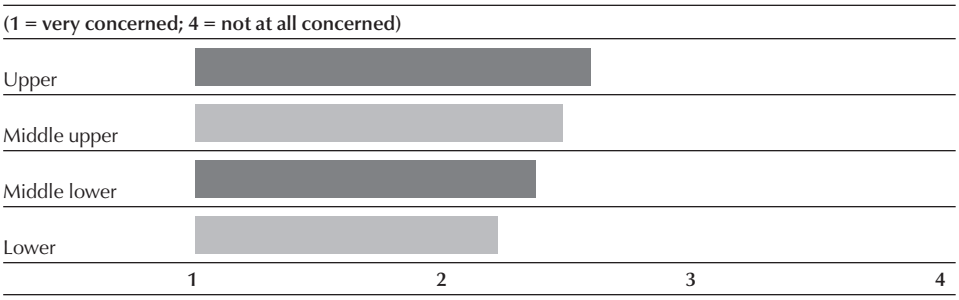


Exhibit 12

"Are you concerned about the imposition of new or additional import and export controls?"



Does the unpredictability of government action adversely affect the cost of capital, or are such occurrences merely nuisances with no economic impact? Respondents were asked to assess the impact on the cost of capital of the unpredictability of laws and regulations, economic policies, corruption, and accounting standards. The results of this analysis—grouped by country income category—are presented in Exhibits 13-16. As the charts show, the impact of unpredictability on the cost of capital was generally perceived to be higher in the lower-middle income category, with lesser importance assigned by respondents in other categories. (Exhibits E through H in Appendix 4 present the individual country responses.)

Exhibit 13

"Is unpredictability of laws and regulations important in affecting your firm's cost of capital?"

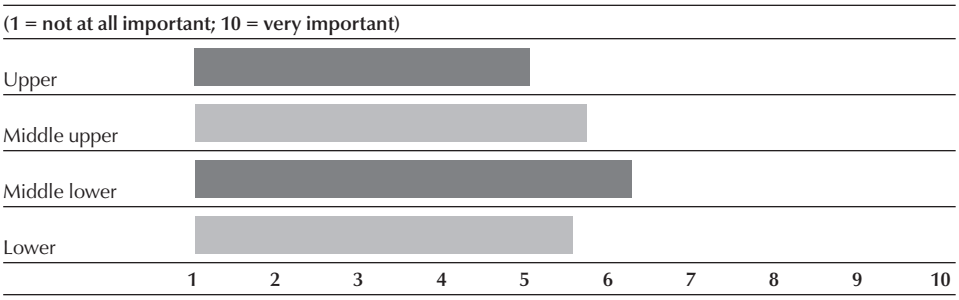


Exhibit 14

"Do unpredictable government policies affect the cost of capital in your country?"

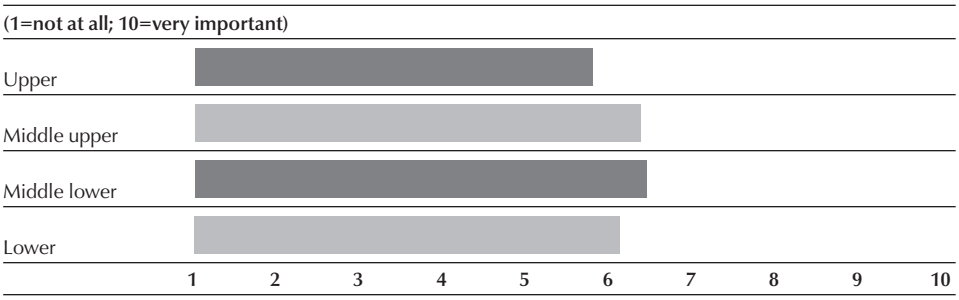


Exhibit 15

"Do poor accounting standards affect the cost of capital in your country?"

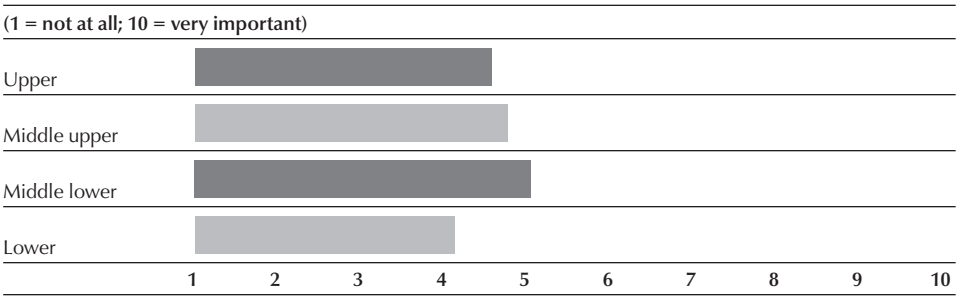
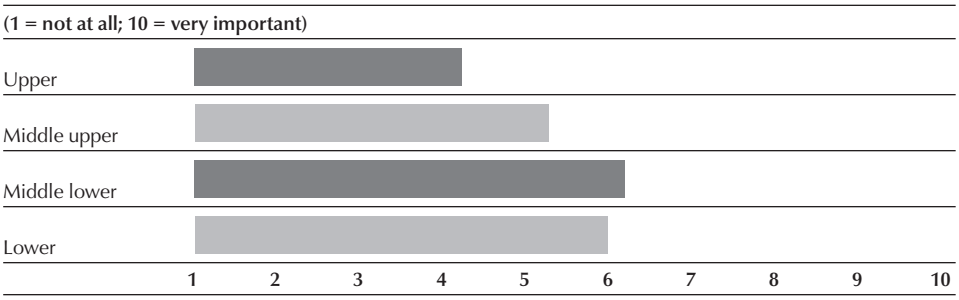


Exhibit 16
"Does corruption affect the cost of capital in your country?"



Has Opacity Changed Over the Last Five Years?

The first cycle of a survey is, by definition, unable to project change over time. As we continue to publish this report at regular intervals, it will increasingly address this important type of measurement. However, to capture some general notion of whether opacity has changed in the listed countries in the past five years, we invited the respondents to give their views concerning changes in laws and rights, opacity associated with economic policy, and corruption. The results are presented in Exhibits 17-19. (The results for individual countries appear in Appendix 4, Exhibits I through K.)

Exhibit 17
"How has uncertainty surrounding enforcement of laws, regulations and rights changed in the last 5 years?"

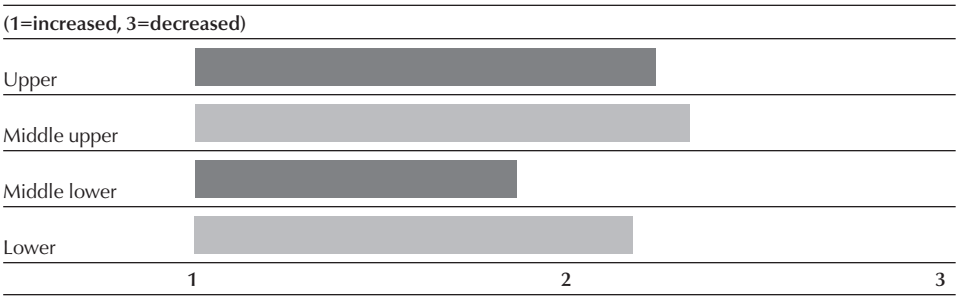


Exhibit 18
"Has the unpredictability of government economic policies changed over the last five years?"

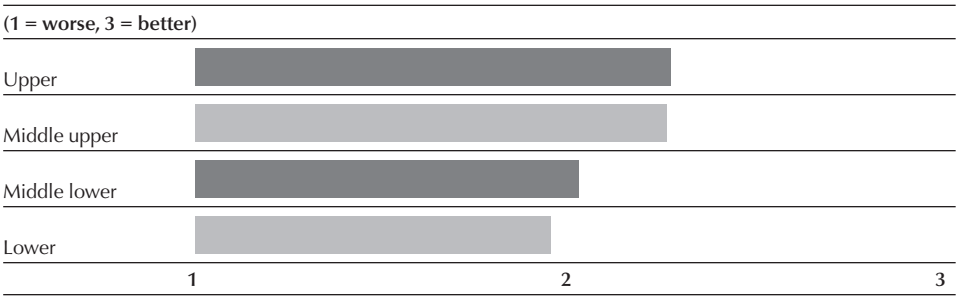
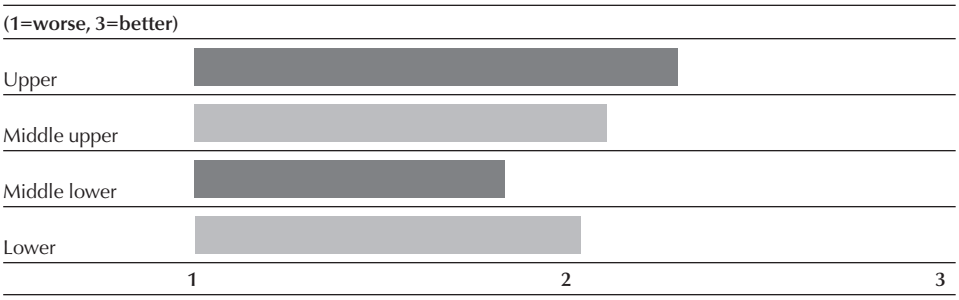


Exhibit 19

"Over the past five years, has corruption's effect on the cost of capital changed?"



In terms of laws and rights, opacity has on average decreased as a problem for countries in the upper, middle-upper, and lower income groups, whereas opacity has worsened on average over the last five years for countries in the middle-lower income category.

Respondents in Venezuela, Ecuador, and Peru reported the most significant deterioration in the certainty surrounding the enforcement of laws and regulations over the past five years. For a variety of countries, reported conditions in this regard did not change at all (these include Argentina, Greece, Hong Kong, Singapore, the United Kingdom, and the United States). The three countries that had the most improvement in the level of uncertainty surrounding law and regulatory enforcement were South Korea, India, and Lithuania.

With regard to economic opacity, countries in the middle-upper and upper income group showed improvement, whereas countries in the lower income category showed deterioration. Respondents in the middle-lower income category indicated that the level of economic opacity has not changed substantially over the last five years. Venezuela and Ecuador were again two of the three countries that posted the greatest increase in the unpredictability of government economic policies over the past five years, while our respondents reported the worst deterioration in Indonesia. Lithuania is one of the three countries where economic policy opacity decreased the most, while Israel and the Czech Republic also posted very significant gains in policy predictability, in the view of our respondents. Countries where predictability remained unchanged include Argentina, Egypt, Greece, Guatemala, Russia, Singapore, South Africa, and Uruguay.

The survey also indicates perceived changes in the level of corruption. Respondents in countries that fall into the upper income category reported diminished corruption, whereas countries in the middle lower income category are said to suffer higher levels of corruption. Countries in the lower and middle upper income categories display a slight perceived change for the better in terms of corruption. South Africa, Peru, and Colombia were reported to have experienced the worst deterioration. The greatest improvement was reported for South Korea, Poland, and Italy.

To summarise, the effects of opacity on the cost of capital seem to have lessened in the so-called transition states of Central and Eastern Europe, while Latin America appears to have suffered deterioration over the last five years.

In this overall set of responses concerning levels and changes in different components of opacity, there is a clear pattern: in countries around the world, the higher the level of income, on average, the greater the level of perceived transparency.

Conclusions

Our empirical results indicate that opacity imposes significant costs on investors—be they individual or corporate—and on countries. Investors assume, in effect, a significant hidden surtax when they commit funds to countries burdened with a high O-Factor. Similarly, countries with a burdensome O-Factor may pay a risk premium when they borrow from abroad or domestically by issuing bonds.

The Opacity Index takes its place alongside other published indices of the effects of corruption and opacity, which focus on other aspects of public life and capital markets (as noted earlier, see Appendix 5 for some correlations). These aspects include reduction of expenditures on health, education, operations, and maintenance; inefficient increases in public investment; reduction of public investment productivity; and reduction of tax revenue.

Opacity has significant economic and social costs. It can be measured in terms of national income through increased domestic inequality, as previous research has shown. It can be measured, as in this report, in terms of the increased cost of capital and reduction in its availability. As the true costs of opacity are increasingly understood and publicised, political and pan-global measures to achieve greater transparency and provide it with a firm regulatory basis will surely rise in priority on the agendas of governments and international commissions.

The Opacity Index is neutral in its research methods and mathematics, but it points unmistakably to the benefits of transparency for nations, governments, businesses, and the public at large.

Appendix 1
Technical Notes

Introduction

Estimating the economic costs of opacity has several advantages. First, it allows us to transform the survey-based opacity scores (whose units are arbitrary) to something with a meaningful economic interpretation. For example, the extra risk premium due to opacity provides a concrete idea (in basis points) on the amount of premium needed to induce investors to invest in a country with a given level of opacity. Second, the calculated tax-equivalent is invariant with respect to any linear transformation of the survey scores.

While the tax-equivalent is estimated based on data on FDI, the estimates apply to domestic investment as well under some mild assumptions, which are explained in this appendix.

Of course, the calculations involve assumptions. Therefore, the exact magnitude of the effect is reported for illustration only. The methodology used in the calculation is explained below, which allows readers to do alternative calculations using alternative assumptions.

This appendix is organised in the following way. In the first section, the basic methodology in terms of the regression specification and statistical results is described. In the following section, the estimated costs of opacity in terms of an equivalent increase in tax rate are presented. Finally, the third section looks at the calculation of the portfolio premium.

A Regression Analysis of Opacity and Inward Foreign Direct Investment

We first examine the effect of opacity on the volume of inward foreign direct investment using a regression analysis. Based on the regression coefficients, we will later gauge the quantitative effect of opacity. We will make a case that the tax-equivalent calculation based on the FDI applies equally to domestic capital (under a mild assumption).

We start with an explanation of the regression specification. Our specification can be motivated by a simple optimisation problem solved by a multinational firm. Let K(j) be the stock of investment the multinational firm intends to allocate to host country j. Let t(j) be the rate of corporate income tax in host country j, b(j) be the cost of opacity to the firm expressed in units of tax-equivalent, and r be the rental rate of capital. Let f[K(j)] be the output of the firm in host country j. There are N possible host countries that the firm can invest in. The firm chooses the level of K(j) for j=1,2,…, N, in order to maximise its total after-tax and after-bribery profit:

$$\pi = \sum_{j=1}^{N} \{[1-t(j)-b(j)]f[K(j)]-rK(j)\}$$

Note that as a simple way to indicate that tax and opacity are distortionary, we let [1-t(j)-b(j)] pre-multiply output rather than profit. The optimal stock of FDI in country j, K(j), would of course be related to both the rate of tax and that of opacity in the host country: K = K[t(j),b(j)], where $\partial K/\partial t < 0$ and $\partial K/\partial b < 0$ [16].

[16] A more sophisticated generalization includes endogenising the level of opacity (and tax) such as shown in Shleifer and Vishny (1993) or Kaufmann and Wei (1999). These generalizations are outside the scope of the current paper.

Let FDI(k,j) be the bilateral stock of foreign direct investment from source country k to host country j. In our empirical work, we start with the following benchmark specification:

$$\mathbf{FDI(k,j) = \sum_i \alpha(i)D(i) + \beta_1\, tax(j) + \beta_2\, opacity(j) + X(j)\delta + Z(k,j)\gamma + e(k,j)}$$

where D(i) is a source country dummy that takes the value of one if the source country is i (i.e., if k=i), and zero otherwise; X(j) is a vector of characteristics of host country j other than its tax and opacity levels; Z(k,j) is a vector of characteristics specific to the source-host country pairs; e(k,j) is an iid error that follows a normal distribution; and $\alpha(i)$, $\beta 1$, $\beta 2$, δ, and γ are parameters to be estimated.

This is a quasi-fixed-effects regression in that source country dummies are included. They are meant to capture all characteristics of the source countries that may affect the size of their outward FDI, including their size and level of development. In addition, possible differences in the source countries' definition of FDI are controlled for by these fixed effects under the assumption that the FDI values for a particular country pair under these definitions are proportional to each other except for an additive error that is not correlated with other regressors in the regression. We do not impose host country fixed effects as doing so would eliminate the possibility of estimating all the interesting parameters including the effect of opacity.

The results of two regressions with this specification are reported in Table T-1.[17] The first regression uses the list of regressors in Wei (2000a). The coefficients on both opacity and tax rate are negative and statistically significant at the five percent level. This implies that more opacity and higher tax would reduce inward foreign direct investment. Other regressors also have sensible signs. For example, larger host countries as measured by log of GDP tend to receive more FDI. Countries with low labour cost, as proxied by log of per capita GDP, also receive more FDI on average. Two additional variables are used to capture possible special relations for certain pairs of source-host countries. Host countries tend to receive more FDI from a source country with which they share a common language (or a common historical colonial tie). Host countries also tend to receive more FDI from geographically close source countries.

Until very recently, the literature that examines the empirical determinants of FDI has not taken into account the effects of host government's policies toward FDI. That is because a systematic measure of the restrictions and the incentives related to foreign investment did not exist. This omission potentially could bias the estimated effect of opacity on foreign investment if opacity and government policies are correlated. We expand on this point in more detail below.

Many host countries have a variety of restrictions on the ability of foreign firms to operate in a country. For example, a country may forbid foreign firms from entering certain sectors, disallow foreign investors to have full control of the firms, or have restrictions on foreign exchange transactions that could interfere with foreign firms' ability to import intermediate inputs or repatriate profits out of the country. Of course, many countries also have special policies designed to attract foreign investment. These can range from tax concessions and subsidised loans, to special incentives for export-related foreign investment. Notably absent from existing studies are empirical measures of restrictions (or incentives) in their relevant regressions. Their omission could potentially be significant. For example, if opacity and restrictions on FDI are positively correlated (i.e., if corrupt countries are also more likely to impose restrictions on foreign investment), then the effect of opacity (corruption) on inward FDI as estimated in previous studies could be exaggerated (since one had not taken into account the negative effect of the FDI restrictions on inward FDI).

[17] Summary statistics and correlation coefficients are reported in Tables T-3 and T-4, respectively.

Logically, there are reasons to think that opacity and the FDI restrictions are indeed positively correlated. Shleifer and Vishny (1993) provided a conceptual framework in which bureaucratic hassle (e.g., license requirement) is endogenously determined to extract bribes. In such a setting, bureaucratic hassle and bribes can be positively correlated. Using data on firm-level surveys, Kaufmann and Wei (1999) indeed found evidence that firms that pay more bribes also face more, not less, bureaucratic hassle in equilibrium. This is because both the level of corruption and the level of red tape are endogenously determined in response to characteristics of the sector, or the firm in question.

On the flip side, if the host government systematically offers incentives to foreign investors to compensate for the opacity problem in the country, then previous estimates of the effect of the opacity could be downward biased if these incentives are not properly controlled for. This discussion suggests the possibility that the omission of host governments' policies towards FDI could have a big influence on the estimated effect of opacity on foreign investment.

Following Wei (2000b), this paper employs a new cross-country measure of restrictions and incentives on inward foreign direct investment, based on a reading of the detailed descriptions compiled by PricewaterhouseCoopers (PwC) in a series of country reports. The "Doing Business and investing in …" series is written for multinational firms intending to do business in a particular country. They are collected in one CD-Rom titled "Doing Business and Investing Worldwide" (PwC, 2000). For each potential host country, the relevant PwC country report covers a variety of legal and regulatory issues of interest to foreign investors, including "Restrictions on foreign investment and investors" (typically Chapter 5), "Investment incentives" (typically Chapter 4), and "Taxation of foreign corporations" (typically Chapter 16).

With a desire to convert textual information into numerical codes, we read through the relevant chapters for all countries that PwC covers. For "restrictions on FDI," we create a variable taking a value from zero to four, based on the presence or absence of restrictions in the following four areas:

a) *Existence of foreign exchange control. (This may interfere with foreign firms' ability to import intermediate inputs or repatriate profits abroad.)*
b) *Exclusion of foreign firms from certain strategic sectors (particularly, national defence and mass media).*
c) *Exclusion of foreign firms from additional sectors that would otherwise be considered harmless in most developed countries.*
d) *Restrictions on foreign ownership (e.g., they may not have 100% ownership).*

Each of the four dimensions can be represented by a dummy variable that takes the value one (in the presence of the specific restriction) or zero (in the absence of the restriction). We create an overall "FDI restrictions" variable that is equal to the sum of these four dummies. "FDI restrictions" is zero if there is no restriction in any of the four categories, and four if there is restriction in each category.

Similarly, we create an "FDI incentives" index based on information in the following areas:

a) *Existence of special incentives to invest in certain industries or certain geographic areas.*
b) *Tax concessions specific to foreign firms (including tax holidays and tax rebates, but excluding tax concessions specifically designed for export promotion, which is in a separate category).*
c) *Cash grants, subsidised loans, reduced rent for land use, or other non-tax concessions, specific to foreign firms.*

d) Special promotions for exports (including existence of export processing zones, special economic zones, etc).

An overall "FDI incentives" variable is created as the sum of the above four dummy variables, in the same manner described above for "FDI restrictions". The variable can take a value of zero if there is no incentive in any of the four categories, and four if there are incentives in all of them.

In the second regression in Table T-1, these two new variables are included together with other regressors. As consistent with one's expectations, a country that offers more incentives to attract FDI, on average, receives more inward FDI. A country that places more restrictions on FDI receives less. Most important for the central task of this paper, the coefficient on opacity variable is still negative and statistically significant at the five percent level.

We have experimented with including the squared terms of log(GDP), log(per capita GDP) and log(distance) as additional regressors. These changes do not affect the sign or the statistical significance of the coefficient on the opacity variable. They affect the size of the point estimate and goodness-of-fit (the adjusted R-squared) only slightly.

Estimating the Cost of Opacity: Tax Equivalent

To illustrate the economic significance of the opacity effect in quantitative terms, this section presents some illustrated calculations that convert the point estimate in the regression to an equivalent cost in terms of tax increase.

Foreign direct investment (FDI) has been recognised as very important in economic growth, particularly for developing nations and economies in transition. It provides not just the needed capital for the host country, but more importantly, the needed technology and managerial and marketing know-how (see, for example, the research paper by Borensztein, De Gregorio, and Lee, 1995). Therefore, every unit of lost FDI is a lost opportunity for faster economic growth.

Our regression analysis in the previous section demonstrates the negative effect of opacity on inward foreign direct investment (and indirectly, on economic growth). We can illustrate the cost of opacity in terms of an equivalent amount of increase in (highest) marginal corporate income tax. To be more precise, for a particular host country k, we may say the failure to reduce its opacity to the Singapore level is equivalent to raising the corporate income tax rate by X percentage points in terms its negative effect on FDI. This value of X is what we call the tax-equivalent measure of the opacity cost.

From the regression specification, we can see that an increase of $1/ß_1$ units in the corporate income tax rate and an increase of $1/ß_2$ units in opacity have the same effect on inward FDI. Therefore, the tax-equivalent measure of opacity for country k is approximated by the following equation:

$(ß_2 / ß_1)$ [opacity(k) – opacity(Singapore)]

The tax-equivalent measure of opacity for all countries in the sample is reported in Column 3 of Table T-2.

The tax-equivalent measure is computed based on observations on foreign direct investment. On the surface, this may appear not generalisable to domestic investment. In particular, one may think that domestic investment may be less sensitive than international investment to a given change in opacity and tax. For example, let us say that Russia has a higher degree of

opacity than Poland. It may be easier for an American firm to skip Russia and invest in Poland than for a Russian firm to do the same. However, with a relatively mild assumption, the tax-equivalent measure can be applied to domestic investment as well.

To see this, let e(int-cap, tax) and e(dom-cap, tax), respectively be the elasticities of international and domestic capital with respect to the tax rate. Similarly, let e(int-cap, opacity) and e(dom-cap, opacity) be the elasticities of the two types of capital with respect to opacity.

It is possible to allow international investment to be more sensitive than domestic investment to both opacity and tax. That is,

e(int-cap, tax) > e(dom-cap, tax)

and

e(int-cap, opacity) > e(dom-cap, opacity).

As long as the ratios of the greater sensitivities by the international investments are proportional to each other, that is,

e(int-cap, tax) / e(dom-cap, tax) = e(int-cap, opacity) / e(dom-cap, opacity)

then, the tax-equivalent measure of the opacity cost backed out of a study of FDI would be the same as the tax-equivalent applicable to domestic investment.

There are several reasons why the estimates from a study of FDI are more reliable than a study of cross-country data on domestic investment. First, for a given source country, our data on FDI to a set of host countries are based on the reporting by that single source country, which ensures a much better international comparability than a cross-section of national data on domestic investment. Second, our FDI data rely only on reporting by major OECD countries whose statistics are more reliable than many non-OECD countries in our sample.

Of course, the estimated increases in tax to the firms generate no tax revenue for the governments. Many developing countries are eager to cut tax rates to boost investment or offer generous tax concessions to attract foreign investment. This study suggests that a high degree of opacity can easily offset the benefit of a tax cut. To put it differently, domestic reforms that aim to reduce opacity may very well be more effective in boosting domestic investment and in attracting foreign investment without reducing tax revenue to the government.

Calculation of the Portfolio Premium

In order to determine the effect of opacity on sovereign bond spreads, we estimated a regression with spreads over U.S. treasury rates on the left hand side and two independent variables on the right hand side: a dichotomous variable indicating whether or not the bonds were issued in US dollars or in local currency (US = 1; local currency = 0), and a variable reflecting the cumulative current account deficit/surplus over the last ten years (1989-1999). We used 2000 data for bond spreads. The coefficient on the O-Factor is 25.5, indicating that a one-point increase in opacity corresponds to a 25.5 basis point increase in the spreads on sovereign bonds issued by that government. The O-Factor coefficient is statistically significant (p=0.08).

Regression Results for Sovereign Bond Calculation

Dependent Variable: Spreads over U.S. treasuries, average for year 2000
Adjusted R2: 17% (goodness of fit)

Independent Variable	Coefficient	P-Value	T-Statistic
Intercept	-713.09	0.40	-0.86
O-Factor composite	25.51	0.08	1.83
US Dollar dummy	-646.97	0.07	-1.90
Net Foreign Assets	-0.001	0.11	-1.68

Explanatory Note on the O-Factor Risk Premium

There are countries listed on the chart that were able to borrow at very low interest rates, sometimes at rates even below the premium assigned to opacity (which was calculated using average values). Similar situations arise when making out of sample illustrative projections. One way to view these anomalies is as the result of finance-unfriendly government policies. These situations are really symptoms of extreme "financial repression" generally taking place when governments crowd out private investment through macroeconomic means such as the imposition of below-equilibrium interest rates (see Beim and Calomiris, 2000, Chapter Two—full citation is listed in references section at end of main text). The anomalies generally indicate a lack of investment opportunities that can compete with government-issued debt. Japan, for example, is able to issue debt at very low interest rates despite the lack of transparency that is endemic to the financial system. For a discussion of the Japanese anomaly, see The Economist magazine, July 15, 2000, "Unmoved". The end cost of these policies is borne by any individual who saves money and is unable to obtain the returns that would result from financial systems without government repression.

A Note of Caution

The calculation of the costs of opacity in terms of an equivalent tax increase or a rise in the sovereign bond rates involves certain assumptions, which are described explicitly in the previous sub-sections. Alternative assumptions may result in different estimates.

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Table T-1
Opacity & Foreign Direct Investment

Dependent variable: log(bilateral FDI from source country j to host country k)a		
Opacity score (PwC's survey O-factor)	-0.056** (0.006)	-0.054** (0.007)
Tax rate	-0.064** (0.012)	-0.067** (0.013)
Log (GDP)[a]	0.916** (0.062)	0.952** (0.063)
Log (per capita GDP)[a]	-0.243** (0.083)	-0.223** (0.085)
Log distance	-0.584** (0.078)	-0.560** (0.081)
Linguistic tie	0.631** (0.286)	0.654** (0.287)
FDI incentives		0.277** (0.110)
FDI restrictions		-0.105* (0.072)
Adjusted R2	0.76	0.77
Observations	360	346

Regression specification: logFDI(j, k) = source country dummies + b X(k,j) + e(k,j); where FDI(k,j) is FDI from source country j to host country k. Coefficients on the source country dummies are estimated but not reported to save space. ** and * indicate significance at the 5% and 10% levels, respectively. Standard errors are in parentheses.

[a] To minimise year-to-year fluctuations, log(FDI), log(GDP) and log(per capita GDP) are averaged over 1994-1996.

Table T-2
Economic Cost of Opacity in Terms of Equivalent Tax Increase

Country	O-Factor	Tax-equivalent[a]
Argentina	61	25
Brazil	61	25
Chile	36	5
China	87	46
Colombia	60	25
Czech Republic	71	33
Ecuador	68	31
Egypt	58	23
Greece	57	22
Guatemala	65	28
Hong Kong	45	12
Hungary	50	17
India	64	28
Indonesia	75	37
Israel	53	19
Italy	48	15
Japan	60	25
Kenya	69	32
Lithuania	58	23
Mexico	48	15
Pakistan	62	26
Peru	58	23
Poland	64	28
Romania	71	34
Russia	84	43
Singapore	29	0
South Africa	60	24
South Korea	73	35
Taiwan	61	25
Thailand	67	30
Turkey	74	36
United Kingdom	38	7
United States	36	5
Uruguay	53	19
Venezuela	63	27

Costs of opacity in terms of equivalent increase in tax rate are calculated based on the point estimates from the last regression in Table 1 and using Singapore as the benchmark. The methodology for the calculation is explained in detail in the text.

[a] Tax-equivalent is a percentage point change in the country's (highest) corporate tax rate.

Table T-3
Summary Statistics for FDI Calculation

Variable	Obs.	Mean	Std. Dev.	Min	Max
O-Factor	35	59.59	13.02	29.47	87.16
Corruption	35	1.91	0.31	1.26	2.56
Legal opacity	35	2.24	0.32	1.63	3.00
Economic opacity	35	2.39	0.25	1.84	2.81
Accounting opacity	35	2.23	0.35	1.5	2.81
Regulatory opacity	35	2.19	0.29	1.46	3.00
Corporate tax rates	56	32.39	6.86	0.00	42.00
FDI restrictions	49	1.69	1.18	0.00	4.00
FDI incentives	49	1.65	0.69	0.00	3.00

The first six variables come from the PwC opacity survey. The corporate tax rate and restrictions on and incentives for FDI come from author's calculation based on PwC's world-wide *Doing Business and Investing Guid*e. Corporate tax rates are updated from the *Global Competitiveness Report* by Harvard University and the World Economic Forum.

Table T-4
Pairwise Correlations for FDI Calculation

			Opacity				Tax	FDI
	O-Factor	Corruption	Legal	Economic	Accounting	Regulatory	Rates	Restriction
O-Factor	1							
Corruption	0.85	1						
Legal opacity	0.88	0.67	1					
Economic opacity	0.85	0.69	0.66	1				
Accounting opacity	0.80	0.53	0.67	0.57	1			
Regulatory opacity	0.91	0.77	0.75	0.82	0.60	1		
Corporate tax rates	0.14	0.12	0.04	0.28	0.02	0.19	1	
FDI restrictions	0.51	0.47	0.41	0.48	0.34	0.53	0.09	1
FDI incentives	0.19	0.18	0.10	0.33	-0.05	0.34	0.22	0.28

Appendix 2
Question Categorisation Cross-Walk (keys survey questions to analysis)

Code		CFOs	Equity Analysts	Bankers	PwC Staff
100	**CORRUPTION**				
110	Corruption never/always				
111	Evading/reducing customs taxes				20a/1-10/Low
112	Evading/reducing corporate taxes				20b/1-10/ Low
113	Obtaining subsidies from state or local government				20c/1-10/Low
114	Obtaining loans from banks	11b/1-10/Low		16/1-10/Low	20d/1-10/Low
115	Registering a foreign-owned company	11c/1-10/Low			20e/1-10/Low
116	Sending capital abroad	11d/1-10/Low			20f/1-10/Low
117	Obtaining a license for production	(11e)/1-10/Low			20g/1-10/Low
118	Obtaining a license to export	(11e)/1-10/Low			20h/1-10/Low
119	Obtaining a license to import	(11e)/1-10/Low			20i/1-10/Low
120	Obtaining other licenses/permits				20j/1-10/Low
121	Obtaining foreign exchange				20k/1-10/Low
122	How concerned are businesses in your country that corruption will interfere with plans?	12/1-4/High	21/1-4/High	14/1-4/High	21/1-4/High
123	How concerned are businesses in the United States that government corruption will interfere with their plans?	22/1-4/High	13/1-4/High	22/1-4/High	15/1-4/High
126	When appraising equities in your country, how concerned are you that corruption will increase the risk of equities?		23/1-4/High		
127	Banking regulators encounter political interference			17/1-4/High	

Line 1: Corresponding Question Number / Answer Type / Type of Response considered better.

Line 2: Questions that were asked only if the response to the other question identified after the "if" statement is equal to any of the answers after the "=".

Code		CFOs	Equity Analysts	Bankers	PwC Staff
200	**LEGAL OPACITY**				
210	How confident are businesses that each of the following will be enforced	6	4		6
211	Property rights	6a/1-4/Low	4a/1-4/Low		6a/1-4/Low
212	Creditor rights	6b/1-4/Low	4b/1-4/Low		6b/1-4/Low
213	Contractual agreements and covenants	6c/1-4/Low	4c/1-4/Low		6c/1-4/Low
220	Uncertainty surrounding laws and regulations	7/1-10/Low	5/1-10/Low	4/1-10/Low	7/1-10/Low
221	Uncertainty surrounding judicial system	8/1-10/Low	6/1-10/Low	5/1-10/Low	8/1-10/Low
222	One share one vote		7a/1-4/Low		
223	Elect and appoint board management		7b/1-4/Low		
224	Recourse in the case of malfeasance		7c/1-4/Low		
225	Freely transfer shares		7d/1-4/Low		
226	Uncertainty surrounding shareholder rights -- increase the risk of equities		8/1-10/Low		
227	Rules against conflict of interest -- how often enforced?		9/1-4/Low		
228	Rules against conflict of interest -- uncertainty increases the risk of equities		10/1-10/Low		
300	**ECONOMIC OPACITY**				
301	Fiscal policies change predictably		11a/1-4/Low	6a/1-4/Low	12a/1-4/Low
302	Monetary policies change predictably		11b/1-4/Low	6b/1-4/Low	12b/1-4/Low
303	Foreign exchange rates change predictably		11c/1-4/Low	6c/1-4/Low	12c/1-4/Low
304	Interest rates change predictably		11d/1-4/Low	6d/1-4/Low	12d/1-4/Low
305	Fiscal policies change unpredictably, affect		11aa/1-10/Low (if 11a = 3 o 4)	6aa/1-10/Low (if 6a = 3 o 4)	12ba/1-10/Low (if 12a = 3 o 4)
306	Monetary policies change unpredictably, affect		11ab /1-10/Low (if 11a = 3 o 4)	6ab/1-10/Low (if 6b = 3 o 4)	12bb/1-10/Low (if 12b = 3 o 4)
307	Foreign exchange rates change unpredictably, affect		11ac /1-10/Low (if 11a = 3 o 4)	6ac/1-10/Low (if 6c = 3 o 4)	12bc/1-10/Low (if 12c = 3 o 4)
308	Interest rates change unpredictably, affect		11ad /1-10/Low (if 11a = 3 o 4)	6ad/1-10/Low (if 6d = 3 o 4)	12bd/1-10/Low (if 12d = 3 o 4)
309	Is there a black market for foreign exchange?		13/Y-N/Low	8/Y-N/Low	13/Y-N/Low
310	Black market premium		13a/N o 1-4/Low (if 13 = 1)	8a/N o 1-4/Low (if 8 = 1)	13a/N o 1-4/Low (if 13 = 1)
311	Tax policies change unpredictably		14a/1-4/High	9a/1-4/High	14a/1-4/High
312	Tax policies are vague		14b/1-4/High	9b/1-4/High	14b/1-4/High
313	Tax policies are applied inconsistently		14c/1-4/High	9c/1-4/High	14c/1-4/High
314	My government passes retroactive tax policies		14d/1-4/High	9d/1-4/High	14d/1-4/High
315	Tax policies change unpredictably, affect	10a/1-10/Low	14ba/1-10/Low (if 14a = 1 o 2)	14ba/1-10/Low (if 9a = 1 o 2)	9ba/1-10/Low (if 14a = 1 o 2)
316	Tax policies are vague, affect	10b/1-10/Low	14bb/1-10/Low (if 14b = 1 o 2)	9bb/1-10/Low (if 9b = 1 o 2)	14bb/1-10/Low (if 14b = 1 o 2)
317	Tax policies are applied inconsistently, affect	10c/1-10/Low	14bc/1-10/Low (if 14c = 1 o 2)	9bc/1-10/Low (if 9c = 1 o 2)	14bc/1-10/Low (if 14c = 1 o 2)
318	My government passes retroactive tax plicies, affect	10d/1-10/Low	14bd/1-10/Low (if 14d = 1 o 2)	9bd/1-10/Low (if 9d = 1 o 2)	14bd/1-10/Low (if 14d = 1 o 2)

Code		CFOs	Equity Analysts	Bankers	PwC Staff
400	**ACCOUNTING OPACITY**				
401	How consistent are accounting standards?		15/1-4/Low	10/1-4/Low	15/1-4/Low
402	How easy or difficult is it for the typical investor to access financial information about private firms?		16/1-4/Low		
403	Uncertainty surrounding accounting standards, affect 1 - 10		18/1-10/Low	13/1-10/Low	16/1-10/Low
404	Adheres to accounting standards - Private firms			11a/1-4/Low	
405	Adheres to accounting standards - Government			11b/1-4/Low	
406	Adheres to accounting standards - State-owned enterprises			11c/1-4/Low	
407	Adheres to accounting standards - The Central Bank			11d/1-4/Low	
408	Adheres to accounting standards - Private Banks			11e/1-4/Low	
409	How often do bankers provide regulatory authorities with accurate info?			12/1-4/Low	
410	Ease of obtaining information about the company's cash flow		17a/1-4/Low		
411	Ease of obtaining information about the company's existing leverage		17b/1-4/Low		
412	Ease of obtaining information about the company's level of business risk		17c/1-4/Low		
500	**REGULATORY OPACITY**				
501	How transparent are government policies that regulate businesses in your country	4/1-4/Low	3/1-4/Low	3/1-4/Low	4/1-4/Low
502	How easy is it for firms to access information on these government policies	5/1-10/Low			5/1-10/Low
510	How confident are businesses that each of the following will be enforced	6	4		6
511	Other government policies that affect operating costs	6d/1-4/Low	4d/1-4/Low		6d/1-4/Low
520	Uncertainty surrounding laws and regulations 1 - 10	7/1-10/Low	5/1-10/Low	4/1-10/Low	7/1-10/Low
521	Tax policies are applied inconsistently		14c/1-4/High	9c/1-4/High	14c/1-4/High
522	Tax policies are applied inconsistently, affect 1 - 10	10c/1-10/Low	14bc/1-10/Low (if 14c = 1 o 2)	9bc/1-10/Low (if 9c = 1 o 2)	14bc/1-10/Low F89
523	How often do bankers provide regulatory authorities with accurate information?			12/1-4/Low	
524	Banking regulators encounter political interference			17/1-4/High	

Code		CFOs	Equity Analysts	Bankers	PwC Staff
	QUESTIONS FOR SUPPLEMENTARY ANALYSIS				
S	Uncertainty surrounding laws and regulations in the U.S. 1 - 10				9/1-11/Low
S	Five year comparison laws regulations and rights				10/1-3/High
S	Reasons for increase in uncertainty of laws and regulations				11_1/1-4/
S	Reasons for decrease in uncertainty of laws and regulations				11_2/1-4/
S	Exchange rates -- new controls	9a/1-4/High	12a/1-4/High	7a/1-4/High	
S	Interest rates -- new controls	9b/1-4/High	12b/1-4/High	7b/1-4/High	
S	Free flow of capital -- new controls	9c/1-4/High	12c/1-4/High	7c/1-4/High	
S	Imports or exports -- new controls	9d/1-4/High	12d/1-4/High	7d/1-4/High	
S	Rate the quality of accounting standards				15a/1-4/Low
S	Opacity related accounting issues that influence the cost of capital				17open
S	Five year comparison economic opacity				18/1-3/Low
S	Reasons for increase in economic opacity				18_a1/1-4/
S	Reasons for decrease in economic opacity				18_a2/1-4/
S	Economic opacity in the United States, affect 1 - 10				19/1-10/Low
S	Five year comparison laws regulations and rights				23/1-3/High
S	Reasons for increase in corruption				23a_1/1-4/
S	Reasons for decrease in corruption				23a_2/1-4/
S	Do you believe this interest rate would be lower in absence of opacity?	15 / Y-N / Low		22 / Y-N / Low	25 / Y-N / Low
S	Would interest rates in the U.S. be lower in the absence of opacity?	(See 25)/Y-N/High		24/Y-N/High	27/ Y-N / High
S	How many percentage points lower would U.S. interest rates be in the absence of opacity? (Not multiple choice.)	(See 26)/		25/	28/
S	Would equity cost of capital in the U.S. be lower in the absence of opacity?	(See 25)/Y-N/ High	31 (see also 22)/Y-N/High		34/Y-N/High
S	How many percentage points lower would equity cost of capital in the U.S. be in the absence of opacity? (Not multiple choice.)	(See 26)/	32/		35/
S	What is the global risk-free rate? (Not multiple choice.)			20/	
S	Misc. equities questions - calculating Beta, etc.		24 - 26/		
S	Would the return on a standard corporate bond in your country be lower in the absence of opacity?	23 / Y-N / Low			37 / Y-N / Low
S	Would the return on a standard corporate bond in the U.S. be lower in the absence of opacity?	(See 25)/Y-N/High			39/Y-N/High
S	How many percentage points lower would return for corporate bonds in the U.S. be in absence of opacity? (Not multiple choice.)	(See 26)/			40/

Code		CFOs	Equity Analysts	Bankers	PwC Staff
S	**BENCHMARKING**				
S	Do corruption and opacity increase the cost of capital in the U.S.?	25/Y-N/High			
S	How many percentage points lower would the cost of capital in the U.S. be in the absence of opacity and corruption? (Not multiple choice.)	26/			
S	Importance of unpredictability in your country's government re: cost of capital	27a/1-10/			41a/1-10
S	Importance of unpredictability in your country's economic policies re: cost of capital	27b/1-10/			41b/1-10
S	Importance of uncertainty caused by poor accounting standards re: cost of capital	27c/1-10/			41c1-10
S	Uncertainty caused by government corruption in your country re: cost of capital	27d/1-10			41d/1-10
U	How familiar are you with opacity in your country?	1/1-4/Low	1/1-4/Low	1/1-4/Low	1/1-4/Low
U	How familiar are you with opacity in the U.S.?	2/1-4/Low	2/1-4/Low	2/1-4/Low	2/1-4/Low
U	(Familiarity with) bank loans	3/1-3/			3a/1-4/Low
U	(Familiarity with) corporate stocks / equities	3/1-3/			3b/1-4/Low
U	(Familiarity with) corporate bonds	3/1-3/			3c/1-4/Low

Line 1: Corresponding Question Number / Answer Type / Type of Response considered better.

Line 2: Questions that were asked only if the response to the other question identified after the "if" statement is equal to any of the answers after the "=".

Appendix 3
Specific Accounting Opacity Issues in Sample Countries

"Please list up to three opacity-related accounting issues that influence the cost of capital in your country. Please list them in order of importance, from the issue having the greatest influence on the cost of capital to the issue having the least influence."

Country	First Response	Second Response	Third Response
Argentina	Lack of detailed accounting principles for specific circumstances	No strong Corporations	Department Control
Brazil	Issues concerning the supervisor and regulator	Quality of professionals	Local GAAP
Brazil	Disclosure requirements	Certain conflicts between fiscal accounting procedures and corporate accounting procedures	Low awareness regarding corporate governance
Brazil	Book value and market differences	Depreciation rates	Inflation
Brazil	Accrual of tax credits due to vague laws	Labour contingencies also due to vague laws	Pension schemes lack transparency
Brazil	Lack of disclosure	Lack of audit obligation for non-listed companies	
Chile	Inflation accounting	Consolidated financial statements	Establishment/disclosure of reserves
Chile	Purchase accounting	Deferred income taxes	Severance Indemnities
Chile	Accounting for foreign investments	Revenue recognition	Accounting for leases
China	Limited disclosure of fair values of financial instruments and recording for related impairment (i.e. reserves, etc.)	General level of informative disclosure in footnotes is lacking (segments, barter trade, concentrations of risk, contingencies, deferred taxation, etc.)	Lack of standards for long-term obligations such as post-employment, health & welfare, pension, etc. so accounting is pay-as-you-go with little ability to understand the nature or extent of obligations from the accounts
China	Lack of reliability of the data	Inadequate disclosure	Lack of standards on contingent liabilities
China	Doubtful accounts	Inventory reserve	Accounting for pension cost
China	Inconsistent regulations from different authorities on the same topics	Lack of communication channel between the authorities and the business communities	Different standards for foreign invested companies and domestic companies
China	Revenue recognition	Lack of credit provision	Tax-driven financial accounting
China	Consolidation / related party activities	Loan loss provisioning	Employee benefit costs
China	Valuation of receivables and inventories	Valuation of fixed assets	Rigid accounting model that follows tax law
Colombia	Accounting for inflation	Accounting for deferred charges	Accounting for leases subordinated to tax issues
Colombia	Inflation accounting	Accounting for deferred charges	
Colombia	Inflation adjustments	Equity method	Consolidation
Colombia	Lack of clarity for the treatment of intangible assets	Lack of consistency in the accounting for leases in all industries	Inflation adjustments not in line with IAS

Country	First Response	Second Response	Third Response
Colombia	Consolidation principles: Lack of serious enforcement of a reporting scheme for Group Companies, so that inter-company transactions cannot be clearly traced by third parties.	Pension coverage. The accounting law permits deferring the accrual of pension costs for a number of years (about 10 years).	Increase of fixed assets value, because of the adjustment for inflation of those fixed assets, or technical appraisal of fixed assets, when market value of such items could be lower. In the case of technical appraisals, the local rule allows the valuation to be performed by internal staff of the company, and therefore, no independence exists, and values are questionable.
Colombia	Violence	Political stability	Unexpected changes in laws
Czech Republic	Quality of disclosures - complexity	Related parties disclosure	Complexity of off B/S
Ecuador	Monetary restatement	Changes in accounting standards (approval of the possibility to defer expenses)	
Ecuador	Deferral of exchange losses	Conversion of financial statements to US dollars	Accounting for capital leases
Ecuador	Dollarization process of the economy	Implementation of Ecuadorian Accounting Standards	
Egypt	Policy consistency	Foreign exchange rates	Property Rights
Egypt	Exchange rate	Laws & regulations	Economic policies
Egypt	Exchange rate for foreign currency.	Tax laws	Other laws effective in the market and businesses
Egypt	Exchange rates	Unpredictability of the economic policies	
Egypt	Governmental red tape	High customs duties	Low governmental wages increase under the table bribes
Greece	High government financing needs	Banking still dominated by state-controlled banks to a significant extent	
Greece	Formalistic, complex, and tax-driven accounting rules, non-compliance to which causes serious tax cost.	Compulsory complex costing system just for accounting purposes, non-compliance to which causes serious tax cost	No specific accounting rules for certain common transactions such foreign stock option plans, complex financial transactions, financial leasing, deferred compensation plans, etc.
Greece	Adequacy of provisions	Deferral of costs	Valuation of assets
Greece	Absence of full and fair disclosures	Earnings management	Impairment of auditor independence (other than Big 5 firms)
Greece	Earnings management	Serious inconsistencies between Greek GAAP and IAS	Transparency of disclosures
Greece	Non-compliance with substance over form principle	Tax-driven financial statements	Inter-company transactions
Guatemala	Inventory valuation	Fees	Interest rate
Guatemala	No statutory audit requirements	GAAP not properly enforced	No obligation to consolidate accounting records
Guatemala	Deferred expenses	Investment valuations	Inventories and receivables valuation
Guatemala	Severance compensation payable to employees based on length of service	Tax contingencies and the provision that the statute of limitations is interrupted by a tax audit	
Hong Kong	Unclear related-party relationships		
Hong Kong	Carrying value of intangibles	Depreciation	Deferred taxes
Hong Kong	"I cannot think of any"	(same response)	(same response)
Hong Kong	Good will	Foreign exchange reporting	Segmental reporting

Country	First Response	Second Response	Third Response
Hong Kong	Lower levels of disclosure than in US GAAP	Less comprehensive accounting framework than in the US	Lack of consistency in applying accounting rules and related earnings management
Hong Kong	Off balance sheet financing arrangements	Related party transactions	Valuation of properties
Hong Kong	Property revaluation	Treatment of goodwill	Merger accounting
Hong Kong	Related-party transactions (many companies, including public companies dominated by family shareholdings)	Valuations, including property valuations, and investments in other companies both in HK and overseas	Receivable provisions
Hungary	Social insurance		
Hungary	Related-party transactions disclosure	Contingencies disclosures	Subsequent event disclosures
Hungary	Off balance sheet transactions, to avoid paying high payroll/social security tax or income tax	Energy pricing regulation, and lack of promised increases made to investors	
Hungary	Less rigorous disclosure requirements of related-party transactions	Less comprehensive footnote disclosures	
Hungary	Corruption	Tax avoidance	Black market
Hungary	Corporate governance is typically thin. Investor information does not come regularly.	The stock exchange does not require IAS financial statements. Local reporting has very limited disclosure.	Local accounting standards are not as flexible with respect to recording provisions or making disclosures for contingencies. In other words, fewer provisions or disclosures are found in local standards.
India	Lack of consolidated financial statements	Absence of regulator to enforce correct accounting and reporting	Lack of disclosure of related-party transactions
India	Favourable tax policies	Change in Reserve Bank of India prime lending rate	
India	Detailed information re ability to pay	Detailed cash flow statements	Detailed future plans
India	Unauthorised payments for business transactions	License allocation by government bodies.	Bureaucracy and red tape
India	No segmented reporting	No consolidation and limited reporting on transactions with related parties	Inventory valuations
Indonesia	Foreign exchange-related transactions	Derivative transactions	Complete disclosures on foreign exchange and derivatives transaction
Indonesia	Inconsistency in applying accounting standards among corporations	Inconsistency in applying auditing standards among accounting firms	Integrity of corporate management and auditors
Indonesia	Tax	Interest	Exchange
Indonesia	Political instability	Security issues	Lack of law enforcement
Indonesia	Lack of enforcement of accounting standards	The local accounting bodies are a weak amalgamation of the firms, which do not work for change or improvements in opacity	Ministry of Finance needs stronger commercial viewpoint
Indonesia	Lack of disclosure of related-party transactions	Uncertainty over financial soundness - e.g., inadequate provisions	Possibility of undetected material fraud and corruption
Indonesia	Very limited disclosure of related-party transactions	Very limited disclosures generally	

Country	First Response	Second Response	Third Response
Italy	Corporate consolidated accounts are not yet seen in their importance by the capital market	Company's financial statements are still heavily tax- driven, with the consequence that discrepancies arise between accounting principles and tax treatment, sometime making it difficult to determine the real profitability of the business	Accounting for leasing in Italy is still different from international accounting principles
Italy	Accounting for contingent liabilities	Capitalisation of intangible assets	Interference of tax considerations
Italy	Inventory	Depreciation	Provisions
Italy	Fiscal interference in accounting principles	Relatively new rules for corporate governance	The irrelevance of the stock exchange, in contrast to the power of the banking system
Italy	Accounting treatment of capital leases	Revaluation of fixed assets	Taxation of corporations
Italy	Tax issues	Special legislation overriding good general rules	Judicial interpretations
Japan	Pension accounting	Accounting for financial instruments	Deferred income tax accounting
Japan	Impairment	Accounting for life insurance company	Accounting for financial instruments
Japan	Impairment of long-lived assets	Fair value of assets	
Japan	Impairment of long-lived assets	Inventory devaluation	Lease accounting
Japan	Derivatives	Pension	Investment
Japan	Valuation of assets	Pension accounting	
Japan	Provision of allowance for bad debts by financial industry	Valuation of real estate held by real estate industry and construction contractors	Valuation of investment securities
Kenya	Bank lending practices need greater review and oversight.	Infrastructure (roads, rail, power, telecoms) needs major improvement to support economic progress. Government policy needs to be better focused in this area.	Absence of a strong equity market. Businesses forced to rely on commercial banks for capital.
Kenya	Illegal payments	Legislative drafting needs improvement	Rule of law issues
Kenya	Weak control environment leads to Inaccurate financial reporting	Audit environment needs strengthening	Vague standards as to reserve requirements (bad debt, inventory reserve)
South Korea	Deferred income tax Accounting	for investments (including write-off of permanent decline, equity accounting of investments)	Deferred development expenses
South Korea	R&D	Contingency accounting	Impaired fixed assets
South Korea	Contingency accounting	Revenue recognition	Consolidation / equity valuation accounting
South Korea	Bad debt allowance	Valuation of inventory	Useful life of fixed asset
South Korea	Valuation of doubtful accounts receivable for collection	Valuation of slow-moving inventory	Valuation of impairment of PP&E
Lithuania	There is no tradition of financial reporting. By tradition (although not by law), financial statements are prepared for tax compliance purposes.	Uniform application of accounting and reporting standards	
Lithuania	No consolidation	Insufficient disclosure	Dominance of tax accounting rules

Country	First Response	Second Response	Third Response
Lithuania	No national accounting standards, just a Law on Accounting and supporting decrees	SEC disclosure requirements are not appropriately enforced	
Lithuania	No requirements for consolidation of financial statements	Insufficient requirements concerning content of financial disclosures (e.g., for relatedparties)	Accountancy profession needs additional training and experience
Mexico	Exchange rate	Government policies	Taxes
Pakistan	Over or under invoicing	Loans	Dual book keeping
Pakistan	Over or under invoicing / over or understatement of loans, assets, costs, and expenses	Audit profession needs greater discipline, especially where smaller companies are concerned	Keeping one set of accounts for tax purposes and another for internal planning (typically, in smaller companies)
Pakistan	Dual book keeping	Unfair practices while obtaining / using loans	Window dressing
Peru	Specific Banking and Insurance regulations accounting treatments.		
Peru	Leasing	Deferred charges	Inventory valuation
Peru	Deferred cost	Deferred income tax	Income recognition
Peru	Regulated standards for the financial system	Goodwill adjustments	Impairment of assets
Peru	More independent audit expertise needed	Limited knowledge of international accounting standards	Information based on consolidated financial statements is unenforceable for judicial purposes
Peru	Recognition of deferred income tax	Recognition of goodwill	Recognition of fair values
Peru	Bad debt provisions	Revaluation of assets	
Poland	Lack of consistent accrual accounting	Aggressive accounting for revenue	Insufficient regard to prudence
Poland	No specific rules for accounting for business combinations	No detailed accounting regulations for lessors	No detailed rules for accounting for long-term contracts
Poland	Consolidation guidelines for group companies	Treatment of leases	Accruals
Russia	Inconsistency with international standards (GAAP, IAS)		
Russia	Revenue recognition	Asset valuation	
Russia	Reluctance to adopt IAS	Highly complex organisational structures for offshore entities	Local Russian Accounting Standards required for tax reporting
Russia	Evolving Russian Standards without clear regulations applied consistently	Lack of meaningfulness of Russian standards	
Russia	Tax- driven rather than profits-driven	Non-deductible expenses	Statutory norms across diverse industry sectors
Singapore	Tendency toward minimum disclosure in financial statements	Transparency and governance lag practices in the US	
Singapore	Treatment of goodwill on acquisition of subsidiaries	Treatment of debt securities issued by a company with embedded equity option in that company and equity options issued to employees	Treatment of income or expense as extraordinary
South Africa	Goodwill	Earnings	Leave pay provision
South Africa	Treatment of goodwill	Off balance sheet structures	
South Africa	Related-party transactions	Provisions	Acquisition accounting
South Africa	Treatment of taxation, particularly deferred taxation	Treatment of intellectual property	Fluctuating exchange rates

Country	First Response	Second Response	Third Response
South Africa	High interest rates due to m onetary policy	Fluctuating exchange rates	
Taiwan	Employees' bonus distributed from after-tax profit, not treated as salary expense		
Taiwan	Accounting treatment of imputation system	Accounting treatment of employee incentives distributed from retained earnings	
Taiwan	Bad debt provision	Asset valuation	Pension
Taiwan	Pension cost	Employee benefit cost	Deferred income tax
Thailand	Integrity of management	Compliance with accounting standards	
Thailand	Related-parties transactions	Consolidation	Impairment of assets
Thailand	Revaluation of assets	Deferred tax	Provision for doubtful debts
Thailand	Valuation of assets	Profit recognition	Devaluation of the currency and accounting
Thailand	Lack of disclosure	Related-party transactions	Corporate governance
Tunisia	A lack of comprehensive information disclosed by companies	Financial statements submitted to banks are not fair	Financial statements are not prepared and disclosed in a timely manner
Tunisia	The rate of taxation on profit	Banking conditions	Competition between companies in the same sector
Turkey	Non-application of inflation accounting	Accounting is tax-driven rather than business or operations-driven	Unawareness of internationally accepted accounting standards (IAS, GAAP, etc.)
Turkey	Absence of hyperinflation accounting	Lack of disclosure on related-party transactions	Control and audit practices need improvement
Turkey	No inflation accounting adopted	No accrual basis accounting	No consolidation or investment accounting
Turkey	Non-application of inflation standard (IAS 29)	Non-application of consolidation standards for publicly traded companies, excepting banks	Mainly tax-driven accounting
Turkey	Inflation adjustments not required/adequate by the accounting standards	Off book transactions	Double book keeping systems, one for tax authorities one for management and shareholders
Turkey	Inflation accounting	Provisions and accruals	Consolidations and accounting for investments
Turkey	Inflation accounting	Taxation - deferred and current	Consolidation
UK	Intangibles		
UK	Whether the UK will join the Euro		
UK	Lack of measurement of business risk profile	Accounting for intangible assets, intellectual and human capital	Non-cash items in income statement
UK	Off balance sheet accounting (e.g., hidden costs of pension provision)	Divisional/ sector performance	Information out of date
UK	Business segment reporting	Goodwill and intangible accounting	Off balance sheet activities
UK	Contract accounting	Lease accounting	Bad debt provisioning
UK	Goodwill	Split of equity from debt and valuation of latter	Deferred tax
Uruguay	Labour regulations		
Uruguay	Fixed asset valuation	Inventory valuation	Intangible assets
Uruguay	Negative results	Low equity	Contingencies
Uruguay	Tax balances (current and deferred)	Related party transactions	Pension plan accounting
USA	FAS 133	APB 16	Historical cost accounting

Country	First Response	Second Response	Third Response
USA	Lack of disclosure on credit risk	Cash vs. operating earnings per share	
USA	Derivatives accounting	Consolidation and business combination accounting	Stock compensation accounting
USA	Pooling of Interests method in business combinations	Revenue recognition issues	
Venezuela	Inflation adjustment	Defer cost	Depreciation policies
Venezuela	Inflation adjustment	Depreciation method	Deferred cost
Venezuela	Inflation accounting vs. historical cost	Exchange rates differences accounting	Pre-operating costs
Venezuela	Inflation accounting	Major differences between Local Venezuelan GAAP and IAS	No relationship between tax and finance accounting in some important areas
Venezuela	Inflation accounting	Start-up and pre-operating costs are deferred	Fair value of investments

Appendix 4
Survey Response Charts (by country)

Exhibit A

"Are you concerned about unpredictable exchange rates?"

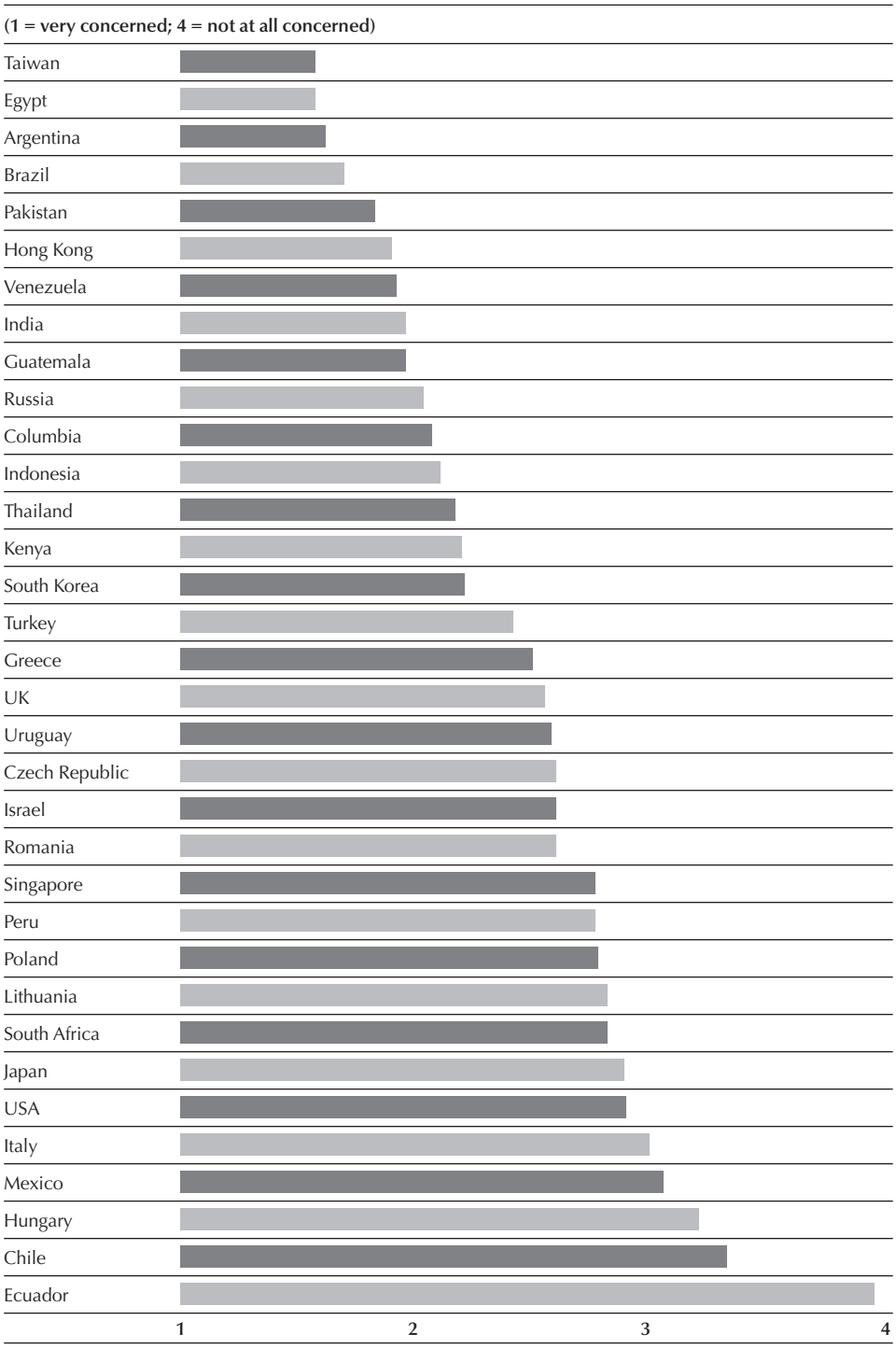


Exhibit B

"Are you concerned about unpredictable interest rates?"

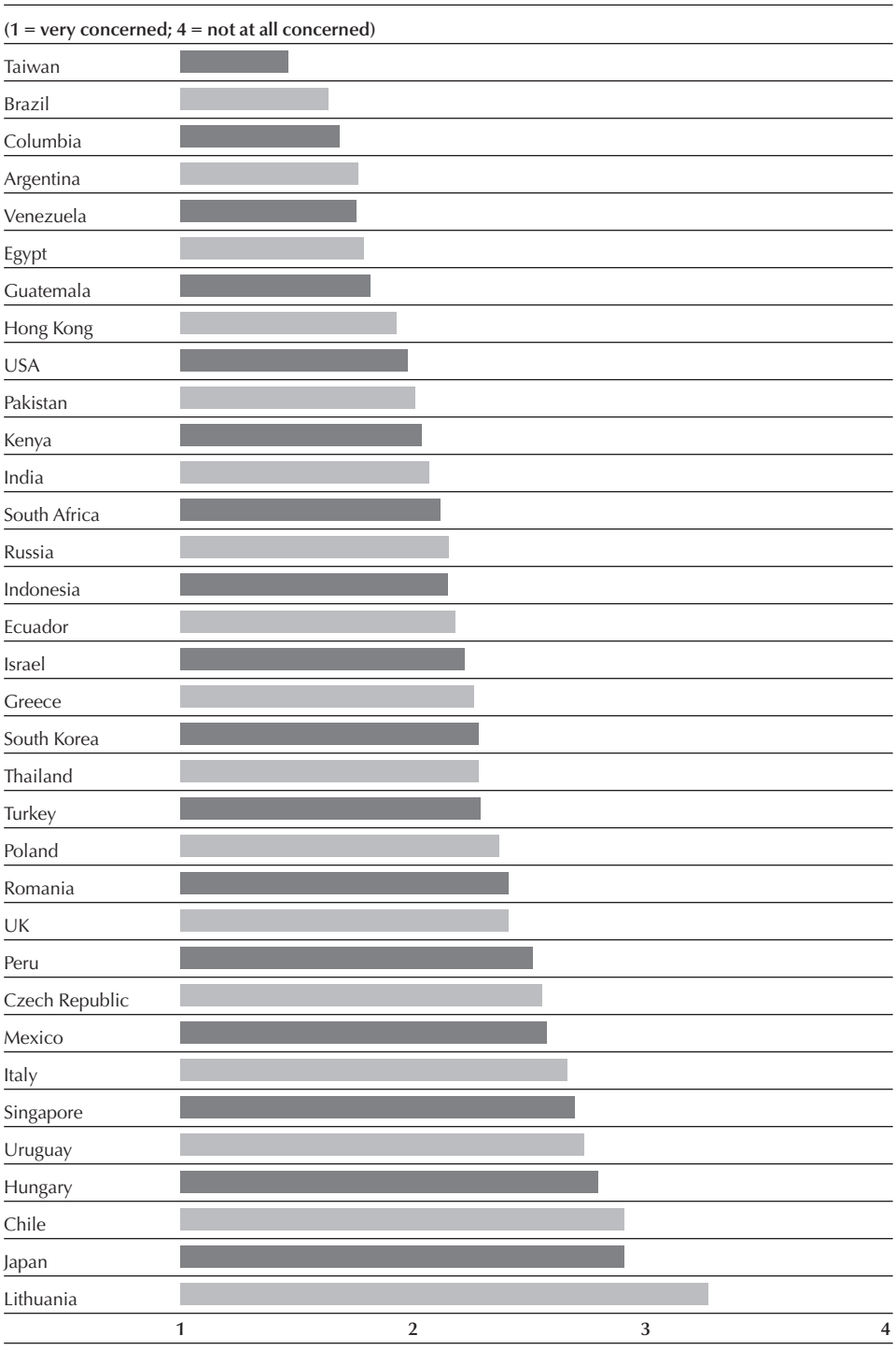


Exhibit C

"Are you concerned about the imposition of new or added controls on capital flows?"

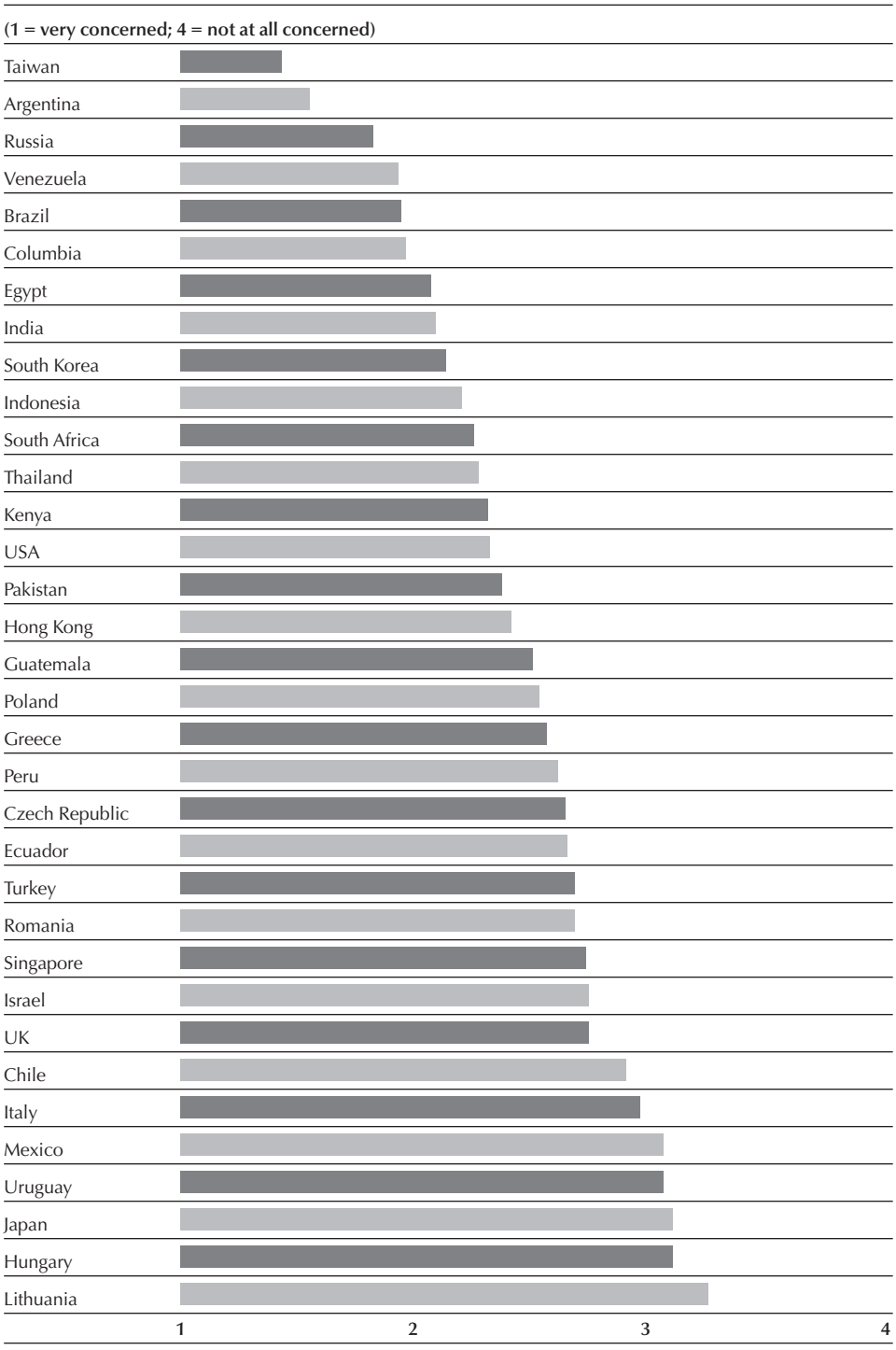


Exhibit D

"Are you concerned about the imposition of new or additional import and export controls?"

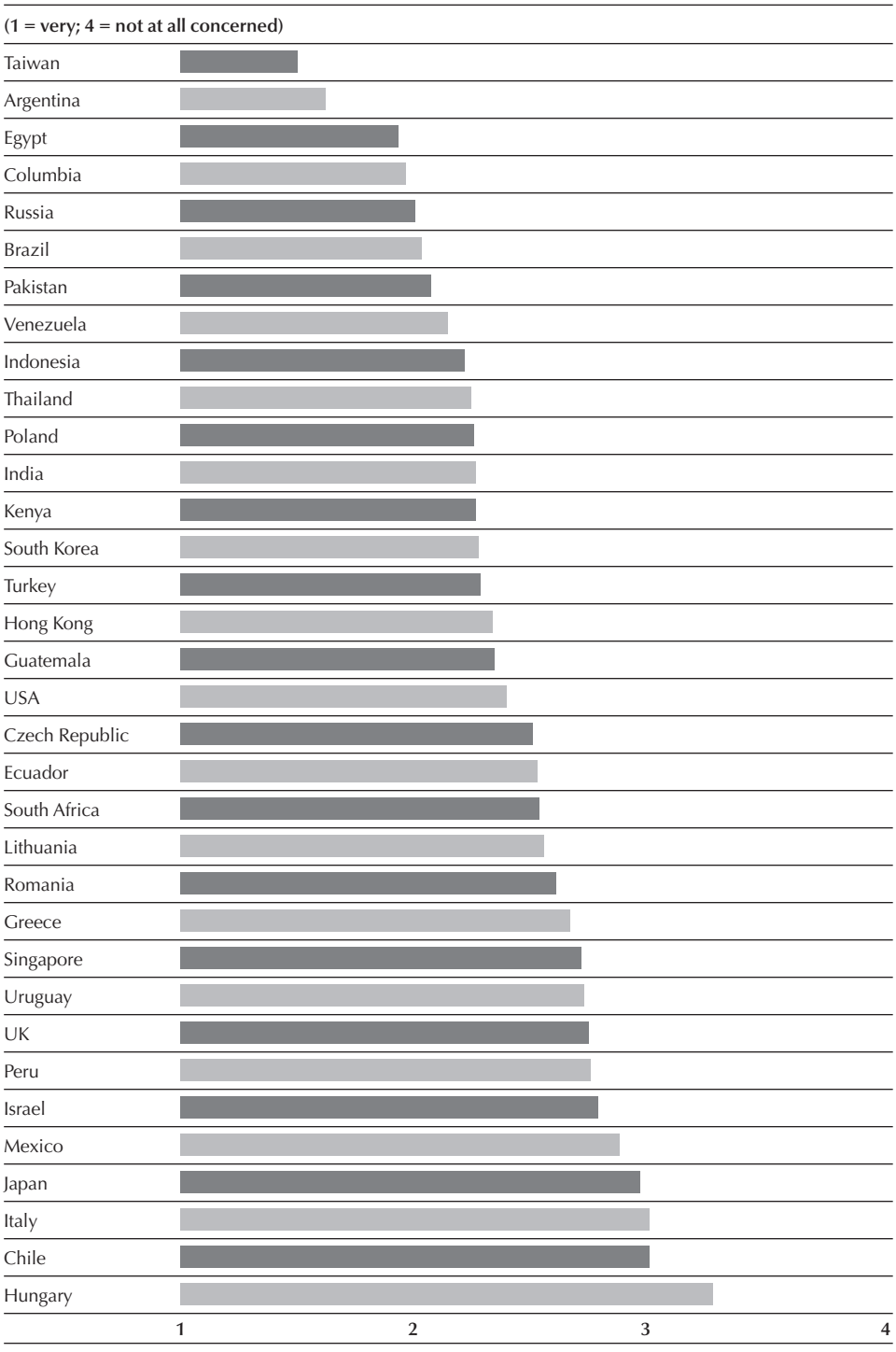


Exhibit E

"Is unpredictability of laws and regulations important in affecting your firm's cost of capital?"

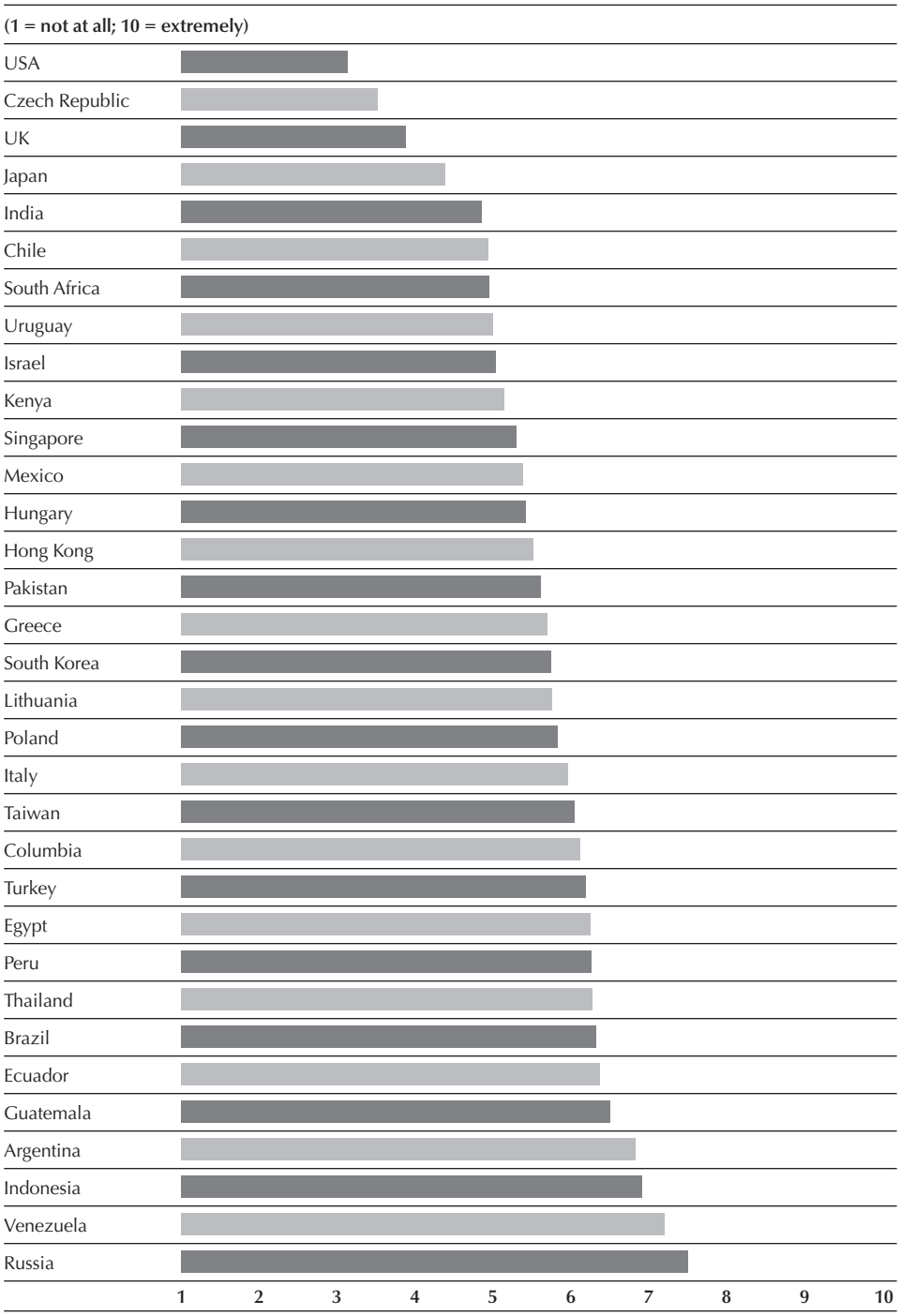


Exhibit F

"Do unpredictable government policies affect the cost of capital in your country?"

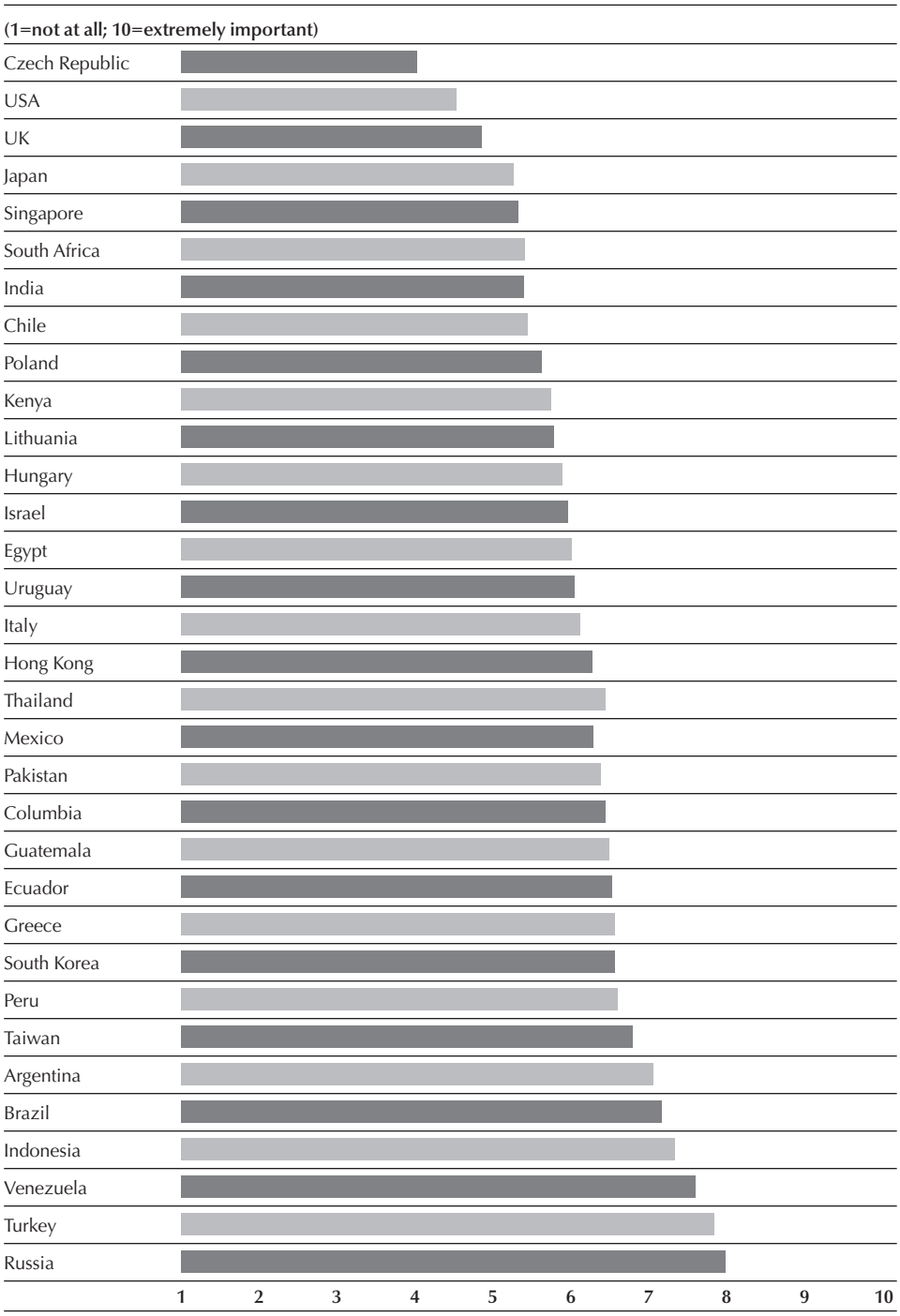


Exhibit G

"Do poor accounting standards affect the cost of capital in your country?"

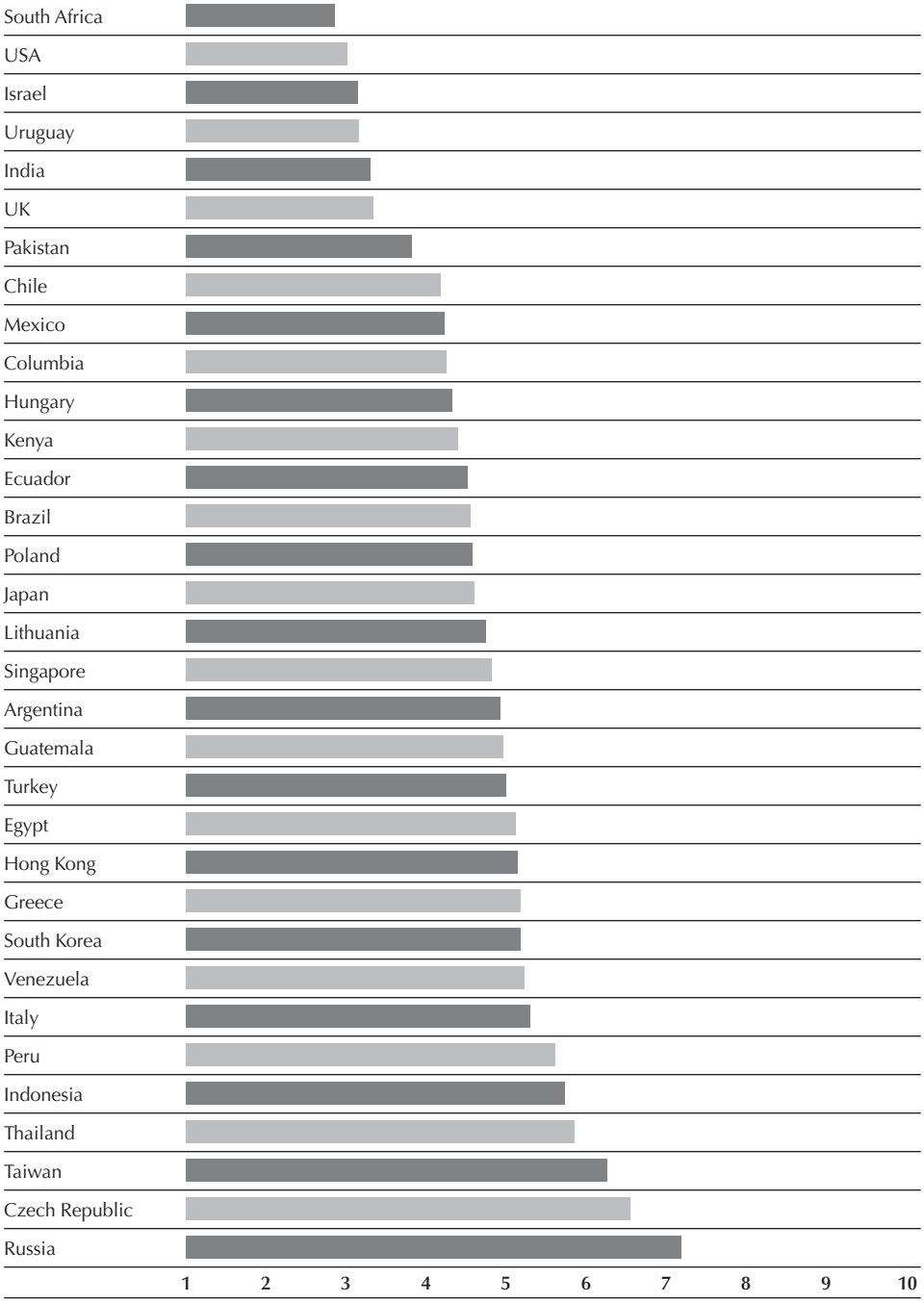


Exhibit H

"Does corruption affect the cost of capital in your country"

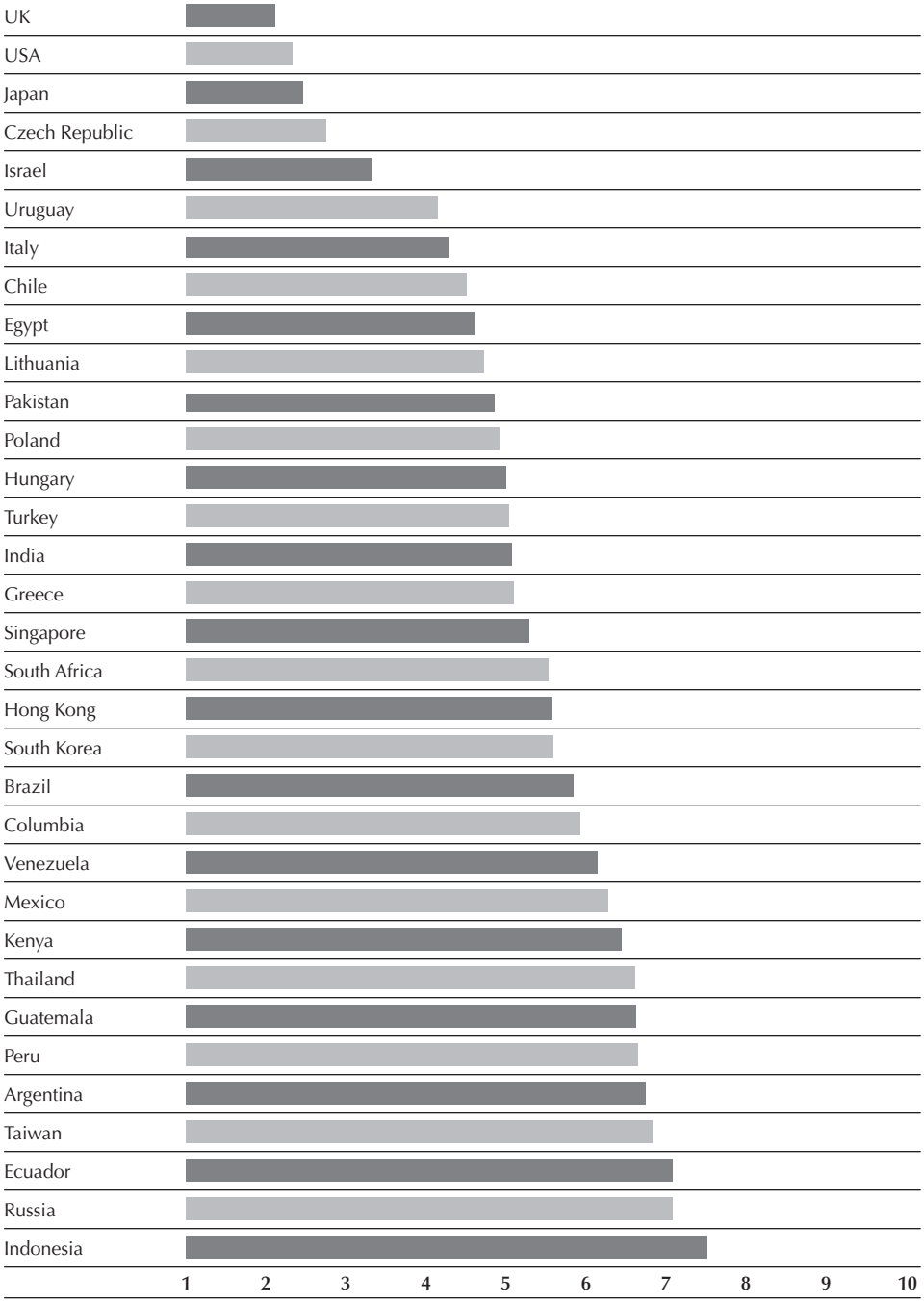


Exhibit I

"How has uncertainty surrounding enforcement of laws, regulations and rights changed in the last five years?"

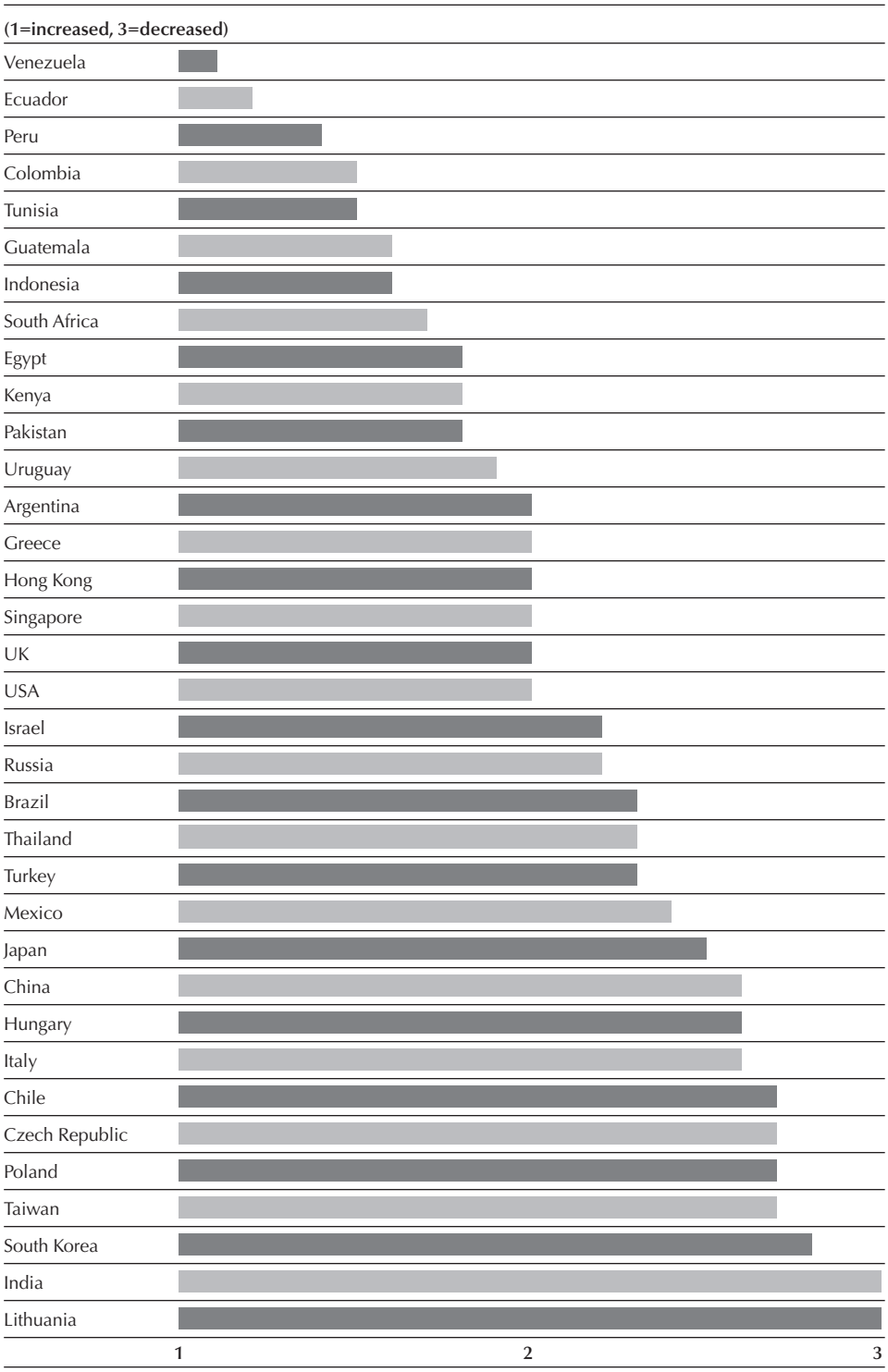


Exhibit J

"Has the unpredictability of government economic policies changed over the last five years?"

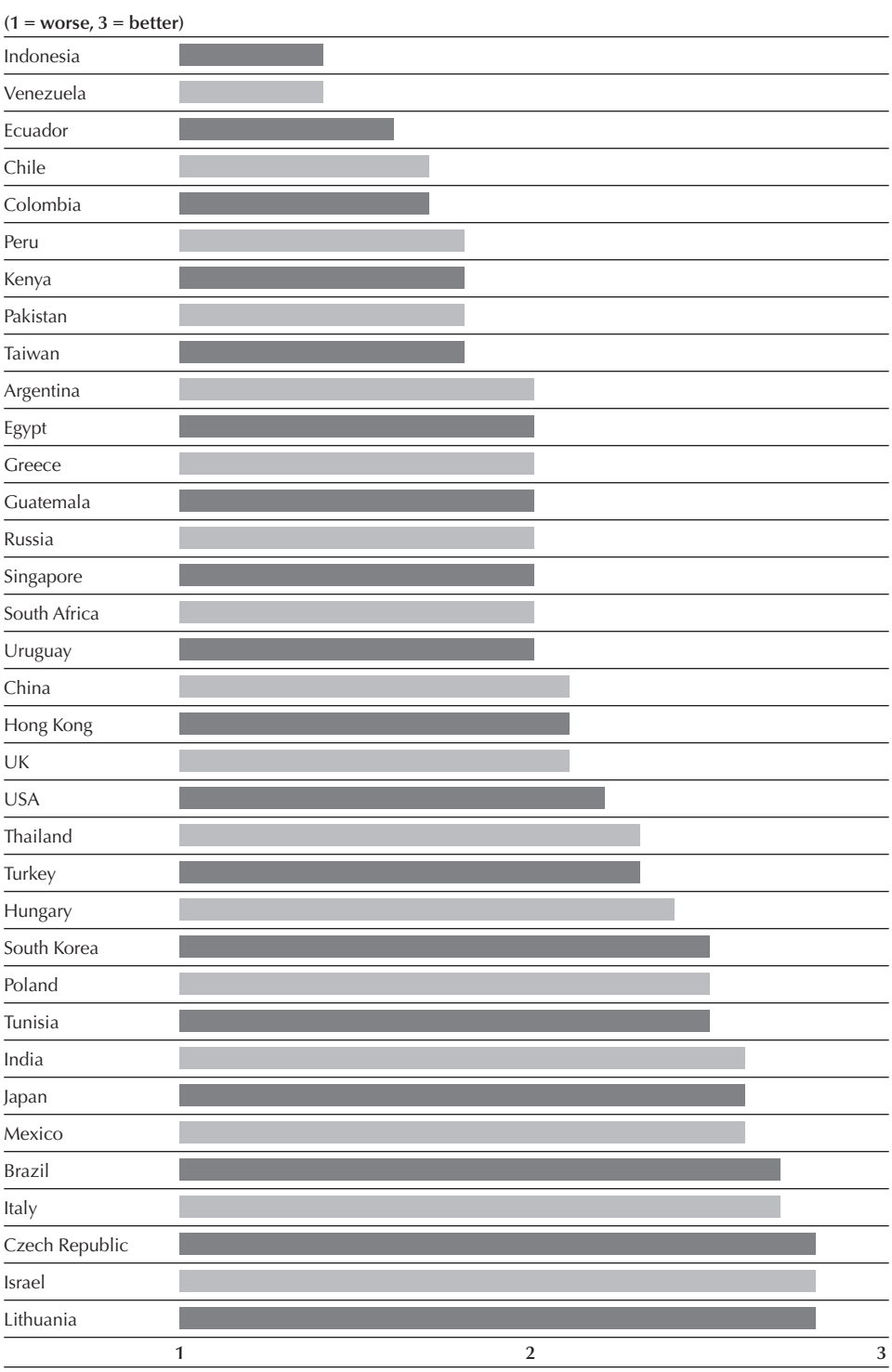


Exhibit K

"Over the past five years, has corruption's effect on the cost of capital changed?"

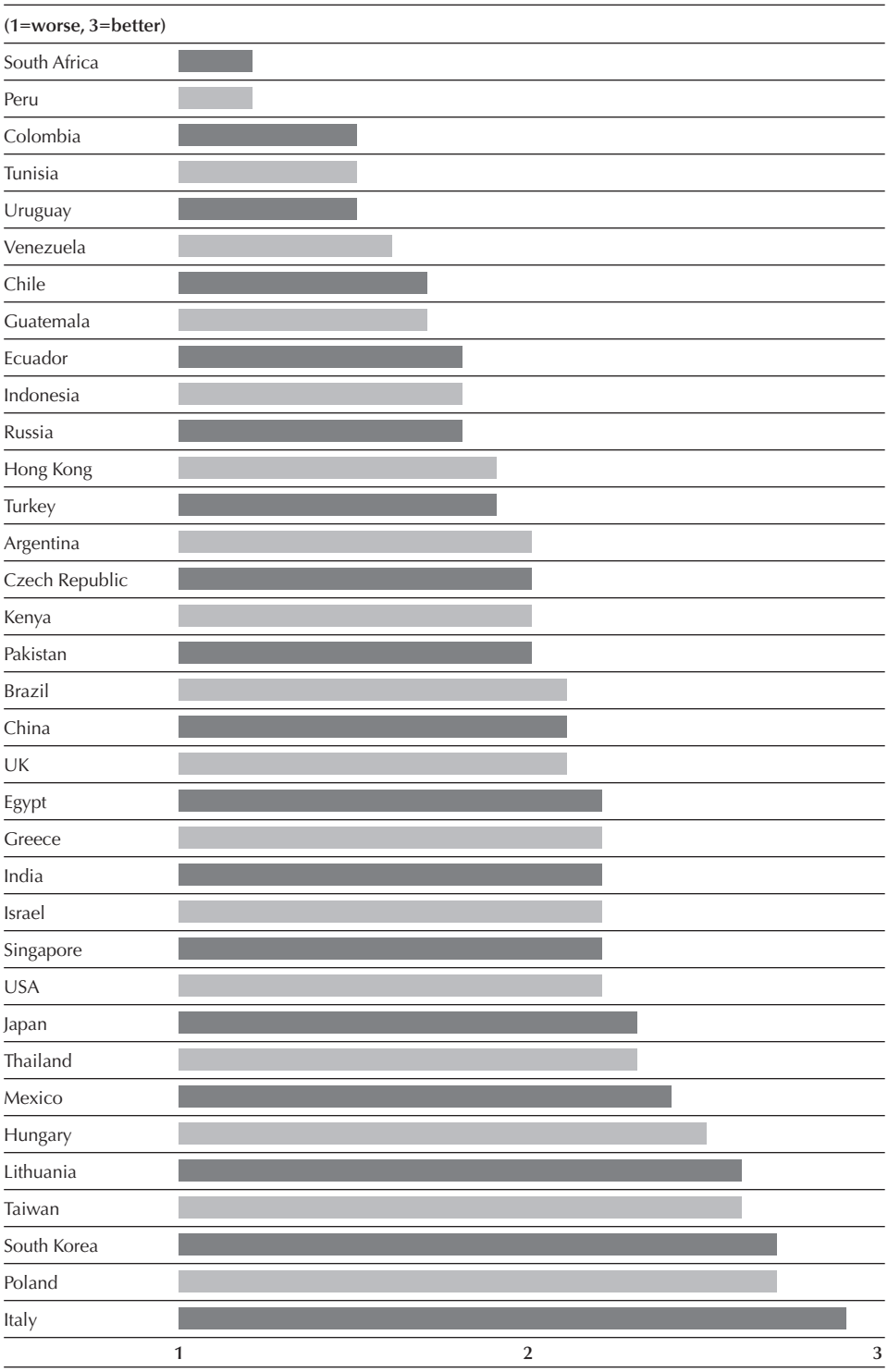
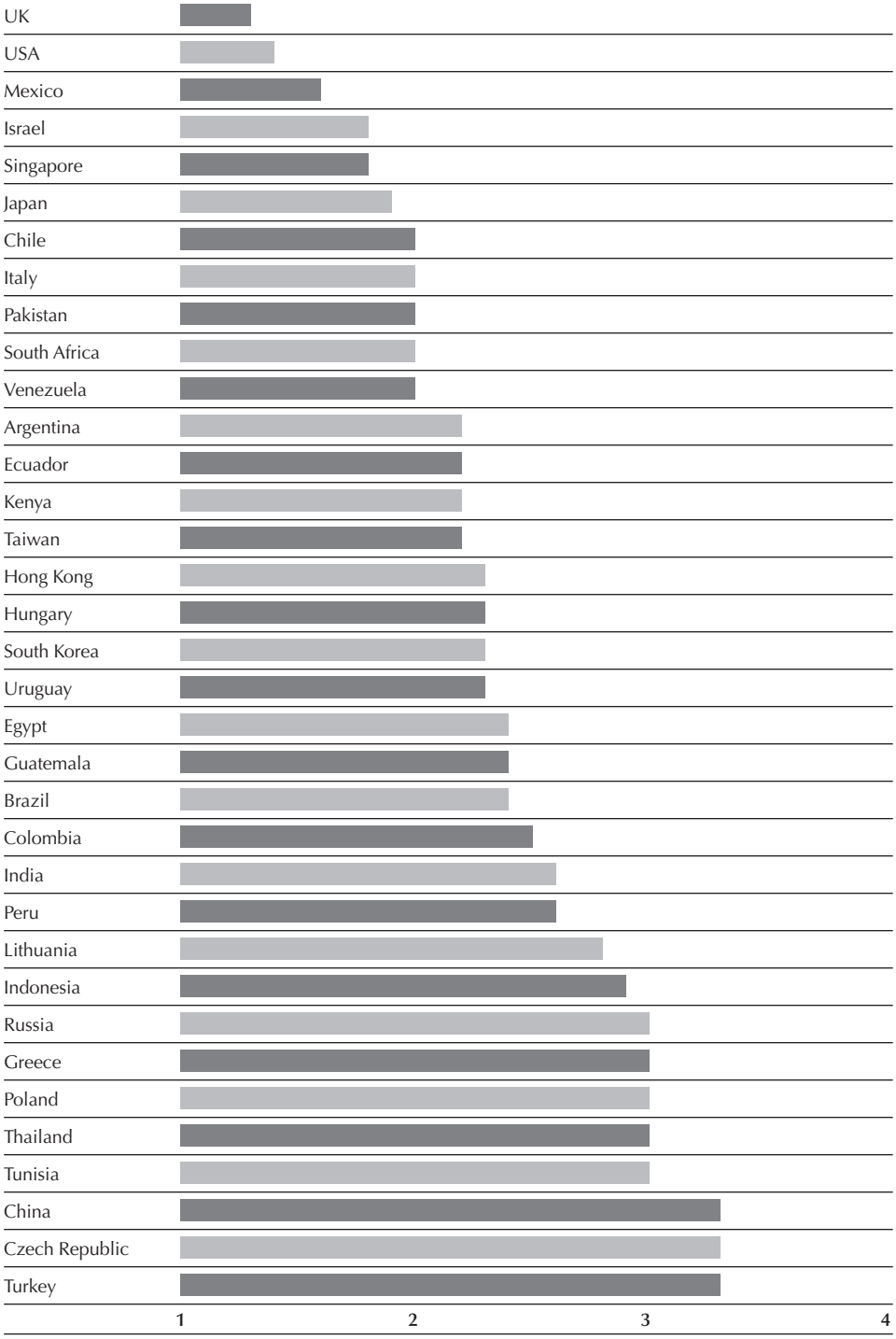


Exhibit L

"Rate the Quality of Accounting Standards"



Appendix 5
Correlation with Other Indices

Below are the correlation coefficients for the O-Factor with the World Bank and Transparency International indices. All but two of the coefficients are statistically significant and all have the expected sign. (The expected sign is negative because the meaning of higher scores is reversed in the O-Factor from the other indices.) The World Bank indices were calculated over 1997-98, and range from a low of –2.5 to a high of 2.5. The Transparency International Corruption Perception Index was calculated for 1998, and ranges from a low of zero to a high of 10. With the exception of Lithuania's Corruption Perception Index, all indices were available for all countries covered in the present report.

The smallest correlation coefficients are where you would expect them. The Voice and Political Stability indices measure national governance issues that were not specifically addressed in the Opacity report. Similarly, the Opacity component Accounting **(A)** measures an aspect of business that is not specifically addressed in the other indices. Across these rows and columns, the only coefficients that exceed 0.5 (absolute value) are Corruption **(C)** with Political Stability and Accounting with Regulatory Framework. For all relationships not involving those three indices, only two fall below 0.5 (absolute value). The first, Legal **(L)** Opacity and Government Effectiveness, is not particularly troublesome because of a divergence in the underlying factor being measured. It may seem surprising, however, that Legal Opacity and Rule of Law have a relatively low (though statistically significant) correlation coefficient. This is likely to result from the fact that Opacity includes questions on property rights while Rule of Law includes perceptions of violent crime (see "Brief Review of Content of World Bank Indices," below).

Correlation of O-Factor with Other Measures

	C	L	E	A	R	O-Factor
Voice and Accountability	-0.426	-0.329	-0.423	*-0.245*	-0.420	-0.422
Political Stability/Lack of Violence	-0.530	-0.295	-0.556	-0.300	-0.360	-0.467
Government Effectiveness	-0.745	-0.499	-0.694	-0.472	-0.633	-0.701
Regulatory Framework	-0.671	-0.592	-0.738	-0.589	-0.668	-0.754
Rule of Law	-0.729	-0.375	-0.594	*-0.274*	-0.500	-0.565
Control of Corruption	-0.787	-0.524	-0.672	-0.422	-0.658	-0.705
Corruption Perception Index	-0.775	-0.534	-0.668	-0.353	-0.683	-0.689

All coefficients statistically significant ($p. < 0.10$) except where italicised.

All indices listed in the left-hand column are from the World Bank, except the Corruption Perception Index, which is from Transparency International. Higher scores are "worse" for Opacity; higher scores are "better" for all other indices.

Brief Review of Content of World Bank Indices

World Bank Index		Governance Aspect Measured
Voice and Accountability	Political process, civil liberties, political rights	The process by which those in authority are selected and replaced.
Political Stability/Lack of Violence	Likelihood that government will destabilise or be overthrown	
Government Effectiveness	Quality of public service and bureaucracy, competence of civil servants and independence from political pressures, credibility of commitment to policies	The capacity of the state to implement sound policies
Regulatory Framework	Incidence of market-unfriendly policies, perceptions of excessive regulation	
Rule of Law	Perceptions of incidence of crime,effectiveness of judiciary, enforceability of contracts	The respect of citizens and the state for the rules which govern their interactions
Control of Corruption (Graft)	Frequency of additional payments, effects on business environment	

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