

# **Corporate Governance Reform in Emerging Markets: How Much, Why, and with What Effects?<sup>1</sup>**

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April 2007**

## **1. Introduction**

In the ten years since the Asian crisis, the economic and financial landscape in emerging markets has been transformed. Large current account deficits have been eliminated. Dependence on short-term foreign borrowing has been reduced while central banks have accumulated foreign-exchange reserves to better bullet-proof their economies from fickle capital flows. Exchange rates have become more flexible. Budget deficits have come down and with them debt-to-GDP ratios and inflation. Countries have strengthened their financial markets, developing the infrastructure needed to encourage issuance and investment in long-term, fixed-rate, domestic-currency-denominated debt securities. Equity markets are more liquid and drawing increasing attention from international investors. All this is very different from ten years ago.

One should not allow self-congratulation to breed complacency. It is easy enough to point to emerging markets where one or more items on the preceding list are missing. In addition, there are grounds for wondering how much of this progress is merely cyclical – whether, as global growth slows, budget deficits, inflation, financial fragility and the problems with which they are associated will reemerge. Inevitably a critical look yields something of a glass-half-empty, glass-half-full story. Still it is hard to deny that important progress has been made in strengthening institutions and policies.

Why has progress not been faster? Why have some countries reformed more comprehensively than others? And have the recommended reforms in fact had the expected payoff in terms of economic performance? In this paper we attempt to answer these questions for the case for corporate governance reform.

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<sup>1</sup> We thank Kenichi Ueda for advice regarding data and Pipat Leungaruemitchai for help in obtaining it.

Corporate governance is a suitable case study for several reasons. First, the shortcomings of corporate governance were emphasized in official post mortems on the Asian crisis.<sup>2</sup> These blamed principal-agent problems for the extensive leverage and excessive dependence on short-term foreign-currency-denominated debt that rendered the corporate and financial sectors so fragile. They pointed to inaccurate information about corporate finances as an explanation for why investors scrambled out of Asian markets. In turn this led the World Bank, IMF, OECD and BIS, among others, to stress the need for corporate governance reform.<sup>3</sup>

Second, effective corporate governance is not something that can be legislated. Rather, it emerges from the interplay of the public and private sectors. Regulators can establish guidelines for governance, but how decisions are reached and how those taking them are held accountable depends on how firms implement those decisions and on how investors react. Corporate governance thus epitomizes the challenges of reform in a world where outcomes depend not just on official decisions but also on market reactions.<sup>4</sup>

Third, high-profile management scandals in the U.S. are a reminder that even countries with sophisticated financial markets have corporate governance problems. Insofar as the United States can't solve this problem, one might reasonably ask whether it is realistic to ask emerging markets to do so.

Fourth, there is disagreement on how best to provide effective corporate governance and therefore on what reforms are desirable. Even among advanced countries with relatively sophisticated financial markets, the United States and Europe in particular, there is disagreement on the specifics of corporate governance reform. In part this reflects different analytical

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<sup>2</sup> See for example World Bank (1998). This emphasis was to the exclusion of other factors, to be sure. But this emphasis on corporate governance problems was what distinguished accounts of the Asian crisis from analysis of its predecessors.

<sup>3</sup> A representative compendium (of OECD work on reforming corporate governance) is at [www.oecd.org/topic/0,2686,en\\_2649\\_37439\\_1\\_1\\_1\\_1\\_37439,00.html](http://www.oecd.org/topic/0,2686,en_2649_37439_1_1_1_1_37439,00.html).

<sup>4</sup> One recent study for the Asian economies (Cheung and Jang 2005) actually reports a negative correlation between how countries rank in terms of the adequacy of corporate governance rules and regulations and the adequacy of actual practice as seen by investors.

perspectives, but in part it results from differences in economic structure – for example, that bank-based financial systems remain more prevalent in Europe.<sup>5</sup>

In the emerging-market context there similarly are questions about the suitability of one-size-fits-all governance reform advice. Legislation and regulations tailored to the circumstances of high-income countries may yield very different results where the information environment is underdeveloped, cross shareholding is common and family control is pervasive. Governance that relies on the accurate and timely provision of accounting information may be ill suited to emerging markets where the supply of independent accountants and auditors is limited and the accounting profession’s self-regulatory body is weak.<sup>6</sup> Attempting to prevent management from pursuing private agendas by giving large shareholders more power may not work in an emerging-market setting where there the majority owner is the manager and the problem instead is the exploitation of outside shareholders by large block-holders.<sup>7</sup> Observations like these prompt questions about the suitability for emerging markets of advanced-country models. In Asia they have fueled calls for a distinct regional approach to corporate governance.<sup>8</sup>

Our analysis of these issues makes use of the work of de Nicolo, Laeven and Ueda (2006). These authors (NLU for short) have constructed outcome-based measures of the quality of corporate governance for a wide sample of countries for the period 1994-2003. “Outcome based” means looking not at legislation but at what firms and markets actually do. As a measure of firm behavior, the authors look to firms’ release of accounting information on items recognized as

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<sup>5</sup> On this, see Enriques and Volpin (2007).

<sup>6</sup> See Alba, Claessens and Djankov (1998).

<sup>7</sup> These problems of self-dealing or “tunneling” are the focus of Johnson, La Porta, Lopez-de-Silanes and Shleifer (2000).

<sup>8</sup> See the discussion in Khan (2003). The author’s argument is that in Asian countries where corporations are heavily controlled by insiders – often members of the founding family – banking systems need to be strengthened to provide a counterweight and deal effectively with agency and monitoring problems. The implication is that corporate governance in Asia should focus more on strengthening banking systems and less on the release of accounting information and activism on the part of individual shareholders. Similarly, Hofstetter (2005) argues that rules developed to address the agency risks of companies with dispersed ownership do not necessarily have the same merits for the case of family-controlled companies. The author criticizes U.S.-like mandatory bid rules that undercut the potential efficiency of control premiums and suggests default rules allowing for opt-out solutions that offer necessary flexibility in the context of insider-controlled companies.

important by professional accountants. A second measure of firm behavior is earnings opacity, namely the extent to which managers conceal true performance by using accruals (cash flow) to limit the fluctuation of profits. As their measure of market behavior, NLU compute the co-movement of the prices of the shares of different companies in the same country, on the grounds that co-movement will be higher when management is less transparent about the financial condition and prospects of individual firms. Corporate governance quality is then the average of these indicators. In principle this index should measure how well countries are doing in strengthening corporate governance, even if the specific measures appropriate for doing so differ as a function of the structure of the economy and its financial markets.<sup>9</sup>

Our contribution is to extend these measures through 2005 and to analyze the determinants and effects of corporate governance reform. We look first at the economic and political determinants of corporate governance quality. This helps us to understand why some countries have stronger corporate governance than others. It speaks to the notion that this problem will solve itself in the course of economic growth – and to the idea that quick fixes ignore the fact that the development of corporate governance is an organic part of the larger process of economic and financial development.

In addition, these results point to instrumental variables that can be used to analyze the impact of corporate governance on financial activity and development. Policies to foster the development of capital markets, including corporate governance reform, have attracted considerable attention in the literatures on economic development and financial instability. Yet few analyses have acknowledged the obvious problem that the quality of institutional arrangements not only affects but also is affected by financial development. Insofar as our analysis of the determinants of corporate governance quality points to variables that are themselves exogenous and unlikely to independently influence financial depth and liquidity, it

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<sup>9</sup> We will have more to say about the strengths and weaknesses of this measure of corporate governance quality.

suggests instrumental variables that can be used to better pin down the impact of corporate governance on larger outcomes.

The results provide some evidence, mainly for Asia, that corporate governance improves with economic development. But, in addition, they point to some specific circumstances that appear to facilitate the development of strong corporate governance practice. Corporate governance appears to improve with the stability and development of the political system, as if governments that expect to remain in power are readier to sink the costs of reforms that only pay off down the road, and that investors are better able to effectively communicate their interest in corporate governance reform in countries with well-developed political systems. There is also some evidence that countries where foreign investors are more prominent push for improvements in corporate governance. Finally, there is some evidence that corporate governance is stronger in countries with a common law tradition, where shareholders are likely to be more active and better able to represent their interests.

Using these same political variables as instruments for corporate governance, the results suggest that corporate governance quality has a positive impact on private bond market capitalization, stock market capitalization, the number of listed companies, and the turnover ratio on the stock market – but not, plausibly, for public bond market capitalization. Our results thus support the notion that corporate governance reform can make a difference for financial development. Even if financial development also affects the quality of corporate governance, as is plausible, our results suggest that this is not all that is going on.

## **2. The Evolution of Corporate Governance**

The NLU indicator of corporate governance quality, as mentioned, has three components. First, the share of the 40 most important accounting items, as identified by the Center for International Financial Analysis and Research of Princeton University, on which the largest

companies (top ten manufacturing companies as measured by total assets in each country) disclose information. Second, a measure of earnings smoothing, constructed as one minus the Spearman rank correlation between changes in accruals and changes in estimated cash flow (both normalized by total assets) for each country and year. Third, a measure of stock price synchronicity constructed from the covariation of each firm's weekly return with the market capitalization-weighted weekly return. The overall index and its components are available for 41 countries, including 19 emerging markets (ten in Asia), annually for the period 1994-2003. Using their sources and following their methods, we updated the authors' three subindices through 2005.

Like any summary measure of something as multi-faceted as corporate governance, this one is not without its limitations. The number of items on which firms disclose accounting information tells us nothing about the accuracy of that information. Estimating earnings smoothing is more difficult for emerging markets than advanced countries because of the absence of information on cash flow for many firms and the need to use an accruals-based proxy instead. Finally, individual stock prices can move together to a greater or lesser extent for reasons other than the limited availability of information on individual firms' outcomes and prospects, for example because of changes in the prevalence of common shocks. Still, this outcome-based measure tells us more about what firms do than the statute- and regulation-based alternatives. And it has some strengths relative to its predecessors, for example that it does not focus exclusively on share price co-movements (as in Morck, Yeung and Yu 2000) or accounting practice (as in Cheung and Jang 2005).

The evolution of corporate governance for the full sample, individual regions, and emerging and advanced countries is shown in Table 1. There appear to have been improvements in corporate governance both Asia and Latin America, although progress has been a bit slower in the Asian case. This suggests a tendency toward convergence in corporate governance quality

across emerging regions. In both Latin America and Asia, there is relatively little improvement (in the Latin case, even retrogression) prior to 1998 and then faster progress subsequently; this suggests that subsequent reforms were prompted not merely by the Asian crisis – which was of course felt most intensely in Asia – but by the general push by the multilaterals and more generally by the pressures of financial globalization. We report some further evidence on this below, where we show that corporate governance depends more on pressure from foreign investors and appears to have been affected less by the incidence of financial crises.

It is also interesting that there have been improvements in the quality of corporate governance as measured by this index in the majority of Asian countries. These are most dramatic in Hong Kong, Singapore and, interestingly, Malaysia, Thailand and the Philippines. But this improvement has been only marginal in the case of Indonesia, where there has been some improvement in accounting standards, but earnings smoothing and stock price synchronicity, reflecting continued low levels of transparency, show little if any improvement.<sup>10</sup> There appears to have been a deterioration in the case of China, where there has been little evident improvement in accounting practice and stock price co-movements have risen further. While recent fluctuations in the Shanghai stock market are outside the sample period, observers will not be surprised by this last result.

Thus, there has been progress around the world. The next question is why it has been more rapid in some places than others.

### **3. Determinants**

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<sup>10</sup> The Indonesian Accounting Standards Board and the Indonesian Institute of Accountants have issued some 50-plus standards compatible with international practice, but this does not mean that firms always disclose the requisite information on this basis. For example, none of the Indonesian firms in our sample reported accounting information on "Research and Development (Expenses), the Unconsolidated Parent Company's Net Profit, Funds from/for Other Operating Activities, or Foreign Currency Translation Gain/Loss in the most recent year.

We start by regressing corporate governance quality on a vector of country-specific economic and political characteristics. Information on the definition of the variables can be found in Appendix Table A1. The equations are estimated with random effects; the Hausman and Breusch-Pagan tests show that random effects are preferred to fixed effects and simple pooling.<sup>11</sup>

The benchmark specification is in column 1 of Table 4. Countries with more stable governments appear to have better corporate governance, reflecting the greater willingness of politicians to sink the up-front costs of reform that only yield returns down the road. In contrast, whether that government is more or less democratic does not obviously make a difference.<sup>12</sup> Past capital inflows scaled by GDP translate into stronger present corporate governance, as if foreign investors press for improvements in practice.

In addition, countries with a common law tradition have better corporate governance, reflecting the stronger rights and voice of outside shareholders and, presumably, their greater activism. Countries with low lending rates appear to have relatively strong corporate governance. Low lending rates may reflect stable economic conditions, enabling the government to devote more time and resources to corporate governance improvement rather than to other more pressing economic problems. Doidge, Karolyi and Stulz (2004) observe that where external finance is more readily available, the incentives for firms to improve corporate governance are greater. Finally, the number of parent enterprises (multinational enterprises with subsidiaries abroad) enters positively in the benchmark specification. The number of parent enterprises is a proxy for the number of large corporations in a country, which in turn reflects the level of corporate sector development. Countries with more large corporations could feel a greater need to place them under rigorous governance standards and may also feel that firms are better able to comply with stringent regulation. Conversely, it is often said that some countries hesitate to enforce rigid

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<sup>11</sup> Reassuringly, the key results carry over when we estimate these relationships instead using fixed effects.

<sup>12</sup> This is consistent with the literature on whether democracies are more or less able and likely to undertake economic and financial reforms – which is perhaps best characterized as inconclusive. For a rich discussion of these and other links running from the political system to corporate governance, see Roe (2003).



governance standards because their many small- and medium-sized companies would find it costly to comply with the rules.

A number of other variables do not appear to significantly influence the quality of corporate governance when included in the multivariate regression.<sup>13</sup> These include GDP per capita, as a measure of aspects of general economic and financial development not adequately captured by other variables, although this specific result is sensitive to sample, as we explain below. Other insignificant variables include domestic credit provided by the banking sector, included on the grounds that an active banking sector is sometimes identified as pushing for improved corporate governance; the incidence of recent banking crises; the stability of the exchange rate, and the number of recent years in which the country was under an IMF program.<sup>14</sup>

Another interesting result is the negative coefficient on the dummy variable for Asia. That is, after controlling for more than a dozen economic and political characteristics, the quality of corporate governance in Asia continues to lag behind that in other countries. Since the majority of non-Asian countries in the sample are advanced economies, this would appear to reflect the differential between Asia and that grouping.

To shed further light on this, we estimated the same equation separately for Asian and non-Asian countries. The results are in columns 3 and 4 of Table 4. English legal origin continues to be associated with stronger corporate governance, and past capital inflows are positively associated with corporate governance quality. Political stability and development is positively associated with the quality of corporate governance in both subsamples, although, not surprisingly, levels of statistical significance are lower, indicative of fewer degrees of freedom.

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<sup>13</sup> Although, as shown in the correlation matrix (Table 3), each of them has statistically significant correlation with the measure of corporate governance quality.

<sup>14</sup> Any tendency for IMF tutelage to lead to improved corporate governance appears to be neutralized in the aggregate by cases of countries that were continuously under Fund programs and in which transparency problems were rife. This variable is cumulative years under an IMF program where we start counting in 1960. Its maximum value is 23, this observation belonging to Argentina, which was continuously under IMF programs from 1983 through 2005. Similarly, while it is sometimes suggested that institutional strengthening (including better corporate governance) is a prerequisite for moving to greater exchange rate flexibility (since firms then must limit currency mismatches and other exchange-rate-related balance-sheet risks), this effect seems to be neutralized in the aggregate by the tendency for some countries with weak governance to exhibit relatively high levels of currency instability.

There are also a number of interesting differences between Asia and the rest of the world. The zero coefficient on credit provided by the banking sector in the full-sample estimates appears to conflate the strong negative effect of this variable in Asia with a weak positive effect in other regions. It does not appear that banks are active agents for improvements in corporate governance in Asia; if anything, the opposite is true. This may reflect the tendency for banks to be connected to the enterprises to which they lend and to be agents of the government's development strategy more than independent investors, something that has been emphasized in accounts of the Asian crisis.<sup>15</sup>

In addition, whereas the number of large enterprises entered positively in the full sample, it is negative for Asian countries. This is not surprising: in Asia large enterprises are often owned by business groups controlled by wealthy families. These enterprises are reluctant to disclose information to outside investors and use their political connections to lobby against positive changes in governance practice. Finally, per capita GDP matters for Asia, as if there are additional differences in the region, presumably associated with the general level of economic development, not adequately captured by the other explanatory variables – something that does not appear to be true of the rest of the sample (as noted above).

In sum, corporate governance quality varies across countries for both systematic and idiosyncratic reasons. Systematic reasons include the structure of the legal system and how effectively it empowers outside investors to lobby for information disclosure and representation; the presence of foreign investors, who are likely to lobby for improvements in corporate governance; and political stability and development, which influences the readiness of government to invest in governance reform. In Asia, in addition, the dominance of bank finance and the number of parent enterprises appear to be negatively associated with the quality of corporate governance.

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<sup>15</sup> See e.g. Goldstein (1998).

#### 4. Effects

We now examine the impact of corporate governance quality on financial development, and specifically on the depth and liquidity of financial markets. We treat corporate governance as endogenous, recognizing that its quality can be affected by as well as affecting financial development.

The net effect of this influence running in the opposite direction is uncertain a priori. On the one hand, as financial markets grow their participants will press, out of self-interest, for institutional reform, and being more numerous they may be correspondingly more likely to succeed; this suggests a positive influence running from financial development to corporate governance quality. In addition, both firms and regulators in more financially-advanced economies may be able to afford more demanding corporate governance practices, which are costly to implement and comply with. On the other hand, countries where financial development is lagging may have particular incentive to raise corporate governance quality in order to jump-start their markets; this would point to a negative relationship between the two variables.

We construct the fitted value of corporate governance using all the exogenous variables in the second stage as included instruments and the political variables and our measures of the presence of foreign investors as excluded instruments.<sup>16</sup> We are not aware of previous arguments or evidence that the structure of the political system is important for financial development – which is why we are comfortable about omitting the political variables from the second stage and using them as instruments for corporate governance.<sup>17</sup> Omitting cumulative capital flows from

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<sup>16</sup> All exogenous variables in the system should be used as instruments for any endogenous variable in the first stage in order to obtain unbiased estimates in the second stage regression.

<sup>17</sup> This is in contrast to work like that of Roe (2003) cited above, where it is argued that political variables should be significantly associated with corporate governance itself – this being precisely the argument relied on here.

the second stage is likely to be more controversial. Fortunately, dropping this variable from our list of instruments does not alter our key results, as we show below.<sup>18</sup>

In the second stage regressions we consider the impact of corporate governance, along with a vector of controls, on the capitalization of private bond markets (as a percent of GDP), government bond markets (as a percent of GDP), stock market capitalization (as a percent of GDP), the number of listed companies, and the turnover ratio on the stock market (in per cent). Results are in Table 5. The key finding is that the exogenous component of corporate governance as we measure it has a positive effect on all of these variables, but this effect is weakest – it is insignificant at conventional confidence levels – in the case of public-sector bond market capitalization. This makes sense: stronger corporate governance will work directly to make investment by outsiders in private corporations more attractive, but it will stimulate investment in public debt securities only indirectly, insofar as private and public bond markets are complements (they utilize the same market infrastructure, have a similar customer base, etc.).<sup>19</sup>

When we estimate the same equations by pooled OLS, ignoring the possibility of simultaneity, the significant positive effects on private bond market capitalization, stock market capitalization, the number of listed companies and the measure of stock liquidity remain (column 1 of Table 6) remain. But only the positive effect on private bond market capitalization remains when we use fixed-effects or random-effects panel estimators without instrumental variables (columns 2 and 3). This underscores the importance of recognizing the endogeneity of corporate governance.<sup>20</sup>

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<sup>18</sup> See the section on robustness. Dropping this variable does however create some other sources of econometric discomfort, as we explain there, requiring us to modify the specification slightly.

<sup>19</sup> When we include private bond market capitalization as a determinant of public bond market capitalization, there is only weak evidence of this last effect. When we substitute public bond market size lagged one year in the first column, the key results do not change. In addition, lagged public bond market size is not significant (coefficient = -0.021, t-statistic = 0.66). Similarly, when we add private bond market capitalization lagged one year in the second column, the key results remain the same and the lagged private bond market size is not significant (coefficient = 0.044, t-statistic = 0.58).

<sup>20</sup> In the case of private bond market, although the effect is positive and significant across all regression models, the fact that the coefficient on corporate governance quality in the OLS regressions is smaller than in the IV regressions suggests that the reverse relationship from bond market size to corporate governance quality may be negative.

## 5. Robustness

We performed a number of sensitivity analyses to check robustness. To start, to the first stage we added dummy variables for Latin America and for the South Africa-Turkey pair (Column 1 of Table 7). The significant negative coefficient on the dummy variable for the Asian countries remains when the two additional regional dummies are present; and the Asia dummy in fact becomes larger in absolute value. The additional coefficients on the Latin America and South Africa-Turkey dummies do not differ significantly from zero at standard confidence levels.

Second, we estimated alternative specifications for the first stage, as reported in columns 2 and 3 of Table 7. We dropped the insignificant exchange rate, banking crisis, and IMF dummy variables; next we dropped the measures of financial openness, trade openness and domestic credit provided by the banking sector. The key results carried over.

Third, we estimated our equations using fixed rather than random effects. This requires dropping legal origin, the Asia region dummy, and the number of parent enterprises because these variables do not vary over time. The first-stage results still hold for the other variables except that the coefficient trade openness now becomes positive and significant. The key results from the second stage are unchanged; the remaining coefficients all have the same sign and continue to differ significantly from zero at standard confidence levels.

Fourth, we dropped cumulative capital inflows from the first stage (Column 4). Our key results – in particular, the sign and significance level of the corporate governance variable in the second stage – remain the same. The cost of doing so is a problem of weak instruments,

according to the F test of joint significance of the two political variables in the first stage regression.<sup>21</sup>

The textbook treatment for this problem is to find more powerful instruments. One possibility is to build on work on peer effects and policy diffusion (Simmons and Elkins 2003), where it is argued that the probability of a country adopting a particular policy reform is increasing with the number of its neighbors who have already done so. One can argue that there is a logic for including this variable – constructed, in the present context, as the quality of corporate governance in other countries in the same region – insofar as countries compete for foreign capital partly on the basis of how well they represent the interests of investors. This variable is plausibly exogenous except perhaps for countries large enough to influence the quality of corporate governance throughout the region. It is plausible to exclude it from the second stage, there being no reason to expect the quality of corporate governance elsewhere to have a first-order impact on the subject country's financial development. And it is a strong instrument. Adding it leaves the sign and significance of the key corporate governance variable in the second stage unchanged and eliminates the weak-instrument problem. A limitation of this variable is that it is not clear that a country's economic neighbors are also its geographic neighbors – in other words, that the relevant peer group is made up of the countries in the same geographical neighborhood. This is why we relegate estimates using this instrument to this section on sensitivity analysis.

Fifth, we looked separately at the impact on market development of the individual components of our corporate governance index, having first estimated their determinants using the same specification as above. As shown in Table 8, all three elements (adoption of accounting standards, tendency not to smooth earnings and share-price non-synchronicity) generally have the expected positive effect on private bond market capitalization, stock market capitalization, the

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<sup>21</sup> The F-statistic for the excluded instruments is 15.67 with the measure of cumulative capital inflows included in the first stage and 1.33 without. The cutoff for weak instruments is a threshold of 10.00 as suggested by Staiger and Stock (1997) for the case of a single endogenous regressor.

number of listed companies and the stock turnover ratio.<sup>22</sup> This reassures us that the results do not hinge on the behavior of any one component of our corporate governance measure.

Finally we considered the number of listed companies scaled by real GDP and by total number of business registrations rather than simply the number of listed companies to take into account the effect of country size and corporate sector size on this variable. For both specifications, the sign and significance of most variables, including corporate governance quality, remained unchanged, except for the log of real GDP per capita, the coefficient on which now became negative and significant.<sup>23</sup>

## **6. Corporate Governance and Capital Market Development in Asia**

Having looked separately in Section 4 at the determinants of corporate governance practice in Asia, here we look separately at the impact in Asia of corporate governance reform on financial development.<sup>24</sup> We estimate the same specification as in the Table 5 full-sample regressions separately for the Asian and non-Asian subsamples, again using instrumental variables.<sup>25</sup> Results are in Table 9. The relatively high R-squared for the Asian subsample indicates that the independent variables used in our analysis account for most of the differences in capital market development. The positive effects of corporate governance on stock market

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<sup>22</sup> With an exception of stock price non-synchronicity, which has negative effect on the turnover ratio. Analogous regressions for regional subsamples reveal that this strong, negative effect prevails in the Asian economies, offsetting the positive effect for non-Asian subsample. See below for further discussion of this result for Asian economies.

<sup>23</sup> We include these specifications in the section on robustness rather than the results section above because it not clear that real GDP is an appropriate variable to use as a scaling factor for number of listed firms. Using the total number of business registrations as a scaling factor is more appropriate, but due to incomplete time-series data on this variable, doing so reduces the number of observations greatly (from 451 to 193 country-years). In addition, since we already include the number of parent companies in the list of controls, we feel that it is justified to enter number of listed companies as a simple number. Data on total number of registrations are obtained from the World Bank Group Database on Entrepreneurship available online at <http://econ.worldbank.org/WBSITE/EXTERNAL/EXTDEC/EXTRESEARCH/0..contentMDK:21164814~pagePK:64214825~piPK:64214943~theSitePK:469382,00.html>.

<sup>24</sup> Latin America is characterized by many of the same capital-market and corporate-governance problems as Asia, including concentrated ownership and weak shareholder rights (Capaul 2003). It would be interesting to analyze that region separately. However, the small sample size together with the strong similarity of economic and political attributes of the seven Latin American countries in the sample limit the variation in the financial variables which in turn undermines the precision in the subsample regression analyses. Figure 6 illustrates these problems. Thus, we leave the case of Latin America for future research.

<sup>25</sup> Of course estimating the first stage separately for the Asian and non-Asian subsamples.

capitalization and number of listed companies are strong and significant only for the Asian economies; it would appear that this result is driven mainly by the Asian subsample. On the other hand, the impact of corporate governance quality on private bond market capitalization and stock market turnover is negative for the Asian subsample, in contrast to the non-Asian subsample where the full-sample results carry over. This negative association with private bond market capitalization might be taken to suggest that efforts to improve corporate governance in the region have not had a payoff in terms of the growth of this market. But the negative effect of corporate governance quality on private bond market size in the Asian subsample turns out to be driven by two outliers: Malaysia and the Philippines.<sup>26</sup> When these two countries are dropped, we get a positive effect of corporate governance quality on private bond market development that is statistically significant at standard confidence levels for the Asian subsample as well.

The negative association of corporate governance quality with stock market turnover may reflect the tendency for provident funds and other buy-and-hold investors to dominate the market in countries like Singapore and Hong Kong where both corporate governance and equity markets are relatively sophisticated. In addition, it is sometimes argued the prevalence of “momentum traders” in Asian stock exchanges may account for the association of high turnover with poor corporate governance, since such investors are unlikely to pay much attention to the governance of companies.<sup>27</sup>

In both the Asian and non-Asian subsamples, more parent enterprises contribute to larger private bond markets, larger stock markets, more listed companies and higher stock turnover, as

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<sup>26</sup> Malaysia had relatively low corporate governance score over the sample period (56.9 compared with the region’s average of 59.8), but very high private bond market capitalization as a percent of GDP (49.74 percent compared with the region’s average of 18.20 percent). The very aggressive measures taken by the Malaysian government and central bank to promote the development of the corporate bond market, by establishing an efficient trading platform and mandating extensive price transparency in transactions, are the subject of bin Ibrahim and Wong (2005). On the other hand, the Philippines scored relatively well in the corporate governance index (61.0) but had extremely small private bond market (0.09 percent of GDP). Espinosa (2005) points to a variety of problems that account for the relatively small size of the market: the absence of an efficient trading platform like Malaysia’s (all trading is over the counter), outmoded bankruptcy laws, and bank dominance of the financial sector.

<sup>27</sup> “Momentum traders” refers to investors who make their investment decisions based not on company fundamentals but on the dynamics of the stock market index or individual stock prices. For what it is worth, this negative relationship is especially strong in China, Pakistan, and Malaysia.



expected. Recall from the analysis of determinants of corporate governance that the number of parent enterprises has a negative effect on governance quality; we attributed this negative effect to the influence of big business groups in Asia, which may have opposed improvements in corporate governance. Thus, the number of parent companies has a mixed impact on financial market development: a positive direct impact and a negative indirect impact operating via the quality of corporate governance.

In the Asian subsample, trade openness is positively associated with private bond issuance and equity market capitalization. Interestingly, financial openness appears to be good for stock market capitalization but bad for bond market capitalization. Insofar as this reflects a differential tendency for countries to open their stock and bond markets to foreign investors, a more nuanced measure of financial openness may shed more light on the pattern. Corporates appear to rely more on bond issuance in the aftermath of banking crises but to issue less equity, presumably reflecting depressed valuations. This behavior was prominent in, inter alia, Korea in 1998-9, when the major conglomerates issued large numbers of bonds to finance restructuring in the wake of the country's crisis. Public bond market size seems to be another important determinant of private bond market capitalization: larger public bond markets relative to GDP are associated with high corporate governance issuance as a percentage of GDP. This confirms a finding of previous studies (e.g. Eichengreen and Leungaruemitchai 2006) and attests to the benchmark function and liquidity-enhancing effects of public bond markets. It also highlights an impediment to private bond market development in Asia, namely that government bond markets are often not well developed, partly because countries have relied on off-budget borrowing from abroad for financing and partly because economies such as Singapore and Hong Kong have had fiscal surpluses for a long period of time, creating no need to issue bonds.<sup>28</sup>

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<sup>28</sup> This problem has been the subject of other analyses: see inter alia McCauley (2003). Finally, there remain a variety of interesting effects of years spent under an IMF program – as in the full-sample estimates in Table 5 above. We leave verifying their robustness and their interpretation to future work.

## 6. Conclusion

The Asian crisis pointed up the need for strengthening corporate governance in emerging market economies. To be sure, corporate governance is only one item on the reform agenda, which includes improved supervision and regulation of financial institutions and capital markets; adapting macroeconomic policies, including exchange rate policy, to the now more open financial environment and strengthening competition policy. But corporate governance is arguably one of the more challenging items on the post-Asian crisis reform agenda. Even high-income countries with relatively sophisticated financial markets continue to grapple with shortcomings in their corporate governance arrangements. There is little agreement among scholars and practitioners on the efficient design of such arrangements. And there remains the perception, in Asia in particular, that corporate governance arrangements suitable for the advanced countries are not appropriate for the very different structural and economic circumstances of emerging markets.

All this said, there have been improvements in the quality of corporate governance in the last ten years. The task may be difficult, in other words, but progress is possible. We find that improvements are more likely in countries with stable governments prepared to sink the up-front costs of institutional reforms with deferred payoffs, where there are foreign investors prepared to lobby for reform, and where other countries in the region are undertaking corporate governance reform, which is suggestive of peer effects. That said, the case of China, which has nothing if not governmental stability, which is increasingly open to foreign investment and surrounded by other Asian countries undertaking the relevant reforms but which has made relatively little progress on the corporate-governance front suggests that these conditions may not be sufficient or that they may suffice only when they reach a critical threshold. We find that the relevant reforms have a significant payoff in terms of the development of equity markets and corporate bond markets.

Evidently, corporate governance reform pays. Progress is apparent in a wide variety of emerging markets. At the same time, the comparison with advanced economies suggests that the

process is incomplete. The question is whether emerging markets can eliminate this shortfall. One view would be that effective corporate governance is an organic part of the larger process of economic and financial development and that emerging markets can close their corporate governance quality gap only as their per capital incomes and levels of financial development converge with those of the advanced countries. Our results support a more optimistic conclusion. The quality of corporate governance depends on more than just per capita income as a measure of the general level of economic development. It in fact depends also on other factors, which suggests that there are some very specific things that emerging markets can do to promote it. Macroeconomic stability is good for the development of corporate governance. Opening to foreign investment is good for corporate governance.<sup>29</sup> So too is political stability, which gives investors voice and governments an incentive to invest in the future. And corporate governance quality does not simply reflect the level of financial development; in addition it can affect it. The results here suggest that it can affect it in decidedly positive ways.

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<sup>29</sup> At least under certain circumstances – specifically, when foreign investors remain “outsiders” and minority stakeholders. See Ananchotikul (2007) for counterexamples.

## References

- Alba, P., Stijn Claessens and S. Djankov (1998), "Thailand's Corporate Financing and Governance Structures: Impact on Firms' Competitiveness," unpublished manuscript, World Bank.
- Ananchotikul, Sudarat (2007), "Does Foreign Investment Really Improve Corporate Governance? Evidence from Thailand," unpublished manuscript, University of California, Berkeley.
- Beck, Thorsten, Asli Demirgüç-Kunt and Ross Levine (2000), "A New Database on Financial Development and Structure," *World Bank Economic Review* 14, pp. 597-605.
- Bin Ibrahim, Muhammad and Adrian Wong (2005), "The Corporate Bond Market in Malaysia," BIS Papers no. 26, pp.114-128.
- Braun, Matias and Ignacio Briones (2007), "Development of the Chilean Corporate Bond Market," unpublished manuscript, Universidad Adolfo Ibanez (January).
- Capaul, Miarta (2003), "Corporate Governance in Latin America," unpublished manuscript, Latin America and the Caribbean Region, World Bank.
- Caprio, Gerard, Daniela Klingebiel, Luc Laeven and Guillermo Noguera (2003), "Banking Crisis Database," World Bank. Available online at [http://www1.worldbank.org/finance/html/database\\_sfd.html](http://www1.worldbank.org/finance/html/database_sfd.html)
- Cheung, Stephen and Hasung Jang (2005), "Evaluation of Corporate Governance in East Asian Economies," PECC Macro Corporate Governance Scorecard Protect, Seoul, PECC.
- de Nicolo, Gianni, Luc Laeven and Kenichi Ueda (2005), "Corporate Governance Quality: Trends and Real Effects," IMF Working Paper no. WP/06/293 (December).
- Doidge, Craig, G. Andrew Karolyi and Rene M. Stulz (2004), "Why Do Countries Matter So Much for Corporate Governance?" Finance Working Paper no. 50/2004, European Corporate Governance Institute (September).
- Eichengreen, Barry and Pipat Leungaruemitchai (2006), "What Doesn't Asia Have Bigger Bond Markets?" BIS Paper no.30, Basel: BIS.
- Enriques, Luca and Paolo Volpin (2007), "Corporate Governance Reforms in Continental Europe," *Journal of Economic Perspectives* 21, pp.117-140.
- Espenila, Nestor (2005), "The Corporate Bond Market in the Philippines," BIS Paper no. 26, pp.135-145.
- Glick, Reuven, Xueyan Guo and Michael Hutchison (2006), "Currency Crises, Capital-Account Liberalization, and Selection Bias," *Review of Economics and Statistics* 88, pp. 698-714.

- Goldstein, Morris (1998), *The Asian Financial Crisis*, Washington, D.C.: Institute for International Economics.
- Hofstetter, Karl (2005), "One Size Does Not Fit All: Corporate Governance for 'Controlled Companies'," unpublished manuscript, Harvard Law School (June).
- Johnson, Simon, Rafael La Porta, Florencio Lopez-de-Silanes and Andrei Shleifer (2000), "Tunneling," *American Economic Association Papers and Proceedings* 90, pp.22-27.
- Kahn, Haider (2003), "Corporate Governance of Family-Based Businesses in Asia: Which Road to Take?" unpublished manuscript, University of Denver.
- La Porta, Rafael, Florencio Lopez-de-Silanes, Andrei Shleifer and Robert Vishny (1998), "Law and Finance," *Journal of Political Economy* 106, pp. 1113-1155.
- McCauley, Robert (2003), "Unifying Public Debt Markets in East Asia," *BIS Quarterly Review* (December), pp.89-98.
- Morck, Randall, Bernard Yeung and Wayne Yu (2000), "The Information Content of Stock Markets: Why do Emerging Markets Have Synchronous Price Movements?" *Journal of Financial Economics* 58, pp.215-260.
- Ranciere Romain, Aaron Tornell, Frank Westermann (2006) "Decomposing the Effects of Financial Liberalization: Crises vs. Growth," NBER Working Papers no. 12806 (December).
- Roe, Mark J. (2003), "Political Determinants of Corporate Governance: Political Context, Corporate Impact," Discussion Paper no. 451, John M. Olin Center for Law, Economics, and Business, Harvard Law School (December).
- Simmons, Beth and Zachary Elkins (2003), "Globalization and Policy Diffusion: Explaining Three Decades of Liberalization," in Miles Kahler and David Lake (eds), *Governance in a Global Economy*, Princeton: Princeton University Press, pp.275-304.
- Staiger, Douglas and James Stock (1997), "Instrumental Variables Regression with Weak Instruments," *Econometrica* 65, pp.557-586.
- World Bank (1998), *East Asia: The Road to Recovery*, Washington, D.C.: World Bank.

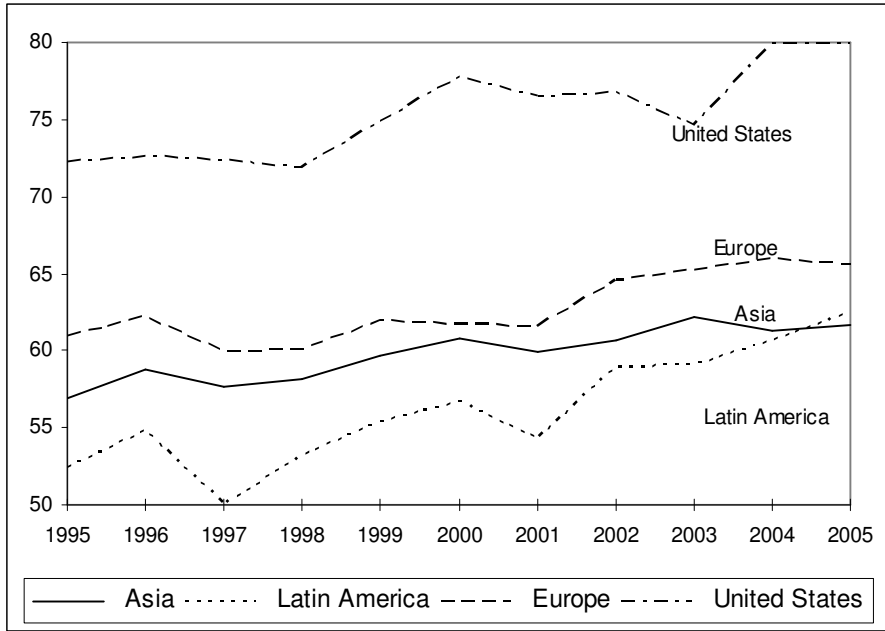
**Table 1: Evolution of Corporate Governance Quality (CGQ), 1995 – 2005**

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
All	58.7	60.2	58.0	58.9	60.7	61.1	61.0	63.2	63.9	64.7	65.2
Asia	57.0	58.8	57.7	58.2	59.7	60.7	59.9	60.7	62.2	61.3	61.7
Latin America	52.4	54.7	50.0	53.2	55.4	56.7	54.3	58.9	59.1	60.6	62.4
Europe	60.9	62.2	59.9	60.0	61.9	61.7	61.6	64.6	65.2	65.9	65.5
Others	62.8	63.3	62.9	63.6	65.3	65.7	69.0	68.6	69.0	72.0	74.0
Emerging	55.4	57.5	54.5	56.2	57.5	58.3	57.4	59.3	60.4	60.9	61.6
Advanced	61.0	62.1	60.5	60.8	63.0	63.2	63.5	65.9	66.4	67.3	67.8
<i>Memorandum:</i>											
United States	72.2	72.6	72.3	71.9	74.8	77.7	76.5	76.7	74.6	79.8	79.9
Japan	57.2	59.3	59.8	62.0	64.2	63.8	62.9	65.7	64.0	64.4	66.4

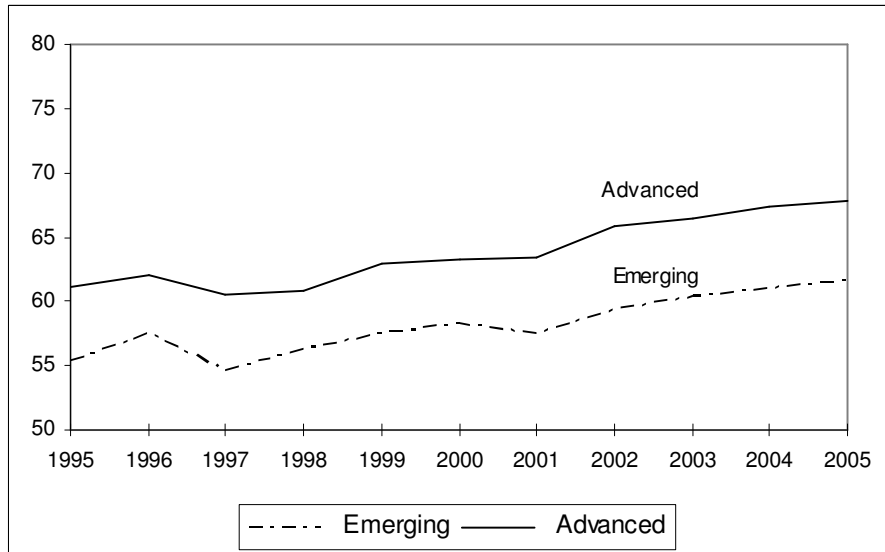
Note: See Appendix Table A2 for grouping of sample countries by region.

Source: Corporate governance indices from 1995-2003 from De Nicolo, Laeven, and Ueda (2006), extended through 2005 by authors.

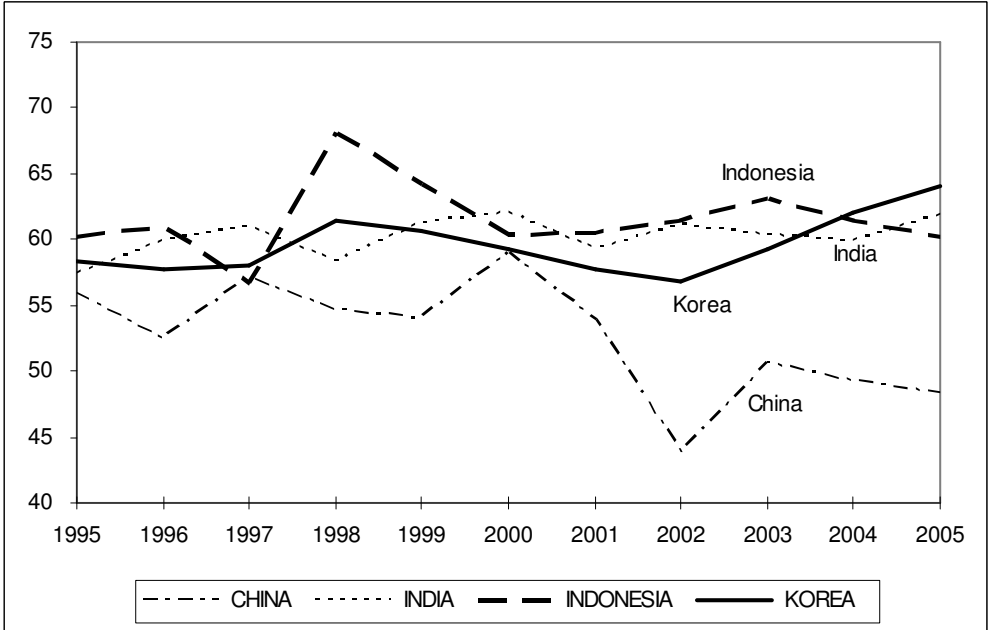
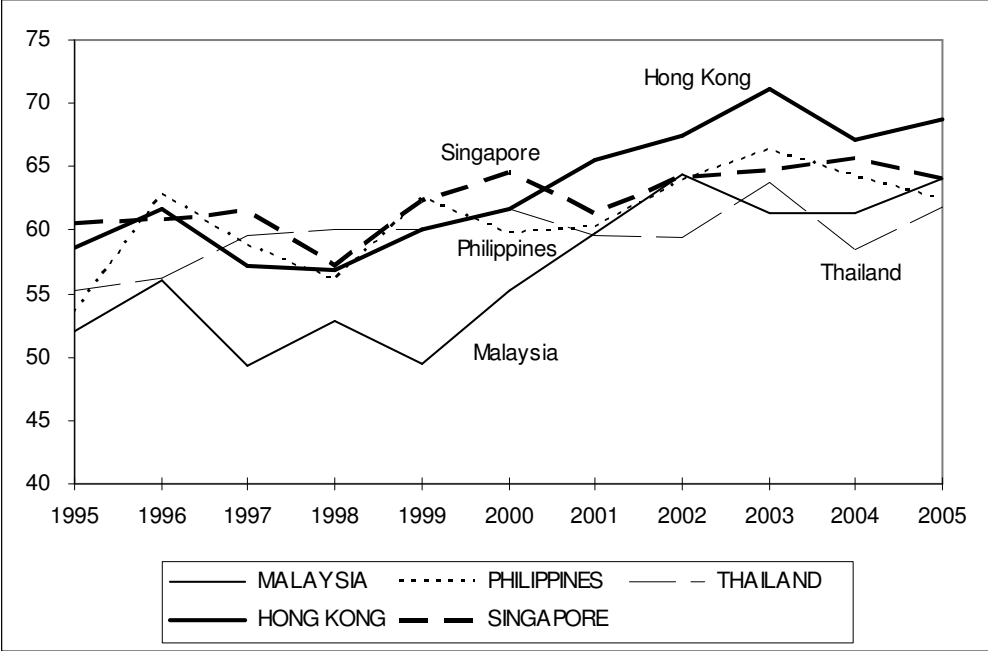
**Figure 1: CGQ Index by Region**



**Figure 2: CGQ Index, Emerging vs. Advanced Countries**



**Figure 3: CGQ Index in Asia**





**Table 2: Summary Statistics**

<b>Variable</b>	<b>Obs</b>	<b>Mean</b>	<b>Std. Dev.</b>	<b>Min</b>	<b>Max</b>
Corporate Governance Quality (0 to 100)	451	61.42	7.17	28.60	89.20
Accounting Standards (0 to 100)	435	84.21	4.06	66.30	93.35
Earnings Smoothing (0 to 100)	451	19.22	12.04	0.00	101.01
Stock Price Synchronicity (0 to 100)	451	82.25	10.35	38.50	96.00
Private bond market capitalization (% GDP)	439	24.86	26.42	0.00	145.62
Public bond market capitalization (% GDP)	439	36.47	24.86	0.21	147.89
Stock market capitalization (% GDP)	451	77.88	72.51	3.61	566.18
Number of listed companies	451	858	1428	50	8851
Stock turnover ratio	451	72.41	68.74	1.31	623.59
Government stability index (0 to 12)	451	8.73	1.82	4	12
Polity index (-10 to 10)	451	7.74	4.07	-7	10
Cumulative capital inflows (% GDP)	451	33.04	40.42	0.63	299.88
English legal origin dummy	451	0.34	0.47	0	1
Real GDP per capita (in log)	451	8.84	1.92	0.12	10.90
Domestic credit by banking sector (% GDP)	451	97.16	45.97	8.58	258.50
Lending interest rates	451	13.02	14.76	1.68	103.30
Number of parent enterprises	451	1483	2097	0	9356
Financial openness	451	7.03	10.23	0.07	96.38
Trade openness	451	77.56	56.73	16.30	383.06
Exchange rate stability index (0 to 10)	451	8.96	1.82	0	10
Cumulative years under IMF programs	451	1.34	3.79	0	23
Currency crisis indicator	451	0.04	0.20	0	1
Banking crisis indicator	451	0.12	0.32	0	1

Note: Data on private and public bond market capitalization are unavailable for Israel throughout the sample period (1995-2005).

**Table 3: Correlation Matrix**

	Corporate Governan ce Quality	Governe nt stability	Polity index	Cumulativ e capital inflows (%GDP)	Log real GDP per capita	English legal origin dummy	Domestic credit by banks (% GDP)	Lending rate (%)	Number of parent enterprise s	Financial openness	Trade openness	Exchange rate stability	Banking crisis dummy
Government stability	0.112**	1.000											
Polity index	0.262***	-0.154***	1.000										
Cumulative capital inflows (%GDP)	0.126***	0.194***	-0.147***	1.000									
Log real GDP per capita	0.328***	0.022	0.388***	0.249***	1.000								
English legal origin dummy	0.242***	0.155***	-0.094**	0.308***	0.073	1.000							
Domestic credit by banks (% GDP)	0.310***	0.198***	0.185***	0.212***	0.495***	0.155***	1.000						
Lending rate (%)	-0.274***	-0.152***	-0.098**	-0.187***	-0.558***	-0.187***	-0.414***	1.000					
Number of parent enterprises	0.213***	0.002	0.182***	-0.145***	0.285***	-0.267***	0.338***	-0.163***	1.000				
Financial openness	0.123***	0.199***	-0.011	0.607***	0.289***	0.082	0.226***	-0.192***	0.009	1.000			
Trade openness	0.078	0.152***	-0.196***	0.805***	0.190***	0.324***	0.285***	-0.254***	-0.119**	0.546***	1.000		
Exchange rate stability	0.126***	0.059	0.005	0.118**	0.388***	0.150***	0.185***	-0.538***	0.056	0.104**	0.131***	1.000	
Banking crisis dummy	-0.203***	-0.016	-0.195***	-0.109**	-0.311***	-0.074	-0.043	0.309***	-0.013	-0.138***	0.019	-0.196***	1.000
Years under IMF programs	-0.162***	-0.057	-0.140***	-0.124***	-0.335***	-0.150***	-0.366***	0.175***	-0.198***	-0.144***	-0.183***	-0.035	0.173***

Note: \*, \*\*, \*\*\* indicate significance level at 10%, 5%, and 1%, respectively.

**Table 4: Determinants of Corporate Governance Quality  
(First Stage, GLS Random Effects)**

Dependent Variable: Corporate Governance Quality (CGQ)				
	Full sample		Asia	Non-Asia
	(1)	(2)	(3)	(4)
<i>Excluded instruments:</i>				
Government stability	0.234* (1.87)	0.130 (1.01)	0.075 (0.39)	0.059 (0.34)
Polity index	0.247** (2.20)	0.063 (0.53)	0.337*** (5.73)	0.018 (0.03)
Cumulative capital inflows (% GDP)	0.046*** (5.13)	0.039*** (3.40)	0.033*** (2.92)	0.074*** (2.81)
<i>Included instruments:</i>				
Log GDP per capita		-0.608 (1.43)	1.260*** (4.40)	-0.455 (0.93)
English legal origin dummy		4.300** (2.30)	2.465*** (3.13)	5.827*** (2.66)
Domestic credit provided by banking sector (% GDP)		0.001 (0.06)	-0.049*** (5.32)	0.022* (1.67)
Lending interest rate (%)		-0.140*** (2.73)	-0.180 (1.61)	-0.135** (2.43)
Number of parent enterprises		0.001*** (3.53)	-0.001*** (4.35)	0.001*** (3.21)
Financial openness		-0.026 (1.37)	-0.096** (2.32)	-0.010 (0.46)
Trade openness		0.013 (0.96)	-0.002 (0.21)	-0.012 (0.37)
Exchange rate stability		-0.136 (0.66)	-0.300 (0.88)	-0.184 (0.73)
Dummy for banking crisis in previous year		0.105 (0.15)	-0.556 (0.69)	1.461 (1.32)
Years under IMF programs		0.004 (0.03)	-0.069 (0.79)	0.101 (0.37)
Dummy for Asia		-5.564*** (3.21)		
Constant	55.991 (36.18)	64.424 (12.29)	59.642 (11.37)	62.102 (7.97)
F-Statistics for excluded instruments	47.10	15.67	45.48	9.87
p-value	0.000	0.001	0.000	0.020
Observations	451	451	121	330
Number of country ID	41	41	11	30
R <sup>2</sup>	0.073	0.203	0.498	0.263

Notes: Heteroskedasticity-consistent t-statistics in parentheses.

\*, \*\*, \*\*\* indicate significance level at 10%, 5%, and 1%, respectively.

**Table 5: Effects of Corporate Governance Quality  
(Second Stage, IV Regressions)**

	Dependent Variable:				
	Private Bond Market Cap (% GDP)	Public Bond Market Cap (% GDP)	Stock Market Cap (% of GDP)	Number of Listed Companies (in log)	Stock Turnover Ratio (%)
Corporate Governance Quality (fitted)	1.509*** (4.46)	0.366 (0.71)	12.215*** (4.33)	0.053*** (3.21)	3.826** (2.27)
Log GDP per capita	2.938*** (4.89)	-6.057*** (3.57)	14.117*** (4.25)	0.092** (2.33)	-3.123 (0.75)
English legal origin dummy	-5.454 (0.95)	-1.219 (0.13)	-27.908 (1.36)	0.788*** (2.61)	5.905 (0.31)
Domestic credit provided by banking sector (% GDP)	0.172*** (6.49)	-0.094*** (2.75)	-0.082 (1.37)	-0.001 (0.77)	0.128 (1.28)
Lending interest rate (%)	0.173*** (3.04)	-0.203* (1.74)	2.132*** (4.48)	0.010*** (3.21)	0.577 (1.46)
Number of parent enterprises	0.005** (2.48)	0.004** (2.25)	-0.008* (1.72)	0.001** (2.10)	0.008 (1.28)
Financial openness	-0.026 (0.75)	-0.134** (2.25)	1.006*** (3.11)	0.003** (2.22)	0.308** (2.34)
Trade openness	0.001 (0.02)	0.117*** (2.90)	0.483** (2.25)	0.000 (0.17)	-0.349*** (2.53)
Exchange rate stability	0.381** (2.33)	0.906*** (2.80)	3.800*** (4.46)	0.015** (2.01)	0.732 (0.56)
Dummy for banking crisis in previous year	0.978 (1.07)	0.418 (0.28)	-13.119*** (2.97)	0.017 (0.47)	-4.220 (0.46)
Years under IMF programs	-0.164*** (2.69)	0.088 (0.54)	0.922* (1.86)	-0.011*** (3.58)	1.673 (1.19)
Dummy for Asia	-0.421 (0.07)	-23.452 (1.63)	61.071** (2.32)	1.001*** (3.62)	57.944** (1.96)
Public bond market size (% GDP)	0.038 (1.17)				
Constant	-122.943 (5.40)	64.088 (1.71)	-890.114 (4.55)	0.991 (0.86)	-167.657 (1.41)
Observations	439	439	451	451	451
Number of country ID	40	40	41	41	41
R <sup>2</sup>	0.656	0.011	0.472	0.313	0.227

Notes: Corporate governance quality is the fitted value from regressing the CGQ index on a set of instrumental variables as in Column 2 of Table 4. Instruments used are: government stability, polity index, and cumulative capital inflows as a percent of GDP. Heteroskedasticity-consistent t-statistics in parentheses. \*, \*\*, \*\*\* indicate significance level at 10%, 5%, and 1%, respectively.

**Table 6: Alternative Specifications for the Effects of Corporate Governance Quality on Financial Development**

Dependent Variable	Coefficient on Corporate Governance Quality Index				
	Pooled OLS	OLS/FE	GLS/RE	IV/FE	IV/RE
Private Bond Market Cap (% GDP)	0.443*** (3.37)	0.188*** (3.12)	0.196*** (3.07)	1.393*** (3.71)	1.509*** (4.46)
Public Bond Market Cap (% GDP)	0.143 (0.87)	0.100 (1.21)	0.126 (1.34)	-0.055 (0.10)	0.366 (0.71)
Stock Market Cap (% of GDP)	1.232*** (3.52)	0.065 (0.26)	0.259 (1.03)	11.940*** (3.60)	12.215*** (4.33)
Log Number of Listed Companies	0.025*** (4.03)	-0.005** (2.17)	-0.003 (1.32)	0.025* (1.66)	0.053*** (3.21)
Stock Turnover Ratio (%)	0.438 (1.38)	0.232 (0.76)	0.281 (0.92)	9.028*** (2.89)	3.826** (2.27)

Notes: For the OLS and GLS models, each financial development variable is regressed on the CGQ index and the set of independent variables analogous to columns 1 through 5 in Table 5. For the IV models, first stage regressions are analogous to column 2 of Table 4 (with English dummy origin, number of parent enterprises, and dummy for Asia dropped for the fixed effects IV regression). CGQ Index in the second stage IV regressions is the fitted value from the first stage. Instruments used are: government stability, polity index, and cumulative capital inflows as a percent of GDP. Heteroskedasticity-consistent t-statistics in parentheses. \*, \*\*, \*\*\* indicate significance level at 10%, 5%, and 1%, respectively.

**Table 7: Determinants of Corporate Governance Quality  
Robustness Checks**

	Dependent Variable: Corporate Governance Quality (CGQ)				
	(1)	(2)	(3)	(4)	(5)
<i>Excluded instruments:</i>					
Government stability	0.127 (0.99)	0.132 (1.02)	0.127 (0.98)	0.268** (2.13)	0.124 (1.02)
Polity index	0.051 (0.44)	0.067 (0.55)	0.081 (0.68)	0.072 (0.60)	0.017 (0.15)
Cumulative capital inflows (% GDP)	0.042*** (3.50)	0.039*** (3.38)	0.042*** (4.71)		
Average CGQ in other countries in the same region					0.373*** (4.59)
<i>Included instruments:</i>					
Log GDP per capita	-0.687 (1.34)	-0.637 (1.56)	-0.580 (1.51)	-0.344 (0.94)	-0.087 (0.21)
English legal origin dummy	3.549* (1.87)	4.281** (2.39)	4.450*** (2.58)	5.084*** (3.05)	3.877** (2.34)
Domestic credit provided by banking sector (% GDP)	-0.131** (2.46)	-0.128*** (3.01)	-0.130*** (3.09)	-0.136*** (3.19)	-0.085* (1.89)
Lending interest rate (%)	0.001*** (3.12)	0.001*** (3.62)	0.001*** (3.78)	0.001*** (3.34)	0.001*** (2.71)
Number of parent enterprises	-0.002 (0.23)	0.002 (0.24)			
Financial openness	-0.027 (1.38)	-0.026 (1.35)			
Trade openness	0.010 (0.74)	0.012 (0.91)			
Exchange rate stability	-0.123 (0.60)				
Dummy for banking crisis in previous year	0.118 (0.17)				
Years under IMF programs	0.034 (0.26)				
Dummy for Asia	-6.254*** (2.95)	-5.541*** (3.32)	-4.940*** (3.09)	-4.482*** (2.85)	-3.018* (1.83)
Dummy for Latin America	-3.577 (1.21)				
Dummy for South Africa and Turkey	-0.263 (0.06)				
Constant	66.633 (11.34)	63.188 (14.32)	63.307 (14.83)	61.437 (14.76)	37.583 (5.25)
F-Stat for excluded instruments	15.75	15.79	30.43	4.92	22.73
p-value	0.001	0.001	0.000	0.085	0.000
Observations	451	451	451	451	451
Number of country ID	41	41	41	41	41
R <sup>2</sup>	0.225	0.206	0.215	0.234	0.271

Notes: All regressions are estimated using GLS random effects. Heteroskedasticity-consistent t-statistics in parentheses. \*, \*\*, \*\*\* indicate significance level at 10%, 5%, and 1%, respectively.

**Table 8: Effects of Different Components of CGQ Index  
(Second Stage, IV Regressions)**

	Dependent Variable:														
	Private Bond Market Cap (% GDP)			Public Bond Market Cap (% GDP)			Stock Market Cap (% GDP)			Number of Listed Companies (in log)			Stock Turnover Ratio (%)		
<i>CGQ Components:</i>															
Accounting Standards (fitted)	3.161*** (3.82)			-1.328 (0.89)			19.071*** (3.48)			0.142*** (3.51)			49.230*** (5.21)		
Earnings Smoothing (fitted)	0.912*** (4.60)			0.104 (0.33)			6.966*** (4.38)			0.033*** (3.39)			4.564*** (3.97)		
Price Non-Synchronicity (fitted)	0.819*** (4.02)			0.439 (1.44)			8.663*** (4.40)			0.027** (2.51)			-2.912 (1.45)		
Control variables	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Observations	453	439	475	453	439	475	465	451	489	466	451	490	465	451	489
Number of country ID	40	40	40	40	40	40	41	41	41	41	41	41	41	41	41
R <sup>2</sup>	0.655	0.657	0.658	0.005	0.010	0.013	0.452	0.471	0.476	0.281	0.312	0.296	0.221	0.226	0.230

Notes: All regressions are analogous to the full specification in Table 5 with the CGQ index replaced by each of its three components. Results on other independent variables omitted. Instruments used are: government stability, polity index, and cumulative capital inflows as a percent of GDP. Heteroskedasticity-consistent t-statistics in parentheses. \*, \*\*, \*\*\* indicate significance level at 10%, 5%, and 1%, respectively.

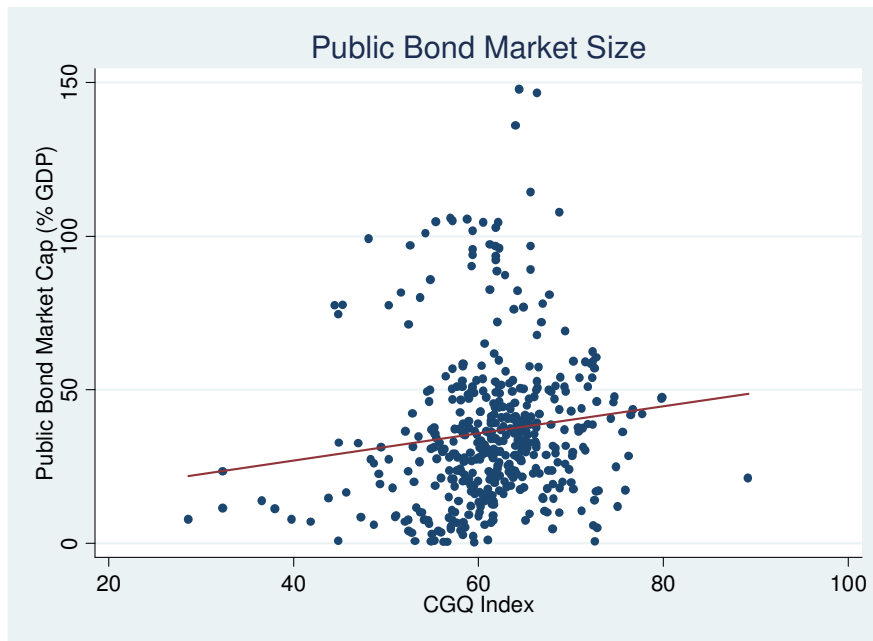
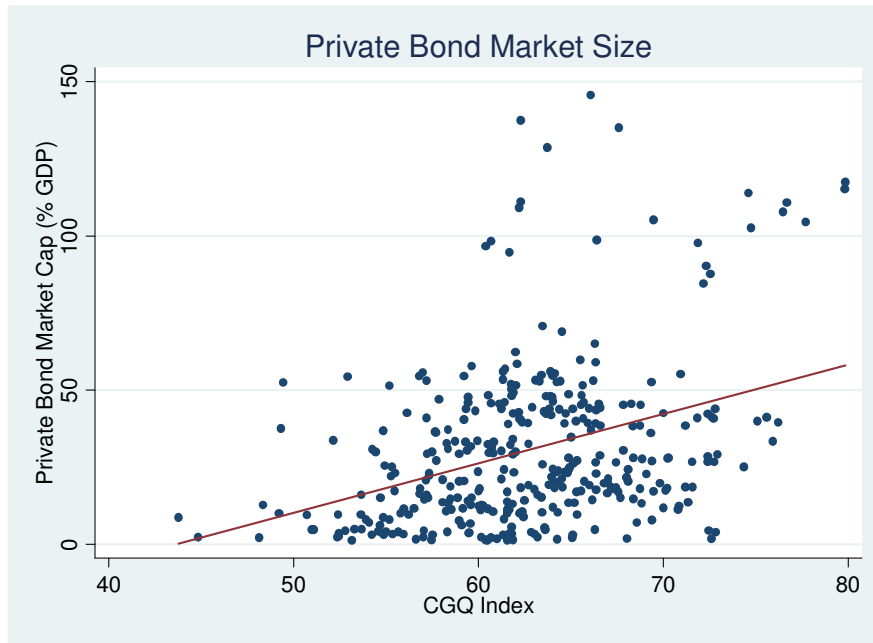
**Table 9: Effects of Corporate Governance Quality, IV Regressions  
Asian and Non-Asian Subsamples**

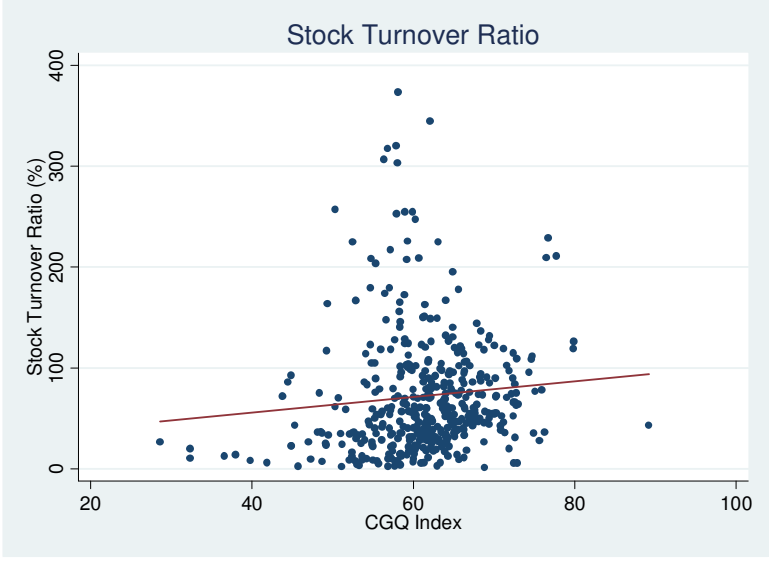
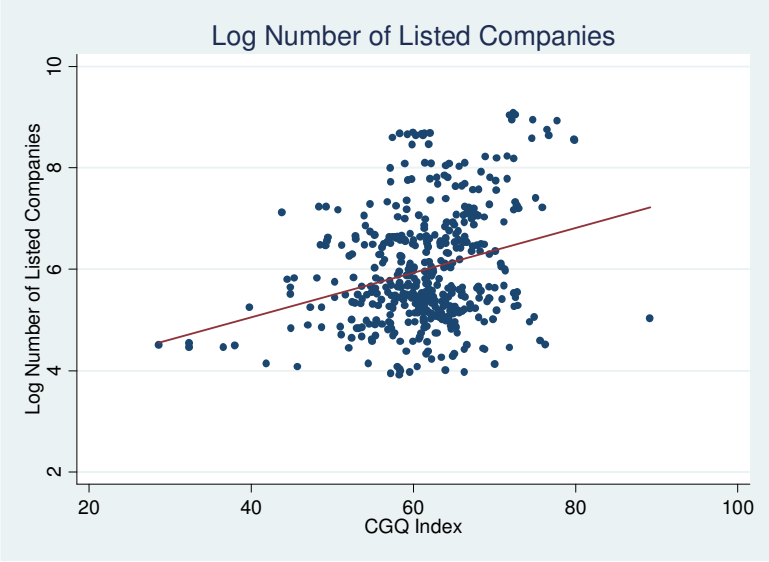
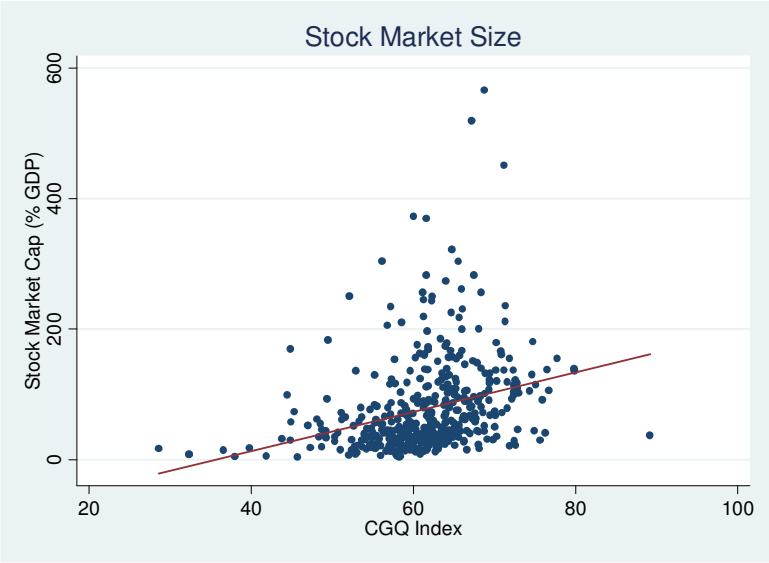
	Second Stage									
	Private Bond Market Cap (% GDP)		Public Bond Market Cap (% GDP)		Stock Market Cap (% of GDP)		Number of Listed Companies (in log)		Stock Turnover Ratio (%)	
	Asia	Non-Asia	Asia	Non-Asia	Asia	Non-Asia	Asia	Non-Asia	Asia	Non-Asia
Corporate Governance Quality (fitted)	-1.624*** (3.16)	1.268*** (2.95)	3.244*** (4.10)	-1.193** (2.42)	7.650*** (3.27)	3.696 (1.46)	0.096*** (4.04)	0.001 (0.04)	-14.848*** (4.36)	4.268*** (2.65)
Log GDP per capita	3.154*** (3.05)	2.018** (2.39)	4.592** (2.17)	-9.206*** (5.82)	-11.278* (1.93)	3.860 (1.34)	-0.330*** (5.17)	0.021 (0.52)	7.078 (0.89)	-1.415 (0.29)
English legal origin dummy	2.815* (1.82)	-10.333 (1.29)	-2.133 (0.60)	15.041 (1.38)	20.119*** (2.63)	18.342 (0.78)	1.299*** (8.19)	1.298*** (4.12)	80.305*** (4.70)	-31.556* (1.70)
Domestic credit provided by banking sector (% GDP)	0.026 (0.91)	0.224*** (6.99)	0.141** (2.08)	0.009 (0.29)	0.782*** (4.64)	-0.093 (0.77)	0.011*** (6.66)	0.000 (0.24)	-1.010*** (4.35)	0.126 (1.25)
Lending interest rate (%)	-0.079 (0.35)	0.110* (1.73)	-1.877*** (3.39)	-0.360*** (3.50)	3.086** (2.55)	0.802* (1.83)	0.000 (0.04)	0.002 (0.76)	-3.766* (1.91)	0.601* (1.90)
Number of parent enterprises	0.005*** (6.86)	0.006** (2.46)	-0.004*** (3.93)	0.005** (2.16)	0.011*** (3.34)	0.003 (0.56)	0.001*** (9.51)	0.001** (2.47)	0.027*** (3.60)	0.000 (0.14)
Financial openness	-0.715*** (2.92)	-0.036 (0.83)	-0.403* (1.59)	-0.145*** (2.70)	2.741*** (3.03)	0.714** (2.15)	0.016*** (2.63)	0.004*** (3.15)	-0.028 (0.05)	0.176 (1.24)
Trade openness	0.152*** (5.33)	-0.103* (1.73)	-0.198*** (4.54)	0.075 (1.01)	0.680*** (6.31)	0.584*** (2.90)	-0.006*** (5.89)	-0.004** (1.98)	-0.070 (0.57)	-0.075 (0.40)
Exchange rate stability	-0.906 (1.63)	0.382** (2.36)	-0.458 (0.35)	0.419 (1.37)	11.777*** (4.22)	1.632* (1.67)	0.061 (1.51)	0.008 (0.90)	-3.836 (0.73)	0.141 (0.16)
Dummy for banking crisis in previous year	3.691* (1.75)	0.579 (0.63)	-5.351 (1.46)	2.623 (1.44)	-21.905* (1.92)	-22.123*** (4.26)	-0.305** (2.14)	-0.047 (0.94)	-12.798 (0.67)	-6.434 (0.84)
Years under IMF programs	-0.327*** (2.74)	-0.093 (0.52)	0.934*** (3.31)	0.667** (2.05)	0.910 (1.12)	1.128 (1.17)	-0.035*** (3.47)	-0.024*** (2.97)	6.111*** (2.81)	-3.198*** (3.56)
Public bond market size (% GDP)	0.285*** (4.43)	-0.097** (2.45)								
Constant	67.961 (2.34)	-92.173 (3.28)	-161.584 (3.09)	181.873 (5.59)	-611.987 (4.16)	-259.846 (1.52)	1.325 (0.88)	5.118 (4.05)	1023.329 (4.88)	-195.822 (1.74)
Observations	120	319	120	319	121	330	121	330	121	330
Number of country ID	11	29	11	29	11	30	11	30	11	30
R <sup>2</sup>	0.807	0.662	0.566	0.030	0.848	0.147	0.705	0.384	0.537	0.199

Notes: Corporate governance quality for Asia (non-Asia) is the fitted value from regressing the CGQ index on a set of instrumental variables exclusively for Asian (non-Asian) subsample as in Column 2 (3) of Table 4. Instruments used are: government stability, polity index, and cumulative capital inflows as a percent of GDP. Heteroskedasticity-consistent t-statistics in parentheses. \*, \*\*, \*\*\* indicate significance level at 10%, 5%, and 1%, respectively.

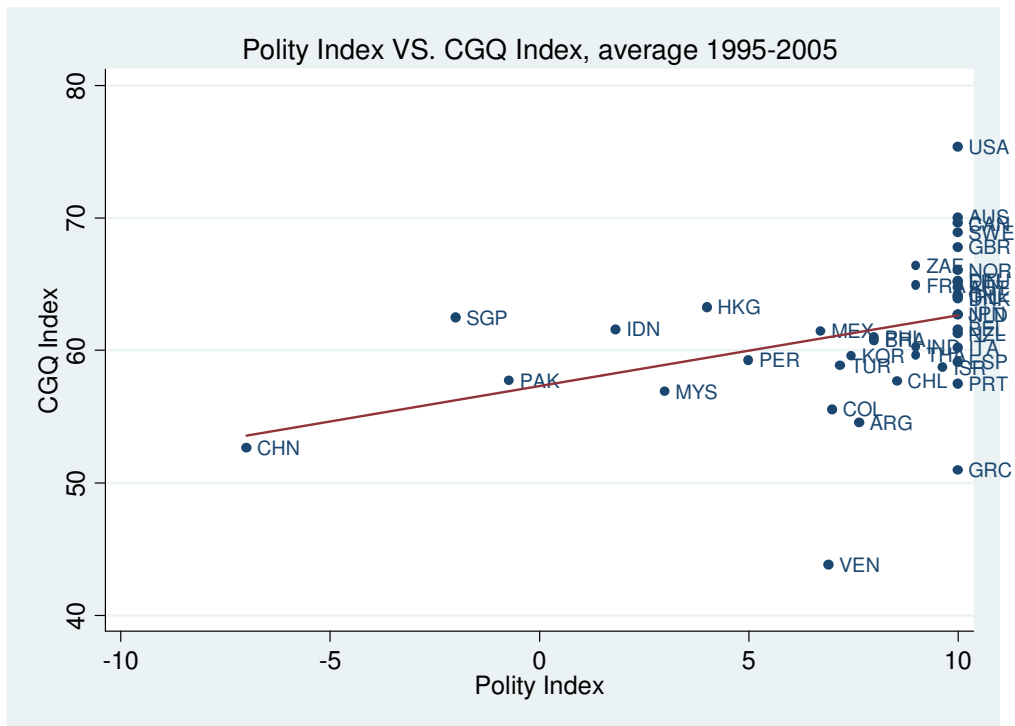
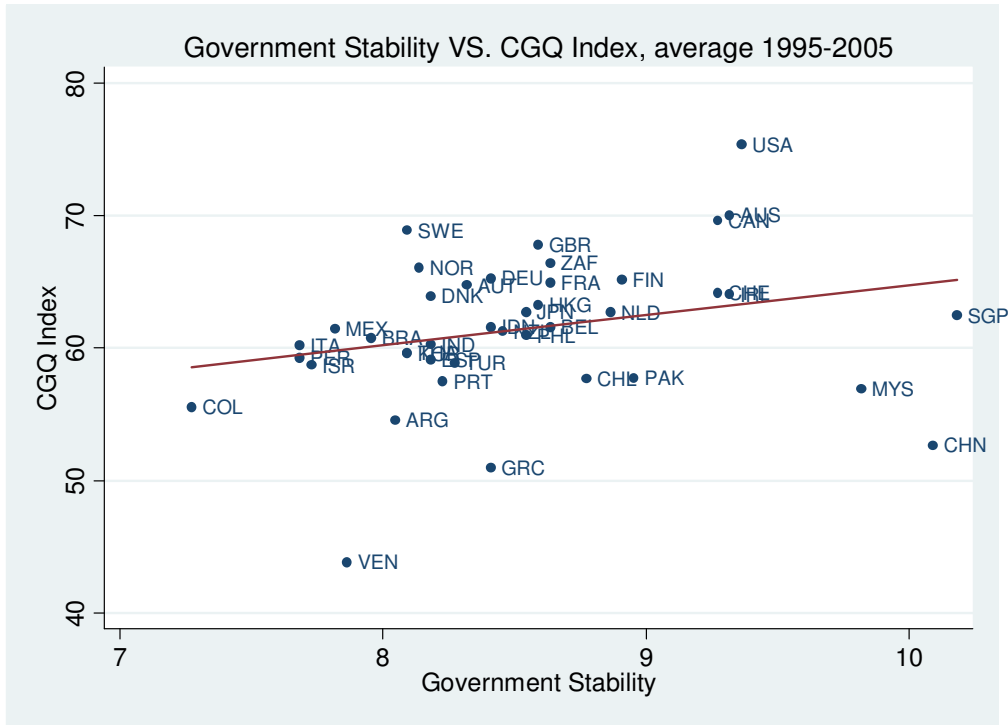


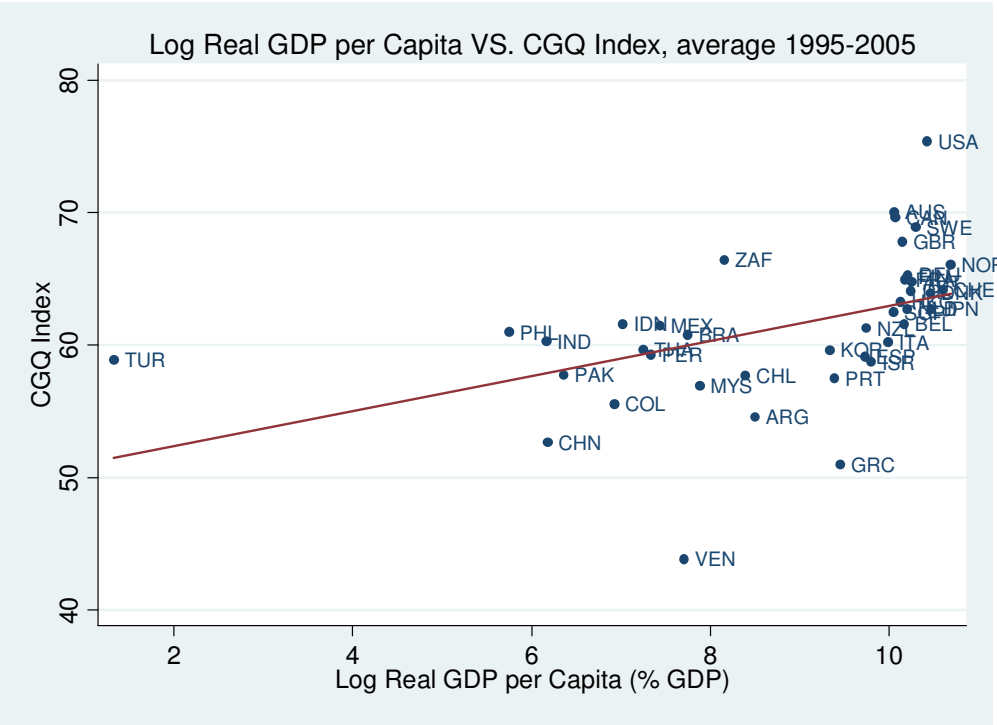
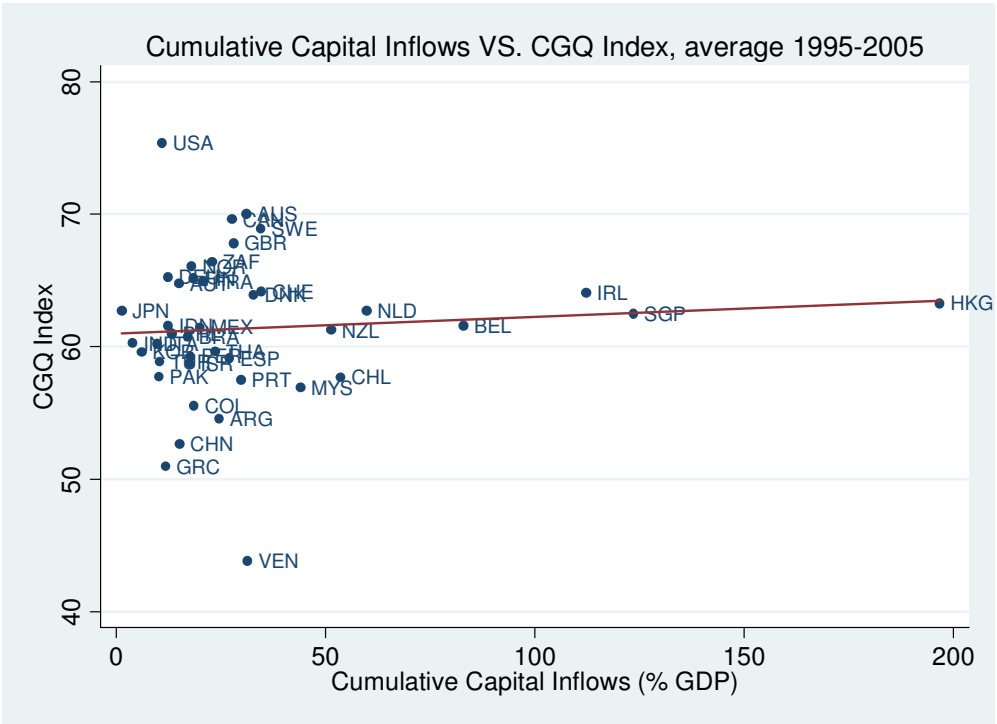
**Figure 4: CGQ Index and Financial Development  
Pooled Sample, 1995-2005**

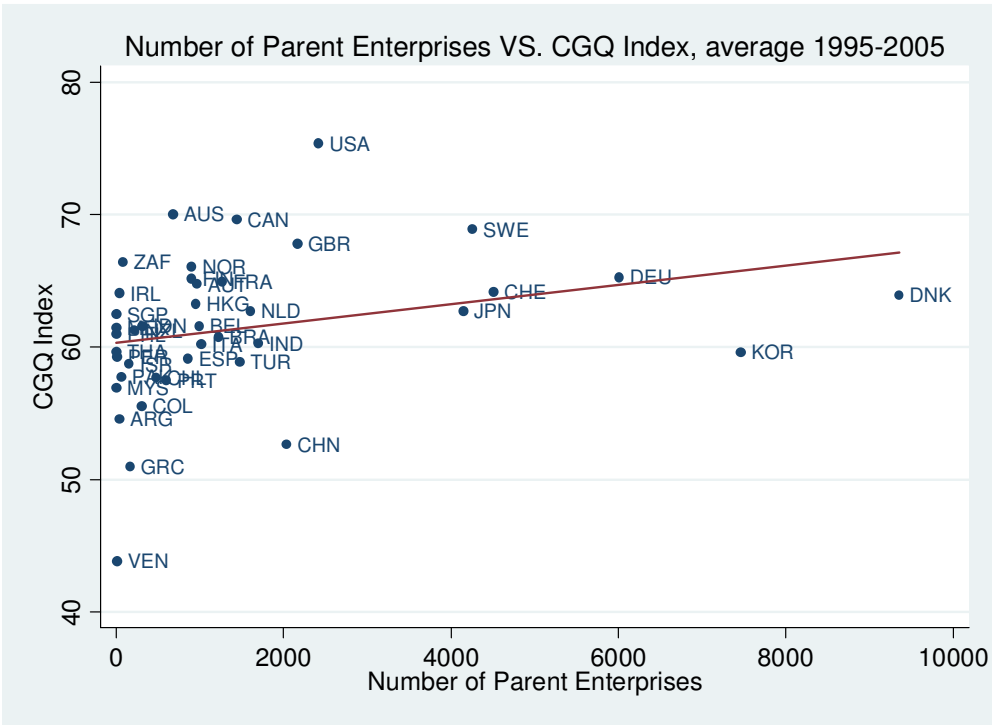
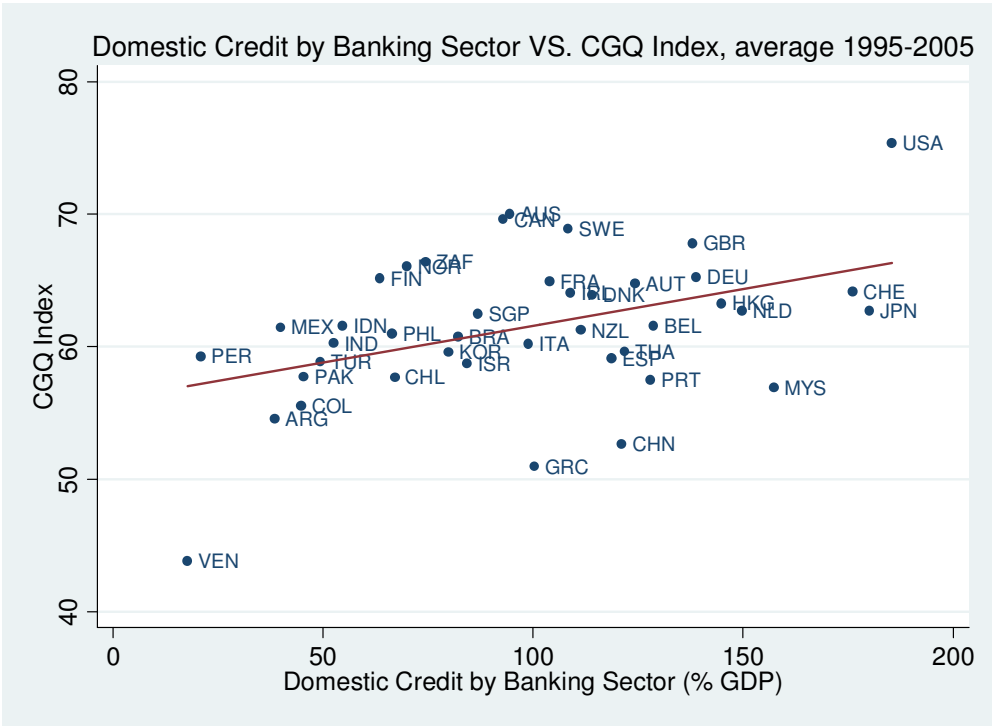




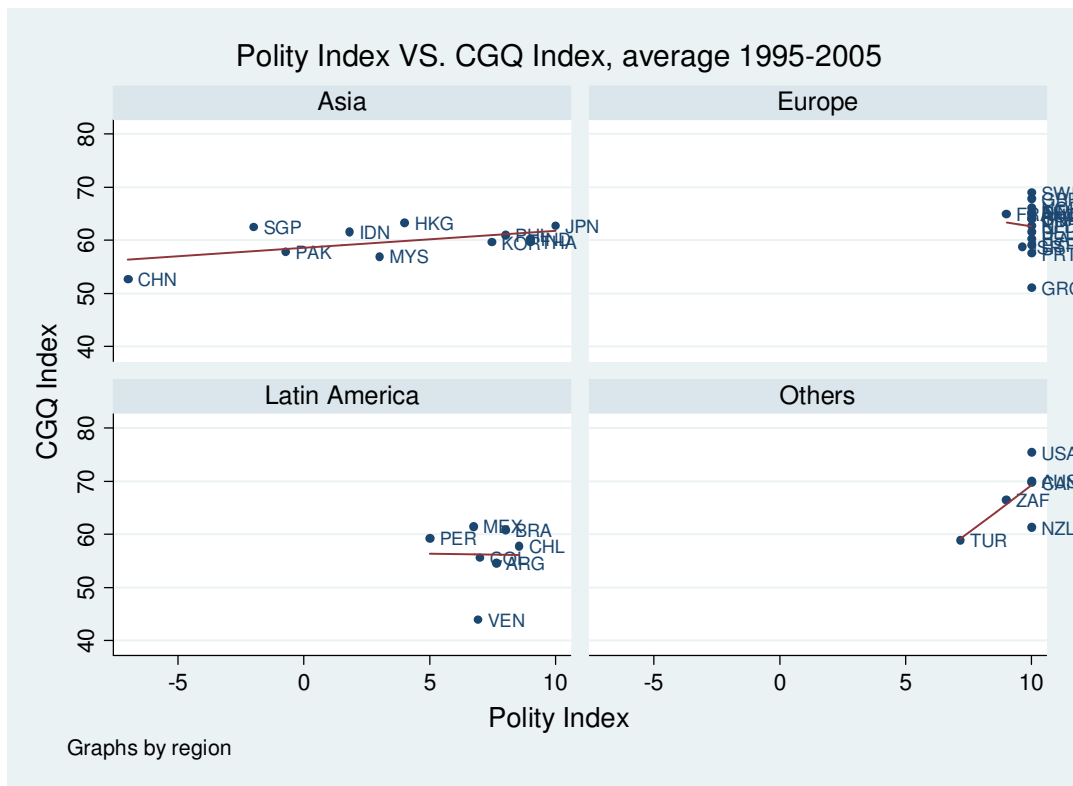
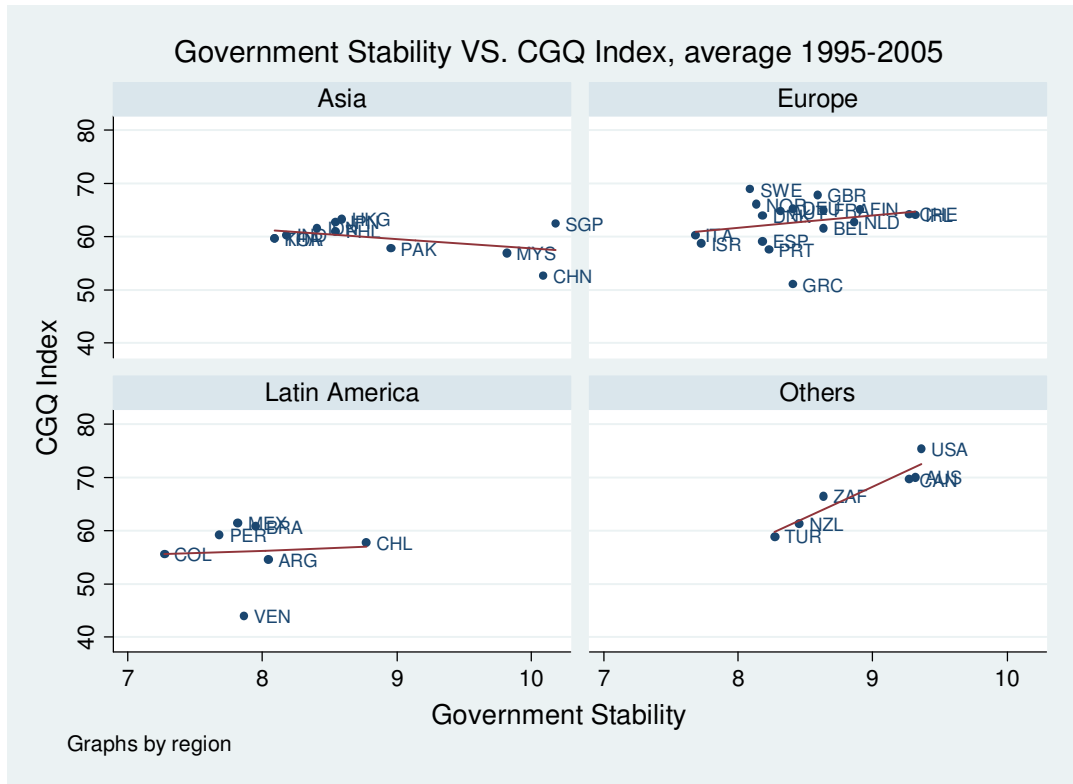
**Figure 5: CGQ Index and Explanatory Variables**  
**Cross Section, average 1995-2005**



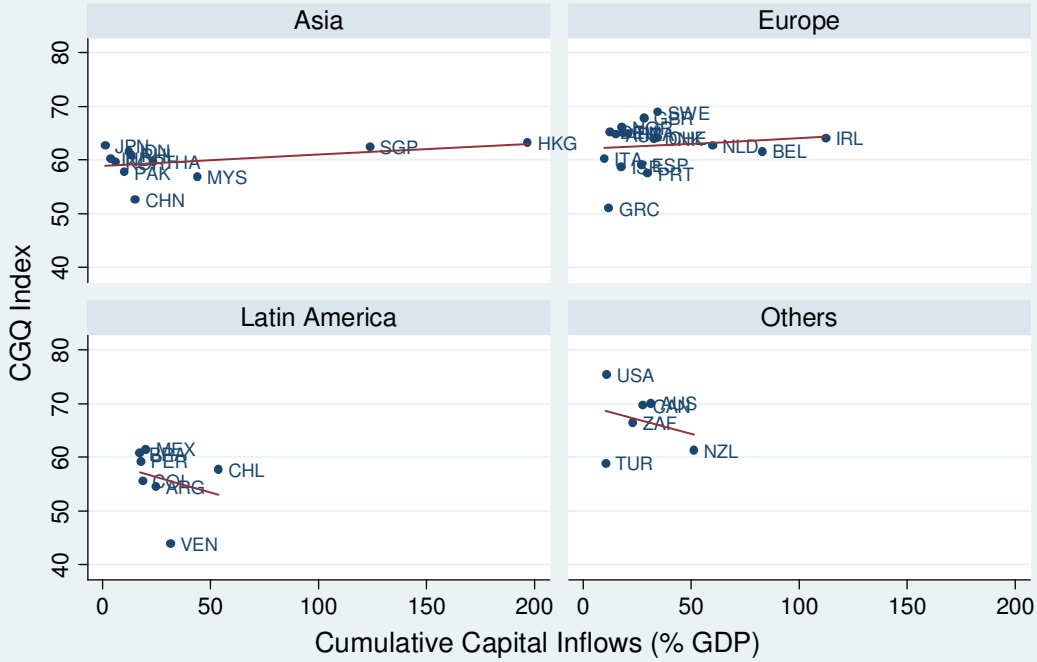




**Figure 6: CGQ Index and Explanatory Variables**  
**By region, average 1995-2005**

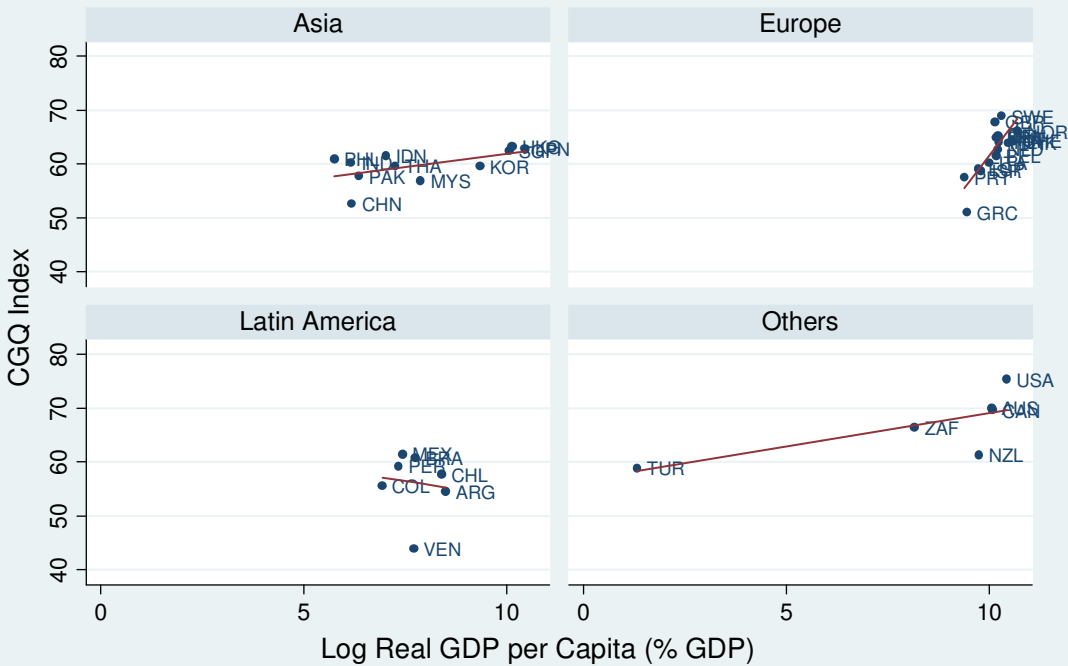


Cumulative Capital Inflows VS. CGQ Index, average 1995-2005



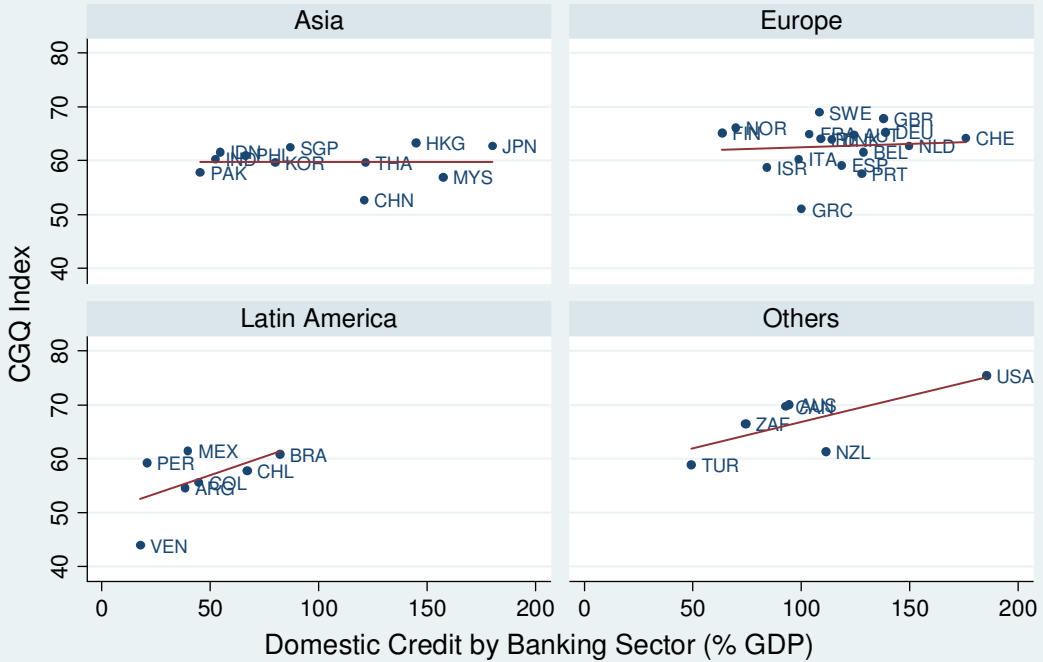
Graphs by region

Log Real GDP per Capita VS. CGQ Index, average 1995-2005



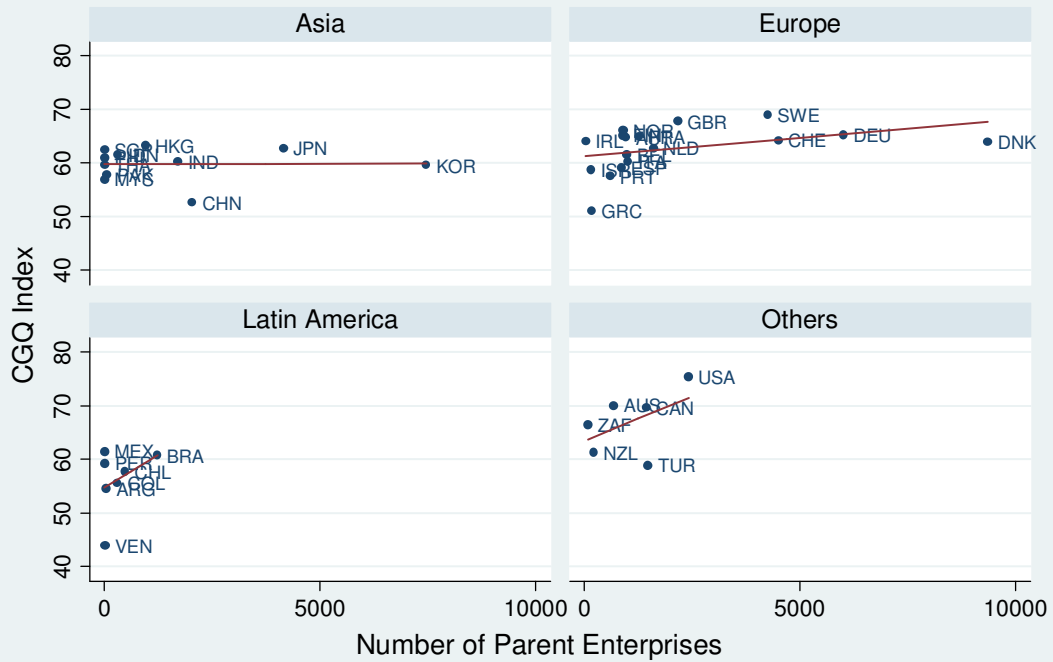
Graphs by region

### Domestic Credit by Banking Sector VS. CGQ Index, average 1995-2005



Graphs by region

### Number of Parent Enterprises VS. CGQ Index, average 1995-2005



Graphs by region



**Appendix Table A1: Description of Variables and Data Sources**

<b>Variable</b>	<b>Description</b>	<b>Source</b>
CGQ index	Unweighted average of the indicators of accounting standards, earning smoothing, and stock price synchronicity, ranging from 0 (worst) to 100 (best)	de Nicolo, Laeven, and Ueda (2006); updated by authors.
Accounting standards index	Number of reported accounting items as a percentage of 40 accounting items	de Nicolo, Laeven, and Ueda (2006); updated by authors.
Earning Smoothing index	Rank correlation between cash flows and profits across a set of firms at each point in time, standardized, ranging from 0 (most opaque performance) to 100 (least opaque performance)	de Nicolo, Laeven, and Ueda (2006); updated by authors.
Stock Price Synchronicity index	Average R-squared of regressions of each company's stock return on country-average return in each year, standardized, ranging from 0 (maximum synchronicity) to 100 (minimum synchronicity)	de Nicolo, Laeven, and Ueda (2006); updated by authors.
Private bond market capitalization	Private domestic debt securities issued by financial institutions and corporations (as a percentage of GDP)	BIS Domestic and International Securities Statistics; supplementary data are from Beck, Demirgüç-Kunt, and Levine (2000) and national statistical databases
Public bond market capitalization	Public domestic debt securities issued by government (as a percentage of GDP)	BIS Domestic and International Securities Statistics; supplementary data are from Beck, Demirgüç-Kunt, and Levine (2000) and national statistical databases
Stock market capitalization	Value of listed shares as a percentage of GDP	World Development Indicator (WDI)
Number of listed companies	Number of companies listed on the national stock market	World Development Indicator (WDI)
Stock turnover ratio	Ratio of total value of shares traded to stock market capitalization	Beck, Demirgüç-Kunt, and Levine (2000)
Government stability	Assessment of the government's ability to carry out its declared program(s) and its ability to stay in office, ranging from 0 (least stable) to 12 (most stable)	International Country Risk Guide (ICRG)
Polity index	Combined scores of polity regime characteristics, ranging from -10 (strongly autocratic) to 10 (strongly democratic)	Polity IV Project <a href="http://www.cidcm.umd.edu/polity/">http://www.cidcm.umd.edu/polity/</a>
Cumulative capital inflows	Stock of inward foreign direct investment (as a percentage of GDP)	United Nations Conference on Trade and Development (UNCTAD) database
Cumulative capital outflows	Stock of outward direct investment (as a percentage of GDP)	United Nations Conference on Trade and Development (UNCTAD) database
Legal origin	Dummy variables indicating country law originated from English law, German law, French law, and Scandinavian law	La Porta, et al. (1998)
Log of real GDP per capita	Log of deflated GDP over total population	World Development Indicator (WDI)

**Table A1 (continued)**

<b>Variable</b>	<b>Description</b>	<b>Source</b>
Domestic credit by banking sector	Private domestic credit provided by deposit money banks and other financial institutions (as a percentage of GDP)	World Development Indicator (WDI)
Lending rate	Average lending rates paid by commercial banks (in percent)	World Development Indicator (WDI) and Global Financial Data (GFD)
Number of parent enterprises	Parent corporations are those enterprises that control assets of other entities outside of their respective home countries. Typically, “control of assets” requires ownership of at least 10% of a corporation’s shares or voting power (equity capital stake), or its equivalent for an unincorporated enterprise.	United Nations Conference on Trade and Development (UNCTAD). <i>World Investment Report 2005: Transnational Corporations and the Internationalization of R&amp;D</i> Annex Table A.I.8. Available online at <a href="http://www.unctad.org/en/docs/wir2005_en.pdf">http://www.unctad.org/en/docs/wir2005_en.pdf</a>
Financial openness	The sum of foreign direct investment and portfolio investment inflows and outflows (as a percentage of GDP)	Raw data from International Financial Statistics (IFS)
Trade openness	Total value of exports plus imports (as a percentage of GDP)	Raw data from World Development Indicator (WDI)
Exchange stability	Assessment of the appreciation or depreciation of a currency against the US dollar over year, ranging from 0 (least stable) to 10 (most stable)	International Country Risk Guide (ICRG)
Years under IMF program(s)	Cumulative number of years a country has been under IMF agreements	Vreeland (2003); updated data provided by James Vreeland
Currency crisis indicator	Dummy variable indicating an incidence of a currency crisis	Glick, Guo and Hutchison (2004) and Ranciere, Tornell, and Westermann (2006)
Banking crisis indicator	Dummy variable indicating an incidence of a banking crisis	Caprio, et al. (2003) Banking Crises Database, World Bank <a href="http://www1.worldbank.org/finance/html/database_sfd.html">http://www1.worldbank.org/finance/html/database_sfd.html</a> . Updated banking crises data provided by Enrica Detragiache

**Appendix Table A2: Sample Countries**

<b>Asia</b>	<b>Latin America</b>	<b>Europe</b>	<b>Other</b>
China	Argentina	Austria	Australia
Hong Kong	Brazil	Belgium	Canada
India	Chile	Denmark	New Zealand
Indonesia	Colombia	Finland	South Africa
Japan	Mexico	France	Turkey
Korea	Peru	Germany	United States
Malaysia	Venezuela	Greece	
Pakistan		Ireland	
Philippines		Israel	
Singapore		Italy	
Thailand		Netherlands	
		Norway	
		Portugal	
		Spain	
		Sweden	
		Switzerland	
		United Kingdom	