Essays in Financial Economics

by

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Abstract

The thesis consists of three essays dealing with corporate governance in an international context.

The first essay is entitled "A Cross-Firm Analysis of the Impact of Corporate Governance on the East Asian Financial Crisis." In a sample of 399 firms from Indonesia, Korea, Malaysia, the Philippines, and Thailand, cross-firm differences in variables related to corporate governance had a significant impact on firm performance during the East Asian financial crisis of 1997-1998. Higher outside ownership concentration led to significantly better stock price performance during the crisis, but higher managerial ownership concentration had no significant effect on performance. This may indicate that the presence of an outside blockholder can mitigate expropriation of minority shareholders, but that managers with significant holdings can resist this effect. Diversified firms performed significantly worse than focused firms during the crisis. On average, single-segment firms emerged from the crisis trading at a premium of over 20% relative to diversified firms with which they were equally valued prior to the crisis. The relative loss in value for diversified firms was due primarily to the performance of firms with high variation in investment opportunities across divisions, suggesting that cross-subsidization of divisions may have been a source of the value loss. Variables indicative of higher disclosure quality are associated with significantly better performance during the crisis. Having an ADR and having an auditor from a "Big Six" accounting firm had separate positive effects on firm performance. Firms with both indicators came out of the crisis valued at a premium of over 50%, on average, relative to firms without these indicators with which they were equally valued prior to the crisis. Taken as a whole, the results provide some evidence at the micro level that poor corporate governance contributed to the depth of the East Asian financial crisis.

The second essay is entitled "The Performance of Politically Favored Firms in the East Asian Financial Crisis: Evidence from Malaysia." Malaysia presents an interesting opportunity to study the impact of political favoritism on firm performance during the East Asian crisis. Favoritism runs along two dimensions in Malaysia. Firms are favored based on the ethnicity of their owners as well as through personal relationships with key government officials. I find that the stock price performance of firms favored based on ethnicity was significantly *better* than the performance of non-favored firms during the crisis. However, the performance of firms favored through personal connections was significantly *worse* than the performance of non-connected firms. The evidence does not suggest that the relative loss for connected firms was driven by excessive leverage or inherent operating inefficiencies. Rather, the evidence suggests that the performance difference was driven by changes in the expected value of benefits for politically favored firms.

The third essay is entitled "Do Agency Problems Affect Dividend Policy? Firm-Level Evidence from Around the World." The "outcome" agency model of dividends (La Porta, Lopez-de-Silanes, Shleifer, and Vishny (LLSV (2000)) yields two key empirical predictions. First, dividend payouts will be higher among firms in which agency problems are less severe. Second, a negative relationship between growth opportunities and dividend payouts will be stronger among firms in which agency problems are less severe. LLSV (2000) use country-level measures of legal protection as a proxy for lower agency costs, and find empirical support for both predictions. I build on these findings by using firm-level measures indicative of the severity of agency problems. The proxies I employ are based on the cross-listing of firms in the U.S., the quality of accounting disclosure, diversification across industries, and the presence of a large outside shareholder. In a sample of 3,385 firms across 32 countries, I also find empirical support for both predictions of the outcome model.

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Chapter 1

A Cross-Firm Analysis of the Impact of Corporate Governance on the East Asian Financial Crisis

1.1   Introduction

Poor corporate governance has frequently been cited as one of the causes of the East Asian financial crisis of 1997-1998.[1] While poor corporate governance may not have *triggered* the East Asian crisis, the corporate governance practices in East Asia may have made countries more vulnerable to a financial crisis and may have exacerbated the crisis once it began. Recent research has highlighted the importance of corporate governance in emerging markets. La Porta, Lopez-de-Silanes, Shleifer, and Vishny (LLSV 1997, 1998, 1999b) demonstrate that, across countries, corporate governance is an important factor in financial market development and firm value. Regarding the East Asian crisis, Johnson *et al.* (2000) show that country-specific measures of corporate governance perform better than standard macroeconomic variables at explaining the extent of currency depreciation and stock market decline of emerging markets during the crisis.

If corporate governance was in fact a significant factor in the crisis, then corporate governance should explain not just *cross-country* differences in performance during the crisis, but also *cross-firm* differences in performance within countries. In this paper I use firm-level data from the five East Asian crisis economies of Indonesia, Korea, Malaysia, the Philippines,

and Thailand to study the impact of three aspects of corporate governance on firm performance during the crisis. Because the measures of legal protection emphasized in LLSV (1997, 1998, 1999) and Johnson *et al.* (2000) are country-specific, I examine other aspects of corporate governance that vary at the firm level.

The first aspect, ownership concentration, is, along with legal protection, one of two key determinants of corporate governance (Shleifer and Vishny (1997)). The second aspect, corporate diversification, is not a corporate governance mechanism, *per se*, but it affects corporate governance through its influence on the agency problem between manager and shareholder. The third aspect, disclosure quality, is an important element of corporate governance. LLSV (1998) argue that accounting standards play a critical role in corporate governance by informing investors and by making contracts more verifiable. I find that ownership concentration, corporate diversification, and disclosure quality all had a significant impact on the stock price performance of firms during the crisis. As a whole, my firm-level results complement the country-level finding of Johnson *et al.* (2000) that corporate governance played an important role in the East Asian crisis.

Corporate governance is the means by which minority shareholders are protected from expropriation by managers or controlling shareholders. I interpret expropriation in a broad sense to mean any action taken by a manager in his own interest at the expense of minority shareholders. Expropriation includes two types of actions. The first type involves actions that divert resources *away from* investment, such as managerial self-dealing, excessive perquisite consumption, and outright stealing. The second type involves actions that divert resources *toward* investment, but to inefficient investment. This includes over-investment or empire

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[1] Examples include Greenspan (1999), Harvey and Roper (1999), and Stiglitz (1998), who stated, "Lack of transparency and inadequate accounting standards, lack of protections for minority shareholders, and other aspects

building as well as cross-subsidization of investment among divisions (as in Scharfstein and Stein (2000)).[2]

Why would corporate governance become more critical in a financial crisis? Two broad possibilities have been suggested. The first possibility is that expropriation of minority shareholders becomes more severe during a crisis, and thus firms with worse corporate governance lose relatively more value during the crisis. Johnson *et al.* (2000) argue that a crisis can lead to greater expropriation because managers are led to expropriate more as the expected return on investment falls. A second possibility is that expropriation of minority shareholders doesn't necessarily become more severe during a crisis, but that the crisis forces investors to recognize and take account of the failings in corporate governance that had existed all along. In this case, again, firms with worse corporate governance might lose relatively more value during the crisis. Rajan and Zingales (1998) present an argument in which investors ignored weaknesses of East Asian firms until things turned sour. They suggest that investors in East Asia were not well informed about the firms they invested in, but continued to supply capital as long as returns were good. Then, once the crisis was set in motion (by whatever cause) investors quickly pulled out because they knew they did not have adequate institutional protection for their investments.

How do ownership concentration, corporate diversification, and disclosure quality affect the agency problem between managers and shareholders? In the next section I discuss in more detail what theory suggests the effect of these factors would be. For now, I will briefly

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of corporate governance clearly played a role in causing and magnifying the East Asian crisis."

[2] Johnson *et al.* (2000) list instances of expropriation of minority shareholders during the crisis. For example, in November 1997 United Engineers Malaysia (UEM) purchased 32.6% of its financially troubled parent, Renong. UEM minority shareholders interpreted this as a bailout of Renong at an inflated price, and UEM's stock price fell 38% the day the transaction was announced (Straits Times 11/19/97 p. 62). Another example comes from Korea where minority shareholders of Samsung Electronics protested that the firm was providing debt guarantees to less-

summarize my findings on how these factors affected firm performance during the crisis. I find that higher ownership concentration is associated with significantly better stock price performance during the crisis. This is true when ownership concentration is measured as the holdings of the largest shareholder in the firm (in terms of cash flow rights) or as the total holdings of all large shareholders. However, I find that the apparent benefit of concentrated ownership does not extend to concentrated ownership by managers. Higher ownership concentration by managers has no significant effect on firm performance during the crisis. One possible interpretation of these results is that outside blockholders create value during a crisis by monitoring the manager and preventing expropriation, but that managers with significant shareholdings are sufficiently entrenched to counteract this effect.

I find that corporate diversification is associated with significantly worse stock price performance during the crisis. The economic impact of this effect was large. Regressions show that, on average, single-segment firms emerged from the crisis trading at a premium of over 20% to diversified firms with which they were equally valued prior to the crisis (after controlling for firm size, leverage, country, and industry.) I also find that the loss in value for diversified firms is largely attributable to diversified firms that have high variation in investment opportunities across divisions.[3] This suggests that cross-subsidization of divisions could account for some of the value loss of diversified firms during the crisis.

I find that my two measures of disclosure quality are both associated with significantly better stock price performance during the crisis. I propose two ways in which disclosure quality across firms can be measured. First, a firm will have greater disclosure quality if it has an ADR listed in the U.S. because it will have either greater disclosure requirements or increased scrutiny

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successful Samsung Group companies and that these guarantees often were not even disclosed (The Economist 3/27/99 p. 68).

of its reporting. Second, a firm will have greater disclosure quality (or at least greater *perceived* disclosure quality) if its auditor is one of the "Big Six"[4] international accounting firms. Firms that had both indicators of higher disclosure quality were valued after the crisis, on average, at a 50% premium above firms that had neither indicator, and with which they were equally valued prior to the crisis. This suggests that the transparency provided by improved disclosure offered some protection to minority shareholders during the crisis. Thus, firms may create value by unilaterally opting for higher disclosure quality, even in countries where high disclosure quality may not be legally required. Firms may not entirely be hostage to the corporate governance practices of their own countries.

Taken together, my empirical results are consistent with the claim that improved corporate governance had a positive effect on firm performance during the East Asian crisis. Taken more generally, the results provide some evidence on the importance of corporate finance as a piece of the puzzle in explaining macroeconomic events.

In the next section I outline what theory suggests about how these factors affect the agency problem and I discuss related literature. In Section 3, I describe the data used in the study. In Section 4, I discuss the empirical results. Section 5 concludes.

1.2   Theory and Related Literature

In this section I discuss ownership concentration, corporate diversification, and disclosure quality in turn. I outline broadly what theory has to say about how these factors affect corporate governance. I also discuss some relevant literature.

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[3] Defined in a manner similar to that in Rajan, Servaes, and Zingales (1999).

1.2.1 Ownership Concentration

Ownership concentration is a direct corporate governance mechanism. Shleifer and Vishny (1997) note that, along with legal protection, ownership concentration is one of two common approaches to corporate governance. They hypothesize that ownership concentration may be a particularly important corporate governance mechanism when legal protection is relatively low. Concentrated ownership confers the incentive (through cash flow rights) and power (through control rights) to monitor managers. LLS (1999) find high degrees of ownership concentration in many firms throughout the world, particularly in countries with relatively poor shareholder protection. Nevertheless, ownership concentration comes with competing costs and benefits, and it is important to distinguish between ownership concentration by managers and ownership concentration by outside shareholders.

The primary benefit of ownership concentration by managers is the convergence of interests emphasized in Jensen and Meckling (1976). That is, as the manager owns a greater share of the firm he bears a greater cost of any action that harms shareholders, and thus is led to act in shareholders' interests. An offsetting cost, discussed by Morck, Shleifer, and Vishny (1988), is that with larger shareholdings the manager may become entrenched, and immune to other forms of discipline. A particular form of entrenchment that might be important in emerging markets is that the manager could become resistant to monitoring by a large outside shareholder.

The primary benefit of ownership concentration by outsiders is that the large shareholder gains the power and incentive to monitor the actions of the manager (Shleifer and Vishny (1997)). An offsetting cost is that, at some point, the outside shareholder himself gains enough

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[4] Six major accounting firms remained at the outset of the crisis as the Price Waterhouse/Coopers & Lybrand merger did not occur until late 1997.

power to pursue personal objectives that may not coincide with the objectives of minority shareholders. To the extent that this occurs, however, the convergence-of-interests hypothesis is relevant for outside blockholders as well. Expropriation is costly, and higher ownership concentration by any controlling party should mitigate expropriation.

Other studies of the effects of ownership concentration that are relevant to this paper include Morck, Shleifer, and Vishny (1988), who study U.S. firms and find that as management ownership increases, firm value first increases and then declines. They interpret this as demonstrating the tradeoff of convergence of interests and entrenchment. Lins (1999) studies firms from 18 emerging markets and finds that large blockholders generally increase firm value. Claessens *et al.* (1998) find that ownership concentration is positively related to firm value in East Asian countries prior to the crisis.

1.2.2   Corporate Diversification

Corporate diversification is not a direct corporate governance mechanism, but could affect the expropriation problem and the effectiveness of corporate governance in a couple of ways. First, diversified firms offer more opportunities for expropriation through misallocation of capital. This occurs primarily because the divergence of product lines presents the opportunity for inefficient cross-subsidization (as in Scharfstein and Stein (2000)), but also because a diversified firm might have greater access to capital which presents the opportunity for over-investment. Rajan, Servaes, and Zingales (1999) show that diversification reduces value particularly when firms have high diversity in opportunities and resources, suggesting that cross-subsidization might be at the heart of the loss in value. Scharfstein (1997) also presents evidence of cross-subsidization.

Second, diversification may hinder corporate governance simply because of the complexity it creates. The complexity of the organization can increase the level of asymmetric information and make it easier for managers or controlling shareholders to pursue their own objectives (see Lins and Servaes (1999)). Expropriation may be more likely if it is more difficult to detect.

Third, benefits might accrue to conglomerates, particularly in countries where capital markets are less developed. Khanna and Palepu (1999) argue that diversification is beneficial in emerging markets because conglomerates can perform through internal markets the functions that external markets fail to provide. Stein (1997) presents a model in which internal markets improve capital allocation. The conglomerate form may also be beneficial simply because it allows greater access to capital to pursue worthwhile investments. Nevertheless, the benefits of internal capital markets may be most favorable when a large number of good investment opportunities is available. If profitable investment opportunities are scarce, as might be expected in a financial crisis, these benefits could be less important.

Other papers related to corporate diversification that are especially relevant to this paper include Claessens et al. (1999b) who find a diversification discount for East Asian firms and that this discount is more pronounced during 1997 and 1998 in a broad sample of firms across nine countries. Lins and Servaes (1999) find a discount for diversified firms in seven East Asian emerging markets prior to the East Asian crisis. Fauver, Houston, and Naranjo (1999) find that the impact of corporate diversification on firm value is negatively related to capital market development across 35 countries.

1.2.3   Disclosure Quality

Improved disclosure should reduce asymmetric information at the firm level and mitigate opportunities for expropriation. LLSV (1998) argue that accounting standards play a critical role in corporate governance by enabling investors to understand the companies they invest in and by making contracts between managers and investors more verifiable in court. LLSV (1998) compile country-specific measures of accounting standards which Johnson *et al.* (2000) also use in their cross-country study of the East Asian crisis.

Variations in accounting standards and disclosure quality are found even among firms in the same country. I consider two possible proxies for disclosure quality: ADRs and Big Six auditors. If an East Asian firm has an ADR, disclosure quality could be affected in two ways. First, in some cases (particularly for firms with "level 2" or "level 3" ADRs) the firm is subject to additional reporting requirements beyond what is required in their home country. Second, firms that are tapping additional markets will have a larger pool of investors and may have a greater demand for accounting disclosure and more analysts scrutinizing their operations (see Coffee (1999)). Reese and Weisbach (1999) argue that increased protection of minority shareholders is a primary motivation for non-U.S. firms to cross-list in the U.S.

Firms that are audited by one of the international "Big Six" accounting firms rather than locally based firms may also have higher disclosure quality. The Big Six firms may be less likely to ignore problems in a firm's financial statements because they have a greater reputation to uphold. Alternatively, Big Six auditors may be perceived as producing better disclosure simply because foreign investors associate a familiar, prominent name with better quality.

In the case of the ADRs it is important to recognize that there are other potential interpretations of the results other than disclosure quality. In particular, if firms with ADRs tend to be more internationally oriented and have a greater proportion of exports, then they might

have been hurt relatively less by the currency depreciation during the crisis. This effect should

be reduced somewhat by controlling for industry in the regressions, but may still be present.

Another possibility is that firms with some types of ADRs have greater access to capital markets

(see Lins, Strickland, and Zenner 1999) and that this access has increased value during a

financial crisis.

1.3   Data

In this section I discuss sample selection, the time period studied, and the variables used

in the paper. A few other variables and methodological issues are discussed in later sections as

they arise.

1.3.1   Sample Selection

The countries studied in this paper are Indonesia, Korea, Malaysia, the Philippines, and

Thailand, which were the five countries most involved in the East Asian financial crisis.

Although other East Asian countries (and, indeed, other emerging markets outside of Asia) were

touched by the crisis, the five considered here suffered disproportionately in terms of currency

depreciation and stock market decline (see Table 1).

All firms from these five countries are included in the sample provided that they meet

three criteria. First, the firms must have financial data reported in the Worldscope database,

which is the primary data source used in this study. Second, the firms must be identified in

Worldscope as being included in the International Finance Corporation (IFC) global index.[5] The

IFC includes firms in this index only if they are among the largest and most liquid firms in a

given market. This criterion substantially reduces the sample size, but is imposed because stock prices are an essential part of this study, and the liquidity screen ensures that the prices I use are informative and indicative of the price at which the stock actually trades. Clearly, this criterion greatly reduces, but does not entirely eliminate, uninformative prices. Some firms (18 out of 399) that are included in the IFC global index prior to the crisis are dropped from the index in the end of 1998. This could potentially indicate that some of these firms were not as liquid toward the end of the crisis period. Nevertheless, such firms are still included in my sample because deleting them could create a survivorship bias. Finally, I impose the criterion that the primary business segment of the firm not be in financial services, that is, in SIC 6000-6999. I do this in order to have comparable financial data across firms and to be consistent with other studies.

The final sample consists of a total of 399 firms from the five crisis countries. In general, the sample is representative of the larger firms that trade on the major stock exchange of each country. Small listed firms and other unlisted firms, including large multinationals with no local listing (which may make significant contributions to GDP) are not represented in the sample. Of the remaining 399 firms in the sample, 13 (about 3.3%) stopped trading during the crisis period (July 1997 through August 1998.) For these 13 firms the crisis-period return is assumed to be the return from the beginning of the crisis to the date of the final quoted stock price. This assumption potentially understates the loss of value for these firms.

Table 1 shows that Korea has the most firms in the sample with 145, and the Philippines has the fewest, with 29. The median size of firms, in terms of total assets, also varies, with Korea having the largest (a median size of over $1.45 billion) and the Philippines the smallest (a median size of over $316 million.) Malaysia has the largest percentage of diversified firms, at

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[5] Firms are included if they are added to the IFC global index on or before the IFC's 1997 review. Although this review occurs in October 1997, a firm's inclusion is based on liquidity during the prior year, so I assume that firms

79.0%, while the Philippines has the smallest percentage, at 41.4%. Indonesia has the highest

ownership concentration (of the largest blockholder), at 47.7%, with Korea having the lowest, at

15.7%.[6]

1.3.2 Definition of Crisis Period

Figure 1 shows the movement of composite stock indices for all 5 countries from 1995

through 1998. The indices are set to 100 in January 1995 for comparative purposes, and all

indices are converted to U.S. dollars. Lines on the chart delineate the crisis period as defined in

this paper. The beginning of the crisis period corresponds with the devaluation of the Thai baht

on July 2, 1997, a date generally considered to be the starting point of the crisis. The July

beginning point also corresponds to the date when all 5 indices began moving downward in

concert. As can be seen in Figure 1, prior to this time, some, but not all, of the indices had been

trending downward. The ending point of the crisis period, August 1998, corresponds with the

date on which the indices began a sustained upward trend. I also consider alternative definitions

of the crisis period in order to check the robustness of my results.

1.3.3 Description of Variables

Following is a description of the dependent variable, explanatory variables, and control

variables used in the basic regressions. In analyzing the results in each section, a few additional

variables will be introduced, but these will be discussed as they come up.

1.3.3.1 Dependent Variables

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added in 1997 met the standard of liquidity prior to the beginning of the crisis.
[6] Diversification and ownership concentration are defined in subsection 3.3.

To measure firm performance during the crisis I use stock returns over the crisis period, from the end of June 1997 to the end of August 1998. These returns are raw unadjusted returns and are expressed in $U.S. I do not calculate expected returns using firm-specific betas for two reasons. First, the historical data does not go back far enough for many firms to allow for reliable estimates of out-of-sample betas. Second, even if sufficient data were available, because of the changes of leverage that occurred in firms prior to the crisis, and the extreme nature of returns during the crisis, firm-specific betas may not be a good measure of expected covariation with the market during the crisis. So instead of using such a benchmark, I use measures of debt and size, industry dummies, and country dummies in the regressions to control for factors that could affect expected returns.[7] Table 1 shows the average return by country for the crisis period.

1.3.3.2 Explanatory Variables

To measure ownership concentration, I use data reported by Worldscope. Worldscope identifies all parties that own 5% or more of the cash flow rights of each firm. Clearly, two important limitations of this data should be kept in mind when interpreting the results. Namely, the data does not incorporate indirect shareholdings, and it does not indicate divergence between cash flow rights and control rights. The ownership data I use is pre-crisis data, which means the last reported data from each firm prior to July 1997. Data is missing for some firms in Worldscope, in which cases I supplement the data with information from the *Asian Company Handbook* (1998) and the *Corporate Handbook: KLSE Main Board* (1998) where possible. Given the data limitations, I identify ownership concentration for 301 of the 399 firms in the sample (75.4%). I consider two measures of ownership concentration. The first is the ownership percentage (in terms of cash flow rights) of the largest shareholder in the firm, which I refer to as

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[7] Pre-crisis betas can be calculated for about 80% of the firms if a minimal requirement of 24 monthly pre-crisis observations is imposed. In regressions using this subsample of 80% of the firms, beta has no significant

"largest blockholder concentration." The second is the total holding of all shareholders that own 5% or more of the stock, which I refer to as "summed ownership concentration."

I also measure the level of managerial ownership in each firm. This is done by comparing a list of officers and directors in each firm (compiled from Worldscope and the above-mentioned handbooks) with the list of significant owners in each company. If the name of an officer matches the name of an owner, this ownership block is classified as managerial ownership. (Thus the term "managerial" here implies that an individual is involved with decision-making within the firm, and not necessarily that the individual is hired as an outside professional.) This name-matching procedure is not exhaustive; it identifies a subset of managerial blockholdings that are the most transparent. In some cases the true owner of a particular block may be obscured if the owner places the block under the name of another individual (say, a relative) or of another company.

To measure corporate diversification, I determine the number of industries in which each firm operates, with industries being defined at the two-digit SIC level. The SIC codes are reported by Worldscope. I use product segment data from Worldscope and other sources to determine what percentage of each firm's sales corresponds to each two-digit SIC code. The first diversification variable is a multiple-segment indicator that is set to 0 if 90% or more of a firm's sales come from one two-digit SIC, and 1 otherwise. The second variable is the number of industries in which a firm operates. Worldscope apparently reports a maximum of 5 industries per firm, so this variable could be truncated for some firms. Thus, I could be understating the level of diversification for very diversified firms.

To measure disclosure quality I use two variables. The first is a dummy variable that is set to 1 if the firm had an ADR listed in the U.S. at the beginning of the crisis and 0 otherwise.

explanatory power for returns once size, leverage, and industry are included as control variables.

The second variable is a dummy variable that is set to 1 if the firm is audited by one of the "Big Six" international accounting firms and 0 otherwise.[8]

1.3.3.3 Control Variables

I use several variables to control for other factors that might be affect firm performance. The first is firm size, measured by the natural logarithm of total firm assets. The second is the firm's debt ratio, measured as the book value of total debt divided by the book value of total capital. This data is reported by Worldscope. I include dummy variables for 4 of the 5 countries included in the regressions to try to control for country-specific factors. I also include dummy variables for 11 of 12 industries, where industries are defined broadly, as in Campbell (1996).

By including leverage as a control variable, I am potentially making it more difficult to detect the effects of poor governance. Specifically, poor corporate governance may have been correlated with higher debt levels prior to the crisis (see Friedman and Johnson (1999)), so poor stock price performance attributed to leverage could also be partially caused, indirectly, by poor corporate governance. Still, because higher levels of debt will naturally lead to worse stock price performance in a downturn, leverage is appropriately included as a control variable.

I have tested other control variables that are not reported in the regression results that follow. The first is the percentage of sales to foreign countries. This variable is important because firms with foreign sales would naturally be partially insulated from the effects of the crisis (to the extent that sales are to countries that did not experience relative currency depreciation.) Worldscope reports this variable for less than 50% of the firms in my sample. The variable is insignificant in regressions involving the subsample of firms for which the data is available. A second control variable not reported is the firm's book to market ratio. This

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[8] The Big Six firms are Arthur Andersen, Coopers & Lybrand, Deloitte & Touche, Ernst & Young, KPMG Peat Marwick, and Price Waterhouse (which merged with Coopers & Lybrand after the onset of the crisis.)

variable is available for about 95% of the firms in the sample, but as it is insignificant in all regressions, it is not reported in order to focus on results from the complete sample.

1.4   Empirical Results

To assess the impact of corporate governance variables on firm stock price performance during the crisis, I estimate the following model:

$$CrisisPeriod\,Return = a + b_1(log(TotalAssets)) + b_2(TotalDebt\,/\,TotalCapital)$$
$$+ \sum_{i=3}^{6} b_i\,(Country_{i-2}Dummy) + \sum_{j=7}^{17} b_j\,(Industry_{j-6}Dummy) + \sum_{k=18}^{n} b_k\,(CorpGovVariable_{k-17}) + e$$

where the corporate governance variables included will change according to the specification, and the other variables are as defined previously.

1.4.1   The Impact of Ownership Concentration on Firm Performance

Table 2 presents the results of regressions of crisis period stock returns on ownership concentration. As noted in Section 3, these regressions are based on a subsample of 301 firms because I am unable to obtain ownership data on all firms. Panel A presents the results for general measures of ownership concentration. The coefficient on largest blockholder concentration is positive, and indicates each rise of 10% in ownership concentration is associated with a higher return of around 1.3% during the crisis. The coefficient is significant at the 1% level in both specifications, that is, whether or not the control variables for size and debt are included. The coefficient on summed ownership concentration is also positive, and of a somewhat smaller magnitude than for largest blockholder concentration. The coefficient is

significant at the 1% level in the first specification and at the 5% level in the second, and indicates that each rise of 10% in single ownership concentration is associated with a higher return of about 1%. These results indicate that, in general, the presence of a strong blockholder was beneficial during the crisis, perhaps because the blockholder has the incentive and power to prevent expropriation.

In Panel B of Table 2 I differentiate between ownership blocks held by management and blocks held by other parties. In the first two specifications I include management ownership concentration without non-management concentration. The coefficient on management ownership concentration is not significantly different from zero in either specification. In the final two specifications I included management ownership concentration and non-management concentration, measured as the holdings of the largest non-managerial blockholder. Non-management concentration has a positive coefficient in both specifications. The coefficients are similar in magnitude to those in Panel A and are significant at the 1% level. The coefficient on management concentration remains insignificant. This indicates that managers with large shareholdings may be able to resist the monitoring efforts of outside shareholders; that is, that the entrenchment effect seems to dominate the convergence-of-interests effect for managerial ownership.

1.4.2 The Impact of Corporate Diversification on Firm Performance

In this section I analyze the effect of diversification on firm performance during the crisis. I start with regression analysis, as in section 4. I then try to understand the source of the loss of value for diversified firms by looking at the variation in investment opportunities across divisions of a firm. To confirm the results on diversification, I also use the methodology that has

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been employed in the past to calculate the discount for corporate diversification. This procedure also indicates that diversified firms lost significantly more value than single-segment firms during the crisis.

Table 5 presents summary statistics of diversified firms and undiversified firms by country. Diversified firms, on average, had lower ownership concentration, lower profitability, higher levels of short-term debt, and lower levels of capital expenditures prior to the crisis.

1.4.2.1 Regressions of Firm Performance on Corporate Diversification

Panel A of Table 3 presents the results of regressions of crisis period stock returns on diversification variables. The coefficient on the multiple-segment indicator is negative and significant at the 1% level when all control variables are included, and at the 5% level without the controls. The magnitude of the coefficient indicates that on average, diversified firms lost an additional 4.7% of value during the crisis relative to single-segment firms even after controlling for debt, size, industry, and country. Given two equally valued firms prior to the crisis, one diversified and one not, after the crisis the single-segment firm was valued at a premium of over 20% to the diversified firm, on average. The coefficient on the second diversification measure, number of industries, is also negative and significant at the 1% level with the size and debt controls included, and at the 5% level without the controls. These results suggest a loss of value to diversified firms during the crisis that could potentially be attributable to greater expropriation of minority shareholders.

1.4.2.2 Diversification and Investment Opportunities

To try to understand the source of the loss in value for diversified firms, I create a measure of the diversity of investment opportunities similar to that employed in Rajan, Servaes, and Zingales (1999). Specifically, I use the market-to-book ratio of each firm as a proxy for

Tobin's q to indicate the level of investment opportunity. I find the industry median market-to-book ratio for single-segment firms in each industry in each country. I then match each segment of each conglomerate to its appropriate industry median market-to-book ratio. Industries are defined at the two-digit SIC level, but if no single-segment firms are available for a particular two-digit SIC in a particular country, I use the broader industry classifications as defined in Campbell (1996). If no match is available at all, I use the country-wide median market-to-book ratio as a fill-in. This occurs for about 15% of segments, and the unmatched segments are typically small relative to the total value of the diversified firm.

To measure variation in investment opportunities for diversified firms I take the standard deviation of the market-to-book ratios for all segments in the firm. A high standard deviation would indicate greater diversity in investment opportunities across divisions of the firm. To assess the importance of investment opportunities in explaining the loss in value for diversified firms during the crisis, I split the diversified firms into two equal groups: high (above median) and low (below median) variation in investment opportunities.

In Panel B of Table 3 Diversified*High Variation indicates that a firm is both diversified and has a high standard deviation of investment opportunities. Diversified*Low Variation indicates those diversified firms with a low standard deviation of investment opportunities. The coefficient is negative on both variables in both specifications, indicating that diversification was harmful during the crisis for both classes of firms. But the magnitude and significance of the coefficients on each variable are quite different. The diversified firms with high variation in investment opportunities had an additional negative return of about 4.7%, and this coefficient is significant at the 1% level. The diversified firms with low variation in investment opportunities had an additional negative return of about 1.7%, and this coefficient is not significant. These

results are consistent with cross-subsidization of faltering divisions as a source of the value loss for diversified firms during the crisis.

1.4.2.3 The Discount for Corporate Diversification

In order to check the robustness of the above results on the performance of diversified firms during the crisis I use a methodology similar to that employed by Berger and Ofek (1995) to assess the diversification discount for firms during the crisis. I do this in order to be comparative with other literature on diversification, but this methodology does present a couple of problems for usage in this study. First, the methodology uses data collected over the course of an entire year, making it impossible to pinpoint the exact loss in value over the crisis period. Second, performing the calculation requires a certain critical mass of firms in each country in order to match diversified firms with single-segment firms by industry. The number of firms per country in my sample is relatively small, particularly for the Philippines.

I compute diversification discounts for four consecutive years. The years are defined from July to June in order to correspond more closely to the timing of the crisis (with July 2, 1997 being considered the beginning of the crisis.) Two years occur prior to the crisis, one in the middle of the crisis, and one in the rebound period following the crisis. Thus, the years begin in July each year from 1995 to 1998 and end in June of the following year.[9] I use product segment information broken down by sales to categorize each firm's sales by percentage according to two-digit SIC codes. I classify firms in the sample as single-segment if 90% or more of the firm's sales correspond to a single two-digit SIC code and as diversified otherwise.

My measure of valuation for each firm is the ratio of the market value of equity to total sales. I calculate the "excess value" of each firm as the log of the ratio of actual value to

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[9] The final year number is preliminary, because at the time of writing, Worldscope had not yet reported data for all firms for fiscal year-ends from July 1998 to June 1999. A final estimate should be available within a few months.

imputed value. A firm's actual value is its actual ratio of market value to sales. A firm's

imputed value is calculated as follows. First, I compute the median market-to-sales ratio for all

single-segment firms that operate in each two-digit SIC in each country. Then for each firm I

take the weighted average (according to percent of sales) of the appropriate medians of two-digit

SICs in which that firm operates. If no single-segment firm operates in a given two-digit SIC in

a given country, then the median used is the median of single-segment firms in the broader

industry classifications used by Campbell (1996). If no single segment match is found even in

the broader classification, then the median of all single-segment firms in the country is used.

Industry matches at some level are found for about 85% of the segments, and the segments

without matches are typically small relative to the entire firm. This weighted average is the

imputed value. Imputed values are calculated for single-segment firms as well as diversified

firms in order to make appropriate comparisons. To reduce the influence of outliers, a firm is

eliminated from the sample if its actual value is more than 4 times its imputed value or less than

¼ of its imputed value.[10]

Following Lins and Servaes (1999) I estimate the value of corporate diversification with

the following regression model for two pre-crisis years, one mid-crisis year, and one post-crisis

year:

$$Excess\ Value = a + b_1(Multiple\text{-}Segment\ Indicator) + b_2(Log(Total\ Assets))$$
$$+ b_3(CAPX/Sales) + e$$

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[10] Although no specific rationale dictates the use of this screen, it is the standard screen that has been used in other studies.

Consistent with other studies, firm size and capital expenditures are included as control variables.

Table 6 reports the regression results. Two different specifications are reported for each year, one with CAPX/Sales included as a control and one without. The logarithm of total assets is included as a control in all specifications. The coefficient on the multiple-segment indicator can be interpreted as the discount for diversification. In all years and all specifications a negative coefficient is reported, indicating a discount for diversification. In the two pre-crisis years the discount measures around 2%, but these discounts are not significant at standard significance levels. In the mid-crisis year, the discount widens to 8%, with the discount being significant at the 1% level. In the post-crisis year, the discount widens further to 13%, and this is also significant at the 1% level. This widening of the diversification discount during the crisis supports the results of the previous regressions showing that diversification was detrimental for performance during the crisis. The result could be indicative of the greater costs of expropriation due to weakened corporate governance. The result is consistent with Claessens *et al.* (1999) who find a stronger diversification discount during the crisis period, although the Claessens *et al.* (1999) result is based on nine Asian countries (the sample is dominated by Japan) and a broader sample of firms in each country (including smaller and less-liquid stocks.)

The widening of the discount to 13% is less than the value loss estimated by the regressions in section 4.1. Three factors could account for this. First, the mechanics of calculating the discount may be problematic, particularly because I have a relatively small number of firms to work with. Second, sales may be dropping relatively more for diversified firms during the crisis, a value loss that would not necessarily be picked up by the diversification discount. However, I find that sales declined about equally for diversified and single-segment

firms during the crisis. Finally, and most likely, the discrepancy could occur because the regressions use points in time precisely at the beginning and end of the crisis, whereas the discount calculation, of necessity, combines data compiled for an entire year's time.

1.4.3   The Impact of Disclosure Quality on Firm Performance

Table 4 presents the results of regressions of crisis-period stock returns on measures of disclosure quality. The coefficient on ADR, the first variable, is positive and significant at either the 5% level in each specification. The magnitude of the coefficient indicates that firms with ADRs had more than a 7% return above what firms without ADRs had during the crisis.[11] The coefficient on the dummy variable for having a Big Six auditor is also positive and significant at the 5% or 10% level in all specifications. The magnitude of the coefficient indicates that firms with Big Six auditors had a 5% return above that of firms with other auditors, suggesting some benefit during the crisis to having an auditor with a more prominent international reputation

The final two specifications in Table 4 show that both disclosure variables retain their significance when included in the regression simultaneously, indicating that there are separate positive effects for each measure of disclosure quality. Having both indicators is associated with a retention of 11.4% of pre-crisis value above that of firms without the indicators. In a post-crisis perspective, the difference seems even larger. Given two equally valued firms prior to the crisis, one with both indicators of disclosure quality and one with neither, the firm with higher disclosure quality traded at a 58% premium, on average, to the firm with lower disclosure quality by the end of the crisis.

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[11] Additional evidence on the benefits of additional listings comes from Malaysia. Many firms listed on the Kuala Lumpur Stock Exchange were also (until recently) listed on Singapore's central limit order book. The firms with dual listings also significantly outperformed firms with single listings during the crisis, even though the dual listing had no additional formal disclosure requirements.

1.4.4 Additional Tests

In this section I give results of regressions that include all corporate governance variables simultaneously. I also test the same variables on pre-crisis and post-crisis time periods to see if the significance of the variables is unique to the crisis period.

1.4.4.1 Regressions of Firm Performance on All Corporate Governance Variables

In Table 7 I present results from regressions including ownership concentration, diversification, and disclosure quality simultaneously to assess whether the results in separate regressions are manifestations of the same effect. I include the measures of outside and managerial ownership concentration, diversification interacted with variation in investment opportunities, and both disclosure quality variables. In the first two specifications I leave out ownership concentration because the sample size drops when this variable is included. As is seen in Table 7, all variables retain the expected sign in all specifications. All variables that were significant separately retain significance at the 1%, 5%, or 10% level with the exception of the dummy variable for a Big Six auditor, which retains significance in three out of four specifications. The results indicate that the effects discussed in previous sections are primarily separate effects, and not manifestations of the same phenomenon. The adjusted R^2 in the final regression is 0.328, indicating that the variation in these corporate governance variables, along with the control variables, explains about a third of the variation in firm stock price performance during the East Asian financial crisis.

1.4.4.2 Regressions on Pre-Crisis and Post-Crisis Time Periods

Table 8 shows the results from regressions using the same corporate governance variables on pre-crisis and post-crisis periods. For the pre-crisis period it will be important to know if

variables that were significant during the crisis have always had an effect on returns. If so, then the performance of the variables during the crisis may not be entirely attributable to the crisis. For the post-crisis period it will be important to see the effect of these variables once the countries begin to rebound. To the extent that the variables have no significance after the crisis, it will tend to indicate that the market learned something about these firms during the crisis that is still reflected in their pricing. To the extent that the abnormal performance associated with these variables is reversed after the crisis, it will tend to indicate more that these factors just make firms more vulnerable to this type of shock.

Panel A of Table 8 shows the results of regressions of returns from the pre-crisis period of June 1995 to June 1996. Panel B shows the results for the pre-crisis period of June 1996 to June 1997. The number of observations is reduced by about 10% in each earlier year because of a lack of earlier return data. Looking at the coefficients for both pre-crisis years, very few strong patterns emerge. In some cases the sign of the coefficients is opposite of the sign during the crisis period, but in other cases the sign is the same. None of the variables in this regression is significant at standard levels, with the exception of the coefficient on the variable indicating diversification and high variation in investment opportunities, which is positive and significant at the 10% level in one of the two pre-crisis years. In general the results in Panels A and B indicate that the impact of these variables during the crisis was not the continuation of effects that existed prior to the crisis. Nor was the performance of these variables during the crisis was simply the reversal of some abnormal returns prior to the crisis.

Panel C of Table 8 shows the results of regressions of returns from the post-crisis period of August 1998 to July 1999. In this period it appears that there was something of a reversal of trends from during the crisis. The coefficients on the key corporate governance variables have

the reverse sign of what they had during the crisis. For diversification variables and the ADR indicator, the coefficients are significantly different from zero, while the coefficients on the other variables are not significantly different from zero. The magnitude of the coefficients is generally large, but should be viewed in light of the fact that the average firm return over this period was well over 300%. Furthermore, the sample size is somewhat smaller in the post-crisis period. Firms that stopped trading during the crisis are not included in the post-crisis sample. This potentially biases the post-crisis results relative to the results from the crisis period. In general, however, the results from the post-crisis period indicate that the performance of variables related to corporate governance during the crisis are somewhat reflective of certain firms just being more susceptible to this type of shock.

1.5   Conclusion

I have shown that variables related to corporate governance can explain a significant amount of cross-firm variation in stock price performance during the East Asian crisis. Ownership concentration, corporate diversification, and disclosure quality all have separate effects on firm performance even after controlling for other important factors. Although some alternative interpretations of the results cannot entirely be discarded, this paper is a step toward understanding the role of corporate governance during the crisis, and at a minimum shows that corporate governance cannot be ruled out as a cause of the crisis.

In a more general sense, this paper suggests that in times of distress, corporate governance can have large, first-order effects on firm value. The results highlight the need for effective corporate governance and support the often-stated policy recommendation that countries that open up to capital flows should do so with a solid institutional foundation in place.

This paper also provides evidence of a link between corporate governance and macroeconomic events. But perhaps most importantly for decision-makers in firms, these results show that firms are not entirely hostages to the countrywide practices of corporate governance in their home country. To some degree, firms may be able to opt out of the corporate governance systems of their own country. By unilaterally improving corporate governance at the firm level, firms may be able to provide some protection to shareholders in a period of extreme economic distress.

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Table 1
Summary Statistics of Sample Firms by Country

	All Crisis Countries	Indonesia	Korea	Malaysia	Philippines	Thailand
A. Crisis Statistics						
Currency Depreciation, 6/97-8/98		-78.0%	-34.5%	-39.8%	-39.8%	-41.1%
Stock Market Return in $US, 6/97-8/98		-89.6%	-72.8%	-83.1%	-74.5%	-76.0%
B. Sample Inclusion						
Number of Firms in Worldscope	1,310	155	319	445	113	278
Number of Firms Passing IFC Screen	572	63	195	166	54	94
Number of Firms After Elimination of SIC 6XXX	399	44	145	124	29	57
C. Financial Statistics, Pre-Crisis						
Total Assets (US $000): Mean	1,817,299	1,212,521	3,135,169	1,113,581	818,042	1,048,547
Median	688,506	668,628	1,450,087	407,954	316,637	619,073
Return on Assets Mean	6.99%	10.06%	4.31%	8.59%	11.48%	5.73%
Median	6.18%	8.48%	4.53%	8.75%	10.97%	5.99%
Price/Book Value per Share Median	1.53	1.76	0.77	2.90	1.73	1.38
Total Debt/Equity Median	1.20	1.06	2.40	0.58	0.52	1.27
D. Diversification						
Percentage of diversified firms Mean	59.6%	45.5%	56.3%	79.0%	41.4%	47.4%
Number of industries Mean	2.29	1.82	1.99	3.19	1.90	1.68
E. Ownership Structure						
Largest Blockholder Concentration Mean	27.0%	47.7%	15.7%	29.6%	36.8%	39.1%
Summed Ownership Concentration Mean	43.1%	62.5%	24.7%	49.4%	55.5%	79.5%

Currency depreciation and stock market return are calculated from International Finance Corporation data. Financial statement data comes from the Worldscope database. Stock market return based on index of all firms in country's primary exchange, i.e., Jakarta Stock Exchange, Korean Stock Exchange, Kuala Lumpur Stock Exchange, Philippine Stock Exchange, and Stock Exchange of Thailand. June 1997 to August 1998 is defined as the crisis period. Pre-crisis statistics refer to data from the last financial statement prior to July 19○7 Firms are classified as undiversified if 90% or more of sales are attributed to one 2-digit SIC code, and diversified otherwise Number oʲ industries is the number of 2-digit SIC codes in which the firm operates. Largest blockholder concentration is defined as the % holdings of the largest shareholder. Summed ownership concentration is defined as the sum of ownership of all shareholders owning 5% or more of the company.

Table 2: Ownership Concentration

Coefficient estimates from regressions of stock returns on ownership concentration variables and control variables
For sample firms in Indonesia, South Korea, Malaysia, the Philippines, and Thailand

Panel A: General Ownership Concentration				
(Specification)	(i)	(ii)	(iii)	(iv)
Intercept	-0.706 ***	-1.068 ***	-0 752 ***	-1 062 ***
	[-9.25]	[-6.86]	[-9 08]	[-6 84]
Largest Blockholder Concentration	0 170 ***	0.131 ***		
	[3.88]	[3.08]		
Summed Ownership Concentration			0.159 ***	0.098 **
			[3.64]	[2.23]
Log(Total Assets)		0.051 ***		0 048 ***
		[3.37]		[3.03]
Total Debt/Total Capital		-0.0017 ***		-0.0017 ***
		[-4.50]		[-4.53]
Country Dummies	Included	Included	Included	Included
Industry Dummies	Included	Included	Included	Included
Number of Observations	301	294	301	294
Adjusted R-squared	0.233	0.308	0.237	0.304

Regressions of stock returns on ownership concentration variables and other control variables of firms over the East Asian crisis period of June 1997 to August 1998. Firms not included in the IFC global index and firms operating primarily in SIC codes 6000-6999 are excluded. Stock returns are compound raw returns measured over the crisis period and are in $U.S. Firms with missing data on ownership concentration are excluded from all regressions. Firms with missing data on total assets or debt ratios are excluded from regressions where these variables are included. Summed ownership concentration is defined as the sum of the percentages owned by all shareholder owning 5% or more of the firm. Largest blockholder concentration is defined as the percentage owned by the largest shareholder in the firm. Country dummy variables are included for 4 of the 5 countries. Industry dummy variables are included for 10 of 11 industries, broadly defined as in Campbell (1996). Heteroskedasticity-consistent t-statistics are in parentheses, and asterisks denote significance levels: * indicates significance at the 10% level, ** indicates the 5% level, and *** indicates the 1% level.

Table 2: Ownership Concentration (Continued)

Coefficient estimates from regressions of stock returns on ownership concentration variables and control variables
For sample firms in Indonesia, South Korea, Malaysia, the Philippines, and Thailand

Panel B: Management Ownership Concentration				
(Specification)	(i)	(ii)	(iii)	(iv)
Intercept	-0.622 ***	-1.041 ***	-0.721 ***	-1.068 ***
	[-9.39]	[-6.91]	[-9.41]	[-7.01]
Largest Management Blockholder %	-0.092	0.007	-0.066	0.062
	[-0.83]	[0.06]	[-0.06]	[0.56]
Largest Non-Management Blockholder %			0.189 ***	0.133 ***
			[4.26]	[3.02]
Log(Total Assets)		0.056 ***		0.050 ***
		[3.81]		[3.47]
Total Debt/Total Capital		-0.0018 ***		-0.0016 ***
		[-4.89]		[-4.40]
Country Dummies	Included	Included	Included	Included
Industry Dummies	Included	Included	Included	Included
Number of Observations	301	294	301	294
Adjusted R-squared	0.209	0.293	0.237	0.305

Regressions of stock returns on ownership concentration variables and other control variables of firms over the East Asian crisis period of June 1997 to August 1998. Firms not included in the IFC global index and firms operating primarily in SIC codes 6000-6999 are excluded. Stock returns are compound raw returns measured over the crisis period and are in $U.S. Firms with missing data on ownership concentration are excluded from all regressions. Firms with missing data on total assets or debt ratios are excluded from regressions where these variables are included. Management ownership concentration is defined as the sum of the percentages owned by all shareholder owning 5% or more of the firm who are also listed as officers of the company in Worldscope. Country dummy variables are included for 4 of the 5 countries. Industry dummy variables are included for 10 of 11 industries, broadly defined as in Campbell (1996). Heteroskedasticity-consistent t-statistics are in parentheses, and asterisks denote significance levels: * indicates significance at the 10% level, ** indicates the 5% level, and *** indicates the 1% level.

Table 3: Diversification

Coefficient estimates from regressions of stock returns on diversification measures and control variables
For sample firms in Indonesia, South Korea, Malaysia, the Philippines, and Thailand

Panel A: Diversifcation Measures				
(Specification)	(i)	(ii)	(iii)	(iv)
Intercept	-0.61 ***	-0.77 ***	-0.61 ***	-0.79 ***
	[-11.23]	[-5.11]	[-11.15]	[-5.25]
Multiple-Segment Indicator	-0.046 **	-0.047 ***		
	[-2.53]	[-2.62]		
Number of Industries			-0.014 **	-0.016 ***
			[-2.47]	[-2.65]
Log(Total Assets)		0.028 *		0.031 **
		[1.89]		[2.05]
Total Debt/Total Capital		-0.0021 ***		-0.0021 ***
		[-6.27]		[-6.31]
Country Dummies	Included	Included	Included	Included
Industry Dummies	Included	Included	Included	Included
Number of Observations	398	384	398	384
Adjusted R-squared	0.216	0.270	0.211	0.267

Regressions of stock returns on diversification variables and other control variables over the East Asian crisis period of June 1997 to August 1998. Firms not included in the IFC global index and firms operating primarily in SIC codes 6000-6999 are excluded. Stock returns are compound raw returns measured over the crisis period and are in $U.S. Firms with missing data on total assets or debt ratios are excluded from regressions that include these variables. The multiple-segment indicator is set to 0 if 90% of the firm's sales come from a single two-digit SIC code and 1 otherwise. Number of industries is the number of two-digit SIC codes in which the firm operates. Country dummy variables are included for 4 of the 5 countries. Industry dummy variables are included for 10 of 11 industries, broadly defined as in Campbell (1996). Heteroskedasticity-consistent t-statistics are in parentheses, and asterisks denote significance levels. * indicates significance at the 10% level, ** indicates the 5% level, and *** indicates the 1% level.

Table 3: Diversification (Continued)

Coefficient estimates from regressions of stock returns on diversification measures and control variable
For sample firms in Indonesia, South Korea, Malaysia, the Philippines, and Thailand

Panel B: Interaction with Variation of Investment Opportunities		
(Specification)	(i)	(ii)
Intercept	-0.62 ***	-0.78 ***
	[-11.73]	[-5.14]
Diversification*High Variation	-0.053 ***	-0.047 ***
	[-3.39]	[-3.01]
Diversification*Low Variation	-0.007	-0.017
	[-0.33]	[-0.81]
Log(Total Assets)		0.028 *
		[1.86]
Total Debt/Total Capital		-0.0020 ***
		[-5.85]
Country Dummies	Included	Included
Industry Dummies	Included	Included
Number of Observations	398	384
Adjusted R-squared	0.214	0.264

Regressions of stock returns on diversification variables and other control variables over the East Asian crisis period of June 1997 to August 1998. Firms not included in the IFC global index and firms operating primarily in SIC codes 6000-6999 are excluded. Stock returns are compound raw returns measured over the crisis period and are in $U.S. Firms with missing data on total assets or debt ratios are excluded from regressions that include these variables. The multiple-segment indicator is set to 0 if 90% of the firm's sales come from a single two-digit SIC code and 1 otherwise. High (Low) Variation indicates that the firm has above (below) median standard deviation of market-to-book ratios across divisions. Country dummy variables are included for 4 of the 5 countries. Industry dummy variables are included for 10 of 11 industries, broadly defined as in Campbell (1996). T-statistics are in parentheses, and asterisks denote significance levels: * indicates significance at the 10% level, ** indicates the 5% level, and *** indicates the 1% level.

Table 4: Disclosure Quality

Coefficient estimates from regressions of stock returns on disclosure quality variables and control variables

For sample firms in Indonesia, South Korea, Malaysia, the Philippines, and Thailand

(Specification)	(i)	(ii)	(iii)	(iv)	(v)	(vi)
Intercept	-0.654 *** [-12.20]	-0.666 *** [-4.17]	-0.659 *** [-11.44]	-0.797 *** [-5.26]	-0.676 *** [-11.81]	-0.691 *** [-4.34]
ADR	0.076 ** [2.54]	0.074 ** [2.38]			0.0732 ** [2.51]	0.0713 ** [2.36]
Big 6 Auditor			0.054 ** [2.12]	0.047 * [1.93]	0.0502 ** [2.01]	0.0432 * [1.81]
Log(Total Assets)		0.011 [0.67]		0.028 * [1.83]		0.011 [0.70]
Total Debt/Total Capital		-0.0020 *** [-5.98]		-0.0020 *** [-5.89]		-0.0020 *** [-5.91]
Country Dummies	Included	Included	Included	Included	Included	Included
Industry Dummies	Included	Included	Included	Included	Included	Included
Number of Observations	398	384	398	384	398	384
Adjusted R-squared	0.218	0.268	0.211	0.264	0.223	0.272

Regressions of stock returns on disclosure quality variables and other control variables over the East Asian crisis period of June 1997 to August 1998. Firms not included in the IFC investable index and firms operating primarily in SIC 6000-6999 are excluded. Stock returns are compound raw returns measured over the crisis period and are in $U.S. Firms with missing data on total assets or debt ratios are excluded from regressions that include these variables. "ADR" means the firm had an American depository receipt listed in the U.S. at the outset of the crisis. "Big 6 Auditor" means the firm's auditor is one of the "Big 6" accounting firms, i.e., Arthur Andersen, Coopers & Lybrand, Deloitte & Touche, Ernst & Young, KPMG, or Price Waterhouse. Country dummies are included for 4 of the 5 countries, and industry dummies are included for 10 of 11 industries broadly defined as in Campbell (1996). Heteroskedasticity-consistent t-statistics are given in brackets, and asterisks denote significance levels: * indicates significance at the 10% level, ** at the 5% level, and *** at the 1% level.

Table 5
Summary Statistics, Diversified and Undiversified Firms by Country

	All Crisis Countries		Indonesia		Korea		Malaysia		Philippines		Thailand	
	Undiversified	Diversified	Undiversified	Diversified	Undiversified	Diversified	Undiversified	Diversified	Undiversified	Diversified	Undiversified	Diversified
Number of Industries	1	3 2	1	2 9	1	2 8	1	3 9	1	3 4	1	2 4
Median Ownership Concentration	41.3%	34.···	61 2%	64 3%	26.2%	21 6%	55.4%	48 4%	46.0%	75 7%		
Median Number of Shareholders	3393	7946			8614	10772	6010	10385	1370	1509		
Pre-crisis ROA	6 3%	6 0%	8 5%	8.9%	4 3%	4 6%	12 1%	7.4%	10.2%	11 6%	6.2%	6.3%
Decline in ROA, Pre-crisis to Mid-crisis	-2 6%	-4 3%	-3 4%	-11 3%	-0 8%	-1 1%	-2 0%	-5 2%	-6.9%	-5 6%	-21 9%	-23 8%
Pre-crisis Short-term Debt/Equity	34 6	53 4	19 0	46 5	119 2	143 4	4.5	27.9	14 8	7.9	25 0	40 4
Pre-crisis Long-term Debt/Equity	55 4	51 9	62.6	83 2	83 7	108 5	12 1	22 7	8.2	29 9	70.7	78 4
Pre-crisis CAPX/Sales	12 9	9 1	22 1	15 5	12 8	7 3	5 0	8.6	40.9	14 7	10.4	9.1
Mid-crisis CAPX/Sales	12 2	8 9	22 2	16 9	12 7	9 2	6 2	7.6	34 4	15 2	11 5	5.3
% Change in Market to Book	-46.2%	-61.1%	-39 6%	-51.4%	-38.0%	-53 8%	-50 7%	-68 9%	-62.1%	-61.2%	-44 9%	-69.0%

Firms not included in the IFC investable index and firms operating primarily in SIC codes 6000-6999 are excluded A firm is classified as undiversified if 90% or more of sales come from one industry, and diversified otherwise Industries are defined at the two-digit SIC level Pre-crisis means July 1996 through June 1997 Mid-crisis means July 1997 through June 1998 Percent change in M/B is the percentage change in the share price divided by the book value per share as reported by Worldscope

Table 6: Diversification Discount

Coefficient estimates from regressions of excess value on a multiple-segment indicator and control variables

For four separate years for sample firms in Indonesia, Korea, Malaysia, the Philippines, and Thailand

(Specification)	Pre-Crisis 1 (7/95-6/96)		Pre-Crisis 2 (7/96-6/97)		Mid-Crisis (7/97-6/98)		Post-Crisis (7/98-6/99)	
	(i)	(ii)	(i)	(ii)	(i)	(ii)	(i)	(ii)
Intercept	0.30 [1.41]	0.28 [1.33]	0.61 *** [3.21]	0.60 *** [3.15]	0.68 *** [3.21]	0.64 *** [2.90]	-0.25 [-0.69]	-0.04 [-0.10]
Multiple-segment Indicator	-0.03 [-1.04]	-0.02 [-0.74]	-0.01 [-0.38]	-0.02 [-0.67]	-0.07 ** [-2.31]	-0.08 *** [-2.92]	-0.10 ** [-2.06]	-0.13 *** [-2.67]
Log(Total Assets)	-0.03 [-1.45]	-0.03 [-1.47]	-0.07 *** [-3.33]	-0.07 *** [-3.25]	-0.08 *** [-3.21]	-0.07 *** [-2.91]	-0.03 [0.68]	0.00 [0.09]
CAPX/Sales		0.00 *** [2.65]		0.00 [0.43]		0.00 [1.08]		0.00 [0.13]
Number of Observations	292	287	312	298	324	306	133	122
R-squared	0.01	0.03	0.04	0.04	0.04	0.05	0.04	0.06

Regressions are of excess value on a multiple-segment indicator, size (measured by the natural logarithm of total assets), and capital expenditures to sales for firms from Indonesia, South Korea, Malaysia, the Philippines, and Thailand. Firms not included in the IFC investable index are excluded as are all firms who operate primarily in SIC 6000-6999. Excess value is defined as the log of the ratio of actual value to imputed value. Actual value is the ratio of market value of equity to sales. Imputed value is the average of the median ratio of market value of equity to sales for single-segment firms from industries in which the firm operates, weighted by percentage of sales. The multiple-segment indicator is set to 0 if 90% or more of the firm's sales are in one two-digit SIC industry, and 1 otherwise. Firms are exluded from the regression if the ratio of actual value to imputed value is greater than 4 or less than 1/4. Results are given for each of 4 years, where years are defined from July to June to better correspond to the timing of the crisis. T-statistics are given in brackets, and asterisks denote significance levels: * indicates significance at the 10% level, ** indicates the 5% level, and *** indicates the 1% level.

Figure 1
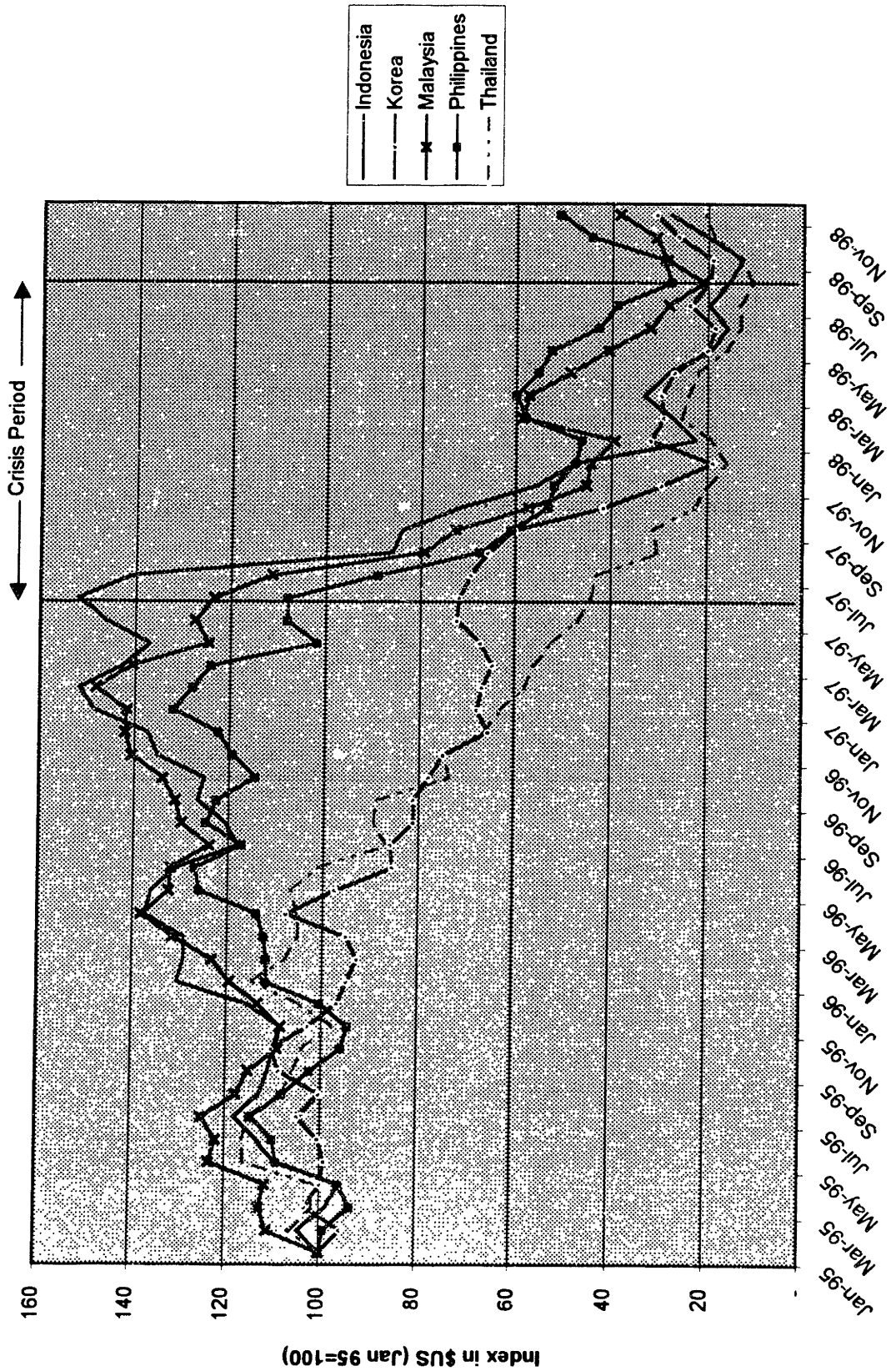## East Asian Stock Market Indices

Table 7: Combined Regression

Coefficient estimates from regressions of stock returns on variables related to corporate governance and control variables

For sample firms in Indonesia, South Korea, Malaysia, the Philippines, and Thailand

(Specification)	(i)	(ii)	(iii)	(iv)
Intercept	-0.656 ***	-0.674 ***	-0.801 ***	-1.021 ***
	[-11.92]	[-4.28]	[-0.18]	[-7.08]
Largest Management Blockholder %			0.039	0.084
			[0.35]	[0.77]
Largest Non-Management Blockholder %			0.173 ***	0.133 ***
			[3.84]	[2.96]
Diversification*High Variation	-0.054 ***	-0.048 ***	-0.037 **	-0.037 **
	[-3.43]	[-3.02]	[-2.36]	[-2.43]
Diversification*Low Variation	-0.006	-0.016	-0.006	-0.012
	[-0.31]	[-0.77]	[-0.30]	[-0.68]
ADR	0.078 ***	0.075 **	0.106 ***	0.076 **
	[2.79]	[2.56]	[3.56]	[2.31]
Big 6 Auditor	0.045 *	0.039 *	0.037 *	0.030
	[1.81]	[1.65]	[1.94]	[1.62]
Log(Total Assets)		0.011		0.034 **
		[0.69]		[2.17]
Total Debt/Total Capital		-0.0019 ***		-0.0014 ***
		[-6.03]		[-4.02]
Country Dummies	Included	Included	Included	Included
Industry Dummies	Included	Included	Included	Included
Number of Observations	398	384	301	294
Adjusted R-squared	0.233	0.279	0.284	0.328

Regressions of stock returns on variables related to corporate governance and other control variables over the East Asian crisis period of June 1997 to August 1998. Firms not included in the IFC investable index and firms operating primarily in SIC 6000-6999 are excluded. Stock returns are compound raw returns measured over the crisis period and are in $U.S. Firms with missing data on ownership concentration are excluded from regressions including ownership concentration. Firms with missing data on total assets or debt ratios are excluded from regressions that include these variables. Largest blockholder concentration is defined as the percentage owned by the largest shareholder in the firm. The multiple-segment indicator is set to 0 if 90% of the firm's sales come from a single two-digit SIC code and 1 otherwise. "ADR" means the firm had an American depository receipt listed in the U S at the outset of the crisis. "Big 6 Auditor" means the firm's auditor is one of the "Big 6" accounting firms, i.e., Arthur Andersen, Coopers & Lybrand, Deloitte & Touche, Ernst & Young, KPMG, or Price Waterhouse. Country dummies are included for 4 of the 5 countries, and industry dummies are included for 10 of 11 industries broadly defined as in Campbell (1996). Heteroskedasticiy-consistent t-statistics are given in brackets, and asterisks denote significance levels: * indicates significance at the 10% level, ** at the 5% level and *** at the 1% level.

Table 8: Pre- and Post-Crisis

Coefficient estimates from regressions of stock returns on variables related to corporate governance and control variables
For sample firms in Indonesia, South Korea, Malaysia, the Philippines, and Thailand

(Specification)	Panel A Pre-Crisis 1 (6/95-6/96)		Panel B Pre-Crisis 2 (6/96-6/97)		Panel C Post-Crisis (8/98-7/99)	
	(i)	(ii)	(i)	(ii)	(i)	(ii)
Intercept	2 060 ***	2 317 ***	-0.077	0 028	-0 303	2 009
	[3 49]	[3 41]	[-0 14]	[0 04]	[-0 10]	[0 53]
Largest Management Blockholder %		0 508		-0 012		1 455
		[0 87]		[-0 03]		[0 44]
Largest Non-Management Blockholder %		-0 150		-0 246		-1 570
		[-0 61]		[-1 25]		[-1 08]
Diversification*High Variation	0 124 *	0 120	0 032	-0 001	1 186 ***	1 608 ***
	[1 71]	[1 58]	[0 61]	[-0 02]	[2 59]	[3 01]
Diversification*Low Variation	-0 022	-0 070	-0 045	-0 039	0 652 *	0 768 *
	[-0 40]	[-1 36]	[-1 08]	[-0 89]	[1 68]	[1 66]
ADR	0 065	0 110	-0 010	-0 033	-1 111 ***	-1 166 **
	[0 89]	[1 18]	[-0 15]	[-0 40]	[-2 78]	[-2 27]
Big 6 Auditor	-0 052	-0 032	-0 019	-0 033	-0 301	-0 391
	[-0 59]	[-0 30]	[-0 37]	[-0 40]	[-0 78]	[-0 91]
Log(Total Assets)	-0 247 ***	-0 273 ***	-0 030	-0 030	0 187	0 096
	[-3 47]	[-3 52]	[-0 48]	[-0 41]	[0 52]	[0 21]
Total Debt/Total Capital	0 0006	0 0000	0 0006	0 0008	0 022 ***	0 0161
	[0 40]	[0 02]	[0 68]	[0 81]	[3 04]	[1 62]
Country Dummies	Included	Included	Included	Included	Included	Included
Industry Dummies	Included	Included	Included	Included	Included	Included
Number of Observations	328	274	356	288	362	280
Adjusted R-squared	0 245	0 282	0 211	0 158	0 103	0 084

Regressions of stock returns on variables related to corporate governance and other control variables over periods before and after the crisis Firms not included in the IFC global index and firms operating primarily in SIC 6000-6999 are excluded Stock returns are compound raw returns measured over the crisis period Firms with missing data on ownership concentration are excluded from regressions including ownership concentration Firms with missing data on total assets or debt ratios are excluded from regressions that include these variables Largest blockholder concentration is defined as the percentage owned by the largest shareholder in the firm The multiple-segment indicator is set to 0 if 90% of the firm's sales come from a single two-digit SIC code and 1 otherwise "ADR" means the firm had an American depository receipt listed in the U S at the outset of the crisis "Big 6 Auditor" means the firm's auditor is one of the "Big 6" accounting firms, i e , Arthur Andersen, Coopers & Lybrand, Deloitte & Touche, Ernst & Young, KPMG, Price Waterhouse, or a subsequent merged firm of these 6 Country dummies are included for 4 of the 5 countries, and industry dummies are included for 10 of 11 industries broadly defined as in Campbell (1996) Heteroskedasticity-consistent statistics are given in brackets, and asterisks denote significance levels * indicates significance at the 10% level, ** at the 5% level, and *** at the 1% level

Chapter 2

The Performance of Politically Favored Firms in the
East Asian Financial Crisis:
Evidence from Malaysia

2.1   Introduction

The East Asian financial crisis of 1997 and 1998 was sufficiently dramatic and

devastating that great efforts have gone into understanding it. With the benefit of hindsight,

many have argued that "crony capitalism" was one factor that made the East Asian economies

more vulnerable to a financial crisis. [1] Among the other connotations that "crony capitalism"

may have, the term usually carries two implications. First, it implies that government takes an

active role in picking and promoting winners within the economy. Second, it implies that

personal relationships among businessmen and government officials drive business decisions

more than do free market forces. As a consequence, crony capitalism may cause distortions in an

economy. Capital may be allocated differently from how it would be in an arm's length financial

system (see Rajan and Zingales (1998)), and inefficient firms may prosper under government

support. Because of these potential distortions, politically favored firms may perform quite

differently from non-favored firms during a crisis, either because the crisis cuts off their

government support or, alternatively, because the support has rendered them fundamentally

weaker in some way.

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[1] A leading example is Krugman (1998).

This paper takes a step toward understanding the effects of cronyism during the crisis by studying the performance of politically favored firms in Malaysia. Malaysia presents an interesting opportunity to study crony capitalism because political favoritism in Malaysia runs along two dimensions that are relatively clear-cut. The first dimension provides a particularly exogenous distinction between favored firms and non-favored firms: the ethnicity of the owners of the firm. Since the announcement of Malaysia's New Economic Policy (NEP) in 1970, the government has pursued an overt policy of promoting native Malays, or Bumiputeras[2], to greater prominence in business. Today this policy translates into a number of government-granted benefits for firms controlled by Bumiputeras, including favorable borrowing rates, subsidies, and preference for government contracts. The second dimension of political favoritism depends on the personal relationships between businessmen and high-ranking government officials. Because political power in Malaysia is highly centralized, and because the current regime has enjoyed relative stability, the majority of political patronage has been channeled through a very few select officials. The set of firms with access to these officials could potentially derive a large portion of firm value from these relationships. Studying firm performance along this dimension of political favoritism raises some concerns about endogeneity, because officials may build connections with certain firms based on some underlying characteristics of the firm. However, as described below, I am able to take advantage of an exogenous event affecting the value of political connections in Malaysia in order to test the importance of this aspect of political favoritism.

Within the set of Malaysian firms in the Worldscope database I distinguish between favored and non-favored firms across these two dimensions. I compare the stock price performance of the different groups during the crisis and find significant differences in

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[2] Literally, "sons of the soil" (see Heinz (1999)).

performance for favored and non-favored firms. Controlling for firm size, leverage, and industry, I find that along the dimension of ethnicity, favored (Bumiputera) firms performed significantly better than non-favored firms, but along the dimension of personal relationships, I find that favored firms performed significantly worse. Ethnically favored firms had moderately higher returns of over three percentage points above non-favored firms over the crisis period. Politically connected firms had returns about eight percentage points below non-connected firms over this period.

I evaluate two different hypotheses that could account for the differences in value loss between favored and non-favored firms.[3] What I will call the "lack-of-discipline" hypothesis asserts that because favored firms were pampered by the government, they were not seasoned with the same amount of discipline as firms which were left to their own devices in the market.[4] Then, when the crisis hit, either the favored firms were less able to deal with the period of distress, or investors woke up to the weaknesses of these firms. One important way in which favored firms may have been weaker is that they may have been over-leveraged. Perhaps because favored firms had better access to capital (or weaker corporate control) they took on more debt (particularly short-term debt) than did non-favored firms prior to the crisis. Higher leverage should naturally make firms perform worse in a downturn because of its effect on a firm's covariation with the market, and because the depreciation of the local currency will hurt leveraged firms if the debt is foreign-denominated.[5] I find that the level of debt held by ethnically favored firms was not significantly different from the level held by non-favored firms after controlling for other factors that affect the level of debt. By contrast, I do find that

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[3] An additional hypothesis, which I have not addressed here, is that politically favored firms have greater ability to expropriate minority shareholders, so that if expropriation increases during the crisis (see Johnson et al. (2000)), politically favored firms suffer greater losses in value.
[4] Shleifer and Vishny (1994) discuss inefficiencies that arise when politicians exert influence over firms.

politically connected firms had significantly more debt than non-connected firms. However, surprisingly, higher levels of debt among politically connected firms do not appear to have led to worse stock price performance during the crisis. In addition to looking at leverage, I examine other operating characteristics of favored and non-favored firms before the crisis, and am unable to find any significant support for the lack-of-discipline hypothesis.

The second hypothesis, which I will call the "loss-of-patronage" hypothesis, is that the crisis reduces the value of political favoritism, and the market incorporates this value loss into stock prices as the crisis progresses. Political favoritism may lose value during the crisis for two reasons. First, the crisis may reduce the expected value of political patronage from current leaders, either because the probability of a change in regime is increased or because the government has a smaller supply of favors to grant (public works projects may get cancelled, for instance). Second, political connections may lose value because when the crisis hits, favors previously granted to firms will come due. Favored firms may be called upon by their political patrons to bail out troubled firms or to financially support the ruling party to keep it in power. Even without additional examination of the data, the loss-of-patronage hypothesis seems to fit well with the pattern of performance of favored firms. If the crisis reduces the value of political favoritism, then it seems natural that it would reduce value less for ethnically favored firms than for politically connected firms. After all, ethnically favored firms derive benefits from a government mandate, as opposed to politically connected firms, which are at the mercy of the officials who happen to be in power.

To further test the loss-of-patronage theory, I take advantage of a unique occurrence in Malaysian politics at the end of the Malaysian stock market decline. If politically connected

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[5] Harvey and Roper (1999) argue that the increasing level of U.S. dollar-denominated debt in Asian corporations was the key factor contributing to the crisis.

firms lost value during the crisis because of a loss of the value of their connections, we would expect them to regain this value as the economy rebounded and as their connections in government solidified their power. September 1998 was the first "rebound" month for Malaysia. But it was also the month in which the second-highest-ranking official in Malaysia, Anwar Ibrahim, was abruptly fired from his post and later sent to jail.[6] I find that in September 1998 politically connected firms had stock price performance that was significantly better than non-connected firms. However, I also find that firms with connections primarily through Anwar did not enjoy this same rebound; their returns were similar to non-connected firms. This evidence is suggestive that the value of political connections was important during the crisis, and lends support to the loss-of-patronage hypothesis. This result complements the finding of Fisman (2000), who documents the loss in value of firms linked to Indonesian President Suharto when negative rumors of Suharto's health emerged.

The paper is outlined as follows: In the next section I discuss in more detail the issues regarding the Malaysian economy that are important for this study. In Section 3, I describe the data and methodology used in the study. In Section 4, I discuss the empirical results. Section 5 concludes.

2.2 Political Favoritism in Malaysia[7]

Although Bumiputeras account for some 60% of the population of Malaysia, business in Malaysia has historically been dominated by ethnic Chinese. With an eye toward correcting this imbalance, and partly in response to ethnic rioting in 1969, the government instituted the NEP in 1970. A key goal of the NEP was to achieve 30% Bumiputera ownership of the corporate sector,

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[6] September 1998 was also the month when Malaysia implemented capital controls, but regarding the issue at hand, there is no obvious reason why this would affect firms with links to Anwar differently.

and to create a new community of Bumiputera businessmen. The state has carried out this "affirmative action" program by actively intervening in the economy, granting special privileges to Bumiputeras. Since 1970 Bumiputeras have been given, among other privileges, priority for government contracts, increased access to capital, priority for privatizations, and other subsidies.

The policies of the NEP favoring Bumiputeras have retained momentum over the past 30 years. The ruling coalition in Malaysia has been the Barisan Nasional, which is dominated by the United Malays' National Organisation (UMNO), an ethnically based political party. Mahathir Mohamad, who has been president of UMNO and Prime Minister of Malaysia since 1981, has stood behind the goal of promoting Bumiputera capitalism. Although the goal of 30% Bumiputera ownership of the corporate sector has not been achieved, Bumiputera ownership has increased substantially since implementation of the NEP, rising from 2.4% in 1970 to 20.6% by 1995 (Gomez and Jomo (1997), p. 168).

However, many have argued that the increased state intervention required for implementation of the NEP has opened the door to greater political patronage, corruption, and cronyism in Malaysia. As the government has more actively handed out favors to firms, businessmen have increasingly used personal connections to influence the allocation of those favors. During Mahathir's tenure as Prime Minister, three government officials, along with their associated protégés, have had the most power to control business in Malaysia, and thus access to these officials has been most valuable for entrepreneurs. The first is Mahathir himself. The second is Daim Zainuddin, who is a former finance minister and has been perhaps the most powerful person in corporate Malaysia. The third is Anwar Ibrahim, who, before his downfall, was second in power to Mahathir and had numerous corporate connections. While other officials in Malaysia also provide valuable connections for businessmen, Mahathir, Daim, and Anwar

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[7] Much of this information is taken from and described in more detail in Gomez and Jomo (1997).

have clearly been the most dominant figures. This is illustrated in Table 1, which lists politically connected Malaysian companies and the source of their connections. These connections have had considerable influence on the development of corporate Malaysia, so it is natural to suppose that they had a strong impact during the crisis as well.

2.3   Data and Methodology

In this section I describe the sample of firms, define the crisis period, and describe the variables used and how they were constructed.

2.3.1   Sample Selection

The sample consists of all Malaysian firms that have at least a minimal amount of data in the Worldscope database as of October 1999. Although all firm characteristics are measured on a pre-crisis basis, I use the later version of the Worldscope database because Worldscope has substantially increased the number of firms that it covers over time.[8] The 424 firms in the sample are representative of the firms that are listed on the main board of the Kuala Lumpur Stock Exchange. Unlisted firms not represented in the sample would include smaller Malaysian firms and multinationals with no local listing.

2.3.2   Definition of Crisis Period

Figure 1 shows an index of stock returns of Malaysian firms in Worldscope for 1990 to 1999. Lines on the chart delineate the crisis period as defined in this paper. The beginning of the crisis period corresponds with the devaluation of the Thai baht on July 2, 1997, a date generally considered to be the starting point of the crisis. The end of the crisis period

corresponds to the beginning of the rebound period in September 1998 when the stock index began a sustained upward trend.

2.3.3   Identifying Political Favoritism

As discussed previously, political favoritism runs along two dimensions in Malaysia. To identify whether firms are ethnically favored, I use data from the Kuala Lumpur Stock Exchange *Annual Companies Handbook*. Each firm listed in the handbook is identified according to the ownership that falls in categories of Bumiputera, non-Bumiputera, foreign, or government. The *Handbook* does not provide an exhaustive listing of all firms, so I am able to identify ethnicity of ownership for only 74% of the firms. This reduced sample size is reflected in the empirical analysis of this variable. To categorize firms as Bumiputera-controlled, I focus on a definition given by the Corporate Affairs Unit of Malaysia's Securities Commission (press release, 8/27/96) which states that a Bumiputera-controlled company is one in which 50% or more of the equity is held by Bumiputera shareholders or institutions.[9] I assume that shareholdings by government agencies contribute toward this percentage.[10] Thus, the "Ethnically Favored" variable is a dummy variable that is set to 1 if the Bumiputera shareholdings are above this threshold and 0 otherwise.

To identify which firms have political connections with government officials, I rely on the analysis of Gomez and Jomo (1997). I identify as "politically connected" any firm which Gomez and Jomo (1997) identify as having officers or controlling shareholders with close

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[8] A small number of firms (eight) were included in Worldscope prior to the crisis but not in October 1999.
[9] A secondary definition from the same source notes that a firm may qualify as "Bumiputera-controlled" if 35% of the equity is held by Bumiputeras and 51% or more of the officers of the firm are Bumiputera. This definition is problematic for my purposes because I can't identify the ethnicity of the officers.
[10] Including government agencies seems appropriate given the close connection between government and Bumiputera interests. If I do not include government agencies in the total the difference in performance become more pronounced and more statistically significant.

relationships with key government officials – primarily Mahathir, Daim, and Anwar. Table 1 lists each firm identified as connected and the source of the connection. Using the analysis of Gomez and Jomo (1997) to identify connections suffers from two limitations. First, Gomez and Jomo (1997) make no claim that they have exhaustively identified every firm with political connections in Malaysia. This limitation may not be too troublesome, because if they have focused on a subset of firms with connections, it is likely the subset of firms with the strongest connections or the subset of the largest firms with connections (see Table 2). Because larger firms generally had better stock price performance during the crisis, it would presumably be even more difficult to find that larger connected firms performed worse during the crisis. The second limitation is that, while all connections identified by Gomez and Jomo (1997) are from before the crisis, some are identified from earlier in the 1990s, leaving the possibility that a connection could have disappeared prior to the beginning of the crisis. However, given the relative stability of the government over this period, this limitation also may not be too troubling. The variable I call "Politically Connected", then, is a dummy variable that is set to 1 if the firm has a connection as listed in Table 1, and 0 otherwise.

2.3.4 Description of Other Variables

To measure firm performance during the crisis I use stock returns over the crisis period, from the end of June 1997 to the end of August 1998. These returns are unadjusted returns and are expressed in Malaysian Ringgit. Because data limitations prevent calculation of out-of-sample betas for many of the firms in the study, I attempt to capture factors related to beta by controlling for leverage, size, and industry in the regressions.

Firm size is measured by the natural logarithm of total firm assets. As a measure of leverage I use the firm's debt ratio, measured as the book value of total debt divided by total assets. I include dummy variables for 12 of 13 industries, where industries are defined broadly, as in Campbell (1996), and correspond with the firm's primary SIC code. I also include as a control variable the firm's book-to-market ratio (book value per share divided by the stock price). All of these variables are constructed using data from Worldscope, and they are measured using the last available information from prior to the beginning of the crisis.

2.4   Empirical Results

In this section I present the central results from the paper and discuss tests to evaluate the three theories discussed previously. I also discuss some robustness checks of the central results.

2.4.1   Stock Price Performance

To assess the impact of political connections on stock price performance during the crisis I estimate the following empirical model:

$$CrisisPeriod\ Return = a + b_1(log(Size)) + b_2(BooktoMarketRatio) + b_3(TotalDebt / TotalAssets)$$
$$+ \sum_{j=4}^{15} b_j(Industry_{j-3}Dummy) + \sum_{k=16}^{n} b_k(PoliticalFavoritismVariable_{k-15}) + e$$

Table 3 presents the results from these regressions. In the first two specifications, the Politically Connected variable is included. (Because 19 firms lack data on debt ratios, I run the regression twice, with and without the debt ratio as a control variable.) The coefficient on Politically

Connected ranges from –8% to –9%, indicating that a strong political connection is associated with a greater stock price decline of 8% to 9%, on average, during the crisis period of July 1997 through August 1998. These coefficients are significant at the 1% level of confidence. The control variables for size and leverage are also significant in these regressions, with larger size being associated with higher returns during the crisis, and higher leverage with lower returns.

In the third and fourth specifications the Ethnically Favored variable is included. As mentioned earlier, data is missing on this variable for many of the firms, so the number of observations declines in these specifications. The coefficient on Ethnically Favored is positive and the magnitude is a little over 3%. This indicates a higher return of 3% is associated with Bumiputera firms during the crisis. The coefficients on Ethnically Favored are significant at the 10% level of confidence.

In the final specification both political favoritism variables are included. The magnitude of each coefficient decreases somewhat, but the significance of each variable is retained. Together, these results indicate some strong effects on firm performance related to whether or not firms receive favorable treatment from the government. Favoritism based on government-mandated, affirmative-action type priority appears to have had a positive effect during the crisis, while favoritism based on personal relationships had a strongly negative effect. In the next section I investigate the reasons for this phenomenon.

2.4.2   Evaluating Theories for Performance Differences

To evaluate the reasons for the performance differences I will evaluate in turn the lack-of-discipline hypothesis, and the loss-of-patronage hypothesis.

2.4.2.1 The Lack-of-Discipline Hypothesis

I first consider whether politically favored firms had higher leverage or less efficient operations than non-favored firms. If politically connected firms had greater leverage (or if ethnically favored firms had less leverage) prior to the crisis, then this could explain some or all of the performance differences. A firm with higher debt would naturally be expected to perform worse in a crisis because of the effect of leverage on a firm's covariation with the market and also because the depreciation of the local currency will hurt the firm to the extent that the debt was foreign-denominated. Table 2 shows that firms with political connections had debt ratios some eleven percentage points higher, on average, than non-connected firms prior to the crisis. Ethnically favored firms had slightly less leverage than non-favored firms. These differences are only rough measures, however, in that they do not account for differences in industry or other characteristics.

Panel A of Table 4 presents the results of regressions intended to measure the effect of political favoritism on levels of debt more carefully. I estimate the following model:

$$TotalDebt / TotalAssets = a + b_1(log(Size)) + b_2(ReturnOnAssets) + b_3(GrowthRate)$$
$$+ \sum_{j=4}^{15} b_j(Industry_{j-3}Dummy) + \sum_{k=16}^{n} b_k(PoliticalFavoritismVariable_{k-15}) + e$$

where the inclusion of size, profitability, and growth follows the lead of Lee, Lee, and Lee (1999).

Panel A of Table 4 shows that size, profitability, growth, and industry account for some of the difference in leverage between favored and non-favored firms. Specifically, larger firms had higher debt ratios (see Titman and Wessels (1998)), more-profitable firms had lower debt ratios (as would be suggested by Myers (1977)), and firms with higher growth had higher debt

ratios, consistent with their presumably greater level of investment. Only the coefficient on profitability is significant at standard levels, however. After controlling for these factors, firms with political connections had significantly higher debt ratios than those that were not connected. In the full sample, politically connected firms had debt ratios nearly eleven percentage points higher, and the coefficient is significant at the 5% level. In the reduced sample the coefficient is not significant, and the coefficient on Ethnically Favored is also not significant, but is negative, as the simple averages suggested.

In Panel B of Table 4 I evaluate whether higher debt ratios among politically connected firms led to lower stock returns during the crisis. To do so, I repeat the regression model from Table 3, but add an interaction term for the debt ratio and the dummy for political connections. The coefficient on the interaction term is positive and significant at the 1% level. The magnitude of the coefficient is almost as large as the magnitude of the coefficient on the debt ratio alone, indicating that the net effect of debt ratios on stock returns among politically connected firms is negligible. The implication is that although higher debt led to worse stock price performance during the crisis, as expected, higher debt did not have a negative impact among politically connected firms.

Table 2 reports some other pertinent facts about leverage in politically favored firms. It shows that on average, both ethnically favored firms and politically connected firms relied less upon short-term debt than did non-favored firms, although these differences are not statistically significant. Thus there is no support for the notion that crony firms loaded up heavily on short-term debt in the months preceding the crisis. Table 2 also shows that favored firms tended to increase debt levels more than non-favored firms in the year before the crisis.

I turn now from debt to other indicators of efficiency among favored and non-favored firms. If favored firms were weaker because they lacked the discipline imposed by exposure to free-market forces, then we might expect to find some evidence of inefficiency in their operating characteristics. Table 2 compares some average financial ratios for favored and non-favored firms prior to the crisis.[11] Clearly, these ratios should be interpreted cautiously, as they are aggregated across industries and depend on accurate reporting by companies. Nevertheless, they should highlight any extreme differences that exist between favored and non-favored firms.

The most noteworthy fact to emerge from an examination of the ratios in Table 2 is that there appears to be little difference in the operational efficiency of favored and non-favored firms. Among the ratios for profitability, liquidity, and asset utilization there are no significant differences across the dimensions of ethnic favoritism or political connectedness (in terms of t-tests of the means). This analysis is not conclusive; other less tangible factors may have made favored firms less able to deal with a crisis. But it is a strike against the theory that favored firms performed differently during the crisis because they were inherently different operationally.

2.4.2.2 The Loss-of-Patronage Theory and Connections to Anwar

If politically connected firms performed poorly during the crisis because the connections themselves decreased in value, then we might expect that the connected firms would rebound more than the non-connected firms when the stock market recovers. This should be the result of a return to "business as usual" and a solidifying of the power of the ruling government officials. However, it could be difficult to differentiate this type of rebound from a rebound based on operating characteristics of the firms. But specific occurrences in Malaysian politics at the end

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[11] Pomerleano (1998) uses ratio analysis to study the East Asian crisis, but focuses on differences across countries rather than differences among firms within a country.

of Malaysia's stock market decline allow for a cleaner test of the value of political connections during the crisis.

I define September 1998 as the first rebound month for the Malaysian stock market. It is the first month of the sustained upward trend for the Malaysian stock market. However, September 1998 also marked the downfall of the second-most-powerful political figure in Malaysia, Deputy Prime Minister and Finance Minister Anwar. Once considered Mahathir's certain successor, Anwar was fired by Mahathir on September 2, 1998, and later jailed on charges of corruption and sodomy on September 20, 1998. Clearly, these events should reduce the value of political connections for firms with strong ties to Anwar. To the extent that politically connected firms enjoyed a rebound in September due to the increased value of their connections, we would not expect the same increase in value to be enjoyed by Anwar-connected firms.

To test this possibility, I create another dummy variable called "Anwar Connected" which is set to one for politically connected firms whose connections depended primarily upon Anwar (based on the data presented in Table 2; 14 firms in total). Table 5 presents the results of regressions of stock returns for September 1998 on the same variables as in Table 3 plus Anwar Connected. Table 5 shows that politically connected firms as a whole did enjoy a rebound after the crisis. A higher return of some 21%, significant at the 1% level, is attributed to political connections. However, the coefficient on Anwar Connected is negative, with the magnitude more than offsetting the gain attributed to political connections. The negative coefficient is significant at the 5% level in the first specification and at the 1% level in the second specification. This result suggests that the value of political connections themselves was an

important determinant of the fortunes of Malaysian firms during the crisis, and was at least partly responsible for the relatively poor performance of connected firms.

2.4.3   Robustness Checks

I have performed a number of tests in order to check the robustness of the central result that favored firms performed differently during the crisis than non-favored firms. The results of some of these tests are shown in Table 6. Panel A shows the results of regressions of stock returns on the same variables as in Table 3, but with the sample restricted to non-financial firms only. That is, I have excluded all firms that have primary SIC in the range 6000 to 6999. The motivation for doing this is simply that financial data may not be entirely comparable between financial firms and non-financial firms. The results in Panel A are similar to the base case results. The coefficients on both political favoritism variables are still significant, with the coefficient on Politically Connected falling slightly, and the coefficient on Ethnically Favored increasing slightly in magnitude and in significance.

Panel B presents the results of regressions with the sample restricted to firms included in the International Finance Corporation (IFC) Global index only. The motivation for using this subsample is to address concerns that some of the stocks in the sample may not be very liquid, and thus may be reporting uninformative stock prices. The IFC includes stocks in its Global index only if they are among the largest and most liquid stocks in the country. In these results the coefficient on Politically Connected falls slightly more than in Panel A, but it is still negative and significant. The coefficient on Ethnically Favored, however, is not significantly different from zero.

Panel C presents the results of regressions on the full sample, but with additional variables included as controls. The additional variables are related to corporate governance, and have been shown in Mitton (2000) to have a significant impact on firm performance during the East Asian crisis. The first variable, "Diversified," is a dummy variable set to 1 if the firm operates in more than one 2-digit SIC segment, and 0 otherwise. The next variable, "Ownership Concentration," is defined as the total percent share ownership of all shareholders owning 5% or more of the firm. The other two variables are indicative of disclosure quality. The first, "Big Six Auditor," is a dummy variable set to 1 if the firm's financial statements are audited by one of the "Big Six" international accounting firms[12], and 0 otherwise. Finally, "ADR" is a dummy variable set to 1 if the firm has an ADR listed in the U.S., and 0 otherwise. As Panel C shows, the Politically Connected variable is largely unaffected by the introduction of these other variables. The magnitude of the coefficient falls slightly, but the level of significance is retained The coefficient on Ethnically Favored, however, is not significantly different from zero, indicating some colinearity with the corporate governance variables.

2.5   Conclusion

I have shown that political favoritism, measured along two dimensions, had a significant impact on how the stock prices of firms performed during the East Asian financial crisis. Ethnically favored firms had significantly better performance than non-favored firms during the crisis, but this result was shown to be not extremely robust. Politically connected firms had significantly worse performance than non-connected firms, and this result was shown to be much stronger and quite robust. The evidence suggests that the primary reason for the relative loss

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[12] The "Big Six" firms are Arthur Andersen, Coopers & Lybrand, Deloitte Touche, Ernst & Young, KPMG Peat Marwick, and Price Waterhouse, which merged with Coopers after the crisis began.

among connected firms was that the crisis decreased the expected value of benefits for connected

firms. I've found little support for the alternative explanation that connected firms were weaker

or less efficient than non-connected firms. Although connected firms did have higher leverage,

on average, it doesn't appear that higher levels of debt contributed to their poor stock price

performance.

Clearly, the mere presence of elements of cronyism in East Asian economies does not

mean that cronyism caused the crisis or even that it was a suboptimal system for these countries.

While politically connected firms were hit harder during the crisis, the evidence presented here

does not suggest that this was a punishment for past misdeeds and deficiencies. The evidence is

more suggestive that the crisis simply caused these favored firms to lose a valuable subsidy.

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Table 1
Politically Connected Malaysian Firms

COMPANY NAME	Primary Connected Major Shareholder/Director	Primary Political Connection
ADVANCE SYNERGY BHD	Ahmad Sebi Abu Bakar	Daim, Anwar
ANTAH HOLDINGS BHD	Negeri Sembilan royalty	Mahathir
AOKAM PERDANA BHD	Samsudin Abu Hassan	Daim
ARAB MALAYSIAN CORPORATION BHD	Azman Hashim	Unspecified
AUSTRAL AMALGAMATED BHD	Samsudin Abu Hassan	Daim
BAN HIN LEE BANK BHD	Quek Leng Chan	Anwar
BANDAR RAYA DEVELOPMENTS BHD	MCA	MCA
BERJAYA GROUP BHD	Vincent Tan Chee Yioun	Daim
BERJAYA SPORTS TOTO BHD	Vincent Tan Chee Yioun	Daim
COLD STORAGE (MALAYSIA) BHD	Basir Ismail, Samsudin Abu Hassan	Daim
CONSTRUCTION AND SUPPLIES HOUSE	Joseph Ambrose Lee, Abdul Mulok Awang Damit	Daim
CYCLE & CARRIAGE BINTANG BHD	Basir Ismail	Daim
DAMANSARA REALTY BHD	Koperasi Usaha Bersatu Bhd	UMNO
DATUK KERAMAT HOLDINGS BHD	Koperasi Usaha Bersatu Bhd	UMNO
DIVERSIFIED RESOURCES BHD	Yahya Ahmad, Nasaruddin Jalil	Anwar, Mahathir
EKRAN BHD	Ting Pek Khiing	Daim, Mahathir, Abdul Taib Mahmud
FABER GROUP BHD	UMNO	UMNO
GADEK (MALAYSIA) BHD	Yahya Ahmad, Nasaruddin Jalil	Anwar, Mahathir
GEORGE TOWN HOLDINGS BHD	Tunku Abdullah	Mahathir
GOLDEN PLUS HOLDINGS BHD	Ishak Ismail, Mohamed Sarit Haji Yusoh	Anwar
GRANITE INDUSTRIES BHD	Samsudin Abu Hassan	Daim
HICOM HOLDINGS BHD	Yahya Ahmad	Anwar, Mahathir
HO HUP CONSTRUCTION COMPANY BHD	Halim Saad	Daim
HONG LEONG BANK BHD	Quek Leng Chan	Anwar
HONG LEONG CREDIT BHD	Quek Leng Chan	Anwar
HONG LEONG INDUSTRIES BHD	Quek Leng Chan	Anwar
HONG LEONG PROPERTIES BHD	Quek Leng Chan	Anwar
HUME INDUSTRIES (MALAYSIA) BHD	Quek Leng Chan	Anwar
IDRIS HYDRAULIC (MALAYSIA) BHD	Ishak Ismail	Anwar
KAMUNTING CORPORATION BHD	T.K. Lim	Daim
KFC HOLDINGS (MALAYSIA) BHD	Ishak Ismail	Anwar
KINTA KELLAS PUBLIC LIMITED CO	Halim Saad	Daim
KRETAM HOLDINGS BHD	UMNO Youth, Wan Azmi Wan Hamzah	Daim
KUMPULAN FIMA BHD	Basir Ismail	Daim
LAND & GENERAL BHD	Wan Azmi Wan Hamzah	Daim
LANDMARKS BHD	Samsudin Abu Hassan	Daim
MAGNUM CORPORATION BHD	T.K. Lim	Daim
MALAKOFF BHD	Malaysian Resources	UMNO
MALAYSIAN AIRLINE SYSTEM BHD	Tajudin Ramli	Daim
MALAYSIAN RESOURCES CORPORATION	Wan Azmi Wan Hamzah	UMNO, Anwar
METROPLEX BHD	Dick Chan	Unspecified
MULTI-PURPOSE HOLDINGS BHD	T.K. Lim	Daim
MYCOM BHD	Mohd Tamrin Abdul Ghafar	Ghafar Baba
NANYANG PRESS (MALAYA) BHD	Quek Leng Chan	Anwar
NEW STRAITS TIMES PRESS (MALAYSIA)	Unspecified	Anwar
O.Y.L INDUSTRIES BHD	Quek Leng Chan	Anwar
PACIFIC CHEMICALS BHD	Ting Pek Khiing, Robert Tan	Daim, Mahathir, Abdul Taib Mahmud
PENGKALEN HOLDINGS BHD	Joseph Ambrose Lee, Abdul Mulok Awang Damit	Daim
PRIME UTILITIES BHD	Ahmad Sebi Abu Bakar	Daim, Anwar
PROMET BHD	Ibrahim Mohamed	Unspecified
R J REYNOLDS BHD	Wan Azmi Wan Hazmah	Daim
RASHID HUSSAIN BHD	Wan Azmi Wan Hamzah	Daim
RENONG BHD	Halim Saad	Daim

Table 1 (Continued)
Politically Connected Malaysian Firms

COMPANY NAME	Primary Connected Major Shareholder/Director	Primary Political Connection
SAPURA TELECOMMUNICATIONS BHD	Unspecified	Mahathir
SETRON (MALAYSIA) BHD	Penang Bumiputera Foundation, Kamarudding Jaafar	Anwar
SISTEM TELEVISYEN MALAYSIA BHD	UMNO Companies	UMNO
STAR PUBLICATIONS (MALAYSIA) BHD	Vincent Tan Chee Yioun	Daim
TAIPING CONSOLIDATED BHD	Vincent Tan Chee Yioun	Daim
TANJONG PUBLIC LIMITED COMPANY	T Ananda Krishnan	Mahathir
TECHNOLOGY RESOURCES INDUSTRIES	Tajudin Ramli	Daim
TIME ENGINEERING BHD	Halim Saad	Daim
TONGKAH HOLDINGS BHD	Mokhzani Mahathir	Mahathir
UNIPHOENIX CORPORATION BHD	Ibrahim Mohamed	Unspecified
UNIPHONE TELECOMMUNICATIONS BHD	Shamsuddin bin Abdul Kadir	Mahathir
UNITED ENGINEERS (MALAYSIA) BHD	Halim Saad	Daim
UNITED MERCHANT GROUP BHD	Ahmad Sebi Abu Bakar	Daim, Anwar
UNITED PLANTATIONS BHD	Basir Ismail	Daim
UTUSAN MELAYU (MALAYSIA) BHD	UMNO	UMNO
WEMBLEY INDUSTRIES HOLDINGS BHD	Ishak Ismail	Anwar
YTL CEMENT BHD	Yeoh Tiong Lay	Unspecified
YTL CORPORATION BHD	Yeoh Tiong Lay	Unspecified
YTL POWER INTERNATIONAL BHD	Yeoh Tiong Lay	Unspecified

Lists Malaysian firms in the Worldscope database which have an identifiable tie with high ranking political figures The information is compiled from Gomez and Jomo (1997) Under "Primary Political Connection" Mahathir refers to Mahathir Mohamad, Daim refers to Daim Zainuddin, and Anwar refers to Anwar Ibrahim "UMNO" refers to the United Malays' National Organisation, an ethnically based political party that dominates the government's ruling coalition

Table 2
Summary Statistics and Ratio Analysis
All Malaysian firms with data in Worldscope database

	ETHNIC FAVORITISM						POLITICAL CONNECTIONS					
	All Firms			Non-Financial Firms			All Firms			Non-Financial Firms		
	Ethnically Favored	Non-Favored	(p-value)	Ethnically Favored	Non-Favored	(p-value)	Politically Connected	Non-Connected	(p-value)	Politically Connected	Non-Connected	(p-value)
Number of Firms	84	234		63	176		67	357		50	262	
Total Assets (Ringgit 000)	3,275,588	2,358,121	(0.374)	1,669,385	1,675,416	(0.992)	4,592,439	2,108,916	(0.014)	3,220,966	1,169,136	(0.000)
Total Asset Growth (1-year)	52.7%	36.5%	(0.107)	49.2%	33.1%	(0.093)	34.9%	47.7%	(0.421)	38.9%	42.9%	(0.817)
Book-to-Market Ratio	0.45	0.45	(0.968)	0.46	0.42	(0.330)	0.47	0.45	(0.568)	0.45	0.42	(0.450)
Crisis-Period Return	-78.5%	-81.3%	(0.110)	-77.6%	-81.1%	(0.099)	-83.9%	-78.6%	(0.010)	-82.7%	-78.2%	(0.082)
LEVERAGE												
Total Debt/Total Assets	24.7%	26.0%	(0.615)	26.0%	27.1%	(0.700)	34.7%	23.4%	(0.000)	37.7%	24.6%	(0.000)
Short-Term Debt/Total Debt	57.2%	62.2%	(0.255)	56.5%	62.2%	(0.247)	57.2%	62.8%	(0.216)	59.3%	62.2%	(0.574)
Increase in TD/TA	1.36%	2.75%	(0.369)	1.48%	3.03%	(0.384)	6.25%	2.02%	(0.062)	7.93%	2.25%	(0.046)
Increase in STD/TD	-0.80%	-3.10%	(0.575)	-1.20%	-3.80%	(0.563)	-7.70%	-1.10%	(0.088)	-9.00%	-0.50%	(0.062)
PROFITABILITY												
ROA	7.24%	9.41%	(0.444)	7.37%	8.40%	(0.633)	6.44%	9.28%	(0.286)	7.17%	8.45%	(0.574)
Profit Margin	9.87%	2.22%	(0.713)	6.39%	-3.53%	(0.710)	9.66%	6.60%	(0.868)	8.17%	0.31%	(0.746)
LIQUIDITY												
Current Ratio	1.82	1.88	(0.866)	1.82	1.72	(0.724)	1.54	1.82	(0.433)	1.55	1.72	(0.516)
Quick Ratio	1.51	1.26	(0.316)	1.51	1.26	(0.312)	1.21	1.27	(0.791)	1.21	1.27	(0.807)
ASSET UTILIZATION												
Asset Turnover Ratio	0.52	0.54	(0.719)	0.58	0.63	(0.415)	0.47	0.56	(0.147)	0.56	0.66	(0.170)
Inventory Turnover Ratio	15.34	20.54	(0.639)	15.61	20.81	(0.645)	33.90	16.58	(0.149)	34.42	17.13	(0.152)

Summary statistics of Malaysian firms in the Worldscope database with a minimum amount of data. "Ethnically favored" refers to a firm controlled by Bumiputeras (primarily indigenous Malays). "Politically connected" refers to a firm with identifiable political connections as listed in Table 1. A financial firm is defined as one with primary SIC in the range 6000-6999. Listed p-values are from t-test of differences of means. Total number of firms in ethnic favoritism category does not add to total sample size of 424 because ethnicity not identifiable for some firms. Financial figures are calculated from Worldscope data and come from the last reported financial statements prior to July 1997. Crisis period is defined as July 1997 to August 1998. All figures are simple averages and based on pre-crisi data unless noted otherwise. Data points are missing for some firms, thus the number of observations included for each average may vary.

Table 3
Regression Results -- Stock Returns

Coefficient estimates from regressions of stock returns on political favoritism variables and control variables

(Specification)	(i)	(ii)	(iii)	(iv)	(v)
Intercept	-1.249 *** [-15.80]	-1.267 *** [-16.20]	-1.055 *** [-12.60]	-1.085 *** [-12.57]	-1.152 *** [-12.48]
Politically Connected	-0.092 *** [-4.54]	-0.079 *** [-3.89]			-0.0593 *** [-2.89]
Ethnically Favored			0.033 * [1.94]	0.032 * [1.92]	0.0312 * [1.88]
Log(Total Assets)	0.070 *** [4.77]	0.082 *** [5.43]	0.027 * [1.73]	0.046 *** [2.90]	0.059 *** [3.45]
Book/Market Ratio	-0.010 [-0.31]	-0.041 [-1.28]	0.024 [0.62]	-0.004 [-0.11]	-0.003 [-0.07]
Total Debt/Total Assets		-0.0017 ** [-2.30]		-0.0030 *** [-7.13]	-0.0028 *** [-6.93]
Industry Dummies	Included	Included	Included	Included	Included
Number of Observations	424	405	292	281	281
Adjusted R-squared	0.172	0.233	0.154	0.281	0.300

Regressions of stock returns on political favoritism variables and other control variables over the East Asian crisis period of July 1997 to August 1998 All Malaysian firms with available data in the Worldscope database are included Numbers in parentheses are heteroskedasticity-robust t-statistics. Asterisks denote levels of significance: *** means significant at the 1% level, ** is the 5% level, and * is the 10% level. "Politically Connected" means firm has an identifiable connection with key government officials. "Ethnically Favored" means firm is controlled by Bumiputeras (primarily ethnic Malays). Industry dummies included for 12 of 13 industries as defined in Campbell (1996), with industry corresponding to the primary SIC code of each firm. Number of observations varies in each specification due to missing data points

Table 4
Regression Results -- Political Connections and Debt

Coefficient estimates from regressions of debt ratios and stock returns on political favoritism variables and control variables

PANEL A: DEBT RATIO AS DEPENDENT VARIABLE

(Specification)	(i)	(ii)
Intercept	22.874 [1.46]	8.261 [0.59]
Politically Connected	10.930 ** [1.99]	3.4120 [1.21]
Ethnically Favored		-3.910 [-1.45]
Log(Total Assets)	0.406 [0.15]	3.791 [1.66]
Profitability (ROA)	-0.446 * [-1.72]	-0.201 * [-1.86]
Growth (1-yr ln Total Assets)	2.014 [1.61]	1.024 [0.57]
Industry Dummies	Included	Included
Number of Observations	319	215
Adjusted R-squared	0.173	0.125

PANEL B: STOCK RETURNS AS DEPENDENT VARIABLE

Intercept	-1.252 *** [-15.85]
Politically Connected	-0.1540 *** [-5.17]
Log(Total Assets)	0.082 *** [5.51]
Book/Market Ratio	-0.040 [-1.27]
Total Debt/Total Assets	-0.0028 *** [-7.77]
Total Debt/Total Assets*Politically Connected	0.0025 *** [3.67]
Industry Dummies	Included
Number of Observations	405
Adjusted R-squared	0.261

Regressions to analyze the effect of political connections on debt ratios and stock returns. Panel A shows regressions of debt ratios (total debt/total assets) on political favoritism variables and other control variables using data from prior to the beginning of the East Asian crisis in July 1997. Panel B repeats regressions of stock returns on variables included in Table 3, but with an interaction term for debt and political connections included. All Malaysian firms with available data in the Worldscope database are included. Numbers in parentheses are heteroskedasticity-robust t-statistics. Asterisks denote levels of significance: *** means significant at the 1% level, ** is the 5% level, and * is the 10% level. "Politically Connected" means firm has an identifiable connection with key government officials. "Ethnically Favored" means firm is controlled by Bumiputeras (primarily ethnic Malays). Industry dummies included for 12 of 13 industries as defined in Campbell (1996), with industry corresponding to the primary SIC code of each firm. Number of observations varies in each specification due to missing data points.

Table 5
Rebound Period Regressions

Coefficient estimates from regressions of stock returns on political favoritism variables and control variables

(Specification)	September 1998		Sept. 1998 to June 1999	
	(i)	(ii)	(i)	(ii)
Intercept	0.619 ***	0.340	2.047 **	1.091
	[2.97]	[1.32]	[2.51]	[1.04]
Politically Connected	0.212 ***	0.217 ***	0.744 ***	0.683 ***
	[3.33]	[3.03]	[3.57]	[2.72]
Anwar Connected	-0.256 **	-0.438 ***	-0.550	-1.309 ***
	[-2.52]	[-3.39]	[-1.09]	[-3.14]
Ethnically Favored		-0.010		0.040
		[-0.22]		[0.20]
Log(Total Assets)	-0.028	0.024	-0.022	0.180
	[-0.86]	[0.58]	[-0.16]	[1.00]
Book/Market Ratio	0.087	0.060	0.098	-0.078
	[1.24]	[0.64]	[0.37]	[-0.23]
Total Debt/Total Assets	0.004 ***	0.004 ***	0.013 ***	0.012 ***
	[4.00]	[3.42]	[3.53]	[2.76]
Industry Dummies	Included	Included	Included	Included
Number of Observations	395	273	383	265
Adjusted R-squared	0.129	0.145	0.100	0.106

Regressions of stock returns on political favoritism variables and other control variables over the rebound period
beginning September 1998. All Malaysian firms with available data in the Worldscope database are included.
Numbers in parentheses are heteroskedasticity-robust t-statistics. Asterisks denote levels of significance: *** means
significant at the 1% level, ** is the 5% level, and * is the 10% level. "Politically Connected" means firm has an
identifiable connection with key government officials. "Anwar Connected" means the firm is connected primarily
through Anwar Ibrahim. "Ethnically Favored" means firm is controlled by Bumiputeras (primarily ethnic Malays).
Industry dummies included for 12 of 13 industries as defined in Campbell (1996), with industry corresponding to the
primary SIC code of each firm. Number of observations varies in each specification due to missing data points

Table 6
Robustness Checks

Coefficient estimates from regressions of stock returns on political favoritism variables and control variables

(Specification)	A Financial Firms Excluded		B IFC Global Firms Only		C With Corporate Governance Variables	
	(i)	(ii)	(i)	(ii)	(i)	(ii)
Intercept	-1.318 *** [-14.19]	-1.155 *** [-10.66]	-1.455 *** [-12.11]	-1.240 *** [-9.71]	-1.288 *** [-15.78]	-1.230 *** [-12.97]
Politically Connected	-0.075 *** [-2.90]	-0.0562 ** [-2.17]	-0.063 *** [-2.98]	-0.049 ** [-1.98]	-0.072 *** [-3.60]	-0.060 *** [-2.90]
Ethnically Favored		0.041 ** [2.23]		-0.007 [-0.25]		0.011 [0.65]
Log(Total Assets)	0.092 *** [5.09]	0.060 *** [2.93]	0.110 *** [5.61]	0.087 *** [4.17]	0.076 *** [5.16]	0.067 *** [4.10]
Book/Market Ratio	-0.068 * [-1.75]	-0.005 [-0.11]	-0.117 *** [-3.07]	-0.117 ** [-2.01]	-0.023 [-0.75]	0.021 [0.62]
Total Debt/Total Assets	-0.0017 ** [-2.17]	-0.0031 *** [-6.61]	-0.0011 [-1.60]	-0.0028 *** [-4.13]	-0.0013 * [-1.90]	-0.0024 *** [-5.88]
Diversified					-0.037 ** [-2.52]	-0.039 ** [-2.55]
Ownership Concentration					0.130 *** [2.99]	0.097 ** [1.97]
Big 6 Auditor					0.010 [0.74]	0.009 [0.69]
ADR					0.035 [0.72]	-0.089 * [-1.85]
Industry Dummies	Included	Included	Included	Included	Included	Included
Number of Observations	305	217	162	108	405	281
Adjusted R-squared	0.263	0.348	0.357	0.319	0.259	0.328

Regressions of stock returns on political favoritism variables and other control variables over the East Asian crisis period of July 1997 to August 1998 All Malaysian firms with available data in the Worldscope database are included Numbers in parentheses are heteroskedasticity-robust t-statistics Asterisks denote levels of significance *** means significant at the 1% level, ** is the 5% level, and * is the 10% level "Politically Connected" means firm has an identifiable connection with key government officials "Ethnically Favored" means firm is controlled by Bumiputeras (primarily ethnic Malays) "Diversified" is a dummy variable set to 1 if firm operates in more than one 2-digit SIC industry "Ownership Concentration" is the total percentage of firm owned by shareholders with blocks of 5% or more "Big 6 Auditor" is a dummy variable set to 1 if the firm's financial statements are audited by Arthur Andersen, Coopers & Lybrand, Deloitte & Touche, Ernst & Young, KPMG Peat Marwick, or Price Waterhouse "ADR" is a dummy variable set to 1 if the firm has an ADR traded in the U S Industry dummies included for 12 of 13 industries as defined in Campbell (1996) with industry corresponding to the primary SIC code of each firm Number of observations varies in e

Figure 1
Index of Malaysian Stocks, 1990-1999
Equal-weighted indices of firms in Worldscope database
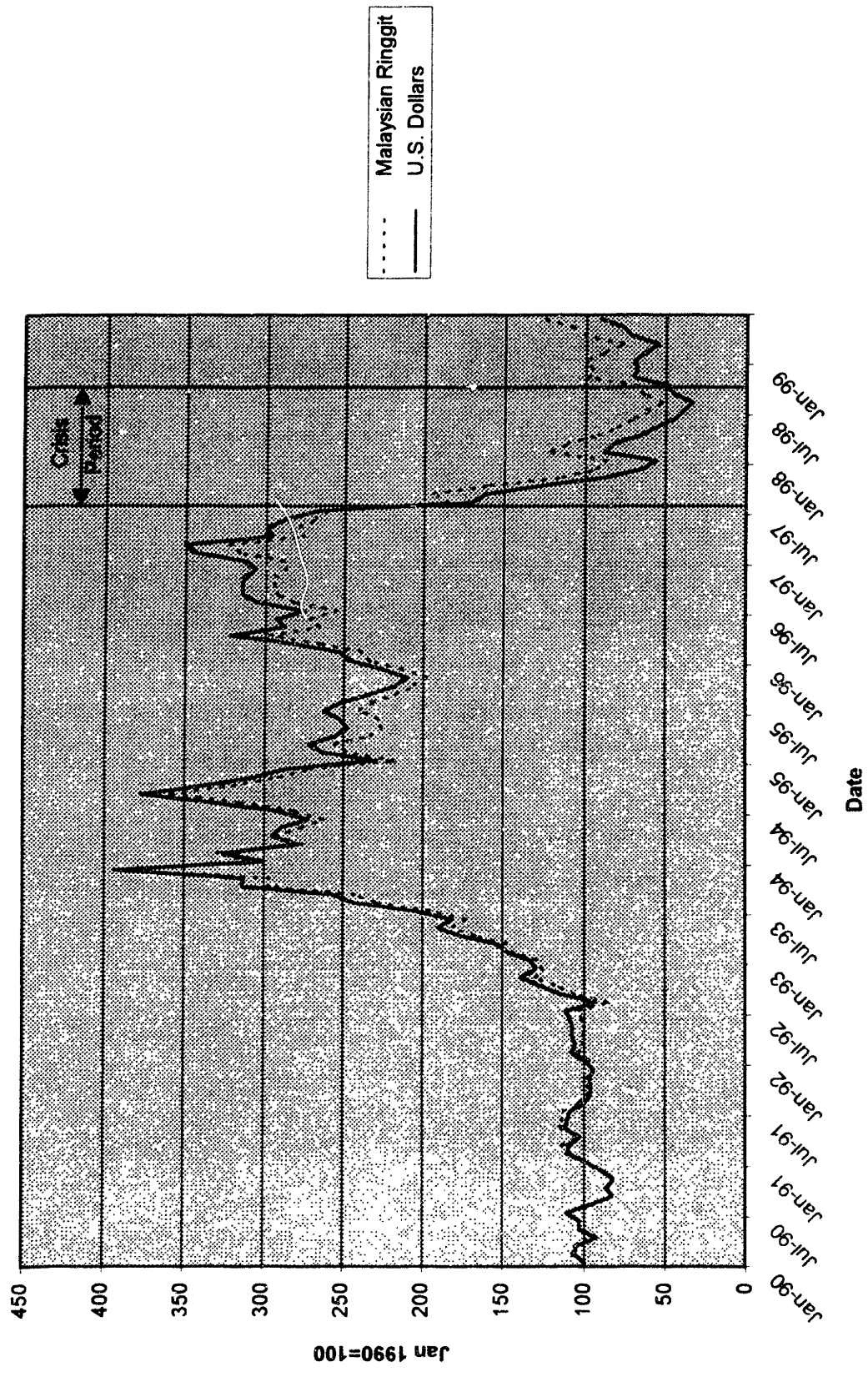
Chapter 3

Do Agency Problems Affect Dividend Policy?
Firm-Level Evidence from Around the World

3.1 Introduction

The agency approach to understanding dividend policy[1] implies that outside shareholders

have a preference for dividends over retained earnings because insiders might squander cash

retained within the firm.[2] La Porta, Lopez-de-Silanes, Shleifer, and Vishny (LLSV (2000)) have

distinguished between two agency models of dividends. In the first – the "outcome" model –

dividends result when outside shareholders use their power to force insiders to pay out cash. In

the second – the "substitute" model – insiders voluntarily pay dividends to establish a reputation

for good treatment of outside shareholders. The two models have very different empirical

implications. The outcome model implies that when minority shareholders are exposed to

greater agency problems dividends will be lower. In addition, the outcome model implies that a

negative relationship between firms' growth opportunities and dividend payouts will be stronger

when agency problems are less severe. The substitute model carries the opposite predictions,

although its implication for the net effect on the relationship between growth and dividends is

ambiguous.

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[1] See, for example, Easterbrook (1984), Jensen (1986), Myers (2000).

LLSV (2000) test these implications by recognizing that the degree of severity of agency problems differs across countries around the world. Specifically, they view higher quality of investor protection offered by countries as a proxy for lower agency costs, and examine the relationship between investor protection and dividend policy. In a cross-section of over 4,000 firms from 33 countries, they find evidence supporting the outcome agency model of dividends. That is, they find that in countries with better legal protection of minority shareholders, dividend payouts are higher. They also find that in countries with better legal protection, the negative relationship between growth opportunities and dividend payouts is stronger.

In this paper, I build on the findings of LLSV (2000) by examining ways in which the severity of agency problems varies across firms within countries. I propose four proxies for the degree of severity of agency problems in a firm. The first proxy is whether or not a firm's stock is cross-listed (directly or through a depository receipt) on a major exchange in the United States. Through cross-listing, firms subject themselves to U.S securities laws and accounting standards and thereby may offer a higher degree of protection for minority shareholders (see Coffee (1999)). The second proxy is whether or not a firm's financial statements are audited by one of the international "Big 5" accounting firms. Better accounting disclosure offers increased protection to investors because the firm becomes more transparent and understandable, and because contracts between managers and investors become more verifi.. ._ .n court (see LLSV (1998)). I argue that Big 5 auditors provide a higher level of disclosure because they have a greater reputation to uphold and are less likely to have conflicts of interest with officers of local firms. The third proxy is whether or not a firm is diversified across industries. Agency problems can be more severe in diversified firms because these firms are less transparent, more likely to be

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[2] Johnson, La Porta, Lopez-de-Silanes, and Shleifer (2000) describe ways in which assets and profits can be transferred out of firms.

associated with an empire-building manager, and susceptible to inefficient capital allocation across divisions (see Scharfstein and Stein (2000)). These factors may inhibit the ability of investors to use their power to control managers. The fourth proxy is whether or not the firm has a large shareholder unaffiliated with management. The effect of large outside shareholdings on agency problems, however, is somewhat ambiguous. The large outside shareholder may reduce agency problems by wielding power in favor of minority shareholders, but could also increase agency problems by using that power to pursue goals that don't coincide with the interests of minority shareholders (see La Porta, Lopez-de-Silanes, and Shleifer (1999)).

I test the relationship between these variables and dividend payouts on a sample of 3,385 firms from 32 countries.[3] On balance, I find evidence consistent with the outcome agency model of dividends. For the first test – whether firms with less-severe agency problems pay higher dividends – I find support for the outcome model. Cross-listed firms pay higher dividends than non-cross-listed firms, firms that have Big 5 auditors pay higher dividends than those that don't, and single-segment firms pay higher dividends than diversified firms. (The relationship is less clear for firms with large outside blockholders.) Still, the results of this first test must be interpreted cautiously, because of concerns that the proxies for agency problems may be correlated with other factors that affect dividend payouts.

The second test – whether the negative relationship between growth opportunities and dividend payouts is stronger among firms with less-severe agency problems – is a cleaner test of the outcome model. This test raises fewer concerns about alternative interpretations, because it compares high-growth firms to low-growth firms within the same level of agency problem severity. The results of this test support the outcome model. The negative relationship between

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[3] Although my sample is more recent than the LLSV (2000) sample, the number of firms is smaller because I exclude the United States (as I am studying cross-listing in the U.S.)

growth and dividends is significantly stronger among cross-listed firms, among firms with Big 5 auditors, and among single-segment firms. (The relationship is marginally stronger among firms with large outside blockholders.)

Taken together, the results in this paper provide additional evidence in favor of the outcome agency model of dividends. The results from these firm-level measures complement the results for the country-level measures in LLSV (2000).

The paper is organized as follows: The next section discusses dividend policy and the above-mentioned proxies for agency problems in more detail. Section 3 describes the data. Section 4 goes through the empirical results. Section 5 concludes.

3.2   Dividend Policy and Agency Problems within Firms

Agency explanations comprise just one subset of a number of theories that have been proposed to explain corporate dividend policy. Examples of previous work on agency explanations for dividends include Easterbrook (1984), who proposes that payment of dividends forces managers to return to the capital market for funds, thereby giving outside investors an opportunity to exercise control over managers. Jensen (1986) argues that firms that fail to pay out dividends are subject to agency costs of free cash flow, and that these costs can be mitigated through debt contracts. More recently, Myers (2000) proposes a model in which dividend payments must be large enough to satisfy outside shareholders and keep them from exercising their power and intervening in the firm.

LLSV (2000) draw upon the agency literature to outline their two agency models of dividends The outcome model proposes that dividends are paid as a result of minority shareholders exercising their power to force insiders to pay out cash. A key aspect of this model

is that shareholders need not have rights to dividends *per se*, but simply the power to protect their interests in general. The most straightforward implication of the outcome model is that firms in which shareholders have greater power will pay higher dividends. The second implication, which is more important for this paper, is that when shareholder protection is good, investors will be more willing to forego current dividends for firms that have good growth opportunities. Thus, the negative relationship between growth and dividends should be stronger in environments with better minority shareholder protection.

The substitute agency model of dividends relies upon firms needing to raise additional funds in the equity market in the future. In this model, firms voluntarily pay dividends in order to establish a reputation for good treatment of shareholders, thereby enabling themselves to raise funds on more attractive terms. Because establishing this reputation would be more critical in environments where agency problems are more severe, the substitute model predicts that dividend payouts will be higher when minority shareholders have less power. As LLSV (2000) explain, the substitute model has no clear prediction for the relationship between growth and dividends. Firms with growth opportunities might pay higher dividends because they have a greater need to establish a reputation to raise capital in the future, but this tendency may be offset by the fact that firms with growth opportunities have a better current use of excess cash.

The severity of agency problems to which minority shareholders are exposed can vary across firms in a given country in many ways. Cross-listing on an organized exchange in the U.S. is one natural way in which the rights of minority shareholders can be strengthened. Coffee (1999) has argued that a primary motivation for firms to cross-list in the U S is to bond themselves to protect the interests of shareholders. Reese and Weisbach (1999) have presented empirical evidence in support of this hypothesis. When a firm cross-lists on an organized U.S.

exchange – either directly or through use of a depository receipt – it then must reconcile its financial statements with U.S. GAAP, adhere to the standards of corporate governance of the exchange on which it lists, file regular reports with the SEC, and comply with U.S. securities laws.[4] Minority shareholders of cross-listed firms, in short, are protected in many ways just as minority shareholders of U.S. firms are. If shareholders use this power to extract dividends, as the outcome model suggests, then cross-listed firms should have higher dividend payouts and a stronger negative relationship between dividends and growth.

Providing a higher level of accounting disclosure is another way in which the interests of minority shareholders can be protected. As LLSV (1998) have argued, disclosure quality is an important aspect of corporate governance because shareholders are better able to understand the companies they invest in, and contracts between minority shareholders and insiders become more verifiable in court. At the country level, LLSV (1998) show that countries with better legal protection of investors tend to have better accounting standards At the firm level, individual firms should have the option to voluntarily provide better disclosure, even if their country's standards are not high. In Mitton (2000) I argue that one way for firms to opt for better disclosure is to have their financial statements audited by one of the well-known, international Big 5 accounting firms. These firms should be less likely to ignore errors and misrepresentations in accounting statements because they have a greater reputation to uphold and because they will be less damaged financially from losing any one problematic client. In addition, in contrast to locally based accounting firms, the Big 5 firms should be less likely to have personal relationships with officers of the firms they audit, thus avoiding potential conflicts of interest. Again, if the outcome model is correct, minority shareholders should be able to take advantage

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[4] The firm may not fall under the jurisdiction of U S. law in every case, but often will, particularly if it holds assets in the U.S.

of the greater protection offered by higher accounting disclosure to require higher dividends, and to do so particularly when a firm is a low-growth firm.

Minority shareholders may be subject to more-severe agency problems in diversified firms for a number of reasons. On one level, diversified firms may simply be less transparent than focused firms, with the complexity of the organization making it more difficult for investors to understand the firm. But there also may be agency costs that are more pronounced in diversified firms. The fact that a firm is diversified may indicate that the insiders are more prone toward overinvestment or empire-building. And if the diversified firm then engages in inefficient cross-subsidization of divisions (as in Scharfstein and Stein (2000)), then minority shareholder value may be dissipated further. Claessens *et al.* (1998) find in East Asia that diversification is associated with greater divergence between cash flow and control rights, indicating that minority shareholders may have less power in these firms.

Diversification is a somewhat different proxy for the severity of agency problems than the first two measures. A firm having a U.S. cross-listing or a Big 5 auditor indicates a mechanism in place that gives minority shareholders greater power to overcome underlying agency problems. A firm being undiversified, by contrast, indicates that the underlying agency problem itself is less severe. While both cases are indicative of minority shareholders having more or less power to control insiders, this difference calls for additional caution in attributing causality to the diversification measure.

The fourth proxy I consider, the size of blockholdings held by the largest non-management shareholder, is a key factor in the ability of minority shareholders to control management. Shleifer and Vishny (1997) argue that concentrated ownership is, along with legal protection, one of two key determinants of corporate governance. As outside shareholders

increase in ownership concentration, they gain the power and incentive to monitor management. As noted earlier, however, the impact of concentrated outside ownership on minority shareholders is ambiguous. While large outside shareholders may use their power to act in the interest of minority shareholders, at some level of ownership they may use their power to expropriate minority shareholders and pursue their own interests (see La Porta, Lopez-de-Silanes, and Shleifer (1999)). Thus, although I lack a clear empirical prediction. I analyze this variable because of its important implications for agency models of dividends

3.3 Data

In this section I discuss how the sample of firms was selected and describe the variables used in the paper.

3.3.1 Sample Selection

The primary sample for the study comes from the March 2000 version of the Worldscope database.[5] This database includes information on 15,267 firms in 54 countries. Table 1 describes how the sample was selected. Panel A shows that I first limit the sample to firms in countries covered in LLSV (2000) Panel B shows which countries are excluded. I exclude socialist and former socialist countries, mandatory dividend countries, and all other countries not included in LLSV (2000). I also exclude the United States because the issue of cross-listing has no meaning for these firms. As a result of excluding the United States, my primary sample is smaller than the sample in LLSV (2000).

After excluding firms from these countries I exclude financial firms, that is, those with a primary or secondary SIC code between 6000 and 6999. This is to be consistent with LLSV

(2000) and because data is not always directly comparable between financial and non-financial firms. I also exclude firms with missing data on sales, net income, dividends, cash flow, or sales growth. After eliminating these firms I am left with a sample of 3,385 firms from 32 countries.

3.3.2   Description of Variables

Table 2 summarizes the variables used in the paper. Three variables are measured at the country level and are taken directly from LLSV (2000). Firms are identified as to whether the legal systems of the countries are derived from civil law or common law. I also identify whether firms have high or low protection of minority shareholders as measured by an index of antidirector rights. I also include a measure of the tax advantage of paying dividends in each country. This variable is described in detail in LLSV (2000); a higher number indicates a greater tax advantage to dividends relative to capital gains.

Following LLSV (2000), I measure dividend payouts in three different ways. For each measure, dividends are in the numerator, and in the denominator is net income, cash flow, and sales, respectively. Dividends-to-net income is the most common measure of dividend payouts, but the other measures are used as checks. In particular, dividends-to-sales is used because reported sales are less subject to accounting manipulation. and because sales would not be reduced by cash diverted from shareholders through expropriation activities. In each case the data comes from Worldscope and is taken from the most recent financial statements available for each firm.

The data on cross-listings comes from three sources. Firms are called cross-listed if their stock is directly cross-listed on NASDAQ or the NYSE, or if the firm has a level-2 or level-3 depository receipt listed in the U.S Depository receipts other than level 2 or level 3 are not

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‘ LLSV (2000) use the March 1996 version of the same database.

considered, as these listings do not carry the same regulatory and disclosure requirements Data on depository receipts comes from the Bank of New York, which maintains a complete directory of all depository receipts from around the world. Data on direct cross-listings comes from the websites maintained by the New York Stock Exchange and NASDAQ A total of 138 firms in the sample are cross-listed in the U S , and Table 2 breaks down the percentage of cross-listed firms from each country in the sample Eleven countries have no cross-listed firms in the sample, and Canada has the highest proportion, with 22 8% of its sample firms cross-listed

Data on the auditor of each firm's financial statements comes from the Worldscope database A firm is said to have a Big 5 auditor if its auditor is one of the major international accounting firms including Arthur Andersen. Deloitte Touche, Ernst & Young, KPMG Peat Marwick, and Pricewaterhouse Coopers. Just over half of the firms in the sample (52 2%) use the Big 5 auditors Table 2 shows the percentages of firms by country

A firm is defined as diversified if it operates in more than one industry. Here industries are defined at the two-digit SIC level. The SIC codes in which each firm operates are reported by Worldscope According to this definition, 73.3% of the firms in the sample are diversified, with percentages ranging from 20% in Turkey to 93% in Belgium One possible concern with this data is that individual countries may be subject to particular idiosyncrasies in their method of reporting product segment data This is part of a larger concern about financial variables having different meanings across countries. Though I cannot entirely eliminate this concern, I address this concern in my regression methodology by relaxing the assumption of independence of observations across firms within a country

I determine the percentage ownership of the largest non-management shareholder using the Worldscope database Worldscope lists all shareholders that own 5% or more of each firm

Data on ownership is missing for many of the firms in the sample, so the sample size drops to 2,720 when this variable is included. Worldscope also maintains a list of the key officers of each firm. For each firm, I match up the list of shareholders with the list of officers. If a shareholder is an officer in the company or if a shareholder is clearly a member of an officer's family, I designate that shareholding as associated with management. The largest blockholding not associated with management is then called the "non-management blockholding" for each firm. I use a dummy variable set to 1 if the non-management block is greater than 20% (the median) and 0 otherwise. This methodology has two limitations. First, it only identifies a subset of the shareholdings associated with management, because some management shareholdings are less transparent and more difficult to identify. Second, the listed blockholder might be an individual, an institutional investor, or another firm. If another firm owns the block, then, not knowing the ultimate shareholders of that firm, I am unable to truly identify which shareholdings are associated with management. Both of these limitations tend to upwardly bias the reported non-management blockholding. The median for each country is reported in Table 2.

Finally, I include data on the size of each firm, measured as the total assets of the firm in $U.S. I include the growth rate of each firm, which is measured as the five-year average growth in net sales. As in LLSV (2000), this is used as a proxy for the available growth opportunities of a firm. I will also use the industry of each firm, which I define as the primary industry of each firm, where industries are defined broadly, as in Campbell (1996). Appendix 1 describes in more detail the variables used in the study.

3.4 Empirical Results

I present the empirical results in two stages In Tables 3 through 6 I present some simple

statistics aimed at showing in the data whether dividend payouts are higher among firms with

less-severe agency problems, or if the negative relationship between growth and dividends is

stronger among firms with less-severe agency problems These statistics, of course, include no

attempt to control for different characteristics of countries or firms that otherwise might affect

dividend payouts, so I then present the results of regressions in which I control for these other

factors

3 4.1   Statistics

For each proxy for the severity of agency problems I examine whether firms with less-

severe agency problems pay higher dividends, and whether the negative relationship between

growth and dividends is stronger among firms with less-severe agency problems. Table 3

presents statistics for firms categorized by whether they are cross-listed in the U.S. or not.

Cross-listed firms have a significantly higher dividend/sales ratio than do non-cross-listed firms

Differences are not significant for the other two measures. Thus, there is some evidence that

cross-listed firms pay higher dividends, but this result must be interpreted cautiously. Table 3

shows that cross-listed firms are much larger than non-cross-listed firms, raising the possibility

that cross-listed firms pay higher dividends because they are larger and more mature, and not

because they offer reduced agency problems. On the other hand, cross-listed firms have higher

growth than non-cross-listed firms, a fact that makes it more surprising that cross-listed firms

pay higher dividends

Table 3 also shows dividend ratios based on whether firms are high growth or low

growth Among cross-listed firms, high-growth firms pay out less in dividends than low growth

firms under all three measures, with the difference being significant for two of the three measures. Among non-cross-listed firms, high-growth firms pay out significantly less under the dividends/net income measure, but pay out more (not significantly) under the other two measures. This result is consistent with the outcome model in that the negative relationship between growth and dividends is stronger among cross-listed firms. This is also a cleaner test of the outcome model than comparing levels of dividends between cross-listed and non-cross-listed firms, because it compares firms within the same category.

Table 4 presents dividend ratios for firms categorized by whether or not they have Big 5 auditors. Big 5 audited firms pay out significantly higher dividends than non-Big 5 firms under two of the three measures. Under the third measure they also pay out more, but the difference is not significant. This result is also consistent with the outcome model, but, again, must be interpreted with some caution. For the second test, Table 4 shows that among Big 5 audited firms, low-growth firms pay out higher dividends than high-growth firms under all three measures, with the difference being significant for two of the three measures. Among non-Big 5 firms, low-growth firms pay out significantly higher dividends under the dividends/net income measure, but differences are not significant under the other two measures. On balance, then, the statistics on Big 5 audited firms support the outcome model.

Table 5 presents dividend ratios for firms categorized as single segment and diversified. The results here are somewhat mixed. Single-segment firms pay significantly higher dividends by the dividends/sales measure and the dividends/cash flow measure, but significantly lower dividends by the dividends/net income measure. Among single-segment firms, low-growth firms pay significantly higher dividends than high-growth firms for two of the measures. Among diversified firms low-growth firms pay significantly higher dividends for one measure, and

significantly lower dividends for another measure. While these statistics slightly favor the outcome model, Table 5 also shows that diversified firms are larger and have lower growth than single-segment firms. Based on those facts it would be expected that diversified firms would pay higher dividends, but it appears that they do not Once size and growth are controlled for in a regression framework, then, we might expect to see that single-segment firms pay much higher dividends.

Finally, Table 6 presents dividend ratios for firms categorized as having high non-management blockholdings or low non-management blockholdings As discussed previously, the predictions here are somewhat ambiguous, and the results are also ambiguous. Firms with high non-management blockholdings pay significantly lower dividends by the first two measures and significantly higher dividends by the dividends/sales measure Among high non-management blockholding firms, low-growth firms pay significantly higher dividends by the dividends/net income measure, and insignificantly lower dividends by the other two measures Among low non-management blockholding firms, the pattern is almost the same. Table 6, then, does not point in one clear direction, particularly given that the predictions for this variable are ambiguous in the first place.

3 4 2   Dividends Before and After Cross-Listing

Before turning to the regression results, one additional test will shed additional light on the question of whether firms with less-severe agency problems, as measured by one of the proxies, pay higher dividends The date of cross-listing of firms is a clearly identifiable event which provides the opportunity to look at firms' dividend policies before and after a change in their levels of investor protection. I use the subset of firms that cross-listed at a point in time that

allows examination of pre-cross-listing and post-cross-listing financial data for the firm. Firms that cross-listed well before the starting point of the Worldscope database are not considered, and this leaves a sample of 103 cross-listed firms. For each firm I calculate the growth in dividends per share for the year in which the firm cross-listed as well as the five years before and the five years after cross-listing. (Dividends per share is a better measure when looking at dividend growth over time because it reflects an explicit policy of the firm and is not subject to the noise introduced by fluctuating earnings or sales.) For each firm in each year I then calculate "abnormal dividend growth" which is defined as dividend growth for the firm less the median dividend growth of all firms in the full sample (including non-cross-listed firms).

Once abnormal dividend growth is calculated I shift the 103 cross-listed firms into "event time". That is, the year of cross-listing for each firm is redefined as year 0, with the 5 years before and after labeled as years −5 to −1 and +1 to +5. I then calculate the median abnormal dividend growth for cross-listed firms for the year of cross-listing and the five years before and after. The results are summarized in Figure 1. It shows that in the five years prior to cross-listing, the firms typically had above-median dividend growth only in the year just prior to cross-listing. In the five years following cross-listing, however, the firms had above-median dividend growth in four out of 5 years. The three years after cross-listing are the years of highest abnormal dividend growth for these firms, with abnormal growth of over 3% in each year. While not conclusive evidence, Figure 1 is at least suggestive of firms increasing dividends as a result of cross-listing in the U.S

3 4.3   Regression Results

Table 7 presents the results of regressions on the full sample of 3,385 firms. The table

consists of three panels, one for each of the three dividend measures. In order to account for the

possible cross-correlation of error terms for firms in the same country, I employ a specification

that relaxes the assumption of independence of observations for firms within the same country [6]

But in the last regression shown in each panel, where country dummy variables are included, the

specification is a fixed-effects regression with heteroskedasticity-robust standard errors

Initially, I control for the variables included in the regressions in LLSV (2000) I include a

dummy variable set to 1 if the firm comes from a low shareholder protection country I include

the decile into which the firm's growth rate falls I also include the interaction between low

protection and the growth decile. Finally, I include the dividend tax advantage for the country

that each firm comes from. For simplicity, I do not include the civil law dummy from LLSV

(2000), because this is highly collinear with the low protection variable. In the final two

regressions in each panel, I also include firm size and industry dummies in order to control for

other heterogeneous firm characteristics.

The variables of primary interest enter the regressions in pairs I include dummy

variables to indicate whether firms are cross-listed, have Big 5 auditors, and are diversified

(The ownership variable appears in Table 8, in the reduced sample) Paired with each of these

dummy variables is an interaction term between the dummy variable and the firm's growth

decile The dummy variables test whether firms with reduced agency problems pay higher

dividends, whereas the interaction terms test whether the negative relationship between growth

and dividends is more pronounced among firms with reduced agency problems To simplify

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[6] I use heteroskedasticity-robust standard errors with clustering on each country This generally produces results
similar to the random effects model employed by LLSV (2000) I do not use the random effects model because a
Hausman specification test rejects the appropriateness of this model for my variables (It does not reject the
appropriateness of the random effects specification using only the variables from LLSV (2000)) If I

interpretation, I have constructed the interaction variables so that a positive coefficient will always indicate support for the outcome model. Thus, I interact *Not* Cross-Listed and *Not* Big 5 and Diversified (all dummies indicating increased agency problems) with the growth decile of the firm.

The results of the regressions in LLSV (2000) are generally confirmed in these regressions. The Low Protection dummy, with one exception, always has a negative coefficient (though not always significant), indicating that firms in countries with weaker shareholder protection pay lower dividends. The Growth Decile variable always has a negative coefficient and is usually significant, indicating that in general, firms with higher growth pay lower dividends. The Low Protection*Growth Decile interaction term varies in sign and is significant only when positive (with one exception), indicating that the relationship between growth and dividends is not as strong in countries with weaker shareholder protection. Finally, the coefficient on Dividend Tax Advantage is always positive, but as in LLSV (2000), it is only significant for the Dividends/Sales variable.

The coefficient on Cross-Listed is always positive in all three panels, and is significant at the 10% level or higher in several of the specifications. The coefficient on Cross-Listed changes dramatically when the control for firm size is included, confirming the suspicion that this variable is correlated with firm size. The magnitude of the coefficient indicates that, for example, in the fourth regression in Panel B, cross-listed firms have dividends/cash flow ratios seven percentage points higher than non-cross-listed firms, all else equal. Note, however, that the magnitude of the coefficient decreases when country dummy variables are included

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(inappropriately) run the random effects specification I obtain stronger results for the diversification variables and weaker results for the cross-listing and auditor variables

The coefficient on the interaction between Not Cross Listed and the Growth Decile is always positive, and always significant in Panel B except when country dummies are included The absolute magnitude of the coefficient is usually lower than the corresponding magnitude of the coefficient on Growth Decile alone This indicates that among non-cross-listed firms the negative relationship between growth and dividends is significantly weaker than it is among cross-listed firms This result is consistent with the outcome agency model of dividends

The coefficient on Big 5 Auditor is positive and significant at the 5% level or higher in Panels B and C, but insignificant and negative in Panel A The magnitude of the coefficient indicates that, for example, in the last regression in Panel C, firms with Big 5 auditors have dividends/sales ratios 1 3% higher than firms without Big 5 auditors, all else equal The coefficient on the interaction between Not Big 5 Auditor and the Growth Decile is positive and significant at the 5% level or higher in specifications without country dummies in Panels B and C, but also insignificant and negative in Panel A. This indicates that the negative relationship between growth and dividends is stronger among firms with Big 5 auditors While the results on the Big 5 auditor variables thus do not hold for the dividends/net income variable or with the fixed-effect model, they are on balance supportive of the outcome model.

The coefficient on Diversified is always negative, and significant at between the 1% level and 5% level in Panel C, but insignificant in Panels A and B The magnitude of the coefficient indicates that, for example, in the last regression in Panel B, diversified firms have dividends/cash flow ratios five percentage points lower than single segment firms, all else equal The coefficient on the interaction term between Diversified and the Growth Decile is positive in all regressions, and significant at the 5% level or higher in Panel C This indicates that the negative relationship between growth and dividends is stronger among single-segment firms

The significance of the diversification variables holds even when country dummies are included in Panel C. The results on the diversification variables are also consistent with the outcome model.

Table 8 presents the results from the same regressions as in Table 7, but with the Non-Management Ownership variable included. The sample size is reduced to 2,720 because of the large number of firms with missing ownership data. The coefficient on the High Non-Management Ownership dummy is negative in all but one specification. It is significant at the 5% level in one specification. The coefficient on the interaction with the Growth Decile is always negative, but never significant. The results weakly suggest that among firms with high outside ownership blocks, dividend payouts are lower but the negative relationship between growth and dividends is stronger. Regardless of the interpretation of this variable, then, the results do not clearly favor the outcome model or the substitute model.

Clearly the results are somewhat weaker in the fixed effects model with country dummy variables. With some exceptions, these variables do not show strong differences in dividend payouts within firms in the same country, although the variables always retain the appropriate sign. To the extent that these variables are significant without country dummies but insignificant when the dummies are included, a different interpretation of the data is called for. Specifically, one might say, rather than that these factors induce higher dividend payouts, that country-wide investor protections induce higher dividend payouts, and that the factors studied here seem to be some of the mechanisms through which investor protections are implemented. So although the regression results are not always consistent across all specifications, taken as a whole they can still be viewed as supportive of the outcome agency model of dividends

3.5   Conclusion

Why do firms pay dividends? Agency theory suggests that dividends are paid because shareholders want them, otherwise excess cash may not be spent in minority shareholders' interests. The outcome model tells us something about the mechanism through which shareholders get the dividends they want. They use what power they have to exert pressure on insiders to pay out the cash. Complementary to the work of LLSV (2000), the findings of this paper offer support for the outcome model. Studying the dividend payouts of over 3,000 firms around the world, I've shown that in sets of firms in which agency problems are less severe, dividend payouts are higher in general, and high-growth firms pay out less relative to low-growth firms. The finding that payouts are higher in cross-listed firms, in firms with Big 5 auditors, or in single-segment firms is consistent with the outcome model, although it may be subject to alternative interpretations. More compelling is the second finding that among firms with less-severe agency problems, firms that seem to have good use for internal funds (growth fii:ns) are less likely to pay them out as dividends. The results suggest that when the interests of minority shareholders are well protected, capital may be allocated more efficiently.

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Table 1
Sample Selection

Panel A: Sample Firms

15,267	All firms in March 2000 version of Worldscope database
13,114	Limit to firms in countries covered in LLSV (2000) but not including United States
9,145	Exclude firms with primary or secondary SIC between 6,000 and 6,999
8,605	Exclude firms with missing data on sales
6,112	Exclude firms with missing current data on net income or negative net income
5,284	Exclude firms with missing current data on dividends
4,855	Exclude firms with missing current data on cash flow
3,385	Exclude firms with missing data on sales growth

Panel B: Sample Countries

54	All countries in March 2000 version of Worldscope database
48	Exclude socialist and former socialist countries (China, Czech Republic, Hungary, Poland, Russia, Slovakia)
47	Exclude Luxembourg
42	Exclude mandatory dividend countries (Brazil, Chile, Colombia, Greece, Venezuela)
33	Exclude other countries omitted from LLSV (2000) due to lack of data (Egypt, Israel, Jordan, Liechtenstein, Morocco, Pakistan, Peru, Sri Lanka, Zimbabwe)
32	Exclude United States

Table 2
Data by Country

Country	Number of Firms	Civil Law	Low Protection	Div. Tax Advantage	Dividends/ Cash Flow	Dividends/ Earnings	Dividends/ Sales	w/ Cross-List	% Firms w/ Big 5	% Firms Diversified	Largest Non-Mgt. Own. Block	Total Assets (US 000$)	Sales Growth
Argentina	14	1	0	1.00	18.31	35.5	4.47	21.43	35.71	71.43	49.00	2,762,880	6.05
Australia	75	0	0	0.90	28.41	49.8	3.38	5.33	90.67	76.00	24.76	1,547,646	6.35
Austria	36	1	1	0.78	20.66	37.9	1.39	0.00	36.11	75.00	51.67	1,111,122	9.73
Belgium	42	1	1	0.74	12.39	29.0	2.31	0.00	42.86	92.86	41.56	3,145,497	8.97
Canada	171	0	0	0.89	9.25	20.8	1.68	22.80	89.47	55.56	32.77	1,775,689	7.79
Denmark	86	1	1	0.67	16.44	25.3	1.28	2.33	95.35	76.74	15.12	624,817	8.32
Finland	57	1	1	1.07	21.22	40.2	2.58	5.26	66.67	70.18	27.42	1,378,401	10.60
France	245	1	1	0.64	11.96	24.8	1.17	2.45	21.63	88.57	44.86	3,809,449	7.35
Germany	264	1	1	0.86	13.80	33.7	1.30	1.14	36.36	79.92	49.63	3,981,872	5.23
Hong Kong	18	0	0	1.00	36.09	54.4	7.15	5.56	94.44	72.22	39.58	1,393,750	8.27
India	130	0	0	0.59	32.35	28.5	2.09	0.00	12.31	66.15	51.63	304,208	5.59
Indonesia	33	1	1	0.76	16.88	12.4	2.05	0.00	6.06	54.55	54.25	355,759	4.04
Ireland	31	0	0	0.77	20.32	27.5	1.89	9.68	96.77	70.97	16.99	837,276	15.67
Italy	78	1	1	0.77	13.27	30.3	1.99	6.41	83.33	85.90	27.23	3,657,658	6.46
Japan	662	1	0	0.70	12.70	38.6	0.77	1.66	1.36	79.76	19.37	2,405,824	-2.18
Korea	50	1	1	0.79	4.14	12.8	0.30	6.00	0.00	52.00	13.81	2,836,329	10.35
Malaysia	31	0	0	0.68	28.35	35.8	5.47	0.00	54.84	80.65	38.45	468,957	2.36
Mexico	32	1	1	1.00	13.42	24.6	2.15	3.13	59.38	81.25	36.71	3,513,356	5.87
Netherlands	112	1	1	0.40	15.16	24.7	1.36	5.36	92.86	80.36	24.09	1,629,133	9.70
New Zealand	15	0	0	1.00	38.34	49.7	5.13	6.67	100.00	46.67	43.19	768,446	6.18
Norway	42	1	0	1.08	17.46	28.1	1.95	9.52	95.24	52.38	31.09	1,144,037	11.35
Philippines	9	1	1	1.05	14.49	16.6	2.38	0.00	0.00	33.33	57.46	687,344	1.00
Portugal	18	1	1	0.98	46.70	25.1	1.31	0.00	33.33	44.44	40.24	275,798	10.72
Singapore	18	0	0	0.96	19.55	33.1	2.47	0.00	94.44	83.33	44.97	1,219,834	7.51
South Africa	93	0	0	0.85	22.63	33.6	2.80	7.53	89.25	79.57	49.13	919,611	7.10
Spain	83	1	1	0.72	16.61	30.2	3.45	2.41	92.77	65.06	47.02	2,645,822	7.18
Sweden	70	1	1	1.03	21.99	35.6	2.15	2.86	87.14	67.14	21.88	2,276,662	10.42
Switzerland	97	1	1	0.56	15.75	30.3	1.89	1.03	84.54	75.26	35.43	2,468,030	4.26
Taiwan	29	1	1	0.60	14.03	20.4	1.92	0.00	51.72	44.83	NA	1,551,561	3.05
Thailand	84	0	0	0.90	5.94	10.1	0.85	0.00	45.24	44.05	31.81	370,166	6.76
Turkey	15	1	1	0.90	21.90	40.3	3.49	0.00	6.67	20.00	50.76	1,470,033	3.66
United Kingdom	645	0	0	0.83	26.83	36.9	2.78	4.81	81.55	71.47	17.08	1,195,709	10.67

This table summarizes the data at the country level. Civil law equals 1 if the country's legal system is based on civil law, and 0 for common law. Low protection equals 1 if the country has a high level of antidirector rights. The dividend tax advantage is higher if the tax treatment of the country is relatively favorable to dividends over capital gains. Dividend ratios, ownership percentages, and total assets reflect averages for each country; sales growth reflects medians. Sales growth refers to 5-year average sales growth in inflation-adjusted U.S. dollars. Cross-listed means the firm is directly cross-listed on an organized U.S. exchange or has a level-2 or level-3 depository receipt. Big 5 means the firm's financial statements are audited by Arthur Andersen, Deloitte Touche, Ernst & Young, KPMG Peat Marwick, or Pricewaterhouse Coopers. Diversified means the firm operates in more than one 2-digit SIC code. Non-management ownership refers to the largest block held by a party not identified with the management of the firm. Country-level data comes from LLSV (2000) and firm-level data comes from the March 2000 version of the Worldscope database, except for the cross-listing information, which comes from websites for the Bank of New York, NASDAQ, and the NYS

Table 3

Dividends by Cross-Listing and Growth

	Dividends/ Net income	Dividends/ Cash Flow	Dividends/ Sales	Total Assets $US(000)	% 5-Yr. Avg. Sales Growth
CROSS-LISTED FIRMS	33.22	17.58	2.80	12,276,732	20.19
High-Growth Firms	28.56	15.10	2.46	9,217,355	33.28
Low-Growth Firms	40.25	21.32	3.31	16,893,759	0.45
(p-value for difference)	(0.012)	(0.040)	(0.245)	(0.038)	(0.003)
NON-CROSS-LISTED FIRMS	32.16	17.99	1.83	1,586,270	19.57
High-Growth Firms	29.94	17.93	1.90	1,262,747	56.59
Low-Growth Firms	34.33	18.06	1.76	1,904,066	-1.14
(p-value for difference)	(0.000)	(0.922)	(0.193)	(0.000)	(0.000)
(p-value CROSS-LISTED v. NON)	(0.646)	(0.795)	(0.004)	(0.000)	(0.931)

This table presents average dividend ratios for 3,385 firms in 32 countries. Cross-listed means that the firm has directly cross-listed its stock on an organized U.S. exchange or has a level-2 or level-3 depository receipt listed in the U.S. High (low) growth means above (below) median average sales growth for 5 years. P-values based on a 2-sample t-test of equality of means. Data comes from the March 2000 version of the Worldscope database. Information on cross-listing comes from websites for the Bank of New York, NASDAQ, and the NYSE.

Table 4

Dividends by Auditor and Growth

	Dividends/ Net Income	Dividends/ Cash Flow	Dividends/ Sales	Total Assets $US(000)	% 5-Yr. Avg. Sales Growth
BIG 5 AUDITED FIRMS	32.29	20.19	2.27	2,017,041	27.35
High-Growth Firms	31.01	19.42	2.13	1,644,281	45.11
Low-Growth Firms	34.29	21.38	2.48	2,596,949	-0.30
(p-value for difference)	(0.008)	(0.142)	(0.036)	(0.008)	(0.000)
NON-BIG 5 AUDITED FIRMS	32.10	15.57	1.44	2,027,623	26.98
High-Growth Firms	27.82	14.94	1.58	1,666,762	31.93
Low-Growth Firms	34.69	15.95	1.35	2,244,026	-1.64
(p-value for difference)	(0.000)	(0.608)	(0.120)	(0.095)	(0.000)
(p-value BIG 5 v. NON)	(0.795)	(0.001)	(0.000)	(0.966)	(0.002)

This table presents average dividend ratios for 3,385 firms in 32 countries. Big 5 audited means that the auditor of the firm's financial statements is one of the international "Big 5" accounting firms, i.e. Arthur Andersen, Deloitte Touche, Ernst & Young, KPMG Peat Marwick, or Pricewaterhouse Coopers. High (low) growth means above (below) median average sales growth for 5 years. P-values based on a 2-sample t-test of equality of means. Data comes from the March 2000 version of the Worldscope database.

Table 5

Dividends by Diversification and Growth

	Dividends/ Net Income	Dividends/ Cash Flow	Dividends/ Sales	Total Assets $US(000)	% 5-Yr. Avg. Sales Growth
SINGLE-SEGMENT FIRMS	29.90	19.82	2.14	1,589,513	15.57
High-Growth Firms	26.95	17.49	1.83	1,469,304	29.53
Low-Growth Firms	33.43	22.61	2.51	1,733,354	-1.10
(p-value for difference)	(0.000)	(0.279)	(0.012)	(0.447)	(0.000)
DIVERSIFIED FIRMS	33.04	17.30	1.77	2,179,963	21.07
High-Growth Firms	31.08	17.91	1.97	1,728,468	44.73
Low-Growth Firms	34.88	16.73	1.59	2,602,556	-1.09
(p-value for difference)	(0.000)	(0.126)	(0.001)	(0.003)	(0.000)
(p-value SINGLE SEGMENT v. DIV.)	(0.000)	(0.080)	(0.000)	(0.001)	(0.000)

This table presents average dividend ratios for 3,385 firms in 32 countries. Diversified means that the firm operates in more than one industry, with industries being defined at the 2-digit SIC level. Single-Segment means that the firm operates in only one 2-digit SIC. High (low) growth means above (below) median average sales growth for 5 years. P-values based on a 2-sample t-test of equality of means. Data comes from the March 2000 version of the Worldscope database.

Table 6
Dividends by Non-Management Blockholdings and Growth

	Dividends/ Net Income	Dividends/ Cash Flow	Dividends/ Sales	Total Assets $US(000)	% 5-Yr. Avg. Sales Growth
HIGH NON-MGT. BLOCKHOLDINGS FIRMS	32.92	16.66	2.04	1,663,447	22.26
High-Growth Firms	31.27	16 92	2 09	1,550,903	46.05
Low-Growth Firms	34.52	16.41	1.99	1,773,697	-1.04
(p-value for difference)	(0.020)	(0.597)	(0.579)	(0.453)	(0.000)
LOW NON-MGT. BLOCKHOLDINGS FIRMS	34.51	19.87	1.78	1,887,163	19.45
High-Growth Firms	31.50	20.55	1 94	1,534,297	39.08
Low-Growth Firms	37.70	19.15	1.61	2,261,414	-1.37
(p-value for difference)	(0.000)	(0.333)	(0.045)	(0 578)	(0.000)
(p-value HIGH NON-MGT. v. LOW)	(0.092)	(0 000)	(0 035)	(0 352)	(0 661)

This table presents average dividend ratios for 3,385 firms in 32 countries. High non-management blockholdings means that a listed shareholder not identified with management owns above the median (20%) of the cash flow rights of the firm. High (low) growth means above (below) median average sales growth for 5 years. P-values based on a 2-sample t-test of equality of means. Data comes from the March 2000 version of the Worldscope database.

Table 7 (Continued)
Regression Results

(Specification)	B: Dividend/Cash Flow as dependent variable				
	(i)	(ii)	(iii)	(iv)	(v)
Intercept	12.160	11.930	17.209	26.539 **	33.098 ***
	[1.27]	[1.57]	[1.63]	[2.27]	[5.52]
Low Protection	-1.538	-2.943	-3.249	-3.531	-7.769
	[-0.30]	[-0 85]	[-0.94]	[-1.10]	[-1.07]
Growth Decile	-1.025 *	-1.203 ***	-1.759 ***	-1.827 ***	-1.084 **
	[-1.86]	[-2 62]	[-2.66]	[-2.85]	[-2.02]
Low Protection*Growth Decile	-0.757	-0.574 *	-0.536	-0.460	0.192
	[-1.49]	[-1.70]	[-1.67]	[-1.49]	[0.57]
Dividend Tax Advantage	7.318	4.300	3.800	4.347	
	[0.79]	[0.56]	[0.47]	[0.57]	
Cross-Listed	7.437 ***	3.420	3.410	6.873 **	1.934
	[3.04]	[1.00]	[1.00]	[2.17]	[0.54]
Not Cross-Listed*Growth Decile	1 515 ***	1.051 *	1.037 *	1.210 **	0.163
	[3.52]	[1.85]	[1.87]	[2.10]	[0.32]
Big 5 Auditor		8.507 **	8.391 **	7.914 **	0.062
		[2.26]	[2.28]	[2.32]	[0.02]
Not Big 5 Auditor*Growth Decile		0.809 **	0.786 **	0.675 **	-0.110
		[2.15]	[2.16]	[2.09]	[-0 32]
Diversified			-6.348	-5.914	-5.061
			[-1.49]	[-1.34]	[-1 43]
Diversified*Growth Decile			0.763	0.702	0.455
			[1.53]	[1.43]	[1.37]
Firm Size (log Total Assets)				-1.833 **	0.172
				[-2.14]	[0.34]
Industry Dummies	No	No	No	Yes	Yes
Country Dummies	No	No	No	No	Yes
Number of Observations	3385	3385	3385	3385	3385
R-squared	0.008	0.011	0.013	0.017	0.046

Regressions of dividend ratios, as measured by dividends/cash flow, on variables proxying for the severity of agency problems and on other control variables. The sample consists of 3,385 firms from 32 countries. Observations within the same country are not assumed to be independent. Heteroskedasticity-robust t-statistics, with clustering by country, are shown in brackets Asterisks denote levels of significance: *** means significant at the 1% level, ** is the 5% level, and * is the 10% level. Low protection is a dummy variable set to one for countries with low antidirector rights. Growth decile is the numbered decile into which the firm's 5-year annual net sales growth falls. Dividend tax advantage is higher for a country with good tax treatment of dividends relative to capital gains. "Cross-Listed" is a dummy variable set to 1 if the firm is directly cross-listed in the U.S. or has a level-2 or level-3 depository receipt traded in the U.S "Big 5 Auditor" is a dummy variable set to 1 if the firm's financial statements are audited by Arthur Andersen, Deloitte & Touche, Ernst & Young, KPMG Peat Marwick, or Pricewaterhouse Coopers. Diversified is a dummy variable set to 1 if the firm operates in more than one Industry dummies included for 12 of 13 industries as defined in Campbell (1996), with industry corresponding to the primary SIC code of each firm.

Table 7
Regression Results

(Specification)	A: Dividend/Net Income as dependent variable				
	(i)	(ii)	(iii)	(iv)	(v)
Intercept	33.391 ***	34.631 ***	33.954 ***	17.446 **	33.756 ***
	[5.52]	[5.75]	[5.91]	[2.67]	[7.72]
Low Protection	-13.055 ***	-13.313 ***	-13.105 ***	-13.045 ***	-3.335
	[-3.32]	[-3.42]	[-3 45]	[-3.87]	[-0.44]
Growth Decile	-2.569 *	-2.501 *	-2.855 *	-2.621 *	-1.751 **
	[-1.98]	[-1.92]	[-1.92]	[-1.91]	[-2.04]
Low Protection*Growth Decile	1.036	1.148 *	1.084 *	0 934	0.883 ***
	[1.54]	[1 82]	[1.75]	[1 46]	[2.62]
Dividend Tax Advantage	10.924	10 625	11.688	11.179	
	[1.41]	[1.39]	[1.58]	[1.56]	
Cross-Listed	8.785	9.225	8.904	4.658	2.986
	[1.38]	[1 53]	[1.54]	[0.78]	[0.50]
Not Cross-Listed*Growth Decile	1.318	1.434	1.387	1.370	0 475
	[1.14]	[1.28]	[1.33]	[1.37]	[0.57]
Big 5 Auditor		-1.689	-1.839	-2.094	-1.924
		[-0.57]	[-0.63]	[-0.73]	[-0.77]
Not Big 5 Auditor*Growth Decile		-0.574	-0 588	-0.587	-0.357
		[-1.13]	[-1 21]	[-1.24]	[-1 08]
Diversified			-0.271	-0.252	-1.457
			[-0.07]	[-0 07]	[-0.64]
Diversified*Growth Decile			0.613	0 561	0.480
			[1.06]	[1.09]	[1.42]
Firm Size (log Total Assets)				3.026 ***	2.445 ***
				[4.17]	[3.80]
Industry Dummies	No	No	No	Yes	Yes
Country Dummies	No	No	No	No	Yes
Number of Observations	3385	3385	3385	3385	3385
R-squared	0.043	0.045	0.049	0.068	0.136

Regressions of dividend ratios, as measured by dividends/net income, on variables proxying for the severity of agency problems and on other control variables. The sample consists of 3,385 firms from 32 countries. Observations within the same country are not assumed to be independent. Heteroskedasticity-robust t-statistics, with clustering by country, are shown in brackets. Asterisks denote levels of significance: *** means significant at the 1% level, ** is the 5% level, and * is the 10% level. Low protection is a dummy variable set to one for countries with low antidirector rights. Growth decile is the numbered decile into which the firm's 5-year annual net sales growth falls. Dividend tax advantage is higher for a country with good tax treatment of dividends relative to capital gains. "Cross-Listed" is a dummy variable set to 1 if the firm is directly cross-listed in the U S. or has a level-2 or level-3 depository receipt traded in the U.S. "Big 5 Auditor" is a dummy variable set to 1 if the firm's financial statements are audited by Arthur Andersen, Deloitte & Touche, Ernst & Young, KPMG Peat Marwick, or Pricewaterhouse Coopers. Diversified is a dummy variable set to 1 if the firm operates in more than one Industry dummies included for 12 of 13 industries as defined in Campbell (1996), with industry corresponding to the primary SIC code of each firm.

Table 7 (Continued)
Regression Results

| (Specification)	C: Dividend/Sales as dependent variable				
	(i)	(ii)	(iii)	(iv)	(v)
Intercept	0.079	0.022	1.147	2.409 **	4.785 ***
	[0.06]	[0.02]	[0.92]	[2.19]	[3.71]
Low Protection	0.171	-0.068	-0.123	-0.209	-0.001
	[0.19]	[-0.13]	[-0.24]	[-0.44]	[-0.00]
Growth Decile	-0.100	-0.132	-0.274	-0.330 ***	-0.258 **
	[-0.74]	[-0.13]	[-1.90]	[-2.79]	[-2.45]
Low Protection*Growth Decile	-0.122	-0.092	-0.087	-0.063	0.055
	[-1.23]	[-1.64]	[-1.68]	[-1.26]	[0.96]
Dividend Tax Advantage	2.210 **	1.694 **	1.643 **	1.507 **	
	[2.05]	[2.22]	[2.15]	[2.06]	
Cross-Listed	1.680 **	0.982	0.961	1.279 *	0.899
	[2.09]	[1.10]	[1.09]	[1.72]	[1.22]
Not Cross-Listed*Growth Decile	0.151	0.070	0.064	0.143	0.050
	[1.19]	[0.54]	[0.52]	[1.29]	[0.52]
Big 5 Auditor		1.489 ***	1.455 ***	1.355 ***	-0.258
		[2.95]	[3.04]	[3.34]	[-0.50]
Not Big 5 Auditor*Growth Decile		0.147 ***	0.141 ***	0.131 ***	-0.002
		[2.84]	[2.95]	[3.19]	[-0.03]
Diversified			-1.413 ***	-1.096 ***	-0.903 **
			[-3.05]	[-3.59]	[-2.15]
Diversified*Growth Decile			0.202 ***	0.182 ***	0.131 **
			[3.38]	[4.29]	[2.30]
Firm Size (log Total Assets)				-0.248 **	-0.065
				[-2.11]	[-0.77]
Industry Dummies	No	No	No	Yes	Yes
Country Dummies	No	No	No	No	Yes
Number of Observations	3385	3385	3385	3385	3385
R-squared	0.025	0.039	0.046	0.089	0.156

Regressions of dividend ratios, as measured by dividends/sales, on variables proxying for the severity of agency problems and on other control variables. The sample consists of 3,385 firms from 32 countries. Observations within the same country are not assumed to be independent. Heteroskedasticity-robust t-statistics, with clustering by country, are shown in brackets. Asterisks denote levels of significance: *** means significant at the 1% level, ** is the 5% level, and * is the 10% level. Low protection is a dummy variable set to one for countries with low antidirector rights. Growth decile is the numbered decile into which the firm's 5-year annual net sales growth falls. Dividend tax advantage is higher for a country with good tax treatment of dividends relative to capital gains. "Cross-Listed" is a dummy variable set to 1 if the firm is directly cross-listed in the U.S. or has a level-2 or level-3 depository receipt traded in the U.S. "Big 5 Auditor" is a dummy variable set to 1 if the firm's financial statements are audited by Arthur Andersen, Deloitte & Touche, Ernst & Young, KPMG Peat Marwick, or Pricewaterhouse Coopers. Diversified is a dummy variable set to 1 if the firm operates in more than one Industry dummies included for 12 of 13 industries as defined in Campbell (1996), with industry corresponding to the primary SIC code of each firm.

Table 8
Regression Results - Reduced Sample

(Specification)	A: Dividends/Net Income		B: Dividends/Cash Flow		C: Dividends/Sales	
	(i)	(ii)	(i)	(ii)	(i)	(ii)
Intercept	14 012 *	31 165 ***	15 844 ***	30 670 ***	2 324 *	4 954 ***
	[1 99]	[6 30]	[3 72]	[5 44]	[1 72]	[2 93]
Low Protection	-13 804 ***	-22 947 **	-4 180	-11 445	-0 726	-1 374
	[-4 00]	[-2 08]	[-1 65]	[-1 57]	[-1 42]	[-0 84]
Growth Decile	-1 491	-0 729	-1 028	-0 542	-0 263	-0 233
	[-1 09]	[-0 65]	[-1 58]	[-0 70]	[-1 48]	[-1 53]
Low Protection*Growth Decile	0 908	0 810 **	-0 255	0 229	-0 013	0 092
	[1 40]	[2 08]	[-0 80]	[0 62]	[-0 25]	[1 43]
Dividend Tax Advantage	15 012 **		12 187 **		1 762 **	
	[2 13]		[2 37]		[2 15]	
Non-Management Ownership>20%	-1 257	-1 382	-2 979	-3 966 **	0 211	-0 048
	[-0 73]	[-0 61]	[-1 15]	[-2 20]	[0 88]	[-0 14]
Non-Mgt Ownership*Growth Decile	-0 167	-0 264	-0 185	-0 32	-0 012	-0 022
	[-0 60]	[-0 76]	[-0 65]	[-1 13]	[-0 37]	[-0 44]
Cross-Listed	0 047	-0 271	3 985	-0 092	1 522	1 150
	[0 01]	[-0 38]	[0 76]	[-0 02]	[1 25]	[1 06]
Not Cross-Listed*Growth Decile	0 612	0 003	0 595	0 019	0 103	0 063
	[0 55]	[0 00]	[0 71]	[0 03]	[0 57]	[0 44]
Big 5 Auditor	-0 852	-2 517	10 759 ***	2 440	1 658 ***	-0 272
	[-0 31]	[-0 88]	[3 25]	[0 90]	[3 70]	[-0 40]
Not Big 5 Auditor*Growth Decile	-0 547	-0 597	0 732 *	-0 022	0 158 ***	-0 012
	[-1 05]	[-1 57]	[1 74]	[-0 06]	[3 60]	[-0 16]
Diversified	2 920	1 733	-1 232	-0 887	-0 719 ***	-0 547
	[1 27]	[0 69]	[-0 55]	[-0 34]	[-2 92]	[-1 09]
Diversified*Growth Decile	0 105	0 059	0 299	0 138	0 130 ***	0 085
	[0 34]	[0 16]	[0 87]	[0 38]	[3 62]	[1 26]
Firm Size (log Total Assets)	2 972 ***	2 757 ***	-1 405 ***	0 127	-0 341 **	-0 122
	[3 73]	[3 79]	[-2 72]	[0 22]	[-2 70]	[-1 25]
Industry Dummies	Yes	Yes	Yes	Yes	Yes	Yes
Country Dummies	No	Yes	No	Yes	No	Yes
Number of Observations	2720	2720	2720	2720	2720	2720
R-squared	0 086	0 137	0 063	0 111	0 105	0 168

Regressions of dividend ratios, as measured by dividends/sales, on variables proxying for the severity of agency problems and on other control variables The sample consists of 3,385 firms from 32 countries Observations within the same country are not assumed to be independent Heteroskedasticity-robust t-statistics, with clustering by country, are shown in brackets Asterisks denote levels of significance. *** means significant at the 1% level, ** is the 5% level, and * is the 10% level Low protection is a dummy variable set to one for countries with low antidirector rights Growth decile is the numbered decile into which the firm's 5-year annual net sales growth falls Dividend tax advantage is higher for a country with good tax treatment of dividends relative to capital gains Non-Mgt Ownership> 2 means that a listed shareholder not affiliated with management owns 20% or more of the firm "Cross-Listed" is a dummy variable set to 1 if the firm is directly cross-listed in the U S or has a level-2 or level-3 depository receipt traded in the U S "Big 5 Auditor" is a dummy variable set to 1 if the firm's financial statements are audited by Arthur Andersen, Deloitte & Touche, Ernst & Young, KPMG Peat Marwick, or Pricewaterhouse Cooper 2-digit SIC Industry dummies included for 12 of 13 industries as defined in Campbell (1996), with industry corresponding to the primary SIC code of each firm

Figure 1
Median Abnormal Dividend Growth of Cross-Listed Firms
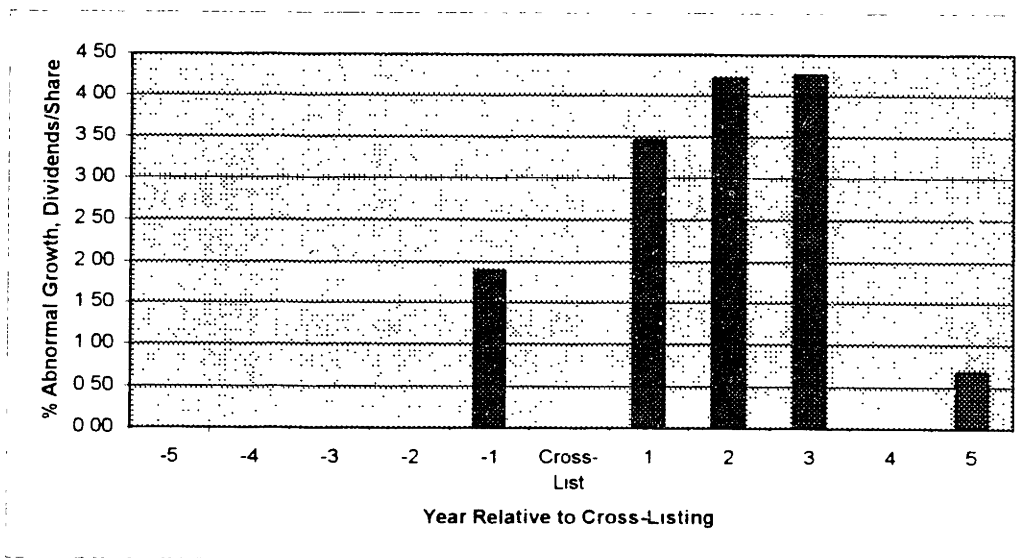
This chart shows the median abnormal dividend growth for a sample of 103 cross-listed firms throughout the world Cross-listed means that the firm is directly cross-listed on an organized U S exchange or has a level-2 or level-3 depository receipt listed in the U S Years reported are relative to the year in which each individual firm cross-listed its stock Abnormal dividend growth means growth of dividends per share above the median for all firms in the full sample of 3,385 firms Data on dividends comes from the March 2000 version of the Worldscope database Data on cross-listings comes from the websites of the Bank of New York, NASDAQ, and the NYSE

Appendix 1
Variable Descriptions

Variable	Description
Big 5 Auditor	A dummy variable set to one if the firm's financial statements are audited by one of the "Big 5" international accounting firms, and zero otherwise. The Big 5 firms are Arthur Andersen, Deloitte Touche, Ernst & Young, KPMG Peat Marwick, and Pricewaterhouse Coopers Source Worldscope database March 2000.
Civil Law	A dummy variable set to one if the origin of the company law or commercial code of the country is Roman law and zero otherwise. Source: LLSV (2000).
Common Law	A dummy variable set to one if the origin of the company law or commercial code of the country is English common law and zero otherwise Source: LLSV (2000)
Cross-Listed	A dummy variable set to one if the firm is directly cross-listed or has a level-2 or level-3 depository receipt trading on an organized U S. exchange (i.e NYSE or NASDAQ) and zero otherwise Sources: Bank of New York complete depository receipt listing, NYSE website, NASDAQ website
Diversified	A dummy variable set to one if the firm operates in more than one industry, where industries are defined at the two-digit SIC level Source· Worldscope database March 2000
Dividends/Cash Flow	Dividends as a percentage of cash flow Source Worldscope database March 2000
Dividends/Net Income	Dividends as a percentage of net income Source Worldscope database March 2000
Dividends/Sales	Dividends as a percentage of sales. Source· Worldscope database March 2000
Dividend Tax Advantage	The ratio of the value, to an outside investor, of US$1 distributed as dividend income to the value of US$1 received in the form of capital gains when kept inside the firm as retained earnings (LLSV (2000) describes the computation in detail.) Source· LLSV (2000)
Growth decile	A number from 1 to 10 corresponding to the decile into which the firm's 5-year average net sales growth falls Source: Worldscope database March 2000.
Industry	A set of dummy variables corresponding to 13 industries, broadly defined as in Campbell (1996).
Low Protection	A dummy variable set to one if a country's index of antidirector rights (as defined in LLSV (1998)) is less than or equal to three and zero otherwise. The range for the index is from zero to six, with a higher number indicating greater rights for shareholders Source: LLSV (2000)
Non-Management Ownership	The percentage of cash flow rights owned by the largest shareholder which is not identified as being affiliated with management of the firm The largest shareholder may be an individual, an institution, or another firm. Source Worldscope database March 2000
Sales Growth	Average annual percentage growth in net sales over 5 year period prior to most recent financial statements for the firm Converted to U.S. Dollars and adjusted for U.S. inflation using GDP deflator Source: Worldscope database March 2000, International Financial Statistics 1999.
Single-Segment	Refers to a firm which operates in only one two-digit SIC code
Total Assets	The sum of total current assets, long-term receivables, investment in unconsolidated subsidiaries, other investments, net PP&E, and other assets Expressed in thousands of $US. Source Worldscope database March 2000.

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