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Who Gains from Capital Controls?
Evidence from Malaysia

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Abstract

The stock prices of politically connected Malaysian firms fell disproportionately in the early stages of the Asian financial crisis but rose more than the market once capital controls were imposed in September 1998. Capital controls primarily benefited well-connected firms without access to international capital markets. These results hold for both financial and non-financial firms separately and are robust to controlling for firm size, sector, profitability, pre-crisis growth and whether a firm is favored because it is officially Bumiputera (with ethnic Malay ownership over 50%). Our findings are consistent with the view that capital controls provide a screen behind which politicians can support particular firms.

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1. Introduction

Many countries operate a form of capitalism in which politicians channel resources towards favored firms (Shleifer and Vishny 1994). There are many problems with such systems because, for example, they may distort incentives, misallocate investment and lead to corruption. At the same time, however, countries such as Malaysia, South Korea and Indonesia managed impressive growth from the 1960s to the 1990s, each using some variant of this model (Rajan and Zingales 1998b, Haggard 2000). Under what conditions is political favoritism sustainable?

Rajan and Zingales (1998b and 2001) argue that political favoritism needs capital controls. In the absence of capital controls, "relationship-based" systems tend to experience overborrowing and government finds it hard to support favored firms when a financial crisis hits.[1] In contrast, with capital controls in place, even in difficult times the government can direct capital where it wants. In the Rajan and Zingales view, capital controls are an important complement – and may even be an essential ingredient – in the overall package of policies that allows relationship-based capitalism to function.

One way to examine the empirical merit of this view is to examine what happens in a country with "relationship-based" capitalism and free capital flows when the government reacts to a macroeconomic crisis by reimposing capital controls. If the Rajan and Zingales view is correct, firms with stronger political connections should (1) suffer more in the initial crisis and (2) benefit more when capital controls are reimposed. This

[1] There are at least three reasons why this may occur. First, local financial institutions may respond by taking on more risk. Second, local firms may borrow directly from international lenders who are unable to assess risks appropriately or who believe that there is an implicit sovereign guarantee. Third, after they lose their monopolies, local banks may be less willing to bail out firms that encounter problems, as in Petersen and Rajan (1995).

paper offers such a test using data from Malaysia before and after the reimposition of capital controls in September 1998.

Malaysia is an appealing case for several reasons. Researchers identified important relationships between politicians and firms before capital controls were imposed (Gomez and Jomo 1997). In addition, throughout the Asian financial crisis that began in July 1997, Malaysia maintained a large and liquid stock market, so examining how stock prices varied across firms is a reasonable way to measure the effects of policy changes.[2] Anecdotal evidence suggests financial markets understood the crisis as threatening to politically favored firms and believed that the imposition of capital controls represented an opportunity for strong politicians to support some firms. The available information also indicates that these expectations have subsequently been met – for example, there have been numerous press reports of government support for well-connected firms.

We find that firms' stock price performance in Malaysia is broadly supportive of the Rajan and Zingales view. Firms with political connections had worse stock returns in the early phase of the Asian financial crisis, but once capital controls were imposed, these firms did better on average. The effect is large. Having political connections had a similar effect to that of increasing a firm's debt-asset ratio by 50-60 percentage points, e.g., from the median of 23.3% to around 75% (roughly equivalent to a 3-standard deviation increase in the debt ratio). These results hold when we control for other measurable characteristics of the firms, such as debt, size, and sector. The results also

[2] Analyzing stock prices has several advantages compared with looking at published financial statements. Financial statements appear only with a considerable lag and after many other events have taken place. Reported earnings do not always reflect actual performance, depending on

hold when we control for whether a firm has the status of being "Bumiputera," meaning that it is largely owned by Malays and qualifies for some official government support.

Assessing of the effects of capital controls in Malaysia is complicated by the fact that the Deputy Prime Minister, Anwar Ibrahim, was fired on the same day that capital controls were imposed. Perhaps not surprisingly, only firms previously connected to the Prime Minister, Mohamad Mahathir, experienced a disproportionate increase in stock price in September 1998. The stock market's reaction appears to have been confirmed by events – over the following year, Anwar-Connected firms were either taken over by pro-Mahathir firms or their owners switched allegiance to Mahathir. Given that the precrisis allocation of politically connected firms between Anwar and Mahathir was essentially random, we can be confident that the nature of political connections affected relative stock prices in September 1998. However, the departure (and rapid imprisonment) of Anwar makes it harder to know if stock prices moved because of capital controls per se or because the market expected that subsidies would be redirected from Anwar-Connected to Mahathir-Connected firms.

To disentangle the effect of capital controls, we examine stock price variation within the group of Mahathir-Connected firms. Mahathir-Connected firms with prior access to international capital markets experienced a smaller increase in stock price following the imposition of capital controls than did other Mahathir-Connected firms. Capital controls, therefore, definitely involved costs for some Mahathir-Connected firms. The implication is that capital controls must also have involved benefits for Mahathir-Connected firms.

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accounting practices. If there were any room for maneuver in an accounting system, we would expect politically well connected firms to be more able to take advantage of it.

Most of the existing literature on capital controls emphasizes macroeconomic issues. If a country faces a severe external crisis, particularly one caused by a pure panic or speculative attack, and if standard measures have failed, Krugman (1998b) argues that imposing capital controls may be an effective way to stabilize the economy. More generally, Bhagwati (1998a and 1998b) and Rodrik (2000) oppose the conventional wisdom that free capital flows help countries benefit from trade liberalization, and argue instead that capital market liberalization invites speculative attacks. Evidence from Malaysia after the imposition of capital controls in September 1998 has been interpreted as demonstrating that capital controls can have positive macroeconomic effects (Kaplan and Rodrik 2001), although the debate remains open (Dornbusch 2001a).

Leading proponents of the macroeconomic view are aware that there may be institutional consequences of capital controls. For example, Kaplan and Rodrik (2001) clearly state their concerns that capital controls may distort incentives and undermine future performance in Malaysia. However, their emphasis is on macroeconomic effects (i.e., all firms), rather than the differential benefits for just some firms.

The Rajan and Zingales view of capital controls is part of a larger literature that links political and corporate governance institutions to financial and economic outcomes. In a series of articles, La Porta, Lopez-de-Silanes, Shleifer and Vishny (1997, 1998, 2000) establish that institutions matter for long-term financial development, the valuation of firms and the quality of government. Rajan and Zingales (1998a) find that countries with weaker investor protection invested less in capital intensive sectors. Fisman (2001) estimates the value of political connections in Indonesia, through looking at how stock prices moved when Suharto's health was reported to change. Our results are consistent

with Morck, Yeung, and Yu (2000), who argue that in countries with weak property rights protection, stock price movements may be predominantly affected by political connections and events. Additionally, in light of their finding that stock prices in emerging markets tend to move synchronously, it is perhaps more surprising that we find substantial differences in performance for politically connected firms. None of the previous literature has examined precisely who gains from capital controls and what this tells us about the nature of political favoritism.

Section 2 provides a simple framework of subsidies and capital controls that we use to guide our empirical analysis. Section 3 reviews the nature of political connections in Malaysia. Section 4 explains our data and methodology in more detail. Section 5 reports descriptive statistics for connected and non-connected firms. Section 6 presents our main results and robustness checks. Section 7 reports the evidence on what happened to firm subsidies after the imposition of capital controls. Section 8 concludes.

2. Subsidies and Capital Controls

Subsidies, Taxes and Capital Flight

Consider the following simple model of an economy with political favoritism. There are four firms, which differ in the nature of their political relationships. Politician A favors two firms (A1 and A2) and one firm (B) is favored by politician B. One firm is independent and has no political ties. The value of a firm is determined in part by its net income (before taxes and subsidies) and in part by the taxes it pays and the lump-sum subsidies that it receives from the government. There are no bribes but the politicians decide on how to allocate subsidies according to their preferences.

The net income (before taxes and subsidies) of firm A1 is higher when capital controls, measured by parameter k, are lower as this lowers the cost of capital, e.g., by borrowing in international markets. The net income of firms A2 and B are not affected by capital controls. Subsidies received by firms A1, A2 and B are denoted by S_{A1}, S_{A2}, and S_B respectively, and these three firms never pay any taxes. Independent firms receive no subsidies and pay taxes on their profits, at rate t. The post-tax and post-subsidy cash flow for the four firms are C_{A1}, C_{A1}, C_B, and C_I respectively (we abstract from the difference between earnings and cash flow):

(1) $$C_{A1} = Đ_{A1}(k) + S_{A1}$$

(2) $$C_{A2} = Đ_{A2} + S_{A2}$$

(3) $$C_B = Đ_B + S_B$$

(4) $$C_I = (1-t)Đ_I(t,k)$$

The value of each firm is the present discounted value of its cash flows.

Taxes are set so as to maximize government revenue, all of which is spent on subsidizing firms. We assume that the government always runs a balanced budget, so the government's initial budget constraint is given by,

(5) $$S_{A1} + S_{A2} + S_B = tĐ_I.$$

The main constraint on taxes, and the explanation for the Laffer curve in this model, is the ability of independent firms' managers to move capital overseas. Note that capital flight does not increase the value of the independent firms, but just the wealth of their managers. The manager of the independent firm chooses the level of capital flight, F, to maximize his personal utility, given by:

(6) $$Max_F U(S;R,k,\alpha) = Max\ [\alpha(1-t)R(I-F) + F - (kF^2/2)],$$

where α is the proportion of the firm that the manager owns, R is the rate of return on his investment (for money not taken out of the country), I is the amount of retained earnings, F is the level of capital flight, and k measures the severity of capital controls. The optimal level of capital flight is,

$$F^*(R,k,\alpha) = (1/k)(1 - \alpha(1-t)R). \quad (7)$$

If k is higher or if the tax rate is lower, there is less capital flight from retained earnings.

Profits in the independent firm, and thus the government's tax base, are R(I-F). As taxes increase, the independent manager will take more capital out of the country. Once the tax rate crosses a critical level, further increases in the rate will cause tax revenue to actually fall, as the tax base declines. Tax revenue is therefore,

$$T=tR(I- F^*) \quad (8)$$

The rate of taxation that maximizes revenue in this framework is lower when k is lower, i.e., when capital controls are weaker. The intuition for this result is simple – when managers can take their capital out of the country more easily, the Laffer curve has its maximum at a lower rate of taxation.[3]

In this simple framework, subsidies and taxes transfer value between different types of firms reflecting the preferences of politicians. Any change in expected net subsidies will be immediately reflected in the value of a firm and therefore in its stock price. For example, if the government cuts subsidies across the board (and therefore also cuts taxes), then the value of A and B relative to I will fall. If on the other hand, politician A manages to increase subsidies for type A firms, while keeping tax rates constant, these firms will increase in value relative to B and I.

[3] For more analysis of taxation in this framework see Friedman, Johnson, Kaufmann and Zoido-Lobaton (2000).

Liberalizing Capital Flows

Politicians can choose to reduce the restrictions on capital flows, by lowering the value of the capital control parameter from k_1 to k_2. For simplicity, we assume that the same parameter affects both capital inflows and capital outflows, so the liberalization of capital flows can has two effects.

First, it lets firm A1 access foreign capital, reducing its cost of capital and increasing its net income (before subsidies). Second, a lower value of k makes capital flight less costly at the margin and therefore reduces the optimal tax rate on independent firms (from t_1 to t_2). For a given tax rate, the managers of firm I now take more capital out of the country. Note that if capital market liberalization occurs when the domestic economy is booming, it may coincide with a fall in capital flight, as managers decide it is better to keep their capital in the country to take advantage of the high rate of return.

Initially we assume that politicians A and B share control of the economy and that they only liberalize capital flows when the benefits outweigh the costs for the firm types they care about. For example, if subsidies to firms A2 and B have to be maintained at their original levels (so these drop out of the comparison), liberalization takes place when the net gain to firm A1 is positive:

$$(9) \qquad Ð_{A1}(k_2) + t_2Ð_I(t_2,k_2) > Ð_{A1}(k_1) + t_1Ð_I(t_1,k_1)$$

Obviously, politicians are more likely to want to liberalize capital flows when the gain to net income (before subsidies) for firm A1 is large relative to the additional capital flight out of firm I.

Financial Crisis

In this simple framework, the easiest way to think about a financial crisis is as a negative shock to the profits of all firms (and to the rate of return on investment, R for the independent firm). Irrespective of the presence of capital controls, this shock directly reduces the value of all firms. A shock that hits all firms equally may still have a disproportionately larger effect on politically connected firms, as they lose both directly and because the level of subsidies fall (due to the lower taxes on independent firms.)

However, if capital market liberalization has occurred, the negative effect of a given shock on politically connected firms is larger, because the size of the indirect effect (via lower subsidies) is larger. Tax revenue (and subsidies) falls more when capital flight, F, is more sensitive to changes in the rate of return on investment, R. From equation (7) we have,

(10) $$F^{*}/ \quad R = -(1/k)\alpha(1-t)$$

A lower return on investment, R, increases capital flight, F, and the absolute value of this effect is larger when k is smaller. A lower value of k creates the potential for more capital flight to occur when profit expectations fall.[4]

Political Conflict

Assume now that the two politicians, A and B, fight among themselves. While the outcome is unclear, investors will value firms according to the probability that A or B will win. If there is a decisive moment when A wins, the value of firms of type A should jump up relative to the value of firms of type B. This happens both because politician A

[4] For more analysis of marginal effects in a related model, see Johnson, Boone, Breach and Friedman (2000).

has definitely won and because firms A1 and A2 can now receive subsidies that would otherwise have gone to firm B. Note that this political victory does not necessarily affect the value of the independent firm I. Note also that this redistribution of subsidies can happen with or without capital controls.

Capital Controls

Given that politician A has won the political conflict, when would he want to reimpose capital controls? He does not need capital controls in order to eliminate the subsidies that previously went to type B firms. However, politician A needs to impose capital controls if he also wants to increase the tax rate on independent firms from t_2 back to t_1. In this framework, reimposing capital controls provides a screen behind which additional funds can be allocated to politically favored firms.

There is obviously a tradeoff between the lower net income of firm A1 and the higher taxes that can be squeezed out of firm I. Assuming that the gains outweigh the losses, politician A then decides how to allocate subsidies among A1 and A2. If the politician gives subsidies evenly to the two types of firms, we would expect to see a smaller increase in value for A1, as it has additional costs due to lost access to international capital markets.

Empirical Issues

Our simple framework suggests three firm-level comparisons that can be used to assess the Rajan and Zingales view of capital controls and political favoritism. The first is a comparison of how stock price performance for politically connected and

independent firms both during the initial crisis (without capital controls) and after the imposition of capital controls. Controlling for observable firm characteristics, this should enable us to evaluate whether being politically connected was indeed a liability in the crisis period and an advantage once capital controls were imposed. The drawback to this comparison is that the performance of firms may vary due to some unobservable characteristics. If these are correlated with the nature of their political connections, then our estimates for the value of these connections will be biased.

Second, to address this issue, we can compare the performance of firms that had connections to different politicians. If the imposition of capital controls means greater subsidies to favored firms, this should only help firms that have connections with strong politicians. Conversely, firms with connections to politicians who have fallen from power should not gain from capital controls. The problem with this comparison is that it may be hard to disentangle the relative importance of additional expected subsidies due to capital controls compared with the additional expected subsidies due to redistribution from the friends of a losing politician to the friends of a winning politician.

Third, to more precisely determine the effects of capital controls per se, we can examine variation in performance within the set of firms who are connected to strong politicians. If we find that firms with greater previous access to international capital markets gained less from the imposition of capital controls, this suggests that the imposition of capital controls involved costs for some well-connected firms. Presumably, therefore, there were also benefits that balanced these costs for some favored firms and outweighed them for others.

3. **Political Favoritism in Malaysia**[5]

Two forms of political favoritism exist in Malaysia today (Gomez and Jomo 1997). The first is the official status awarded to firms that are run by ethnic Malays. The second consists of much more informal ties that exist between leading politicians and firms that are run by both Malay and Chinese business people.

Although ethnic Malays (known as Bumiputeras, literally "sons of the soil") 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 New Economic Policy (NEP) in 1970. Since 1970 Bumiputeras have been given, among other privileges, priority for government contracts, increased access to capital, opportunities to buy assets that are privatized and other subsidies. The ruling coalition in Malaysia for the past 30 years has been the Barisan Nasional, which is dominated by the United Malays' National Organisation (UMNO). Dr. Mahathir Mohamad, who has been president of UMNO and Prime Minister of Malaysia since 1981, has consistently promoted Bumiputera capitalism (Gomez and Jomo 1997).

The increased state intervention required for implementation of the NEP has opened the door to greater political involvement in the financing of firms in Malaysia.[6] As the government has more actively handed out favors to firms, businessmen have increasingly used personal connections to influence the allocation of those favors.

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[5] Much of this information is taken from Gomez and Jomo (1997), whose research was completed before the Asian financial crisis broke out in July 1997.

[6] For example, when Mahathir was minister for trade and industry in 1980 he helped set up the Heavy Industries Corporation of Malaysia (known as Hicom). Hicom subsequently invested in the auto industry, steel and cement. This kind of investment involved the government in picking which private sector firms had access to investment resources (Perkins and Woo 2000).

During Mahathir's tenure as Prime Minister, three government officials, along with their associated protégés, have concentrated the power to help 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 was finance minister early in Mahathir's term and who was brought back into government in 1998. He has been perhaps the most powerful person in corporate Malaysia and is generally considered to have been consistently close to Mahathir. The third is Anwar Ibrahim, who, before his downfall in September 1998, was second in power to Mahathir and had numerous corporate connections. While Anwar was closely allied with Mahathir before the crisis, in 1998 he came to be regarded as a potential rival.

While other officials in Malaysia also provide valuable connections for businessmen, Mahathir, Daim, and Anwar have clearly been the most dominant figures. This is illustrated in Appendix Table 1, which lists politically connected Malaysian companies and the nature 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 Asian financial crisis as well.

Note that there is no evidence that the allocation of firms to Anwar rather than Mahathir was anything other than random. Before the Asian financial crisis, affiliation to either politician was a close substitute, and we have found no evidence that being close to one was preferable than being close to the other. We therefore have no reason to believe that there are unobserved characteristics of these firms that determined their political affiliations. Any systematic differences in the performance of those firms should therefore be due to the changing relative value of their political connections.

4. Data and Methodology

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

Sample

The sample consists of all Malaysian firms that had 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, we use the later version of the Worldscope database because Worldscope has substantially increased the number of firms that it covers over time.[7] 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.

Crisis and Rebound Periods

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

[7] All the firms included in Worldscope prior to the crisis were still included in October 1999, so there is no sample selection bias due to firms dropping out of the data set.

period and start of the "rebound period" corresponds to the imposition of capital controls on September 2, 1998 when the stock index began a sustained upward trend.[8]

Looking for a break in the Malaysian data from September 1998 seems reasonable. Kaplan and Rodrik (2001) explain the nature of Malaysian capital controls in detail, and assess how economic performance differed after September 1998. The most detailed account of Malaysia's economic crisis, Jomo (2001; chapter 7 is on Capital Controls per se), also identifies the beginning of September 1998 as the critical turning point.

Political Connections

To identify which firms have political connections with government officials, we rely on the analysis of Gomez and Jomo (1997). We identify as "politically connected" any firm which Gomez and Jomo (1997) identify as having officers or controlling shareholders with close relationships with key government officials – primarily Mahathir, Daim, and Anwar. Appendix 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, these authors 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. Because larger firms generally had better stock price performance

[8] Capital controls were announced on September 1 and the ringgit-dollar rate was fixed in the early afternoon of September 2, 1998.

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.[9] However, given the relative stability of the government over this period, this limitation is also not too troubling. The variable we call "Politically Connected", then, is a dummy variable that is set equal to one if the firm has a connection as listed in Appendix Table 1, and zero otherwise.

We use the same source, as reported in Appendix Table 1, to create another dummy variable called "Anwar Connected" which is set equal to one for politically connected firms whose connections depended primarily upon Anwar (based on the data presented in Appendix Table 1; 14 firms in total). We code a firm as "Mahathir Connected" if the connection in Appendix Table 1 is either to Mahathir or to Daim (Mahathir's consistently close political ally) or to UMNO (the ruling party controlled by Mahathir.) Note that there are some firms that belong to both camps and for a few firms we know they are politically connected but not the precise nature of that connection.[10]

[9] In the second edition of their book, which was prepared in late 1997 and which appeared in 1998, Gomez and Jomo (1998, 2nd edition) updated their list of political connections. We have used this revised list as a robustness check and find that it does not affect any of our main results. However, we prefer to use their pre-crisis list, as this was complete before there was any sign of a crisis.

[10] If a firm is indicated in Gomez and Jomo (1997) as being connected to both Anwar and Mahathir (a total of 5 firms), then it would be coded as a 1 for Politically Connected, but as a 0 for Anwar Connected and as a 1 for Mahathir Connected. This seems the best way to identify those firms that a priori we would expect to suffer from Anwar's downfall.

Description of Other Variables

To measure firm performance during the crisis we use stock returns over the crisis period, from the end of June 1997 to the end of August 1998. The returns are dividend inclusive and are expressed in Malaysian ringgit. We do not calculate abnormal returns using historical betas because data limitations prevent calculation of pre-crisis betas for many of the firms in the sample. Instead, we attempt to control for factors that could affect expected returns by including leverage, size, book-to-market ratios, and industry in the regressions.[11]

Firm size is measured by the logarithm of total firm assets.[12] As a measure of leverage we use the firm's debt ratio, measured as the book value of total debt divided by total assets. We 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. We 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 prior to the beginning of the crisis.

Return on assets is defined as net income (before interest and after taxes) divided by beginning-of-year total assets. Profit margin is defined as net income divided by net

[11] Even requiring a price history of just 24 months, we can calculate betas for only 65% of the firms in our sample. In this subsample, all of our key results are robust to including beta in the regressions.

[12] Because politically connected firms, on average, are larger than non-connected firms, we repeat our regressions using nonlinear measures of firm size to ensure that size effects do not drive our results. Our results are robust to including variables for total assets, total assets squared, and total assets cubed, as well as the logarithms of these measures, either separately or in combinations. Our results are also robust to using net sales instead of total assets in all of these specifications. In short, there is no evidence that size effects are driving our results.

sales. The current ratio is defined as current assets divided by current liabilities, and the quick ratio is current assets less inventory divided by current liabilities. Asset turnover is defined as net sales divided by total assets, and inventory turnover is cost of goods sold divided by inventory. Finally, we assume short-term debt is anything with maturity less than a year.

As a reasonable proxy for access to international capital markets, we look at where firms' stocks were traded before the Asian crisis started in summer 1997.[13] A significant number of Malay firms are traded in countries other than Malaysia, including Singapore (the so-called Central Limit Order Book, CLOB), the U.S. (either a direct listing or an ADR), London, and in a small number of cases Seoul or another foreign exchange. Other firms trade only on the Malaysian market. Of Mahathir Connected firms, 40% trade overseas and 60% trade only in Malaysia.

To identify whether firms are ethnically favored, we 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 we are 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, we 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

[13] Reese and Weisbach (2001) show that non-US firms that list in the US do this in part to improve their access to equity capital.

equity is held by Bumiputera shareholders or institutions.[14] We assume that shareholdings by government agencies contribute toward this percentage. Thus, the "Ethnically Favored" variable is a dummy variable that is set to one if the Bumiputera shareholdings are above this threshold and zero otherwise.

5. Descriptive Statistics

Table 1 reports the basic descriptive data for these firms. The first row reports the number of firms in each category of our sample, breaking it down by politically connected vs. non-connected and then by Mahathir connected vs. Anwar connected. We also look at financial and non-financial firms separately, to check whether our findings hold for both.

The second row shows that politically connected firms had significantly worse returns from July 1997 to August 1998, although there was no significant difference between Mahathir- and Anwar-connected firms. The third row shows that politically connected firms had significantly better returns in September 1998, and that Mahathir-connected firms performed much better than did Anwar-connected firms. The fourth row shows no significant differences between politically connected and unconnected in returns after September 1998. Anwar-connected firms outperformed Mahathir-connected firms over this later period, although as we explain below this is probably because most were forced into the Mahathir camp after September 1998.

[14] 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 not useful for our purposes because the ethnicity of officers cannot always be inferred from their name.

The fifth row of Table 1 shows that, in terms of total assets, politically connected firms are significantly larger (about twice the size on average) compared with non-connected firms, although there is no evidence that asset growth immediately before the crisis was larger in connected firms (row 6). There is no evidence that Mahathir-connected firms had more assets on average than Anwar-connected firms.

There also appears to be little difference in the operational efficiency of favored and non-favored firms.[15] The ratios for profitability (Return on Assets in row 7 and Profit Margin in row 8), liquidity (Current Ratio and Quick Ratio), and asset utilization (Asset Turnover Ratio and Inventory Turnover Ratio) show no significant differences across the dimensions of political connections (in terms of t-tests of the means). The book-to-market ratio is one way to examine whether investors perceive there is "tunneling" of assets. These ratios are not significantly different for any group of firms before the crisis.

There is no evidence in support of the idea that favored firms performed differently during the crisis because they were better or worse operationally before the crisis. The available evidence actually suggests that firms were allocated to the two different political patrons randomly (in terms of their measurable characteristics). Whether a firm was connected to Mahathir or Anwar before July 1997 was determined more by chance than anything else.

Panel A of Table 2 confirms there is no evidence that politically connected firms had higher profitability before the crisis. With return on assets (in the last full year of financial results prior to July 1997) as the dependent variable, the dummy variable for

[15] 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.

being politically connected is consistently insignificant. The separate dummies for being Mahathir-connected and Anwar-connected are also not significant in any specification (not reported here.)

Corporate Indebtedness

If politically connected firms had greater 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. The data on leverage in Table 1 shows that firms with political connections had debt-asset ratios some eleven percentage points higher, on average, than non-connected firms prior to the crisis. However, politically connected firms had less short-term debt and while total debt to assets before the crisis went up faster in politically connected firms, the opposite was true for short-term debt. These differences are only rough measures, however, in that they do not account for differences in industry or other characteristics.

Panel B of Table 2 presents the results of regressions intended to measure the effect of political favoritism on levels of debt more carefully. We estimate the following model:

$$\textit{Debt ratio} = a + b_1(\textit{Political Connections}) + b_2(\textit{Size}) + b_3(\textit{Profitability}) + b_4(\textit{Growth}) + b_5(\textit{Industry Dummies}) + e,$$

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

Panel B of Table 2 confirms that politically connected firms had more debt before the crisis. For the full sample, using only industry controls, politically connected firms had debt ratios eleven percentage points higher, and the coefficient is significant at the 5% level. Restricting the sample to non-financial firms does not eliminate the effect of politically connections on indebtedness, although the effect is now significant only at the 10% level.

Controlling for size, profitability, growth, and industry accounts for part of the difference in leverage between favored and non-favored firms. Specifically, larger firms had higher debt ratios (columns 5 and 6), as predicted by Titman and Wessels (1988); more-profitable firms had lower debt ratios (columns 5 and 6), as would be suggested by Myers (1977). Firms with higher growth had lower debt ratios (column 6). Only the coefficient on profitability is consistently significant at standard levels, however. After controlling for these factors, firms with political connections still had significantly higher debt ratios than those that were not connected, although the coefficient is halved (to 4.7).

6. **Results**

This section presents our main results and discusses robustness checks. To assess the impact of political connections on stock price performance during various periods we estimate the following model:

$$\textit{Stock Return} = a + b_1(\textit{Political Favoritism Variables}) + b_2(\textit{Size}) + b_3(\textit{Book-to-Market Ratio}) + b_4(\textit{Debt ratio}) + b_5(\textit{Industry Dummies}) + e,$$

Where the stock return is measured over the indicated period and the political favoritism variables change according to the specification.

July 1997-August 1998

Table 3 presents the results from these regressions for the period from July 1997 to August 1998.[16] In the first three specifications, the Politically Connected dummy variable is included. The coefficient on Politically Connected ranges from –5% to –9%, indicating that a political connection is associated with a greater stock price decline of 5% 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 final specification we include separate dummies for being Mahathir- and Anwar-connected. Both types of politically connected firms had worse stock price performance than did unconnected firms: Mahathir-connected firms had an 8.3% greater decline and Anwar-connected firms had a 6% larger fall. The difference in performance between Mahathir- and Anwar-connected firms is not significant in this time period.

In the first phase of the financial crisis, therefore, favoritism based on personal relationships had a strongly negative effect on the stock price performance of Malaysian firms. This is broadly consistent with the Rajan and Zingales (1998b) view that firms with strong political connections may suffer more in a financial crisis, for example because the expected value of subsidies declines.

[16] We use heteroskedasticity-robust standard errors. Multicollinearity does not seem to be a problem in the model, as the average variance inflation factor of the coefficients is about 1.5 with September 1998 returns or crisis-period returns as the dependent variable (with maximum variance inflation factors no greater than 2.8). Errors-in-variables regressions indicated that our results are not particularly sensitive to measurement error.

More specifically, our results suggest that these negative consequences for politically connected firms are stronger when there are macroeconomic difficulties, for example because investors expect that implicit subsidies can no longer be provided. It is hard to know exactly what the Malaysian government was doing with regard to such subsidies in 1997-98, but Anwar's policy was to follow tight budget discipline along the lines of a de facto IMF program (although Malaysia did not sign up for official IMF conditionality.) There was also a certain amount of political rhetoric regarding the need to reduce "cronyism" (and various statements from both Anwar and Mahathir about who was or was not a "crony'.) Our results indicate that the market interpreted the policies of July 1997 to August 1998 as particularly squeezing politically connected firms.

Depending on the precise specification, as many as 6 of the 12 industry dummies are significant in our "crisis period" regressions. The agricultural sector does relatively well, presumably because the demand for agricultural products is less susceptible to downturns. The other sector dummies that are usually significant are industrial (i.e. manufacturing, which is positive), utilities (also positive), and service firms (also positive.) Most important for our analysis, we find that including industry dummies does not weaken the coefficients on the political connection variables, in fact they usually increase in size and always remain significant.

The Effects of Capital Controls

If politically connected firms performed poorly during the first phase of 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 capital controls

were reimposed. According to the Rajan and Zingales view, imposing capital controls should make it easier to reestablish "business as usual" in which particular government officials help particular firms.

In general, it could be difficult to differentiate a rebound based on political connections from a rebound based on operating characteristics of the firms. But specific political developments allow for a cleaner test for the effects of imposing capital controls. September 1998 marked both the imposition of capital controls and also 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 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. As we argued above, the allocation of firms to Mahathir rather than Anwar before the crisis was essentially random, i.e., it did not make any difference in terms of access to resources and was the result of historical accident rather than some systematic unobserved characteristics of firms.

The first four columns of Table 4 presents the results of regressions of stock returns for September 1998 on the same variables as in Table 4.[17] Politically connected

[17] One econometric issue is that errors across firms may not be independent because returns are correlated in calendar time. As a diagnostic measure to address this issue, we run simulated regressions of the actual return data on a wide variety of randomly generated hypothetical variables. In 10,000 repetitions using September 1998 returns, we find that the coefficients on the hypothetical variables are significant at the 1% level in 1.07% of the repetitions, at the 5% level in 5.27% of the repetitions, and at the 10% level in 9.97% of the repetitions. (The corresponding

firms as a whole enjoyed a rebound in September 1998. A higher return of some 18.3%, significant at the 1% level, can be attributed to political connections, falling only slightly to 16.3% when we also control for firm size and book/market ratio.

The fourth column shows that while there was is a large and significant positive coefficient on being Mahathir-connected in this month (19.9), the coefficient for the Anwar-connected dummy is insignificant and actually negative.

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.

The last two columns of Table 4 show that, in contrast, from October 1998 to September 2000, there was no differential stock price return across firms with various types of political connections. The imposition of capital controls appears to have been an unusually powerful political and market event.

Variation within Mahathir-Connected Firms

As we pointed out in Section 2, variation in the performance of firms connected with different politicians indicates that the pattern of expected subsidies changed, but is not conclusive evidence regarding the impact of capital controls.

The only way to check for the relevance of capital controls is to examine the pattern of variation within firms connected to the winning politician. If capital controls matter, we should see smaller gains for Mahathir-connected firms having access to international capital markets compared with Mahathir-connected firms without such

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percentages using crisis-period returns are 8.50%, 4.87%, and 9.61% respectively.) The lack of spuriously significant coefficients indicates that correlation of the errors is probably not a serious

access. Table 5 repeats our basic regressions, breaking down both types of politically connected firm according to whether or not they were foreign listed.

Column 4 of Table 5 shows that the only gains for politically connected firms in September 1998 were actually for Mahathir-connected firms that were not listed on foreign exchanges before the crisis. This subgroup rose 26.6% relative to independent firms. Foreign listed Mahathir-connected firms also rose relative to the base, but this increase was not significant. Neither of the Anwar subgroups differed significantly from the base group.

To assess these results, in columns 1 and 2 of Table 5 we present the same regressions for the eighteen months before the crisis (January 1996 to June 1997) and for the crisis period. In both cases the pattern is much more even across the subgroups of politically connected firms, i.e., being foreign listed does not appear to have been associated with significant differences in performance prior to September 1998. The coefficient on the interaction of Anwar-Connected and foreign listed is positive and significant in the last column, but this should be viewed in light of the fact that most Anwar firms were forced to switch allegiance to Mahathir in the year that followed the imposition of capital controls.

In addition, column 3 of Table 5 shows what happened in the market upturn of February 1998. In this case the market rose 38%, apparently just on improved expectations of the macroeconomy, i.e., this was not associated with any political event or shift of power between Mahathir and Anwar. In this episode we see no significant difference in performance between any of the politically connected subgroups and the set of independent firms.

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problem in this data.

Debt and Political Connections Compared

Our estimated coefficients indicate that the "political connections" effect is large relative to one of the most important characteristics of firms – their leverage. From column 3 of Table 4, the coefficient on the debt ratio is -0.0015. Leverage (the debt ratio) is expressed in percentage points, i.e., for a firm with total debt to total assets (TD/TA) of 55%, the variable would be 55.0. So an increase in the debt ratio of 10 percentage points (e.g., from the median debt ratio of 23.3 to 34.4) would correspond to a lower crisis-period return of 1.5%. The coefficient on the Politically Connected dummy is -0.078 when we also control for debt, meaning that politically connected firms had a lower crisis period return of 7.8% compared to non-connected firms. Put together, this means that having political connections had a similar effect to that of increasing the debt ratio by 52.0 percentage points (e.g., from the median of 23.3% to around 75%). The standard deviation of TD/TA is 22.48, so having political connections is roughly equivalent to a 3-standard deviation increase in the debt ratio during the "crisis period".

For September 1998, the magnitude is similar. The coefficient of 0.0033 on the debt-asset ratio corresponds to a higher return of 0.33% for each percentage point increase in the debt ratio. So the higher return of 14.2% for politically connected firms is equivalent to the effect of increasing the debt ratio by 43 percentage points (e.g. from the median debt ratio of 23.3% to 66.3%). In sum, for both periods, the leverage effect is strong, but the political connections effect is arguably much stronger.

Robustness Checks

We have performed a number of tests in order to check the robustness of the central result that favored firms performed differently during the crisis and after the imposition of capital controls compared with non-favored firms. Our results do not appear to be dominated by outliers. All of our key results are robust to truncating the data at the 1st and 99th percentiles of observations on stock returns, firm size, or debt ratios.

Table 6 repeats the regressions of Tables 4 and 5 just for financial firms (as identified by a primary SIC code in the range 6000 to 6999 in Worldscope.) The results are quite similar. Politically connected financial firms suffered a large stock price fall than the average from July 1997 to August 1998, although those with connections to Anwar did not do as badly. In September 1998, the stock price of financial firms with political connections surged, but Anwar-connected firms on average did no better than independent firms.[18] Again, when we break the politically connected firms into subgroups, it is only the Mahathir-connected firms that were not foreign listed that showed a significant improvement in stock price (57.8%) relative to independent firms. After October 1998 there was no significant difference in stock price returns between Anwar-connected and other politically connected firms (not reported in the table).

Table 7 provides further robustness checks. Table 7 shows the results of regressions of stock returns on the same variables as in Table 4, with some additional controls. As discussed in section 3, some Malaysian firms have advantages because they

[18] Anwar-connected financial firms that were foreign-listed did experience a significant increase in stock price, but there are only two such firms, so it is hard to interpret this result.

are ethnically favored. As this may have affected their performance in both the crisis and rebound periods, we control for this characteristic throughout our regression analysis. Note that the government publicly states its support for Bumiputera businesses and has implied that any direct measures to support firms were also designed to help Bumiputeras (Mahathir Mohamad 2000).[19] Perkins and Woo (2000) also argue that the government helped Bumiputera firms after the imposition of capital controls. In Panel A, we control for whether a firm is officially Ethnically Favored. This variable is not significant and including it does not have a large effect on our political connections coefficients (the Mahathir-connected coefficient increases slightly.)

In Panel B of Table 7 we use the log of net sales as an alternative measure of firm size. Again the results are essentially unchanged. Panel C 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 addition, the quality of data reported to Worldscope is often better for IFC firms. In these results the coefficients on Politically Connected and Mahathir-connected change in magnitude, but retain their significance and expected sign.

In regressions not reported here, we have also the sample is restricted to non-financial firms only. That is, we have excluded all firms that have primary SIC in the

[19] For example, on p.20, Prime Minister Mahathir writes, "Recovery must be accompanied by the equitable distribution of the economic pie between *Bumiputeras* and *non-Bumiputeras.* Failure to do so could result in the kind of race riots that broke out in May 1969" (Mahathir Mohamad, 2000).

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 coefficients on Politically Connected are significant for the crisis period and for September 1998, and the coefficient on Mahathir-connected remains positive and significant for September 1998.

One potential concern with our results is that politically connected firms may have done relatively well in September 1998 not because capital controls were imposed but just because the market rebounded in that month. Perhaps these were firms that would have done well in any upturn whether that upturn was precipitated by capital controls or not. Figure 1 shows that February 1998 was a strong upturn month in the middle of the "crisis period." In regressions with stock returns for this month only, the coefficient on Politically Connected is negative and insignificant. So at least for this month earlier in the year, politically connected firms did not do well just because there was an upturn in the market, supporting the idea that in September the good performance of politically connected firms was due to the capital controls themselves. We have also checked April 1999 and November 1998, which are the two other largest percentage jumps in the index through the end of 2000. In neither case are the political connection variables significant, or even close to being significant.

7. Support for Favored Firms after the Imposition of Capital Controls

What did the Malaysian government do once capital controls were imposed? Some general reflationary measures were taken, including cutting interest rates and making credit more readily available to consumers and firms (Kaplan and Rodrik

2001.)[20] Mahathir and Daim encouraged banks to lend more, and announced that there would be bailouts for troubled firms (Perkins and Woo 2000). A new expansionary budget was introduced in October 1998 (Perkins and Woo 2000).

There appears to have been both increased subsidies for some firms and punishments for firms that were allied with Anwar. The anecdotal evidence strongly supports the idea that the government used the economy's isolation from short-term capital flows to restore implicit subsidies to some key firms. These subsidies have taken three main forms.

First, the state-owned oil company, Petroliam Nasional Bhd. (known as Petronas), has been called upon to provide bailouts to particular distressed firms (Jayasankaran 1999a). In the most prominent case, Petronas injected cash into the national car company Perusahaan Otomobil Nasional (known as Proton) (Restall 2000a).[21]

Second, a number of companies have received advantageous deals directly from the government. In one widely reported case, the government is preparing to buy back the 29% stake held by Tajudin Ramli in Malaysian Air System (MAS), the operator of Malaysian airlines. The Far Eastern Economic Review reports that the taxpayer will pay more than twice the market price, effectively bailing out Mr. Tajudin at the same time as putting MAS on a firmer financial footing.[22]

[20] For more detail, see Chapter 8 in Mahathir Mohamad 2000.

[21] Petronas is not the only government-controlled institution used to save firms. Khazanah Nasional Bhd., the powerful state-owned investment fund, has proved to be an alternative vehicle for providing financial support.

[22] Mr. Tajudin (also known formally as Tan Sri Tajudin) has a great deal of debt: $263bn personally and 900m ringgit borrowed by Naluri, the listed company in which Mr. Tajudin owns 44% and which in turn holds the stake in MAS (Asian Wall Street Journal weekly edition, July 31-August 6, 2000). There has been difficulty servicing these loans.

Third, arguably the most significant changes have occurred within the banking system. The government has supervised a process of consolidation, including instructing some banks to merge with others. The final picture is not yet settled, but it is clear that bankers who were connected to Anwar are likely to do relatively badly and those with connections to Daim will do relatively better (Jayasankaran 1999b).

All three forms of subsidy may also benefit minority shareholders, for example because they put the supported firms on a stronger financial basis and reduce the incentives to transfer resources out of the firms (Johnson et al 2000). In addition, however, the government has permitted companies to carry out actions that might otherwise be considered violations of laws protecting minority shareholders. The most prominent case involves Renong, which is financially distressed but has a "well-connected" chairman (Restall 2000b). In November 1997, a subsidiary of Renong, United Engineers Malaysia (which has close ties to UMNO) received a waiver of stock market rules, in order to provide a bailout to its parent. The stock market fell sharply on this news, and some observers saw interpreted this reaction as indicating that the government would have difficulties if it provided further support to favored firms. However, in October 1998 after capital controls were in place, the government took over and paid off some of Renong's debts (Perkins and Woo 2000). Again in late 2000, United Engineers Malaysia agreed to purchase $1.8bn of problem assets from Renong. Shareholders have protested these actions.

While it is impossible to measure the size and nature of Malaysian subsidies precisely, the weight of anecdotal evidence supports the notion that well-connected firms received direct and indirect financial support from the government after the imposition of

capital controls. This suggests that the market reaction to the imposition of capital controls in September 1998 was correct in anticipating that particular well-connected firms would receive greater subsidies.

In addition, we have traced the fate of all the firms in Appendix 1 that are listed as affiliated primarily to Anwar. As far as we can ascertain, all of these firms has either been taken over by pro-Mahathir management or the owners have switched allegiance to Mahathir. In many cases there have been asset transfers out of these firms and into firms more closely aligned with Mahathir. Again, it seems that the stock market in September 1998 correctly anticipated what would happen.

Assessment

Malaysia's macroeconomic performance since the imposition of capital controls has been good. Growth was 4.7% in 1999, although there remains a controversy about whether it would have been higher or lower without capital controls (Kaplan and Rodrik 2001, Dornbusch 2000a.) At the same time, there is clear evidence of some government support for favored firms, both directly and – more commonly – through various forms of indirect subsidies.

8. Conclusion

Do capital controls affect all firms equally or do some firms benefit more than others do in a "relationship-based" capitalist system? The evidence from Malaysia strongly supports the idea that firms with connections to strong politicians gained more when capital controls were imposed in September 1998. The main beneficiaries of

capital controls were apparently well-connected firms that did not previously have access to international capital markets. These findings support the Rajan and Zingales idea that capital controls are an essential part of what makes "relationship-based" capitalism function. They are also consistent with the idea that relaxing capital controls while leaving the other institutions of a "relationship-based" system intact, may cause problems.

Clearly, the mere presence of elements of political connections in East Asian economies does not mean that "political relationships" caused the crisis or even that "relationship-based capitalism" 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 suggests rather that the crisis implied these favored firms would lose some of their valuable subsidies, and the imposition of capital controls indicated that these subsidies would be restored for some firms.

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Table 1
Summary statistics and ratio analysis

	All Worldscope firms							Non-Financial Firms Only			
	All	Politically Connected	Non-Connected	(p-value)	Mahathir Connected	Anwar Connected	(p-value)	All	Politically Connected	Non-Connected	(p-value)
Number of Firms	424	67	357		53	14		312	50	262	
RETURNS											
July 1997 to August 1998	-78.5%	-83.0%	-77.7%	(0.010)	-83.4%	-81.3%	(0.529)	-78.1%	-82.1%	-77.3%	(0.065)
September 1998	39.7%	53.2%	37.1%	(0.000)	61.7%	31.3%	(0.021)	38.7%	50.5%	36.1%	(0.007)
October 1998 to Sept. 2000	81.9%	83.5%	81.7%	(0.897)	69.8%	132.2%	(0.036)	81.6%	94.8%	79.1%	(0.348)
SIZE AND GROWTH											
Total Assets ($000)	986,606	1,845,217	820,423	(0.012)	1,799,914	2,013,485	(0.816)	599,554	1,299,733	465,535	(0.000)
Total Asset Growth (1-year)	50.3%	67.3%	46.8%	(0.301)	81.7%	20.3%	(0.376)	42.3%	39.3%	42.9%	(0.834)
PROFITABILITY											
Return on Assets	4.0%	-1.2%	4.9%	(0.041)	-3.0%	5.2%	(0.604)	3.7%	-2.7%	4.9%	(0.062)
Profit Margin	7.1%	9.7%	6.6%	(0.868)	8.9%	12.3%	(0.681)	1.6%	8.2%	0.3%	(0.746)
LIQUIDITY											
Current Ratio	1.77	1.53	1.82	(0.432)	1.52	1.61	(0.846)	1.69	1.54	1.72	(0.516)
Quick Ratio	1.26	1.20	1.27	(0.791)	1.27	0.93	(0.423)	1.26	1.21	1.27	(0.807)
ASSET UTILIZATION											
Asset Turnover Ratio	0.55	0.47	0.56	(0.147)	0.44	0.55	(0.421)	0.65	0.56	0.66	(0.170)
Inventory Turnover Ratio	9.43	12.70	8.82	(0.101)	14.79	5.47	(0.195)	9.50	12.71	8.91	(0.116)
LEVERAGE											
Total Debt/Total Assets (TD/TA)	23.7%	33.7%	21.9%	(0.000)	36.0%	24.6%	(0.298)	26.1%	36.9%	24.0%	(0.000)
Short-Term Debt/Total Debt (STD/TD)	61.8%	57.1%	62.8%	(0.216)	56.8%	58.5%	(0.869)	61.7%	59.3%	62.2%	(0.573)
Increase in TD/TA	2.7%	6.3%	2.0%	(0.062)	8.4%	-70.0%	(0.334)	3.2%	7.7%	2.3%	(0.046)
Increase in STD/TD	-2.2%	-7.7%	-1.1%	(0.088)	-7.6%	-7.9%	(0.975)	-1.9%	-8.9%	-0.5%	(0.062)
OTHER											
Book/Market Ratio	0.45	0.47	0.45	(0.568)	0.50	0.36	(0.105)	0.42	0.45	0.42	(0.450)
Percent Foreign Listed	26.9%	41.8%	24.1%	(0.003)	41.5%	42.9%	(0.928)	26.0%	44.0%	22.5%	(0.002)
Percent Ethnically Favored	26.4%	22.6%	27.2%	(0.495)	27.9%	0.0%	(0.058)	26.4%	29.2%	25.8%	(0.642)

The table presents summary statistics of Malaysian firms in the Worldscope database. The numbers reported are simple averages except as noted. Listed p-values are from t-tests of differences of means, except for last two rows, which are tests of proportions. "Politically connected" refers to a firm with identifiable political connections from Gomez and Jomo (1997). "Ethnically favored" refers to a firm controlled by Bumiputeras (primarily indigenous Malays). A financial firm is defined as one with primary SIC in the range 6000-6999. Financial figures are based on the last reported financial statements prior to July 1997. All figures are simple averages and based on pre-crisis data unless noted otherwise. Data points are missing for some items, thus the number of observations included for each average may vary.

Table 2
Political connections and pre-crisis firm characteristics

Coefficient estimates from regressions of pre-crisis profitability and leverage on political connections

	Panel A: Profitability			Panel B: Leverage		
	Industry controls only	Add control for size	Add control for growth	Industry controls only	Add controls for size and profitability	Add control for growth
	Dependent variable is pre-crisis return on assets			*Dependent variable is pre-crisis debt ratio*		
Intercept	6.580 ***	-14.670	-21.980	20.907 ***	-3.035	9.920
	[2.99]	[-0.86]	[-1.21]	[4.27]	[-0.27]	[0.88]
Politically Connected	-7.260	-8.820	-8.960	11.087 **	4.651 **	4.677 **
	[-1.00]	[-1.05]	[-0.98]	[2.26]	[1.96]	[2.01]
Firm Size		3.605	3.850		3.353 *	2.758
		[1.21]	[1.22]		[1.91]	[1.51]
Profitability					-0.636 ***	-0.630 ***
					[-22.69]	[-23.87]
Firm Growth			0.839			-0.129
			[0.90]			[-0.17]
Industry Dummies	Included	Included	Included	Included	Included	Included
Number of Observations	407	407	359	424	405	358
R-squared	0.031	0.038	0.040	0.108	0.503	0.528

The table reports coefficient estimates from regressions of firm characteristics on a political connections indicator and control variable. All Malaysian firms with available data in the Worldscope database are included. Profitability is Return on Assets, defined as net income divided by total assets (expressed in whole percentages) and measured in the last full year of financial results before July 1997. Leverage is defined as total debt over total assets (expressed in whole percentages) measured at the end of the last full year of financial results before July 1997. Firm size is the log of total assets; growth is the one-year growth rate in total assets (both measured pre-July 1997). "Politically Connected" means firm has an identifiable connection with key government officials from Gomez and Jomo (1997). Industry dummies included for 12 of 13 industries as defined in Campbell (1996), with industry corresponding to the primary SIC code of each firm. The number of observations varies in each specification due to missing data on net income and total asset growth. Numbers in brackets 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.

Table 3
Political connections and crisis-period stock returns

Coefficient estimates from regressions of crisis-period stock returns on political connection variables

	Political connections, without controls	Political connections, with controls, no leverage	Political connections, with controls, incl. leverage	Mahathir and Anwar connections
	Dependent variable is stock return from July 1997 to August 1998			
Intercept	-0.777 ***	-1.239 ***	-1.236 ***	-1.235 ***
	[-90.71]	[-15.64]	[-15.98]	[-15.99]
Politically Connected	-0.053 ***	-0.092 ***	-0.078 ***	
	[-3.32]	[-4.56]	[-3.90]	
Mahathir Connected				-0.083 ***
				[-3.65]
Anwar Connected				-0.060 **
				[-2.14]
Firm Size		0.070 ***	0.077 ***	0.076 ***
		[4.82]	[5.25]	[5.24]
Book/Market Ratio		-0.010	-0.032	-0.031
		[-0.30]	[-0.98]	[-0.94]
Debt Ratio			-0.0015 **	-0.0015 **
			[-2.27]	[-2.24]
Industry Dummies	No	Included	Included	Included
Number of Observations	424	424	424	424
R-squared	0.016	0.198	0.238	0.239

The table reports coefficient estimates from regressions of stock returns on political connection variables and control variables over the Asian crisis period of July 1997 to August 1998. All Malaysian firms with available data in the Worldscope database are included. Numbers in brackets 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 the firm has an identifiable connection with key government officials from Gomez and Jomo (1997). "Mahathir Connected" and "Anwar Connected" indicate the source of the political connection as in Gomez and Jomo (1997) . Firm size is measured as the log of total assets; the debt ratio is measured as total debt over total assets. Industry dummies are included for 12 of 13 industries as defined in Campbell (1996), with the industry corresponding to the primary SIC code of each firm.

Table 4
Stock returns following imposition of capital controls

Coefficient estimates from regressions of stock returns on political connection variables

	September 1998				Oct. 1998 to Sept. 2000	
	Political connections, without controls	Political connections, with controls, no leverage	Political connections, with controls, incl. leverage	Mahathir and Anwar connections	Political connections	Mahathir and Anwar connections
	Dependent variable is stock return in period indicated					
Intercept	0.369 ***	0.592 ***	0.595 ***	0.582 ***	0.520	0.504
	[22.34]	[2.66]	[2.70]	[2.71]	[0.96]	[0.93]
Politically Connected	0.183 ***	0.163 ***	0.142 **		0.054	
	[3.22]	[2.83]	[2.52]		[0.37]	
Mahathir Connected				0.199 ***		-0.036
				[3.04]		[-0.23]
Anwar Connected				-0.051		0.353
				[-0.62]		[1.21]
Firm Size		-0.008	-0.022	-0.020	0.058	0.054
		[-0.23]	[-0.65]	[-0.60]	[0.63]	[0.60]
Book/Market Ratio		0.095	0.113	0.099	-0.148	-0.124
		[1.26]	[1.54]	[1.34]	[-0.84]	[-0.70]
Debt Ratio			0.0033 ***	0.0032 ***	-0.0027	-0.0025
			[3.69]	[3.50]	[-1.07]	[-0.99]
Industry Dummies	No	Included	Included	Included	Included	Included
Number of Observations	413	413	413	413	407	407
R-squared	0.039	0.106	0.134	0.148	0.051	0.054

The table reports coefficient estimates from regressions of stock returns on political connection variables and control variables during the period following the imposition of capital controls. All Malaysian firms with available data in the Worldscope database are included. Numbers in brackets 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 from Gomez and Jomo (1997). "Mahathir Connected" and "Anwar Connected" indicate the source of the political connection as in Gomez and Jomo (1997). Firm size is measured as the log of total assets; the debt ratio is measured as total debt over total assets. 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 5
Capital controls and the interaction of political connections and foreign listings

Coefficient estimates from regressions of stock returns on political connection variables interacted with foreign listing status

	Before crisis: Jan 1996 to June 1997	Crisis period: July 1997 to Aug 1998	Early market upturn: Feb 1998	Capital controls imposed: Sept 1998	Later period: Oct 1998 to Sept 2000
	Dependent variable is stock return in period indicated				
Intercept	-0.291	-1.240 ***	0.808 ***	0.560 ***	0.476
	[-0.90]	[-15.89]	[3.32]	[2.68]	[0.87]
Mahathir Connected*Foreign Listed	-0.159 *	-0.089 ***	0.017	0.101	-0.152
	[-1.95]	[-2.89]	[0.19]	[1.29]	[-0.84]
Mahathir Connected* Not Foreign Listed	-0.026	-0.080 ***	-0.082	0.266 ***	0.044
	[-0.28]	[-3.01]	[-0.98]	[3.05]	[0.21]
Anwar Connected*Foreign Listed	0.082	-0.131 ***	0.152	0.013	0.802 *
	[0.64]	[-3.20]	[1.01]	[0.10]	[1.86]
Anwar Connected*Not Foreign Listed	0.688	-0.005	-0.101	-0.099	0.009
	[1.08]	[-0.23]	[-0.94]	[-0.99]	[0.03]
Firm Size	0.066	0.077 ***	-0.045	-0.019	0.053
	[1.19]	[5.27]	[-1.09]	[-0.56]	[0.58]
Book/Market Ratio	-0.074	-0.030	-0.040	0.102	-0.125
	[-0.51]	[-0.91]	[-0.47]	[1.39]	[-0.70]
Debt Ratio	-0.0013	-0.0015 **	0.0000	0.0032 ***	-0.0025
	[-1.62]	[-2.26]	[-0.01]	[3.42]	[-0.99]
Industry Dummies	Included	Included	Included	Included	Included
Number of Observations	375	424	422	413	407
R-squared	0.052	0.244	0.025	0.155	0.060

The table reports coefficient estimates from regressions of stock returns on political connection variables interacted with foreign trading status and control variables. Stock return periods are as noted in each column. All Malaysian firms with available data in the Worldscope database are included. Numbers in brackets 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 from Gomez and Jomo (1997). "Mahathir Connected" and "Anwar Connected" indicate the source of the political connection as in Gomez and Jomo (1997). "Foreign Listed" indicates that the firm's stock is traded in a foreign market in addition to Malaysia. Firm size is measured as the log of total assets; the debt ratio is measured as total debt over total assets. 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 6
Political connections and stock returns of financial firms

Coefficient estimates from regressions of stock returns on political connection variables (financial firms only)

	Crisis period: July 1997 to August 1998			Capital controls imposed: September 1998		
	Dependent variable is stock return in period indicated					
Intercept	-0.834 ***	-0.831 ***	0.812 ***	0.535	0.504 *	0.416
	[-8.50]	[-8.43]	[-7.93]	[2.10]	[1.98]	[1.66]
Politically Connected	-0.071 ***			0.296		
	[-3.59]			[2.99]		
Mahathir Connected		-0.082 ***			0.405 ***	
		[-3.72]			[3.34]	
Anwar Connected		-0.044			0.037	
		[-1.49]			[0.35]	
Mahathir Connected*Foreign Listed			-0.067 **			0.081
			[-2.26]			[0.87]
Mahathir Connected*Not Foreign Listed			-0.089 ***			0.578 ***
			[-3.33]			[4.06]
Anwar Connected*Foreign Listed			-0.101 ***			0.192 **
			[-7.02]			[2.32]
Anwar Connected*Not Foreign Listed			-0.001			-0.096
			[-0.03]			[-0.69]
Firm Size	0.011	0.010	0.007	-0.029	-0.021	-0.003
	[0.71]	[0.65]	[0.41]	[-0.67]	[-0.50]	[-0.06]
Debt Ratio	-0.0010	-0.0009	-0.0007	0.0017	0.0008	-0.0005
	[-1.48]	[-1.33]	[-1.07]	[0.86]	[0.46]	[-0.30]
Number of Observations	112	112	112	111	111	111
R-squared	0.061	0.064	0.071	0.111	0.150	0.208

The table reports coefficient estimates from regressions of stock returns on political connection variables and control variables. Stock return periods are as noted in each column. All Malaysian financial firms (primary SIC between 6000 and 6999) with available data in the Worldscope database are included. Numbers in brackets 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 from Gomez and Jomo (1997). "Mahathir Connected" and "Anwar Connected" indicate the source of the political connection as in Gomez and Jomo (1997). "Foreign Listed" indicates that the firm's stock is traded in a foreign market in addition to Malaysia. Firm size is measured as the log of total assets; the debt ratio is measured as total debt over total assets.

Table 7
Robustness checks

Coefficient estimates from regressions of stock returns on political connection variables

	A: Control for Ethnicity		B: Alternative Firm Size Measure		C: IFC Firms Only	
	Crisis period: July 1997 to Aug 1998	Capital controls: Sept 1998	Crisis period: July 1997 to Aug 1998	Capital controls: Sept 1998	Crisis period: July 1997 to Aug 1998	Capital controls: Sept 1998
	Dependent variable is stock return in period indicated					
Intercept	-1.132 ***	0.102	-1.125 ***	0.726 ***	-1.456 ***	1.288 ***
	[-12.46]	[0.37]	[-17.25]	[4.07]	[-12.73]	[3.45]
Mahathir Connected	-0.071 ***	0.2129 ***	-0.079 ***	0.2202 ***	-0.066 **	0.1951 *
	[-2.96]	[2.78]	[-3.52]	[3.39]	[-2.55]	[1.97]
Anwar Connected	-0.019	-0.153	-0.057 **	-0.030	-0.061 *	-0.151
	[-0.72]	[-1.49]	[-2.06]	[-0.37]	[-1.72]	[-1.40]
Ethnically Favored	0.014	-0.004				
	[0.95]	[-0.10]				
Firm Size	0.059 ***	0.013	0.026 ***	-0.023 **	0.111 ***	-0.133 **
	[3.69]	[0.33]	[4.56]	[-2.14]	[5.56]	[-2.24]
Book/Market Ratio	0.022	0.067	0.015	0.081	-0.124 ***	0.192
	[0.64]	[0.67]	[0.49]	[1.24]	[-2.72]	[1.20]
Debt Ratio	-0.0025 **	0.0034 ***	-0.0014 **	0.0037 ***	-0.0008	0.0028
	[-6.60]	[3.09]	[-2.11]	[3.94]	[-1.33]	[1.56]
Industry Dummies	Included	Included	Included	Included	Included	Included
Number of Observations	318	308	408	397	156	149
Adjusted R-squared	0.311	0.164	0.256	0.171	0.420	0.321

The table reports coefficient estimates from regressions of stock returns on political connection variables and control variables during the periods indicated. All Malaysian firms with available data in the Worldscope database are included, except in Panel C where only firms included in International Finance Corporation indexes are included. Numbers in brackets 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. "Ethnically Favored" indicates that the firm is controlled by Bumiputera (primarily ethnic Malay) interests. Number of observations is smaller in Panel A because ethnicity is not identifiable for all firms. "Mahathir Connected" and "Anwar Connected" indicate the source of the political connections of Malaysian firms as in Gomez and Jomo (1997). Firm size is measured as the log of total assets, except in Panel B where it is measured as the log of net sales (sales data is missing for 16 firms). The debt ratio is measured as total debt over total assets. Industry dummies included for 12 of 13 industries as defined in Campbell (1996), with industry corresponding to the primary SIC code of each firm.

Appendix 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	UMNO
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

(Continued on next page)

Appendix 1 (Continued)
Politically connected Malaysian firms

COMPANY NAME	Primary Connected Major Shareholder/Director	Primary Political Connection
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	Mahathir
R.J. REYNOLDS BHD	Wan Azmi Wan Hazmah	Daim
RASHID HUSSAIN BHD	Wan Azmi Wan Hamzah	Daim
RENONG BHD	Halim Saad	Daim
SAPURA TELECOMMUNICATIONS BHD	Unspecified	Mahathir
SETRON (MALAYSIA) BHD	Penang Bumiputera Foundation, Kamaruddin 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	Mahathir
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

The table lists Malaysian firms in the Worldscope database which have an identifiable connection 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.

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