Institutional Investors, Political Connections and Analyst Following in Malaysia

Abstract

We examine the association between institutional ownership, political connections, and analyst following in Malaysia from 1999 to 2009. Based on 940 firm-year observations, we document a positive relation between institutional ownership, particularly by Employees Provident Fund (EPF), and analyst following, thus supporting the governance role that institutional investors play in promoting corporate transparency. However, there is no evidence that political connections matter to analyst following. The monitoring role of institutional investors, including EPF, does not appear to be any different between politically connected and non-connected firms.

1.0   Introduction

Financial analysts play an important intermediary role in the capital market by providing information about firms, including estimates of earnings and price forecasts and buy/sell recommendations (Healy & Palepu, 2001). Analysts' services are also demanded by external parties to assist in monitoring (Jensen & Meckling, 1976; Brown *et al*., 2011) and valuing the firms (Bradshaw, 2011). Bushman and Smith (2001) and Healy and Palepu (2001) find lower information asymmetry for firms with greater analyst following, suggesting that analysts provide an important contribution to the firm's information environment (Bushman *et al*., 2004).

Studies that examine the determinants of analyst following have centred on firm characteristics, including institutional ownership (O'Brien & Bhushan, 1990; Hussain, 2000; Ackert & Athanaskos, 2000, 2003; Fernando *et al*., 2012) and corporate governance (Baik *et al*., 2010; Yu, 2010) as well as the rules and regulations of the capital market (Tan *et al*., 2011). However, nothing is known about how analyst following is related to political connections. Our first aim in this paper is to fill this void by providing the first evidence on the association between political connections and analyst following in Malaysia.

The intimate ties between the business elites and political leaders are an integral part of many economies, particularly the emerging economies, including Malaysia. In Malaysia, almost one-third of the listed firms are known to be politically connected (Faccio *et al*., 2006). The extant evidence shows that politically connected firms are highly opaque, and that there is greater information asymmetry between the connected firms and market participants, such as financial analysts. The opacity is due in part to the higher complexity and uncertainty of the income generation process created by the connection (Chen *et al*., 2011). The protection that government provides to connected firms, e.g., government bailouts (Faccio *et al.*, 2006) and the imposition of tariffs on competitors (Goldman *et al.*, 2013), allows managers of these firms

to practise greater discretion on financial disclosure thus further contributing to firm opacity (Bhattacharya *et al*., 2003). Indeed, Chaney *et al*. (2011) find that the quality of accounting information is significantly poorer for politically-connected firms, and Lim *et al.* (2014) report that these firms have a less timely price discovery process. Riahi-Belkaoui (2004) finds managers in connected firms camouflage their performance, increasing earnings opacity. All these studies suggest that connected firms have a poorer information environment. As analysts are attracted to firms with more informative disclosure policies (Lang & Lundholm, 1996), we thus predict that there is a negative relation between political connections and the number of analysts following the firms. Since connected firms receive preferential treatment from governments[1] and are thus less reliant on external funding (Faccio *et al*., 2006), analysts also have less incentive to forecast the earnings of these firms.

Our second aim is to examine the association between institutional ownership and analyst following. Institutional investors have substantial market power, influence, and sophistication in gathering and interpreting information about the firm (Grier & Zychowicz, 1994; Abdul Wahab *et al*., 2007). These attributes provide institutional investors considerable advantage in monitoring corporate activities compared to other investors. Karpoff (2001) finds that institutional investors are successful in shareholder activism, prompting firms to act in accordance with investors' needs. Aggarwal *et al*. (2011) find a positive relation between institutional ownership and corporate governance in a cross-country study. Some supporting evidence of this in Malaysia is provided by Abdul Wahab *et al*. (2008).

The effectiveness of institutional investors as a monitoring body has been recognized by governments that incorporate institutional monitoring duties into regulations in order to ensure

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[1] These preferential treatment include easy access to cheaper bank loans (Chaney, Faccio & Parsley, 2011; Claessens, Feijen & Laeven, 2008; Leuz & Oberholzer-Gee, 2006; Johnson & Mitton, 2003; Khwaja & Mian, 2005); the awarding of profitable government contracts (Goldman, Rocholl & So, 2013; Bertrand, Kramarz, Schoar & Thesmar, 2007; Wu, Wu & Rui, 2012); and lower taxation (Bertrand, Kramarz, Schoar & Thesmar, 2007; Faccio, 2010).

adequate oversight (Starks, 2000). In Malaysia, the Finance Committee in Corporate Governance (FCCG) highlighted the need for greater involvement by institutional investors in corporate governance after the 1998 Asian financial crisis. This has resulted in the establishment of the Minority Shareholders Watchdog Group (MSWG), which aims to protect the interest of minority shareholders through shareholder activism and acts as an independent research organization to advise and encourage good governance practices amongst publicly listed firms (MSWG, 2010). There are four founding members of MSWG,[2] which collectively dominate the market share of institutional investments in Malaysia (Abdul Wahab *et al.,* 2007). Ammer and Abdul Rahman (2009) investigate the effectiveness of shareholder activism by MSWG, and find that MSWG-targeted firms earn higher stock returns than non-targeted firms in the long run. They note that the two most important issues raised by MSWG during annual meetings are financial reporting and corporate governance. Domestic institutional investors can thus provide effective monitoring of corporate behaviour (Chhaochharia *et al.*, 2011).

We argue that financial institutions are able to mitigate information asymmetry by pressuring firms to disclose information. Since institutional investors play an important governance role by promoting corporate transparency, we thus predict that firms with higher institutional ownership have greater analyst following, all else equal. Further, in performing their fiduciary duties (Hawley and Williams, 1997), institutional investors are likely to demand for analyst services to help them assess the potential investee firms (O' Brien & Bhushan, 1990; Shleifer and Vishny, 1997; Hussain, 2000; Jennings, 2005). This suggests it is more profitable for analysts to follow firms with higher institutional shareholdings. Thus, analyst following is expected to be higher for these firms.

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[2] The four founding members of MSWG are the Permodalan Nasional Berhad (PNB), Lembaga Tabung Angkatan Tentera (LTAT), Social Security Organisation (SOCSO), and Pilgrim Fund Board (LUTH).

The effectiveness of institutional investors as monitors of politically connected firms is less clear. One the one hand, the presence of institutional investors in connected firms is expected to promote better reporting environment and increase corporate transparency, thus attracting greater analyst following. However, in Malaysia, government proxies sit on the advisory board of MSWG members. Political involvement in firms' decision making suggests that MSWG investment is likely to be dictated by the government. In an attempt to enhance Bumiputera shareholdings in the capital market under the New Economic Policy (NEP),[3] these domestic institutional investors are likely to skew their investment toward connected firms rather than firms with better governance. The presence of institutional investors in connected firms may thus be politically driven rather than for governance purposes. This argument predicts that the relation between analyst following and institutional ownership is attenuated in politically connected firms.

Based on a sample of 940 firm-year observations from 1999 to 2009, we find some evidence of a positive relation between institutional ownership and analyst following. This supports the corporate governance argument that institutional investors demand greater information disclosure, thus attracting more analysts to the firm. We extend the analysis to reflect the heterogeneity in institutional investors in Malaysia, and find that the ownership of Employees Provident Fund (EPF), the largest institutional investor in Malaysia, is an important determinant of analyst following. Specifically, firms with a higher EPF shareholding have significantly greater analyst following. This result is consistent with the significant participatory role played by EPF in corporate governance (Abdul Wahab *et al.*, 2007). However, MSWG shareholdings are not significant in explaining analyst following.

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[3] The New Economic Policy (NEP) was a social re-engineering and affirmative action program formulated by the National Operation Council in the aftermath of the 1969 racial riot in Malaysia. NEP was adopted in 1971 for a period of 20 years and ucceeded by the National Development Policy (NDP) in 1991. The main objective of NEP (and its successor, NDP) is to achieve national unity by eradicating poverty, irrespective of race, and by restructuring the society to achieve inter-ethnic economic parity between Bumiputera and non-Bumiputera (Gomez and Jomo, 1999). Its second objective is to reduce inter-ethnic economic differences.

Despite the strong and well-documented presence of political connections in Malaysia (Johnson and Mitton, 2003; Faccio *et al.*, 2006), we find no evidence that political connection is an important determinant of analyst following. The monitoring role of institutional investors, including EPF, does not appear to be any different between politically connected and non-connected firms.

Our paper contributes in the following ways. First, it contributes to the increasing volume of research that has capitalized on the political economy of Malaysia (Gomez & Jomo, 1999; Johnson & Mitton, 2003; Adhikari *et al.*, 2006; Gul, 2006; Fraser *et al.*, 2006; Abdul Wahab *et al.*, 2007; Bliss & Gul, 2012a, 2012b) by showing whether a firm is politically connected matters to analysts' decision to follow the firm. Second, we add to the literature on the heterogeneity in institutional shareholders by showing the type of institutional monitoring in Malaysia that matters to analyst following. Our findings have important implications for other countries in the neighbouring region where strong government intervention is a salient feature of the capital markets, and which can substantially affect the information environment for investors.

The rest of paper is set as follows. Section 2 provides a background discussion of political connections and institutional investors in Malaysia. Section 3 outlines our research design, and Section 4 describes the data. Results are discussed in Section 5, and Section 6 concludes the paper.

2.0 Background

2.1 *Political Connections*

Selznick (1949) argues that political connections exist due to uncertainty of government regulations, and lead to firms working together with the government. Theories forwarded by North (1990) and Olson (1993) suggest that the connection provides government with a means

of controlling the firms so that they will act in congruence with the government's agenda. Politicians have been known to extract rents generated by these connections (Shleifer & Vishny, 1994),[4] and in return, the connected firms would receive preferential treatment such as precedence over government contracts.

The growth in research interest on political connections in Malaysia has largely spun from the work of Gomez and Jomo (1999). Subsequent studies utilise their data on political connections and provide valuable insights into the various roles of political connections in Malaysia, e.g., Johnson and Mitton (2003) on capital control, Adhikari *et al*. (2006) on effective tax rates, Gul (2006) on audit fees, Fraser *et al*. (2006) on leverage, Abdul Wahab *et al*. (2007) on corporate governance, and Bliss and Gul (2012a, 2012b) on leverage and cost of debt respectively. Cross countries studies such as Bushman *et al*. (2004) and Faccio *et al.* (2006) have also examined political connections in Malaysia in relation to transparency and other characteristics of connected firms. We add to this line of research by investigating political connections in relation to analyst following.

2.2   Institutional Investors

The purpose of the three government bodies in Malaysia, namely departmental agencies, statutory bodies, and government owned firms, is to accelerate Bumiputera participation in employment, education, and the corporate sector, in particular (Gomez & Jomo, 1999). The latter is achieved through a restructuring of equity participation where foreign equity is to be reduced from 60 to 30 percent, Bumiputera equity raised from practically zero to 30 percent, and Chinese and Indian equity maintained at 40 percent (Norhashim & Abdul Aziz, 2005). Based on data gathered from various Malaysian Plans, we report that Bumiputera share

ownership has increased from a mere 1.5 percent in 1969 to 21.9 percent in 2008 (Appendix A).

Subsequent to the establishment of NEP, it is an "open secret" that the domestic institutional investors in Malaysia provide government the vehicle to enhance and protect the economic interests of Bumiputera investors. Domestic institutional investors are run by Bumiputera who typically hold the position of the Chair of the board of directors. Appointments to the Investment Advisory Board for the top five domestic institutional investors in Malaysia, namely EPF, PNB, LTH, LTAT, and SOCSO, are politically motivated (Norhashim & Abdul Aziz, 2005) as the Board reports directly to the Ministry of Finance (Asher, 2001). It is worth noting that investments of these institutional investors are heavily biased towards Bumiputera-run corporations (Norhashim & Abdul Aziz, 2005). A point in case is the gradual takeover of Malaysian Airline System (MAS) from Naluri Berhad by two main government-run institutional investors, Kumpulan Wang Amanah Pencen (KWAP) and Bank Simpanan Nasional (BSN), in 2001. Although this may be construed as a pure political bailout, others may see this takeover as an important national obligation as there were speculations of a foreign takeover of MAS.

Foreign institutions, mostly pension funds, make up a negligible fraction (~1%) of institutional investors in the Malaysian capital market. Among them are California Public Employees' Retirement System (CALPERS), Teachers Insurance and Annuity Association - College Retirement Equities Fund (TIAA-CREF), United Nation Pension Funds, and State of Ohio Retirement Scheme.

Since the Asian financial crisis, the role of institutional investors in Malaysia has changed dramatically in that they are now expected to play a much bigger role in the capital market, not only to facilitate the government objectives, but also to enhance good governance in firms. Recent evidence suggests that the relation between institutional ownership, particularly by

EPF, and corporate governance has strengthened subsequent to the corporate governance reform in 2001 (Abdul Wahab *et al.*, 2007), in line with the lead role taken by the EPF in establishing MSWG.

3.0 Research Design

To test the research aims, we run the following regression model:

$$Ln(Analyst\_Following)_{it} = a_0 Constant_{it} + a_1 Institutional\_Ownership_{it} +$$
$$a_2 Political\_Connection_{it} + a_3 (Political\_Connection \times Institutional\_Ownership)_{it} +$$
$$a_4 Forecast\_Error_{it} + a_5 X\_Listed_{it} + a_6 1/Price_{it} + a_7 Size_{it} + a_8 Duality_{it} +$$
$$a_9 Board\_Independence_{it} + a_{10} Management\_Ownership_{it} + Industry_{it} + Period_{it} + error_{it},$$

where the dependent variable (*Ln(Analyst_Following)*) is the natural log transformation of the number of analysts following a firm. Our independent variables of interest are *Institutional_Ownership*, *Political_Connection*, and their interaction.

Institutional_Ownership is measured by the percentage ownership of the top five institutional investors in a firm, consistent with Hartzell and Starks (2002) and Abdul Wahab *et al.* (2008). Since institutional investors are known to have different goals and adopt different ways to achieve these goals (Brickley *et al.*, 1988, Bushee *et al.*, 2009),[5] we construct three additional institutional ownership variables to capture institutional investor heterogeneity in Malaysia. Mintchik *et al.* (2011) and Chan *et al.* (2013) provide evidence that the heterogeneity in institutional investors matters to the properties of analyst forecasts; transient investors are drawn to firms with lower forecast errors.

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[5] Bushee *et al.* (2009) employs trading behaviour to assign institutional investors into three distinct groups. The first is transient investors which are institutions with high portfolio turnover and high diversification. The second group is dedicated investors which are institutions that are characterised by low portfolio turnover and concentrated ownership. The final group, quasi-indexer are characterised by diversified portfolio and low portfolio turnover.

We first compute *MSWG*, which constitutes the cumulative shareholdings of the four founding domestic members of MSWG. For the second alternative institutional ownership variable, we single out the shareholding of *EPF* as it is the largest pension fund in the country. The sheer size of EPF suggests that it has the resources to influence the governance structure of its investee firms, which should lead to better financial disclosure. Abdul Wahab *et al.*, (2007) report the relation between EPF shareholding and corporate governance has strengthened subsequent to the corporate governance reform in 2001. The third variable is *OTHERS*, which consists of the cumulative institutional shareholdings that do not fall into *MSWG* and *EPF*.

Political_Connection takes the value of 1 if the firm is politically connected and zero otherwise. A firm is defined to be politically connected if at least one of its large shareholders or top officers is a member of parliament, a minister, or is closely related to a top politician or a party (Faccio *et al.*, 2006). We extend the list of politically connected firms developed by Johnson and Mitton (2003) to include firms controlled by Khazanah Berhad[6] and those identified by Gul *et al.* (2010). Appendix B provides the list of politically connected firms in our sample.

We control for a number of variables in the tests. Following Lang and Lundholm (1996), Lang *et al.* (2004), and Yu (2010), we control for earnings surprise since analyst following is expected to be lower for firms with greater earnings surprise. Earnings surprise (*Forecast_Error*) is proxied by the absolute difference between the analyst forecast of earnings per share (EPS) and actual EPS scaled by share price. Cross-listed firms are subject to greater disclosure requirements and are thus expected to be associated with greater analyst following

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[6] Khazanah Nasional Berhad is the investment holding arm of the Government of Malaysia entrusted to hold and manage the commercial assets of the government and to undertake strategic investments. Khazanah was incorporated under the Companies Act 1965 on 3 September 1993 as a public limited company. The share capital of Khazanah is owned by the Minister of Finance, a body corporate incorporated pursuant to the Minister of Finance (Incorporation) Act, 1957.

(Chen & Steiner, 2000). We control for cross-listed firms by assigning a value of one to *X_Listed* if the firm is also listed in a foreign exchange and zero otherwise. The inverse of share price (*1/Price)* is included in the regression as Brennan and Hughes (1991) find it to be negatively related to analyst coverage. Financial analysts tend to follow larger firms which have the potential to generate more business for them (Ackert & Athanassakos, 2003; Bradshaw, 2011). Larger firms also have a richer information environment which further attracts analyst following. We control for firm size using the natural log transformation of market capitalization as at the end of the financial year (*Size*).

Corporate governance quality is also controlled for in the test. Arguments for a positive relation between corporate governance and analyst following reside on the premise that good governance promotes corporate disclosure (Fan & Wong, 2002). This in turn lowers the analyst's cost of providing an earnings forecast and thus incentivize the analyst to follow the firm (Yu, 2010). Conversely, Healy and Palepu (2001) and Jiraporn *et al.* (2008) regard analyst coverage as a substitute for corporate governance. Good governance in this case lessens the usefulness of the analyst report so that better governed firms with a richer information environment attract fewer analysts. We utilise three corporate governance variables that reflect the board structure. The first is *Duality*, which takes a value of one if the CEO and Chairman positions are held by the same person and zero otherwise. The second is board independence (*Board_Independence*), measured by the proportion of independent directors on the board. The third governance mechanism that we control for is managerial ownership (*Management_Ownership*). Potential expropriation by managers is higher in firms with lower managerial ownership as the interests between managers and shareholders are less aligned in these firms.

Finally, we control for industry sectors. Moyer *et al*. (1989) argue that some industries are affected by regulatory bodies or legal regulations and constraints, and that the regulatory

bodies which oversee these sectors may reduce investors' demand for external financial analysis by acting as a substitute to monitoring. We include year dummies to control for unobserved time effects, including changes in macroeconomic conditions occurring during the sample period.

4.0 Data

Our sample comprises non-financial firms listed on Bursa Malaysia for the period 1999 to 2009. Data on institutional ownership, managerial ownership, Bumiputera directors, and various governance variables are collected from annual reports sourced from the Bursa Malaysia's website, and Compustat Global and Mergent Online databases. We then merge this sample with the sample of firms with data on analyst following from I/B/E/S database. This procedure results in a final sample of 940 firm-year observations.

Panel A of Table 1 shows that the average number of analysts following a firm is 6.21, close to the figure reported by Yu (2010). The average (median) institutional ownership is 16.88 (11.71) percent, and ranges from zero to 94.37 percent. The average (median) shareholding of the largest domestic institutional investor, *EPF,* is 5.31 (3.32) percent, and that of the *MSWG* members stands at 6.66 (2.27) percent. Institutional investors in the *OTHERS* group include state-owned funds, insurance firms, trusts, and foreign institutional investors, and collectively, their average (median) shareholding is 4.89 (0.73) percent. About 28 percent of our sample firms are politically connected.

Panel B shows that the market capitalization (*Size*) of sample firms averages RM 2.433 billion and has a median of RM 614 million. The average (median) absolute forecast error is 67.8 (16.8) percent of share price, and ranges from zero to 2000 percent. Only 6.3 percent of sample firms are cross-listed. Looking at the governance variables, the average (median) proportion of independent directors on the board is 36.58 (33.33), consistent with the

governance code which recommends that at least one third of the board should consist of independent directors. About 35.20 percent of the firms have *Duality* where the CEO and Chairman functions are held by the same person. The average and median managerial ownership are 5.51 and 0.20 percent respectively, with a maximum of 95.73 percent.

{Table 1 here}

5.0 Results

Table 2 provides both Pearson and Spearman-rank correlations between variables. As expected, the correlation between *Institutional_Ownership* and *Ln*(*Analyst_*Following) is 0.192 (*p<0.01*) and 0.234 (*p<0.01*) for Pearson and Spearman-rank respectively. Therefore, there is some preliminary support for the prediction that analyst following is greater for firms with higher institutional ownership. Firm size is positively and significantly correlated with institutional ownership and analyst following, suggesting that larger firms have greater analyst following and higher institutional shareholding. There is also a positive and significant correlation between the political connection variable and institutional ownership and analyst following.

{Table 2 here}

In Table 3, we segregate the firms into those with "high" and "low" analyst following using the sample median (N=3) as the cut-off. Results show that firms with high analyst following have significantly higher institutional ownership and are larger in size. This finding is consistent with the monitoring role of institutional investors in enhancing corporate disclosure, and the greater transparency of larger firms. The univariate tests show that firms with high analyst following are also more likely to be politically connected (*POLCON*) and cross-listed (*X_Listed*), and have lower managerial ownership.

{Table 3 here}

We regress analyst following on its determinants in Table 4, which reports the results for various specification models. In specification (1), we include only the control variables. Both the institutional ownership and political connection variables are added in specification (2), and their interaction is added in specification (3).

Results show a positive and significant relation between institutional ownership and analyst following (0.004, $t=1.713$) in specification (2). A one standard deviation increase in institutional ownership increases the number of analyst following by one. Hence, consistent with our prediction and Bhushan (1989) and O'Brien and Bhushan (1990), firms with higher institutional ownership attract greater analyst following. This finding thus supports the argument that institutional investors play an important governance role by ensuring more informative corporate disclosure policies.

{Table 4 here}

Contrary to expectations, we find a negative but insignificant coefficient for *Political_Connection*, suggesting that analyst following for politically connected firms is indistinguishable from that of other firms. One possible explanation for this is that the connected firms have the biggest slice of domestic institutional investments, which are mostly controlled by the government. In other words, the relation between political connection and analyst following is attenuated by institutional ownership. We test this in specification (3). However, the results show that the interaction term *Political_Connection* $\times$ *Institutional_Ownership* is also insignificant. Of the set of control variables, we find that analyst following is positively related to firm size and the inverse of share price (*1/Price*), but negatively related to earnings surprises.

In Table 5, we consider the heterogeneity of institutional investors in Malaysia. Specifications (1), (3), and (5) report the results for *EPF, MSWG,* and *OTHERS* respectively. In specifications (2), (4), and (6), we include the interaction term between each of these

heterogeneous groups of institutional investors and the political connection dummy. Results show that there is a significantly positive coefficient only for *EPF*. Therefore, unlike the other groups of institutional investors, firms that have higher shareholdings by EPF have greater analyst following. Our results thus hint on the effectiveness of EPF in enhancing corporate governance (Abdul Wahab *et al.*, 2007) and more specifically corporate transparency, which helps to attract more analysts to the firms. The interaction variable *EPF × Political_Connection* (specification (2)) is insignificant, suggesting that EPF plays a similar role in politically connected firms.

There is some evidence that politically connected firms have less analyst following, as shown in specification (2), consistent with the notion that connected firms are more opaque. None of the interaction terms are significant. The results for the control variables are as before, with firm size, the inverse of price, and earnings surprise remaining significant in explaining analyst following.

{Table 5 here}

5.1 *Robustness: Endogeneity*

The relation between analyst following and institutional ownership may be subject to simultaneity bias since firms with higher analyst following are also likely to attract more institutional investors. O'Brien and Bhushan (1990) argue that analysts' decision to follow a firm and financial institutions' decision to invest in the firm are jointly determined through demand and supply considerations of brokerage (which employ analysts) and institutional investors. That is, analysts are motivated to follow firms with larger institutional holdings because of the fee that they can get for providing services to the institutions. At the same time, institutions are attracted by the marketing of brokerages' services and therefore are likely to

invest more heavily in firms that are followed extensively by analysts (O'Brien and Bhushan, 1990; Hussain, 2000).

Our study employs an instrumental variable (IV) in a two-stage least squares (2SLS) regression to address this potential simultaneity bias. We use Bumiputera directors, return on assets (ROA), leverage, and systematic risk as the instruments for the suspect endogenous variable, the percentage of institutional ownership.

The establishment of NEP and its successor NDP is to promote Bumiputera shareholdings in the capital market. Among the initiatives of the NEP is the establishment of Bumiputera-friendly institutions such as PNB, EPF, LTAT, and LTH, which are expected to skew their investment towards firms with Bumiputera directors. Having more Bumiputera directors on the board is thus an important determinant of institutional shareholdings. The presence of Bumiputera directors is a unique institutional feature of the Malaysian market and is not likely to directly influence the number analysts following the firm, except potentially through institutional ownership. Firm performance provides another instrument since institutional investors are likely to be attracted to firms with good performance, but is not directly related to analyst following. We use the return on assets (*ROA*) calculated over the period of five years to proxy for firm performance. Similarly, leverage and systematic risk are likely to affect institutional ownership (as a substitute monitoring mechanism) but not analyst following. Leverage is total debt to total assets, and systematic risk (*Beta*) is computed using the market model on the last 250 days of stock returns.

We control for corporate governance. Bushee and Noe (2000) explain why corporate disclosure, as a dimension of corporate governance, is an important determinant of institutional ownership. First, institutional investors may be attracted to better governed firms with greater information disclosure if such disclosure reduces the price impact of trades. Second, institutional investors may be sensitive to corporate disclosure practices if such disclosures

influence the potential for profitable trading opportunities. Third, corporate disclosure practices may be important to institutions if they rely on public disclosure for corporate governance activities. Chung and Zhang (2011) argue that institutional investors prefer firms with better governance for fiduciary responsibilities, lower monitoring costs, and liquidity reasons. They find institutional shareholding increases with governance quality. We also control for *Managerial_Ownership* and *Size* since managerial ownership can act as a governance mechanism in mitigating agency conflicts (Morck *et al.*, 1988; Short & Keasey, 1999), thus attracting more institutional investment in the firms, and institutional investors have been known to hold a larger stake in larger firms (Gillan & Starks, 2003).

Results from the 2SLS equations are presented in Table 6. From the first-stage regressions, it is evident that the percentage of Bumiputera directors is a predictor of institutional investor ownership. However, the (partial) *F* statistic[7] is 7.193 for *Institutional_Ownership*, suggesting that the instruments are somewhat weak. We examine the validity of the instrument by computing the overidentification statistic,[8] which is chi-square (X^2) distributed with degrees of freedom equal to the difference between the number of instruments and the number of endogenous variables. The statistic shows the instruments used for *Institutional_Ownership* are identified. Finally, the Hausman test does not reject the null of no endogeneity. This highlights the importance of addressing the endogeneity of institutional ownership, and indicates a preference for 2SLS estimates over that of OLS.

The results from the second-stage regressions are consistent with the OLS results, and show an insignificant relation between *Institutional_Ownership* and *ln(Analyst_Following)*.

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[7] We employ the F statistics benchmark figure suggested by Stock *et al.* (2002) which are: 1= 8.96, 2 =11.59, 3 =12.83, 5 = 15.09, and 10 = 20.88.

[8] The Sargan statistics can be obtained by a regression of the second-stage residuals on *all* exogenous variables. If the instruments are valid, the coefficients on the instruments should be close to zero. The formal test is based on the R^2 from this model being close to zero. In particular, $(n-m)*R^2$ is distributed χ^2 with K-L degrees of freedom, where K is the number of exogenous variables *unique* to the first-stage and L is the number of endogenous explanatory variables. *"n"* is the number of observations while *m* is the number of variables in the OLS regression. Note that this test requires that at least one of the instruments is valid (i.e., exogenous).

This result remains insignificant when the interaction term *Political_Connection* ×
Institutional_Ownership is included in the test, as shown in specification (4).

{Table 6 here}

6.0 Conclusion

We investigate whether institutional ownership and political connection are important
drivers of analyst following in Malaysia, where political involvement in corporate decisions is
a salient feature of the capital market. Our sample consists of 940 firm-year observations during
the period 1999-2009. Despite the well documented preferential treatment and protection that
governments provide to politically connected firms in Malaysia, we do not find any difference
in analyst following between connected and non-connected firms.

Consistent with our prediction, we find some evidence of positive relation between
institutional ownership and analyst following. Therefore, institutional investors seem to
provide an important corporate governance mechanism by enhancing corporate disclosure
policies, and this attracts more financial analysts to follow the firms. In examining the
heterogeneity of institutional investors in Malaysia, we find that the relation between
institutional ownership and analyst following is driven by EPF. However, the monitoring role
of institutional investors, including EPF, does not appear to be any different between politically
connected and non-connected firms. Our results are robust to tests of potential endogeniety
between institutional ownership and analyst following.

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Appendix A: Ownership of Share Capital in Limited Firms (1969-2008)

	1969	1970	1975	1980	1985	1990	1995	2000	2004	2008
Total Bumiputras	1.5	2.4	9.2	12.4	18.5	19.3	20.6	18.9	18.9	21.9
Individual	*1*	*1.6*	*3.6*	*4.3*	*n/a*	*14.2*	*18.6*	*14.2*	*15*	*n/a*
Institutions	*0.5*	*n/a*	*n/a*	*n/a*	*n/a*	*n/a*	*n/a*	*3*	*2.2*	*n/a*
Trust Agencies	*n/a*	*0.8*	*5.6*	*8.1*	*n/a*	*5.1*	*2*	*1.7*	*1.7*	*n/a*
Total Non-Bumiputras	34.3	34.3	37.5	40.1	49.5	46.8	43.4	41.3	40.6	36.7
Chinese	*22.8*	*27.2*	*n/a*	*n/a*	*48.2*	*45.5*	*40.9*	*38.9*	*39*	*n/a*
Indian	*0.9*	*1.1*	*n/a*	*n/a*	*0.9*	*1*	*1.5*	*1.5*	*1.2*	*n/a*
Others	*10.6*	*6*	*n/a*	*n/a*	*0.4*	*0.3*	*1*	*0.9*	*0.4*	*n/a*
Nominees	2.1	n/a	n/a	n/a	8	8.5	8.3	8.5	8	n/a
Foreign	62.1	63.3	53.3	47.5	24	25.4	27.7	31.3	32.5	41.4
Total	100	100	100	100	100	100	100	100	100	100

Sources:
Second Malaysia Plan, 1971-1975 (Malaysia, 1971, p. 40)
Third Malaysian Plan, 1976-1980 (Malaysia, 1976, p. 184)
Fourth Malaysian Plan, 1981-1985 (Malaysia, 1981, p. 61)
Sixth Malaysian Plan, 1990-1995 (Malaysia, 1990, p. 13)
Seventh Malaysian Plan, 1996-2000 (p.86)
Ninth Malaysian Plan, 2006-2010 (Malaysia, 2006, p. 356-57)
Tenth Malaysian Plan, 2011-2015 (Malaysia, 2011, p. 148)

Appendix B: List of Politically Connected Firms

1	AFFIN HOLDINGS BHD	35	PADIBERAS NASIONAL BHD [S]
2	AHMAD ZAKI RESOURCES BHD [S]	36	PETRONAS GAS BHD [S]
3	BANDAR RAYA DEVELOPMENTS BHD [S]	37	PHARMANIAGA BHD [S]
4	BERJAYA CORPORATION BHD	38	PROTON HOLDINGS BHD
5	BERJAYA LAND BHD	39	RANHILL BHD [S]
6	BERJAYA SPORTS TOTO BHD	40	SIME DARBY BHD [S]
7	BIMB HOLDINGS BHD [S]	41	STAR PUBLICATIONS (M) BHD [S]
8	BOUSTEAD HOLDINGS BHD	42	TANJONG PUBLIC LIMITED COMPANY
9	CAHYA MATA SARAWAK BHD [S]	43	TELEKOM MALAYSIA BHD [S]
10	CYCLE & CARRIAGE BINTANG BHD [S]	44	TENAGA NASIONAL BHD [S]
11	DIGI.COM BHD [S]	45	TRANSMILE GROUP BHD [S]
12	DRB-HICOM BHD	46	UMW HOLDINGS BHD [S]
13	EDARAN OTOMOBIL NASIONAL BHD [S]	47	UNITED PLANTATIONS BHD [S]
14	FABER GROUP BHD	48	YTL CORPORATION BHD [S]
15	GOH BAN HUAT BHD [S]	49	YTL POWER INTERNATIONAL BHD [S]
16	GOLDEN PLUS HOLDINGS BHD	50	ARAB-MALAYSIAN CORP
17	GUOCOLAND (MALAYSIA) BHD	51	CAMERLIN GROUP
18	HO HUP CONSTRUCTION COMPANY BHD [S]	52	CEMENT INDS.OF MALAYSIA
19	HONG LEONG BANK BHD	53	COMMERCE ASSET-HLDG.
20	HONG LEONG FINANCIAL GROUP BHD	54	GOLDEN HOPE PLTN.
21	HONG LEONG INDUSTRIES BHD [S]	55	KEDAH CEMENT HOLDINGS BHD
22	HUME INDUSTRIES (M) BHD [S]	56	KUMPULAN GUTHRIE
23	IJM CORPORATION BHD [S]	57	LEISURE MANAGEMENT BHD
24	JAYA TIASA HOLDINGS BHD [S]	58	MAGNUM
25	LAND & GENERAL BHD	59	MALAKOFF
26	LANDMARKS BHD	60	MALAYSIA INTL.SHIPPING
27	LION CORPORATION BHD [S]	61	METACORP
28	MALAYAN BANKING BHD	62	METROPLEX
29	MALAYSIA AIRPORT HOLDINGS BHD	63	NALURI
30	MALAYSIAN AIRLINE SYSTEM BHD	64	NANYANG PRESS HDG.
31	MTD CAPITAL BHD [S]	65	OYL INDUSTRIES
32	MULPHA INTERNATIONAL BHD	66	PHILLEO ALLIED BHD
33	MULTI-PURPOSE HOLDINGS BHD	67	THE NEW STRAITS TIMES PRESS (M) BHD
34	NCB HOLDINGS BHD [S]		

Table 1: Descriptive Statistics (1999-2009)

	Mean	Median	Maximum	Minimum	Std. Dev.	N
Panel A: Experimental Variables						
ln(Analyst_Following)	1.176	1.099	3.434	0.000	1.145	940
Analyst_Following	6.217	3.000	31.000	1.000	7.185	940
Institutional_Ownership	16.884	11.710	94.371	0.000	18.203	940
EPF	5.317	3.322	84.554	0.000	6.647	940
MSWG	6.669	2.276	75.956	0.000	12.051	940
OTHERS	4.898	0.738	74.464	0.000	11.931	940
Political_Connection	0.282	0.000	1.000	0.000	0.450	940
Panel B: Control Variables						
Size	20.363	20.236	24.993	15.075	1.480	940
Size (RM'000)	2433000	614100	71510000	3524	6251000	940
Forecast_Error	0.678	0.168	20.023	0.000	1.781	940
X_Listed	0.063	0.000	1.000	0.000	0.243	940
1/Price	0.629	0.418	6.897	0.025	0.696	940
Board_Independence	36.580	33.333	85.714	0.000	17.464	940
Duality	0.352	1.000	1.000	0.000	0.478	940
Management_Ownership	5.505	0.203	95.726	0.000	12.712	940

Analyst_Following is the number of analyst following a firm. *Institutional_Ownership* is top five institutional investors' percentage shareholdings. *EPF* is percentage shareholdings by EPF. *MSWG* is the sum of the percentage shareholdings by LTH, PNB, LTAT, and SOCSO. *OTHERS* is the percentage shareholding of other institutional shareholders. *Political_Connection* takes the value of 1 if the firm is politically-connected and zero otherwise. *Size* is market capitalization. *Forecast_Error* is the absolute forecast error scaled by share price. *X_Listed* takes the value of 1 if the firm is cross-listed and zero otherwise. *1/Price* is the inverse of share price. *Board_Independence* is the proportion of independent directors on the board. *Duality* takes the value of 1 if the CEO and Chairman functions are held by the same person and zero otherwise. *Management_Ownership* is the percentage of direct managerial shareholding.

Table 2: Correlation Matrix (1999-2009, n=940)

	ln(Analyst_Following)	Institutional_Ownership	Political_Connection	Size	Forecast_Error	X_Listed	1/Price	Board_Independence	Duality	Management_Ownership
ln(Analyst_Following)		0.234 ***	0.223 ***	0.583 ***	-0.311 ***	0.132 ***	-0.21 ***	-0.013	0.064 *	-0.134 ***
Institutional_Ownership	0.192 ***		0.145 ***	0.229 ***	-0.043	0.087 ***	-0.069 **	-0.012	0.029	-0.172 ***
Political_Connection	0.234 ***	0.234 ***		0.395 ***	-0.001	0.072 **	-0.132 ***	-0.089 ***	0.102 ***	-0.266 ***
Size	0.579 ***	0.256 ***	0.393 ***		-0.272 ***	0.201 ***	-0.376 ***	-0.049	0.059 *	-0.287 ***
Forecast_Error	-0.172 ***	-0.038	-0.021	-0.158 ***		0.031	0.114 ***	0.08 **	0.041	0
X_Listed	0.139 ***	0.128 ***	0.072 **	0.252 ***	0.027		-0.22 ***	-0.009	-0.056 *	-0.043
1/Price	-0.200 ***	-0.088 ***	-0.119 ***	-0.344 ***	0.025	-0.108 ***		0.064 **	-0.099 ***	0.072 **
Board_Independence	-0.017	0.005	-0.091 ***	-0.040	0.078 **	0.010	0.064 **		-0.085 ***	-0.001
Duality	-0.062 *	-0.098 ***	-0.102	-0.060	-0.049	0.056 *	0.12 ***	0.072 **		0.203 ***
Management_Ownership	-0.148 ***	-0.116 ***	-0.184 ***	-0.237 ***	0.078 **	-0.001	0.041	0.051	-0.134 ***	

Pearson correlations are in italics. *Analyst_Following* is the number of analyst following a firm. *Institutional_Ownership* is top five institutional investors' percentage shareholdings. *EPF* is percentage shareholdings by EPF. *MSWG* is the sum of the percentage shareholdings by LTH, PNB, LTAT, and SOCSO. *OTHERS* is the percentage shareholding of other institutional shareholders. *Political_Connection* takes the value of 1 if the firm is politically-connected and zero otherwise. *Size* is market capitalization. *Forecast_Error* is the absolute forecast error scaled by share price. *X_Listed* takes the value of 1 if the firm is cross listed and zero otherwise. *1/Price* is the inverse of share price. *Board_Independence* is the proportion of independent directors on the board. *Duality* takes the value of 1 if the CEO and Chairman positions are held by the same person and zero otherwise. *Management_Ownership* is the percentage of direct managerial shareholding. . *, ** and *** indicate significance at the 10, 5 and 1 percent levels respectively.

Table 3: Tests of Differences between Firms with High and Low Analyst Following

	Low Analyst Following (n=525)		High Analyst Following (n=415)		t-test	Mann-Whitney
	Mean	Median	Mean	Median	p-value	p-value
Panel A: Experimental Variables						
Institutional_Ownership	13.899	8.763	20.660	15.113	0.000	0.000
EPF	3.880	1.952	7.136	6.045	0.000	0.000
MSWG	6.507	2.064	6.874	2.607	0.517	0.218
OTHERS	3.513	0.267	6.650	1.622	0.000	0.000
Political_Connection	0.210	0.000	0.373	0.000	0.000	
Panel B: Control Variables						
Size	19.717	19.619	21.181	21.115	0.000	0.000
Size (RM'000)	114800.000	331400.000	4058000.000	1479000.000	0.000	0.000
Forecast_Error	0.934	0.250	0.354	0.101	0.000	0.000
X_Listed	0.042	0.000	0.089	0.000	0.007	
1/Price	0.744	0.477	0.483	0.345	0.000	0.000
Board_Independence	36.885	33.333	36.193	36.364	0.612	0.985
Duality	0.377	1.000	0.320	1.000	0.079	
Management_Ownership	6.988	0.291	3.629	0.147	0.000	0.003

Firms are considered to have "high" ("low") analyst following if *Analyst_Following*>median (*Analyst_Following*≤median). *Institutional_Ownership* is top five institutional investors' percentage shareholdings. *EPF* is percentage shareholdings by EPF. *MSWG* is the sum of the percentage shareholdings by LTH, PNB, LTAT, and SOCSO. *OTHERS* is the percentage shareholding of other institutional shareholders. *Political_Connection* takes the value of 1 if the firm is politically connected and zero otherwise. *Size* is market capitalization. *Forecast_Error* is the absolute forecast error scaled by share price. *X_Listed* takes the value of 1 if the firm is cross-listed and zero otherwise. *1/Price* is the inverse of share price. *Board_Independence* is the proportion of independent directors on the board. *Duality* takes the value of 1 if the CEO and Chairman positions are held by the same person and zero otherwise. *Management_Ownership* is the percentage of direct managerial shareholding.

Table 4: Regressions Results for Analyst Following (1999-2009, n=940)

	Expected Direction	(1)		(2)		(3)	
Constant	?	-8.853	***	-8.978	***	-8.968	***
		(-11.405)		(-11.205)		(-11.122)	
Institutional_Ownership	+			0.004	*	0.004	
				(1.713)		(1.166)	
Political_Connection	-			-0.091		-0.097	
				(-0.890)		(-0.759)	
Institutional_Ownership × Political_Connection	?					0.000	
						(0.082)	
Size	+	0.463	***	0.464	***	0.464	***
		(14.913)		(14.124)		(14.094)	
Forecast_Error	-	-0.063	***	-0.062	***	-0.062	***
		(-3.681)		(-3.605)		(-3.605)	
X_Listed	+	0.021		-0.008		-0.009	
		(-0.113)		(-0.043)		(-0.047)	
1/Price	+	0.089	*	0.091	*	0.091	*
		(1.661)		(1.704)		(1.696)	
Board_Independence	+	0.002		0.002		0.002	
		(1.049)		(0.904)		(0.907)	
Duality	-	-0.022		-0.014		-0.014	
		(-0.279)		(-0.180)		(-0.179)	
Management_Ownership	-	-0.001		-0.001		-0.001	
		(-0.231)		(-0.228)		(-0.230)	
Industry fixed	?	Yes		Yes		Yes	
Period fixed	?	Yes		Yes		Yes	
Adjusted R^2		0.388		0.391		0.390	
F-statistic		22.268	***	21.072	***	20.371	***
Period F-statistics		4.72	***	4.496	***	4.491	***

The dependent variable is the log of the number of analysts following a firm. *Institutional_Ownership* is top five institutional investors' percentage shareholdings. *EPF* is percentage shareholdings by EPF. *MSWG* is the sum of the percentage shareholdings by LTH, PNB, LTAT, and SOCSO. *OTHERS* is the percentage shareholding of other institutional shareholders. *Political_Connection* takes the value of 1 if the firm is politically-connected and zero otherwise. *Size* is market capitalization. *Forecast_Error* is the absolute forecast error scaled by share price. *X_Listed* takes the value of 1 if the firm is cross listed and zero otherwise. *1/Price* is the inverse of share price. *Board_Independence* is the proportion of independent directors on the board. *Duality* takes the value of 1 if the CEO and Chairman positions are held by the same person and zero otherwise. *Management_Ownership* is the percentage of direct managerial shareholding. *, ** and *** indicate significance at the 10, 5, and 1 percent levels respectively.

Table 5: Regressions Results for Analyst Following with Heterogeneous Institutional Investors (1999-2009, n=940)

	Expected Direction	(1)		(2)		(3)		(4)		(5)		(6)	
Constant	?	-8.575	***	-8.549	***	-8.995	***	-8.988	***	-8.992	***	-8.902	
		(-10.818)		(-10.765)		(-11.152)		(-11.090)		(-11.172)		(-11.008)	
EPF	+	0.026	***	0.021	***								
		(4.646)		(3.429)									
MSWG	+					0.000		-0.001					
						(-0.104)		(-0.133)					
OTHERS	+									0.001		-0.002	
										(0.328)		(-0.367)	
Political_Connection	-	-0.091		-0.206	*	-0.070		-0.074		-0.075		-0.099	
		(-0.925)		(-1.653)		(-0.692)		(-0.672)		(-0.733)		(-0.912)	
EPF × Political_Connection	?			0.019									
				(1.437)									
MSWG × Political_Connection	?							0.001					
								(0.082)					
OTHERS × Political_Connection	?											0.005	
												(0.693)	
Size	+	0.449	***	0.448	***	0.470	***	0.470	***	0.469	***	0.467	***
		(13.827)		(13.808)		(14.347)		(14.314)		(14.188)		(14.122)	
Forecast_Error	-	-0.063	***	-0.062	***	-0.063	***	-0.063	***	-0.062	***	-0.063	***
		(-3.763)		(-3.688)		(-3.653)		(-3.653)		(-3.638)		(-3.666)	
X_Listed	+	0.030		0.006		0.020		0.019		0.014		0.018	
		(0.168)		(0.036)		(0.109)		(0.107)		(0.078)		(0.097)	
1/Price	+	0.091	*	0.088	*	0.092	*	0.092		0.092	*	0.090	*
		(1.719)		(1.656)		(1.713)		(1.706)		(1.709)		(1.682)	
Board_Independence	+	0.002		0.002		0.002		0.002		0.002		0.002	
		(0.865)		(0.831)		(0.996)		(0.999)		(0.985)		(0.996)	
Duality	-	-0.005		-0.005		-0.026		-0.026		-0.024		-0.025	
		(-0.068)		(-0.068)		(-0.327)		(-0.325)		(-0.304)		(-0.311)	
Management_Ownership	-	0.000		0.000		-0.001		-0.001		-0.001		-0.001	
		(0.012)		(0.100)		(-0.312)		(-0.311)		(-0.306)		(-0.310)	
Industry Fixed		Yes		Yes		Yes		Yes		Yes		Yes	
Period Fixed		Yes		Yes		Yes		Yes		Yes		Yes	
Adjusted R^2		0.407		0.409		0.387		0.387		0.387		0.387	
F-statistic		22.506	***	21.932	***	20.790	***	20.098	***	20.800	***	20.152	***
Period F-statistics		4.756	***	4.661	***	4.780	***	4.775	***	4.755	***	4.823	***

The dependent variable is the log of the number of analysts following a firm. *Institutional_Ownership* is top five institutional investors' percentage shareholdings. *EPF* is percentage shareholdings by EPF. *MSWG* is the sum of the percentage shareholdings by LTH, PNB, LTAT, and SOCSO. *OTHERS* is the percentage shareholding of other institutional shareholders. *Political_Connection* takes the value of 1 if the firm is politically-connected and zero otherwise. *Size* is market capitalization. *Forecast_Error* is the absolute forecast error scaled by share price. *X_Listed* takes the value of 1 if the firm is cross-listed and zero otherwise. *1/Price* is the inverse of share price. *Board_Independence* is the proportion of independent directors on the board. *Duality* takes the value of 1 if the CEO and Chairman positions are held by the same person and zero otherwise. *Management_Ownership* is the percentage of direct managerial shareholding. *, ** and *** indicate significance at the 10, 5 and 1 percent levels respectively.

Table 6: Two-Stage Least Squares (2SLS) Equations (1999-2009, n=940)

	First-stage		Second-stage (*Analyst Following*)							
	Institutional _Ownership		Expected Direction	OLS (1)		2SLS (2)		OLS (3)		2SLS (4)
Constant	-50.915	***	?	-8.978	***	-8.625	***	-8.968	***	-8.960 ***
	(-2.626)			(-11.205)		(-8.187)		(-11.122)		(-10.196)
Institutional_Ownership			+	0.004	*	0.013		0.004		0.016
				(1.713)		(0.918)		(1.166)		(0.851)
Political_Connection	2.971		-	-0.091		-0.113		-0.097		0.099
	(1.179)			(-0.890)		(-0.872)		(-0.759)		(0.315)
Political_Connection × Institutional_Ownership			?					0.000		-0.010
								(0.082)		(-0.622)
Size	2.795	***	+	0.464	***	0.454	***	0.464	***	0.468 ***
	(3.653)			(14.124)		(8.665)		(14.094)		(11.701)
Forecast_Error	-0.021		-	-0.062	***	-0.060	***	-0.062	***	-0.060 ***
	(-0.061)			(-3.605)		(-3.247)		(-3.605)		(-3.280)
X_Listed	9.604	*	+	-0.008		-0.356		-0.009		-0.295
	(1.925)			(-0.043)		(-1.369)		(-0.047)		(-1.258)
1/Price			+	0.091	*	0.046		0.091	*	0.059
				(1.704)		(0.791)		(1.696)		(0.962)
Board_Independence	-0.002		+	0.002		0.001		0.002		0.000
	(-0.035)			(0.904)		(0.294)		(0.907)		(0.091)
Duality	2.162		-	-0.014		0.040		-0.014		0.048
	(1.159)			(-0.180)		(0.442)		(-0.179)		(0.538)
Management_Ownership	-0.065		-	-0.001		0.001		-0.001		0.001
	(-0.924)			(-0.228)		(0.257)		(-0.230)		(0.339)
Bumiputera	0.100	***								
	(3.307)									
ROA	-0.020									
	(-0.585)									
Leverage	0.019									
	(0.885)									
Beta	(0.503)									
	(0.530)									
Industry Fixed	Yes			Yes		Yes		Yes		Yes
Period Fixed	Yes			Yes		Yes		Yes		Yes
Hausman Test (t-stats)						-0.726				-0.746
Hansan-Sargan (X^2)						5.026				5.566
No of Observations	940			940		940		940		940
Adjusted R^2	0.222			0.391		0.422		0.390		0.445
F-statistic	7.193	*		21.072	***	19.754	***	20.371	***	19.182 ***
Period F-statistics	0.585			4.496	***	N/A		4.491	***	N/A

Institutional_Ownership is top five institutional investors' percentage shareholdings. *Political_Connection* takes the value of 1 if the firm is politically-connected and zero otherwise. *Size* is market capitalization. *Forecast_Error* is the absolute forecast error scaled by share price. *X_Listed* takes the value of 1 if the firm is cross listed and zero otherwise. *1/Price* is the inverse of share price. *Board_Independence* is the proportion of independent directors on the board. *Duality* takes the value of 1 if the CEO and Chairman positions are held by the same person and zero otherwise. *Management_Ownership* is the percentage of direct managerial shareholding. *Bumiputera* is the proportion of Bumiputera directors. *ROA* is the return on assets. Leverage is total debt to total assets. *Beta* is systematic risk, computed using the market model on the last 250 days of stock returns. *, ** and *** indicate significance at the 10, 5 and 1 percent levels respectively.