Political Patronage, Audit Quality and the Properties of Analysts' Earnings Forecasts in Malaysia

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ABSTRACT

Based on a sample of 2,034 Malaysian listed firm-year observations for the period 2007-2014, this study shows a negative relationship between dimensions of political patronage (i.e., politically connected firms and the percentage of Bumiputera directors) and analysts' earnings forecast accuracy. Furthermore, the study documents a positive relationship between Bumiputera directors and earnings forecast dispersion. These results suggest that the political patronage of firms is associated with low-quality earnings. We also find that measures of high audit quality are associated with high financial reporting quality and that this is evident in firms with high audit quality showing a weaker negative (positive) relationship between forecast accuracy (dispersion) and political connections and high levels of Bumiputera directors. Overall, the findings suggest that high audit quality plays an important role in mitigating agency costs of information asymmetry by improving the financial information environment.

Keywords: Analysts' forecast accuracy, analysts' forecast dispersion, political patronage, information asymmetry, audit quality, financial reporting quality

JEL Classification: G24, G34, G38

I. INTRODUCTION

The reliability and quality of a firm's financial accounting information are of interest to managers, users, regulators, and auditors, given the influence of this information on decisions affecting the allocation of limited resources in the capital market. Better decisions are expected to be made with the availability of high-quality information inputs. To the extent that accounting information is useful in accurately predicting future earnings, this has implications for the quality of financial reporting and is, therefore, of significant importance. Several studies (e.g., Bhattacharya, Dauok, and Welker 2003; Chaney, Faccio, and Parsley 2011) show that firms that are politically patronized by the government are associated with low-quality financial reporting. If this is the case, then the political patronage of a firm may

influence earnings forecast quality despite an analyst's information processing ability. The baseline research objective of this study is to examine the relationship between political patronage and the properties of analysts' forecasts. The choice of analysts' forecasts as a proxy for financial reporting quality is useful since they are a function of earnings quality, and under the assumption of efficiency variation among analysts, forecast accuracy reflects attributes of earnings that are related to quality (Dechow, Ge, and Schrand 2010, 389). Additionally, the use of analyst forecasts rather than market prices to infer earnings quality has the advantage that analyst forecasts relate only to earnings, whereas market price reflects information other than earnings (Dechow et al. 2010). Furthermore, analysts' compensation and reputation are an increasing (decreasing) function of forecast accuracy (bias). Hence, the use of properties of analysts' forecasts seems to be a reasonable proxy for financial reporting quality since increased access to quality information from management helps to improve accuracy and compensation (Kothari 2001, 156-157).

Bhushan (1989) identifies two possible roles of analysts in the capital market: information intermediary and information provider. Bhushan (1989) argues that if financial analysts are viewed as information intermediaries, the better the quality of information that flows to analysts should lead to a more valuable report that could provide a more accurate forecast. However, if financial analysts are viewed as information providers, then they will compete with the disclosure quality of accounting information provided directly to investors.

An analyst could have high information processing ability but produce poor quality forecasts if the information inputs to the forecast are of low quality. Analysts use reported financial statements, among other inputs, to inform their earnings estimates (Ramnath, Rock, and Shane 2008). Analysts' forecasting is likely more difficult when information asymmetry between investors and managers increases as a result of political patronage. We predict that political patronage has a negative (positive) impact on analysts' forecast accuracy

(dispersion). As political ties are perceived as a threat to the integrity of financial reporting, a stream of research has explored the impact of political connections on the predictive conduct of financial analysts. Of course, financial reporting by politically connected firms will have a beneficial or adverse impact on analysts' assessment of performance, depending on whether such reporting is of higher or lower quality than that of their nonpolitically connected peers.

The primary research objective of this paper is to investigate whether high audit quality mitigates the relationship between political patronage and the properties of analysts' forecast, which is largely unexplored. Auditors monitor the financial reporting process and lend credibility to management's prepared financial statements. This monitoring likely reduces agency costs associated with tensions in the manager-shareholder (i.e., agent-principal) relationship that result from the separation between ownership and control and differing self-interest motives/incentives between the parties. That is, uncertainty about the firm's financial information produced by management (i.e., the agent) is likely to cause the providers of capital (i.e., the principals) to increase agency costs by offering less for the firm's securities and charging a higher cost of capital. Audited financial statements serve as a monitoring mechanism for providing some degree of assurance regarding the firm's information risk and whether the agent is acting in the best interest of the principals (Institute of Chartered Accountants 2005). Fan and Wong (2005) argue that the demand for higher quality audits is reflected in decreasing agency costs, which in turn enhances the information environment. Behn, Choi, and Kang (2008) argue that financial reporting reliability increases with audit quality as users perceive high-quality audits to be reliable in reducing both intentional and unintentional reporting errors. Politically connected firms are often viewed as riskier than nonpolitically connected firms by auditors and thus are charged higher audit fees (Gul 2006; Tee, Gul, Foo, and Teh 2017). We argue that politically connected firms require high audit quality because of their association with management's rent-seeking activities and

the expropriation of the firm's resources and that high-quality audits increase transparency and financial statement credibility. Hence, high audit quality is expected to mitigate the negative (positive) relationship between political connections and analysts' forecast accuracy (dispersion).

We consider three audit quality measures used in the extant literature. The first is the audit quality dichotomous variable, which indicates whether the firm engages a Big 4 international auditor. The second audit quality measure is accruals quality from Dechow and Dichev (2002), a proxy for earnings quality. The third audit quality measure is the audit fees, which is a proxy for audit effort.

The political economy of Malaysia makes it an interesting and relevant case study for our investigation of the influence of political patronage on information asymmetry and how the role of the auditor moderates this relationship. Malaysia, as a developing economy with weak investor protection and low litigation risk (Bliss and Gul 2012a, 2012b), is known for its relationship-based capitalism and cronyism (Johnson and Mitton 2003). Faccio (2006) reports that Malaysia ranks only number two behind the U.K. in terms of the number of politically connected firms.

Because of the importance of political connections to Malaysia's capital market (Johnson and Mitton 2003; Fung, Gul, and Radhakrishnan 2015), we can explore how political cronyism may increase agency costs due to its adverse effect on information asymmetry. Politically connected firms are expected to be associated with poorer earnings quality and higher information asymmetry than nonpolitically connected firms (Chaney et al. 2011).[1] Consistent with other Malaysian political connection studies (e.g., Gul 2006; Bliss and Gul 2012a, 2012b; Abdul Wahab et al. 2018), we opt for the definition by Faccio (2006)

[1] A more benevolent interpretation for low-quality earnings of politically connected firms is that higher government protection might be associated with poorer earnings quality because of inattention on the part of the managers who simply care less about the quality of the information they disclose and invest less time in accurately portraying their accruals (see Chaney et al. 2011).

and Gul (2006) that a firm is considered to be politically connected if one or more of its substantial shareholders or top officers is a member of parliament, a minister or head of state, or closely related to a top government official. This form of political patronage or favoritism consists of informal ties that exist between leading politicians and firms that are run by both Bumiputeras and Chinese business people (Johnson and Mitton 2003). Whether a firm is politically connected is one of the political patronage variables used in this study.

Another variable used that represents political patronage is the percentage of Bumiputera directors on the board. The close association between Malays/Bumiputeras and political control shapes the Malaysian corporate sector. The relationship-based economy of Malaysia may be seen from one perspective as based on cronyism but from another as a means to motivate business interests among the dominant Malays (henceforth referred to as Bumiputeras) and reduce the wealth imbalance among ethnic groups.[2] The various initiatives in government policies that succeeded the 1970 New Economic Policy (NEP), designed to achieve economic parity, still reflect the importance of considering Bumiputeras' capital market participation by providing financial support and the relaxation of certain rules and regulations. However, the appointment of Bumiputera directors on the board is subject to promoting cronyism and nepotism, as only directors that favor the ruling United Malay National Organization (UMNO) party are appointed to boards (Case 2017).

Several studies have used variables based on Bumiputera participation as another proxy for political patronage. In addition to considering political connections, Johnson and Mitton (2003) examine whether an alternative political patronage proxy that described ethnically

[2] The three main ethnic groups in Malaysia are Bumiputeras, which means "*sons of the soil*", Chinese and Indians; the latter two groups resulted from British colonialism which allowed Chinese migrants (from mainland China) and Indian immigrants to work in the plantation sector. As of 2019, Malaysia had a population of 32.5 million people, of which 69 percent were Bumiputeras, 23 percent were Chinese, 7 percent were Indian and 1 percent were other (Department of Statistics Malaysia 2019).

favored firms[3] would perform differently during the capital control period between September 1998 and October 1999 and do not find a significant result.[4] Gul (2006), using the same methodology as Johnson and Mitton (2003), finds a positive and significant association between ethnically favored firms and audit fees. Similarly, Johl, Subramaniam, and Mat Zain (2012) examine the impact of Bumiputera CEOs on audit fees and report a positive relationship.

Based on a sample of 2,034 firm-year observations for the period 2007-2014, the findings show a negatively significant relationship between proxies for political patronage (i.e., politically connected firms and Bumiputera directors on the board) and analysts' earnings forecast accuracy, a proxy for financial reporting quality. Of similar interpretation for reported earnings quality, there is a positive and significant relationship between the percentage of Bumiputera directors and analysts' earnings forecast dispersion. These results suggest that political patronage is associated with low-quality financial reporting and information asymmetry. Our findings on the role of Bumiputera directors are consistent with those of Gul (2006) and Johl et al. (2012) and suggest that political patronage based on ethnicity has a similar effect to that of political patronage based on informal ties (political connections). We also find that high audit quality mitigates the adverse relationship between political patronage and the properties of analysts' forecasts. The results suggest that the auditor's certification of whether the financial statements are free of material misstatement in accordance with generally accepted accounting principles (GAAP) or international financial reporting standards (IFRS) reduces information risk and makes more accurate financial information available to the public. This more accurate information is used to make more accurate analyst forecasts with less forecast dispersion.

[3] Johnson and Mitton (2003) define ethnically favored firms as firms in which Bumiputera shareholdings amounted to 50 percent or more.
[4] Capital control is a method by the government to prevent the free flow of funds between countries (Johnson and Mitton 2003).

The findings of this study contribute to the extant literature in several ways. First, this study shows that the Malaysian economic environment of political and ethnic favoritism is associated with the properties of analyst forecasts, which suggests that government-patronized firms produce low-quality financial information. The finding that politically patronized firms are associated with decreased analysts' forecast accuracy is consistent with Abdul Wahab et al. (2018). Our study also extends Abdul Wahab et al. (2018) and provides evidence on analysts' forecast dispersion, which suggests that political connections decrease the level of consensus among analysts. The findings on Bumiputera directors indicate a link between affirmative actions by the Malaysian government to improve economic participation by Bumiputera directors and political favoritism. Furthermore, our findings add to the political connections literature by suggesting the existence of political favoritism relating to ethnicity.

Second, our findings lend support to financial analysts in Malaysia playing a primary role as information intermediaries compared with the role of information providers. This is evident since both the political patronage variables and audit quality measures are significantly associated with the properties of analysts' forecasts (Bhushan 1989).

We also contribute to the auditing literature by examining how audit quality mitigates the relationship between political patronage and the properties of analysts' forecasts. Hence, our finding that high audit quality improves the information environment by reducing the uncertainty of financial information created by political connectedness supports the work of Fan and Wong (2005) and Guedhami et al. (2014).

This study shows that although firms that are politically patronized tend to report low-quality financial information, the services performed by auditors improve the information environment in Malaysia, leading to more accurate analysts' forecasts with less dispersion. The research herein is based on the assumption that analyst information-processing ability is

constant among different analysts (or that its effects are otherwise random across analysts). This study using the Malaysian setting should be relevant and generalizable to other emerging, relationship-based economies.

The remainder of this paper is organized as follows. Section II describes the political economy in which Malaysian firms operate. The rationale behind our empirical predictions is presented in Section III, and Section IV discusses the research method and data. The results and extended tests are presented in Section V. Section VI concludes the paper.

II. INSTITUTIONAL BACKGROUND

The Political Economy of Malaysia

Its culturally pluralistic and politically authoritarian landscape makes Malaysia distinctly different from most other countries, with its capital market being shaped by the close identification between racial and economic elements (Gomez and Jomo 1999). Although political power is shared among ethnic groups, economic wealth resides mainly in the hands of Malaysian Chinese. Historically, the Malaysian government has developed and enforced policies that are along racial lines. These policies are primarily established to achieve economic parity between the dominant Malays (i.e., Bumiputeras) and the Chinese. The first of such policies was the New Economic Policy[5] established in 1970, which created the world's first affirmative action system that is tied to ethnicity and that favors and benefits Bumiputeras by offering concessions in terms of grants, trade, education, and employment. The successor of the NEP was the New Development Policy (NDP), established in 1991. The NDP continued to promote the same tone of improving economic parity by increasing the equity participation of Bumiputeras through various government-linked corporations and institutional investors. These policies, which were coupled with preferential economic

[5] The Malaysian New Economic Policy (NEP or *DEB* for *Dasar Ekonomi Baru* in Malay) was an ambitious and controversial socioeconomic restructuring affirmative action program launched by the Malaysian government in 1970 under the-then prime minister, Tun Abdul Razak.

treatment, led to business relationships between Malaysian businessmen and politicians.[6] Hence, Malaysia's unique policy of affirmative action, launched to remove Bumiputeras from poverty, led to widespread cronyism.[7]

In 2009, the then-prime minister of Malaysia, Tun Abdullah Ahmad Badawi, announced the removal of the 30 percent Bumiputera equity quota. The subsequent New Economic Policy (NEM) in 2010 sought to treat all ethnic groups equally (Mohamad Yusof et al. 2018). These policies were met with objections from the Malay Consultative Council and led, in part, to establishing various mechanisms for pursuing the economic interests of the Bumiputeras.[8] Please see Appendix A for a chronology of government initiatives aimed at increasing and assisting the economic participation of Bumiputeras. This brief but essential timeline provides the backdrop of the close relationship between ethnic identification and government policies, which create political favoritism towards Bumiputeras. Despite various attempts by the Malaysian government to ensure some equality for other ethnic groups concerning economic participation, the Bumiputera group uses its political voice to defend and protect Bumiputera rights.

(Appendix A about here)

III. EMPIRICAL PREDICTIONS

[6] Gomez and Jomo (1999) highlight that by the year 1995, almost 20 percent of the UMNO's 165 division-chairpersons were millionaires who became politically active to obtain preferential treatment. For instance, former finance minister, Tun Daim Zainuddin, and former deputy prime minister, the late Tun Ghaffar Baba, were prominent businesspersons prior to their ministerial appointments. Additionally, former prime minister Mahathir himself was Chairman of Food Industries of Malaysia, a government-owned corporation.

[7] Some of the benefits include having exclusive business relationships with state-owned enterprises, preferential access to major government contracts and easier access to loans that are usually "soft" (e.g., low-interest loans) and that are often obtainable from government-backed banks or state development bodies and pension funds (Gomez and Jomo 1999).

[8] The Malay Consultative Council was formed by 76 ethnic Malay nongovernmental organizations in February 2010, headed by an independent member of parliament, Dato' Paduka Ibrahim Ali.

Political Patronage and Properties of Analysts' Forecasts

The managerial view suggests that politically connected firms suffer from both the traditional manager-shareholder agency problem and agency problems stemming from the conflicts of interest among managers, politicians, and shareholders (Shleifer and Vishny 1997). Political firms in Malaysia tend to suppress firm-specific information to hide expropriation activities by politicians and cronies, and politicians exploit their control over regulatory policies to favor firms with political connections (Bushman, Piotroski, and Smith (2004). Since the lack of corporate transparency by politically connected firms likely influences analysts' ability to accurately forecast company earnings, we examine how political patronage relates to the properties of analyst forecasts.

Chen, Ding, and Kim (2010) present the initially published research on the relationship between political connections and properties of analyst forecasts in which they included four nonmutually exclusive explanations of why political connections increase information asymmetry, thus making analysts' forecasting difficult (Chen et al. 2010). First, politically connected firms have a somewhat questionable revenue-generating process, which creates uncertainty, making forecasting challenging and difficult. Second, Bhattacharya et al. (2003) argue that political connections offer protection from specific government rulings and that this often reduces transparency. This reduced transparency increases information asymmetry, making forecasting more difficult. Third, Barth, Kasznik, and McNichols (2001) argue that politically connected firms have less need to raise outside capital as they can easily be bailed out by the government (Faccio et al. 2006), which results in investors having less demand for earnings information and creates less incentive for analysts to forecast. Fourth, Chaney et al. (2011) state how politically connected firms with lower earnings quality will make forecasting challenging.

Chen et al. (2010) conducted a study across countries and found that analysts have greater difficulty in predicting the earnings of connected firms and that anti-corruption measures could curb the adverse effect of political connections on the corporate information environment. Their sample consisted of 114 politically connected firms in 17 jurisdictions between 1997 and 2001; of these firms, 23 (out of a total sample of 114 firms) were Malaysian.

Abdul Wahab et al. (2018) extended the work of Chen et al. (2010) by examining the relationship between various dimensions of political patronage and analysts' forecast accuracy. Abdul Wahab et al. (2018) argue that personal, economic, and social dimensions of political patronage in Malaysia could influence analysts' forecast accuracy. Based on a sample of 622 firm-year observations[9] for the period 1999-2003, they find that personal (connections with politicians) and economic (government-linked corporations) dimensions have a negative impact on forecast accuracy, while a social (government-controlled institutional ownership) dimension has a positive effect on forecast accuracy. They conclude that the lack of transparency associated with politically connected firms lowers the quality of reported earnings, which is likely to reduce the accuracy of analyst forecasts. Before exploring the primary research question of our study, we perform a test similar to that of Abdul Wahab et al. (2018), which leads to our baseline hypothesis (H_{1a}), stated in the alternative form:

> H_{1a}: *There is a negative relationship between political patronage and analysts' forecast accuracy.*

Analysts' earnings forecast dispersion is commonly viewed as a measure of ex ante earnings uncertainty (Imhoff and Lobo 1992), possibly due to opaqueness in the firm's

[9] The overall sample used to correct for analysts' self-selection bias is 2,200 firm-year observations.

information environment. Analysts' forecasts of firms with political connections are likely to have greater uncertainty and, therefore, greater forecast dispersion (i.e., the lesser consensus among analysts). Due to obstacles or difficulties for analysts in gathering reliable information, there will probably be a larger dispersion among analysts regarding expected earnings. Expected earnings for nonpolitically connected firms will likely have greater consensus (less dispersion) among analysts, as the quality of information is expected to be relatively better or less opaque. Forecast dispersion, not considered by Abdul Wahab et al. (2018), is examined as the second property of analyst forecasts. Hence, we posit the following hypothesis (H_{1b}), stated in the alternative form:

H_{1b}: There is a positive relationship between political patronage and analysts' forecast dispersion.

Audit Quality, Political Patronage, and the Properties of Analysts' Forecasts

The seminal paper by Fan and Wong (2005) examines the role of auditors in the Asian region by offering two competing arguments. On the one hand, Fan and Wong (2005) argue that external auditors play a governance role even in the weak legal environment observed in East Asia. On the other hand, they argue that the controlling owners are not interested in quality monitoring, as opaqueness helps them to protect private benefits derived from political rents. To test these competing arguments, Fan and Wong (2005) examine whether firms in eight East Asian countries are more likely to hire Big 5 auditors when they are subject to more agency conflicts.[10] Capitalizing on the unique pyramidal ownership structure in the region, they consider entrenchment and alignment effects by differentiating

[10] Fan and Wong's (2005) sample consists of 1,877 firm-year observations from Hong Kong, Indonesia, Malaysia, the Philippines, Singapore, South Korea, Taiwan and Thailand.

between the control and voting rights of the largest shareholders. Fan and Wong (2005) argue that as control increases, the largest shareholders become more entrenched, and thus, the ability to expropriate assets increases.

Similarly, as ownership decreases, the majority shareholders' incentives become less aligned with those of minority shareholders as their wealth is less tied to the firm. This situation increases agency conflicts, resulting in firms hiring Big 5 auditors to mitigate agency costs. Consistent with their argument that auditors can play a governance role, they find that firms in East Asian countries are likely to hire Big 5 auditors as agency conflicts increase. This suggests that auditors do play a governance role in relation to reducing agency conflicts.

Guedhami et al. (2014) investigate the relationship between political connections and the choice of auditor and find that connected firms are more likely to appoint a Big 4 auditor, as the insiders in these firms are eager to improve accounting transparency and convince outside investors that they are not misappropriating resources. Guedhami et al. (2014) extended the findings of Fan and Wong (2005) by showing that the link between political connections and auditor choice is stronger for firms with a complex ownership structure that is conducive to asset expropriations.

However, several recent studies have found that political connections adversely determine the likelihood of engaging quality auditors. Cheng, Hsu, and Kung (2015), Habib, Muhammadi, and Jiang (2017), and Liu, Li, Zeng, and An (2017) argue that the likelihood of engaging quality auditors by politically connected firms is driven by managerial incentives to distort numbers, expropriate assets, and mask related-party transactions. These studies find results consistent with their arguments.

Studies have examined the relationship between audit quality and properties of analysts' forecasts, which result in competing views. Behn et al. (2008) provide evidence on

the relationship between audit quality and properties of analysts' forecasts. They hypothesized that auditor monitoring could improve the quality of accounting earnings by minimizing the difference between a client's reported economic circumstance and the unobservable economic situation of the client. More specifically, a user would likely consider a (perceived) high-quality audit as reliable because it probably reduces both intentional and unintentional reporting errors (Behn et al. 2008).[11] Using two proxies of audit quality—auditor size and industry specialization—Behn et al. (2008) find that quality audits improve analysts' forecast accuracy and reduce forecast dispersion. This first perspective is the decision usefulness perspective (Wu and Wilson 2016), which suggests that high audit quality improves the decision usefulness of financial information available regarding a client and that the accuracy of analysts' forecasting that is reliant on that information may be improved.

The alternative view is when high-quality audits should be able to effectively constrain managerial attempts to bias reported earnings towards the current consensus forecast. The foundation of this perspective relates to the impact of superior audit quality on realized future earnings. Payne (2008) investigates this perspective and finds a positive relationship between specialized auditors and absolute forecast errors. This second perspective is the intervention perspective (Wu and Wilson 2016), which predicts a negative relationship between audit quality and forecast accuracy.

We extend the work of Fan and Wong (2005) and Behn et al. (2008), as our study incorporates political connections in the equation. To our knowledge, no studies have investigated how audit quality mitigates the relationship between political patronage and the properties of analysts' forecasts. Since politically connected firms are associated with low-

[11] A high-quality audit is defined by Behn et al. (2008) as an audit that improves the reliability of financial statement information and allows investors to make more precise estimates of firm value.

quality earnings, we predict that high audit quality will mitigate the negative (positive) impact of political connections on analysts' forecast accuracy (dispersion).

There is a scarcity of research on analysts' forecasts in Malaysia, and the present research, which has not previously been explored, adds to the literature on the Malaysian financial information environment. Politically connected firms are often viewed as risky and incur higher audit fees than nonpolitically connected firms (Gul 2006; Abdul Wahab, Mat Zain, James, and Haron 2009). The higher audit fees may reflect a risk premium as well as the greater audit effort necessary to provide a reasonable degree of assurance about the accuracy of financial statements prepared by politically patronized firms.

Politically connected firms in Malaysia tend to suppress firm-specific information to hide expropriation activities by politicians and cronies, and politicians exploit their control over regulatory policies to favor firms with political connections in return for bribes, political support, and nepotism (Johnson and Mitton 2003; Bushman, Piotroski, and Smith 2004). The lack of transparency by politically connected firms increases information asymmetry between management and financial analysts; however, we expect that the work performed by the auditor, lending credibility to the financial statements and even enhancing audit and financial reporting quality, will mitigate the effect of this information asymmetry. We posit the following hypotheses, stated in the alternative form:

H_{2a}: The negative relationship between political patronage and analysts' forecast accuracy will be weaker for firms with higher audit quality.

H_{2b}: The positive relationship between political patronage and analysts' forecast dispersion will be weaker for firms with higher audit quality.

IV. DATA AND RESEARCH METHOD

Our study is based on a sample of 2,034 firm-year observations of firms listed on Bursa Malaysia from 2007 to 2014. This period is significant, as it covers two important election years: 2008 and 2013. The 2008 election signaled an important shift in the political landscape as the ruling coalition, Barisan Nasional, won fewer than two-thirds of the parliamentary seats and lost five states to the opposition. The results of this election represented a challenge to the competitive authoritarian regime and thus had a direct impact on firms with ties to the ruling coalition (Johansson 2015).[12] Despite the changes made by the government as discussed in Section II, such as the liberalization of the Bumiputera equity quota and establishing mechanisms to promote Bumiputera businesses, Barisan Nasional fared even worse in the 2013 election by losing the popular vote to the opposition.[13] Therefore, the choice of the period 2007-2014, encompassing two significant election years, is ideal for testing the impact of political patronage on firms.

By using an extended period of eight years, we can assess the impact of political connections on the properties of analyst forecasts for a panel dataset. Furthermore, the number of observations is significantly higher than for other published Malaysian analyst papers (e.g., Abdul Wahab et al. 2018, based on five years and 622 observations; and Abdul Wahab et al. 2015, based on ten years and 664 observations). As shown in Table 1, an original sample of 5,840 firm-year observations was collected for firms listed on Bursa Malaysia. This was reduced by 3,709 firm-year observations not included in the I/B/E/S database during the sample period. When the remaining 2,131 observations were merged with

[12] A competitive authoritarian state is a regime in which formal democratic institutions are viewed as the principal means of obtaining and exercising political authority, but where the incumbent ruler violates the rules to such an extent that the state does not meet typical minimum standards for a democracy (Levitsky and Way 2002).

[13] In 2008, Barisan Nasional lost 82 seats but still maintained a simple majority in parliament. In 2013, Barisan Nasional lost a further 7 seats, with only 47.38 percent of the total votes.

BvD's OSIRIS financial database, 97 observations were deleted due to missing financial data, yielding a final sample of 2,034 firm-year observations.[14]

[Table 1 about here]

The following regression models of analyst forecast accuracy and dispersion are used to test our hypotheses:

$$ACCY_{it} = B_0INTERCEPT_{it} + B_1POLCON_{it} + B_2BUMI_{it} + B_3AQ_{it} + B_4BIG4_{it} + B_5LAF + B_6LNHORIZON_{it} + B_7LNNUMEST_t + B_8SIZE_{it} + B_9DEBT_{it} + B_{10}EPS_{it} + B_{11}LOSS_{it} + B_{12}LNAF + B_{13}INT\_AUDIT_{it} + B_{14}ACFIN_{it} + B_{15\text{-}22}INDUSTRIES_{it} + B_{23\text{-}29}PERIODS_{it} + e_{it}$$

(Equation 1)

$$DISP_{it} = B_0INTERCEPT_{it} + B_1POLCON_{it} + B_2BUMI_{it} + B_3AQ_{it} + B_4BIG4_{it} + B_5LAF + B_6LNHORIZON_{it} + B_7LNNUMEST_t + B_8SIZE_{it} + B_9DEBT_{it} + B_{10}EPS_{it} + B_{11}LOSS_{it} + B_{12}LNAF + B_{13}INT\_AUDIT_{it} + B_{14}ACFIN_{it} + + B_{15\text{-}22}INDUSTRIES_{it} + B_{23\text{-}29}PERIODS_{it} + e_{it}$$

(Equation 2)

Properties of Analysts' Forecasts

The dependent variables are forecast accuracy and forecast dispersion. Based on the recommendation of Cheong and Thomas (2011), we operationalized the dependent variables without scaling them by the lagged stock price. Cheong and Thomas (2011) argue that using deflated forecast errors and forecast dispersion as independent (dependent) variables generates spurious results if the dependent (independent) variable is correlated with scale.

[14] OSIRIS is a financial database provided by Bureau van Dijk Electronic Publishing (better known as BvD), established in 1991. They provide comprehensive company databases. BvD specializes in private company data, corporate ownership including beneficial owners' data, M&A data and financial strength metrics.

$$ACCY = (-1)\ (|FORECAST_t - EPS_t|)$$

$FORECAST_t$, used in calculating the dependent variable *ACCY*, refers to the mean I/B/E/S consensus earnings forecasts of year t made during the period before the earnings announcements. EPS_t is the actual earnings per share before extraordinary items in year t, also taken from I/B/E/S.

Our second dependent variable is the dispersion of analysts' forecasts in year t ($DISP_t$), which is defined as the standard deviation of earnings forecasts issued by the analysts. Forecast dispersion is a measure of the degree of uncertainty or disagreement about future earnings (Cheong and Thomas 2011).

$$DISP_t = [STD\ (FORECAST_t)]$$

Political Patronage Test Variables

Two political patronage variables are operationalized. First, we adopt the list of politically connected firms by Fung et al. (2015), in which they expand the lists of Johnson and Mitton (2003) and Faccio (2006). Similar to other Malaysian audit papers (Gul 2006; Abdul Wahab, Gist, and Nik Abdul Majid 2014)), an indicator variable is included in the model that takes on the value of 1 if the firm is politically connected (*POLCON*=1) and zero otherwise. The identification of politically connected firms is based on the definition of Johnson and Mitton (2003).[15] They identify these firms as those that are linked to political leaders (see also Faccio 2006). These firms are connected to politicians such as Tun

[15] Johnson and Mitton (2003) provide a list based on the analysis of Gomez and Jomo (1999) who identified politically connected firms as those that have connections with government officials. Gomez and Jomo (1999) perform a detailed analysis of Malaysian corporations and their political connections prior to the 1997-1998 Asian financial crisis. Our sample firms are, therefore, classified as ''politically connected'' if the firm has officers or major shareholders who are also members of parliament, a minister or head of state, or are closely related to key government officials—primarily Mahathir, Daim, and Anwar.

Mahathir, Dato' Seri Anwar, and Tun Daim or to a political coalition, the Barisan Nasional (BN) or National Front (the English name), which consists of three dominant parties.[16] For the list of politically connected firms, please see Appendix B.[17]

(Appendix B about here)

The political economy of Malaysia is based on a foundation of capital market development initiated to support the accumulation of wealth by the Bumiputeras. As discussed by Mohamad Yusof et al. (2018), Bumiputera participation in the capital market is an essential determinant of government policies affecting capitalism in Malaysia's political landscape. Malaysian board appointments have been proven to be driven by policies of enhancing ownership among the Bumiputera ethnic group. This policy was seen as successful in an early stage, but it was prolonged as a form of cronyism.

Board appointments in Malaysia have shifted from emphasizing a joint partnership among ethnic groups to fulfilling the NEP objectives of enhancing ownership and participation in the capital market by the Bumiputera people. Limited studies have used Bumiputeras as another proxy for political patronage. Johnson and Mitton (2003) investigate whether Bumiputera-dominated firms are associated with lower stock returns during the period of capital control (September 1998 to October 1999) in Malaysia, which was a result of the 1997-1998 Asian financial crisis, but they do not find any supporting evidence. Gul (2006) finds a positive relationship between Bumiputera-dominated firms and audit fees, and this result is further confirmed by the findings of Johl et al. (2012), who report a positive relationship between Bumiputera CEOs and audit fees. Based on this discussion, the percentage of Bumiputera directors on the board (*BUMI*), for which the magnitude of this percentage is intended to capture the extent of a firm's political connectedness, is operationalized as the second political patronage variable.

[16] These parties are United Malay National Organization (UMNO), Malaysian Chinese Association (MCA), and Malaysian Indian Congress (MIC).
[17] There are only 57 of our politically connected firms covered by I/B/E/S.

Audit Quality Test Variables

Three audit quality measures are used that relate to input and output attributes of audit quality, prescribed by Defond and Zhang (2014). The first audit quality measure, which represents the input attribute, is auditor size (*BIG4*). It takes on the value of 1 if the firm engages a Big 4 international auditor or zero otherwise. The second audit quality measure is accruals quality (*AQ*), as defined by Dechow and Dichev (2002), which represents an output attribute. The third audit quality measure is the natural log transformation of audit fees (*LAF*). The reason for our choices is to provide a link between both the demand and supply aspects of audit quality, and these measures capture both input and output characteristics of the audit process to take advantage of their strengths and attenuate their weaknesses (Defond and Zhang 2014). Similar to Defond and Zhang (2014), higher audit quality is equated with greater assurance of high financial reporting quality.

With respect to the auditor size (*BIG4*) dummy variable, Behn et al. (2008) suggest that financial reporting reliability increases with audit quality, which they infer from auditor size and auditor industry specialization. Behn et al. (2008) state that brand name auditors are viewed as providing higher-quality audits based on their perceived competence and independence. Simunic (1980), Palmrose (1986), and Gist (1994) document that Big N auditors charge an audit fees premium and imply that it may be attributable to perceived higher audit quality. DeAngelo (1981) argues that larger accounting firms are motivated to supply high-quality audits to protect their investment in reputation capital. Financial analysts' forecast accuracy is likely to improve with the quality and reliability of financial statement information used to predict future earnings (Behn et al. 2008). Hence, a positive (negative) relationship between *BIG4* and analysts' forecast accuracy (dispersion) is expected.

Accruals quality (*AQ*) is measured as negative one times the absolute value of the residuals from the discretionary accruals model of Dechow and Dichev (2002). The Dechow and Dichev model uses firm-wise time-series regressions with the total current accruals as the dependent variable and the cash flows of previous, current, and subsequent years as the independent variables. [18] The negative sign is designated to show a positive (negative) relationship between accrual quality and *ACCY (DISP)*.

In general, audit fees are a reflection of audit effort, and this is intuitively related to audit quality (Defond and Zhang 2014) and the level of the auditor's litigation risk. However, Defond and Zhang (2014) highlight that the increase in audit fees could be the result of either increased effort or increased risk. Caramanis and Lennox (2008) suggest that increased effort increases financial reporting quality, which would imply that an increase in audit fees should be interpreted as an increase in audit quality. Srinidhi and Gul (2007) argue that due to audits being mandated, audit fees are more likely to reflect audit effort and, therefore, audit quality. Alternatively, audit firms could charge clients higher audit fees because they perceive them to be risky (Gul 2006), and this, in turn, translates to lower earnings quality (Lyon and Maher 2005).

Determinants of Analysts' Forecast Properties

Independent Control Variables

The richness of the information environment must be controlled because earnings predictability varies according to the amount of information available on the firm (Lang and Lundholm 1996). Based on Behn et al. (2008), *LNHORIZON*, which is computed as the natural log of the mean number of days between the forecast estimate dates and the actual

[18] The absolute value of the residuals is an alternative measure of accrual quality when such a measure is needed for each firm-year (Dechow and Dichev 2002, note 6), compared with the standard deviation of the residuals for each firm.

earnings announcement date, controls for the length of the forecast horizon because more information is revealed about the firm's earnings as the announcement date approaches. This variable is expected to be negatively related to forecast accuracy, i.e., the longer the forecast horizon, the lower the forecast accuracy. The natural log of the number of analysts following a client (*LNNUMEST*) is expected to be positively (negatively) related to forecast accuracy (dispersion). Lang and Lundholm (1996) report a positive association between analyst following and forecast accuracy.

Firm size (*SIZE*) is controlled using the natural log transformation of the firm's market capitalization (*MKTCAP*) at year-end. Larger firms tend to have a richer information environment because of their greater media exposure and greater incentives to release more information to enhance their corporate image (Brown, Clarke, How, and Kim 2002). We predict a positive (negative) relationship between *SIZE* and forecast accuracy (dispersion). Black and Carnes (2006) and Hope (2003) argue that firms with higher leverage (measured by total debt to total assets) are expected to have more volatile earnings, leading to more volatile forecast accuracy. Consequently, leverage is controlled in this study using the ratio of total debt to total equity (*DEBT*). Since Eames and Glover (2003) document an association between earnings level and forecast error, earnings per share (*EPS*) is included as a control variable in the model. A loss indicator variable (*LOSS*) for the current year is included since analysts' forecast error tends to be larger for loss firms than for profitable firms, as suggested by Hwang, Jan, and Basu (1996).

The natural log transformation of non-audit fees (*LNAF*) is expected to be positively (negatively) related to *ACCY* (*DISP*). Evidence (see Dopuch, King, and Schwartz 2003; Kinney, Palmrose, and Scholz. 2004; Habib 2012; Abdul Wahab et al. 2014) appears to support the contention that auditor independence is enhanced by the joint provision of audit services and non-audit services (NAS) because of 1) increased audit and financial reporting

quality due to knowledge spillover from NAS to the audit, which enhances audit effectiveness, and 2) the auditor's concern for the loss of reputation and exposure to litigation constrains any desire created by economic bonding with the client to subordinate his or her professional judgment to management's wishes.

Independent Corporate Governance Control Variables

An indicator variable takes on the value of 1 for firms that outsource their internal audit functions (*INT_AUDIT*=1) and is zero otherwise. The work of internal auditing affects financial accounting quality through its many activities, such as risk assessment, strengthening of internal controls, and overall monitoring (Prawitt, Sharp, and Wood 2012). Outsourced internal auditors are perceived to be more objective and competent than in-house internal auditors (Carey, Subramaniam, and Ching 2006; Glover, Prawitt, and Wood 2008). Furthermore, since outsourced internal auditors believe that they are confronted with greater legal liability than in-house internal auditors, they may have more incentive to closely monitor the quality of financial reporting (Ahlawat and Lowe 2004). Based on this, it is expected that firms with outsourced internal audit functions have better corporate governance and are associated with increased audit and financial reporting quality compared with firms with in-house internal audit functions. *INT_AUDIT* is expected to be positively (negatively) related to *ACCY* (*DISP*).

Another corporate governance variable employed is the percentage of audit committee members with financial expertise (*ACFIN*). The presence of financial expertise on the audit committee will likely require (demand) greater audit effort and monitoring by the external auditor (Abbott, Parker, Peters, and Raghunandan 2003; Abdul Wahab et al. 2014). This will likely enhance the information environment, providing analysts with access to better quality financial information, resulting in increased (decreased) forecast accuracy (dispersion).

Fixed-effect variables are included in the models to correct for any heteroscedastic variance due to differences across years (*PERIODS*) and industries (I*NDUSTRIES*) (Stein, Simunic, and O'Keefe 1994; Scott and Gist 2013).[19] Operational definitions of variables are presented in Table 2.

[Table 2 about here]

Sample Description

Table 3 presents the descriptive statistics for 2,034 Malaysian firm-year observations. The mean (median) forecast accuracy (*ACCY*) is -0.045 (-0.018), while the mean (median) *DISP* is 0.016 (0.005). Panel B of Table 3 presents the descriptive statistics for our political patronage variables. The percentage of sample observations with political connections (*POLCON*=1) is 15.3. This percentage is comparable to that of the Fung et al. (2015) study. Please refer to Appendix A for a list of politically connected firms in this study.[20] The average percentage of Bumiputera directors on the board is 34.14, with a range of zero to 100. Politically connected firms such as Telekom Malaysia Berhad and Scomi Group Berhad have a high percentage of Bumiputeras (i.e., 77 and 80 percent, respectively) on their boards of directors, representing an example of the linkage between Bumiputera directors and being politically connected.

Table 3, Panel C summarizes the descriptive statistics for audit quality measures. The percentage of the sample audited by a Big 4 international auditor (*BIG4*) is 80.8.[21] The mean for the negative absolute value of the residuals from Dechow and Dichev's discretionary accruals model, our measure of earnings quality (*AQ*), is -0.089, and the median is -0.060.

[19] The industry classifications for this study are agriculture, construction, manufacturing, consumer, transportation, wholesale, health, hotel and others.
[20] This list of politically connected firms differs from Fung et al. (2015) as not all connected firms are covered by I/B/E/S.
[21] The high percentage of BIG4 is comparable to other Malaysian analyst papers by Abdul Wahab et al. (2015) at 76.1 percent, and Abdul Wahab et al. (2018) at 70 percent.

The mean (median) audit fee (AF) is RM 287,292 (RM 213,498). The mean (median) natural log transformation of audit fees (L*AF*) is RM 12.011 (RM 12.271).

Table 3, Panel D, summarizes the descriptive statistics for independent control variables. A mean (median) of 4.357 (4.595) for the forecast horizon (*LNHORIZON*) indicates that the average (median) number of calendar days between the forecast announcement dates and the subsequent actual earnings announcement date is approximately 114 (99 days) days. The mean natural log transformation of analysts following (*LNNUMEST*) the client is 1.055, indicating an average of five analysts following a firm included in our sample. Firm size (*SIZE*), proxied by the natural log transformation of the firm's market capitalization, has a mean (median) of RM 19.928 (RM 19.371).[22] The proxy for business risk, *DEBT*, which is the ratio of total debt to total equity, has a mean (median) of 1.090 (0.925). This debt ratio mirrors the findings of prior Malaysian studies that show that these firms are highly levered. The average (median) earnings per share (*EPS*) is RM 0.191 (RM 0.120). On average, approximately 7.9 percent of sample observations report a loss (*LOSS*) for the year. The mean natural log transformation of non-audit fees (*LNAF*) is RM 5.705.

Table 3, Panel E, shows the descriptive data for independent corporate governance variables. Firms with outsourced internal audit functions (*INT_AUDIT=1*) account for 48.6 percent of sample observations, while the mean (median) percentage of audit committee members with financial expertise is 40.542 (40.737).

[Table 3 about here]

[22] The currency of Malaysia is Ringgit Malaysia (RM).

V. RESULTS

Univariate Analyses

Table 4 presents both Pearson and Spearman-rank (italicized) correlations between variables and the p-values from two-tailed tests. Forecast accuracy (*ACCY*) is significantly (at the 0.01 level) and negatively correlated (-0.088) with the percentage of Bumiputera directors (*BUMI*) and is significantly (at the .01 level) and negatively correlated (-0.107) with P*OLCON* for the Pearson correlations. Both findings provide initial support for the premise that political patronage is associated with reduced information transparency, resulting in less accurate analyst forecasts. *ACCY* is significantly (at the 0.01 level) and positively correlated (0.113) with *AQ* for the Pearson correlation, consistent with the premise that high-quality audits and financial reporting enhance the information environment and thus improve the accuracy of analyst forecasts. Forecast horizon (*LNHORIZON*), business risk (*DEBT*), earnings per share (*EPS*), and *INT_AUDIT* are significantly correlated (Pearson) with forecast accuracy (*ACCY*). However, the positive Pearson correlation (0.068) between *LNHORIZON* and *ACCY* is not as expected. The correlations between most independent control variables are generally low (i.e., well below 0.30), except for the correlations between the following: *LNNUMEST* and *SIZE* (0.60 and 0.50 for Pearson and Spearman rank, respectively), consistent with our expectation of larger firms having greater following among analysts than smaller firms; *LNNUMEST* and *DISP* (0.815 for Spearman rank), indicating that a greater following among analysts is associated with greater forecast dispersion; *EPS* and *SIZE* (0.387 and 0.378 for Pearson and Spearman rank, respectively), indicating that larger firms are more profitable than smaller firms.

[Table 4 about here]

Table 5 presents the tests of differences in variable mean and median between politically connected and nonpolitically connected firms. Panel A shows a significant difference for *ACCY* between connected and nonconnected firms, indicating less accurate forecasts for politically connected firms, which is consistent with these firms being less transparent. There is a significant difference for *DISP*, indicating more uncertainty and disagreement among analysts (Cheong and Thomas 2011) for politically connected firms. The latter is suggestive of uncertainty about future earnings for politically connected firms. As expected, politically connected firms have a significantly higher mean (median) percentage of Bumiputera directors than nonconnected firms, as shown in Panel B of Table 5. The percentage of politically connected firms audited by a Big 4 auditor is 91.7, compared to 78.8 for nonconnected firms, and this difference is significant at the .01 level. This univariate finding supports the argument by Fan and Wong (2005) and Guedhami et al. (2014) that politically connected firms seek better audit quality to improve corporate transparency. However, it is in contrast to Liu et al. (2017), Habib et al. (2017), and Cheng et al. (2015), who find that politically connected firms are less likely to engage high-quality auditors as they want to mask expropriation activities. Politically connected firms report significantly lower mean accruals quality relative to nonconnected firms, as tabulated in Panel C of Table 5. Moreover, politically connected firms pay significantly higher audit fees than nonconnected firms, and the difference is significant at the .01 level.

Table 5, Panel D summarizes the tests for the independent control variables. There are significant differences for all the variables in this panel, except for *LOSS* and *HORIZON*. There is, however, a significant difference for *LNHORIZON*. Panel E of Table 5 tabulates the results for independent corporate governance control variables, in which the chi-squared finding is significant for *INT_AUDIT*. Accordingly, politically connected firms are less likely to outsource internal auditing than nonpolitically connected firms.

[Table 5 about here]

Tests of differences in variables are extended by partitioning the sample into firms that are below or above the 50 percent of Bumiputera directors (*BUMI* < *or* ≥*50%*), as presented in Table 6. The mean forecast accuracy (*ACCY*) is significantly lower for the *BUMI* subsample above the 50 percent threshold, while the mean dispersion (*DISP*) is significantly higher for firms above the 50 percent value of *BUMI*, as shown in Panel A of Table 6. These findings for *ACCY* and *DISP* suggest less transparent information on firms with a higher percentage of Bumiputera directors (i.e., a proxy for political patronage). Firms that are above the 50 percent threshold of Bumiputera directors are more likely to be politically connected, as shown in Panel B. Panel C of Table 6 shows that firms that are above the 50 percent value of *BUMI* are more likely to engage a *BIG4* international auditor and have significantly lower earnings quality (*AQ*). Further, we find that the firms that are above the 50 percent value of *BUMI* pay significantly higher audit fees (*LAF*). Panel D of Table 6 tabulates the results for the independent control variables. There are significant differences for all of the control variables in this panel, except for the forecast horizon (*HORIZON*). Finally, as shown in Panel E of Table 6, firms with more than 50 percent Bumiputera directors on the board are significantly less likely to outsource their internal audit functions.

The Table 6 results are very comparable to the results reported in Table 5, where the sample is partitioned based on politically connected and nonpolitically connected firms. For instance, we observe at the univariate level that politically patronized firms, either based on *POLCON* or *BUMI*, require a higher level of audit quality, as suggested by the engagement of *BIG4* auditors and higher audit fees. This supports the premise forwarded by Guedhami et al. (2014) that connected firms will seek quality audits to increase financial reporting quality.

Additionally, in general agreement between the two tables is that firms that are politically patronized tend to report lower earnings quality than nonpolitically patronized firms.

[Table 6 about here]

Table 7 presents the differences in variable mean and median between firms audited by Big 4 and non-Big 4 accounting firms. Firms that are audited by Big 4 auditors have significantly higher forecast dispersion than firms that are audited by non-Big 4 auditors.

Panel B of Table 7 tabulates the mean and median differences for political patronage variables. Of the sample observations audited by Big 4 auditors, 17.4 percent are politically connected, whereas only 6.6 percent of sample observations audited by non-Big 4 auditors are politically connected. Firms audited by Big 4 auditors have a significantly higher percentage of Bumiputeras directors than those audited by non-Big 4 firms. As shown in Panel C, we find that firms audited by Big 4 auditors report significantly lower accruals quality (*AQ*) than firms audited by non-Big 4 auditors. In addition, firms engaging Big 4 auditors pay significantly higher audit fees (*LAF*), as expected.

Panel D of Table 7 shows that firms audited by Big 4 auditors are followed by more analysts and are larger in size. Sample firms audited by Big 4 auditors are less likely to outsource their internal audit functions than firms audited by non-Big 4 auditors, and this difference is significant at the .01 level. Firms audited by non-Big 4 auditors have a significantly higher percentage of audit committee members with financial expertise than firms audited by Big 4 auditors, and this difference is significant at the .05 level.

[Table 7 about here]

Multivariate Analyses

Multiple regression analyses using the analyst forecast accuracy (*ACCY*) Equation 1 are performed and presented in Table 8. The t-statistics are shown below the coefficient

estimates, based on robust standard errors employing the procedure known as seemingly unrelated regressions (SUR). The first column of Table 8 shows the baseline model, which includes only the main test variables, except for the interaction terms. Both political patronage proxies are related to forecast accuracy. *POLCON* is negatively and significantly associated with *ACCY* (-0.014, $t=-1.882$, $p<0.05$), providing evidence in support of H_{1a}. The second measure for political patronage, *BUMI*, is also negatively and significantly related to *ACCY* (-0.000, $t=-2.277$, $p<0.05$), providing further evidence in support of H_{1a}. These results are consistent with those of Chen et al. (2010), who suggest that politically connected firms create some form of uncertainty in policies, and with those of Chaney et al. (2011), who suggest that these firms produce a doubtful stream of income and weak earnings quality. The negative relationships confirm the results of Abdul Wahab et al. (2018), who find a negative relationship between political connections and forecast accuracy. Our negative and significant coefficient for *BUMI* signifies that ethnic politics also have an important influence on the information environment. The negative result is similar to Gul (2006) and Johl et al. (2012), who suggest that Bumiputera directors create some level of favoritism that translates to political connections.

Audit quality, measured by *AQ*, is significantly and positively related to forecast accuracy (0.078, $t=4.348$, $p<0.01$), consistent with the prediction that the use of high-quality earnings by analysts leads to better forecasts. Audit quality, measured by *BIG4*, is not significant in the baseline model, suggesting no relationship between *BIG4* and *ACCY*. We found a negative and significant relationship between *LAF* and *ACCY* (-0.008, $t=-2.760$, $p<0.05$).[23] It is possible that the lack of significance of *BIG4* and the incorrect sign of *LAF* are due to the model being underspecified at this point without the interaction terms.

[23] To ascertain that the results are not affected by extreme observations or a few outliers, we winsorized the variables at the 1 or 5 and 99 or 95 percent levels and re-estimated the regression models. In general, the estimation results (untabulated) with winsorized data are similar to those reported in Table 8. Thus, these procedures do not provide any evidence suggesting that our findings are influenced by outliers.

Consistent with the extant literature (e.g., Lang and Lundholm 1996; Black and Carnes 2006; Behn et al. 2008), the forecast horizon (*LNHORIZON*), number of analysts following (*LNNUMEST*), *SIZE*, leverage (*DEBT*), *EPS*, *LOSS*, and *INT_AUDIT* are significantly associated with forecast accuracy (*ACCY*). However, the positive coefficient for *LNHORIZON* is contrary to expectation. *LNAF* and *ACFIN* are not significant in the baseline model.

Interaction terms for political patronage variables with *AQ*, *BIG4*, and *LAF* are added to the model in columns 2, 3, and 4, respectively. We find the interaction term for *POLCON*AQ* to be positively and significantly (0.089, $t=2.389$, $p<0.05$) associated with *ACCY*. The interaction term of *BUMI*AQ* is also positively and significantly (0.004, $t=3.004$, $p<0.01$) associated with *ACCY*. These results suggest that high audit quality, proxied by *AQ*, mitigates the negative impact of political patronage on analysts' forecast accuracy, providing evidence in support of $H_{2a.}$ The interaction term of *POLCON*BIG4*, shown in column 3 of Table 8, is positive and significant (0.066, $t=2.795$, $p<0.01$), and this also provides evidence in support of $H_{2a,}$ suggesting that the Big 4 international firms produce a quality audit that mitigates the negative impact of *POLCON* on *ACCY*. However, contrary to expectation, we find a negative and significant relationship between *BUMI*BIG4* (-0.000, t=-1.550, $p<0.10$) and *ACCY*. This negative relationship could suggest that firms with a high level of Bumiputera directors are perceived as riskier by the auditor. There is no evidence to suggest that *LAF* mitigates the negative relationship between political patronages and *ACCY*, as presented in column 4 of Table 8. A plausible explanation for this insignificant result could be that the effect of audit effort as proxied by audit fees (*LAF*) is already captured in the model by *AQ* and *BIG4*. The results remain qualitatively similar when we combine all the interaction terms (for the full model) in column 5 of Table 8.

[Table 8 about here]

Multiple regression analyses using the analysts' forecast dispersion (*DISP*), Equation 2, are performed and presented in Table 9. Similar to Table 8, column 1 of Table 9 shows the results for *DISP* regressed against control variables and test variables, except for the interaction terms. *POLCON* is not significant, while *BUMI* is positively and significantly (0.000, $t=3.301$, $p<0.01$) associated with *DISP*, providing evidence in support of H_{1b}, suggesting that ethnic politics likely create higher levels of earnings uncertainty and less consensus among financial analysts due to opaqueness in the firm's financial information environment. *LAF* is positively associated with *DISP* (0.002, $t=1.811$, $p<0.10$).

The number of analysts following (*LNNUMEST*), *EPS*, and *LOSS* are positive and significant. The business risk proxy (*DEBT*) is not significant, providing a result similar to that of Behn et al. (2008) using the Zmijewski (1984) financial distress score. Analyst following, earnings level, and the existence of a loss as control variables are also significant in the accuracy model; however, as stated by Behn et al. (2008), the conceptual link between these variables and forecast dispersion is not clearly established in the literature. Columns 2 and 3 of Table 9 include the interaction terms with *AQ* and *BIG4*, respectively. We do not find significant results for the political patronage interaction with *AQ*, as shown in column 2. We find a negative and significant coefficient for *POLCON*BIG4* (-0.021, $t=-2.242$, $p<0.05$), indicating that *BIG4* auditors mitigate the uncertainty and disagreement among analysts concerning expected earnings in politically connected firms. This finding supports H_{2b}. Similar to the results for the *AQ* variable, there is no evidence to suggest that *LAF* mitigates the positive relationship between political patronage and *DISP*, as presented in column 4 of Table 8.

Taken as a whole, the findings from Tables 8 and 9 yield some consensus. First, political patronage does appear to present some form of information uncertainty in the capital market and is associated with a decrease (increase) in analysts' forecast accuracy (dispersion). Second, high audit/financial reporting quality mitigates the negative (positive) relationship between political patronage and analysts' forecast accuracy (dispersion).

[Table 9 about here]

Additional Tests

Interaction Between Political Patronage and Audit Quality for Auditor Size Subsamples

Our investigation is extended by examining the interacting relationship between political patronage variables (*POLCON* and *BUMI*) and proxies of audit quality (*AQ* and *LAF*) for subsamples of firms audited by Big 4 and non-Big 4 auditors. Table 10 presents the results for forecast accuracy (*ACCY*), while Table 11 shows the results for forecast dispersion (*DISP*). The literature suggests that Big 4 auditors do produce higher financial reporting quality and, in this case, better accruals quality than non-Big 4 auditors.[24] Only one of the political patronage variables, *BUMI*, significantly and negatively affects forecast accuracy (-0.000, $t=-3.085$, $p<0.01$) for the Big 4 subsample. We also find, as shown in column 1 of Table 10, that there is a positive relationship between *AQ* and forecast accuracy (0.079, $t=4.573$, $p<0.01$) for firms that are audited by Big 4 auditors. Additionally, there is a negative and significant relationship between *LAF* and *ACCY* (-0.008, $t=-2.259$, $p<0.05$) for firms engaging Big 4 auditors. Column 2 of Table 10 includes the interaction terms between the political patronage variables and *AQ* and *LAF* for firms audited by Big 4 auditors. We find that both *POLCON*AQ* and *BUMI*AQ* are positively and significantly (at the .01 level)

[24] The test using a two-way interaction for subsamples of Big 4 and non-Big 4 firms is easier to interpret than a three-way interaction (see Gul, Fung, and Jaggi 2009, footnote 20, page 272).

related to forecast accuracy, suggesting that Big 4 firms are associated with producing high earnings quality and that this increases forecast accuracy. We find that the interaction *POLCON*LAF* is positively and significantly (0.014, *t=2.113, p<0.05*) related to forecast accuracy, further strengthening the argument that higher audit effort/quality as proxied by audit fees paid to Big 4 auditors mitigates the negative impact of *POLCON* on *ACCY*.

In comparison, there is contrary evidence for firms audited by non-Big 4 auditors. The interaction term *POLCON*AQ*, shown in column 4 of Table 10, is negatively and significantly related to forecast accuracy (-0.697, *t=-1.921, p<0.10*).[25] This finding lends some support to the premise that non-Big 4 firms produce lower earnings quality. We find similar supporting results for *POLCON * LAF* (-0.115, *t=-4.067, p<0.01*); however, there is a positive coefficient for *BUMI*LAF* (0.001, *t=2.460, p<0.05*), possibly signaling that auditors do perceive firms with a high number of Bumiputera directors as risky, which translates to higher uncertainty. In summary, these findings strengthen the argument that Big 4 auditors produce higher financial reporting quality than non-Big 4 auditors.

[Table 10 about here]

Table 11 presents the regressions for forecast dispersion (*DISP*). No evidence is provided to suggest that higher earnings quality in firms audited by Big 4 auditors reduces forecast dispersion. We find that *BUMI* is positively and significantly associated with forecast dispersion for the Big 4 subsample. However, the interactions between political patronage variables and *AQ* and *LAF* for this subsample (Big 4) do not yield any significant results. The findings for the non-Big 4 subsample are mixed, leading us to conclude, as we alluded to

[25] The F-test for the difference in coefficients for *POLCON*AQ* between firms audited by Big 4 and non-Big 4 auditors is significant (*F-value=4.086, p-value=0.043*). Similarly, a three-way interaction of *POLCON*AQ*BIG4* yields positive and significant results (1.018, *t=3.061, p<0.01*). However, the F-test for differences in coefficients for *BUMI*AQ* yields insignificant results (*F-value=0.006, p-value=0.938*). Likewise, a three-way interaction of *BUMI*AQ*BIG4* is insignificant (0.000, *t=0.109, p>0.10*).

when discussing the multivariate results in section 5.2, that more research is needed to develop a better-specified model of analysts' forecast dispersion.

[Table 11 about here]

An Alternative Measure of Political Patronage due to Bumiputera Directors

In the spirit of Johnson and Mitton (2003) and Gul (2006), who defined Bumiputera-dominated firms as firms with 50 percent or more of Bumiputera equity ownership, we operationalized another political patronage measure that takes the value of 1 if the percentage of Bumiputera directors on the board is equal to or greater than 50 percent (*BUMI≥50%*). The untabulated results show that *BUMI≥50%* is negatively and significantly associated with *ACCY* (-0.012, $t=-1.818$, $p<0.10$). We further find that audit quality, proxied by *AQ*, weakens the negative association between *BUMI≥50%* and *ACCY* (0.300, $t=5.249$, $p<0.01$).

Our untabulated results indicate a positive and significant relationship between *BUMI≥50%* and *DISP* (0.008, $t=2.999$, $p<0.01$). Furthermore, we found that the interaction *BUMI≥50%*BIG4* was positive and significant (0.011, $t=1.850$, $p<0.10$). These results suggest that higher levels of Bumiputera directors create information uncertainty. Overall, the alternative measure for Bumiputera directors, *BUMI≥50%*, provides results similar to those reported in Tables 8 and 9.

Endogeneity – Propensity Score Matching

To address the self-selection bias that may potentially confound client characteristics with the effects of politically/nonpolitically connected firms on both *ACCY* and *DISP* (because the treatment and control groups are dissimilar), propensity score matching (PSM) was performed. Self-selection bias is controlled by creating a matched sample based on the predicted probabilities of characteristics from the first-stage probit regression. We ran a first-

stage probit regression with *POLCON* as the dependent variable and with the use of three exclusion restriction variables: market to book value *(MTBV*) and audit opinion (*OPINION*), which takes the value of 1 if there is a material departure from generally accepted accounting principles (GAAP) or if there is a going concern problem, and the percentage of independent directors (*BIND*).[26] The PSM procedure matches observations from the politically connected sample (treatment group) with observations from the control group on several dimensions using the likelihood of receiving treatment.[27]

The PSM method produces a matched sample of 624 firm-year observations (n=312 for the treatment group and n=312 for the control group). The untabulated result for *POLCON* remained negatively and significantly (-0.017, $t=1.860$, $p<0.05$) associated with *ACCY*. However, we failed to find any relationship between *POLCON* and *DISP*.

Elections

Malaysia experienced two elections during the sample period, first in 2008 and then in 2013.[28] Since the election years signaled a shift in the political landscape in Malaysia in which the Barisan Nasional lost its two-thirds majority in 2008 and lost the popular vote in 2013, these events could influence the government patronage of firms. In addition, one might argue that during election periods, any government and policy changes could adversely impact the information environment and thus affect analyst forecasts. These elections may have resulted in some changes to government policies that could affect the level of political connections, especially in relation to Bumiputera directors appointed to boards. Studies have shown that the election in 2008 had an adverse impact on politically connected firms. For

[26] The exclusion restrictions are variables that do not appear in equations (1) and (2) and are used to determine the probit propensity score. In addition, we include the remaining exogenous variables of equations (1) and (2) in the first stage probit regression.
[27] When examining the treatment effect (the effect of political connections on properties of analysts' forecast), the treatment sample (politically connected firms) should have similar characteristics to those of the control sample (nonpolitically connected firms).
[28] The 2008 and 2013 elections were held on March 8, 2008 and May 5, 2013, respectively.

instance, Fung et al. (2015) investigated the impact of political events before and up to the 2008 election on connected firms. Based on an event study approach surrounding four event dates, including the election date, they find that connected firms experienced adverse stock price reactions.[29] Adopting a similar methodology but focusing only on the election date, Johansson (2015) finds similar results for connected firms.

To assess whether our study results vary around the 2008 and 2013 election events, we partitioned the sample into three subsamples to examine any changes in findings around the election periods. The first subsample covers 2007, as this represents the pre-2008 election period of our total sample observations. The second subsample includes the period of 2009-2012, which is the post-2008 election period leading up to the 2013 election event, and the third subsample is for the year 2014, which is the post-2013 election period covered by our total sample observations. Regressions that were similar to those tabulated in Tables 8 (*ACCY*) and 9 (*DISP*) were run. We found that audit quality proxied by accrual quality and auditor size mitigated the negative (positive) impact of political patronage on *ACCY* (*DISP*) during the pre- and post-2008 election periods.

Furthermore, auditor size mitigated the positive impact of *POLCON* on *DISP* for the post-2013 election period. Overall, the results remain qualitatively similar to those reported in Tables 8 and 9.

VI. CONCLUSION

This study has two central objectives. The first and baseline objective is to establish the relationship between political patronage and properties of analysts' forecasts, measured by forecast accuracy and forecast dispersion. Using two proxies for political patronage (i.e., politically connected firms and the percentage of Bumiputera directors on the board), we find

[29] The other three event dates were November 10, 2007, when a mass demonstration was organized by Anwar Ibrahim; November 25, 2007, when a mass demonstration to protest the marginalization of ethnic Indians occurred; and February 13, 2008, when the government announced the election date.

evidence consistent with the literature. *POLCON* and *BUMI* are negatively (positively) and significantly associated with forecast accuracy (dispersion). Poor-quality financial information on politically patronized firms in the market leads to less accurate analyst forecasts and greater uncertainty about future earnings.

The second and primary objective offered is to investigate whether high audit quality mitigates the negative (positive) impact of political patronage on forecast accuracy (dispersion). Evidence is provided that high audit quality, as proxied by accrual quality (*AQ)*, Big 4 auditors, and audit fees, mitigates the negative (positive) impact of political patronage on forecast accuracy (dispersion). While it appears that the quality of financial information is low for firms that are politically patronized, it seems that the services provided by Big 4 auditors compared with those of non-Big 4 auditors improve earnings quality and thus the financial information used in the capital market.

One of the most obvious limitations of this study is the need for a well-specified model of analysts' forecast dispersion. The development of such a model is one avenue for future research. Another avenue for future research is the consideration and evaluation of other audit quality proxies, such as auditor industry specialization.

REFERENCES

Abbott, L., S. Parker, G. Peters, and K. Raghunandan. 2003. The association between audit committee characteristics and audit fees. *Auditing: A Journal of Practice & Theory* 22(2): 17-32.

Abdul Wahab, E. A., A. Allah Pitchay, and R. Ali. 2015. Culture, corporate governance, and analysts forecast in Malaysia. *Asian Review of Accounting* 23 (3): 232–255.

Abdul Wahab, E. A., J. How, J. Park, and P. Verhoeven. 2018. Political patronage and analysts' forecast precision. *Journal of Contemporary Accounting & Economics* 14 (3): 307–320.

Abdul Wahab, E. A., W. E. Gist, and W. Z. Nik Abdul Majid. 2014. Characteristics of non-audit services and financial restatements in Malaysia. *Journal of Contemporary Accounting and Economics* 10 (3): 225–247.

Abdul Wahab, E. A., M. Mat Zain, K. James, and H. Haron. 2009. Institutional investors, political connection and audit quality in Malaysia. *Accounting Research Journal* 22 (2): 167–195.

Ahlawat, S. S., and D. J. Lowe. 2004. An examination of internal auditor objectivity: in-house versus outsourcing. *Auditing: A Journal of Practice & Theory* 23 (2): 149–160.

Barth, M. E., R. Kasznik, and M. F. McNichols. 2001. Analyst coverage and intangible assets. *Journal of Accounting Research* 39 (1): 1–34.

Behn, B., J. Choi, and T. Kang. 2008. Audit quality and properties of analyst earnings forecasts. *The Accounting Review* 83 (2): 327.

Bhattacharya, U., H. Daouk, and M. Welker. 2003. The world price of earnings opacity. *The Accounting Review* 78 (3): 641–678.

Bhushan, R. 1989. Firm characteristics and analyst following. *Journal of Accounting and Economics*, 11(2–3): 255–274.

Black, E. L., and T. A. Carnes. 2006. Analysts' forecasts in Asian Pacific Markets: The relationship among macroeconomic factors, accounting systems, bias and accuracy. *Journal of International Financial Management & Accounting* 17 (3): 208–227.

Bliss, M. A., and F. A. Gul. 2012a. Political connection and cost of debt: Some Malaysian evidence. *Journal of Banking & Finance* 36 (5): 1520–1527.

Bliss, M. A., and F. A. Gul. 2012b. Political connection and leverage: Some Malaysian evidence. *Journal of Banking & Finance* 36 (8): 2344–2350.

Brown, P., A. Clarke, J. C. Y. How, and K. J. P. Lim. 2002. Analysts' dividend forecasts. *Pacific-Basin Finance Journal* 10 (4): 371–391.

Bursa Malaysia. 2013. *Listing Requirements for Bursa Malaysia Securities Bhd.*

Bushman, R., J. Piotroski, and A. Smith. 2004. What determines corporate transparency? *Journal of Accounting Research* 42 (2): 207–252.

Caramanis, C., and C. Lennox. 2008. Audit effort and earnings management. *Journal of Accounting and Economics* 45 (1): 116–138.

Carey, P., N. Subramaniam, and K. C. W. Ching. 2006. Internal audit outsourcing in Australia. *Accounting & Finance* 46 (1): 11–30.

Case, W. 2017. Stress testing leadership in Malaysia: the 1MDB scandal and Najib Tun Razak. *The Pacific Review*, 30(5): 633–654.

Chaney, P. K., M. Faccio, and D. Parsley. 2011. The quality of accounting information in politically connected firms. *Journal of Accounting and Economics* 51 (1–2): 58–76.

Chen, C. J. P., Y. Ding, and C. (Francis) Kim. 2010. High-level politically connected firms, corruption, and analyst forecast accuracy around the world. *Journal of International Business Studies* 41: 1505–1524.

Cheng, C.-L., C.-S. Hsu, and F.-H. Kung. 2015. Political connections, managerial incentives and auditor choice: Evidence from China. *Pacific Accounting Review* 27 (4): 441–465.

Cheong, F. S., and J. Thomas. 2011. Why do EPS forecast error and dispersion not vary with scale? Implications for analyst and managerial behavior. *Journal of Accounting Research* 49 (2): 359–401.

DeAngelo, L. E. 1981. Auditor size and audit quality. *Journal of Accounting and Economics* 3 (3): 183–199.

Dechow, P. M., and I. D. Dichev. 2002. The quality of accruals and earnings: The role of accrual estimation errors. *The Accounting Review* 77 (s-1): 35–59.

Dechow, P., W. Ge, and C. Schrand. 2010. Understanding earnings quality: A review of the proxies, their determinants and their consequences. *Journal of Accounting and Economics* 50 (2–3): 344–401.

DeFond, M., and J. Zhang. 2014. A review of archival auditing research. *Journal of Accounting and Economics* 58 (2): 275–326.

Department of Statistics Malaysia. (2019). Statistics Malaysia. Department of Statistics Malaysia.

Dopuch, N., R. R. King, and R. Schwartz. 2003. Independence in appearance and in fact: an experimental investigation*. *Contemporary Accounting Research* 20 (1): 79–114.

Eames, M. J., and S. M. Glover. 2003. Earnings predictability and the direction of analysts' earnings forecast errors. *The Accounting Review* 78 (3): 707–724.

Faccio, M. 2006. Politically connected firms. *American Economic Review*, 96(1): 369–386.

Fan, J. P. H., and T. J. Wong. 2005. Do external auditors perform a corporate governance role in emerging markets? Evidence from East Asia. *Journal of Accounting Research* 43 (1): 35–72.

Fung, S. Y. K., F. A. Gul, and S. Radhakrishnan. 2015. Corporate political connections and the 2008 Malaysian election. *Accounting, Organizations and Society* 43 (1): 67–86.

Gist, W. 1994. A research note on the relationship between regulation and audit firm size on audit fees. *Journal of Accounting, Auditing & Finance* 9(2): 381-396.

Glover, S. M., D. F. Prawitt, and D. A. Wood. 2008. Internal audit sourcing arrangement and the external auditor's reliance decision*. *Contemporary Accounting Research* 25 (1): 193–213.

Gomez, E. 1996. '*The 1995 Malaysian General Elections: A Report and Commentary*', Institute of Southeast Asian Studies (ISEAS) Occasional Paper No. 93, Singapore.

Gomez, E. T., and K. S. Jomo. 1999. *Malaysia's Political Economy: Politics, Patronage and Profits*. Cambridge: Cambridge University Press.

Guedhami, O., J. A. Pittman, and W. Saffar. 2014. Auditor choice in politically connected firms. *Journal of Accounting Research* 52 (1): 107–162.

Gul, F. A. 2006. Auditors' response to political connections and cronyism in Malaysia. *Journal of Accounting Research* 44 (5): 931–963.

Gul, F. A., S. Y. K. Fung, and B. Jaggi. 2009. Earnings quality: Some evidence on the role of auditor tenure and auditors' industry expertise. *Journal of Accounting and Economics* 47 (3): 265–287.

Habib, A. 2012. Non-audit service fees and financial reporting quality: a meta-analysis. *Abacus* 48 (2): 214–248.

Habib, A., A. H. Muhammadi, and H. Jiang. 2017. Political connections, related party transactions, and auditor choice: Evidence from Indonesia. *Journal of Contemporary Accounting & Economics*, 13(1): 1–19.

Hope, O.-K. 2003. Accounting policy disclosures and analysts' forecasts. *Contemporary Accounting Research* 20 (2): 295–321.

Hwang, L., C. Jan, and S. Basu. 1996. Loss Firms and analysts' earnings forecast errors. *Journal of Financial Statement Analysis* 1 (Winter): 18-31.

Imhoff Jr, E. A., and G. J. Lobo. 1992. The effect of ex-ante earnings uncertainty on earnings response coefficients. *The Accounting Review*: 427–439.

Institute of Chartered Accountants (ICAEW) Audit Quality Forum. 2005. *Agency Theory and the Role of Audit*. England & Wales: ICAEW

Johansson, A. C. 2015. On the challenge to competitive authoritarianism and political patronage in Malaysia. *Asian Pacific Economic Literature* 29 (2): 47–67.

Johl, S., N. Subramaniam, and M. Mat Zain. 2012. Audit committee and CEO ethnicity and audit fees: Some Malaysian evidence. *The International Journal of Accounting*, 47(3): 302–332.

Johnson, S., and T. Mitton. 2003. Cronyism and capital controls: evidence from Malaysia. *Journal of Financial Economics* 67 (2): 351–382.

Kinney Jr., W. R., Z.-V. Palmrose, and S. Scholz. 2004. Auditor independence, non-audit services, and restatements: was the U.S. government right? *Journal of Accounting Research* 42 (3): 561–588.

Kothari, S. P. 2001. Capital markets research in accounting. *Journal of Accounting and Economics* 31 (1–3): 105–231.

Lang, M. H., and R. J. Lundholm. 1996. Corporate disclosure policy and analyst behavior. *Accounting Review* 71 (4): 467–492.

Levitsky, S., and L. Way. 2002. The rise of competitive authoritarianism. *Journal of Democracy* 13 (2): 51–65.

Liu, Y., X. Li, H. Zeng, and Y. An. 2017. Political connections, auditor choice and corporate accounting transparency: evidence from private sector firms in China. *Accounting & Finance*, 57(4): 1071–1099.

Lyon, J. D., and M. W. Maher. 2005. The importance of business risk in setting audit fees: Evidence from cases of client misconduct. *Journal of Accounting Research* 43 (1): 133–151.

Malaysian Institute of Accountants (2013) and/or (1968)

Mohamad Yusof, N. Z., D. Wickramasinghe, and M. Zaman. 2018. Corporate governance, critical junctures and ethnic politics: Ownership and boards in Malaysia. *Critical Perspectives on Accounting* 55 (September): 33–52.

Palmrose, Z-V, 1986. Audit fees and auditor size: further evidence. *Journal of Accounting Research* 24 (spring): 97-110.

Payne, J. L. 2008. The influence of audit firm specialization on analysts' forecast errors. *Auditing: A Journal of Practice & Theory*, 27(2): 109–136.

Prawitt, D. F., N. Y. Sharp, and D. A. Wood. 2012. Internal audit outsourcing and the risk of misleading or fraudulent financial reporting: did Sarbanes Oxley get it wrong? *Contemporary Accounting Research* 29 (4): 1109–1136.

Ramnath, S., S. Rock, and P. Shane. 2008. The financial analyst forecasting literature: A taxonomy with suggestions for further research. *International Journal of Forecasting*, 24(1): 34–75.

Scott, W. D., and W. E. Gist. 2013. Forced auditor change, industry specialization and audit fees. *Managerial Auditing Journal* 28(8): 707-734.

Shleifer, A., and R. Vishny. 1997. A survey of corporate governance. *Journal of Finance* 52 (2): 737–775.

Simunic, D. A. 1980. The pricing of audit services: theory and evidence. *Journal of Accounting Research* 18 (Spring): 161-190.

Srinidhi, B. N., and F. A. Gul. 2007. The differential effects of auditors' nonaudit and audit fees on accrual quality*. *Contemporary Accounting Research* 24 (2): 595–629.

Stein, M., D. Simunic, and T. O'Keefe. 1994. Industry differences in the production of audit services. *Auditing: A Journal of Practice & Theory* 13 (Supplement): 128-142.

Tee, C. M., F. A. Gul, Y.-B. Foo, and C. G. Teh. 2017. Institutional monitoring, political connections and audit fees: evidence from Malaysian firms. *International Journal of Auditing* 21 (2): 164–176.

The Companies Act of Malaysia 1965 (Revised 1973).

U.S. House of Representatives. 2002. The Sarbanes-Oxley Act of 2002. Public Law 107-204 [H.R. 3763]. Washington, D.C.: Government Printing Office.

Wu, Y., and M. Wilson. 2016. Audit quality and analyst forecast accuracy: the impact of forecast horizon and other modeling choices. *Auditing: A Journal of Practice & Theory*, 35(2): 167–185.

Zmijewski, M. E. 1984. Methodology issues related to the estimation of financial distress prediction models. *Journal of Accounting Research* 22 (Supplement): 59-82.

APPENDIX A: VARIOUS MALAYSIAN GOVERNMENT INITIATIVES TO ASSIST BUMIPUTERA ECONOMIC INTERESTS

Events	Year	Notes
New Economic Policy (NEP)	1970	The main premise of the NEP was to achieve economic parity between the dominant Malays (Bumiputeras) and the Chinese.
New Development Policy (NDP)	1991	The NDP continued to promote the Bumiputera economic interests by creating various government link companies such as Khazanah Nasional to assist Bumiputeras firms.
Liberalization of Bumiputera equity quota	2009	The then Prime Minister of Malaysia, Tun Abdullah Ahmad Badawi, announced a liberalization of the 30 percent Bumiputera equity quota that had been around for 37 years.
New Economic Model (NEM)	March 2010	The NEM's objective was to take Malaysia out of the middle-income trap by focusing on all ethnic groups.
Bumiputera Agenda Action Council	June 2010	The Bumiputera Agenda Action Council was formed as a result of the NEM to oversee policies regarding programs to pursue Bumiputera interests.
TERAJU and TERAS were set up	Feb/July 2011	TERAJU (*Unit Penerangan Agenda Bumiputera* or Bumiputera Agenda Steering Unit) was set up in February 2011 to spearhead Bumiputera transformation and participation in the economy. TERAS or High Performance Bumiputera Companies were established in July 2011 to assist small and medium Bumiputera enterprises, and a RM 2 billion Facilitation Fund was made available in August 2011 for eligible Bumiputera firms to carry out big projects with a minimum qualifying value of RM 20 million.
Bumiputera Transformation Map	November 2011	The government launched the Bumiputera Economic Transformation Roadmap, focusing on three strategic issues: policies, education, and development of Bumiputera businesses.
Bumiputera Economic Empowerment Council	September 2013	The Malaysian government launched the Bumiputera Economic Empowerment Council, in which one of its objectives was to enhance Bumiputera equity ownership in the corporate sector.

APPENDIX B: LIST OF POLITICALLY CONNECTED FIRMS

	Name		Name
1	AFFIN HOLDINGS BERHAD	30	MEDIA PRIMA BHD
2	AHMAD ZAKI RESOURCES BHD	31	MISC BHD
3	BANDAR RAYA DEVELOPMENT BERHAD	32	MMC CORPORATION BHD
4	BERJAYA CORPORATION BHD	33	MTD ACPI ENGINEERING BHD
5	BERJAYA SPORTS TOTO BHD	34	MULTI-PURPOSE HOLDINGS BHD
6	BOUSTEAD HEAVY INDUSTRIES CORP BHD	35	PADIBERAS NASIONAL BHD
7	BOUSTEAD HOLDINGS BHD	36	PARKSON HOLDINGS BHD
8	CAHYA MATA SARAWAK BHD	37	PETRONAS GAS BHD
9	DRB-HICOM BHD	38	POS MALAYSIA
10	EASTERN & ORIENTAL BHD	39	PPB GROUP BHD
11	FABER GROUP BHD	40	RAMUNIA HOLDINGS
12	FIAMMA HOLDINGS BHD	41	RHB CAPITAL BERHAD
13	HARBOUR-LINK GROUP BHD	42	SCOMI GROUP BERHAD
14	HO HUP CONSTRUCTION COMPANY BHD	43	SCOMI MARINE BHD
15	HONG LEONG BANK BERHAD	44	SHANGRI-LA HOTELS (M) BHD
16	HONG LEONG INDUSTRIES BHD	45	SINO HUA-AN INTERNATIONAL BERHAD
17	IJM PLANTATIONS BHD	46	TASEK CORPORATION BHD
18	JT INTERNATIONAL BHD	47	TEBRAU TEGUH BHD
19	KONSORTIUM LOGISTIK BHD	48	TELEKOM MALAYSIA BHD
20	KUMPULAN FIMA BHD	49	TENAGA NASIONAL BHD
21	LANDMARKS BHD	50	TIME DOTCOM BHD
22	LION CORPORATION BHD	51	UEM LAND HOLDINGS BHD -
23	MAA GROUP BERHAD	52	UMW HOLDINGS BHD
24	MAGNUM BERHAD	53	UNITED PLANTATIONS BHD
25	MAH SING GROUP BHD	54	UTUSAN MELAYU (M) BHD
26	MALAYSIA AIRPORT HOLDINGS BHD	55	WIJAYA BARU GLOBAL BHD
27	MALAYSIA BUILDING SOCIETY BERHAD	56	YTL LAND & DEVELOPMENT BHD
28	MALAYSIAN AIRLINE SYSTEM BHD	57	YTL POWER INTERNATIONAL BHD
29	MALAYSIAN RESOURCES CORPORATION BHD		

Sources: Fung et al. (2015) and Johnson and Mitton (2003).

TABLE 1: SAMPLE SELECTION

Description	Sample Size
Firm-year Observations 2007-2014[a]	5,840
Less observations not covered by I/B/E/S database	(3,709)
Firm-year observations available[b]	2,131
Less observations with missing financial data[c]	(97)
Firm-year observations for the final sample	2,034

[a] The sample was developed starting with all audited firms listed on Bursa Malaysia's stock exchange during the period. During the 2007-2014 period of this study, there were 730 firms listed on the main board of Bursa Malaysia.

[b] Firm-year observations made available by the I/B/E/S database.

[c]After identification of firms that are covered by I/B/E/S database, this data was merged with BvD's OSIRIS financial data, which resulted in 97 observations with missing data.

TABLE 2: OPERATIONAL DEFINITION OF VARIABLES

#	Variables	Definitions	Source(s)
Panel A: Dependent Variables			
1	*ACCY*	Forecast Accuracy measured as negative one times the absolute forecast error	I/B/E/S
2	*DISP*	Forecast Dispersion measured by the standard deviation of forecasts	I/B/E/S
Panel B: Political Patronage Variables			
3	*POLCON*	An indicator variable that takes the value of 1 if the firm is politically connected, zero otherwise	Fung et al. (2015)
4	*BUMI*	Percentage of Bumiputera directors on the board	Hand collected
Panel C: Audit Quality Variables			
5	*AQ*	The negative absolute value of discretionary accruals based on Dechow and Dichev (2002)	OSIRIS for cash flow data to calculate residual values.
6	*BIG4*	An indicator variable that takes on the value of 1 if the auditor is a Big 4 international auditor, zero otherwise	Hand collected
7	*LAF*	Natural log transformation of audit fees	Hand collected
Panel D: Independent Control Variables			
8	*LNHORIZON*	Natural log transformation of the forecast horizon, which is mean number of calendar days between the forecast estimate announcement dates and the actual earnings announcement date	I/B/E/S
9	*LNNUMEST*	Natural log of the number of analysts following a firm	I/B/E/S
10	*SIZE*	Natural log of a firm's market capitalization	OSIRIS
11	*DEBT*	Total debt deflated by total equity	OSIRIS
12	*EPS*	Earnings per share	I/B/E/S
13	*LOSS*	An indicator variable that takes the value of 1 if the firm reports a loss during the year, zero otherwise	OSIRIS
14	*LNAF*	Natural log transformation of nonaudit fees	Hand collected
Panel E: Independent Corporate Governance Variables			
15	*INT_AUDIT*	An indicator variable that takes the value of 1 if the firm outsources its internal audit functions, zero otherwise	Hand collected
16	*ACFIN*	The percentage of audit committee members with financial expertise	Hand collected

Hand collected data were extracted from annual reports downloaded from Bursa Malaysia's website.

TABLE 3: DESCRIPTIVE STATISTICS (2007-2014, N=2,034)

	Mean	Median	Maximum	Minimum	Std. Dev.
Panel A: Dependent Variables					
ACCY	-0.045	-0.018	0.000	-1.720	0.093
DISP	0.016	0.005	0.766	0.000	0.040
Panel B: Political Patronage Variables					
POLCON	0.153	0.000	1.000	0.000	0.360
BUMI	34.140	33.871	100.000	0.000	20.603
Panel C: Audit Quality Variables					
AQ	-0.089	-0.060	0.000	-2.080	0.120
BIG4	0.808	1.000	1.000	0.000	0.394
AF	287,292	213,498	7,900,000	5000	525405
LAF	12.011	12.271	15.882	8.517	0.963
Panel D: Independent Control Variables					
HORIZON	113.593	98.986	364.000	1.000	73.431
LNHORIZON	4.357	4.595	5.897	0.000	1.215
NUMEST	5.203	2.000	47.000	1.000	6.535
LNNUMEST	1.055	0.693	3.850	0.000	1.039
MKTCAP ('000)	3400000	1290000	71000000	7715	7820000
SIZE	19.928	19.371	24.987	15.859	1.640
DEBT	1.090	0.925	14.009	0.000	1.336
EPS	0.191	0.120	1.950	-1.720	0.265
LOSS	0.079	0.000	1.000	0.000	0.269
LNAF	5.705	8.517	15.727	0.000	5.349
Panel E: Independent Corporate Governance Variables					
INT_AUDIT	0.486	0.000	1.000	0.000	0.500
ACFIN	40.542	40.737	100.000	0.000	16.271

ACCY is accuracy of analysts' earnings forecasts measure as negative one times the absolute forecast error. DISP is forecast dispersion measured by standard deviation of forecasts. POLCON takes the value of 1 if the firm is politically connected, zero otherwise. BUMI is the percentage of Bumiputera directors on the board. AQ, accrual quality, is the negative absolute discretionary accruals based on Dechow and Dichev (2002). BIG4 takes the value of 1 if the firm is audited by a Big 4 international auditor, zero otherwise. LAF is the natural log transformation of audit fees (AF). HORIZON is the average number of calendar days between the forecast announcement dates and subsequent actual earnings announcement date, while LNHORIZON is the natural log transformation of HORIZON. NUMEST is the number of analysts following a firm, and LNNUMEST is the natural log transformation of NUMEST. MKTCAP is a firm's market capitalization, and SIZE is the natural log transformation of MKTCAP. DEBT is the ratio of total debt to total equity, and EPS is earnings per share. LOSS takes the value of 1 if the firm reports a loss for the current year, zero otherwise. LNAF is the natural log transformation of and non-audit fees. INT_AUDIT takes the value of 1 if the firm outsources its internal audit functions, zero otherwise. ACFIN is the percentage of audit committee members with financial expertise. Currency is Ringgit Malaysia (RM).

TABLE 4: CORRELATIONS (2007-2014, N=2,034)

		1		2		3		4		5		6		7		8	
ACCY	1			*-0.231*	***	*-0.135*	***	*-0.100*	***	*0.031*		*-0.042*	*	*-0.077*	***	*0.014*	
DISP	2	-0.363	***			*0.201*	***	*0.185*	***	*-0.004*		*0.146*	***	*0.258*	***	*0.054*	**
POLCON	3	-0.107	***	0.123	***			*0.217*	***	*-0.011*		*0.118*	***	*0.253*	***	*0.016*	
BUMI	4	-0.088	***	0.127	***	0.268	***			*-0.051*	**	*0.159*	***	*0.331*	***	*0.008*	
AQ	5	0.113	***	0.009		-0.055	**	-0.057	***			*-0.007*		*-0.006*		*-0.003*	
BIG4	6	-0.025		0.078	***	0.118	***	0.114	***	-0.044	**			*-0.346*	***	*0.011*	
LAF	7	-0.083	***	0.171	***	0.282	***	0.296	***	-0.030		0.344	***			*-0.029*	
LNHORIZON	8	0.068	***	0.068	***	0.061	***	0.055	**	0.021		0.048	**	0.037	*		
LNNUMEST	9	0.022		0.284	***	0.199	***	0.165	***	-0.046	**	0.171	***	0.367	***	0.147	***
SIZE	10	-0.031		0.222	***	0.243	***	0.207	***	-0.091	***	0.146	***	0.303	***	0.115	***
DEBT	11	-0.105	***	-0.007		0.055	**	0.145	***	0.003		0.022		0.078	***	-0.002	
EPS	12	-0.199	***	0.348	***	0.185	***	0.047	**	-0.058	***	0.112	***	0.153	***	0.068	***
LOSS	13	-0.016		0.032		0.002		-0.048	**	0.037	*	0.008		0.018		0.010	
LNAF	14	-0.011		0.092	***	0.124	***	0.060	***	0.034		-0.162	***	0.022	***	0.069	***
INT_AUDIT	15	0.088	***	-0.094	***	-0.185	***	-0.219	***	0.014		-0.06	***	-0.211	***	-0.065	***
ACFIN	16	0.019		0.006		-0.032		-0.037	*	0.018		-0.054	**	-0.073	***	0.028	

ACCY is accuracy of analysts' earnings forecasts measure as negative one times the absolute forecast error. DISP is forecast dispersion measured by standard deviation of forecasts. POLCON takes the value of 1 if the firm is politically connected, zero otherwise. BUMI is the percentage of Bumiputera directors on the board. AQ, accrual quality, is the negative absolute discretionary accruals based on Dechow and Dichev (2002). BIG4 takes the value of 1 if the firm is audited by a Big 4 international auditor, zero otherwise. LAF is the natural log transformation of audit fees (AF). HORIZON is the average number of calendar days between the forecast announcement dates and subsequent actual earnings announcement date, while LNHORIZON is the natural log transformation of HORIZON. NUMEST is the number of analysts following a firm, and LNNUMEST is the natural log transformation of NUMEST. MKTCAP is a firm's market capitalization, and SIZE is the natural log transformation of MKTCAP. DEBT is the ratio of total debt to total equity, and EPS is earnings per share. LOSS takes the value of 1 if the firm reports a loss for the current year, zero otherwise. LNAF is the natural log transformation of and non-audit fees. INT_AUDIT takes the value of 1 if the firm outsources its internal audit functions, zero otherwise. ACFIN is the percentage of audit committee members with financial expertise. Currency is Ringgit Malaysia (RM). ***, ** and* represent 1, 5, and 10 percent significance levels, respectively. Pearson and Spearman-rank (italicized) correlations are presented.

Table 4 continued

		9		10		11		12		13		14		15		16	
ACCY	1	*-0.016*		*-0.066*	***	*-0.050*	**	*-0.216*	***	*0.007*		*-0.079*	***	*0.108*	***	*-0.003*	
DISP	2	*0.815*	***	*0.409*	***	*0.062*	***	*0.343*	***	*-0.005*		*0.141*	***	*-0.148*	***	*-0.006*	
POLCON	3	*0.193*	***	*0.204*	***	*0.104*	***	*0.177*	***	*0.002*		*0.157*	***	*-0.185*	***	*-0.044*	**
BUMI	4	*0.183*	***	*0.174*	***	*0.217*	***	*0.048*	**	*-0.051*	**	*-0.020*		*-0.186*	***	*0.044*	**
AQ	5	*-0.038*	*	*-0.145*	***	*0.003*		*0.028*		*0.018*		*-0.047*	**	*0.048*	**	*0.051*	**
BIG4	6	*0.169*	***	*0.142*	***	*0.088*	***	*0.130*	***	*0.008*		*-0.107*	***	*-0.060*	***	*0.090*	***
LAF	7	*0.312*	***	*0.215*	***	*0.201*	*	*0.107*	***	*0.005*		*0.020*	***	*-0.174*	***	*-0.058*	***
LNHORIZON	8	*0.031*		*0.006*		*-0.004*		*0.015*		*0.010*		*0.006*		*0.008*		*0.019*	
LNNUMEST	9			*0.503*	***	*0.098*	***	*0.338*	***	*-0.021*		*0.121*	***	*-0.158*	***	*-0.015*	
SIZE	10	0.600	***			*-0.013*		*0.378*	***	*-0.064*	***	*0.196*	***	*-0.158*	***	*-0.026*	
DEBT	11	0.008		-0.057	***			*-0.074*	***	*-0.027*		*0.011*		*-0.019*		*0.030*	
EPS	12	0.285	***	0.387	***	-0.113	***			*-0.069*	***	*0.144*	***	*-0.108*	***	*-0.005*	
LOSS	13	-0.024		-0.055	**	-0.018		-0.060	***			*-0.012*		*-0.043*	*	*-0.065*	***
LNAF	14	0.081	***	0.155	***	0.062	***	0.089	***	-0.012				*-0.268*	***	*-0.260*	***
INT_AUDIT	15	-0.168	***	-0.159	***	0.017		-0.073	***	-0.043	*	-0.250	***			*0.136*	***
ACFIN	16	-0.037	*	-0.013		-0.127	***	0.006		-0.049	**	-0.015		0.034			

ACCY is accuracy of analysts' earnings forecasts measure as negative one times the absolute forecast error. DISP is forecast dispersion measured by standard deviation of forecasts. POLCON takes the value of 1 if the firm is politically connected, zero otherwise. BUMI is the percentage of Bumiputera directors on the board. AQ, accrual quality, is the negative absolute discretionary accruals based on Dechow and Dichev (2002). BIG4 takes the value of 1 if the firm is audited by a Big 4 international auditor, zero otherwise. LAF is the natural log transformation of audit fees (AF). HORIZON is the average number of calendar days between the forecast announcement dates and subsequent actual earnings announcement date, while LNHORIZON is the natural log transformation of HORIZON. NUMEST is the number of analysts following a firm, and LNNUMEST is the natural log transformation of NUMEST. MKTCAP is a firm's market capitalization, and SIZE is the natural log transformation of MKTCAP. DEBT is the ratio of total debt to total equity, and EPS is earnings per share. LOSS takes the value of 1 if the firm reports a loss for the current year, zero otherwise. LNAF is the natural log transformation of and non-audit fees. INT_AUDIT takes the value of 1 if the firm outsources its internal audit functions, zero otherwise. ACFIN is the percentage of audit committee members with financial expertise. Currency is Ringgit Malaysia (RM). ***, ** and* represent 1, 5, and 10 percent significance levels, respectively. Pearson and Spearman-rank (italicized) correlations are presented.

TABLE 5: DIFFERENCES IN VARIABLE MEAN AND MEDIAN BETWEEN POLITICALLY AND NONPOLITICALLY CONNECTED FIRMS (2007-2014, N=2,034)

	POLCON=1 Mean	(n=312) Median	POLCON = 0 Mean	(n=1,722) Median	T-test p-value	Mann Whitney p-value
Panel A: Dependent Variables						
ACCY	-0.069	-0.028	0.041	-0.017	**0.000**	**0.000**
DISP	0.028	0.013	0.014	0.003	**0.000**	**0.000**
Panel B: Political Patronage Variables						
BUMI	47.087	34.997	31.794	33.871	**0.000**	**0.000**
Panel C: Audit Quality Variables						
AQ	-0.104	-0.060	-0.086	-0.060	**0.013**	0.612
BIG4	0.917	1.000	0.788	1.000	**(0.000)**	
AF	606,669	213,498	229,426	213,498	**0.000**	**0.000**
LAF	12.649	12.271	11.895	12.271	**0.000**	**0.000**
Panel D: Independent Control Variables						
HORIZON	112.641	100.387	113.766	98.556	0.804	0.469
LNHORIZON	4.530	4.609	4.325	4.591	**0.006**	0.469
NUMEST	7.830	5.000	4.726	2.000	**0.000**	**0.000**
LNNUMEST	1.541	1.609	0.968	0.693	**0.000**	**0.000**
MKTCAP('000)	6,360,000	2,860,000	2,860,000	905,000	**0.000**	**0.000**
SIZE	20.865	20.892	19.758	19.219	**0.000**	**0.000**
DEBT	1.263	1.000	1.059	0.886	**0.013**	**0.000**
EPS	0.307	0.219	0.171	0.111	**0.000**	**0.000**
LOSS	0.080	0.000	0.078	0.000	(0.917)	
LNAF	7.268	9.711	5.422	8.202	**0.000**	**0.000**
Panel E: Independent Corporate Governance Control Variables						
INT_AUDIT	0.269	0.000	0.526	1.000	**(0.000)**	
ACFIN	39.303	33.333	40.767	40.737	0.144	0.045

POLCON takes the value of 1 if the firm is politically connected, zero otherwise. ACCY is accuracy of analysts' earnings forecasts measure as negative one times the absolute forecast error. DISP is forecast dispersion measured by standard deviation of forecasts. BUMI is the percentage of Bumiputera directors on the board. AQ, accrual quality, is the negative absolute discretionary accruals based on Dechow and Dichev (2002). BIG4 takes the value of 1 if the firm is audited by a Big 4 international auditor, zero otherwise. LAF is the natural log transformation of audit fees (AF). HORIZON is the average number of calendar days between the forecast announcement dates and subsequent actual earnings announcement date, while LNHORIZON is the natural log transformation of HORIZON. NUMEST is the number of analysts following a firm, and LNNUMEST is the natural log transformation of NUMEST. MKTCAP is a firm's market capitalization, and SIZE is the natural log transformation of MKTCAP. DEBT is the ratio of total debt to total equity, and EPS is earnings per share. LOSS takes the value of 1 if the firm reports a loss for the current year, zero otherwise. LNAF is the natural log transformation of and non-audit fees. INT_AUDIT takes the value of 1 if the firm outsources its internal audit functions, zero otherwise. ACFIN is the percentage of audit committee members with financial expertise. Currency is Ringgit Malaysia (RM). ***, ** and* represent 1, 5, and 10 percent significance levels, respectively. Significant p-values are bold. Chi-Square (X^2) results are in parenthesis.

TABLE 6: DIFFERENCES IN VARIABLE MEAN AND MEDIAN BETWEEN FIRMS THAT ARE BELOW AND ABOVE THE 50 PERCENT OF BUMIPUTERA DIRECTORS (2007-2014, N=2,034)

	BUMI below 50 percent	(n=1,686)	*BUMI* equal to or above 50 percent	(n=348)	T-test	Mann Whitney
	Mean	Median	Mean	Median	p-value	p-value
Panel A: Dependent Variables						
ACCY	-0.043	-0.017	-0.057	-0.023	**0.000**	**0.000**
DISP	0.014	0.004	0.026	0.012	**0.000**	**0.000**
Panel B: Political Patronage Variable						
POLCON	0.117	0.000	0.330	0.000	**(0.000)**	
Panel C: Audit Quality Variables						
AQ	-0.086	-0.057	-0.101	-0.075	**0.038**	**0.000**
BIG4	0.807	1.000	0.810	1.000	**(0.000)**	
AF	241,219	213,498	510,511	213,498	**0.000**	**0.000**
LAF	11.949	12.271	12.311	12.271	**0.000**	**0.000**
Panel D: Independent Control Variables						
HORIZON	113.250	98.693	115.255	99.103	0.643	0.324
LNHORIZON	4.327	4.592	4.500	4.596	**0.016**	0.324
NUMEST	4.874	2.000	6.793	4.000	**0.000**	**0.000**
LNNUMEST	0.993	0.693	1.356	1.386	**0.000**	**0.000**
MKTCAP ('000)	2,990,000	1,280,000	5,410,000	1,340,000	**0.000**	**0.000**
SIZE	19.793	19.127	20.584	20.258	**0.000**	**0.000**
DEBT	1.026	0.872	1.402	1.000	**0.011**	**0.000**
EPS	0.187	0.120	0.213	0.150	**0.037**	**0.036**
LOSS	0.082	0.000	0.063	0.000	**(0.016)**	
LNAF	5.055	0.000	8.853	10.137	**0.000**	**0.000**
Panel E: Independent Corporate Governance Control Variables						
INT_AUDIT	0.531	1.000	0.270	0.000	(0.000)	
ACFIN	40.611	40.737	40.210	33.333	0.676	**0.000**

BUMI is the percentage of Bumiputera directors on the board. ACCY is accuracy of analysts' earnings forecasts measure as negative one times the absolute forecast error. DISP is forecast dispersion measured by standard deviation of forecasts. POLCON takes the value of 1 if the firm is politically connected, zero otherwise. AQ, accrual quality, is the negative absolute discretionary accruals based on Dechow and Dichev (2002). BIG4 takes the value of 1 if the firm is audited by a Big 4 international auditor, zero otherwise. LAF is the natural log transformation of audit fees (AF). HORIZON is the average number of calendar days between the forecast announcement dates and subsequent actual earnings announcement date, while LNHORIZON is the natural log transformation of HORIZON. NUMEST is the number of analysts following a firm, and LNNUMEST is the natural log transformation of NUMEST. MKTCAP is a firm's market capitalization, and SIZE is the natural log transformation of MKTCAP. DEBT is the ratio of total debt to total equity, and EPS is earnings per share. LOSS takes the value of 1 if the firm reports a loss for the current year, zero otherwise. LNAF is the natural log transformation of and non-audit fees. INT_AUDIT takes the value of 1 if the firm outsources its internal audit functions, zero otherwise. ACFIN is the percentage of audit committee members with financial expertise. Currency is Ringgit Malaysia (RM). ***, ** and* represent 1, 5, and 10 percent significance levels, respectively. Significant p-values are bold. Chi-Square (X^2) results are in parenthesis.

TABLE 7: DIFFERENCES IN VARIABLE MEAN AND MEDIAN BETWEEN FIRMS AUDITED BY THE BIG 4 AND NON-BIG 4 (2007-2014, N=2,034)

	Big4 =1 Mean	1643 Median	Big4=0 Mean	391 Median	T-test p-value	Mann-Whitney p-value
Panel A: Dependent Variables						
ACCY	-0.047	-0.019	-0.041	-0.016	0.251	**0.060**
DISP	0.018	0.006	0.010	0.001	**0.000**	**0.000**
Panel B: Political Patronage Variable						
POLCON	0.174	0.000	0.066	0.000	**(0.000)**	
BUMI	35.281	33.871	29.343	25.000	**0.000**	**0.000**
Panel C: Audit Quality Variables						
AQ	-0.091	-0.060	-0.078	-0.060	**0.050**	0.754
AF	320,256	213,498	148,773	81,000	**0.000**	**0.000**
LAF	12.172	12.271	11.333	11.302	**0.000**	**0.000**
Panel D: Independent Control Variables						
HORIZON	113.386	99.000	114.463	95.392	0.794	0.616
LNHORIZON	4.385	4.595	4.237	4.558	**0.030**	0.616
NUMEST	5.665	3.000	3.258	2.000	**0.000**	**0.000**
LNNUMEST	1.142	1.099	0.690	0.693	**0.000**	**0.000**
MKTCAP ('000)	3,741,000	1,839,000	1,970,000	357,700	**0.000**	**0.000**
SIZE	20.045	19.592	19.436	18.992	**0.000**	**0.000**
DEBT	1.105	1.000	1.030	0.712	0.320	**0.000**
EPS	0.206	0.130	0.130	0.090	**0.000**	**0.000**
LOSS	0.080	0.000	0.074	0.000	0.714	0.864
LNAF	5.283	0.000	7.480	9.105	**0.000**	**0.000**
Panel E: Independent Corporate Governance Control Variables						
INT_AUDIT	0.472	0.000	0.547	1.000	**(0.007)**	
ACFIN	40.114	40.737	42.339	33.333	**0.015**	**0.000**

ACCY is accuracy of analysts' earnings forecasts measure as negative one times the absolute forecast error. DISP is forecast dispersion measured by standard deviation of forecasts. POLCON takes the value of 1 if the firm is politically connected, zero otherwise. BUMI is the percentage of Bumiputera directors on the board. AQ, accrual quality, is the negative absolute discretionary accruals based on Dechow and Dichev (2002). BIG4 takes the value of 1 if the firm is audited by a Big 4 international auditor, zero otherwise. LAF is the natural log transformation of audit fees (AF). HORIZON is the average number of calendar days between the forecast announcement dates and subsequent actual earnings announcement date, while LNHORIZON is the natural log transformation of HORIZON. NUMEST is the number of analysts following a firm, and LNNUMEST is the natural log transformation of NUMEST. MKTCAP is a firm's market capitalization, and SIZE is the natural log transformation of MKTCAP. DEBT is the ratio of total debt to total equity, and EPS is earnings per share. LOSS takes the value of 1 if the firm reports a loss for the current year, zero otherwise. LNAF is the natural log transformation of and non-audit fees. INT_AUDIT takes the value of 1 if the firm outsources its internal audit functions, zero otherwise. ACFIN is the percentage of audit committee members with financial expertise. Currency is Ringgit Malaysia (RM). ***, ** and* represent 1, 5, and 10 percent significance levels, respectively. Significant p-values are bold. Chi-Square (X^2) results are in parenthesis.

TABLE 8: REGRESSION TESTS FOR FORECAST ACCURACY (ACCY) (2007-2014, N=2,034)

Variable	Sign	1		2		3		4		5	
INTERCEPT	?	-0.004		-0.023		-0.026		0.041		0.009	
		-0.091		*-0.492*		*-0.548*		*0.609*		*0.139*	
POLCON	-	-0.014		-0.005		-0.074		-0.097		-0.152	
		-1.882	**	*-0.576*		***-3.236***	***	*-1.176*		***-1.798***	*
BUMI	-	0.000		0.000		0.000		-0.001		0.000	
		-2.277	**	*0.124*		*0.347*		*-0.682*		*-0.309*	
AQ	+	0.078		-0.096		0.079		0.078		-0.098	
		4.348	***	***-1.997***	**	***4.444***	***	***4.371***	***	***-2.049***	**
BIG4	+	0.007		0.008		0.015		0.008		0.017	
		1.175		*1.202*		*1.478*		*1.312*		***1.556***	*
LAF	+	-0.008		-0.008		-0.007		-0.012		-0.011	
		-2.760	**	***-2.734***	**	***-2.423***	**	***-2.434***	**	***-2.338***	**
*POLCON*AQ*	+			0.089						0.096	
				2.389	**					***2.594***	**
*BUMI*AQ*	+			0.004						0.004	
				3.004	***					***3.035***	***
*POLCON*BIG4*	+					0.066				0.068	
						2.795	***			***2.946***	***
*BUMI*BIG4*	+					-0.000				-0.000	
						-1.550	*			***-1.547***	*
*POLCON*LAF*	+							0.007		0.007	
								0.996		*1.021*	
*BUMI*LAF*	+							0.000		0.000	
								0.444		*0.617*	

For each variable, reported numbers are Beta coefficient (top) and t-statistic (bottom).

ACCY is accuracy of analysts' earnings forecasts measure as negative one times the absolute forecast error. POLCON takes the value of 1 if the firm is politically connected, zero otherwise. BUMI is the percentage of Bumiputera directors on the board. AQ, accrual quality, is the negative absolute discretionary accruals based on Dechow and Dichev (2002). BIG4 takes the value of 1 if the firm is audited by a Big 4 international auditor, zero otherwise. LAF is the natural log transformation of audit fees (AF). HORIZON is the average number of calendar days between the forecast announcement dates and subsequent actual earnings announcement date, while LNHORIZON is the natural log transformation of HORIZON. NUMEST is the number of analysts following a firm, and LNNUMEST is the natural log transformation of NUMEST. MKTCAP is a firm's market capitalization, and SIZE is the natural log transformation of MKTCAP. DEBT is the ratio of total debt to total equity, and EPS is earnings per share. LOSS takes the value of 1 if the firm reports a loss for the current year, zero otherwise. LNAF is the natural log transformation of and non-audit fees. INT_AUDIT takes the value of 1 if the firm outsources its internal audit functions, zero otherwise. ACFIN is the percentage of audit committee members with financial expertise. Currency is Ringgit Malaysia (RM). *, ** and *** denote significant levels of 10%, 5% and 1% based on a one-tailed test, respectively.

Table 8 continued

LNHORIZON	-	0.006		0.005		0.005		0.006		0.005	
		3.504	***	***3.464***	***	***3.448***	***	***3.563***	***	***3.476***	***
LNNUMEST	+	0.009		0.009		0.008		0.009		0.008	
		3.180	***	***3.117***	***	***2.865***	**	***3.270***	**	***2.891***	**
SIZE	+	0.003		0.003		0.003		0.003		0.003	
		1.432	*	***1.473***	*	***1.553***	*	***1.326***	*	***1.473***	*
DEBT	-	-0.009		-0.009		-0.009		-0.009		-0.009	
		-5.868	***	***-5.790***	***	***-5.841***	***	***-5.848***	***	***-5.733***	***
EPS	-	-0.084		-0.083		-0.083		-0.084		-0.081	
		-8.890	***	***-8.791***	***	***-8.713***	***	***-8.893***	***	***-8.610***	***
LOSS	-	-0.013		-0.014		-0.013		-0.013		-0.014	
		-1.580	*	***-1.707***	*	***-1.608***	*	***-1.582***	*	***-1.747***	*
LNAF	+	0.001		0.001		0.001		0.000		0.000	
		1.194		*1.332*		*1.007*		*0.992*		*0.911*	
INT_AUDIT	+	0.014		0.014		0.013		0.014		0.013	
		2.699	**	***2.773***	***	***2.603***	**	***2.616***	**	***2.575***	**
ACFIN	+	0.000		0.000		0.000		0.000		0.000	
		-0.129		*-0.078*		*-0.137*		*-0.242*		*-0.221*	
Industry fixed	?	Yes		Yes		Yes		Yes		Yes	
Period fixed	?	Yes		Yes		Yes		Yes		Yes	
Adjusted R-squared		0.101		0.110		0.105		0.101		0.115	
F-statistic		***9.487***	***	***9.674***	***	***9.268***	***	***8.916***	***	***9.021***	***

For each variable, reported numbers are Beta coefficient (top) and t-statistic (bottom).

ACCY is accuracy of analysts' earnings forecasts measure as negative one times the absolute forecast error. POLCON takes the value of 1 if the firm is politically connected, zero otherwise. BUMI is the percentage of Bumiputera directors on the board. AQ, accrual quality, is the negative absolute discretionary accruals based on Dechow and Dichev (2002). BIG4 takes the value of 1 if the firm is audited by a Big 4 international auditor, zero otherwise. LAF is the natural log transformation of audit fees (AF). HORIZON is the average number of calendar days between the forecast announcement dates and subsequent actual earnings announcement date, while LNHORIZON is the natural log transformation of HORIZON. NUMEST is the number of analysts following a firm, and LNNUMEST is the natural log transformation of NUMEST. MKTCAP is a firm's market capitalization, and SIZE is the natural log transformation of MKTCAP. DEBT is the ratio of total debt to total equity, and EPS is earnings per share. LOSS takes the value of 1 if the firm reports a loss for the current year, zero otherwise. LNAF is the natural log transformation of and non-audit fees. INT_AUDIT takes the value of 1 if the firm outsources its internal audit functions, zero otherwise. ACFIN is the percentage of audit committee members with financial expertise. Currency is Ringgit Malaysia (RM). *, ** and *** denote significant levels of 10%, 5% and 1% based on a one-tailed test, respectively.

TABLE 9: REGRESSION TESTS FOR FORECAST DISPERSION (DISP) (2007-2014, N=2,034)

Variable	Sign	1		2		3		4	6	
INTERCEPT	?	-0.019		-0.019		-0.012		-0.024	-0.019	
		-1.010		*-0.985*		*-0.595*		*-0.864*	*-0.685*	
POLCON	+	0.000		0.002		0.019		-0.005	0.009	
		0.146		*0.604*		***2.169***	**	*-0.164*	*0.278*	
BUMI	+	0.000		0.000		0.000		0.000	0.000	
		3.301	***	***2.270***	**	*0.230*		*0.609*	*0.517*	
AQ	-	0.009		0.012		0.009		0.010	0.011	
		1.472		*0.679*		*1.409*		*1.481*	*0.620*	
BIG4	-	0.000		0.000		-0.003		0.000	-0.004	
		-0.020		*-0.041*		*-0.777*		*-0.010*	*-0.821*	
LAF	-	0.002		0.002		0.002		0.003	0.002	
		1.811	*	***1.825***	*	***1.545***	*	*1.294*	*1.268*	
*POLCON*AQ*	-			0.016					0.014	
				1.248					*1.096*	
*BUMI*AQ*	-			0.000					0.000	
				-0.507					*-0.418*	
*POLCON*BIG4*	-					-0.021			-0.021	
						-2.242	**		***-2.222***	**
*BUMI*BIG4*	-					0.000			0.000	
						1.407	*		***1.444***	*
*POLCON*LAF*	-							0.000	0.001	
								0.180	*0.367*	
*BUMI*LAF*	-							-0.000	-0.000	
								-0.275	*-0.507*	

For each variable, reported numbers are Beta coefficient (top) and t-statistic (bottom).

DISP is forecast dispersion measured by standard deviation of forecasts. POLCON takes the value of 1 if the firm is politically connected, zero otherwise. BUMI is the percentage of Bumiputera directors on the board. AQ, accrual quality, is the negative absolute discretionary accruals based on Dechow and Dichev (2002). BIG4 takes the value of 1 if the firm is audited by a Big 4 international auditor, zero otherwise. LAF is the natural log transformation of audit fees (AF). HORIZON is the average number of calendar days between the forecast announcement dates and subsequent actual earnings announcement date, while LNHORIZON is the natural log transformation of HORIZON. NUMEST is the number of analysts following a firm, and LNNUMEST is the natural log transformation of NUMEST. MKTCAP is a firm's market capitalization, and SIZE is the natural log transformation of MKTCAP. DEBT is the ratio of total debt to total equity, and EPS is earnings per share. LOSS takes the value of 1 if the firm reports a loss for the current year, zero otherwise. LNAF is the natural log transformation of and non-audit fees. INT_AUDIT takes the value of 1 if the firm outsources its internal audit functions, zero otherwise. ACFIN is the percentage of audit committee members with financial expertise. Currency is Ringgit Malaysia (RM). *, ** and *** denote significant levels of 10%, 5% and 1% based on a one-tailed test, respectively.

Table 9 continued

LNHORIZON	+	0.000		0.000		0.000		0.000		0.000	
		0.605		*0.612*		*0.657*		*0.598*		*0.654*	
LNNUMEST	-	0.007		0.007		0.008		0.007		0.008	
		6.182	***	***6.186***	***	***6.409***	***	***6.161***	***	***6.384***	***
SIZE	+	-0.001		-0.001		-0.001		-0.001		-0.001	
		-1.183		*-1.208*		*-1.285*		*-1.164*		*-1.275*	
DEBT	+	0.000		0.000		0.000		0.000		0.000	
		0.547		*0.570*		*0.534*		*0.541*		*0.547*	
EPS	+	0.044		0.044		0.044		0.044		0.044	
		11.217	***	***11.200***	***	***11.150***	***	***11.215***	***	***11.135***	***
LOSS	+	0.008		0.008		0.008		0.008		0.008	
		2.318	**	***2.316***	**	***2.331***	**	***2.321***	**	***2.334***	**
LNAF	-	0.000		0.000		0.000		0.000		0.000	
		1.251		*1.253*		*1.392*		*1.252*		*1.404*	
INT_AUDIT	-	-0.001		-0.001		0.000		-0.001		0.000	
		-0.267		*-0.294*		*-0.205*		*-0.253*		*-0.208*	
ACFIN	-	0.000		0.000		0.000		0.000		0.000	
		1.029		*1.030*		*1.016*		*1.040*		*1.035*	
Industry fixed	?	Yes		Yes		yes		yes		yes	
Period fixed	?	Yes		Yes		Yes		Yes		Yes	
Adjusted R^2		0.168		0.168		0.170		0.168		0.169	
F-statistic		***16.247***	***	***15.165***	***	***15.409***	***	***15.115***	***	***13.565***	***

For each variable, reported numbers are Beta coefficient (top) and t-statistic (bottom).

DISP is forecast dispersion measured by standard deviation of forecasts. POLCON takes the value of 1 if the firm is politically connected, zero otherwise. BUMI is the percentage of Bumiputera directors on the board. AQ, accrual quality, is the negative absolute discretionary accruals based on Dechow and Dichev (2002). BIG4 takes the value of 1 if the firm is audited by a Big 4 international auditor, zero otherwise. LAF is the natural log transformation of audit fees (AF). HORIZON is the average number of calendar days between the forecast announcement dates and subsequent actual earnings announcement date, while LNHORIZON is the natural log transformation of HORIZON. NUMEST is the number of analysts following a firm, and LNNUMEST is the natural log transformation of NUMEST. MKTCAP is a firm's market capitalization, and SIZE is the natural log transformation of MKTCAP. DEBT is the ratio of total debt to total equity, and EPS is earnings per share. LOSS takes the value of 1 if the firm reports a loss for the current year, zero otherwise. LNAF is the natural log transformation of and non-audit fees. INT_AUDIT takes the value of 1 if the firm outsources its internal audit functions, zero otherwise. ACFIN is the percentage of audit committee members with financial expertise. Currency is Ringgit Malaysia (RM). *, ** and *** denote significant levels of 10%, 5% and 1% based on a one-tailed test, respectively.

TABLE 10: REGRESSION TESTS FOR FORECAST ACCURACY ON SUBSAMPLES OF FIRMS AUDITED BY BIG 4 AND NON-BIG 4 AUDITORS (2007-2014)

Variable	Big 4=1 (n=1,643)				Big 4=0 (n=391)			
	1		2		3		4	
INTERCEPT	-0.055		-0.022		0.339		0.529	
	-1.078		*-0.290*		***2.231***	**	***3.148***	***
POLCON	-0.007		-0.172		-0.103		1.253	
	-1.015		***-2.078***	**	***-3.594***	***	***3.554***	***
BUMI	-0.000		-0.000		0.001		-0.007	
	-3.085	***	*-0.001*		***1.804***	*	***-2.195***	**
AQ	0.079		-0.113		0.024		-0.080	
	4.573	***	***-2.323***	**	*0.366*		*-0.723*	
LAF	-0.008		-0.011		-0.004		-0.019	
	-2.259	**	***-2.033***	**	*-0.597*		***-1.787***	*
*POLCON*AQ*			0.109				-0.697	
			3.135	***			***-1.921***	*
*BUMI*AQ*			0.004				0.004	
			3.199	***			*1.280*	
*POLCON*LAF*			0.014				-0.115	
			2.113	**			***-4.067***	***
*BUMI*LAF*			0.000				0.001	
			-0.066				***2.460***	**
LNHORIZON	0.007		0.007		0.001		0.000	
	3.780	***	***3.878***	***	*0.288*		*0.108*	
LNNUMEST	0.007		0.007		0.023		0.023	
	2.335	**	***2.439***	**	***2.593***	**	***2.674***	**
SIZE	0.006		0.005		-0.019		-0.020	
	2.717	***	***2.604***	***	***-2.707***	**	***-3.019***	***
DEBT	-0.006		-0.005		-0.022		-0.021	
	-3.255	***	***-3.099***	***	***-5.675***	***	***-5.756***	***
EPS	-0.109		-0.106		0.137		0.154	
	-11.237	***	***-11.120***	***	***4.159***	***	***4.869***	***
LOSS	-0.016		-0.016		-0.014		-0.013	
	-1.883	*	***-1.973***	*	*-0.628*		*-0.623*	
LNAF	0.001		0.000		0.000		0.000	
	0.999		*0.841*		*-0.019*		*0.151*	
INT_AUDIT	0.011		0.010		0.017		0.015	
	1.916	*	***1.847***	*	*1.376*		*1.332*	
ACFIN	0.000		0.000		0.000		0.000	
	-1.118		*-1.214*		*0.641*		*0.402*	
Industry and Period fixed	Yes		Yes		Yes		Yes	
Adjusted R^2	0.132		0.147		0.203		0.258	
F-statistic	***10.627***	***	***10.460***	***	***4.969***	***	***5.667***	***

For each variable, reported numbers are Beta coefficient (top) and t-statistic (bottom).

ACCY is accuracy of analysts' earnings forecasts measure as negative one times the absolute forecast error. POLCON takes the value of 1 if the firm is politically connected, zero otherwise. BUMI is the percentage of Bumiputera directors on the board. AQ, accrual quality, is the negative absolute discretionary accruals based on Dechow and Dichev (2002). BIG4 takes the value of 1 if the firm is audited by a Big 4 international auditor, zero otherwise. LAF is the natural log transformation of audit fees (AF). HORIZON is the average number of calendar days between the forecast announcement dates and subsequent actual earnings announcement date, while LNHORIZON is the natural log transformation of HORIZON. NUMEST is the number of analysts following a firm, and LNNUMEST is the natural log transformation of NUMEST. MKTCAP is a firm's market capitalization, and SIZE is the natural log transformation of MKTCAP. DEBT is the ratio of total debt to total equity, and EPS is earnings per share. LOSS takes the value of 1 if the firm reports a loss for the current year, zero otherwise. LNAF is the natural log transformation of and non-audit fees. INT_AUDIT takes the value of 1 if the firm outsources its internal audit functions, zero otherwise. ACFIN is the percentage of audit committee members with financial expertise. Currency is Ringgit Malaysia (RM). *, ** and *** denote significant levels of 10%, 5% and 1% based on a one-tailed test, respectively.

TABLE 11: REGRESSION TESTS FOR FORECAST DISPERSION ON SUBSAMPLES OF FIRMS AUDITED BY BIG 4 AND NON-BIG 4 AUDITORS (2007-2014)

Variable	Big 4=1 (n=1,643)				Big 4 =0 (n=391)			
	1		2		3		4	
INTERCEPT	-0.016		-0.025		-0.023		-0.057	
	-0.684		*-0.704*		*-0.573*		*-1.267*	
POLCON	-0.001		0.010		0.021		-0.321	
	-0.417		*0.281*		***3.262***	***	***-4.923***	***
BUMI	0.000		0.000		0.000		0.001	
	3.251	***	*0.489*		*0.009*		*1.354*	
AQ	0.010		0.017		-0.010		-0.037	
	1.471		*0.850*		*-0.529*		*-1.279*	
LAF	0.002		0.003		0.001		0.002	
	1.373	*	*1.109*		*0.341*		*0.741*	
*POLCON*AQ*			0.015				-0.159	
			1.104				***-1.817***	*
*BUMI*AQ*			0.000				0.001	
			-0.680				*1.351*	
*POLCON*LAF*			-0.001				0.027	
			-0.273				***4.968***	***
*BUMI*LAF*			0.000				0.000	
			-0.228				*-1.264*	
LNHORIZON	0.000		0.000		0.001		0.001	
	0.386		*0.376*		*0.926*		*1.269*	
LNNUMEST	0.007		0.007		0.008		0.008	
	5.629	***	***5.575***	***	***3.360***	***	***3.417***	***
SIZE	-0.001		-0.001		0.000		0.001	
	-1.299		*-1.263*		*0.235*		*0.652*	
DEBT	0.001		0.001		-0.001		-0.001	
	1.003		*1.015*		*-1.084*		*-1.257*	
EPS	0.045		0.045		0.036		0.030	
	10.344	***	***10.288***	***	***4.186***	***	***3.774***	***
LOSS	0.010		0.010		-0.004		-0.004	
	2.589	**	***2.584***	**	*-0.751*		*-0.759*	
LNAF	0.000		0.000		0.001		0.001	
	0.992		*1.024*		***1.904***	*	***1.989***	*
INT_AUDIT	-0.001		-0.001		0.000		0.000	
	-0.296		*-0.311*		*0.024*		*0.008*	
ACFIN	0.000		0.000		0.000		0.000	
	1.511	*	***1.541***	*	*-1.012*		*-0.777*	
Industry and period fixed	Yes		Yes		Yes		Yes	
Adjusted R^2	0.159		0.158		0.237		0.277	
F-statistic	***12.967***	***	***11.266***	***	***5.856***	***	***6.161***	***

For each variable, reported numbers are Beta coefficient (top) and t-statistic (bottom).

DISP is forecast dispersion measured by standard deviation of forecasts. POLCON takes the value of 1 if the firm is politically connected, zero otherwise. BUMI is the percentage of Bumiputera directors on the board. AQ, accrual quality, is the negative absolute discretionary accruals based on Dechow and Dichev (2002). BIG4 takes the value of 1 if the firm is audited by a Big 4 international auditor, zero otherwise. LAF is the natural log transformation of audit fees (AF). HORIZON is the average number of calendar days between the forecast announcement dates and subsequent actual earnings announcement date, while LNHORIZON is the natural log transformation of HORIZON. NUMEST is the number of analysts following a firm, and LNNUMEST is the natural log transformation of NUMEST. MKTCAP is a firm's market capitalization, and SIZE is the natural log transformation of MKTCAP. DEBT is the ratio of total debt to total equity, and EPS is earnings per share. LOSS takes the value of 1 if the firm reports a loss for the current year, zero otherwise. LNAF is the natural log transformation of and non-audit fees. INT_AUDIT takes the value of 1 if the firm outsources its internal audit functions, zero otherwise. ACFIN is the percentage of audit committee members with financial expertise. Currency is Ringgit Malaysia (RM). *, ** and *** denote significant levels of 10%, 5% and 1% based on a one-tailed test, respectively.