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Cross-Country Differences in the Effect of Political Connections on Stock Price Informativeness

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Abstract

Using an international sample of firms from 28 countries, we document that there exists a negative relationship between political connections and the informativeness of stock price, as measured by idiosyncratic volatility (IV). This finding is robust to alternative regression specifications, sub-samples analyses, and concerns related to endogeneity. A more detailed analysis shows that out of the different types of possible connections, the connectedness of the owners is the primary driver of this result. Further, the negative association is only significant for firms in countries characterized by low institutional quality (i.e. corrupted countries, countries with low access to external equity markets, and countries with low media penetration). There is no evidence of any relation between political connections and stock price informativeness for firms in countries characterized by high institutional quality. Overall, our results show that although political connections exacerbate rent-seeking that weaken the firms' information environments on average, the negative information consequences are compensated by the countries' institutional quality.

Keywords Political connections, Idiosyncratic volatility, Institutional infrastructure.

JEL Classification G14, G15, L14

I. Introduction

With the rise of alternative ideologies such as state capitalism, there has been an increase in the research interest on the role of political connections in influencing various important issues in the accounting and finance literature. The findings in the existing literature indicate that the presence of political connections can be regarded as a double-edged sword for corporations around the world. Some current studies (such as Fisman (2001) and Faccio (2006)) have documented that political connections could improve firm value. However, other studies such as Chen, Yuan, and Kim (2010) and Chaney, Faccio, and Parsley (2011) highlight the drawbacks of establishing connections. The former shows that political connections reduce analyst forecast accuracy and the latter study shows that they reduce earnings quality. Several recent studies also examine the effect of different institutional qualities across countries on the consequences of political connection. For example, Brockman, Rui, and Zhou (2013) examine how political connections influence post-merger stock performance and find that politically connected bidders located in countries with high institutional quality tend to perform poorer, compared to their unconnected counterparts. Boubakri, Mansi, and Saffar (2013) examine the interaction between political institutions, political connections, and corporate risk-taking activities and their findings suggest that managers of politically connected firms are more willing to undertake risky projects and this finding is stronger in countries with weak political institutions.

In this study, we focus on the cross-country differences in the effect of political connections on the informativeness of stock prices. Following prior literature (such as Ferreira and Laux (2007), Fernandes and Ferreira (2008), Fernandes and Ferreira (2009), Gul, Srinidhi, and Ng (2011), and Kim and Shi (2012)), we use the idiosyncratic stock price volatility (IV) as our measure of firm-specific stock price informativeness.

We are motivated to examine this issue because of several factors. First, the findings in the current literature suggest two competing hypotheses on the relationship between political connections and the information environment. On one hand, political connections could benefit firms and investors by reducing the transaction costs, expediting meritorious transactions and tapping into the available

management expertise. In this respect, the benefits of connections outweigh the associated costs, resulting in greater efficiency and more transparency. Therefore, we posit that political connections are associated with *an increase* in stock price informativeness (*information-increasing hypothesis*). On the other hand, political connections could have adverse effects because of political rents arising from favoritism. Examples include the unmerited preferential awards of government contracts (Agrawal and Knoeber (2001) and Faccio (2006)) or bailouts (Faccio, Masulis, and McConell (2006)) in return for the "compensation" exacted by the political or government officials involved. These illegitimate rents discourage openness and weaken the information environment. In this respect, we conjecture that political connections are associated with *a decrease* in stock price informativeness *(information-decreasing hypothesis*).

In order to assess which one of these effects prevails, we examine the motives of establishing political connections. They are likely to differ, depending on the strength of institutional quality as highlighted by several recent papers (such as Brockman et al. (2013) and Boubakri et al. (2013)). In countries with strong and effective institutions, political rent-seeking is highly constrained because of two important reasons. First, significant disclosures are mandated to help investors and are implemented effectively by a non-corrupt regulatory enforcement mechanism. It therefore becomes more onerous for the politically connected firms to get unmerited favorable treatment surreptitiously. Second, when the rent-seeking is suspected, the adversely affected party (a supplier or an employee who has been rejected in favor of a connected party) is likely to successfully pursue legal claims against the entity providing the favors. On the other hand, in country with weak institutions and poor investor protection, political rent-seeking can survive. In effect, the motive for a firm to acquire political connection in a country with weak institutions is likely to be the "benefits" of political rents whereas the motive for a similar firm in a country with strong institutions is likely to be the expertise of the connected party. Therefore, we predict that the information-increasing hypothesis should be more prevalent for firms located in countries with strong institutional quality. In contrast, we expect the information-decreasing hypothesis to be more pronounced for firms located in countries with low institutional quality.

Using a sample of international firms from 28 countries, our first empirical finding reveals that overall, politically connected firms exhibit lower IV compared to similar non-connected peers i.e., the stock prices of politically connected firms reflect less firm-specific information, compared to their non-connected counterparts. This finding is supportive of the information-decreasing hypothesis. Second, our analysis shows that the adverse effect on IV is significant when the connections are made by the controlling shareholder at the firm level. This result is consistent with the rationale that firms with controlling shareholders where institutional influence is smaller, are more likely to seek rent through political connection made at the controlling shareholder level. In our cross-country analyses, we find stronger negative relation between political connections and IV in countries that are characterized poor institutional infrastructure, such as high corruption, less convenient access to external equity market, and weak media scrutiny. The prevalence of information-decreasing hypothesis in countries with weak institutions complements and expands the findings in the existing literature (see La Porta, Lopez-de-Silanes, Shleifer, and Vishny (1998), Haw, Hu, Hwang, and Wu (2004), Dyck and Zingales (2004), and Bushman, Piotroski, and Smith (2004)). In contrast, we find that the relation between political connections and IV is not significant in countries with high level of institutional quality. Our findings are inconsistent with the information-decreasing hypothesis in these countries. Our empirical findings results are robust, after controlling for the effects of other factors that may affect IV (such as: earnings quality, analyst coverage, share turnover, and insider ownership) and to changes in specifications.

Collectively, this study contributes to a deeper understanding on the implications of political connections. Our results advance the existing literature in several ways. First, we show that the stock prices of politically connected firms are less informative than for similar unconnected firms, especially when such connections are made to the controlling owner of the firm and if those firms are located countries with low institutional quality. This finding suggests lower transparency and greater rent-seeking through political connections in countries with low institutional quality. It is also supportive of the findings of related studies on the negative implications of establishing connections (such as Chen et al. (2010), Chaney et al. (2011), Brockman et al. (2013), and Boubakri et al. (2013)). In contrast, we observe

no relation between political connections and stock price informativeness in countries with high institutional quality. This implies that political connections in these countries are either coincidental or driven by non-rent-seeking motives.[1] In particular, our finding suggests that the adverse effect of political connections on the information environment could be effectively counterbalanced by having strong and supportive market institutions.

Second, we show that the negative relation between political connections and stock-price informativeness is incremental to the effects of earnings quality and analyst coverage. If we identify earnings quality and analyst coverage as measures of public information dissemination, our finding suggests that political connections weakens not only the public information environment but also stymies the acquisition and use of private information, especially for firms in countries characterized by low institutional quality.[2]

Third, at a broader level, our findings contribute to the discussion in the literature on the effect of country-level institutions (Leuz, Nanda, and Wysocki (2003) and Haw et al. (2004)) and firm-level ownership and relationships (Morck, Yeung, and Yu (2000) and Ali, Chen, and Radhakrishnan (2007)) on governance of international firms. More relevantly, our findings are supportive of the notion that establishing political connections in countries with high levels of corruption could be detrimental to international business (Habib and Zurawski (2002)).

The remainder of the paper is as follows: Section II provides the literature review and presents the hypotheses development. Section III describes our research design and sample data. Section IV discusses the empirical results. Section V provides the concluding remarks.

[1] In the United States and other advanced free economies, it is common for the government to seek the services of successful business leaders. "Coincidental" here refers to the possibility that these individuals would have been sought after by firms for their expertise and vision with or without the political or administrative office that they happen to hold.

[2] This result is only suggested by our findings. For example, less public information could increase the incremental benefit to informed investors of collecting private information and thereby spur investors into collecting more private information – which could improve the overall information environment.

II. Literature Review and Hypothesis Development

A. Literature on Stock Price Informativeness

We use non-synchronous stock price movements (idiosyncratic volatility, IV) to measure the degree of incorporation of firm-specific information into stock prices via trading (Roll 1988). The use of IV as a proxy for the informativeness of stock prices is supported by extensive prior literature (Morck et al. 2000; Durnev, Morck, Yeung, and Zarowin (2003), Jin and Myers (2006), and Ferreira and Laux (2007)). In particular, Jin and Myers (2006) argue that any firm-specific stock price movement that is not explained by the market movement must be driven by firm-specific information that is available to the investors.

Moreover, studies have also found that there are cross-country variations in the pattern of IV. For example, Morck et al. (2000) find that while firms in the developed markets exhibit higher IV than those in the emerging markets. They attribute poorer governance and more opaque accounting in emerging markets to explain this difference. In effect, they employ the differences in IV to proxy for the differences in the disclosure of firm-specific information. Their study further documents that country-level measure of opacity is negatively associated with IV.[3]

Recent studies have also demonstrated the implications of IV on firms' capital allocation decisions. Durnev, Morck, and Yeung (2004) find that more informative stock prices (evidenced by higher IV) result in more value-increasing capital budgeting decisions (measured by the ratio of Tobin's marginal *q* ratio). In a similar vein, Chen, Goldstein, and Jiang (2007) employ two measures of stock price informativeness: IV and probability of informed trading (*PIN*) and examine whether they are associated with changes in the sensitivity of investment to stock price. They show that firms with higher values of IV and *PIN* display higher investment-stock price sensitivities, which supports the notion that higher stock price informativeness is associated with higher investment efficiency.

[3] Using firm-level measure of opacity, the findings of Hutton, Marcus, and Tehranian (2009) corroborate that of Jin and Myers (2006) as they find that firms with higher earnings opacity have lower IV.

Firm-specific information derives from two sources: (i) direct public disclosures by the firm; and (ii) the acquisition of private information by interested investors and analysts. Ferreira and Laux (2007) argue that good governance helps in improving the information environment of the firm. On the one hand, good governance can improve the public disclosures such as earnings.[4] On the other hand, good governance can also improve the access to private information by interested investors and analysts by reducing the marginal cost of collecting price-relevant firm-specific information.[5]

The above arguments suggest that after controlling for public information such as earnings quality and analyst coverage, changes in IV are reflective of the private information collection effort by investors (Gul et al. 2011). Furthermore, private information gets reflected in stock prices through trading. Prior studies have found that private information is likely to be more speedily incorporated in firms with lower trading volume (Chan and Hameed (2006) and Fernandes and Ferreira (2008)) and higher insider ownership (Piotroski and Roulstone (2004)). After controlling for these factors, any incremental effect of political connectedness on IV reflects a fundamental change in the private information environment.

B. Hypothesis Development

Recent literature has provided evidence on the benefits and drawbacks of political connections to firms around the world. Faccio (2006) documents that politically connected firms experience significant increase in stock prices after those connections are established. Boubakri, Guedhami, Mishra, and Saffar (2012) provide evidence that politically connected firms have lower cost of equity capital. Fernandes and Ferreira (2009) show a negative relation between stock price informativeness and cost of capital. These

[4] Rajagopal and Venkatachalam (2011) show that earnings quality is negatively related to IV. In a recent working paper, Chen, Sadique., Srinidhi, and Veeraraghavan (2016) argue that public disclosures concentrate information release at particular periods while reducing the private information collection at other times, resulting in lower IV. In other words, average IV over the year is reflective of private information collection rather than of public information release.

[5] Chan and Hameed (2006) further find that analyst coverage is negatively associated with idiosyncratic volatility for firms in emerging markets, which imply that increased analyst coverage leads to more public information rather than firm-specific information being revealed in the market.

studies show that it is less risky for uninformed investors to invest in politically connected firms. There are two plausible reasons. In countries with weak institutions, political rent seeking increases the value of the firm and benefit investors more than the corresponding decrease in transparency. In countries with strong institutions where political rent seeking is not likely, political connections could provide greater knowledge of regulations and reduce transaction costs. Further, the connected firms are more likely to appoint Big Four auditors (Guedhami, Pittman, and Saffar (2014)) to signal their intention to be more transparent to outside investors. If these benefits in terms of higher value, lower risk and greater transparency outweigh the costs of potential rent seeking on average, it should translate to a positive association between political connections and stock price informativeness, which we term as the *information-increasing hypothesis*. The first part of our first hypothesis follows:

H1a: The stock prices of politically connected firms are ***more informative*** than for their non-connected counterparts.

On the other hand, the adverse effects of political rent seeking in connected firms could outweigh the advantages. Political rent-seeking is a process of self-interested opaque dealings between government officials and private businesses (Morck and Yeung (2003) and Krueger (1974)) in which the firm obtains favorable (not merited) treatments in various ways including getting government contracts or in bending rules or in getting loans at a lower cost (Faccio (2006)).[6] In order to protect its political rents and its connected political officials, firms could become more opaque about the political favors received. Furthermore, recent studies have also suggested that politically connected firms have lower earnings quality (Chaney et al. (2011)) and auditors require higher audit fees for politically connected firms as there are higher tendencies for these firms to engage in financial misconducts (Gul (2006)). If, on average, these adverse effects of political connections on the information environment outweigh the

[6] Transparency is an anathema for rent-seeking because it exposes both the firm and the connected individual to both the domestic and foreign media, and could ultimately result in the official losing his or her political position and the firm losing its reputation and forfeiting part of future revenues. This makes opaqueness an essential characteristic of political rent-seeking.

potential advantages, we should expect a negative relation between political connection and IV. This leads to the *information-decreasing hypothesis*. The second part of our first hypothesis follows:

H1b: The stock prices of politically connected firms are ***less informative*** than for their non-connected counterparts.

Our next hypothesis is about the effect of cross-country institutional differences on the relation between political connections and IV. Our hypothesis is based on recent literature (Ball, Kothari, and Robin (2000) and Ball, Robin, and Wu (2003)) that suggests the country's institutional infrastructure could influence their reporting and disclosure decisions. In particular, we expect the association between political connections and stock price informativeness to differ across countries for the following reasons. Businesses are dependent for their project initiations and sustenance on the availability and affordability of capital and other resources on the cost side, and their ability to penetrate the markets on the revenue side. Countries with strong legal and extra-legal institutions demand transparency and penalize political rent seeking. The strong enforcement of regulations in these countries make the potential cost of political rent-seeking high both for the firm and for the connected individuals because of the fear of reputation loss arising from the scrutiny and exposure by free media and the fear of litigation and the political backlash against the concerned politician when such favoritism is exposed. In these countries, private financial institutions and individuals make investment decisions without restrictions by the state. They are more likely to provide capital to transparent firms where they can discern better the use of their capital than to provide capital to opaque firms. Therefore, businesses strive to attract capital by creating transparent information environments that instill confidence among the investors. Likewise, businesses are mostly free to sell their output in free markets with no direct state intervention. In these countries, political rent seeking is not feasible and firms seek political connections either coincidentally or for reducing transaction costs.

In contrast, countries with low institutional quality are characterized by more state control or/and intervention both in the resource and product markets. When the state has significant control over the capital and other resources, firms either choose to attract capital from private investors by creating

transparent information environments or alternatively, access the capital through political connections and government influence. Under these circumstances, the managers of politically connected firms have both the opportunity and the incentive to be less forthcoming in their public disclosures and also make it difficult for interested investors and analysts to obtain private information. Even in countries that have market-friendly statutes on their books, the market forces could be ineffective because of corruption, inconvenient access to external equity market, and the lack of scrutiny by the media. Therefore, we expect politically connected firms to exhibit lower transparency (the stock prices are less informative) than their non-connected peers.

These differences in the effects of institutional strength on the relation between political connections and IV suggest that if the information-increasing hypothesis prevails, the positive effect of connections on the information environment should be stronger but if the information-decreasing hypothesis prevails, the negative effect should be stronger for countries with weak institutions. We state our second hypothesis in two parts, conditional on whether the information increasing or the information decreasing hypothesis prevails.

H2a: The ***positive relation*** between political connections and stock price informativeness is ***stronger*** in countries with ***high institutional quality*** (i.e. low corruption, high access to external equity market, and high media penetration).

The second part of our second hypothesis follows:

H2b: The ***negative relation*** between political connections and stock price informativeness is ***stronger*** in countries with ***low institutional quality*** (i.e. high corruption, low access to external equity market, and low media penetration).

III. Research Design and Data

A. Measure of Idiosyncratic Volatility

The dependent variable, IV, is the relative residual volatility in stock returns after controlling for common factors or market returns that are sources of systematic risk. We measure IV on an annual basis using a two-factor international model (Morck et al. (2000), Li, Morck, Yang, and Yeung (2004), Jin and Myers (2006), and Fernandes and Ferreira (2008)) that includes both the local and the U.S. market index returns as follows:

$$(1) \qquad r_{j,t} = \alpha_j + \beta_{1,j} r_{m,t} + \beta_2 r_{US,t} + \beta_{3,j} r_{m,t-1} + \beta_{4,j} r_{US,t-1} + \beta_{5,j} r_{m,t+1} + \beta_{6,j} r_{US,t+1} + e_{j,t}$$

In equation (1), $r_{j,t}$ is the weekly stock return for firm j; $r_{m,t}$ is the weekly value-weighted domestic market index return for the country of stock listing. The variable $r_{US,t}$ is the weekly value-weighted U.S. market index return. Following Jin and Myers (2006) and Hutton et al. (2009), we include the one-week lead and lag returns for both the domestic $(r_{m,t+1}, r_{m,t-1})$ and U.S. market returns $(r_{US,t+1}, r_{US,t-1})$ to control for non-synchronous trading (Dimson (1979)).

The estimated annual variance of the residual term $e_{j,t} = \hat{\sigma}^2_{je}$ is our estimate of the absolute firm-specific return variation σ^2_{je}. The ratio of idiosyncratic volatility to total volatility is $\frac{\sigma^2_{je}}{\sigma^2_j}$, which is essentially $1 - R^2$ of equation (1). Since R^2 is bounded between 0 and 1, we follow the existing literature in computing IV as the log-transformed relative firm-specific return variation where our estimate $\hat{\sigma}^2_{je}$ replaces σ^2_{je}:

$$(2) \qquad IV_j = \log\left(\frac{1-R_j^2}{R_j^2}\right) = \log\left(\frac{\sigma_{je}^2}{\sigma_j^2 - \sigma_{je}^2}\right)$$

B. Data and Sample

Our data on the political connections for firms around the world is obtained from Faccio (2006).[7] Consistent with Faccio (2006), we define a firm as politically connected if an individual who holds more than 10% of the shares or who is a member of the board of directors of the firm is also in the position of leadership in the country as king, president or prime minster (top politician), is a member of parliament, or is closely related to a top politician.

We use a dummy variable, *CONNECTED*, which equals 1 for politically connected firms, or 0 otherwise. We retrieve the firm-level financial data for the international firms from Worldscope and Datastream, both provided by Thomson Reuters. We follow previous studies by excluding firms operating in the financial industry (SIC codes between 6000 and 6999) because financial industry disclosures are regulated differently among different countries. We also eliminate firms with book values of total assets of less than US$10 million to make the firms more comparable across different countries as well as industries with no connected firms. Further, we require the weekly returns for the sample firms to be available to compute IV. With these constraints, we obtain a sample of 6,453 (32,464) non-connected firms (firm-years) and 224 (1,621) connected firms (firm-years) that gives a total sample of 6,677 (34,085) firms (firm-years). The sample period is from 1997 to 2005. The detailed distribution of the sample and the corresponding median IV for each country are presented in Table 1.

[INSERT TABLE 1 ABOUT HERE]

As observed from Panel A of Table 1, there is a significant and consistent difference in IV between connected and non-connected firms, with connected firms displaying lower IV in 20 out of the 28 countries in our international sample.[8] This finding provides a preliminary indication that political connections might be associated with lower firm-specific idiosyncratic volatility.

[7] The data is available for download at http://www.aeaweb.org/aer/data/mar06_data_20031166.zip. We further obtain the detailed data on the types of connections from Mara Faccio.

[8] In the robustness test, we show that our main finding on the relationship between political connections and IV remains unaltered both qualitatively and quantitatively if we exclude the U.S. sample (which comprises more than one-quarter of our sample).

In addition, Table 1 presents three other country-level institutional variables that we employ in the empirical tests to examine the cross-sectional variations of the relation between political connections and idiosyncratic volatility. We measure the degree of corruption in a country using the corruption index (*CORRUPT*) developed in Kaufmann, Kray, and Mastruzzi. (2003). Specifically, it measures "the exercise of public power for private gain" in the year 2000 and incorporates various facets of corruption, including bribery and the impact of corruption. A lower index value reflects higher corruption. *CORRUPT* values range from -1.09 (Indonesia) to 2.54 (Finland). The overall mean value of *CORRUPT* is 1.36.

We identify the extent of access to external equity market in a country by the *ACCESS* index, obtained from La Porta, Lopez-de-Silanes, and Shleifer (2006). A higher score on the *ACCESS* index indicates a more convenient access to the equity market and therefore, the cost associated with raising external equity is lower. *ACCESS* values range from 3.90 (Mexico) to 6.74 (USA), with an overall mean value of 5.46

We obtain our media penetration index (*MEDIA*) from Bushman et al. (2004). It is defined as the average rank of the country's per capita number of newspapers and televisions during 1993 to 1995 as reported by World Development Indicators (WDI) database, published by the World Bank.[9] This index is only available for 26 out of the 28 countries in our sample. Higher index values represent higher media penetration. *MEDIA* ranges from 29.51 (India) to 96.72 (USA) and the overall mean value is 80.00.

Panel A of Table 2 gives the descriptive statistics for firm-specific variables for all firms as well as for connected and non-connected firms separately. The mean, median, and standard deviation of IV are 1.020, 1.006, and 0.816, respectively. A comparison of the mean values of IV between connected and non-connected firms shows that the connected firms have a mean value of IV (mean = 0.577) that is about half of the respective mean value in non-connected firms (mean = 1.042) and the difference is significant at the 1 percent level. The medians also follow the same pattern.

[9] The website of the World Bank World Development Indicator (WDI) database is http://data.worldbank.org/indicator.

We include several firm-level control variables that affect IV, based on prior literature (Fernandes and Ferreira (2008)). *SIZE* is our proxy for firm size and it is the natural logarithm of total assets (in US dollars). *LEV* is the firm's leverage, and it is calculated as total debts divided by total assets. The return on equity *ROE,* is our profitability measure, computed as net income divided by the ending value of the book value of equity. The book-to-market ratio, *BTM,* is the computed as book value of equity divided by market value of equity. Panel A of Table 2 reveals that connected firms are on average larger in *SIZE*; have higher *LEV* and *ROE*; and have smaller *BTM* than non-connected firms. Most of these findings are consistent with that found in Faccio (2010).

[INSERT TABLE 2 ABOUT HERE]

We also include several country-level control variables that prior studies (Morck et al. (2000) and Jin and Myers (2006)) have found to be important in influencing IV. *GOVDISC* is an index of governance and disclosure that is created by taking the principal components of the good government index based on La Porta et al. (1998),[10] accounting disclosure index from the Global Competitiveness Reports for 1999 and 2000 (Jin and Myers (2006)), and the rule of law index (La Porta et al. (2006)). We use two measures to proxy for firm and industry concentration: *FIRM_HERF* is the firm Herfindahl index, computed by using the sales of individual firms for each country; and *IND_HERF* is the industry Herfindahl index, computed by using the industry sales for each country. *GDP* is the natural logarithm of gross domestic product per capita and *VGDP* is the variance of the annual *GDP* per capita growth, both obtained from the World Bank WDI database. *NFIRMS* is the natural logarithm of the number of listed firms in each country in each year. Finally, *CSIZE* is the size of the country, measured as the natural logarithm of the geographic size in square kilometers.

Panel B of Table 2 displays the Pearson's correlations between IV, the political connections dummy variable (*CONNECTED*), and other firm-level control variable. Notably, the preliminary reading

[10] The good government index is computed as an average of three separate indices: corruption, risk of expropriation, and risk of contract repudiation.

from the correlation analysis reveals that *IV* is negatively correlated with *CONNECTED*. The values of correlation coefficients between political connections and control variables also indicate that multicollinearity is unlikely to be a serious problem for our analysis.

The Appendix provides the detailed definition for each variable.

IV. Empirical Results and Analysis

A. The Effect of Political Connections on Idiosyncratic Volatility

Table 3 presents the results of the regression with IV as the dependent variable and political connections denoted by *CONNECTED* as the main independent variable. In particular, we estimate the following baseline regression using ordinary least squares (OLS) specification:

$$IV_{i,t} = a_0 + \beta_1 CONNECTED_i + \beta_2 SIZE_{i,t} + \beta_3 LEV_{i,t} + \beta_4 BTM_{i,t} + \beta_5 ROE_{i,t} + \sum c_j Industry_i^j + \sum d_k Country_i^k + \sum e_t Year_i^t + u_i \quad (3)$$

In equation (3), $IV_{i,t}$ is the idiosyncratic volatility of firm *i* in year *t* and $CONNECTED$ is an indicator variable that is equal to 1 if firm *i* is a politically connected firm, or 0 otherwise. *Industry*, *Country*, and *Year* are dummy variables that control for country, industry, and year fixed effects. All other variables are as defined earlier.

The results of our estimate of the baseline model (equation (3)) using only country and industry fixed effects (FE) are presented in Column (1) of Table 3.[11] We also control for heteroskedasticity and serial-correlation by using standard errors that are clustered by firm.[12] The specification for Column (2)

[11] We classify the firms into industries based on the classification by Fama and French (1997).

[12] In our unreported robustness tests, we re-estimate the baseline regression using alternatives clustering methods as suggested by Petersen (2009): country-level, country-year and firm-year clustering. The results are similar.

includes additional year dummies. Column (3) presents the results for the modified regression specification that include all the country-level control variables[13]:

$$IV_{i,t} = a_0 + \beta_1 CONNECTED_i + \beta_2 SIZE_{i,t} + \beta_3 LEV_{i,t} + \beta_4 BTM_{i,t} + \beta_5 ROE_{i,t} + \sum \alpha_n CountryControls_n + \sum c_j Industry_i^j + \sum e_t Year_i^t + u_i \quad (4)$$

where *CountryControls* refer to country-level control variables that are based on prior studies (Morck et al. (2000), Jin and Myers (2006), Fernandes and Ferreira (2008) and Fernandes and Ferreira (2009)): *GOVDISC* (governance disclosure index), *FIRMHERF* (firm Herfindahl index), *INDHERF* (industry Herfindahl index), *GDP* (GDP per capita), *VGDP* (variance of GDP per capita), *NFIRMS* (number of listed firms in each country in each year), and *CSIZE* (country size). Column (4) presents the results of the Fama-MacBeth (1973) cross-sectional regression analysis and Column (5) presents the results of weighted least squares (WLS) specification to take into account the different number of observations in each country.

[INSERT TABLE 3 ABOUT HERE]

The results in Table 3 show that the coefficient of *CONNECTED* is significantly negative at least at the 5% level for all the specifications, indicating that that politically connected firms, generally display lower IV when compared to similar non-connected firms. The results are not only statistically significant, but also economically significant. Using the coefficient estimate in Column (3) of Table 3, political connections result in lower IV value by 6.7 percentage points, which is about 11.6% of the average value of IV across all politically connected firms. Therefore, our findings are supportive of H1b (information-decreasing hypothesis) that, on average, the stock prices of politically connected firms are less informative than non-connected firms. [14] Correspondingly, H1a is not supported.

[13] For this purpose, we exclude the country fixed-effects and only include industry and year fixed effects.

[14] All our main results are unchanged if we use monthly returns, instead of weekly returns in estimating IV.

Consistent with prior studies and our expectations, country-level variables *GDP* and *GOVDISC* exhibit positive associations with IV, indicating that higher economic growth (in terms of GDP per capita) and more effective country-level governance and disclosures facilitate the acquisition of firm-specific information by investors (Jin and Myers (2006), Ferreira and Laux (2007), Hutton et al. (2009)). The findings for the other firm-specific control variables reveal that while *LEV* and *BTM* are positively related to IV, *SIZE* has a negative relation with IV. Meanwhile, there is no consistent relation between *ROE* and IV. The firm-level competition variable, *FIRM_HERF* shows a positive relation with IV, but the industry-level competition variable *IND_HERF* displays no significant association with IV in any of the regression specification. Finally, we also find that *CSIZE* is positively associated with IV.

B. Robustness Tests

In this sub-section, we present several robustness tests on the effect of political connections on IV. First, we construct a matching sample of connected and non-connected firms. In essence, for each politically connected firm in each year, we find a corresponding non-connected firm which fulfills the following criteria: (1) the non-connected matching firm must be located in the same country and industry; (2) the market capitalization of the non-connected matching firm must be similar to the value for the connected firm. The matching is performed without replacement, which implies that each connected firm is distinctly matched with a corresponding non-connected firm. The total number of firm-year observations for the matching sample is 2,882. We re-estimate equations (3) and (4) for the matching sample using different regression specifications and present results in Table 4. Although the results are in general weaker for the matching sample, they are still consistent with H1b. Hence, the main finding of a negative relationship between political connections and IV still persists, even for the smaller matching sample.

[INSERT TABLE 4 ABOUT HERE]

Second, we use alternative regression specifications and other subsamples and present the results in Table 5. Column (1) presents the results after all the independent variables have been adjusted by the country median values; Column (2) includes the variability of *ROE* (denoted *VROE*) as an additional control variable; Column (3) excludes the data from the USA, UK, and Japan as these three countries constitute a disproportionately large number of unconnected firms compared to other countries; Column (4) excludes the Asian financial crisis period (1997-1998); Column (5) excludes all countries whose connected firms number less than 5. The results from all these additional tests are similar to the results in Table 3 and provide further confirmatory evidence in support of H1b that political connections exert a negative impact on IV.

[INSERT TABLE 5 ABOUT HERE]

Third, we focus on different types of connections. Political connections are characterized both by the political official with whom the firm is connected and the position he or she holds in the firm. Controlling shareholders have the incentive to derive maximum benefit from the political connections that they help to establish for their firms.[15] This type of connections is denoted by the dummy variable, *CONNECTED_OWNER*, which equals 1 if the political connections are established through the controlling shareholder, or 0 otherwise. Similarly, *CONNECTED_DIR* is a dummy variable which equals 1 if the connections are established through a member of the board of directors, or 0 otherwise.

The leader of the country (such as the king or president) is in the best position to bestow political favors with little fear of being penalized by the legal system for favoritism. Connections to the country leader is denoted by the dummy variable, *CONNECTED_LEADER* which equals 1 if the controlling shareholder or a member of the board of directors is the head of state such as a king, president, or prime minister of the country, or 0 otherwise. Likewise, *CONNECTED_MP* is a dummy variable which equals 1

[15] Controlling shareholders can enjoy the benefits that accrue to the firm more than the managers or shareholders in a diffuse-ownership structure. Therefore, they face less free-rider problem compared to other stakeholders in the firm.

if the controlling shareholder or a member of the board of directors is a member of the parliament, or 0 otherwise. *CONNECTED_CLOSE* is a dummy variable which equals 1 if the controlling shareholder or a member of the board of directors is closely related to at least one top politician, or 0 otherwise.

We replace *CONNECTED* in equation (4) with the various types of connections and re-estimate equation (4) using OLS with industry and year fixed-effects. Column (1) of Table 6 present the results when *CONNECTED* is replaced by *CONNECTED_OWNER* and *CONNECTED_DIR*; whereas Column (2) of Table 6 present the corresponding results when *CONNECTED* is replaced by *CONNECTED_LEADER*, *CONNECTED_MP*, and *CONNECTED_CLOSE*. The results suggest that the channel through which our main result on the negative effect of political connections on stock price informativeness is obtained is through the controlling shareholders that are politically connected (*CONNECTED_OWNER*), as the coefficient *CONNECTED_OWNER* is negative (magnitude = -0.132) and significant at the 1% level. Another connection that could potentially be important is when the connected politician is the leader of the country (*CONNECTED_LEADER*) in question, as the coefficient *CONNECTED_LEADER* is also negative (with a *p*-value of 0.14). The other types of political connections are not significant.

[INSERT TABLE 6 ABOUT HERE]

Fifth, in order to mitigate the concerns about endogeneity and self-selection bias associated with the decision of firms to establish political connections, we employ a two-stage treatment model. In the first-stage, we estimate a probit model with the dummy variable, *CONNECTED*, as the dependent variable and several firm-specific and country-specific variables that prior studies have included as determinants of political connection:

$$\Pr(CONNECTED_{i,t}=1) = a_0 + \beta_1 SIZE_{i,t} + \beta_2 ROE_{i,t} + \beta_3 BTM_{i,t} + \beta_4 GOVDISC_i + \beta_5 PCONNIND_{i,t} + \sum c_j Industry_i^j + \sum e_t Year_i^t + u_i \quad (5)$$

In particular, we use *PCONNIND*, which is the percentage of politically connected firms for each industry in each year as an instrument in the first-stage regression as we would expect that a higher percentage leads to more establishments of political connections (see Houston, Jiang, Lin, and Ma (2014)). On the other hand, there is no reason to expect that it will affect IV, hence satisfying the conditions required for the instrument (Reeb, Sakakibara, and Mahmood (2012)). The results of the first-stage regression (unreported) reveals that firms are more likely to establish political connections if they are larger (coefficient of *SIZE* = 0.210, t-statistics = 9.04), located in countries with low governance and accounting disclosures (coefficient of *GOVDISC* = -0.111, t-statistics = -2.49), and if they belong to industries that contain larger proportion of connected firms (coefficient of *PCONNIND* = 5.355, t-statistics = 11.05).

Then, in the second stage, we obtain the predicted value of *CONNECTED* and the inverse mills ratio (*IMR*) from the first-stage regression of equation (5) and include them to re-estimate equation (4). Columns (3) and (4) of Table 6 present the corresponding results for the two-stage least squares (2SLS) and the Heckman (1979) specifications. Our main result remains unchanged as the predicted values of *CONNECTED* still display negative association with IV.

C. The role of Country-Level Institutional Infrastructure

In order to test H2 on the differential effects of country-level institutional infrastructure on the relation between political connections and stock price informativeness, we employ three proxies for country-level institutional factor, namely: *CORRUPT*, *ACCESS*, and *MEDIA*. We use the median value of each country-level variable to partition the sample into two groups: *Low* (below median value) and *High* (above median value).

Columns (1) and (2) of Table 7 provide the regression estimates of equation (4) using OLS with industry and year fixed effects for low and high corruption countries. Interestingly, we observe that the presence of political connections has no incremental effect on IV for firms in countries with low level of corruption (the magnitude of the coefficient of *CONNECTED* in Model (1) is 0.032 and it is

insignificant). In contrast, there is a negative and significant association between political connections and IV for firms in countries with high level of corruption (the magnitude of the coefficient of *CONNECTED* in Model (2) is -0.100, with t-statistic of 2.68). In terms of economic significance, for firms located in countries with high levels of corruption, political connections have the effect of reducing the value of IV by 10 percentage points or about 17.3% of the average value of IV across all politically connected firms. These findings suggest that political connections exert a differential impact on IV, depending on the strength of the institutional quality.

Next, we construct a dummy variable *LOWINST*, which equals 1 for firms in corrupted countries, those in countries with low access to external equity market, and those in countries with low media penetration; or 0 otherwise. We include the interaction term *CONNECTED*×*LOWINST* and estimate the following equation using OLS with industry and year fixed effects:

$$IV_{i,t} = a_0 + \beta_1 CONNECTED_i + \alpha_1 LOWINST_i + \alpha_2 (CONNECTED_i \times LOWINST_i) + \beta_2 SIZE_{i,t} + \beta_3 LEV_{i,t} + \beta_4 BTM_{i,t} + \beta_5 ROE_{i,t} + \sum \alpha_n CountryControls_n + \sum c_j Industry_i^j + \sum e_t Year_i^t + u_i \quad (6)$$

Column (3) of Table 7 presents the results of estimates of equation (6) for the pooled sample that controls for the interaction between *CONNECTED* and *LOWINST*, using *CORRUPT* as the measure of institutional quality. We observe that once *LOWINST* and its interaction with *CONNECTED* are controlled for, the coefficient of *CONNECTED* is no longer significant. However, consistent with our prediction in H2b, the coefficient of *LOWINST* exhibits a negative relation with IV. More relevantly, the coefficient of the interaction term *CONNECTED*×*LOWINST* is negative and significant at the 5% level (magnitude = -0.121, t-statistic = -2.34) and this interaction term captures the differential impact of political connections on IV for firms in countries with low institutional quality, relative to their counterparts in countries with high institutional quality.

[INSERT TABLE 7 ABOUT HERE]

Next, we examine the split-sample results in Columns (4) and (5); and the interaction results in Column (6) for access to external equity market (*ACCESS*). The results demonstrate that the significant

negative association between political connections and IV is found only in countries with low access to external equity market (Column (4)). In all other cases, the coefficient of *CONNECTED* is insignificant. In addition, we continue to find that the coefficient of the interaction term *CONNECTED×LOWINST* is negative and statistically significant (Column (6)).

Finally, columns (7) to (9) of Table 7 present the results for media penetration, the first two for the split samples and the last one for interaction effect. The negative effect of political connections on IV is significant only in the countries with low media penetration ((Column (7)). The estimation of equation (6) using *MEDIA* as the measure of institutional quality further shows that the coefficient of the interaction term *CONNECTED×LOWINST* is negative and significant (Column (9)).

In general, the evidence in Table 7 is consistent with the hypothesis of more negative association between political connections and IV for firms in countries with low institutional quality, characterized by high corruption, low access to external equity market, or low media penetration. Hence, the results in Table 7 provide supporting evidence for H2b.

D. Controlling for Earnings Quality, Analyst Coverage, Trading Volume and Insider Ownership

In this sub-section, we examine potential alternative explanations for the result that political connections exert a negative impact on stock price informativeness in countries with low institutional quality. First, we test whether our finding is in addition to or merely a substitute for the effect of earnings quality on IV as studied by Jin and Myer (2006) and Hutton et al. (2009). These prior studies show that both country-level and firm-level measures of earnings opacity dampen the incorporation of firm-specific information in stock prices. Moreover, Chaney et al. (2011) further show that politically connected firms exhibit lower quality accounting information.

Following Ashbaugh, LaFond, and Mayhew (2003), we compute earnings quality (*EQ*) as the ROA-adjusted discretionary current accruals.[16] The rationale for using this measure is that managers of connected firms who are motivated to engage in political rent-seeking are likely to use their discretion in accounting policy to reduce the informativeness of earnings. There is no reason to believe that non-discretionary aspects of earnings quality are systematically different between connected and non-connected firms after controlling for variables such as size, leverage, profitability and growth. Therefore, consistent with prior studies, we treat higher values of *EQ* to indicate higher incidence of earnings manipulation undertaken by managers, which therefore implies lower earnings quality.

We modify equation (6) to include two additional explanatory variables: *EQ* and the interaction term *CONNECTED*×*EQ* and re-estimate the expanded equation using OLS with industry and year fixed-effects. The results (when *CORRUPT* is used as the measure of institutional quality) are presented in Column (1) of Table 8. Similar to the findings by Hutton et al. (2009), we show that *EQ* is negatively associated with IV, which suggest that higher level of accruals are representative of less transparency and results in stock price which do not fully reflect firm-specific information. If our earlier results are simply due to the effect of earnings quality, then, we should expect the interaction term *CONNECTED*×*CORRUPT* to be insignificant once we include the other interaction term *CONNECTED*×*EQ* into the regression. However, this is contrary to the findings in Column (1). The interaction coefficient *CONNECTED*×*CORRUPT* continues to display negative sign (-0.286) and it remains highly significant at the five-percent level (t-statistic = -2.21). More importantly, we do not find any relation between the interaction term *CONNECTED*×*EQ* with IV. Therefore, our results show that

[16] Specifically, we compute *EQ* as the difference between total current accruals (*TCA*) and expected performance adjusted total current accruals (*EPTCA*). *TCA* is calculated as change in current assets minus change in current liabilities minus the change in cash plus change in short-term debts, divided by lagged total assets. We then estimate a cross-sectional annual regression for each of the industry in our sample of *TCA* on the inverse of lagged total assets, lagged return on assets (Kothari, Leone, and Wasley (2005)), and change in net sales divided by lagged total assets. The estimated coefficients are then multiplied by lagged total assets, lagged ROA, and change in net sales respectively to obtain *EPTCA*.

political connections have an incremental negative effect on IV, after controlling for the effect of earnings quality.

[INSERT TABLE 8 ABOUT HERE]

Second, Chan and Hameed (2006) document a negative relationship between analyst coverage and *IV* for firms in the emerging markets. They infer from their findings that increased analyst activities may impede the production of firm-specific information, resulting in stock prices becoming less informative. To examine whether our main finding is driven by analyst coverage, we control for *ANALYST*, which is calculated as the logarithm of 1 plus the number of analysts following the firm, as obtained from I/B/E/S.[17] We further include *ANALYST* and the interaction term *CONNECTED*×*ANALYST* in the estimation of equation (6) using OLS with industry and year fixed-effects. Column (2) of Table 8 shows that analyst coverage is negatively and significantly associated with *IV*, which is supportive of the findings of Chan and Hameed (2006). We also find that the interaction coefficient *CONNECTED*×*ANALYST* is negative but not significant. More relevantly, our main finding on the interaction coefficient *CONNECTED*×*CORRUPT* remains unchanged, even after controlling for the effect of analyst coverage.

Third, prior literature (Ferreira and Laux (2007)) has also documented the "trading link" hypothesis, which posits that the private information collected by the sophisticated investors and analysts gets incorporated into the stock price through informed trading. Therefore, the more trades by informed investors, the higher should be the firm-specific information incorporated into the stock price. Ideally, we would like to control for informed trades to see if the effect of political connections on *IV* is linked to (the lack of) such trading. However, specific institutional (informed) trading information is not available for the countries that are covered in our sample. Particularly, we do not have information about such trading in emerging economies. As the second best approximation, we use share turnover (*TURNOVER*), computed as total annual trading volume divided by total number of shares outstanding (as obtained from

[17] Analyst following is set to zero for firms with missing analyst data on I/B/E/S.

Datastream) to control for the trading link effect. Our rationale is that higher turnover reflects greater heterogeneity among investors and therefore proxies for the presence of informed traders. Based on this rationale, a lower turnover should result in lower firm-specific volatility. We include the additional control variables *TURNOVER* and the interaction term *CONNECTED×TURNOVER* in our estimation of equation (6) using OLS with industry and year fixed effects. The results of the regression, presented in Column (3) of Table 8 show that the main results of our study are unaltered. In addition, the coefficient of *TURNOVER* exhibits negative association with *IV*, which is consistent with Chan and Hameed (2006) and Fernandes and Ferreira (2008). Both studies argue that the stock prices of highly traded stocks incorporate less firm-specific information and therefore, they are less informative. The interaction coefficient *CONNECTED×TURNOVER* is not related to IV.

In Column (4) of Table 8, we provide the results after controlling for the effect of insider ownership on *IV*. We obtain ownership data from Worldscope and measure insider ownership by the variable *CLOSE*. This variable is defined as the percentage of shares owned by senior corporate officers and directors and their immediate families; shares held in trusts; shares held by another corporation (except shares in a fiduciary capacity by financial institutions); shares held by pension and benefit plans; and shares held by individuals who hold 5% or more ownership. We include *CLOSE* and the interaction term *CONNECTED×CLOSE* in the estimation of equation (6) using OLS with industry and year fixed-effects. The coefficient of *CLOSE* in Column (4) is positive and statistically significant at the one-percent level, similar to the findings of Piotroski and Roulstone (2004). This implies that insider ownership fosters the incorporation of firm-specific information into stock prices. However, the interaction coefficient of *CONNECTED×CLOSE* does not exhibit any association with *IV*. Nevertheless, our main finding on the interaction coefficient *CONNECTED×CORRUPT* remains unchanged after controlling for the effect of insider ownership.

In summary, the findings in Table 8 provide consistent evidence that the stock prices of politically connected firms reflect less firm-specific information than that of non-connected firms in countries with low institutional quality. More importantly, since we control for measures of public information

environment such as earnings quality and analyst coverage, these findings also imply that political connections have the effect of weakening not only the public information environment as documented in prior literature but also the private information environment.

V. Conclusions.

In this paper, we examine the differential cross-country effects of political connections on the incorporation of firm-specific information in the stock prices of firms, using an international sample that covers 28 countries. We propose two competing hypotheses on how political connections affect the information environment of international firms. When political connections are established to extract political rents, the information environment of the connected firms becomes poorer (information-decreasing hypothesis). Whereas, when political connections are coincidental or established for expertise and cost reduction, they could strengthen the information environment (information-increasing hypothesis). We measure the strength of the information environment by the idiosyncratic stock price volatility (IV). Consistent with the information-decreasing hypothesis, we find that politically connected firms exhibit lower IV than that of their non-connected peers. In our examination of the effect of country-level differences in institutional infrastructure, we find that weak institutions characterized by high corruption, low access to external equity market, and low media scrutiny exacerbate and in fact, drive the negative relation between political connections and the richness of the information environment. An implication of this result is that strong institutions alter the incentives that make firms seek political connection and in turn, mitigate the adverse consequences of political rent seeking on the firm-specific information that becomes available to investors.

Our study provides empirical evidence on the effects of macro-factors such as political factors, corruption, financial development, and media penetration on the information environment of connected *vis-a-vis* non-connected firms. By implication, our findings also provide evidence on the differential motivations for political connections for firms in countries with low and high institutional quality. In particular, our findings suggest that countries with low institutional quality more political rent-seeking

activity because they have weaker restraining legal and political institutions. In contrast, countries with high institutional quality have strong restraining legal and political institutions that inhibit political rent-seeking activity.

Another related finding in our study is that not all political connections are similar. Political connections that involve the controlling shareholder or owner significantly affect IV, whereas other connections do not have such impact. This result lends support to the argument that political connections allow the connected firms to use their power in rent-extraction. In effect, when the connections are between strong power centers (strong enough to overcome the institutions and suppress news about it) on both sides – the state and the firm, political patronage is dispensed and exploited. In the absence of such power, it becomes risky for the politician to dispense political patronage and for the firm to extract political rent.

At a more detailed level, our study, in conjunction with Chaney et al. (2011), shows that political connections adversely affect both public and private information availability. Chaney et al. (2011) document the negative effect of political connections on the quality of publicly announced accounting earnings. Information environment is comprised of both the public disclosure and the private acquisition of information by resourceful and interested investors. We show that the negative relation between political connections and IV remains after controlling for public sources of information. Therefore, the findings from our study suggest that political connections have an adverse and material effect on private information collection.

Our findings are useful in understanding the interactions between the political and legal institutions, the incentive for seeking political connections and the possibility of political rent-seeking activities which are welfare-reducing from a societal viewpoint. However, our results should be interpreted with caution. As mentioned in the paper, the reverse causality cannot be fully ruled out – we try to address it by examining what happens when firms establish political connections. An equilibrium argument is that firms might rationally choose to be politically connected if that is more value-adding than improving the information environment to attract capital. This choice is more common in countries

with low institutional quality where the "value-addition" to the firm by political connections can be higher than that in countries with high institutional quality where political patronage, when it gets to be known, could be costly both for the provider and receiver of that patronage.

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Appendix. Definitions of Variables and Sources of Data

Variable name	Definition	Source
Country-level institutional variables		
CORRUPT	An index of corruption, measured as "the exercise of public power for private gain" in the year 2000.	Kauffman et al. (2003)
ACCESS	An index of access to external equity market	La Porta et al. (2006)
MEDIA	An index of media penetration, measured as the average rank of the countries' per capital number of newspapers and television during 1993 and 1995.	Bushman et al. (2004)
Country-level control variables		
GOVDISC	An index of governance and disclosure, measured as the principal components of the good government index from La Porta et al. (1998), accounting disclosure index from the Global Competitiveness Reports for 1999 and 2000 (Jin and Myers, 2006), and the rule of law index (La Porta et al., 2006).	La Porta et al. (1998); Jin and Myers (2006); La Porta et al. (2006)
FIRMHERF	Firm Herfindahl index, computed by using the sales of individual firms for each country.	Worldscope
INDHERF	Industry Herfindahl index, computed by using the sales of individual firms for each country.	Worldscope
GDP	Natural logarithm of gross domestic product.	World Bank WDI
VGDP	Variance of the annual GDP per capita growth, estimated using the values over the previous 5 years.	World Bank WDI
NFIRMS	The natural logarithm of the number of listed firms in each country and each year.	Worldscope
CSIZE	Country size, measured as the natural logarithm of the geographic size in square kilometers.	Fernandes and Ferreira (2008)

Firm-level variables		
IV	Idiosyncratic volatility, calculated as the logarithmic transformation of (1-R^2 / R^2) from equation (1).	Datastream
SIZE	Firm size, defined as the natural logarithm of the book value of total assets.	Worldscope
LEV	Leverage, defined as total debt scaled by the book value of total assets.	Worldscope
BTM	Book-to-market ratio, calculated as the book value of total assets, divided by the market value of equity plus total assets minus the book value of total equity.	Worldscope
ROE	Return on equity, calculated as net income divided by book value of total equity.	Worldscope
VROE	Variability of return on equity, calculated over the previous 3 years.	Worldscope
EQ	Inverse measure of earnings quality, calculated as the ROA-adjusted discretionary current accruals (Ashbaugh et al., 2005).	Worldscope
ANALYST	Analyst following, calculated as the natural logarithm of 1 plus the number of analysts following the firms. Analyst following is set to 0 for firms with missing analyst data.	I/B/E/S International
TURNOVER	Share turnover, calculated as total annual trading volume divided by total number of shares outstanding.	Datastream
CLOSE	Closely-held ownership.	Worldscope

TABLE 1

Sample Distribution

Table 1 presents the median logistic-transformed idiosyncratic volatility (*IV*) for the politically connected and non-connected firms as well as the three country-level institutional factors (*CORRUPT*, *ACCESS*, and *MEDIA*) for each country in the sample, respectively. *IV* is the logistic-transformed firm-specific return variation. *FIRMS* is the number of firms, *N* is the number of firm-years observations. *DIFF* is the difference in *IV* between connected and non-connected firms. All other variables are as defined in the Appendix. The sample period is from 1997 to 2005.

	All firms			Non-connected firms			Connected firms			Country-level variables			
Country	*FIRMS*	*N*	*IV*	*FIRMS*	*N*	*IV*	*FIRMS*	*N*	*IV*	*DIFF*	*CORRUPT*	*ACCESS*	*MEDIA*
Australia	17	58	1.232	15	53	1.221	2	5	1.842	0.621	2.05	6.00	89.25
Austria	26	109	1.009	25	102	0.968	1	7	1.421	0.453	1.93	4.89	87.53
Belgium	5	25	0.269	3	12	0.176	2	13	0.812	0.636	1.36	5.70	86.73
Canada	23	46	1.116	21	41	1.116	2	5	0.703	-0.414	2.3	6.39	93.37
Denmark	34	125	1.178	31	105	1.178	3	20	1.184	0.006	2.36	5.87	95.52
Finland	35	173	1.193	33	156	1.142	2	17	1.253	0.111	2.54	6.37	94.82
France	214	1,083	1.087	209	1,041	1.094	5	42	1.026	-0.067	1.46	5.75	86.14
Germany	77	270	1.331	75	259	1.331	2	11	1.645	0.314	1.72	5.93	90.99
Hong Kong	55	270	1.170	54	260	1.172	1	10	0.653	-0.519	1.44	5.50	87.44
India	174	1,002	0.620	170	965	0.620	4	37	0.654	0.034	-0.21	5.30	29.51
Indonesia	146	701	0.932	126	580	0.952	20	121	0.700	-0.251	-1.09	4.53	.
Ireland	7	51	0.942	6	41	1.004	1	10	0.942	-0.062	1.55	5.29	83.34
Israel	50	188	0.956	48	170	1.017	2	18	-0.563	-1.580	1.25	5.35	82.47
Italy	156	730	0.851	142	651	0.869	14	79	0.335	-0.534	0.89	4.41	78.98
Japan	1,149	6,411	0.871	1,140	6,347	0.873	9	64	0.526	-0.348	1.38	4.92	91.79
Korea (South)	194	961	0.827	189	925	0.838	5	36	0.496	-0.343	0.45	5.02	83.5
Malaysia	644	3,291	0.796	598	2,929	0.832	46	362	0.282	-0.550	0.18	5.11	63.83
Mexico	61	331	1.004	56	292	1.054	5	39	0.633	-0.421	-0.39	3.90	59.95
Netherlands	28	56	0.768	27	54	0.682	1	2	1.046	0.365	2.34	6.43	92.00
Portugal	34	134	1.068	32	122	1.068	2	12	0.894	-0.174	1.41	4.50	70.59
Singapore	209	928	0.959	201	869	0.959	8	59	0.959	-0.001	2.5	5.50	83.72

Spain	34	202	0.578	31	189	0.581	3	13	0.288	-0.294	1.66	5.09	75.31
Sweden	68	396	0.607	65	375	0.613	3	21	0.483	-0.130	2.48	6.15	37.86
Switzerland	31	213	0.877	28	185	0.936	3	28	0.576	-0.360	2.22	6.07	95.47
Taiwan	418	1,862	0.899	413	1,817	0.903	5	45	0.152	-0.751	0.72	5.54	.
Thailand	212	1,026	0.853	197	914	0.888	15	112	0.056	-0.832	-0.34	4.24	52.26
UK	831	4,548	1.206	780	4,175	1.219	51	373	1.039	-0.180	2.17	6.26	90.81
USA	1,745	8,895	1.623	1,738	8,835	1.626	7	60	1.051	-0.575	1.77	6.74	96.72
All markets													
Total	6,677	34,085		6,453	32,464		224	1,621					
Mean			0.958			0.962			0.753	-0.209	1.36	5.46	80.00

TABLE 2

Descriptive Statistics

Panel A of Table 2 present the descriptive statistics of the main firm-specific variables. Panel B presents the Pearson correlations of the firm-specific variables. *p*-value for the differences in mean between connected and non-connected firms for each of the firm-specific variables is given in the parenthesis. All variables are as defined in the Appendix.

Panel A: Descriptive statistics for the firm-specific variables

	All firms				Non-connected firms				Connected firms				
	N	Mean	Median	Std Dev	N	Mean	Median	Std Dev	N	Mean	Median	Std Dev	*p*-value
IV	34,085	1.020	1.006	0.816	32,464	1.042	1.025	0.811	1,621	0.577	0.579	0.808	(0.00)
SIZE	34,085	19.340	19.160	1.697	32,464	19.283	19.110	1.667	1,621	20.483	20.430	1.865	(0.00)
LEV	34,085	0.255	0.221	0.244	32,464	0.252	0.217	0.243	1,621	0.321	0.293	0.259	(0.00)
BTM	34,085	0.990	0.706	0.914	32,464	0.993	0.710	2.714	1,621	0.936	0.648	2.666	(0.02)
ROE	34,085	-0.023	0.064	0.442	32,464	-0.025	0.062	0.442	1,621	0.014	0.096	0.450	(0.00)

Panel B: Correlation matrix for the firm-specific variables

	IV	*CONNECTED*	*SIZE*	*LEV*	*BTM*	*ROE*
IV	1.000					
CONNECTED	-0.121	1.000				
SIZE	-0.346	0.151	1.000			
LEV	-0.081	0.060	0.210	1.000		
BTM	-0.018	-0.013	-0.113	0.055	1.000	
ROE	-0.095	0.019	0.185	-0.074	-0.021	1.000

TABLE 3

Regression Results of Firm-Specific Return Variation on Political Connections – Full Sample

Table 3 presents the regression results of idiosyncratic volatility on political connections and other control variables for the full sample. The definitions of the variables are described in Appendix 1. The sample period is from 1997-2005. Columns (1) to (3) present the results using the ordinary least squares (OLS) regression specification. Column (4) presents the results using the Fama-MacBeth (1973) regression methodology. Column (5) presents the results using the weighted-least squares (WLS) regression methodology. The *t*-statistic for each coefficient is reported in the parenthesis and is based on White's heteroskedasticity corrected standard errors. *, **, and *** denote statistical significance at the 10, 5, and 1% levels, respectively (one-tailed).

	(1) OLS	(2) OLS	(3) OLS	(4) Fama-Macbeth	(5) WLS
CONNECTED	**-0.078*** **	**-0.064** **	**-0.067** **	**-0.042** **	**-0.067*** **
	(-2.95)	**(-2.44)**	**(-2.37)**	**(-2.52)**	**(-3.75)**
SIZE	-0.189***	-0.188***	-0.187***	-0.173***	-0.187***
	(-60.60)	(-60.19)	(-57.36)	(-10.22)	(-77.48)
LEV	0.175***	0.177***	0.174***	0.204***	0.174***
	(8.94)	(9.13)	(8.68)	(8.81)	(10.89)
BTM	0.069***	0.080***	0.064***	0.067***	0.064***
	(13.41)	(15.26)	(11.76)	(7.77)	(14.19)
ROE	0.018*	0.007	0.001	-0.025*	0.001
	(1.90)	(0.79)	(0.15)	(-2.16)	(0.15)
GOVDISC			0.127***	0.143***	0.127***
			(7.81)	(3.81)	(10.73)
FIRMHERF			4.907***	4.599***	4.879***
			(15.86)	(4.85)	(19.53)
INDHERF			-0.078	0.126	-0.081
			(-1.03)	(1.58)	(-1.57)
GDP			0.174***	0.164***	0.175***
			(13.21)	(5.04)	(18.69)
VGDP			0.137***	0.086	0.136***
			(13.92)	(1.55)	(18.25)
NFIRMS			0.083***	0.079	0.082***
			(6.17)	(1.53)	(8.57)
CSIZE			0.106***	0.110***	0.106***
			(26.56)	(8.85)	(38.70)
Intercept	4.494***	4.294***	0.027	0.429	0.372***
	(35.24)	(33.81)	(0.15)	(0.68)	(2.78)
Country FE	Yes	Yes	No	No	No
Industry FE	Yes	Yes	Yes	Yes	Yes
Year FE	No	Yes	Yes	Yes	Yes
Adjusted R^2	0.315	0.346	0.321	0.280	0.278
Observations	34,085	34,085	34,085	34,085	34,085

TABLE 4

Regression Results of Firm-Specific Return Variation on Political Connections – Matching Sample

This table presents the regression results of idiosyncratic volatility on political connections and other control variables for the sample of politically connected firms and a matching sample of non-connected firms. The definitions of the variables are described in Appendix 1. The sample period is from 1997-2005. Columns (1) to (3) present the results using the ordinary least squares (OLS) regression specification. Column (4) presents the results using the Fama-MacBeth (1973) regression methodology. Column (5) presents the results using the weighted-least squares (WLS) regression methodology. The *t*-statistic for each coefficient is reported in the parenthesis and is based on White's heteroskedasticity corrected standard errors. *, **, and *** denote statistical significance at the 10, 5, and 1% levels, respectively (one-tailed).

	(1) OLS	(2) OLS	(3) OLS	(4) Fama-Macbeth	(5) WLS
CONNECTED	**-0.065****	**-0.063****	**-0.062***	**-0.069*****	**-0.062****
	(-2.07)	**(-2.02)**	**(-1.79)**	**(-4.09)**	**(-2.47)**
SIZE	-0.182***	-0.187***	-0.190***	-0.182***	-0.190***
	(-13.04)	(-13.04)	(-13.15)	(-11.75)	(-19.09)
LEV	0.096	0.183***	0.206***	0.246**	0.206***
	(1.39)	(2.77)	(2.94)	(3.20)	(3.69)
BTM	0.029*	0.047***	0.045**	0.039**	0.045***
	(1.65)	(2.80)	(2.52)	(2.77)	(3.01)
ROE	0.004	-0.015	-0.006	-0.046	-0.006
	(0.11)	(-0.47)	(-0.18)	(-1.00)	(-0.19)
GOVDISC			0.095*	0.122**	0.095**
			(1.86)	(2.73)	(2.56)
FIRMHERF			3.733***	6.336***	3.733***
			(4.06)	(3.40)	(4.76)
INDHERF			-0.005	0.126	-0.004
			(-0.03)	(1.20)	(-0.03)
GDP			0.196***	0.192***	0.196***
			(4.58)	(4.52)	(6.23)
VGDP			-0.000	0.055	-0.000
			(-0.01)	(0.73)	(-0.01)
NFIRMS			0.046	0.072	0.046
			(1.19)	(1.32)	(1.56)
CSIZE			0.091***	0.099***	0.091***
			(5.60)	(6.51)	(8.10)
Intercept	4.681***	5.211***	1.113*	0.502	0.580
	(12.91)	(14.06)	(1.78)	(0.64)	(1.28)
Country FE	Yes	Yes	No	No	No
Industry FE	Yes	Yes	Yes	Yes	Yes
Year FE	No	Yes	Yes	Yes	Yes
Adjusted R^2	0.267	0.335	0.286	0.217	0.286
Observations	2,882	2,882	2,882	2,882	2,882

TABLE 5

Regression Results of Firm-Specific Return Variation on Political Connections

– Alternative Specifications and Samples

This table presents the regression results of idiosyncratic volatility on political connections and other control variables using alternative specifications and samples. The definitions of the variables are described in Appendix 1. The sample period is from 1997-2005. Column (1) presents the results after all firm-specific variables have been adjusted by the respective country-median values. Column (2) presents the results after including *VROE* (the volatility of return on equity). Columns (3) to (5) present the results after excluding observations from USA, UK, and Japan; the years of Asian financial crisis (1997-1998); and countries with less than 5 politically connected firms, respectively. The *t*-statistic for each coefficient is reported in the parenthesis and is based on White's heteroskedasticity corrected standard errors. *, **, and *** denote statistical significance at the 10, 5, and 1% levels, respectively (one-tailed).

	(1) Adjusted for country median	(2) Include VROE	(3) Exclude USA, UK, Japan	(4) Exclude 1997-1998	(5) # of connected firms > 5
CONNECTED	**-0.060****	**-0.067****	**-0.057***	**-0.060****	**-0.078****
	(-2.24)	**(-2.36)**	**(-1.72)**	**(-2.07)**	**(-2.52)**
SIZE	-0.186***	-0.188***	-0.184***	-0.185***	-0.186***
	(-60.67)	(-56.32)	(-34.14)	(-54.20)	(-54.32)
LEV	0.050	0.175***	0.149***	0.210***	0.172***
	(0.29)	(8.43)	(5.29)	(9.72)	(8.10)
BTM	0.126	0.065***	0.052***	0.075***	0.063***
	(0.73)	(11.70)	(7.71)	(13.41)	(10.49)
ROE	-0.186***	0.007	0.002	0.004	0.006
		(0.70)	(0.15)	(0.39)	(0.59)
VROE		0.006			
		(0.35)			
GOVDISC	-0.032	0.128***	0.017	0.129***	0.135***
	(-1.27)	(7.74)	(0.92)	(7.71)	(6.92)
FIRMHERF	1.460***	4.978***	1.700***	4.361***	5.047***
	(4.68)	(15.77)	(4.10)	(13.66)	(13.65)
INDHERF	0.011	-0.079	0.113	-0.053	0.066
	(0.16)	(-1.05)	(1.35)	(-0.69)	(0.79)
GDP	0.021	0.174***	0.159***	0.190***	0.173***
	(1.54)	(12.93)	(11.06)	(14.67)	(8.39)
VGDP	0.004	0.135***	-0.020*	0.168***	0.151***
	(0.42)	(13.46)	(-1.71)	(17.08)	(11.27)
NFIRMS	0.097***	0.085***	-0.070***	0.029**	0.102***
	(8.09)	(6.22)	(-3.86)	(2.10)	(5.46)
CSIZE	0.003	0.107***	0.042***	0.111***	0.112***
	(0.93)	(26.10)	(7.38)	(27.70)	(22.80)
Intercept	-1.362***	0.291	2.294***	0.590***	-0.132
	(-8.41)	(1.57)	(9.75)	(3.23)	(-0.53)
Country FE	No	No	No	No	No
Industry FE	Yes	Yes	Yes	Yes	Yes
Year FE	No	Yes	Yes	Yes	Yes
Adjusted R^2	0.223	0.322	0.265	0.299	0.323
Observations	34,085	33,426	14,231	29,205	30,767

TABLE 6

The Role of Different Types of Political Connections and Controlling for Endogeneity and Selection Bias

Columns (1) and (2) of this table present the regression results of idiosyncratic volatility on different types of political connections and other control variables. Columns (3) and (4) of this table present the results after controlling for endogeneity and selection bias using the two-stage least squares (2SLS) and Heckman (1979) regression methodologies, respectively. The definitions of the variables are described in Appendix 1. The sample period is from 1997-2005. *IMR* is the inverse-mills ratio from the first-stage probit model of determinants of political-connections. The *t*-statistic for each coefficient is reported in the parenthesis and is based on White's heteroskedasticity corrected standard errors. *, **, and *** denote statistical significance at the 10, 5, and 1% levels, respectively (one-tailed).

	(1)	(2)	(3) 2SLS	(4) Heckman
CONNECTED_OWNER	**-0.132*** **			
	(-2.96)			
CONNECTED_DIR	-0.010			
	(-0.31)			
CONNECTED_LEADER		-0.106		
		(-1.48)		
CONNECTED_MP		0.003		
		(0.10)		
CONNECTED_CLOSE		-0.053		
		(-0.61)		
CONNECTED			**-0.404*** **	**-0.407*** **
			(-4.41)	**(-4.31)**
IMR				0.000
				(0.18)
SIZE	-0.187***	-0.187***	-0.181***	-0.181***
	(-57.43)	(-57.38)	(-50.61)	(-50.40)
LEV	0.176***	0.176***	0.171***	0.171***
	(8.73)	(8.76)	(8.55)	(8.54)
BTM	0.063***	0.063***	0.062***	0.061***
	(11.65)	(11.64)	(11.27)	(11.26)
ROE	0.002	0.001	-0.001	-0.001
	(0.17)	(0.15)	(-0.10)	(-0.10)
GOVDISC	0.125***	0.126***	0.116***	0.116***
	(7.66)	(7.72)	(7.04)	(7.04)
FIRMHERF	4.849***	4.798***	5.010***	5.011***
	(15.68)	(15.47)	(16.08)	(16.08)
INDHERF	-0.073	-0.077	-0.020	-0.021
	(-0.98)	(-1.02)	(-0.26)	(-0.27)
GDP	0.174***	0.174***	0.180***	0.180***
	(13.23)	(13.11)	(13.58)	(13.57)
VGDP	0.138***	0.138***	0.143***	0.143***
	(14.01)	(14.05)	(14.24)	(14.24)
NFIRMS	0.083***	0.082***	0.078***	0.078***
	(6.20)	(6.10)	(5.78)	(5.75)
CSIZE	0.106***	0.107***	0.108***	0.108***
	(26.62)	(26.56)	(26.72)	(26.71)
Intercept	0.029	0.040	-0.181***	-0.181***
	(0.16)	(0.22)	(-50.61)	(-50.40)
Country FE	No	No	No	No
Industry FE	Yes	Yes	Yes	Yes
Year FE	No	Yes	Yes	Yes
Adjusted R^2	0.322	0.322	0.322	0.322
Observations	34,085	34,085	34,085	34,085

TABLE 7

The Role of Country-Level Institutional Factors

This table presents the regression results of firm-specific return variation on political connections, country-level institutional factors (*LOWINST*), and other control variables. *LOWINST* is a dummy variable which equals 1 for firms in corrupted countries, those in countries with low access to external equity market, and those in countries with low media penetration; or 0 otherwise. The definitions of the variables are described in Appendix 1. Columns (1), (4), and (7) present the results for countries with low corruption, low access to external capital market, and low media penetration; respectively. Columns (2), (5), and (8) present the results for countries with high corruption, high access to external capital market, and high media penetration; respectively. Columns (3), (6), and (9) present the regression results for the pooled sample and include the interaction term between *CONNECTED* and *FACTOR*. The *t*-statistic for each coefficient is reported in the parenthesis and is based on White's heteroskedasticity corrected standard errors. *, **, and *** denote statistical significance at the 10, 5, and 1% levels, respectively, (one-tailed).

	(1) Low Corruption	(2) High Corruption	(3) Pooled Sample	(4) Low Access	(5) High Access	(6) Pooled Sample	(7) Low Media Penetration	(8) High Media Penetration	(9) Pooled Sample
CONNECTED	0.032	**-0.100*** **	-0.001	**-0.094** **	0.007	-0.006	**-0.087** **	0.015	0.032
	(0.84)	**(-2.68)**	(-0.04)	**(-2.40)**	(0.20)	(-0.16)	**(-2.19)**	(0.36)	(0.78)
LOWINST			-0.406***			**-0.315*** **			**0.141*** **
			(-16.62)			**(-20.89)**			**(5.45)**
CONNECTED×LOWINST			**-0.121** **			**-0.115** **			**-0.191*** **
			(-2.34)			**(-2.18)**			**(-3.37)**
SIZE	-0.183***	-0.182***	-0.186***	-0.180***	-0.184***	-0.184***	-0.173***	-0.183***	-0.184***
	(-43.81)	(-38.61)	(-58.04)	(-35.44)	(-46.85)	(-58.15)	(-27.56)	(-48.99)	(-55.58)
LEV	0.180***	0.171***	0.169***	0.171***	0.186***	0.175***	0.133***	0.206***	0.174***
	(6.35)	(6.51)	(8.56)	(6.18)	(6.88)	(8.90)	(3.99)	(8.12)	(8.36)
BTM	0.109***	0.066***	0.073***	0.072***	0.092***	0.076***	0.055***	0.122***	0.078***
	(10.46)	(11.18)	(13.50)	(11.04)	(10.41)	(14.18)	(6.68)	(15.61)	(13.30)
ROE	0.000	-0.003	0.002	-0.012	-0.003	0.005	0.020	-0.008	0.008
	(0.02)	(-0.23)	(0.22)	(-0.73)	(-0.27)	(0.56)	(1.08)	(-0.69)	(0.83)
GOVDISC	-0.322***	-0.020	-0.171***	-0.058*	-0.002	-0.086***	-0.077**	0.738***	0.198***
	(-3.99)	(-0.77)	(-6.87)	(-1.72)	(-0.04)	(-4.45)	(-2.56)	(9.44)	(10.48)
FIRMHERF	0.835	2.998***	2.154***	3.379***	0.949*	4.069***	0.883	0.951*	5.921***
	(1.60)	(6.18)	(6.61)	(6.28)	(1.75)	(13.47)	(1.45)	(1.69)	(17.73)
INDHERF	-0.274**	0.174*	0.001	0.259***	-0.197*	-0.089	0.074	-0.196*	-0.094
	(-2.35)	(1.92)	(0.01)	(2.66)	(-1.91)	(-1.20)	(0.76)	(-1.67)	(-1.19)
GDP	0.487***	0.145***	0.229***	0.181***	0.593***	0.236***	0.172***	0.151*	0.193***
	(5.75)	(9.81)	(17.16)	(10.79)	(7.67)	(17.81)	(10.96)	(1.80)	(13.63)
VGDP	-0.047*	-0.024*	-0.002	0.014	-0.054**	0.094***	-0.092***	0.184***	0.166***
	(-1.82)	(-1.78)	(-0.14)	(0.54)	(-2.27)	(9.84)	(-3.76)	(7.17)	(13.18)
NFIRMS	0.123***	-0.034*	0.091***	-0.004	0.120***	0.080***	-0.028	0.060***	0.100***
	(6.88)	(-1.68)	(6.83)	(-0.18)	(8.08)	(6.00)	(-1.02)	(2.72)	(5.65)
CSIZE	0.046***	0.027***	0.072***	0.073***	0.033***	0.108***	0.012	0.068***	0.123***
	(6.33)	(3.94)	(18.27)	(3.78)	(4.36)	(29.12)	(1.17)	(6.20)	(23.40)
Intercept	-1.524*	1.661***	0.434**	0.730*	-2.687***	-0.352*	1.830***	0.646	-0.403**
	(-1.90)	(6.79)	(2.49)	(1.87)	(-3.59)	(-1.93)	(6.27)	(0.77)	(-2.00)
Country FE	No	No	No	No	No	No	No	No	No
Industry FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Adjusted R^2	0.306	0.245	0.333	0.254	0.325	0.336	0.278	0.344	0.331
Observations	16,070	18,015	34,085	15,137	18,948	34,085	10,323	21,199	31,522

TABLE 8

Controlling for Earnings Quality, Analyst Following, Share Turnover, and Insider Ownership

This table presents the regression results of firm-specific return variation on political connections and other control variables, after controlling for the effects of earnings quality (*EQ*), analyst coverage (*ANALYST*), share turnover (*TURNOVER*), and insider ownership (*CLOSE*). The definitions of the variables are described in Appendix 1. The *t*-statistic for each coefficient is reported in the parenthesis and is based on White's heteroskedasticity corrected standard errors. *, **, and *** denote statistical significance at the 10, 5, and 1% levels, respectively (one-tailed).

	(1)	(2)	(3)	(4)
CONNECTED	0.048	0.036	0.021	-0.007
	(0.83)	(0.68)	(0.47)	(-0.15)
CORRUPT	-1.422***	-1.485***	-1.445***	-1.480***
	(-10.73)	(-11.43)	(-10.93)	(-11.42)
CONNECTED×CORRUPT	**-0.186****	**-0.185****	**-0.202****	**-0.232****
	(-2.21)	**(-2.23)**	**(-2.37)**	**(-2.54)**
EQ	-0.089***			
	(-3.70)			
CONNECTED×EQ	0.094			
	(0.87)			
ANALYST		-0.075***		
		(-10.99)		
CONNECTED×ANALYST		-0.010		
		(-0.50)		
TURNOVER			-0.017***	
			(-7.63)	
CONNECTED×TURNOVER			-0.003	
			(-0.16)	
CLOSE				0.225***
				(12.99)
CONNECTED×CLOSE				0.094
				(1.14)
SIZE	-0.187***	-0.155***	-0.186***	-0.175***
	(-57.70)	(-35.84)	(-57.07)	(-51.24)
LEV	0.160***	0.141***	0.177***	0.162***
	(7.82)	(7.06)	(8.92)	(8.16)
BTM	0.065***	0.044***	0.060***	0.055***
	(11.91)	(7.92)	(11.12)	(10.28)
ROE	0.003	0.003	-0.008	-0.005
	(0.33)	(0.36)	(-0.89)	(-0.58)
GOVDISC	-0.270***	-0.260***	-0.288***	-0.243***
	(-6.46)	(-6.35)	(-6.89)	(-5.95)
FIRMHERF	3.155***	3.616***	3.441***	3.839***
	(9.50)	(11.00)	(10.38)	(11.47)
INDHERF	-0.029	-0.028	-0.054	-0.025
	(-0.40)	(-0.38)	(-0.74)	(-0.35)
GDP	0.166***	0.154***	0.175***	0.146***
	(12.71)	(11.81)	(13.30)	(11.08)
VGDP	0.103***	0.121***	0.107***	0.130***
	(9.49)	(11.03)	(9.83)	(11.72)
NFIRMS	0.117***	0.120***	0.128***	0.145***
	(8.24)	(8.58)	(8.98)	(10.36)
CSIZE	0.122***	0.128***	0.121***	0.125***
	(28.29)	(29.52)	(28.17)	(28.83)
Intercept	0.316*	-0.171	0.168	-0.118
	(1.74)	(-0.93)	(0.91)	(-0.64)
Country FE	No	Yes	No	No
Industry FE	Yes	Yes	Yes	Yes
Year FE	No	Yes	Yes	Yes
Adjusted R^2	0.326	0.331	0.328	0.332
Observations	34,085	34,085	34,085	34,085