

**Insider trading, earnings management, and political connections:
Evidence from the ouster of government officials**

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Abstract

In this study, I examine whether insiders at politically-connected firms are more likely to manage earnings if they plan to trade stocks after an earnings announcement, compared to insiders at non-connected firms. I use anti-corruption cases involving the ouster of high-level Chinese government officials as a natural experiment setting and adopt difference-in-differences model. I find that before the ouster of corrupt government officials, insiders at politically-connected firms are more likely to manage discretionary accruals upward if they intend to sell stocks after an earnings announcement. The positive relationship between discretionary accruals and subsequent insider selling activities becomes less pronounced after the political connections are terminated. Additional analyses show that political connections affect the association between upward earnings management and subsequent insider selling activities by providing both access to private information regarding government policies and protection from government officials. This study has implications for investors and regulators regarding the mechanism through which politically-connected insiders can extract rents from outside investors, namely managing earnings upward while selling stocks subsequently.

Key words: *Insider trading, earnings management, political connection, Chinese market*

I. Introduction

The association between earnings management and insider trading activities can be described in four main situations: (1) managing earnings upward and then selling stocks; (2) managing earnings downward and then buying stocks; (3) selling stocks and then managing earnings downward; and (4) buying stocks and then managing earnings upward. Insider selling (buying) activities preceded by upward (downward) earnings manipulation convey confusing signals to the market and hence represent opportunistic insider trading behavior¹. On the contrary, selling (buying) activities followed by downward (upward) earnings management convey consistent signals to the market and may not necessarily represent opportunistic behavior (Sawicki and Shrestha, 2008).² Therefore, in this study, the focus remains on the first two situations. Several recent studies provide the evidence of this type of opportunistic insider trading behavior, that is, insiders opportunistically manage earnings to manipulate stock prices if they intend to trade stocks subsequently in order to maximize trading profits (Park and Park, 2004; Sawicki and Shrestha, 2008 2014). It is important to identify factors that may influence opportunistic insider trading behavior and to make the implications of such opportunistic behavior clear to regulators and investors (Rozanov, 2008; Cheng, Huang and Li, 2016). The purpose of this paper is to explore whether insiders at politically-connected firms are more likely to engage in this opportunistic behavior, that is, managing earnings upward (downward) if they intend to sell (buy) stocks subsequently, compared to insiders at non-connected firms.

On one hand, when insiders plan to trade stocks after earnings announcements, in order to maximize trading profits, they may manage earnings in advance to manipulate stock prices (this is the so-called opportunistic hypothesis). On the other hand, insider selling (buying) activities preceded by upward (downward) earnings management may attract attentions of regulators and incur significant

¹ Beneish and Vargus (2002) find that when upward earnings management is followed by insider selling, on average, future stock price will decline.

² Alternatively, such activities can be interpreted by signaling hypothesis, that is, insiders intentionally use both trading activities and accruals management to address the misvaluation of the firm (Sawicki and Shrestha, 2008).

costs to insiders in terms of lawsuits and damage to their reputations (the litigation hypothesis). Insiders will be more (less) likely to engage in manipulating earnings before their trading if the expected benefits from doing so are larger (smaller) than the expected costs. Thus, for instance, consistent with this theoretical framework, there is evidence that good corporate governance (Rozanov, 2008) and actual lawsuits (Cheng et al., 2016) help deter opportunistic insider trading activities by imposing sufficient costs on the insiders. The aim of this research is to complement previous studies by providing evidence on the effect of an underexplored factor, i.e. political connections, on one specific type of opportunistic insider trading behavior, that is, managing earnings if they intend to trade stocks subsequently.

In terms of their potential significance, political connections can channel private information to insiders regarding forthcoming government decisions that may affect the stock performance of a firm, and hence increase the intensity and the benefits of opportunistic insider trading activities (Gao and Huang, 2016; Jagolinzer, Larcker, Ormazabal and Taylor, 2016). When insiders obtain some private information regarding future government decisions, they may trade on it quickly before it is leaked to the market. Thus, they may have incentives to manipulate stock prices, for example, by managing earnings, to maximize their trading profits in a short window. Further, political connections can shield insiders from enforcement mechanisms and reduce the litigation costs associated with opportunistic insider trading behavior (Yu and Yu, 2011; Correia, 2014; Bouveau, Coulomb, and Sangnier, 2016). Therefore, political connection can increase the benefits and reduce the costs of engaging in opportunistic insider trading behavior. I expect that insiders at politically-connected firms are more likely to manage earnings upward (downward) if they intend to sell (buy) stocks subsequently, compared to insiders at non-connected firms.

This study uses Chinese market as the setting. The future performance of firms in China largely depends on government policies and the allocation of government resources (Feng, Johansson, and Zhang, 2015). To be more specific, because government policies significantly affect share prices in

the Chinese capital market, individuals with access to the private knowledge regarding these policies represent a rich source of inside information. In practice, not surprisingly, government decisions are often leaked to individuals who enjoy privileged relationships with government officials prior to being publicly disclosed (Huang, 2006).³ Moreover, Chinese regulatory agencies are not fully independent of interference from the government, while Chinese legal institutions are government-driven rather than litigant-driven (Naughton, 2007; Clarke, Murrell and Whiting, 2008). Political right precedes over laws and regulations and empowers government officials to intervene in judicial and regulatory decisions (Chen, 2003; Jones, 2003). For these reasons, political connections are especially valuable for insiders' opportunistic behavior⁴ in China (Huang, 2006; Wu, Johan and Rui, 2016).

One more consideration in this regard is that Chinese politics is characterized by fierce competition among several factions. Political scandals, such as corruption investigations that have led to the ouster of high-level government officials, are commonly viewed as pretexts put forward by one faction in its battles with others (Huang, Wong and Zhang, 2015). Because such scandals are driven mainly by political factors, they are unlikely to be foreseen by the market or influenced by firms (Fan, Guan, Li and Yang, 2014). Building on the studies by He, Pan, and Tian (2017) and Pan and Tian (2017), I take advantage of this unique setting and use the ouster of high-level government officials at both the provincial and national levels in anti-corruption cases as a natural experiment based on the difference-in-differences design. Thus, I identify a sample of firms connected to corrupt government officials through bribes or relationships of friendship or kinship. The expectation is that, compared with insiders at non-connected firms, insiders at politically-connected firms are more likely to manage earnings upward (downward) if they intend to sell (buy) stocks after an earnings announcement. The sudden

³ Thus, for example, in November 2015, Xu Xiang, a prominent Chinese private equity investor, and three managers from CITIC Securities were arrested on suspicion of insider trading, and two high-level officers of China's Securities Regulatory Commission were also investigated (Fortune, 2015). "China arrests another market guru amid probe into stock debacle," *Fortune*, November 2, 2015, <http://fortune.com/2015/11/02/china-arrests-another-market-guru-amid-probe-into-stock-debacle/>

⁴ In this study, insiders' opportunistic behavior particularly refers to the situation in which insiders are more likely to manage earnings upward (downward) if they sell (buy) stocks subsequently.

termination of political connections when corruption cases are exposed is expected to mitigate such opportunistic insider trading behavior at politically-connected firms.

Both Jagolinzer et al. (2016) and Bouveau et al. (2016) examine the relationship between political connections and insider trading.⁵ However, both of their definitions of political connection suffer from endogeneity issues. Jagolinzer et al. (2016) measure political connections based on whether insiders have work experience at government agencies. However, it is difficult to rule out the alternative explanation that the trading behavior of politically-connected insiders is due, not to political connection per se, but simply to greater skills at forecasting the government's actions. Bouveau et al. (2016) define politically-connected directors as either major contributors to the Nicolas Sarkozy's presidential campaign or his personal friends. However, any changes in these directors' intentions to support Sarkozy might parallel changes in their insider trading behavior. Another limitation of these two studies is that there is no empirical evidence linked to the question that opportunistic insider trading behavior at politically-connected firms could have been driven by privileged access to information regarding the government's future decisions or by political protection, or alternatively by some combination of the two factors.

This paper complements these two studies in the following two ways. First, by using the ouster of corrupt government officials as the exogenous shock to the termination of political connections, this study to a large extent solves the endogeneity issues, since these anti-corruption cases are not directly associated with politically-connected firms. Second, by focusing on the setting of the ouster of government officials, I am able to disentangle the two channels—of private information regarding future government policy and of protection from government officials—to certain extent. Following the approach taken here, in the year before a corrupt government official falls under investigation (designated as year T-1), insiders at politically-connected firms possess both private information about

⁵ Jagolinzer et al. (2016) examine the relationship between political connections and insider trading during the U.S. financial crisis of 2008 and find that politically-connected insiders exploit private information about the allocation of funds by the Troubled Asset Relief Program. Bouveau et al. (2016) use the 2007 presidential election in France as a context for investigating the relationship between political connections and opportunistic insider trading behavior.

future government policies and political protections, as shown in Figure 1. Then, in event year T, when a corrupt government official is investigated, insiders at politically-connected firms suddenly lose their political protection, although they may still have private information about future decisions by the government, especially when the investigation of a corrupt government official is proximate to an earnings announcement, as presented in Figure 2 (a) and (b). In the first year after event year T (designated as year T+1), insiders at politically-connected firms lose both protection from government officials and private information regarding future government policy, as illustrated in Figure 3. Based on this logic, any mitigation of the insiders' opportunistic behavior at politically-connected firms from year T-1 to event year T⁶ is mainly attributable to the loss of political protection. Likewise, any such mitigation from event year T to year T+1 is mainly attributable to the loss of private information regarding future government decisions.

Following Park and Park (2004) and Sawicki and Shrestha (2008, 2014), I measure opportunistic insider trading activities preceded by earnings management in the following two situations.⁷ In the first, insiders manage discretionary accruals upward if they intend to sell their stocks within three months after an earnings announcement. In the second, insiders manage discretionary accruals downward if they intend to buy stocks within three months after an earnings announcement.

I analyze all high-level corruption cases that were prosecuted in China between 2010 and 2016. I identify 79 publicly-listed firms as being connected to corrupt government officials during this period either through direct bribery or through connections of friendship or kinship. I also collect a set of non-connected firms that serve as a control group to ensure that my empirical findings are not attributed to differences in characteristics of firms other than political connections. Using the

⁶ In assessing this situation, I use the subsample of instances where the investigation date of a corrupt government official is near the date of earnings announcement in the event year. I do so in order to make sure that insiders at politically-connected firms retain private information regarding future government policies when they make decisions about earnings management and trading in the event year.

⁷ As mentioned in footnote 1 above, I do not consider insider trading activities before earnings management. Insider trading selling (buying) activities before earnings management send the same signals to the market as the subsequent decreasing (increasing) of accruals, which may be consistent with signaling hypothesis rather than the opportunistic hypothesis.

procedure of He et al. (2017), I match non-connected firms with politically-connected firms by industry, owner type (state-owned or non-state-owned enterprises), and firm size (in terms of total assets) during the sample periods.

Using the difference-in-differences method, I find that, compared with insiders at non-connected firms, insiders at politically-connected firms are more likely to manage discretionary accruals upward if they sell stocks within three months after an earnings announcement before the ouster of the corrupt officials. After the termination of political connections, the positive relationship between discretionary accruals and subsequent insider selling activities at politically-connected firms becomes less pronounced, relative to that at non-connected firms. In additional analyses, I disentangle the two channels of private information regarding future government policy and political protection. Using a subsample consisting of the politically-connected firms for which the investigation date of a corrupt government official is near the earnings announcement date and matched non-connected firms, I find that compared with that at non-connected firms, the positive relationship between discretionary accruals and subsequent insider selling activities at politically-connected firms becomes less pronounced from year T-1 to event year T, an outcome that I attribute to the loss of political protection. I also find that relative to that at non-connected firms, the positive relationship between discretionary accruals and subsequent insider selling activities at politically-connected firms becomes less pronounced from event year T to year T+1, which I attribute to the loss of private information regarding government policies. These findings are robust to using a one-month trading window after an earnings announcement, reconstructing the non-connected control groups using propensity score matching methods, and using alternative measurements for discretionary accruals.

In order to validate the underlying assumption that insiders can increase (decrease) stock prices by managing earnings upward (downward) before selling (buying) stocks, I follow Gunny and Zhang (2013) and use a measure of Λ -shaped sales (defined as insider sales that are preceded by positive abnormal returns and followed by negative abnormal returns) and a measure of V-shaped purchases

(defined as insider purchases that are preceded by negative abnormal returns and followed by positive abnormal returns). The results show that insider trading activities following earnings announcement at politically-connected firms are more likely to exhibit a Λ -shaped sales pattern or a V-shaped purchases pattern before the ouster of corrupt officials, and that these patterns become less pronounced after the termination of political connections. Additional evidence shows that three-month-ahead abnormal returns following insider trading are higher for politically-connected firms compared with those for non-connected firms before the ouster of corrupt officials and the abnormal returns at politically-connected firms are reduced after the termination of political connections.

This study makes several contributions to the literature. First, although both Bourveau et al. (2016) and Jagolinzer et al. (2016) provide evidence that insider trading activities are linked to political connections, as discussed earlier, these studies suffer from endogeneity problems.⁸ Moreover, they focus solely on either private information regarding government decisions or political protection⁹ and fail to provide empirical evidence to distinguish these two channels. Using the specific setting of the ouster of government officials in China, this study addresses the endogeneity concern and distinguishes the two channels to certain extent. This paper thus provides evidence that both channels facilitate the opportunistic insider trading behavior politically-connected firms.

Second, previous studies demonstrate that good corporate governance (Rozanov, 2008) and actual lawsuits (Cheng et al., 2016) impose costs on opportunistic insider trading activities. This paper complements these studies by showing that political connections could facilitate opportunistic insider trading activities by both increasing the benefits and decreasing the costs.

Third, this study concludes that insiders at politically-connected firms are more likely to manage earnings upward if they intend to sell stocks after an earnings announcement, compared to non-connected insiders. Insider selling activities preceded by upward earnings management convey

⁸ See footnote 5.

⁹ Jagolinzer et al. (2016) attribute their results solely to the channel of private information about future government decisions, and Bourveau et al. (2016) attribute theirs solely to political protection.

confusing signals to outside investors and harms market efficiency. In this regard, this paper contributes to the literature on political connections and gives some implications to investors and regulators by revealing one mechanism through which politically-connected insiders can extract rents from outside investors, namely managing earnings upward while selling stocks subsequently.

The reminder of the paper proceeds as follows. Section II discusses insider trading regulation and political context in China. The hypotheses are developed in Section III, and Section IV describes the sample selection and research design. The main results are presented in Section V and additional analyses are presented in Section VI. Section VII provides robustness checks and sensitivity tests. Section VIII makes conclusions.

II. Insider trading regulation and political context in China

Insider trading regulation in China

The definition of an insider by Chinese regulator includes three main groups: a firm's directors, supervisors, and senior managers; holders of 5% or more of total shares in a firm; and personnel in other companies, regulatory agencies, or financial institutions who may obtain information that is not publicly disclosed. Under the Chinese regulations, any insider thus defined is prohibited from using material non-public information to engage in securities trading. The regulations also prohibit insiders from manipulating disclosed information so as to affect stock prices.

Since 2008, a specific Chinese regulation has prohibited executives from trading within 10 days before earnings preannouncements and 30 days before the issuance of formal financial reports. Zhu and Wang (2015) finds no evidence of insider trading during the ban period, but insider trades outside the ban period remain highly profitable. The clear implication is that the regulations have impact only on the pattern of insider trading but not the opportunistic insider trading behavior *pe ser*, which may actually have been exacerbated in the periods after the issuance of earnings announcements.

The Chinese political context

Among the world's emerging markets, China is perhaps the one most often plagued with government intervention, which has indeed long been commonplace (Huang, 2006; Wu et al., 2016). Political connections are of special importance in China because the country's market socialist system relies on virtuous government officials (Lin, Morck and Zhao, 2016). The abuse of political power is accordingly a perennial concern in China.

The role of political connections in the Chinese economy and capital market

In 1978, China began adopting elements of a market economy (pro-market economic reform), while the State still retained control of the economy in terms of allocating key resources, issuing licenses and permits, ratifying projects, awarding subsidies, and allowing tax arrears (Shi, Markocze and Stan, 2014). Four decades later, the government remains the key stakeholder and distributor of resources in the Chinese economy (Feng et al., 2015). The country's securities market is widely regarded as a policy market, in that government policies affect stock prices—and are therefore an important component of inside information in China. Information regarding government policies are often leaked and exploited by corrupt officials and their cronies (Huang, 2006).

Moreover, the Chinese judiciary operates as an administrative unit within the political system, the authority of which derives from the State rather than from the law (Gong, 2004). The regulatory body of the capital market, the Chinese Securities Regulatory Commission, is not independent but rather falls under the control of the State of Council of China, thus public enforcement of securities regulations is subject to political interference (Jiang, Xu, Xu and Yuan, 2015). Political connections can bring firms certain privileges in the current regulatory environment in China. Such connections can facilitate opportunistic behavior in the Chinese market both by transmitting private information about government policies to politically-connected firms and by protecting politically-connected firms from regulatory sanctions (Huang, 2006; Feng et al., 2015; Wu et al., 2016).

Anti-corruption reform effort

As the Chinese economy has continued to develop, an increasing number of executives have been colluding with government officials to exploit various resources for personal gain in ways that harm the public welfare. In this environment, when officials intervene in judicial and regulatory decisions, political power takes precedence over laws and regulations. The situation become so problematic that, in December 2012, the Political Bureau of the Central Committee of the Communist Party launched a vigorous and broad-based anti-corruption campaign designed to curb the abuse of political power. The primary targets of the anti-corruption campaign have been government officials. This reform effort has changed the political and economic culture in China by decreasing the value of political connections in doing business (Ke, Liu and Tang, 2016; Lin et al., 2016).

These reforms appear to have teeth and increased number of officials have been punished for corruption and abuse of political power nationwide (Lin et al., 2016). During this anti-corruption reform, Chinese government has been expanding investigations to the capital market and aggressively prosecuting insider trading cases that involve its officials (The New York Times, 2015).¹⁰

III. Development of hypotheses

The two hypotheses mentioned above—the opportunistic hypothesis and the litigation hypothesis—can predict the relationship between earnings management and subsequent insider trading activities (Park and Park, 2004). Under the opportunistic hypothesis, insiders may manage earnings upward (downward) if they intend to increase (decrease) stock prices in order to maximize their profits in subsequent selling (or buying) activities. According to the litigation hypothesis, insiders, in order to avoid the scrutiny of the regulators, may be more cautious in managing earnings if they intend to trade stocks subsequently.

¹⁰ See footnote 3.

On one hand, earnings management, when successful in affecting stock prices, benefits insiders by generating abnormally high returns (Trueman, 1990; Bar-Gill and Bebchuk, 2003). Park and Park (2004) provide empirical evidence that insiders adjust discretionary accruals upward if they intend to sell stocks in the period following an earnings announcement. Sawicki and Shrestha (2008, 2014) likewise find evidence that insiders manage their firms' earnings downward (upward) if insiders plan to buy (sell) stocks in the subsequent period.

On the other hand, insider selling (buying) activities preceded by upward (downward) earnings management conveys inconsistent signals to markets, thereby potentially reducing market efficiency and drawing the attention of regulators. Thus, once insiders are under regulatory scrutiny, they may incur significant costs, varying from the damage to their reputations to criminal charges (Park and Park, 2004). Accordingly, from the perspective of the litigation hypothesis, insiders may be less likely to manage their firms' earnings upward (downward) if they intend to sell (buy) stocks subsequently, in order to avoid litigation risk.

Insiders, not surprisingly, may be more (less) likely to manage their firm's earnings before trading to maximize their profits if the expected benefits of doing so are greater (less) than the expected costs. Political connections can increase the benefits and reduce the costs of this opportunistic behavior. First, insiders at politically-connected firms can be privately informed about the future government policies and how these policies would affect their firms. This private information from the government may increase the intensity and the profits of opportunistic insider trading (Jagolinzer et al., 2016). When insiders have access to the private information regarding future government decisions, they may exploit it and trade on it quickly before it is leaked to other investors in the market. Thus, they may have incentives to manipulate stock prices in a short window (i.e., by managing earnings upward or downward) to maximize their trading profits. Second, political connections can help to reduce the likelihood of prosecution and degree of punishment (Bourveau et al., 2016). Yu and Yu (2011) and Correia (2014) report that lobbying can delay or reduce the likelihood of prosecution by the SEC. It

thus appears that insiders at politically-connected firms assume that their political connections can alleviate their legal exposure to enforcement and this assumption promotes a sense of impunity that can encourage them to engage in opportunistic behavior.

Based on these lines of argumentation, I expect that insiders at politically-connected firms would be more likely to engage in the opportunistic behavior—that is, to manage earnings upward (downward) if they intend to sell (buy) stocks in the periods following earnings announcements—than insiders at non-connected firms.

The ouster of corrupt government officials can, as discussed earlier, abruptly terminate a connected firm's political ties. Because anti-corruption cases in China usually result from factional infighting (Fan et al., 2014; Lin et al., 2016), it can be difficult for formerly-connected firms to reestablish political ties, at least in the short term, after the corrupt officials have been replaced by those from rival factions (Leuz and Oberholzer-Gee, 2006). In addition, officials who have faced corruption charges are rarely reinstated, and any effort to establish new political ties is bound to take considerable time to bear fruit (Fan et al., 2014). The ouster of corrupt government officials means the loss of both the private information about future government policies and political protections from government officials. Thus, I expect that after the loss of political connection, insiders at politically-connected firms become less likely to manage earnings upward (downward) if they intend to sell (buy) stocks subsequently. I accordingly formulate the hypotheses as follows:

- *Hypothesis 1. After their political connections are terminated, insiders at politically-connected firms are less likely to manage earnings upward if they intend to sell stocks after an earnings announcement, compared to insiders at non-connected firms.*
- *Hypothesis 2. After their political connections are terminated, insiders at politically-connected firms are less likely to manage earnings downward if they intend to buy stocks after an earnings announcement, compared to insiders at non-connected firms.*

IV. Sample selection and research design

High-level government officials' corruption cases

To investigate the association between earnings management and insider trading activities at politically-connected firms before and after the termination of political connections, I manually collect a list of anti-corruption cases brought against high-level Chinese government officials in the period from 2010 to 2016. I focus on provincial- and national-level officials for several reasons. To begin with, officials at these levels have the power to make decisions regarding government policies and to protect connected insiders—powers that cease when they are investigated on corruption charges (He et al., 2017). Second, such high-level corruption cases naturally attract widespread public attention and therefore tend to be well-documented (Pan and Tian, 2017). Third, the prosecution of high-level anti-corruption cases in China is usually attributable to political factors rather than to any specific behavior on the part of politically-connected firms and is therefore unlikely to be anticipated by the market. The high-level anti-corruption cases examined here are accordingly treated as exogenous shocks, which means that this study suffers less from potential endogeneity problems. Moreover, the identification of high-level cases is consistent with the approach taken in recent studies of similar issues in China (Fan et al., 2014; He et al., 2017; Pan and Tian, 2017).

In order to collect high-level anti-corruption cases, following recent studies (Fan et al., 2014; He et al., 2017; Pan and Tian, 2017), I consult the official websites of the Chinese Central Commission for Discipline Inspection, the Supreme People's Procuratorate, and the Supreme People's Court.

Sample of firms connected to corrupt government officials

I identify a set of firms that have connections to corrupt government officials. For this purpose, my definition of politically-connected firm is that in which one or more senior manager or director is found to have offered a bribe to a corrupt official or to be a friend or family member of the official. Although this definition is relatively strict, it provides a very direct, explicit, and powerful indicator of ties between firms and politicians (He et al., 2017). The search covers all of the available

information for each case identified on the aforementioned official websites. Following Pan and Tian (2017), I also collect additional information about politically-connected firms by using search engines, such as Baidu (<http://www.baidu.com/>) and Google (<http://www.google.com/>).

Table 1 describes the selection process of the sample. Initially, I identify 101 politically-connected firms listed on the Shanghai and Shenzhen Stock Exchanges. From this sample, I exclude 22 firms—7 in the finance industry, 2 that have negative equity during most of the sample period, 7 for which the corruption cases have been brought within one year of or before their IPOs, and 6 at which managers or directors have been prosecuted or fired for bribing¹¹. As a result, the final sample contains 79 politically-connected firms.¹²

An overview of the sample is presented in Table 2. The yearly distribution of sample firms losing their political connections (Panel A) indicates that more than 83.5% (66 of 79) of politically-connected firms lose their political connections after 2012 when President Xi launched the anti-corruption campaign. The industrial distribution of sample firms (Panel B) indicates that, while politically-connected firms take part in a broad array of industries, more than half are in the manufacturing sector.

Control group of non-connected firms for empirical analysis

Following He et al., (2017), I identify a matching non-connected firm for each of the politically-connected firms in the sample. Potential matching firms come from those listed companies having the same type of ultimate owner (state-owned or non-state-owned enterprises) and being in the same industry¹³ as the connected firms. From this pool, I further select the firms of which the average total assets most closely parallel that of the politically-connected firms. The matching is done without

¹¹ If the managers or directors directly involved in bribery were prosecuted or fired after the disclosure of corruption cases, it could be the dismiss of managers or directors, rather than the termination of political connections, influence the association between earnings management and insider trading activities after corruption event.

¹² There is a possibility that I have omitted some politically-connected firms due to information limitations. Such omissions would naturally weaken the results. However, to the extent that the misclassifications are random, the empirical findings will not suffer significantly from bias (He et al., 2017).

¹³ Although I treat the remaining firms without connections to corrupt government officials as non-connected firms, these firms may well relate to other government officials. However, as long as those officials were not involved in corruption cases, the connections of these firms would still remain, and the association between earnings management and subsequent insider trading behavior at these firms was unlikely to be affected by corruption event (He et al., 2017).

replacement, and each matching firm is used only once. The purpose of creating this non-connected matching sample is to address the self-selection issue caused by differences in the characteristics of politically-connected and non-connected firms other than political connections.

Insider trading and financial data

Insider trading data are collected from the stock exchange website and the WIND database. Because the objective of this study is to determine whether insiders are more likely to manage earnings before trading at politically-connected firms, the transactions included here are limited to open market purchases and sales by officers and directors.¹⁴ Other types of transactions, for example option grants and exercises and stock transfers between relatives, are excluded. Financial data and stock price data are obtained from the WIND database and DataStream.

Research Design

Insider trading activity

To address the association between upward earnings management and subsequent insider selling activities and between downward earnings management and subsequent insider buying activities respectively, I allow for asymmetric measures by separating the insider selling activities and insider buying activities. In the first step, following prior studies (Park and Park, 2004; Badertscher, Hribar and Jenkins, 2011; Cheng and Lo, 2006), I calculate $ITNS_{it}$, a continuous variable defined as the net sales trading volumes of all insiders scaled by the absolute total insider trading volumes at firm i within three months after the earnings announcement date of the period t :

$$ITNS_{it} = \frac{Selling\ volumes_{it} - Buying\ volumes_{it}}{Selling\ volumes_{it} + Buying\ volumes_{it}}$$

For the second step, following previous work (Park and Park, 2004; Badertscher et al., 2011), I define two continuous truncated variables for net selling and net buying activities as follows:

¹⁴ I do not include the trading activities of large shareholders in the main tests because they may not have been involved in decisions regarding earnings management. I also run the main regression including the trading activities of large shareholders and the results are qualitatively consistent.

$ITNsell_{it}$ equals $ITNS_{it}$ when $ITNS_{it}$ is positive and 0 otherwise; $ITNbuy_{it}$ equals $-1 \times ITNS_{it}$ when $ITNS_{it}$ is negative and 0 otherwise.

Accrual earnings management

To construct the measure of accrual earnings management, I estimate the following cross-sectional Modified Jones model (Dechow, Sloan and Sweeney, 1995) by industry and year peers using the industry code established by the Chinese Securities Regulatory Commission and including at least 5 observations:

$$\frac{TA_{it}}{A_{it}} = \alpha_0 + \alpha_1 \left(\frac{1}{A_{it-1}} \right) + \alpha_2 \left(\frac{\Delta REV_{it} - \Delta REC_{it}}{A_{it-1}} \right) + \alpha_3 \left(\frac{PPE_{it}}{A_{it-1}} \right) + \varepsilon_{it} \quad (1),$$

where:

- TA_{it} = total accruals (earnings before extraordinary items minus cash flow from operations) at firm i in the period t ,
- A_{it} = total assets at firm i in the period t ,
- ΔREV_{it} = change in revenues at firm i in the period t ,
- ΔREC_{it} = change in receivables at firm i in the period t , and
- PPE_{it} = gross property, plant, and equipment at firm i in the period t .

I then use the residual from the equation (1) as the measure of discretionary accruals at firm i in the period t (DA_{it}).

The association between earnings management and subsequent insider trading activities

As discussed, I measure, in the manner of Park and Park (2004) and Sawicki and Shrestha (2008, 2014), the association between earnings management and insider trading activities in two situations. In the first, insiders manage earnings upward if they plan to sell stocks within three months after an earnings announcement. In the second, insiders manage earnings downward if they intend to buy stocks within three months after an earnings announcement. My focus is thus on the association between earnings management and subsequent insider trading activities, based on the notion that the acts of manipulating earnings upward (downward) and of subsequent insider selling (buying) activities send opposite signals to the markets and thus represent opportunistic behavior.

The event timeline is illustrated in Figure 2. Insider trading activities are measured within a three-month window following the date of the earnings announcement of the current fiscal year. Event year

T is defined as the event year when the ouster¹⁵ of a corrupt government official occurs in the period between the earnings announcement dates of the previous year (year T-1) and of the current year (year T). Following He et al. (2017), the pre-event period is defined as three years before each corruption event and post-event period is defined as three years after corruption event (including event year T).

Research Model

H1 and H2 predict that after political connections are terminated, insiders at politically-connected firms become less likely to manage earnings upward (downward) if they intend to sell (buy) stocks after an earnings announcement. The dependent variable is thus discretionary accruals (DA_{it}), as measured by Modified Jones Model. The test variables are insider selling and buying activities within three months after earnings announcements ($ITNsell_{it}$ and $ITNbuy_{it}$). Following Sawicki and Shrestha (2008, 2014), I establish a regression model for H1 and H2 as follows:

$$DA_{it} = \alpha_0 + \alpha_1 ITNsell_{it} + \alpha_2 ITNsell_{it} \times Connect_{it} + \alpha_3 ITNsell_{it} \times Post_{it} + \alpha_4 ITNsell_{it} \times Connect_{it} \times Post_{it} + \alpha_5 ITNbuy_{it} + \alpha_6 ITNbuy_{it} \times Connect_{it} + \alpha_7 ITNbuy_{it} \times Post_{it} + \alpha_8 ITNbuy_{it} \times Connect_{it} \times Post_{it} + \alpha_9 Connect_{it} + \alpha_{10} Post_{it} + \alpha_{11} Connect_{it} \times Post_{it} + \alpha_{12} Size_{it} + \alpha_{13} CFO_{it} + \alpha_{14} Loss_{it} + \alpha_{15} Lev_{it} + \alpha_{16} Age_{it} + Year\ fixed\ effect + Industry\ fixed\ effect + \varepsilon_{it} \quad (2),$$

where:

- DA_{it} = firm i 's discretionary accruals in the period t measured by Modified Jones Model (Dechow et al., 1995);
- $ITNsell_{it}$ equals $ITNS_{it}$ when $ITNS_{it}$ is positive and 0 otherwise, $ITNbuy_{it}$ equals $-1 \times ITNS_{it}$ when $ITNS_{it}$ is negative and 0 otherwise, and
 - $ITNS_{it}$ is defined as the net sales trading volumes of all insiders scaled by the absolute total insider trading volumes at firm i within three months after the current period t 's earnings announcement date. $ITNS_{it} = \frac{Selling\ volumes_{it} - Buying\ volumes_{it}}{Selling\ volumes_{it} + Buying\ volumes_{it}}$
- $Connect_{it}$ equals 1 if firm i is politically connected to corrupt government officials and 0 otherwise;
- $Post_{it}$ equals 1 if the observation falls within the three years after the corruption event (including event year T) and 0 if it falls within the three years before;
- $Big4_{it}$ equals 1 if a Big Four auditor is hired by firm i in the period t and 0 otherwise;
- $Size_{it}$ is the natural logarithm of total assets at the end of the period t at firm i ;

¹⁵ I treat the earliest investigation date released on the official website of the Chinese Central Commission for Discipline Inspection as the date of the ouster of corrupt government official.

- CFO_{it} is the ratio of cash flow from operations to total assets at the end of the period t at firm i ;
- $Loss_{it}$ equals 1 if the net income at the end of the period t at firm i is less than 0 and 0 otherwise;
- Lev_{it} is the ratio of total liabilities to total assets at the end of the period t at firm i ; and
- Age_{it} equals the number of years since firm i was publicly listed.

The coefficient of the interaction among $ITNsell_{it}$, $Connect_{it}$, and $Post_{it}$, i.e., α_4 , is expected to be negative, and that of the interaction among $ITNbuy_{it}$, $Connect_{it}$, and $Post_{it}$, i.e., α_8 , to be positive. After the termination of political connections, insiders at politically-connected firms are expected to be less likely to manage earnings upward (downward) if they intend to sell (buy) stocks subsequently, compared with insiders at non-connected firms.

I include $Big4_{it}$ in order to control for the effect of audit quality on discretionary accruals and expect that the coefficient of $Big4_{it}$ will be negative. I include the variable $Size_{it}$ to control for firm size and cash flow (CFO_{it}) in the accruals model because accruals and cash flow correlate negatively (Dechow, 1994; Sloan, 1996). Following prior studies (e.g., Anthony and Ramesh, 1992; Butler, Leone, and Willenborg, 2004; Lawrence, Minutti-Meza and Zhang, 2011), I include the firm characteristic variables $Loss_t$, Lev_t , and Age_t to control for the influence of a firm's earnings performance, financial risk, and life cycle on discretionary accruals. Finally, I also control for year and industry fixed effects. All the variables are defined in Appendix A.

V. Empirical results

Descriptive Statistics

The descriptive statistics for the full sample are presented in Panel A of Table 3. I winsorize all the continuous variables at the first percentile on each end of the data distribution. $INTS_{it}$ is measured as the net sales trading volumes of all insiders scaled by the absolute total insider trading volumes. $INTS_{it}$ has a positive mean of 0.039, indicating that, on average in the sample, insider sales volumes exceed insider purchases volumes. I measure insider trading activities using two continuous truncated variables, one for net selling activities ($ITNsell_{it}$) and the other for net buying activities ($ITNbuy_{it}$).

$ITNsell_{it}$ has a mean value of 0.100 and $ITNbuy_{it}$ has a mean value of 0.060. Discretionary accruals (DA_{it}) are measured using the Modified Jones Model, and the mean value approaches zero. Only 17.1% of the sample observations use a Big 4 auditor, a finding that is in line with other studies on Chinese markets (Ke, Lennox, and Xin, 2015). 9.2% of the sample observations suffer losses in the sample period. The average leverage level for the sample firms is 49.9%, indicating that almost half of the assets consist of liability, which is consistent with He et al., (2017).

The descriptive statistics for politically-connected and non-connected firms are presented in Panel B of Table 3. The mean difference and median difference tests alike show that both types of firms share similar characteristics in terms of discretionary accruals (DA_{it}), insider trading behaviors ($ITNS_{it}$, $ITNsell_{it}$, $ITNbuy_{it}$), use of Big 4 auditors ($Big4_{it}$), firm size ($Size_{it}$), net cash flow from operations (CFO_{it})¹⁶, firm performance ($Loss_{it}$), financial risk (Lev_{it}), and firm cycle (Age_{it}). These results indicate that the tests do not suffer from self-selection bias; that is, the results cannot be explained in terms of any difference in the characteristics of firms apart from their political connections.

The Pearson and Spearman correlations for the main measures below and above the diagonal, respectively, are presented in Panel C of Table 3. The correlation between DA_{it} and $Size_{it}$ is positive and significant at the 10% level, indicating that larger firms are more likely to move accruals upward. The negative and significant correlation between DA_{it} and CFO_{it} is consistent with the expected relationship between accruals and cash flow (Dechow, 1994). The correlations between DA_{it} and $Loss_{it}$ and between DA_{it} and Lev_{it} are negative and significant at the 1% level, indicating that firms with poor performance and high financial risks are more likely to move accruals downward and to employ the big bath earnings management technique. The correlations between $ITNsell_{it}$ and $Big4_{it}$ and between $ITNsell_{it}$ and $Size_{it}$ are negative and significant at 1% level, indicating that

¹⁶ Except that net cash flow from operations at politically-connected firms is marginally higher than that at non-connected firms.

insiders at firms audited by Big 4 auditors and insiders at firms with larger size are less likely to be involved in selling activities.

Panel D of Table 3 presents the Pearson correlation coefficients between DA_{it} and $ITNsell_{it}$ for politically-connected firms ($Connect_{it}=1$) and non-connected firms ($Connect_{it}=0$) in the periods before the ouster of corrupt government officials ($Post_{it}=0$) and in the periods after event year ($Post_{it}=1$). For politically-connected firms, the correlation between discretionary accruals (DA_{it}) and subsequent insider selling activities ($ITNsell_{it}$) is positive and significant in the periods before the ouster of corrupt government official, indicating that insiders at politically-connected firms are more likely to manage accruals upward if they plan to sell stocks after an earnings announcement. In the periods after the event year, the correlation between DA_{it} and $ITNsell_{it}$ becomes negative but insignificant, consistent with the expectation that, after the termination of political connections, the positive relationship between discretionary accruals and subsequent insider selling activities becomes less pronounced. For non-connected firms, the correlation between DA_{it} and $ITNsell_{it}$ is negative but insignificant during both periods before and after the event year. Panel E of Table 3 presents the Pearson correlation coefficients between DA_{it} and $ITNbuy_{it}$ for politically-connected firms ($Connect_{it}=1$) and non-connected firms ($Connect_{it}=0$) in the periods before the ouster of corrupt government officials ($Post_{it}=0$) and in the periods after event year ($Post_{it}=1$). All the correlation coefficients in Panel E are insignificant, indicating that insiders at both politically-connected firms and non-connected firms do not move accruals downward if they buy stocks subsequently.

[Insert Table 3 here]

Main results

Table 4 presents the results of the tests of the hypotheses, showing the association between discretionary accruals (DA_{it}) and insider trading activities ($ITNsell_{it}$ and $ITNbuy_{it}$) for politically-connected firms and non-connected firms in the periods before and after the ouster of government officials. The results for the full sample appear in Column 1. The coefficient of $ITNsell_{it}$ is negative

and significant (coefficient=-0.0276, t-statistics=-2.654), indicating that insiders at non-connected firms are less likely to manage discretionary accruals (DA_{it}) upward if their net selling volumes after an earnings announcement increase before the ouster of corrupt government officials. The positive and significant coefficient of the interaction between $ITNSell_{it}$ and $Connect_{it}$ (coefficient=0.0512, t-statistics=3.116) suggests that, compared with insiders at non-connected firms, insiders at politically-connected firms in the periods before the ouster of corrupt government officials manage discretionary accrual (DA_{it}) 0.0151¹⁷ upward if their subsequent net selling volumes ($ITNSell_{it}$) increase by one standard deviation.¹⁸ The coefficient of the interaction among $ITNSell_{it}$, $Connect_{it}$, and $Post_{it}$ is negative and significant (coefficient=-0.0652, t-statistics=-2.599), which indicates that relative to the insiders at non-connected firms, insiders at politically-connected firms in the periods after the ouster of corrupt government officials manage accruals 0.0192¹⁹ downward if their subsequent net selling volumes ($ITNSell_{it}$) increase by one standard deviation. Thus, the positive relationship between discretionary accruals and subsequent insider selling activities becomes less pronounced at politically-connected firms, after the termination of political connection. The results for the association between discretionary accruals (DA_{it}) and insider buying activities ($ITNbuy_{it}$) are not, however, significant for all test variables.

In order to gain greater insight into the relationship between positive (negative) accruals and subsequent insider selling (buying) activities, I estimate the regressions for positive discretionary accruals ($DA_{it}>0$) and negative discretionary accruals ($DA_{it}<0$) subsamples, respectively. As shown in Column 2, the coefficient of $ITNSell_{it}$ is negative and significant (coefficient=-0.0408, t-statistics=-3.680), indicating that insiders at non-connected firms are less likely to move positive discretionary accruals (DA_{it}) upward if their net selling volumes increase subsequently. The positive

¹⁷ This number is the product of the standard deviation of $ITNSell_{it}$ and the coefficient of the interaction between $ITNSell_{it}$ and $Connect_{it}$, $0.295 \times 0.0512 = 0.0151$.

¹⁸ Based on the Chow test, the sum of the $ITNSell_{it}$ coefficient and the coefficient of the interaction between $ITNSell_{it}$ and $Connect_{it}$ ($-0.0276 + 0.0512 = 0.0236$) is significantly greater than zero. F-statistics=12.88, p-value=0.0004.

¹⁹ This number is the product of the standard deviation of $ITNSell_{it}$ and the coefficient of the interaction among $ITNSell_{it}$, $Connect_{it}$, and $Post_{it}$, $-0.295 \times 0.0652 = -0.0192$.

and significant coefficient of the interaction between $ITNsell_{it}$ and $Connect_{it}$ (coefficient=0.0535, t-statistics=2.280) means that, compared with insiders at non-connected firms, those at politically-connected firms in the periods before the ouster of corrupt government officials manage positive accruals (DA_{it}) 0.0158²⁰ upward if their subsequent net selling volumes ($ITNsell_{it}$) increase by one standard deviation. The negative and significant coefficient of the interaction among $ITNsell_{it}$, $Connect_{it}$, and $Post_{it}$ (coefficient=-0.0658, t-statistics=-1.955) shows that, relative to the insiders at non-connected firms, insiders at politically-connected firms in the periods after the termination of political connections move positive discretionary accruals 0.0194²¹ downward if their subsequent net selling volumes ($ITNsell_{it}$) increase by one standard deviation. Lastly, the results for the association between negative discretionary accruals ($DA_{it}<0$) and insider buying activities ($ITNbuy_{it}$) appear in Column 3 and are not significant for all test variables.

In general, the findings presented in Table 4 suggest that insiders at politically-connected firms are more likely to have income-increasing accruals if they intend to sell more stocks after an earnings announcement. After the termination of political connection, insiders at politically-connected firms are less likely to do so. However, I do not find significant results for the association between discretionary accruals (DA_{it}) and insider buying activities ($ITNbuy_{it}$) for politically-connected firms or non-connected firms before or after the ouster of government officials. It could be possible that managing earnings downward to decrease stock prices may cause negative consequences on manager compensation or performance record.

In table 4, the coefficients for the control variables are generally consistent with the predictions. The coefficients of $Size_{it}$ is positive and significant at the 1% level, indicating that larger firms are more likely to manage accruals upward. The negative and significant coefficient of CFO_{it} is consistent with the notion that accruals and cash flows from operations are negatively related (Dechow,

²⁰ This number is the product of the standard deviation of $ITNsell_{it}$ and the coefficient of the interaction between $ITNsell_{it}$ and $Connect_{it}$, $0.295 \times 0.0535 = 0.0158$.

²¹ This number is the product of and the standard deviation of $ITNsell_{it}$ and the coefficient of the interaction among $ITNsell_{it}$, $Connect_{it}$ and $Post_{it}$, $-0.0658 \times 0.295 = -0.0194$.

1994). The coefficients of $Loss_{it}$ and Lev_{it} are negative and significant at the 1% level, indicating that firms with poor performance and high financial risks are more likely to employ the big bath mechanism to move accruals downward. The positive and significant coefficient of Age_{it} indicates that older firms may have more experience to manage accruals, and thus are more likely to do so.

VI. Additional Analyses

Distinguishing the channels of private information on future government policies and political protections

As additional analyses, I try to use the specific context of the ouster of a government official to distinguish the two channels—private information of future government policies and protection provided by government officials—through which political connections may affect the association between upward earnings management and subsequent insider selling activities. As illustrated in Figure 1, in the year before the ouster of government officials (year T-1), insiders at politically-connected firms have both private information regarding future government decisions and the political protection provided by government officials. In the event year in which a corrupt government official is investigated (event year T), insiders at politically-connected firms immediately lose their political protection, as shown in Figure 2 (a), though they may have retained private information about future government decisions, especially when the investigation of a government official is announced in proximity to an earnings announcement date, as can be seen in Figure 2 (b). In the year after corruption event year (year T+1), insiders at politically-connected firms lose both access to protection of government officials and private information about government policies. If the positive association between discretionary accruals and subsequent insider selling activities becomes less pronounced from year T-1 to the event year T,²² it can be attributed primarily to the loss of political protection. If the

²² In this situation, I use the subsample in which the investigation date of a corrupt official is proximal to an earnings announcement in the event year in order to verify that insiders at the politically-connected firms retain private information about future government policies when they make decisions regarding earnings management and trading in the event year.

positive association between discretionary accruals and subsequent insider selling activities becomes less pronounced from event year T to year T+1, it can be attributed largely to the loss of access to privileged information regarding future government policies.

[Insert the Figure here]

In light of these considerations, I conduct two additional tests using two subsamples. The first includes politically-connected firms that have issued an earnings announcement within three months after an investigation of a corrupt government official and matched non-connected firms for the periods from year T-1 to the event year T. The second subsample includes all politically-connected firms and matched non-connected firms from the event year T to year T+1. I generate two new variables to replace $Post_{it}$ for these two subsamples, $Post_{(-1)it}$, an indicator variable that equals 1 for the corruption event year T and 0 for year T-1, and $Post_{(+1)it}$, an indicator variable that equals 1 for year T+1 and 0 for the corruption event year T, respectively.

The results for the periods from year T-1 to event year T are presented in Panel A of Table 5. For the sake of concision, only the results for the association between discretionary accruals (DA_{it}) and insider selling activities ($ITNsell_{it}$) are reported.²³ In column 1, the positive and significant coefficient of the interaction between $ITNsell_{it}$ and $Connect_{it}$ (coefficient=0.1645, t-statistics=2.640) indicates that, in year T-1, insiders at politically-connected firms remain more likely to manage accruals upward if they intend to sell more stocks after an earnings announcement. The negative and significant coefficient of the interaction among $ITNsell_{it}$, $Connect_{it}$, and $Post_{(-1)it}$ (coefficient=-0.1693, t-statistics=-2.513), indicates that, in the corruption event year T, after sudden loss in political protections, relative to insiders at non-connected firms, insiders at politically-connected firms are less likely to move accruals upward if they intend to sell stocks after an earnings announcement. The results for the positive discretionary accruals subsample from year T-1 to event year T are presented in Column 2. The positive coefficient of the interaction between $ITNsell_{it}$ and

²³ The results for the association between discretionary accruals (DA_{it}) and insider buying activities ($ITNbuy_{it}$) are not significant.

$Connect_{it}$ (coefficient=0.2477, t-statistics=2.884) suggests that, in year T-1, insiders at politically-connected firms remain more likely to manage positive accruals upward if they sell stocks after an earnings announcement. The negative and significant coefficient of the interaction among $ITNSell_{it}$, $Connect_{it}$, and $Post_{(-1)_{it}}$ (coefficient=-0.2581, t-statistics=-3.183) means that, in the corruption event year T, insiders at politically-connected firms are less likely to manipulate positive accruals upward if they sell stocks subsequently, in order to avoid litigation risk after they lose political protections.

The results for the periods from the event year T to year T+1 are presented in Panel B of Table 5. In column 1, the positive but insignificant coefficient of the interaction between $ITNSell_{it}$ and $Connect_{it}$ indicates that, in the corruption event year T, after the immediate termination of political connections, the association between upward earnings management and insider selling activities at politically-connected firms is not significantly different from that at non-connected firms. The negative and significant coefficient of the interaction among $ITNSell_{it}$, $Connect_{it}$, and $Post_{(+1)_{it}}$ (coefficient=-0.0738, t-statistics=-1.950) indicates that, in year T+1, relative to insiders at non-connected firms, insiders at politically-connected firms are less likely to manage accruals upward if they sell stocks after an earnings announcement. The results for the positive discretionary accruals subsample from event year T to year T+1 are presented in Column 2. The negative and significant coefficient of the interaction among $ITNSell_{it}$, $Connect_{it}$, and $Post_{(+1)_{it}}$ (coefficient=-0.0964, t-statistics=-1.681) indicates that, in year T+1, compared with insiders at non-connected firms, insiders at politically-connected firms are less likely to manipulate positive accruals upward if they sell stocks after an earnings announcement.

In general, table 5 shows that the positive association between discretionary accruals and subsequent insider selling activities at politically-connected firms becomes less pronounced from year T-1 to event year T, which is attributed to the loss of political protection. The positive relationship between discretionary accruals and subsequent insider selling activities at politically-connected firms

becomes less pronounced from event year T to year $T+1$, which is attributed to the loss of private information about future government policies. Therefore, political connection affect the association between discretionary accruals and subsequent selling activities through both channels of political protection and private information.

[Insert Table 5 here]

Return on opportunistic insider trading following earnings announcement

In designing the study, I assume that insiders would increase (decrease) stock prices by managing earnings upward (downward) in order to maximize their profits from selling (buying) stocks. If this strategy proves successful, the return on opportunistic insider trading that follows earnings management should result in Λ -shaped sales (defined as insider sales that are preceded by positive abnormal returns and followed by negative abnormal returns) and V-shaped purchases (defined as insider purchases that are preceded by negative abnormal returns and followed by positive abnormal returns) (Gunny and Zhang, 2013). These two patterns of trading activities usually reflect insiders' active management of the timing or content of disclosed information in order to increase trading profits and represent opportunistic activities. Such outcomes would be less likely in the context of alternative motives for trading, such as diversification, personal liquidity, or behavior bias (Gunny and Zhang, 2013). I expect that insider trading activities following earnings announcements at politically-connected firms would be more likely to exhibit Λ -shaped sales or V-shaped purchases pattern. After the termination of political connections, Λ -shaped sales or V-shaped purchases pattern of insider trading following earnings announcements at politically-connected firms will become less likely to be observed.

I therefore, following Gunny and Zhang (2013), measure the Λ -shaped sales and V-shaped purchases pattern of trading activities over the three-month window after an earnings announcement in three steps. First, I assess the three-month abnormal returns before and after the insider trading date at the firm day level. Thus, AR_Pre_{it} represents the three-month buy-and-hold raw return minus the

three-month market return that ends on the insider trading date for insider trading activities at firm day level, and AR_Post_{it} represents the three-month buy-and-hold raw return minus the three-month market return after the insider trading date for insider trading activities at firm day level. Second, I define a dummy variable, $Pattern_{it}$, that equals 1 when a firm day is a net insider sale day and $AR_Pre_{it} > 0$ and $AR_Post_{it} < 0$, or when a firm day is a net insider purchase day and $AR_Pre_{it} < 0$ and $AR_Post_{it} > 0$, and zero for all other firm days. Third, I generate a firm-year level variable, $Oppor_IT_{it}$, defined as the mean of $Pattern_{it}$ over the three-months window subsequent to the earnings announcement in the period t for firm i , weighted by the trading volume of daily net insider trades.

$$Oppor_IT_{it} = \frac{\sum Pattern_{it} \times \text{daily net trading volume}}{\sum \text{daily net trading volume}}$$

I thus establish the following regression model:

$$Oppor_IT_{it} = \alpha_0 + \alpha_1 Connect_{it} + \alpha_2 Post_{it} + \alpha_3 Connect_{it} \times Post_{it} + \alpha_4 Size_{it} + \alpha_5 ROA_{it} + \varepsilon_{it} \quad (3)$$

The results presented in Column 1 of Table 6 show a significantly positive relationship between $Oppor_IT_{it}$ and $Connect_{it}$ (coefficient=0.0251, t-statistics=1.759). This result indicates that, in the periods before the ouster of corrupt government official, opportunistic insider trading that follows earnings announcement at politically-connected firms is more likely to exhibit Λ -shaped sales or V-shaped purchases pattern. This finding is consistent with the notion that insiders at politically-connected firms increase (decrease) stock prices by managing earnings upward (downward) in order to maximize their selling (buying) profits. The negative and significant coefficient of $Connect_{it} \times Post_{it}$ (coefficient=-0.0456, t-statistics=-1.986) indicates that, after the termination of political connections, the opportunistic Λ -shaped sales or V-shaped purchases pattern of insider trading within three months after an earnings announcement is less commonly observed at politically-connected firms, relative to that at non-connected firms.

Following Jagolinzer et al. (2016), I also calculate the three-month buy-and-hold abnormal returns²⁴ following the insider trading date at firm year level (RET_Post_{it}) to measure the future

²⁴ For insider buying activities, RET_Post_{it} equals three-month ahead raw returns minus three-month ahead market

abnormal return on opportunistic insider trading that follows earnings announcement. I establish the following model:

$$RET_Post_{it} = \alpha_0 + \alpha_1 connect_{it} + \alpha_2 Post_{it} + \alpha_3 Connect_{it} \times Post_{it} + \alpha_4 Size_{it} + \alpha_5 ROA_{it} + \varepsilon_{it} \quad (4)$$

The results are presented in the Column 2 in Table 6.

The positive and significant coefficient of $connect_{it}$ (coefficient=0.0187, t-statistics=2.919) provides evidence that, in the periods before the ouster of a government official, opportunistic insider trading activities following earnings announcement at politically-connected firms generate relatively higher future abnormal returns. Conversely, the negative and significant coefficient of $Connect_{it} * Post_{it}$ (coefficient=-0.0181, t-statistics=-1.704) indicates that the abnormal returns from opportunistic insider trading following earnings announcement at politically-connected firms decrease after the termination of a firm's political connection.

VII. Robustness and sensitivity tests

One-month trading window after earnings announcement

In the main results, the insider trading window is three months after earnings announcement. In order to gain more insights into the causality relationship between earnings management and subsequent insider trading activities, I narrow the trading window to one month after earnings announcements. I rerun all the regressions using trading activities within one-month window after earnings announcements. The results are presented in table 7. For the sake of concision, only the results for the association between discretionary accruals (DA_{it}) and insider selling activities ($ITNsell_{it}$) are reported.²⁵ Panel A of table 7 presents the regression results of the effect of political connection on the association between discretionary accruals and insider selling activities for all sample periods. Panel B presents the regressions results of the effect of political connection on the association between

returns to reflect the profits earned by insiders. For insider selling activities, RET_Post_{it} equals -1*(three-month ahead raw returns minus three-month ahead market returns) to reflect the losses avoided by insiders.

²⁵ The results for the association between discretionary accruals (DA_{it}) and insider buying activities ($ITNbuy_{it}$) are not significant.

discretionary accruals and insider selling activities for the periods from year T-1 to the event year T. Panel C reports the regression results for the periods from the event year T to year T+1. The regression results in Table 7 are quantitatively similar to those presented in Table 4 and 5.

[Insert Table 7 here]

Test for the Parallel-Paths Assumption

The credibility of difference-in-differences estimation relies on the core assumption of “Parallel Paths”; without treatment, the average change for treated firms should be equal to the average change for controlled firms (Angrist and Krueger, 1999; Athey and Imbens, 2006). In this section, I test whether politically-connected and non-connected firms exhibit parallel trends in changes in the association between discretionary accruals and insider trading activities before the termination of political ties. Following He et al., (2017), I carry out the tests by including the variables $Pre_{(-1)it}$ and $Pre_{(-2)it}$ and the interaction terms $ITNsell_{it} \times Connect_{it} \times Pre_{(-1)it}$ and $ITNsell_{it} \times Connect_{it} \times Pre_{(-2)it}$ in the empirical models. $Pre_{(-1)it}$ is an indicator variable that equals 1 if the observation falls in the year ahead of the corruption event, and 0 otherwise. $Pre_{(-2)it}$ is an indicator variable that equals 1 if the observation falls in the two years ahead of the corruption event, and 0 otherwise. The interaction terms $ITNsell_{it} \times Connect_{it} \times Pre_{(-1)it}$ and $ITNsell_{it} \times Connect_{it} \times Pre_{(-2)it}$, thus, captures the differences in the association between discretionary accruals (DA_{it}) and insider trading activities ($ITNsell_{it}$) between politically-connected and non-connected firms one year (two years) ahead of the corruption event, compared to their differences three years ahead. If the pre-event trends of politically-connected and non-connected firms are parallel, then the coefficients of $ITNsell_{it} \times Connect_{it} \times Pre_{(-1)it}$ and $ITNsell_{it} \times Connect_{it} \times Pre_{(-2)it}$ are expected to be insignificantly different from zero. Table 8 lists the regression results, which suggest that there is no significant difference in the pre-event trends between politically-connected and non-connected firms.

[Insert Table 8 here]

Propensity Score Matching (PSM) procedure to re-select the non-connected firms

In the main analysis, I select the non-connected samples by matching them with the politically-connected ones based on industry affiliation, owner type, and the firm size (in terms of total assets). The descriptive statistics for politically-connected and non-connected firms presented in Panel B of Table 3 show that both types of firms share similar characteristics, indicating that the samples do not suffer from self-selection bias. To check the robustness of the main results, I follow He et al., (2017) and adopt the PSM procedure to re-select the non-connected firms. In particular, I require the candidate non-connected firms to from the same industry and have the same owner type as politically-connected firms in the years of corruption events and use a logit model to calculate the propensity scores for politically-connected and non-connected firms based on firm size ($Size_{it}$), return on equity (ROE_{it}), financial leverage (Lev_{it}) (He et al., 2017). I then match, without replacement, each politically-connected firm to a non-connected firm with the closest propensity score. Then I reestimate the equations using the politically-connected firms and the newly selected non-connected firms. The untabulated results are quantitatively similar to those presented in Tables 4 and 5.

Performance matched discretionary accrual measures

Although the modified Jones model is believed to be powerful in detecting earnings management (Dechow et al., 1995), it might be misspecified when applied to samples of firms with extreme performance in part because performance and estimated discretionary accruals exhibit a mechanical relation (Kothari, Leone, and Wasley, 2005). Following Kothari et al. (2005), I estimate discretionary accruals adjusted for a performance-matched firm's discretionary accrual, where matching is on the basis of a firm's return on assets and industry type. I reestimate all the main regressions using the performance matched discretionary accruals measures. The untabulated results are quantitatively similar to those presented in Tables 4 and 5.

VIII. Conclusions

This study investigates, in the Chinese market, are insiders at politically-connected firms are more likely to manage earnings upward (downward) if they intend to sell (buy) stocks after earnings announcements. Based on 79 politically-connected firms and 79 matched non-connected firms in the period from 2010-2016, I find that, compared with insiders at non-connected firms, insiders at politically-connected firms are more likely to manage earnings upward if they intend to sell stocks after an earnings announcement. The positive relationship between discretionary accruals and the subsequent insider selling activities at politically-connected firms becomes less pronounced once political connections are terminated with the ouster of a corrupt government official.

Using the specific setting of the ouster of corrupt government officials, I am able to distinguish the two channels through which political connections can affect the association between discretionary accruals and subsequent insider trading activities, namely private information of future government policies and political protection. Additional evidence shows that the positive relationship between discretionary accruals and subsequent selling activities at politically-connected firms becomes less pronounced from year $T-1$ to event year T , owing to the loss of political protection. The positive relationship between discretionary accruals and subsequent selling activities becomes less pronounced from event year T to year $T+1$, owing to the additional loss of private information about future government policies. This finding suggests that both channels affect the association between earnings manipulation and subsequent insider trading activities. Furthermore, opportunistic insider trading activities following earnings announcement at politically-connected firms appear more likely to exhibit the strategic Λ -shaped sales or V -shaped purchases patterns and become less likely to do so after political connections are terminated.

The unique empirical design of the study has allowed me to provide evidence that is robust and subject to fewer endogeneity problems than previous similar studies. The findings presented here have implications for investors and regulators in Chinese markets and for other countries in which political

connections play a significant role in the economy. Still, there are some caveats when interpreting the findings of this study. First, the definition of political connections, although direct and explicit, could be considered as too narrow and therefore leave the study vulnerable to criticism for small-sample bias. Furthermore, while the association between earnings management and insider trading activities is employed as a measure of opportunistic behavior, it is not easy to demonstrate the direct causal relationship between them. Nevertheless, I provide strong evidence that insider trading activities within the short window after earnings announcements do exhibit the opportunistic Λ -shaped sales or V-shaped purchases patterns.

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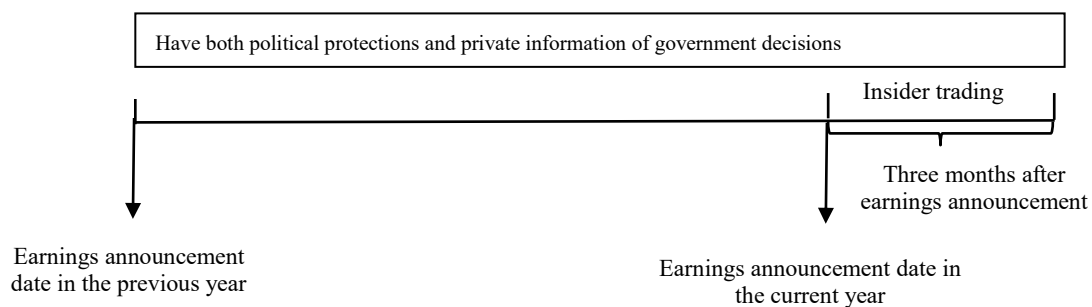
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Appendix A
Definition of Variables

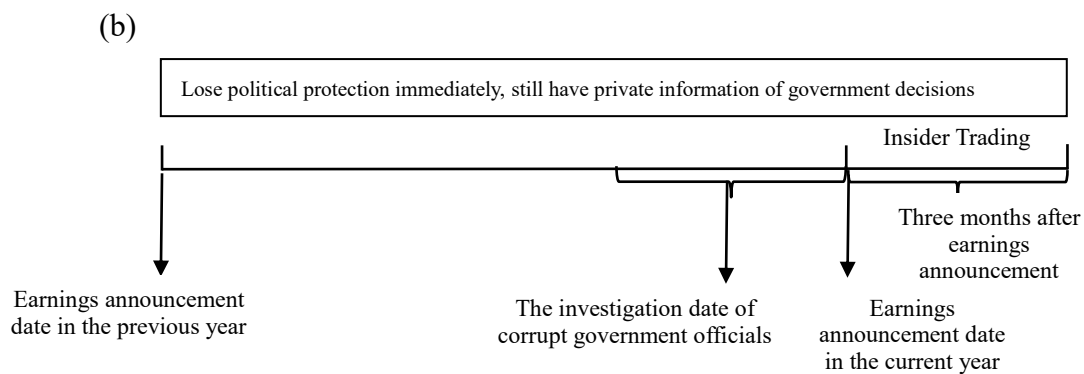
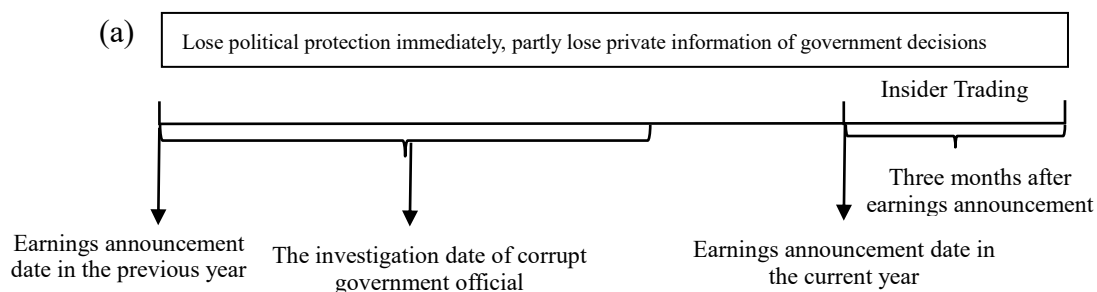
$ITNS_{it}$	The net sales trading volumes of all insiders scaled by the absolute total insider trading volumes at firm i within three months after the current period t 's earnings announcement date. $ITNS_{it} = \frac{Selling\ volumes_{it} - Buying\ volumes_{it}}{Selling\ volumes_{it} + Buying\ volumes_{it}}$
$ITNsell_{it}$	$ITNS_{it}$ when $ITNS_{it}$ is positive, and 0 otherwise
$ITNbuy_{it}$	$-1 \times ITNS_{it}$ when $ITNS_{it}$ is negative, and 0 otherwise
$Connect_{it}$	1 if firm i is politically-connected to corrupt government officials and 0 otherwise
$Post_{it}$	1 if the observation falls within the three years after the corruption event (including event year T) and 0 if it falls within the three years before
$Post_{(-1)_{it}}$	1 if the observation falls in the corruption event year T and 0 if it falls in year $T-1$
$Post_{(+1)_{it}}$	1 if the observation falls in year $T+1$ and 0 if it falls in the corruption event year T
$Pre_{(-1)_{it}}$	1 if the observation falls in the year ahead of the corruption event, and 0 otherwise
$Pre_{(-2)_{it}}$	1 if the observation falls in the two years ahead of the corruption event, and 0 otherwise
$AR_{Pre\ it}$	The three-month raw return minus the three-month market return that ends on the insider trading date for insider trading activities at firm-day level
$AR_{Post\ it}$	The three-month raw return minus the three-month market return after the insider trading date for insider trading activities at firm-day level
$Pattern_{id}$	1 when a firm day is a net insider sale day and $AR_{Pre\ it} > 0$ and $AR_{Post\ it} < 0$, or when a firm day is a net purchase day and $AR_{Pre\ it} < 0$ and $AR_{Post\ it} > 0$, and zero for all other firm days
$Oppor_IT_{it}$	The mean of $Pattern_{it}$ over the three-months window subsequent to the earnings announcement in the period t for firm i , weighted by the trading volume of daily net insider trades
RET_Post_{it}	The three-month buy-to-hold raw return minus the three-month market return after the insider trading date for insider trading activities within three-month window after earnings announcement
$Big4_{it}$	1 if a Big Four auditor is hired by firm i in the period t and 0 otherwise
$Size_{it}$	The natural logarithm of total assets at the end of the period t at firm i
CFO_{it}	The ratio of cash flow from operations to total assets at the end of the period t at firm i
$Loss_{it}$	1 if the net income at the end of the period t at firm i is less than 0 and 0 otherwise
Lev_{it}	The ratio of total liabilities to total assets at the end of the period t at firm i
Age_{it}	The number of years since firm i was publicly listed

Figure. Event Timeline

1. One year ahead of event year (year T-1)



2. Event year (year T)



3. One year after event year (year T+1)

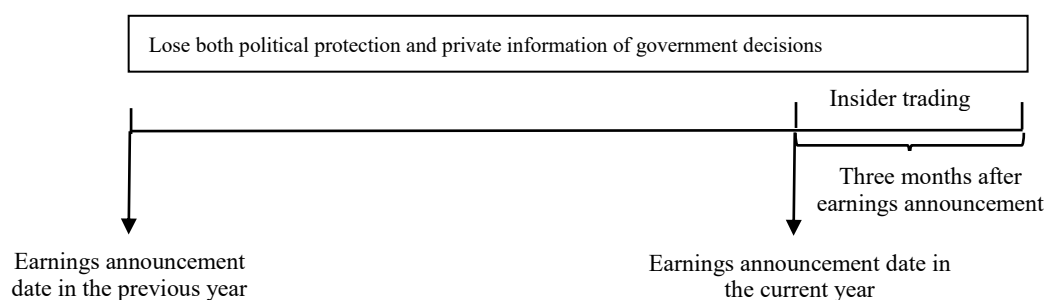


Table 1 Sample Description

	N
Number of listed firms connected to corrupt government officials from 2010-2016	101
(-) Firms in financial industries	-7
(-) Firms that have negative equity during most of the sample period	-2
(-) Firms for which the corruption cases have been brought within one year of or before their IPOs	-7
(-) Firms at which managers or directors have been prosecuted or fired for bribing	-6
(=) Number of politically-connected firms in the treatment group	79
(+) Number of non-connected firms in the control group	79
(=) Number of firms in the final sample	158
(×6) Number of observations in the final sample (three years before and three years after event year)	948
(-) Observations with missing financial data	-60
(=) Final number of observations	888

Table 2 Distribution of politically-connected firms

Panel A presents the yearly distribution of sample firms losing their political connections. Panel B presents the industrial distribution of politically-connected firms.

Panel A: Yearly distribution of sample firms losing their political connections

Year	Total	Percentage
2010	2	2.5%
2011	7	8.9%
2012	4	5.1%
2013	13	16.5%
2014	28	35.4%
2015	17	21.5%
2016	8	10.1%
Total	79	100%

Panel B: Industrial distribution of politically-connected firms

Industry	Total	Percentage
Agriculture	2	2.5%
Construction	6	7.6%
Commercial Service	2	2.5%
Culture and Art	2	2.5%
Information	5	6.3%
Manufacturing	44	55.7%
Mining	6	7.6%
Real Estate	4	5.1%
Retail and Whole Sale	2	2.5%
Utilities	4	5.1%
Other	2	2.5%
Total	79	100%

Table 3 Descriptive Statistics

Table 3 reports summary statistics for the full sample in Panel A. Panel B presents the summary statistics for politically-connected firms and non-connected firms respectively. Panel C reports Pearson (below the diagonal) and Spearman (above the diagonal) correlations for the main measures. Panel D presents the Pearson correlation coefficients between DA_{it} and $ITNsell_{it}$ for politically-connected firms ($Connect_{it}=1$) and non-connected firms ($Connect_{it}=0$) in the periods before the ouster of corrupt government officials ($Post_{it}=0$) and in the periods after event year ($Post_{it}=1$). Panel E presents the Pearson correlation coefficients between DA_{it} and $ITNbuy_{it}$ for politically-connected firms ($Connect_{it}=1$) and non-connected firms ($Connect_{it}=0$) in the periods before the ouster of corrupt government officials ($Post_{it}=0$) and in the periods after event year ($Post_{it}=1$). All variables are defined in Appendix A. All continuous variables are winsorized at the top and bottom 1 percent of their distributions. All p-values are two-tailed; ***, **, and * represent statistical significance at the 1 percent, 5 percent and 10 percent level, respectively.

Panel A: Descriptive statistics for the full sample

Variable	N	Mean	P50	S.D	Min	P25	P75	Max
DA_{it}	888	-0.004	-0.007	0.085	-0.279	-0.049	0.329	0.357
$ITNS_{it}$	888	0.039	0	0.391	-1	0	0	1
$ITNsell_{it}$	888	0.100	0	0.295	0	0	0	1
$ITNbuy_{it}$	888	0.060	0	0.233	0	0	0	1
$Connect_{it}$	888	0.503	1	0.500	0	0	1	1
$Post_{it}$	888	0.475	0	0.500	0	0	1	1
$Big4_{it}$	888	0.171	0	0.377	0	0	0	1
$Size_{it}$	888	22.723	22.545	1.581	18.206	21.613	23.804	25.621
CFO_{it}	888	0.047	0.045	0.071	-0.199	0.007	0.090	0.332
$Loss_{it}$	888	0.092	0	0.290	0	0	0	1
Lev_{it}	888	0.499	0.514	0.214	0.050	0.332	0.675	0.966
Age_{it}	888	11	12	6	1	5	16	23

Panel B Descriptive statistics for politically-connected firms and non-connected firms

Variable	Politically-connected firms (N=444)	Non-connected firms (N=444)	P-value of t-test of difference	Politically-connected firms (N=444)	Non-connected firms (N=444)	P-value of t-test of difference
	Mean	Mean		Median	Median	
DA_{it}	-0.007	-0.000	0.211	-0.011	-0.003	0.179
$ITNS_{it}$	0.028	0.051	0.395	0	0	0.471
$ITNsell_{it}$	0.087	0.112	0.213	0	0	0.471
$ITNbuy_{it}$	0.059	0.061	0.883	0	0	0.645
$Big4_{it}$	0.170	0.172	0.927	0	0	0.998
$Size_{it}$	22.723	22.724	0.997	22.608	22.514	0.179
CFO_{it}	0.051	0.043	0.091*	0.047	0.042	0.179
$Loss_{it}$	0.092	0.093	0.949	0	0	0.959
Lev_{it}	0.488	0.510	0.126	0.498	0.523	0.591
Age_{it}	11.295	10.659	0.125	12.406	11.819	0.347

Table 3 Descriptive Statistics (Continue)

Panel C Pearson and Spearman correlation coefficients (n=888)

		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
(1)	DA_{it}	1	-0.008	0.007	0.023	-0.055	0.025	-0.033	0.062*	-0.613***	-0.228***	-0.133***	-0.026
(2)	$ITNS_{it}$	0.001	1	0.815***	-0.651***	-0.012	-0.019	-0.071**	-0.135***	0.013	-0.090***	-0.092***	-0.156***
(3)	$ITNsell_{it}$	0.008	0.806***	1	-0.091***	-0.030	0.018	-0.130***	-0.182***	-0.027	-0.061*	-0.152***	-0.168***
(4)	$ITNbuy_{it}$	0.008	-0.661***	-0.088***	1	-0.018	0.056*	-0.048	-0.007	-0.056*	0.074**	-0.041	0.049
(5)	$Connect_{it}$	-0.042	-0.029	-0.042	-0.005	1	-0.006	-0.003	0.009	0.061*	-0.002	-0.056*	0.042
(6)	$Post_{it}$	0.033	-0.010	0.019	0.041	-0.006	1	0.011	0.127***	-0.081**	0.078**	0.003	0.213***
(7)	$Big4_{it}$	-0.020	-0.069**	-0.133***	-0.053	-0.003	0.011	1	0.530***	0.110***	-0.062*	0.213***	-0.056*
(8)	$Size_{it}$	0.057*	-0.124***	-0.177***	-0.015	0.000	0.124***	0.585***	1	0.028	-0.080**	0.493***	0.118***
(9)	CFO_{it}	-0.675***	0.000	-0.034	-0.044	0.057*	-0.089***	0.100***	0.011	1	-0.147***	-0.183***	0.079**
(10)	$Loss_{it}$	-0.219***	-0.094***	-0.057*	0.085**	-0.002	0.078**	-0.062*	-0.077**	-0.120***	1	0.210***	0.071**
(11)	Lev_{it}	-0.119***	-0.093***	-0.158***	-0.043	-0.051	0.003	0.215	0.484***	-0.152***	0.207***	1	0.161***
(12)	Age_{it}	-0.044	-0.159***	-0.176***	0.045	0.052	0.198***	-0.055	0.080**	0.064*	0.074**	0.174***	1

Panel D Pearson correlation coefficients of DA_{it} and $ITNsell_{it}$

	$Post_{it}=0$	$Post_{it}=1$
$Connect_{it}=1$	0.116*	-0.053
$Connect_{it}=0$	-0.006	-0.044

Panel E Pearson correlation coefficients of DA_{it} and $ITNbuy_{it}$

	$Post_{it}=0$	$Post_{it}=1$
$Connect_{it}=1$	0.083	-0.062
$Connect_{it}=0$	-0.014	-0.012

Table 4 Regression results of the effect of political connection on the association between discretionary accruals and insider trading activities

Table 4 reports the regression results of the effect of political connection on the association between discretionary accruals (DA_{it}) and insider trading activities ($ITNsell_{it}$ and $ITNbuy_{it}$). Column 1 presents the results for the full sample. Column 2 presents the results for the effect of political connection on the association between positive discretionary accruals ($DA_{it} > 0$) and insider trading selling activities ($ITNsell_{it}$). Column 3 presents the results for the effect of political connection on the association between negative discretionary accruals ($DA_{it} < 0$) and insider buying activities ($ITNbuy_{it}$). All variables are defined in Appendix A. All continuous variables are winsorized at the top and bottom 1 percent of their distributions. All p-values are two-tailed; ***, ** and * represent statistical significance at the 1 percent, 5 percent and 10 percent level, respectively. Reported t-statistics are based on standard errors adjusted for firm-level clustering.

Dependent variable: DA_{it}	Predicted Sign	Full Sample	$DA_{it} > 0$	$DA_{it} < 0$
$ITNsell_{it}$	?	-0.0276*** (-2.654)	-0.0408*** (-3.680)	
$ITNsell_{it} \times Connect_{it}$	+	0.0512*** (3.116)	0.0535** (2.280)	
$ITNsell_{it} \times Post_{it}$	?	0.0276 (1.476)	0.0448* (1.774)	
$ITNsell_{it} \times Connect_{it} \times Post_{it}$	-	-0.0652** (-2.599)	-0.0658* (-1.955)	
$ITNbuy_{it}$	?	-0.0123 (-0.727)		-0.0478 (-1.115)
$ITNbuy_{it} \times Connect_{it}$	-	0.0223 (0.869)		0.0369 (0.840)
$ITNbuy_{it} \times Post_{it}$	?	0.0025 (0.108)		0.0337 (0.708)
$ITNbuy_{it} \times Connect_{it} \times Post_{it}$	+	-0.0141 (-0.427)		-0.0217 (-0.437)
$Connect_{it}$	?	-0.0000 (-0.007)	0.0043 (0.476)	0.0038 (0.593)
$Post_{it}$	?	-0.0070 (-0.890)	-0.0112 (-1.037)	-0.0001 (-0.018)
$Connect_{it} \times Post_{it}$	?	-0.0077 (-0.913)	-0.0163 (-1.412)	-0.0089 (-1.149)
$Big4_{it}$	-	0.0022 (0.276)	0.0047 (0.387)	0.0039 (0.430)
$Size_{it}$	?	0.0091*** (4.842)	0.0035 (1.038)	0.0091*** (2.797)
CFO_{it}	-	-0.9825*** (-22.950)	-0.8194*** (-10.035)	-0.6700*** (-13.957)
$Loss_{it}$	?	-0.0746*** (-10.107)	-0.0683*** (-5.900)	-0.0512*** (-7.118)
Lev_{it}	?	-0.1079*** (-6.883)	-0.0899*** (-4.025)	-0.0847*** (-5.251)
Age_{it}	?	0.0011** (2.533)	0.0008 (1.261)	0.0009** (2.118)
constant		-0.0861* (-1.948)	0.0578 (0.857)	-0.1426** (-2.120)
Industry Fixed Effect		Yes	Yes	Yes
Year Fixed Effect		Yes	Yes	Yes
r2		0.657	0.473	0.567
N		888	406	482

Table 5 Regression results for the periods from year T-1 to the event year T and for the periods from the event year T to year T+1

Panel A of table 5 presents the regression results of the effect of political connection on the association between discretionary accruals (DA_{it}) and insider selling activities ($ITNsell_{it}$) for the periods from year T-1 to the event year T. Panel B of table 5 reports the regression results for the periods from the event year T to year T+1. All variables are defined in Appendix A. All continuous variables are winsorized at the top and bottom 1 percent of their distributions. All p-values are two-tailed; ***, ** and * represent statistical significance at the 1 percent, 5 percent and 10 percent level, respectively. Reported t-statistics are based on standard errors adjusted for firm-level clustering.

Panel A Regression results for the periods from year T-1 to the event year T

	Full Sample	$DA_{it}>0$
$ITNsell_{it}$	-0.0946** (-2.282)	-0.0784* (-1.805)
$ITNsell_{it} \times Connect_{it}$	0.1645** (2.640)	0.2477*** (2.884)
$ITNsell_{it} \times Post_{-1}(-1)_{it}$	0.0901** (2.132)	0.0515 (1.258)
$ITNsell_{it} \times Connect_{it} \times Post_{-1}(-1)_{it}$	-0.1693** (-2.513)	-0.2581*** (-3.183)
$Connect_{it}$	-0.0029 (-0.234)	-0.0301 (-1.415)
$Post_{-1}(-1)_{it}$	-0.0224* (-1.675)	-0.0265 (-0.848)
$Connect_{it} \times Post_{-1}(-1)_{it}$	0.0009 (0.068)	0.0503* (1.892)
Control variables	Yes	Yes
Industry Fixed Effect	Yes	Yes
Year Fixed Effect	Yes	Yes
r ²	0.828	0.792
N	132	65

Panel B Regression results for the periods from the event year T to year T+1

	Full Sample	$DA_{it}>0$
$ITNsell_{it}$	-0.0191* (-1.966)	-0.0163 (-0.973)
$ITNsell_{it} \times Connect_{it}$	0.0135 (0.654)	0.0262 (1.007)
$ITNsell_{it} \times Post_{+1}(+1)_{it}$	0.0742** (2.256)	0.0750 (1.443)
$ITNsell_{it} \times Connect_{it} \times Post_{+1}(+1)_{it}$	-0.0738* (-1.950)	-0.0964* (-1.681)
$Connect_{it}$	-0.0078 (-1.115)	0.0003 (0.026)
$Post_{+1}(+1)_{it}$	-0.0021 (-0.295)	0.0195 (1.176)
$Connect_{it} \times Post_{+1}(+1)_{it}$	-0.0114 (-1.040)	-0.0231 (-1.344)
Control variables	Yes	Yes
Industry Fixed Effect	Yes	Yes
Year Fixed Effect	Yes	Yes
r ²	0.709	0.550
N	312	149

Table 6 Regression results of the return on opportunistic insider trading following earnings announcement

Table 6 presents the regression results of the return on opportunistic insider trading following earnings announcement. The dependent variable in column 1 is $Oppor_IT_{it}$, measuring the opportunistic Λ -shaped sales (defined as insider sales that are preceded by positive abnormal returns and followed by negative abnormal returns) and V-shaped purchases (defined as insider purchases that are preceded by negative abnormal returns and followed by positive abnormal returns) (Gunny and Zhang, 2013). The dependent variable in column 2 is RET_Post_{it} , three-month buy-and-hold raw returns minus three-month market returns following the insider trading date at firm year level. All variables are defined in Appendix A. All continuous variables are winsorized at the top and bottom 1 percent of their distributions. All p-values are two-tailed; ***, ** and * represent statistical significance at the 1 percent, 5 percent and 10 percent level, respectively. Reported t-statistics are based on standard errors adjusted for firm-level clustering.

	$Oppor_IT_{it}$	RET_Post_{it}
$Connect_{it}$	0.0251* (1.759)	0.0187*** (2.919)
$Post_{it}$	0.0181 (1.039)	0.0066 (0.756)
$Connect_{it} \times Post_{it}$	-0.0456** (-1.986)	-0.0181* (-1.704)
$Size_{it}$	-0.0049 (-1.178)	-0.0008 (-0.453)
ROA_{it}	0.0633 (0.613)	-0.0515 (-1.047)
constant	0.0581 (0.567)	0.0075 (0.177)
Industry Fixed Effect	Yes	Yes
Year Fixed Effect	Yes	Yes
r ²	0.060	0.062
N	888	888

Table 7 Regression results for insider trading activities within one-month window after earnings announcement

Table 7 reports the regression results for insider trading activities within one-month window after earnings announcement. Panel A presents the results of the effect of political connection on the association between discretionary accruals and insider selling activities for all sample periods. Panel B presents the regression results of the effect of political connection on the association between discretionary accruals (DA_{it}) and insider selling activities ($ITNsell_{it}$) for the periods from year T-1 to the event year T. Panel C reports the regression results for the periods from the event year T to year T+1. All variables are defined in Appendix A. All continuous variables are winsorized at the top and bottom 1 percent of their distributions. All p-values are two-tailed; ***, ** and * represent statistical significance at the 1 percent, 5 percent and 10 percent level, respectively. Reported t-statistics are based on standard errors adjusted for firm-level clustering.

Panel A Regression results for all sample periods

	Full Sample	$DA_{it}>0$
$ITNsell_{it}$	-0.0319*** (-2.690)	-0.0451*** (-3.378)
$ITNsell_{it} \times Connect_{it}$	0.0492*** (2.941)	0.0556** (2.458)
$ITNsell_{it} \times Post_{it}$	0.0392*** (3.281)	0.0459** (2.443)
$ITNsell_{it} \times Connect_{it} \times Post_{it}$	-0.0529*** (-2.829)	-0.0574** (-2.159)
$Connect_{it}$	0.0033 (0.516)	0.0082 (0.900)
$Post_{it}$	-0.0063 (-0.812)	-0.0077 (-0.716)
$Connect_{it} \times Post_{it}$	-0.0119 (-1.424)	-0.0211* (-1.881)
Control variables	Yes	Yes
Industry Fixed Effect	Yes	Yes
Year Fixed Effect	Yes	Yes
r ²	0.655	0.469
N	888	406

Panel B Regression results for the periods from year T-1 to the event year T

	Full Sample	$DA_{it}>0$
$ITNsell_{it}$	-0.0612** (-2.213)	-0.0601 (-1.359)
$ITNsell_{it} \times Connect_{it}$	0.1272** (2.384)	0.2331*** (3.500)
$ITNsell_{it} \times Post_{(-1)it}$	0.0633** (2.155)	0.1134** (2.325)
$ITNsell_{it} \times Connect_{it} \times Post_{(-1)it}$	-0.1314* (-1.742)	-0.3419*** (-3.255)
$Connect_{it}$	-0.0022 (-0.161)	-0.0168 (-0.757)
$Post_{(-1)it}$	-0.0250** (-2.041)	-0.0403 (-1.604)
$Connect_{it} \times Post_{(-1)it}$	0.0013 (0.097)	0.0418 (1.555)
Control variables	Yes	Yes
Industry Fixed Effect	Yes	Yes
Year Fixed Effect	Yes	Yes
r ²	0.828	0.793
N	132	65

Table 7 Regression results for insider trading activities within one-month window after earnings announcement (continue)

Panel C Regression results for the periods from the event year T to year T+1

	Full Sample	$DA_{it} > 0$
ITN_{sell}_{it}	-0.0052 (-0.439)	0.0006 (0.036)
$ITN_{sell}_{it} \times Connect_{it}$	0.0206 (1.550)	0.0199 (1.218)
$ITN_{sell}_{it} \times Post_{+1}_{it}$	0.0255* (1.768)	0.0060 (0.249)
$ITN_{sell}_{it} \times Connect_{it} \times Post_{+1}_{it}$	-0.0349* (-1.701)	-0.0755** (-2.455)
$Connect_{it}$	-0.0010 (-0.140)	-0.0017 (-0.151)
$Post_{+1}_{it}$	0.0094 (0.982)	0.0270 (1.651)
$Connect_{it} \times Post_{+1}_{it}$	-0.0161 (-1.632)	-0.0264 (-1.609)
Control variables	Yes	Yes
Industry Fixed Effect	Yes	Yes
Year Fixed Effect	Yes	Yes
r ²	0.712	0.547
N	312	149

Table 8 Test for the Parallel Path Assumption

Table 8 reports the test results for the Parallel Path Assumption between the politically-connected and non-connected firms. All variables are defined in Appendix A. All continuous variables are winsorized at the top and bottom 1 percent of their distributions. All p-values are two-tailed; ***, ** and * represent statistical significance at the 1 percent, 5 percent and 10 percent level, respectively. Reported t-statistics are based on standard errors adjusted for firm-level clustering.

	Full Sample	$DA_{it}>0$
$ITNsell_{it} \times Connect_{it} \times Pre_{-1}(-1)_{it}$	0.0313 (1.260)	0.0587 (1.422)
$ITNsell_{it} \times Connect_{it} \times Pre_{-2}(-2)_{it}$	0.0039 (0.196)	0.0229 (1.031)
$ITNsell_{it} \times Connect_{it} \times Post_{it}$	-0.0534** (-2.218)	-0.0556** (-2.177)
Control variables	Yes	Yes
Industry Fixed Effect	Yes	Yes
Year Fixed Effect	Yes	Yes
r2	0.660	0.474
N	888	406