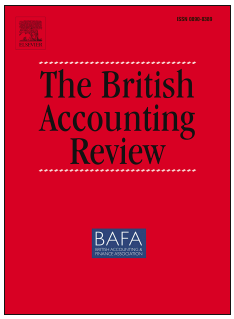

Impression Management, Forward-Looking Strategy-Related Disclosure, and Excess Executive Compensation: Evidence from China

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Impression Management, Forward-Looking Strategy-Related Disclosure, and Excess Executive Compensation: Evidence from China

Abstract

We investigate whether overpaid executives in Chinese listed firms engage in impression management by using forward-looking strategy-related disclosure (FLSD) in management discussion and analysis (MD&A) narratives to justify their excess compensation. Using a sample of 8,437 firm-year observations of Chinese nonfinancial listed firms from 2007 to 2016, we find a significant and positive relationship between executive overpayment and impression management in FLSD. This positive relationship is more pronounced in state-owned enterprises (SOEs) than non-SOEs. We also find that a higher degree of board independence, higher institutional shareholdings, auditors, analysts, and the introduction of the anti-corruption campaign could lower such a positive relationship. These findings suggest that impression management in FLSD is reduced when corporate governance is strengthened. We also find that CEO duality could enhance this positive relationship. Further examining how the market reacts to such impression management, we find an immediate positive and significant market reaction to such impression management at the time of the annual report filing, which could further mitigate the negative perceptions from stakeholders due to excessive pay. Such a positive market reaction is reversed over a longer time horizon, which supports the opportunistic/symbolic nature of impression management in FLSD.

Keywords: Forward-looking Strategy-related Disclosure (FLSD), Impression Management, Excess Executive Compensation, Naïve Bayes Classification, Corporate Governance, China.

JEL Classifications*:* G3; M12.

1. Introduction

Corporate qualitative disclosure is an important practice through which firms supplement their financial reports to meet investors' demands for information about past and expected future performance in order to make economic decisions (Gu & Li, 2007; Feldman et al., 2010; Li, 2010; Muslu et al., 2015). Of these qualitative disclosures, the disclosure of corporate strategy has become one of the most important. According to the Steering Committee of the Financial Accounting Standards Board (FASB), disclosures of 'managements' strategies and plans for managing those critical success factors in the past and going forward' have been identified as a crucial step for improving business reporting (FASB, 2001, p. 13).[1]

Strategy-related disclosures often reveal information about managers' future expectations and strategic plans, typically including general corporate information, corporate strategy, acquisitions and disposals, research and development, and future prospects (Lim et al., 2007; Meek et al., 1995; Muslu et al., 2015). Firms disclose strategy-related information through various channels, such as general annual reports (Lim et al., 2007; Meek et al., 1995), press releases (Gu & Li, 2007), nonearning corporate guidance from earnings announcements (Lu & Tucker, 2012), presentation of corporate strategy (Baginski et al., 2017; Whittington et al., 2016), management commentary on an annual

[1] According to the FASB's framework of voluntary disclosures shown in FASB (2001), the Steering Committee stated the following: 'The next step is to identify management's strategies and plans for managing those aspects of the business that are especially important to the company's success. Disclosure of management's strategies informs investors about where management intends to take the company. Disclosure of management's plans informs investors about how management expects to get there. Information about management's strategies and plans is particularly important to investors in making investment decisions because the quality of those strategies and plans and management's effectiveness in executing them will be major factors in determining the company's success' (Chapter 3: Framework for Providing Voluntary Disclosures).

report (Athanasakou et al., 2019), and the management discussion and analysis (MD&A) section of annual reports (Li et al., 2019b; Muslu et al., 2015).

The extant studies on this topic have examined strategy-related disclosure from the perspective of quantity (e.g., Baginksi et al., 2017; Gu & Li, 2007; Lu & Tucker, 2012; Muslu et al., 2015) and the linguistic tone or the average tone, which is relatively qualitative (e.g., Feldman et al., 2010; Li, 2010; Li et al., 2019b). Evidence yielded by these investigations indicates that the credibility/value-relevance of strategy-related disclosure is often problematic, as qualitative disclosures are prone to managerial manipulation. However, limited research has been conducted on impression management in strategy-related disclosure, particularly relating it to executive compensation. The primary aim of this study is to fill this gap in the literature. Specifically, we apply the impression management perspective to demonstrate that managers use strategy-related disclosure to justify their excess compensation.

We argue that when overpaid executives face legitimacy threats caused by regulatory scrutiny and actions prompted by public criticism over excess pay, they are incentivised to justify their compensation by engaging in impression management in strategy-related disclosure to favourably shape investors' perceptions about the executives' own skills and abilities. This is an important research topic given that excessive executive compensation has become common in developed economies (e.g., Core et al., 2008) and emerging economies such as China (e.g., Chen et al., 2010). Overpaid executives often receive negative press coverage, which can damage their reputation and expose them to legitimacy threats (Core et al., 2008). Available evidence indicates that organisations adopt disclosure of corporate qualitative information as a strategy to alter perceptions of their

legitimacy on the part of various information users, such that impression management in such disclosure can signify firms' response to legitimacy threats (Hooghiemstra, 2000; Merkl-Davies & Brennan, 2007; Ogden & Clarke, 2005). Bebchuk and Fried (2003) suggest that, to avoid or minimise the outrage that results from outsiders' recognition of rent extraction, managers have a substantial incentive to legitimise their extraction of rents, such as excessive compensation.

In this study, we focus on management discussion and analysis (MD&A) narratives disclosure, particularly on forward-looking strategy-related disclosure (FLSD), in the Chinese setting. MD&A is a section in the annual report in which managers disclose qualitative narratives to interpret corporate quantitative information, which reflects the managerial intention regarding the firm's current outlook (using backward-looking performance commentary (BLPC)) and future projections (using forward-looking strategy-related disclosure (FLSD)).[2] Like in the U.S., the China Securities Regulatory Commission (CSRC) has required Chinese listed firms to include an MD&A section for yearly and quarterly filings since 2007. MD&A disclosure has become a vital information source for investors' economic decisions in China (Li et al., 2019b; Wang et al., 2021b; Zhang et al., 2021; Zhang et al., 2022b).

We further argue that, compared with BLPC, FLSD is widely used and can provide more benefits to management for justifying their excessive payment. Moreover, a unique feature in China is that most Chinese CEOs are politically connected, enabling them to

[2] For example, Barron et al. (1999) examine MD&A narratives by grouping them into a historical category (with three historical subcomponents) and a forward-looking category (with three forward-looking subcomponents). Cole and Jones (2004) examine two categories of supplemental information from MD&A in the retail industry, i.e., disclosures about historical reasons for revenue changes and forward-looking disclosures related to the expansion plans of retail firms.

access inside business information and scarce resources required to formulate forward-looking plans of action that are typically unavailable to public investors (Ferreira & Rezende, 2007; Chen et al., 2017; Jagolinzer et al., 2020). Consequently, this benefit of political connection is often reflected in FLSD in MD&A, which conveys management's confidence in future business success and signals their close ties with the central power. Such a strategy is of particular relevance given the arguably less transparent nature of the Chinese stock market (Boulton et al., 2011; Ding et al. 2016; Li et al., 2019a). This ability of managers to obtain inside information means investors are likely to perceive FLSD as being more salient and trustworthy than other channels of disclosure (Conyon et al., 2015; Ferreira & Rezende, 2007).

We combine agency theory with legitimacy theory to argue that managers are more likely to engage in impression management in MD&A (and FLSD in particular) to justify their excessive compensation for the sake of legitimising their rent extraction. The Chinese norm of social equality has made excessive executive pay the subject of substantial media attention and public outrage due to society's perception of the unfair income distribution (Adithipyangkul et al., 2011; Markóczy et al., 2013). Such attention and outrage at excessive compensation for executives, particularly those of SOEs, have triggered subsequent regulatory scrutiny by the central government (such as the 'salary limit orders' in 2009 and in 2014), which has put pressure on overpaid managers. Such regulatory scrutiny of and actions about executive overpayment may be perceived as indicating wrongdoing by overpaid CEOs, thereby creating negative perceptions among stakeholders and undermining the CEOs' reputation and future career. This has exposed overpaid executives (particularly those of SOEs) to social and political legitimacy threats.

Furthermore, weak corporate governance and an insufficient institutional environment in China have created opportunities for the management in Chinese listed firms to use their position to engage in impression management. As a main reflection of weak corporate governance, executive compensation in Chinese SOEs is not closely linked to firm performance but rather managerial/political power (Chen et al., 2010; Chen et al., 2011). Although the CSRC has issued reporting standards and regulations to improve corporate governance and foster transparency, such reporting standards and regulations seem to be 'window dressing', leading to the financial reporting environment of Chinese listed firms remaining opaque (Piotroski & Wong, 2012; Jiang & Kim, 2020). This makes Chinese listed firms subject to low litigation risk when their managers engage in opportunistic behaviour in corporate disclosure (particularly qualitative disclosure). Thus, the Chinese institutional environment provides a good setting to test our research questions empirically.

Using a sample of 8,437 firm-year observations of Chinese nonfinancial listed firms from 2007 to 2016, we find a significant and positive relationship between executive overpayment and impression management in FLSD. This positive relationship is more pronounced in state-owned enterprises (SOEs) than non-SOEs. We also find that a higher degree of board independence, higher institutional shareholdings, auditors, analysts, and the introduction of the anti-corruption campaign could weaken such a positive relationship. These findings suggest that impression management in FLSD is reduced when corporate governance is strengthened. We also find that CEO duality could enhance this positive relationship. These findings remain unchanged after addressing the endogeneity issues and several robustness tests. We further examine how the market reacts to impression

management in FLSD, and find an immediate positive and significant market reaction to such impression management at the time of the annual report filing, which could further mitigate the negative perceptions from stakeholders due to excessive pay. This positive market reaction is reversed over a longer time horizon, which supports the opportunistic/symbolic nature of impression management in FLSD.

Our study makes several contributions to the literature. First, we contribute to the literature on information disclosure, particularly qualitative information disclosure and the tone management of such information. Few studies in the extant literature explore whether managers engage in impression management in MD&A narratives as a communication strategy for self-serving purposes in response to legitimacy threats caused by pressure from external stakeholders. Examining this question is important mainly because these disclosures, as supplementary to financial information, provide useful information to investors when making real investment decisions. By combining agency theory with legitimacy theory, we conduct the first nuanced study and show how overpaid executives use FLSD to placate *external* stakeholders' pressure, thus trying to legitimise their overpayment. Methodologically, we apply textual analysis techniques to identify impression management in FLSD in the Chinese setting.

Second, we contribute to the corporate governance literature on executive compensation. We investigate strategy-related disclosure included in the MD&A in the context of executive overpayment. Prior literature has reported that managers mainly use strategies surrounding *financial information disclosure* to justify their excessive compensation (Albuquerque et al., 2013; Faulkender & Yang, 2010; Adut et al., 2013; Morse, Nanda, & Seru, 2011; and Wade et al., 1997). In contrast, we provide the first study

on how managers use *impression management in qualitative information* under weak corporate governance and insufficient institutions to legitimise their rent extraction, i.e., overpayment.

Third, we contribute to the literature on whether impression management in corporate reporting can be informative, or is merely 'cheap talk' from the investors' perspective. The theoretical literature has suggested that whether such impression management is informative or 'cheap talk' depends on whether investors (as information users) are subject to behavioural and cognitive biases (Merkl-Davies and Brennan, 2011). Our empirical findings support the cognitive bias perspective that there is a positive market reaction to impression management in FLSD, surrounding the annual report filing (due to the salience of forward-looking, goal-based information for investors). Furthermore, as impression management in FLSD leans more towards being 'cheap talk' or 'symbolic' in nature, our empirical findings also suggest that such a positive market reaction is reversed over a longer time horizon.

The remainder of the paper is organised as follows. Section 2 presents the related literature. Section 3 constructs the theoretical framework and hypotheses. Section 4 describes the empirical methodology and sample selection. Section 5 presents the empirical results. Section 6 presents the results of additional tests. Section 7 discusses and concludes the study.

2. Literature Review

2.1. MD&A disclosure

Publicly listed firms on the U.S. stock exchange are required by the U.S. Securities

and Exchange Commission (SEC) to include MD&A, a narrative section in their annual report. Firms listed on the Chinese stock exchanges are similarly required by the Chinese Securities Regulatory Commission (CSRC) to make such disclosures.[3] MD&A usually provides managerial commentary about the firm's current outlook and future projections, giving market participants an opportunity to look at a firm through the eyes of management by providing a historical and prospective analysis (SEC, 2003). In the MD&A, the narratives on the firm's current outlooks consist primarily of backward-looking performance commentary (BLPC), which often involves historical analysis based on past performance, whereas those on the firm's future projections mainly include forward-looking strategy-related disclosure (FLSD).

Compared with BLPC, FLSD seems more salient for investors (FASB, 2001). FLSD mainly contains information on corporate strategy, defined as 'the pattern of decisions in a firm that determines and reveals its objectives, purposes, or goals, produces the principal policies and plans for achieving those goals, and defines the range of business that the company is to pursue' (Andrew, 1980, pp. 18–19). Disclosure about corporate strategy often reflects managerial intentions (i.e., information about what a firm's management has in mind for the future of the firm), which (1) tends to be 'soft' and cannot be directly verified; (2) is very often forward-looking; and (3) is formed on the basis of information that only managers can access (Ferreira & Rezende, 2007).

[3] Following the U.S., the China Securities Regulatory Commission (CSRC) has required Chinese listed firms to include an MD&A section for yearly and quarterly filings since 2007. Like the 10-K setting in the U.S., the MD&A section in China is expected to shed light on how the company performed in the prior period, its current financial condition, and management projections for future performance. The former name of MD&A in China is the 'Report of Board of Directors' or 'Discussion and Analysis on Business Operations.' As MD&A has also become an important narrative disclosure in China, an increasing number of studies have examined its content and tone in the Chinese context, such as Li et al. (2019b), Wang et al. (2021b), Zhang et al. (2021b), and Zhang et al. (2022).

While the SEC and CSRC require specific topics to be discussed in the MD&A, the content in this section remains voluntary. Therefore, managers are likely to exercise discretion over the extent of detail provided and the language used in these disclosures, particularly in FLSD (Davis & Tama-Sweet, 2012; Muslu et al., 2015). Unlike the reporting of accounting figures, which is regulated by accounting standards, the MD&A section is not required to be audited. Thus, firms have considerable flexibility in the language and linguistic tone they select to describe performance (Henry and Leone, 2016), which opens the door for impression management.

2.2. Impression management in corporate disclosures

Impression management refers to the activities people employ to control information or the perceptions others form of them in order to steer others' opinions in the service of personal or social goals (Leary & Kowalski, 1990). In a corporate reporting context, impression management involves attempts 'to control and manipulate the impression conveyed to users of disclosed information' (Clatworthy & Jones, 2001, p. 311), a result of which is that managers (as those preparing information/annual reports) are assumed to employ corporate reports as impression management tools to 'strategically … manipulate the perceptions and decisions of stakeholders' (Yuthas et al., 2002, p. 142). Impression management predominantly occurs in unregulated narrative disclosures.

Due to the agency problem, managerial impression management in narrative disclosures can be expounded as opportunistic or self-serving behaviour through a positive disclosure bias for managers' personal benefit, such as job security and remuneration raise (Clatworthy and Jones, 2003; Merkl-Davies and Brennan, 2007). Impression management usually occurs in weak corporate governance contexts where the environment creates

opportunities for managers to do so, while strong corporate governance can limit impression management practices in narrative disclosures (Garcia-Osma & Guillamón-Saorín, 2011). On the face of it, contexts characterised by executive overpayment appear likely to overlap with those characterised by weak corporate governance. In the context of our study, FLSD is the typical form of such narrative disclosure.

2.3. FLSD *vs.* BLPC

The literature suggests that managers may have a lower cost/risk of manipulating forward-looking formation than backward-looking information. In practice, forward-looking strategy-related information disclosed in annual reports is neither regulated nor audited. Rogers and Stocken (2005) suggest that the inability to conduct *ex-post* monitoring increases the likelihood of *ex-ante* manipulation. Furthermore, Cazier et al. (2020) find that a positive tone in forward-looking qualitative disclosure has a significantly lower association with the likelihood of subsequent litigation than a positive tone in non-forward-looking qualitative disclosure. This finding suggests that the Safe Harbour provisions of the Private Securities Litigation Reform Act 1995 can effectively shield firms' qualitative forward-looking disclosure from litigation risk.

In China, other than the well-documented weak internal corporate governance in Chinese listed companies resulting from dominant state ownership (Jiang & Kim, 2020; Pitroski & Wong, 2012), external governance mechanisms such as laws, institutions and legal protection are also ineffective (Jiang & Kim, 2020). Particularly, Piotroski and Wong (2012) suggest that although the CSRC has issued reporting standards and regulations to improve corporate governance and foster transparency, such reporting standards and regulations seem to be 'window dressing'. Thus, they suggest that despite recent regulatory

actions designed to enhance corporate transparency, the financial reporting environment of Chinese listed firms remains opaque. Therefore, this has made Chinese listed firms subject to low litigation risk when their managers engage in opportunistic behaviour in corporate disclosure, which may induce managers to manipulate FLSD for their self-serving purposes. Therefore, compared with BLPC, FLSD is generally less costly when manipulated.

The literature has also suggested that investors as information users may pay more attention to strategy-related (i.e., forward-looking narrative-based) information disclosure than past quantitative information. Investors do so due to their limited attention span and information processing power, making them prone to overreact to news presented in a salient, easily processed form (Hirshleifer, 2015; Hirshleifer & Teoh, 2003). Forward-looking strategy-related information usually has such salience (Fiske & Taylor, 1991). For example, Hirshleifer et al. (2013) suggest that, compared with a firm's past innovative efficiency (measured by patents or citations scaled by research and development expenditures), investors tend to pay more attention to explicitly forward-looking information about the prospects for the particular R&D projects that the firm is undertaking. Similarly, Amel-Zadeh and Faasse (2016) suggest that in companies' annual 10-K filings, the MD&A disclosure (which contains more contextual forward-looking information) is more salient to investors than the footnotes (i.e., notes to financial statements, which tend to be more technical). Hirshleifer (2015) also observes that investors in financial markets tend to neglect low-salience signals and overreact to salient news in corporate disclosure.

Furthermore, Hirshleifer and Teoh (2003) find that human attention tends to be drawn to goal-related stimuli. It is generally believed that FLSD contains a goal-based narrative salient to investors, who tend to exhibit cognitive biases due to limited

information processing power (Hirshleifer, 2015; Hirshleifer & Teoh, 2003).

Putting all of this together, we argue that investors pay more attention to FLSD than BLPC. Therefore, managers are more likely to conduct impression management through FLSD than through BLPC for their self-serving purposes.

3. Theoretical Framework and Hypothesis Development

In this section, we combine agency theory with legitimacy theory to elaborate our argument on why managers are more likely to conduct impression management in FLSD to justify their excessive compensation in the context of China and build our hypotheses.

The literature suggests that excessive executive compensation has become a common phenomenon in both developed economies (e.g., Core et al., 2008) and emerging economies such as China (e.g., Chen et al., 2010). Excessive compensation is mainly due to agency problems with weak governance structures and the low quality of oversight that a board offers (Core et al., 1999; Core et al., 2008). Rent extraction/managerial power theory posits that weak corporate governance allows executives to (at least partly) determine their compensation, resulting in inefficiently high levels of pay (Bebchuk and Fried, 2003; Chen et al., 2010; Chen et al., 2011). Such pay levels reflect managerial power, which can be described as the ability of managers to influence the remuneration decisions made by the board of directors and extract private benefits in excess of optimal compensations (Chalmers, et al., 2006; Frydman & Jenter, 2010).

Moreover, in China, social equality is an essential norm arising from communism and collectivism (Walder, 1995). Consequently, excessive executive compensation has attracted considerable media attention,[4] causing public outrage due to the perception of

[4] In China, media outlets have been extensively controlled by the government for a long time, making them

unfair income distribution in society (Adithipyangkul et al., 2011; Markóczy et al., 2013). This issue is particularly problematic when excessive compensation originates from the rent extraction/managerial power resulting from state ownership rather than management talent and abilities (Chen et al., 2010; Chen et al., 2011).[5]

Public attention and outrage at excessive compensation for executives, particularly those of SOEs, have triggered subsequent regulatory scrutiny by the central government, which has put genuine institutional and legal pressure ('*real*' pressure) on overpaid managers. For example, in 2009, the central government issued the first 'salary limit order' – 'Guidelines on Further Standardising the Salary Management of Heads of Central Enterprises' – to standardise executive compensation in SOEs. Specifically, the Ministry of Finance issued a new pay limit regulation, which required that, for state-owned financial institutions, executives' annual pay in 2008 could not exceed 90% of the pay level in 2007.[6] Its effect was significant. For example, when Shanghai Pudong Development Bank (SPDB), as an SOE, released its 2008 annual report in April 2009, senior executives at the SPDB

arms of the Chinese Communist Party (CCP) to prevent challenges to its authority (Du et al., 2016). However, since being admitted to the World Trade Organization (WTO) in 2001, China's rapid economic development has allowed for greater diversity in its media coverage, and the government has relaxed its control over economic news (Qi et al., 2014). In practice, the Chinese media enjoys significantly more autonomy in reporting on financial misconduct than in their reporting on most other areas of Chinese law and society (Liebman & Milhaupt, 2008). As a result, Chinese media outlets have been identified in the literature (see Qi et al., 2014; Wang and Ye, 2015; and Du et al., 2016; for examples) as playing a corporate governance role in the Chinese capital market that is similar to that in developed markets. Concerning the governance role of media coverage in developed countries, please refer to Miller (2006), Joe et al. (2009), and Dyck et al. (2010).

[5] Chen et al. (2010) suggest that in firms with dominant state ownerships, many executives in China's listed firms are appointed by the government, and they are often former government officials, thus having close connections with the government. Firms with politically connected executives are thus more likely to appoint other officials to be directors and managers rather than individuals with adequate professional qualifications and knowledge. They further indicate that inside executives tend to use their networks and relative power within the firms to extract excess compensation through their influence over the pay arrangements. Similarly, Chen et al. (2011) find that an executive's political power is more likely to extract a high level of compensation. Therefore, in China, the political connections or political power of executives in firms with dominant state ownership may extract excess compensation.

[6] Please see the web source of this news in Chinese at https://www.nbd.com.cn/articles/2009-04-11/211107.html

were found to be overpaid according to this regulation. Consequently, the Ministry of Finance requested that the excessive part of the 2008 annual pay be deducted from the 2009 annual pay for the SPDB (and other state-owned financial institutions). Further, in 2014 the central government issued the second 'salary limit order' – 'The Reform Plan for the Salary System of Heads of Central Enterprises' – which came into effect from January 1, 2015. Consequently, the first batch of this reform involved the implementation of pay limits on executives from 72 central SOEs. Sun and Zhang (2020) suggest that local SOEs also implemented salary limits for their executives since this second 'salary limit order', showing the spillover effects of this order surrounding central SOE executives.[7]

Such regulatory scrutiny of and actions about executive overpayment by the central government may be perceived as indicating wrongdoing by overpaid CEOs, thereby creating negative perceptions among stakeholders and undermining CEOs' reputation and career in the future. This has exposed overpaid executives (particularly SOEs' executives) to social and political legitimacy threats. Bebchuk and Fried (2003) suggest that to avoid or minimise such negative perceptions that result from outsiders' recognition of rent

[7] Executive compensation in China primarily consists of monetary/cash compensation, with stock-based compensation being limited. The former typically includes basic salary and annual bonuses (i.e., performance compensation mainly aligned with accounting measures) (Li et al., 2013; Wang, 2020). Unlike in the U.S., stock-based compensation is much less prevalent in China due to regulatory constraints. For example, the Ministry of Finance issued a 'Notice on Issues of Compensation Management of Heads of Financial SOEs and other SOEs' in 2009. This notice highlighted that SOEs should temporarily suspend the implementation of stock-based compensation plans. As a result, only 5.9% of SOEs employed stock-based compensation in 2017 (Wang, 2020; Lennox and Wu, 2022). The literature also suggests that this low percentage among SOEs can be attributed to CEOs' implicit incentives for political promotion substituting for explicit compensation incentives (i.e., stock-based compensation) (Cao et al., 2019; Jiang and Kim, 2020). Thus, cash compensation has been the most significant form of CEO compensation in China.

Furthermore, the Chinese government's 'salary limit orders' are mainly set for controlling cash compensation for Chinese executives in the SOEs and focus on regulating and standardising basic salary and performance compensation, which usually takes the form of cash payment. As a result, when facing regulatory scrutiny, overpaid managers have sufficient incentives to engage in impression management to justify their compensation.

extraction, managers have a substantial incentive to try to legitimise their extraction of rents – excessive compensation.

Suchman (1995) defined legitimacy in an inclusive, broad-based way, indicating that 'legitimacy is a generalised perception or assumption that the actions of an entity are desirable, proper, or appropriate within some socially constructed system of norms, values, beliefs, and definitions' (Suchman, 1995, p. 574). Obtaining legitimacy, therefore, largely hinges on firms adopting appropriate institutional practices as a 'perception' or 'assumption' in the context of prevailing cultural norms, beliefs, symbols and rituals and by conforming with widespread perceptions of what is considered 'proper, adequate, rational and necessary' (Meyer & Rowan, 1977).

Legitimacy theory considers that managers *actively* shape the view of an organisation (Suchman, 1995). Evidence reported in the accounting literature indicates that corporate disclosure is a common response to legitimacy threats (Merkl-Davies & Brennan, 2007). For example, Shell announced its plans to sink the Brent Spar in the Atlantic in 1995 to handle public controversy (Hooghiemstra, 2000). This example and others, such as the Exxon Valdez oil spill and the chemical leak in Bhopal, India, indicate that social and environmental disclosures as a form of impression management are driven by public pressure and increased media attention caused by major social incidents. Moreover, the frequency and style of such disclosures can be modified to alter the public perception of organisations' legitimacy. Ogden and Clarke (2005) investigate ten privatised regional water companies in the U.K., suggesting that their management employs impression management strategies in annual report statements concerning customer service to gain, maintain, and repair their legitimacy as customer-focused companies.

The discussions in Sections 2.2 and 2.3 have suggested that managers may conduct impression management in corporate qualitative disclosure for self-serving purposes/benefits due to the agency problem, and they are more likely to manipulate FLSD in MD&A than BLPC. FLSD can be regarded as a signal to the market for executives to update their beliefs about managers' abilities.[8]

When overpaid Chinese executives face *real* pressure from regulatory scrutiny on overpayment by the central government, they are more likely to *actively* engage in impression management in FLSD as communication action/strategy, in response to such external pressure, to legitimise their excessive pay as rent extraction. This is particularly true when executive pay is influenced mainly by managerial power through their political connections to central power in China. FLSD typically includes management's access to inside business information and scarce resources required to formulate forward-looking plans of action that are typically unavailable to public investors (Ferreira & Rezende, 2007; Jagolinzer et al., 2020). This ability to obtain inside information is generally regarded by investors as a signal of management talent, so that FLSD is more likely than other channels of disclosure to be noticed and trusted by investors (Conyon et al., 2015; Ferreira & Rezende, 2007).

We thus formulate the following hypothesis:

H1: Excess executive compensation triggers impression management in FLSD by the management in Chinese listed firms.

[8] Ferreira and Rezende (2007) suggest that FLSD usually reflects managerial intentions, i.e., information about what a firm's management has in mind for its future. When managers have career concerns, their announcements of strategic plans can exhibit the effects of their actions, not only on expected profits but also on the market's perceptions of their talent. Even if they do not consider leaving their firms, they could claim higher compensation if they can create a reputation of being talented by such strategy-related disclosures.

Moreover, because the vast majority of executives of listed SOEs in China are former government officials appointed by the government, they have mixed identities of both professional managers and public officials. Such mixed identities expose SOE executives not only to questions of social legitimacy due to the social equity culture, but also to political legitimacy related to their career development. Useem and Useem (1979) define political legitimacy in a broad manner, suggesting that it includes 'both citizens' trust in public officials and their conviction that governmental institutions are fair, responsive, and valuable.' In this regard, when SOE executives are seen to be taking excessive compensation, they will face extra external pressure caused by public questioning and criticism about whether governmental institutions are fair and credible from the perspective of political legitimacy, which would affect their future career path. Therefore, they have a stronger incentive to legitimise their rent extraction (i.e., excessive compensation) by manipulating FLSD to justify their excessive pay. Accordingly, we further hypothesise the following:

H2: The positive association between excessive executive compensation and impression management in FLSD is more pronounced in SOEs than in non-SOEs in China.

4. Research Design and Methodology

4.1. Variable construction

Dependent variable: impression management in FLSD

To measure impression management in FLSD, we first identify forward-looking strategy-related sentences presented in the MD&A section of annual reports of our sampled Chinese listed firms by using a natural language processing (NLP) technique called naïve Bayesian classification (NBC), following Li (2010). The NBC algorithm is a typical

supervised learning model that requires manually obtained training data based on predefined categories.[9] In the context of our study, existing studies such as Meek et al. (1995) and Lim et al. (2007) suggest that strategy-related disclosures include five content categories: (1) general corporate information (i.e., analysis of the market and industry); (2) R&D; (3) corporate strategy; (4) future prospects; and (5) acquisitions and disposals. We manually construct our training data based on these five categories and implement the NBC algorithm using the Java programming language to identify forward-looking strategy-related sentences. Appendix 1 shows the details of this process. The training datasets and the Java programming code that executes the naïve Bayes classifier are available on request.

After classifying all sampled sentences into forward-looking strategy-related sentences and backward-looking performance commentary sentences, we then measure the impression management in both by employing the approach developed by Huang et al. (2014) to identify abnormally positive tones in each of these sentences using the following tone determinant model:

$$\begin{aligned} TONE_{jt} = {} & \alpha + \beta_0 EARN_{jt} + \beta_1 RET_{jt} + \beta_2 CFRATIO_{jt} + \beta_3 ACC_{jt} + \beta_4 SIZE_{jt} + \beta_5 MTB_{jt} \\ & + \beta_6 ETVOL_{jt} + \beta_7 EARNVOL_{jt} + \beta_8 FIRMAGE_{jt} + \beta_9 NBSEG_{jt} + \beta_{10} NGSEG_{jt} \\ & + \beta_{11} \mathrm{MA}_{jt} + \beta_{12} SEO_{jt} + \beta_{13} SI_{jt} + \beta_{14} LOSS_{jt} + \beta_{15} DEARN_{jt} + \beta_{16} AFE_{jt} + \varepsilon_{jt} \end{aligned} \quad (1)$$

According to the model given by Eq. (1), $TONE_{jt}$ is calculated for each sentence k from the classified forward-looking strategy-related or backward-looking performance

[9] Lewis and Young (2019) review the leading analytic approaches applied in the accounting and finance literature, including key word searches and counts, attribute dictionaries, naïve Bayesian classification, cosine similarity, and topic modeling approaches (e.g., latent Dirichlet allocation). Please refer to Section 4.3 of Lewis and Young (2019) for the implementation steps of the naïve Bayes classification.

commentary sentences using the expression $TONE_{jt} = \frac{1}{K}\sum_{k=1}^{K} TONE_{jt,k}$, whereby $TONE_k = 1$ signifies positive tone, 0 neutral, and -1 negative, and K is the total number of sentences in the forward-looking strategy-related or backward-looking performance commentary disclosure. Hence, for each firm *j* in year *t*, its forward-looking strategy-related or backward-looking performance commentary disclosure tone is defined as the average tone of all the sentences.

Furthermore, we also use the NBC algorithm to identify whether each sentence k from our sampled disclosure is positive, neutral, or negative in tone. The process of tone measurement at the sentence level from our sampled disclosure is described in Appendix 2.

The model presented in Eq. (1) also suggests that the TONE can be decomposed into (1) a normal component (NTONE) comprising all control variables related to tone determinants and (2) an abnormal component (ABTONE), represented by the residual ε_{jt}. We calculate the ABTONE of two classified groups (i.e., forward-looking strategy-related sentences and backward-looking performance commentary sentences) constructing two variables: ABTONE_strategy and ABTONE_percom. ABTONE_strategy, our dependent variable, is the abnormal tone of forward-looking strategy-related sentences to measure impression management in FLSD. ABTONE_percom, the abnormal tone of backward-looking performance commentary sentences to measure impression management in BLPC, is one key control variable in the baseline model and the dependent variable in the placebo test. Table A2 in the appendices reports definitions and measurements of the control variables used in Eq. (1).

Independent variable: excess compensation

We adopt excess cash compensation[10] as a proxy for excess executive compensation (overpay), measured as the difference between actual and expected compensation. Following Core et al. (2008), we estimate the expected compensation by regressing the natural logarithm of compensation on specific economic determinants of Chinese executive compensation when controlling for region, industry, and year variables:

$$\begin{aligned} LnCOMP_{it} = {} & \alpha + \beta_0 ROA_{it} + \beta_1 ROA_{i,t-1} + + \beta_2 SDROA_{it} \\ & + \beta_3 MTB_{it} + \beta_4 MB_{it} + \beta_5 SIZE_{it} + \beta_6 CHAIR_{it} \\ & + \beta_7 STATE_{it} + \beta_8 SIZE\_CompenC_{it} + \beta_9 SALARY\_CompenC_{it} \\ & + \beta_{10} ISIDIRECTOR\_CompenC_{it} + \beta_{11} SHAREHOLD\_CEO_{it} \\ & + \beta_{12} AGE\_CEO_{it} + \beta_{13} TENURE\_CEO_{it} + \varepsilon_{it} \end{aligned} \quad (2)$$

Following Hooghiemstra et al. (2017), Overpay is defined as our independent variable when it is equal to the residual term from the estimation model shown in Eq. (2) if the residual is positive and zero, otherwise. Underpay is defined when it is equal to the absolute value of the residual term from estimation Model (2) if the residual is zero or negative, and zero otherwise. Table A3 in the appendices shows the definitions and measurements of all variables used in Eq. (2).

Control variables

In line with the approach adopted in prior studies on corporate governance (e.g.,

[10] We can only obtain cash compensation based on the Chinese case. Many previous compensation studies in China, such as Buck et al. (2008), Firth et al. (2006), and Kato and Long (2006), use the natural log of the annual cash compensation to measure CEO compensation, which does not include long-term incentive plans (LTIPs) such as stock options. Markóczy et al. (2013) also suggest that, conceptually, cash compensation represents the closest match to the construct 'compensation' in China, and that, unlike stock options whose value is not entirely controlled by boards, cash compensation is directly controlled by boards. Thus, using only cash compensation has been argued to be a strength of Chinese data in CEO compensation research (Buck et al., 2008). Chen et al. (2010) suggest that very few listed firms in China have executive stock option schemes. This is a limitation of this study, although it should not affect the validation of the results when cash compensation is sufficient to indicate the significant effect on impression management.

Chen et al., 2014; Cheng & Courtenay, 2006; Eng & Mak, 2003; Lim et al., 2007; Muslu et al., 2015; Wang et al., 2008), we include the following variables into our analyses to control for the possible corporate governance effect on impression management: (1) ownership concentration, including share proportion of the largest shareholder (TOP1), share proportion of the second-largest shareholder (TOP2), and share proportion of the first ten shareholders (Her10) measured by the squared sum of the proportion of the first ten shareholders; (2) ownership type (State), which is a dummy variable that is coded 1 when the firm is a state-owned enterprise; (3) the proportion of executives' shareholding (Share_Man); (4) institutional ownership holding (Share_Inst); (5) board structure (Size_BD) measured by the natural logarithm of the total number of board directors; (6) independent director (IndepR), measured by the percentage of independent directors on the board; (7) duality, a dummy variable that is coded 1 when the CEO is also the board chairman; (8) turnover_CEO, a dummy variable that is coded 1 when there is CEO/president turnover; (9) audit committee (AuditC), a dummy variable that is coded 1 when the firm has an audit committee; (10) Big 4, a dummy variable coded 1 if the firm auditor is big 4, and 0 otherwise; and (11) financial analysts (Analyst), measured by the natural logarithm of 1 plus the total number of analysts following.

Further, we also consider two control variables. First, using discretionary accruals as earnings/accruals management is a method of manipulating investors' perceptions of a firm (Teoh et al., 1998; Xie, 2001). To control for this effect, we add a control variable, discretionary accruals (DA), measured by the modified Jones model (Dechow et al., 1995). Second, since we cannot rule out the possibility that managers may manipulate MD&A to respond to financial misconduct (Chakravarthy et al., 2014 and Zhang et al., 2021a), we

add a control variable, Violation,[11] a dummy variable coded 1 if there were violations or financial misconducts in the last three years, and 0 otherwise.

Following prior studies on voluntary information disclosure and impression management, we also control for the following firm-level characteristics: (1) firm size (Assets) measured by the natural logarithm of total assets; (2) leverage (Lev) measured by the sum of long-term debt and current liabilities divided by total assets; (3) firm growth (Growth) measured by the growth rate of total assets; (4) acquisition (Acquisition), a dummy variable that is coded 1 if there is a merger and acquisition; (5) cross-listing (Crosslist), a dummy variable that is coded 1 if there is a cross-border listing of the firm; (6) Refinance, a dummy variable that is coded 1 if there is a new equity financing or a new debt financing; (7) Herfindahl-Hirschman Index (HHI), calculated as $HHI_{jt} = \sum_{i=1}^{N_j} s_{ijt}^2$, where s_{ijt} is the market share of firm i in industry j in year t; N_j is the number of firms in industry j; The market share of firm i is obtained by dividing the firm i's annual sales by the total annual sales of all N firms in industry j; (8) Return on assets (ROA), measured by the net profit scaled by the total assets; and (9) Dividend ratio (Dividend), measured by dividend per share scaled by earnings per share.

Furthermore, we also include ABTONE_percom as a control variable to test whether excess executive compensation still triggers impression management in FLSD

[11] We identify violations/misconducts according to the CSMAR database. CSMAR provides information on the time of the violation announcement, the types of violations, and the punishment agency. The types of violations mainly include (1) information disclosure violations (covering the sub-types, such as fake information disclosure, postponement of disclosure, major omissions, and other violations of disclosure); (2) stock trading violations (covering the sub-types, such as illegal trading, insider trading, and manipulation of stock prices); (3) corporate operation violations (covering the sub-types, such as occupation of corporate assets, unauthorised changes in the use of funds, and illegal guarantee; and (4) others.

after controlling for the abnormal tone of BLPC. Table 1 includes the definitions and measurements for the dependent, independent, and control variables.

[Insert Table 1 here]

4.2. Model specification

To test Hypothesis H1, we employ the following empirical model:

$$ABTONE\_strategy_{i,t} = \alpha_0 + \alpha_1 Overpay_{i,t} + \alpha_2 \sum Controls + \delta_i + \gamma_t + \varepsilon_{i,t} \quad (3)$$

where a positive and statistically significant coefficient α_1 suggests that excess executive compensation triggers impression management in forward-looking strategy-related disclosure. After adding the control variables shown in Table 1, we include firm fixed effects (δ_i) to control for the influence of firm-level invariant factors on the empirical results. The year fixed effects (γ_t) are also included.

We also conduct a placebo test by replacing $ABTONE\_strategy_{i,t}$ with $ABTONE\_percom_{i,t}$, which is used as one of the control variables in Eq. (3) as a dependent variable to examine whether excess pay triggers impression management in BLPC by using the following empirical model:

$$ABTONE\_percom_{i,t} = \alpha_0 + \alpha_1 Overpay_{i,t} + \alpha_2 \sum Controls + \delta_i + \gamma_t + \varepsilon_{i,t} \quad (4)$$

where *Controls* include all control variables used in Eq. (3), excluding $ABTONE\_percom_{i,t}$. We expect that α_1 in Eq. (4) is statistically insignificant based on H1. If we obtain a positive and significant coefficient α_1 in Eq. (3) and an insignificant coefficient α_1 in Eq. (4), we could suggest that excessive executive pay triggers impression management in FLSD rather than BLPC.

To test Hypothesis H2, we employ the following empirical model:

$$ABTONE\_strategy_{i,t} = \alpha_0 + \alpha_1 Overpay_{i,t} + \alpha_2 Overpay * State + \alpha_3 \sum Controls + \delta_i + \gamma_t + \varepsilon_{i,t} \quad (5)$$

where $Overpay * State$ is the interactive term between excess compensation and the indicator variable showing whether the listed firm is an SOE or not. A positive and statistically significant coefficient of this interactive term indicates that SOEs' executives are more likely to engage in impression management in FLSD to justify their pay.

4.3. Data source and sample

Our sample consists of Chinese nonfinancial firms listed on the Shanghai and Shenzhen Stock Exchanges from 2007 to 2016,[12] resulting in 19,437 firm-year observations as our initial sample size. Our financial data are retrieved from the China Centre for Economics Research (CCER) database, WIND, and the China Stock Market and Accounting Research (CSMAR) database. The data on forward-looking strategy-related and backward-looking performance commentary disclosure are collected from the MD&A sections of the annual reports of the sampled firms. However, it is worth noting that we do not include the impact of the new accounting standards implemented by Chinese listed firms in 2007 on financial reporting and its disclosure. After removing the missing data, the final sample consisted of 8,437 firm-year observations. We winsorise all the continuous variables at a 1% level to reduce the impact of outliers.

5. Empirical Results

5.1. Descriptive statistics

[12] Our sample selection ended in 2016 due to the availability of data. However, there has been no significant change in the institutional environment regarding disclosure requirements in China, and management disclosure behaviour remains consistent in the last 10 years.

Table 2 reports the descriptive statistics for all variables used in our regression models given in Eqs. (3), (4), and (5). For ABTONE_strategy as our dependent variable, the mean, median, minimum, maximum, and standard deviation values are 0.0083, 0.0310, -1.1299, 0.7871, and 0.2286, respectively. The range of ABTONE_strategy values reveals a large discrepancy in impression management in FLSD among the sample firms. The mean, median, minimum, maximum values, and standard deviation for the independent variable, i.e., Overpay, are 0.4553, 0.2527, 0.000, 5.1884, and 0.5877, respectively, suggesting a large discrepancy in the excess executive compensation of the listed firms included in the sample.

Regarding other key corporate governance variables that may influence impression management in FLSD, institutional shareholding (Share_Inst) has a mean value of 0.0343, which is lower than the average size of institutional shareholding in developed economies. The mean percentage of firms owned by the State (State) is 0.4601, showing that 46% of the listed firms in the sample are SOEs.

[Insert Table 2 here]

5.2. Main results

To test H1, we apply the firm-and-year-fixed-effect regression based on Eq. (3). The results reveal that the estimated coefficient of Overpay on ABTONE_strategy is both positive and significant (0.0010 at the 5% level of significance as indicated in Column 1 of Table 3) after controlling ABTONE_percom (i.e., impression management in BLPC) and other control variables.

Furthermore, we also run the firm-and-year-fixed-effect regression based on Eq. (4) to conduct the placebo test. The results in Table A4 in the appendices suggest that the estimated coefficient of Overpay on ABTONE_percom is negative but statistically insignificant (i.e., an insignificant -0.0028, as shown in Table A4), implying that excess executive pay does not trigger impression management in BLPC. Thus, the results from both the baseline and placebo tests indicate that higher excess compensation received by executives is associated with an increased likelihood of firms engaging in impression management in FLSD rather than BLPC.

Furthermore, according to Column 1 of Table 3, the estimated coefficient of Underpay on ABTONE_strategy is negative but insignificant. Thus, when executives receive compensation lower than the optimal level suggested by the economic determinants, they are not incentivised and are less likely to use impression management in FLSD to justify their excessive compensation.

To test H2, we run the firm-and-year-fixed-effect regression based on Eq. (5). The results reveal that the estimated coefficient of the interaction term State*Overpay is positive and significant (i.e., 0.0044 at the 5% significance level, as shown in Column 2 of Table 3). This result indicates that overpaid executives in SOEs have a stronger incentive to engage in impression management than those in non-SOEs. Our finding suggests that the positive association between excess executive compensation and impression management in FLSD is more pronounced in SOEs than in non-SOEs, thus supporting H2.

5.3. Moderating effects of governance factors

In addition to testing our hypotheses, we also conduct six tests to empirically identify various governance factors that can potentially exert moderating effects on the

positive association between excess executive compensation and abnormal positive tone as a form of impression management via strategy-related disclosure.

First, prior research indicates that institutional investors with substantial shareholdings in a firm have the capacity and incentive to monitor and influence management decisions to limit the self-serving behaviour of corporate managers (Bushee, 1998; Cassell et al., 2013; Gillan & Starks, 2000; Guercio et al., 2008; Prowse, 1990). In particular, Chung et al. (2002) find that institutional shareholdings discourage managers from increasing or decreasing reported profits toward the managers' desired level or range. Ajinkya et al. (2005) similarly find that firms with greater institutional ownership are more likely to issue a forecast and are inclined to forecast more frequently and be more specific, accurate, and less optimistically biased. Cassell et al. (2013) find that institutional investment is a monitoring mechanism, and CEOs' terminal-year opportunistic forecasting behaviour is less pronounced when institutional investors hold a greater percentage of the firm's shares.

Therefore, we introduce the interaction term Share_Inst*Overpay (Share_Inst is the share proportion of the institutional investors) into the regression Model (3) and run the firm-and-year-fixed-effect regression for all firms in the sample. A negative and statistically significant coefficient on this interactive term indicates that institutional investors are instrumental in limiting overpaid executives' capacity to engage in impression management to camouflage their excess pay.

The results show that the estimated coefficient of the interaction term Share_Inst*Overpay is both negative and significant (i.e., -0.2585 at the 1% significance level, as shown in Column 3 of Table 3). The finding implies that with the increase in their

shareholding, institutional investors have a stronger incentive to play a monitoring role and may be more likely to limit managerial impression management in FLSD to justify excess compensation.

Second, Liu et al. (2015) suggest that independent directors as an internal governance mechanism can effectively monitor managers and limit their self-serving behaviour in China. Thus, we introduce the interaction term IndepR*Overpay (IndepR is the percentage of independent directors on the board, showing the degree of board independence) into the regression Model (3) and run the firm-and-year-fixed-effect regression. We predict that the coefficient of this interaction term will be significant and negative, suggesting that the higher the percentage of independent directors on the board, the less significant the positive association between excess compensation and impression management in FLSD will be.

The result in Column 4 of Table 3 (i.e., -0.0090 at the 5% significance level) implies that a greater degree of board independence results in more limited managerial impression management to justify excess compensation.

Third, CEO duality (i.e., the CEO also serves as the board's chair) has been debated as one of the internal governance mechanisms in corporate governance (e.g. Krause et al., 2014). It is a double-edged sword. On the one hand, the agency theory suggests that CEO duality increases the CEO's power, which may exacerbate the agency problem, weakening the board monitoring and leaving CEOs with opportunities to engage in opportunistic behaviour (Elsayed, 2007). The manipulation of FLSD to legitimise excessive compensation is one kind of these agency problems. Thus, CEO duality may positively moderate the positive association between excessive compensation and impression

management. On the other hand, stewardship theory argues that CEO duality can act as stewards of the company, seeking to maximise shareholder value through unified leadership and decision-making efficiency (Goergen et al., 2020). From this perspective, CEO duality may be more committed to the firm's long-term success, acting as a steward rather than an agent seeking to maximise his/her personal gains. This alignment of interests could lead to less manipulation of FLSD to justify excessive compensation. Thus, CEO duality may negatively moderate such a positive association.

To test this moderating effect, we introduce the interaction term Duality*Overpay into the regression Model (3). The results (see Column 5 of Table 3) indicate the significant and positive coefficient of such interaction term (i.e., 0.0106 at the 5% level), suggesting that CEO duality could exacerbate the agency problem and lead to more manipulation of FLSD as opportunistic behaviour in our case.

Fourth, prior research has suggested that auditors can provide an external governance mechanism to mitigate self-serving reporting behaviour, such as earnings management (e.g., Francis et al., 1999; Lawrence et al., 2011), financial restatements (e.g., Eshleman and Guo, 2014; Kinney et al., 2004), and accounting fraud (e.g., Lennox and Pittman, 2010). Thus, we introduce the interaction term Big4*Overpay (Big4 is a dummy variable coded 1 if the firm auditor is big 4 and 0 otherwise) into the regression Model (3). We predict that the coefficient of this interaction term will be significant and negative, suggesting that with the presence of the Big4 auditor in the firm, the positive association between excess compensation and impression management will be less significant.

The result in Column 6 of Table 3 (i.e., -0.0216 at the 1% significance level) implies that the presence of Big4 auditors in the firm results in more limited managerial impression

management via FLSD to justify excess compensation.

Fifth, existing studies have shown that financial analysts, as information intermediaries, can serve as external monitors to managers, limiting them from engaging in opportunistic behaviour such as earnings management (Yu, 2008; Irani & Oesch, 2013; Bradley et al., 2017) and corporate fraud (Chen et al., 2016). Thus, we introduce another interaction term Analyst*Overpay (Analyst is defined as the natural logarithm of 1 plus the total number of analysts following) into the regression Model (3). We predict that the coefficient of this interaction term would be significant and negative, suggesting that more analysts following will cause a less significant and positive association between excess compensation and impression management. Column 7 of Table 3 suggests that this interaction term finding is consistent with our prediction.

Finally, the central government launched an anti-corruption campaign in 2012 – the so-called 'Anti-corruption Campaign' – to eliminate bribery, excessive bureaucracy, and government officials receiving personal benefits. The campaign aimed to reduce corporate rent-seeking and inefficient government processes and targeted CEOs in SOEs or politically connected firms. On the one hand, the anti-corruption campaign may play a role in potentially controlling CEO excess compensation, diminishing managerial incentives for impression management. For example, Kong et al. (2023) suggest that the deterrence by the campaign could reduce managerial self-interest behaviour, particularly the large pay gap between executives and ordinary employees, which often raises the issue of executives acquiring excess compensation. They find that the anti-corruption campaign reduces the within-firm pay gap, highlighting the importance of the campaign as an external governance mechanism. Therefore, it can be argued that the campaign may negatively

moderate the positive association between excess compensation and impression management.

Conversely, the campaign could increase scrutiny of executives, as it often raises public expectations for transparency and accountability (Hope et al., 2020). For example, Griffin et al. (2022) use abnormal/excess executive compensation to proxy one of the potential corruption measures. They find that excess compensation is significantly associated with the probability of a CEO being investigated. In response to such potential legitimacy threats, executives may even be more induced to dress up their performance by engaging in impression management to justify and legitimate their excessive pay. Thus, it can be argued that the campaign may positively moderate such a positive association.

To test this moderating effect, we investigate whether the anti-corruption campaign moderates SOEs' association between excessive compensation and impression management. In the SOE samples, we introduce the interaction term Anti_corruption*Overpay (Anti-corruption is a dummy variable coded as 1 when the period is after 2012 and 0 otherwise) and the variable Anti-corruption into the regression Model (3). The result shown in Column 8 of Table 3 suggests that the coefficient of this interaction term finding is significant and negative, implying the importance of the campaign as an external governance mechanism.

In addition, we also introduce a triple interaction term, Anti_corruption*State*Overpay, into the regression Model (5) to test this moderating effect in the context of SOEs. The other three terms, i.e., Anti_corruption, Anti_corruption*Overpay, and Anti_corruption*State, are also included in the model. We find a significant and negative coefficient of this triple interaction term, implying that the

anti-corruption campaign could negatively influence the positive impact of state ownership on the association between overpayment and impression management.

Further, we examine the moderating effect of the campaign in the context of political connections. We follow Fan, Wong, and Zhang (2007) to measure political connections (PC). We introduce a triple interaction term, Anti_corruption*PC*Overpay (PC is a dummy variable coded as 1 when a CEO is politically connected), into the regression Model (3). The other five terms, i.e., PC, Anti_corruption, Anti_corrpution*Overpay, PC*Overpay, and Anti_corruption*PC, are also included in Model (3). We also find a significant and negative coefficient of the triple interaction term – Anti_corruption*PC*Overpay, underscoring the campaign as the external governance role. The findings of these two triple interaction terms are not reported in the paper but are available upon request.

[Insert Table 3 here]

5.4. Endogeneity

While our empirical results suggest a positive association between excessive executive compensation and impression management in FLSD, these results might be subject to endogeneity issues. For example, reverse causality may exist, i.e., managers may receive excessive compensation due to their favourably altering outsiders' perceptions of management talent by impression management in FLSD.

To address such endogeneity concerns, we conduct a univariate test to investigate the changes in impression management in FLSD following exogenous CEO turnover events (Al Mamun et al., 2020). Fee et al. (2013) adopt a sample of exogenous CEO

turnover events precipitated by a death or a health problem. Based on Fee et al. (2013), we use CEO health as the exogenous turnover event due to the lack of data on CEO death in China for the exogenous turnover. We first screen CEO health based on the identified 4,209 CEO turnovers in our initial sample from 2007 to 2016. This results in 90 exogenous CEO turnover cases based on the CEO health reason using CEO information in CSMAR.[13] We then require (1) the data that cover the outgoing CEO who has been in office at least one year before his/her departure at time t (i.e., at time t-1) and the incoming CEO who remains in office at least one year after his/her coming in at time t (i.e., at time t+1); and (2) non-missing data for Overpay and ABTONE_strategy in our required three-year window (i.e., [t-1, t, t+1]). These two restrictions result in the loss of 66 CEO turnover samples. The final sample consists of 24 exogenous CEO turnover cases based on the CEO health reason.

Among the final sample of 24 exogenous CEO turnovers, 4 CEO turnover events increase in overpay (i.e., the events changing from non-overpay to overpay), 4 events decrease in overpay (i.e., the events changing from overpay to non-overpay), and 16 events result in no change in overpay (i.e., the events changing from overpay (non-overpay) to overpay (non-overpay)). We compare the two treatment groups (firms with increases or decreases in overpay) against a control group (firms with no change in overpay). We then calculate ΔABTONE_strategy and ΔOverpay by the difference in ABTONE_strategy and Overpay between one year after (t+1) and one year before (t-1) the CEO turnover at the time t, respectively.

Table 4 shows the results based on this univariate test. Specifically, Column (1)

[13] CSMAR provides 11 reasons for CEO turnovers: personal, contract expiration, health, retirement, corporate governance restructuring, job transfer, agent-related termination, change of controlling right, dismissal, resignation, and case involve.

reports the mean of ΔABTONE_strategy for the increase-in-overpay group (i.e., 0.2617), where an incoming CEO with overpay replaces the outgoing CEO with non-overpay. Column (2) shows the mean of ΔABTONE_strategy for the no-change-in-overpay group (i.e., 0.0967), where outgoing CEOs have similar compensation status to incoming CEOs. Column (3) reports the mean of ΔABTONE_strategy for the decrease-in-overpay group (i.e., -0.0623), where outgoing CEOs are overpaid and incoming CEOs are non-overpaid. We then report the difference in the mean of ΔABTONE_strategy between Columns (1) and (2) and associated t-statistics in Column (4), and the difference in the mean of ΔABTONE_strategy between Columns (3) and (2) and associated t-statistics in Column (5). The univariate test results show that the mean difference in ΔABTONE_strategy between the increase-in-overpay and no-change-in-overpay groups is positive and significant at the 10% level. The mean difference in ΔABTONE_strategy between the decrease-in-overpay and the no-change-in-overpay groups is negative and significant at the 10% level.

In addition, to further mitigate the endogeneity concerns, we also conduct the tests by replacing the dependent variable with the one-year-lagged dependent variable and then rerunning the tests of Table 3. Table 5 reports the results of H1, H2, and various moderating effects of governance factors under this setting. The main results are consistent with those of Table 3 (See Table 5).

[Insert Table 4 here]

[Insert Table 5 here]

6. Additional Tests

6.1. Market reaction to both FLSD and BLPD

Our baseline results have suggested that overpaid Chinese executives (as the information preparers) are more likely to conduct impression management in FLSD through tone management to legitimise their excess pay. This raises the question as to whether such tone management of FLSD is informative or merely 'cheap talk'.[14]

The literature suggests that whether impression management in corporate reporting is empirically informative or cheap talk depends on the degree to which investors (information users) are subject to behavioural and cognitive biases (Merkl-Davies and Brennan, 2011). If investors are rational, they tend to regard biased (impression management) information disclosures as cheap talk and ignore them, because such disclosures are costless to managers and difficult to verify. On the contrary, if investors are subject to bounded rationality due to cognitive biases, they may be unable to assess information in an unbiased and timely manner and thus influenced by impression management, causing the market/investor to react to manipulation of corporate reporting as if it is informative.[15] The latter attribute prevails in the Chinese context.

[14] The literature has suggested two competing views concerning the credibility of FLSD – the informativeness and the cheap talk perspectives. On the one hand, the informativeness perspective suggests that FLSD may convey incremental information relevant to investors. Specifically, corporate strategies are forward-looking plans of action, which often reveal paths of ongoing value creation and guide choices and decisions about the composition of resources and activities to develop and deploy. As a result, the credible disclosure of corporate strategy conveys 'good news' to investors, aimed at increasing the firm's stock prices while also signalling management talent and confidence in the future success of the firm strategy (Gu & Li, 2007). In contrast, the cheap talk perspective suggests that disclosures containing unverifiable qualitative information may serve merely as a strawman and be easily dismissed by information users as 'cheap talk' because the accuracy of such disclosure is relatively difficult to verify or can only be verified *ex-post*, often with significant time lags (Beyer et al., 2010; Gu & Li, 2007).

[15] Prior empirical research has identified the existence of the market reaction to impression management in information disclosures. For example, Yekini et al. (2016) find that the positiveness inherent in qualitative parts of annual reports from the U.K. listed firms is associated with abnormal stock returns around disclosure dates. This is based on the suggestions from the cognitive psychology theories that, when investors read the

Our argument in section 2.3 shows that investors are subject to cognitive biases due to limited information processing power and would pay more attention to FLSD. We can further argue that it is highly likely that such bounded rationality may make Chinese investors respond positively to impression management in FLSD in the stock market initially (in the short term at the time of the annual report filing), even if such impression management leans more towards being 'cheap talk' in nature.

However, cheap talk can also cause symbolic actions. Unlike substantive actions that involve material changes in organisation, goals, structures, or behaviour, symbolic actions do not reflect a change in behaviour, but may show merely an attempt at portraying corporate activities in the most favourable light (Ashforth & Gibbs, 1990; Day & Woodward, 2004). Therefore, symbolic actions could be viewed as opportunistic and mislead investors because they give the illusion of action or responsiveness to issues without actually committing to any substantive changes. Tone management is an example of such impression management.

Huang et al. (2014) examine the stock price reaction to abnormal positive tone (ABTONE) in earnings press releases both during earnings announcements (i.e., in the short window around earnings announcements) and over the longer horizon after earnings announcements. They find a positive market reaction to ABTONE at earnings announcements, which is subsequently reversed to a negative reaction, i.e., in one quarter and two quarters after the earnings announcement. Their findings suggest that an abnormal positive tone misleads investors at the time of earnings announcements to overvalue the

narratives in the firms' annual reports, they tend to engage in a cognitive structure change due to the tone contained in the reports. Whittington et al. (2016) examine the market reactions to CEOs' public presentations on company strategy (forward-looking oriented information) and find that these public presentations by CEOs cause positive market reactions.

firm temporarily, and the market subsequently corrects the mispricing. Such misleading and subsequent correction could be attributed to the tone management (i.e., the abnormal positive tone) being a symbolic action.

As mentioned above, we argue that overpaid Chinese CEOs have engaged in impression management in FLSD as opportunistic behaviour to justify their excessive compensation. We would expect that the initial positive market reaction would not last long once the market sees through the symbolic nature of this kind of impression management with time, and therefore, the market subsequently corrects this mispricing.

Therefore, we expect that initially the tone management of FLSD (ABTONE_strategy) may induce a significant and positive market reaction at the time of the annual report filing, then a reversion of market reaction over a longer time horizon.

We follow Huang et al.'s (2014) empirical settings to examine the above argument in our context. First, we run the following firm-and-year-fixed-effect regression to examine the immediate market reaction to ABTONE_strategy and ABTONE_percom at the time of annual report filing:

$$\begin{aligned} CAR[-1,+1] = {} & \alpha + \beta_1 ABTONE\_strategy_{jt} + \beta_2 ABTONE\_percom_{jt} + \beta_3 SUE_{jt} \\ & + \beta_4 LEV_{jt} + \beta_5 DA_{jt} + \beta_6 SIZE_{jt} + \beta_7 MTB_{jt} + \beta_8 EARN_{jt} \\ & + \beta_9 EARNVOL_{jt} + \beta_{10} RET_{jt} + \beta_{11} ETVOL_{jt} + \beta_{12} LOSS_{jt} + \delta_j + \gamma_t + \varepsilon_{jt} \end{aligned} \quad (6)$$

where $CAR[-1,+1]$ is the three-trading-days cumulative abnormal returns surrounding the annual report filing date. ABTONE_strategy (ABTONE_percom) is the abnormal positive tone of FLSD (BLPC) derived from Equation (1). We use the following control variables. SUE is a firm's current quarterly earnings minus earnings of the same

quarter last year, scaled by the market value at the beginning of the quarter. LEV is the sum of long-term debt and current liabilities divided by total assets. DA is discretionary accruals, measured by the modified Jones model following Dechow et al. (1995). SIZE is the logarithm of the market value of equity at the end of the year. MTB is the market value of equity plus the book value of total liabilities scaled by the book value of total assets. EARN is the annual operating earnings scaled by the book value of assets. EARNVOL is the standard deviation of earnings calculated using data from the last three years. RET is contemporaneous annual stock returns. ETVOL is the stock return volatility calculated using 12 months of monthly return data. LOSS is an indicator variable set to 1 when EARN is negative, and 0 otherwise.

Furthermore, to examine delayed market reaction after the annual report filing date, we run the following two regressions:

$$\begin{aligned} CAR[+2,+60] = {} & \alpha + \beta_1 ABTONE\_strategy_{jt} + \beta_2 ABTONE\_percom_{jt} + \beta_3 SUE_{jt} \\ & + \beta_4 LEV_{jt} + \beta_5 DA_{jt} + \beta_6 SIZE_{jt} + \beta_7 MTB_{jt} + \beta_8 EARN_{jt} \\ & + \beta_9 EARNVOL_{jt} + \beta_{10} RET_{jt} + \beta_{11} ETVOL_{jt} + \beta_{12} LOSS_{jt} + \delta_j + \gamma_t + \varepsilon_{jt} \end{aligned} \tag{7}$$

$$\begin{aligned} CAR[+2,+121] = {} & \alpha + \beta_1 ABTONE\_strategy_{jt} + \beta_2 ABTONE\_percom_{jt} + \beta_3 SUE_{jt} \\ & + \beta_4 LEV_{jt} + \beta_5 DA_{jt} + \beta_6 SIZE_{jt} + \beta_7 MTB_{jt} + \beta_8 EARN_{jt} \\ & + \beta_9 EARNVOL_{jt} + \beta_{10} RET_{jt} + \beta_{11} ETVOL_{jt} + \beta_{12} LOSS_{jt} + \delta_j + \gamma_t + \varepsilon_{jt} \end{aligned} \tag{8}$$

where $CAR[+2,+60]$ ($CAR[+2,+121]$) is the 60-trading-days (121-trading-days) cumulative stock returns starting the second day after the annual report filing date.

Table 6 shows the results of immediate and delayed market reactions to ABTONE_strategy and ABTONE_percom. Column 1 suggests a positive market reaction

to ABTONE_strategy at the time of annual report filings (i.e., the coefficient of ABTONE_strategy with 0.0159 at the 1% significance level) but no significant reaction to ABTONE_percom. Column 2 suggests that a positive reaction continues after one quarter/60 trading days of the annual report filing date (i.e., the coefficient of ABTONE_strategy with 0.0111 at the 10% significance level). This positive reaction is reversed after two quarters (i.e., 121 trading days) of the annual report filing date (see the coefficient of ABTONE_strategy with -0.0141 at the 10% significance level, as shown in Column 3). The magnitude of this negative stock return is economically significant, that is, 1.41% for two quarters (2.82% annualised). Thus, these findings suggest that because impression/tone management in FLSD as a symbolic action shows managerial incentives for manipulation of firm outsiders' perceptions of overpaid executives' talent, such tone management indeed misleads investors at the time of annual report filings, and the market fails to correct the mispricing until two quarters after the annual report filing date.

[Insert Table 6 here]

6.2. The mitigation of impression management in FLSD on market reaction to excessive compensation

When executives obtain excessive compensation, they face legitimacy threats due to public outrage over such overpayment, thereby leading to negative perceptions from stakeholders and the loss of organisational legitimacy. Our main findings from section 5.2 have suggested that higher overpayment by executives triggers greater engagement on their part in impression management in FLSD to justify their excess pay. Thus, a further question

this raises is whether such impression management could influence or mitigate negative perceptions from stakeholders due to overpayment.

Prior research has suggested that stock market reactions can be used to proxy organisational legitimacy (i.e., perceptions from stakeholders). Specifically, Westphal and Zajac (1998) argue that, although stock market reactions are seen as providing hard numbers that reflect the true underlying value of a firm in the financial economics literature, from a legitimacy perspective, firms can also affect market reactions and therefore change their underlying market value by symbolic actions. Westphal and Zajac (1998; p131 – p132) further suggest, 'Market reactions thus should perhaps be viewed more in terms of "soft" numbers that reflect the subjective perceptions of a heterogeneous audience, neatly quantified and aggregated.'

Therefore, to answer how impression management in FLSD might influence perceptions from stakeholders due to overpayment, we examine whether the immediate positive market reaction to ABTONE_strategy at the time of the annual report filing (as we identified in section 6.1) could impact the negative market reactions to excessive compensation. Thus, we construct an interaction term, i.e., Overpay*ABTONE_strategy. If the executives' impression/tone management mitigates such negative perceptions, we expect the coefficient of this interaction to be positive and significant. We estimate the following firm-and-year-fixed-effect regression to test this question:

$$CAR[-1,+1] = \alpha + \beta_1 ABTONE\_strategy_{jt} + \beta_2 Overpay_{jt} + \beta_3 Overpay_{jt} * ABTONE\_strategy_{jt} + \beta_4 \sum Controls + \delta_j + \gamma_t + \varepsilon_{jt} \quad (9)$$

Where $CAR[-1,+1]$ is the three-trading-days cumulative abnormal returns surrounding the annual report filing date following Huang et al. (2014); Overpay is excessive

compensation; $ABTONE\_strategy_{jt}$ is impression management in FLSD; and Controls are the control variables as shown in Eq. (6). Empirical results in Table 7 suggest that the coefficient of Overpay is negative and significant, and the coefficient of the interaction term between Overpay and impression management is positive and significant. These results confirm our expectations.

[Insert Table 7 here]

6.3. Robustness check

As a part of our investigation, we further conduct various robustness checks to establish the reliability of our main regressions. First, due to the importance of measuring abnormal positive tone as a proxy of impression management, we rerun our regressions by adopting an alternative measure of tone management. In line with the approach adopted by Huang et al. (2014), we construct ABTONE_strategy_2, estimated from a tone model controlling for an additional variable (i.e., managerial forecasts of one-year-ahead earnings), and use it as a direct proxy for managerial expectations of future performance. The main results remain unchanged when ABTONE_strategy_2 is used as the alternative dependent variable (see Table 8).

[Insert Table 8 here]

Second, we adopt an alternative measure for CEO compensation by following methods reported in the literature (Chen et al., 2010). Specifically, we use the cash compensation of the three highest-paid executives to measure executive overpay as our alternative independent variable (i.e., Overpay_Top3) and rerun the regressions. The main

results are generally consistent (see Table 9).

[Insert Table 9 here]

Third, to further alleviate the concern that the results regarding the difference between SOEs and non-SOEs are due to some unobserved differences, we use a propensity score matching (PSM) method to construct the treatment group (including all SOEs) and the control group (including non-SOEs that have propensity scores that are closest to the scores of firms in the treatment group). Specifically, our first-stage prediction model includes all control variables, as shown in Eq. (3), and, using the nearest propensity scores from this model, we match the SOEs with non-SOEs one-to-one without replacement. The resulting sample size is then reduced to 7,676 firm-year observations, and the results remain unchanged (see Table 10).

[Insert Table 10 here]

7. Conclusions

In this study, we extend the impression management literature to accounting and corporate governance in the context of corporate strategy-related disclosure as a means of justifying excessive executive compensation. By combining legitimacy theory with agency theory, we argue that overpaid managers are more likely to engage in impression management in MD&A (particularly FLSD) as a firm's communication strategy to justify their excessive compensation in response to legitimacy threats caused by pressure from *external* stakeholders. Using a sample of 8,437 firm-year observations of Chinese nonfinancial listed firms from 2007 to 2016, we find a significant positive relationship between executive overpayment and impression management in FLSD. This positive

relationship is more pronounced in SOEs than non-SOEs but less pronounced in firms with a higher degree of board independence and higher institutional shareholdings. We also find that auditors, analysts, and the introduction of the anti-corruption campaign could weaken such a positive relationship. These findings suggest that impression management in FLSD is reduced when corporate governance is strengthened. We also find that CEO duality could enhance this positive relationship. We further examine how the market reacts to such impression management and find an immediate positive and significant market reaction to such impression management at the time of the annual report filing, which could further mitigate the negative perceptions from stakeholders due to excessive pay. Such a positive market reaction is reversed over a longer time horizon, which supports the opportunistic/symbolic nature of impression management in FLSD.

The major limitation of our study stems from the executive compensation measurement, which is based solely on executive cash compensation. Such measurement is driven by the study context, as executive stock option schemes are not commonly used in China, especially among SOEs (Chen et al., 2010; See Lennox and Wu (2022) for a recent review of this issue). As this is a major difference between the executive compensation components in China and those in the U.S. and the U.K., we plan to address this in future research.

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Table 1 Definition of Variables

Dependent variable	
ABTONE_strategy	The residual from equation (1) based on the identified forward-looking strategy-related sentences according to Appendices #1 and #2
Independent variable	
Overpay	Equal to the residual term from the estimation model (2) of CEO total pay if the residual is positive, and zero otherwise.
Underpay	Equal to the absolute value of the residual term from the estimation model (2) of CEO pay if the residual is zero or negative, and zero otherwise.
Control variables	
ABTONE_percom	The residual from equation (1) based on the identified backward-looking performance commentaries according to Appendices #1 and #2
Assets	The natural logarithm of total assets
Lev	The sum of long-term debt and current liabilities, divided by total assets
Turn_CEO	The dummy variable coded one if there is CEO turnover and 0 otherwise
Growth	Total assets growth rate
Acquisition	The dummy variable coded one if there is a merger and acquisition and 0 otherwise
Crosslist	The dummy variable coded one if cross-listing abroad and 0 otherwise
HHI	Herfindahl index, measured by $HHI_{jt} = \sum_{i=1}^{N_j} s_{ijt}^2$, where s_{ijt} is the market share of firm i in industry j in year t; N_j is the number of firms in industry j. The market share of firm i is obtained by dividing the firm i's annual sales by the total annual sales of all N firms in industry j.
Refinance	The dummy variable coded one if there is refinancing and 0 otherwise
Share_Mng	The ratio of shareholdings by managers
Top1	Share proportion of the largest shareholder

Duality	The dummy variable coded one if the CEO is also the Board Chairman and 0 otherwise
Size_BD	The natural logarithm of the total number of board directors
IndepR	The percentage of independent directors on the board
AuditC	The dummy variable coded one if the firm has an audit committee and 0 otherwise
State	The dummy variable coded one if the firm is an SOE and 0 otherwise
Share_Inst	The ratio of shareholdings by institutional investors to total outstanding shares
Her10	The squared sum of the proportion of the first ten shareholder
Top2	Share proportion of the second-largest shareholder
Big4	The dummy variable coded one if the firm auditor is big 4 and 0 otherwise
Analyst	The natural logarithm of 1 plus the total number of analysts following
Violation	The dummy variable coded one if there were violations or financial misconducts in the last three years and 0 otherwise
DA	Discretionary accruals calculated using the Modified Jones Model by Dechow et al. (1995)
ROA	The net profit divided by total assets
Dividend	Dividend per share divided by earnings per share

Notes: Table 1 reports definitions and measurements of variables in the study. ABTONE_strategy (ABTONE_percom) is measured by the residual from equation (1) based on the identified forward-looking strategy-related sentences (the identified backward-looking performance commentaries) according to Appendices #1 and #2. For the variable Violation, we identify violations or financial misconducts according to the CSMAR database. CSMAR provides information on the time of announcement of violations, the types of violations, and the punishment agency. The types of violations mainly include (1) information disclosure violations (covering the sub-types, such as fake information disclosure, postponement of disclosure, major omissions, and other violations of disclosure); (2) stock trading violations (covering the sub-types, such as illegal trading, insider trading, and manipulation of stock prices); (3) corporate operation violations (covering the sub-types, such as occupation of corporate assets, unauthorised changes in the use of funds, and illegal guarantee); and (4) others.

Table 2 Summary Statistics of Variables

Variable	Obs	Mean	Std. Dev.	Min	Max	Median
ABTONE_strategy	8,437	0.0083	0.2286	-1.1299	0.7871	0.0310
Overpay	8,437	0.4553	0.5877	0.0000	5.1884	0.2527
Underpay	8,437	0.4079	1.7039	0.0000	13.9602	0.0000
ABTONE_percom	8,437	0.0015	0.1333	-0.5571	0.7701	-0.0175
State	8,437	0.4601	0.4984	0.0000	1.0000	0.0000
Share_Inst	8,437	0.0343	0.0411	0.0000	0.1855	0.0192
IndepR	8,437	0.5925	0.1480	0.2500	1.0000	0.5000
Top2	8,437	0.0891	0.0716	0.0035	0.3195	0.0687
Big4	8,437	0.0527	0.2235	0.0000	1.0000	0.0000
Analyst	8,437	1.7262	1.0894	0.0000	3.6889	1.7918
Top1	8,437	0.3574	0.1472	0.0845	0.7465	0.3401
Share_Mng	8,437	0.0478	0.1157	0.0000	0.5767	0.0000
Duality	8,437	0.3348	0.4720	0.0000	1.0000	0.0000
Size_BD	8,437	1.8939	0.2194	1.3863	2.4849	1.9459
AuditC	8,437	0.9308	0.2538	0.0000	1.0000	1.0000
Her10	8,437	0.1674	0.1147	0.0135	0.5643	0.1396
HHI	8,437	0.0548	0.0967	0.0079	0.4588	0.0090
Assets	8,437	22.1006	1.1922	18.9071	26.8984	21.9584
Lev	8,437	0.4411	0.2047	0.0462	1.2113	0.4394
Growth	8,437	0.1983	0.3251	-0.3673	2.7933	0.1177
Acquisition	8,437	0.1576	0.3644	0.0000	1.0000	0.0000
Crosslist	8,437	0.0161	0.1259	0.0000	1.0000	0.0000
Refinance	8,437	0.1869	0.3899	0.0000	1.0000	0.0000
Violation	8,437	0.0627	0.2424	0.0000	1.0000	0.0000
DA	8,437	0.0678	0.0702	0.0000	0.4219	0.0473
Turn_CEO	8,437	0.1747	0.3797	0.0000	1.0000	0.0000
ROA	8,437	0.0495	0.0400	0.0000	0.1954	0.0400
Dividend	8,437	0.2773	0.3099	0.0000	1.8286	0.2123

Note: Table 2 presents summary statistics for the variables. Please refer to Table 1 for definitions of the variables. Obs = number of observations; Std. Dev. = standard deviation; Min, Max, and Median are minimum, maximum, and median values, respectively.

Table 3 The Impact of Excess Compensation on Impression Management & The Moderating Effects of Governance Factors on Such Impact

	Dependent Variable: ABTONE_strategy							
	(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**	**(7)**	**(8)**
Overpay	0.0010**	0.0038**	0.0077***	0.0043**	0.0040***	0.0005**	0.0012**	0.0038**
	(2.22)	(2.51)	(3.35)	(2.28)	(2.74)	(2.10)	(2.15)	(2.45)
State*Overpay		0.0044**						
		(2.48)						
Share_Inst*Overpay			-0.2585***					
			(-3.76)					
IndepR*Overpay				-0.0090**				
				(-2.36)				
Duality*Overpay					0.0106**			
					(2.16)			
Big4*Overpay						-0.0216***		
						(-3.34)		
Analyst*Overpay							-0.0001**	
							(-2.03)	
Anti_corruption*Overpay								-0.0092***
								(-2.87)
Anti_corruption								-0.0327
								(-1.54)

Underpay	-0.0011	-0.0012	-0.0013	-0.0011	-0.0011	-0.0010	-0.0011	0.0004
	(-0.79)	(-0.82)	(-0.87)	(-0.79)	(-0.78)	(-0.69)	(-0.79)	(0.23)
ABTONE_percom	0.3308***	0.3309***	0.3314***	0.3310***	0.3307***	0.3311***	0.3308***	0.2933***
	(19.49)	(19.49)	(19.53)	(19.49)	(19.48)	(19.50)	(19.48)	(12.59)
State	0.0444***	0.0473***	0.0448***	0.0444***	0.0442***	0.0446***	0.0444***	
	(2.79)	(2.78)	(2.82)	(2.79)	(2.78)	(2.80)	(2.79)	
Share_Inst	-0.0309	-0.0310	-0.1523*	-0.0315	-0.0321	-0.0310	-0.0310	0.0012
	(-0.44)	(-0.44)	(-1.83)	(-0.45)	(-0.46)	(-0.44)	(-0.44)	(0.01)
IndepR	-0.0236**	-0.0235**	-0.0236**	-0.0280**	-0.0242**	-0.0237**	-0.0236**	-0.0106
	(-2.17)	(-2.16)	(-2.17)	(-2.19)	(-2.19)	(-2.17)	(-2.17)	(-1.35)
Top2	0.0064	0.0066	0.0058	0.0069	0.0064	0.0035	0.0064	0.0319
	(0.09)	(0.10)	(0.08)	(0.10)	(0.09)	(0.05)	(0.09)	(0.28)
Big4	-0.0238**	-0.0240**	-0.0234**	-0.0239**	-0.0238**	-0.0373**	-0.0238**	-0.0322**
	(-1.98)	(-1.98)	(-1.96)	(-1.98)	(-1.97)	(-2.41)	(-1.98)	(-2.07)
Analyst	0.0028	0.0028	0.0027	0.0028	0.0029	0.0029	0.0028	-0.0019
	(0.79)	(0.79)	(0.77)	(0.79)	(0.82)	(0.82)	(0.72)	(-0.35)
Top1	-0.0180	-0.0178	-0.0211	-0.0179	-0.0149	-0.0182	-0.0179	-0.2567
	(-0.14)	(-0.14)	(-0.17)	(-0.14)	(-0.12)	(-0.14)	(-0.14)	(-1.10)
Share_Mng	0.0247	0.0249	0.0277	0.0245	0.0002	0.0245	0.0247	-0.1387
	(0.59)	(0.60)	(0.66)	(0.59)	(0.54)	(0.59)	(0.59)	(-0.25)
Duality	-0.0112	-0.0113	-0.0114	-0.0112	-0.0059	-0.0112	-0.0112	-0.0171

	(-1.54)	(-1.55)	(-1.57)	(-1.54)	(-0.69)	(-1.53)	(-1.54)	(-1.49)
Size_BD	-0.0196**	-0.0194**	-0.0184**	-0.0196**	-0.0201**	-0.0194**	-0.0196**	-0.0451***
	(-2.11)	(-2.10)	(-2.04)	(-2.11)	(-2.14)	(-2.10)	(-2.11)	(-2.71)
AuditC	0.0252***	0.0252***	0.0256***	0.0251***	0.0252***	0.0253***	0.0252***	0.0233*
	(2.81)	(2.80)	(2.85)	(2.80)	(2.80)	(2.82)	(2.81)	(1.70)
Her10	-0.0799	-0.0797	-0.0755	-0.0800	-0.0844	-0.0802	-0.0800	0.2960
	(-0.52)	(-0.52)	(-0.49)	(-0.52)	(-0.55)	(-0.52)	(-0.52)	(1.15)
HHI	-0.0631	-0.0626	-0.0549	-0.0628	-0.0624	-0.0624	-0.0631	-0.1384
	(-0.87)	(-0.86)	(-0.76)	(-0.86)	(-0.86)	(-0.86)	(-0.87)	(-1.05)
Assets	-0.0056	-0.0057	-0.0050	-0.0056	-0.0058	-0.0057	-0.0056	-0.0033
	(-0.81)	(-0.83)	(-0.72)	(-0.81)	(-0.84)	(-0.83)	(-0.81)	(-0.30)
Lev	0.0137	0.0135	0.0122	0.0140	0.0136	0.0143	0.0137	0.0496
	(0.55)	(0.54)	(0.49)	(0.56)	(0.55)	(0.58)	(0.55)	(1.22)
Growth	0.0149*	0.0151*	0.0144*	0.0149*	0.0149*	0.0150*	0.0149*	-0.0053
	(1.91)	(1.93)	(1.85)	(1.91)	(1.91)	(1.92)	(1.91)	(-0.36)
Acquisition	0.0075	0.0074	0.0077	0.0075	0.0075	0.0076	0.0075	0.0031
	(1.17)	(1.16)	(1.20)	(1.17)	(1.17)	(1.18)	(1.17)	(0.27)
Crosslist	-0.0360	-0.0374	-0.0428	-0.0364	-0.0341	-0.0431	-0.0360	0.0954
	(-0.55)	(-0.57)	(-0.65)	(-0.55)	(-0.52)	(-0.65)	(-0.55)	(0.67)
Refinance	-0.0158***	-0.0158***	-0.0158***	-0.0158***	-0.0157***	-0.0158***	-0.0158***	-0.0052
	(-2.85)	(-2.86)	(-2.86)	(-2.85)	(-2.83)	(-2.86)	(-2.85)	(-0.59)

Violation	0.0094	0.0094	0.0088	0.0094	0.0093	0.0094	0.0094	0.0114
	(1.06)	(1.06)	(0.99)	(1.06)	(1.05)	(1.06)	(1.06)	(0.76)
DA	-0.0234	-0.0231	-0.0210	-0.0233	-0.0231	-0.0233	-0.0235	-0.0429
	(-0.70)	(-0.69)	(-0.63)	(-0.70)	(-0.69)	(-0.70)	(-0.70)	(-0.84)
Turn_CEO	-0.0084	-0.0085	-0.0082	-0.0084	-0.0082	-0.0085	-0.0084	-0.0161**
	(-1.52)	(-1.53)	(-1.49)	(-1.52)	(-1.49)	(-1.54)	(-1.52)	(-1.99)
ROA	-0.0003	-0.0003	-0.0006	-0.0007	0.0004	-0.0005	-0.0003	-0.0584
	(-0.00)	(-0.00)	(-0.01)	(-0.01)	(0.00)	(-0.01)	(-0.00)	(-0.42)
Dividend	-0.0094	-0.0094	-0.0095	-0.0095	-0.0094	-0.0093	-0.0094	-0.0152
	(-1.16)	(-1.16)	(-1.17)	(-1.17)	(-1.17)	(-1.15)	(-1.16)	(-1.17)
cons	0.2216	0.2236	0.2094	0.2253	0.2250	0.2241	0.2215	0.2718
	(1.38)	(1.39)	(1.30)	(1.40)	(1.40)	(1.39)	(1.38)	(1.05)
Firm fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
N	8,437	8,437	8,437	8,437	8,437	8,437	8,437	3,882
Adj R2	0.0771	0.0771	0.0782	0.0771	0.0773	0.0774	0.0771	0.0749

Note: Table 3 reports the results of H1, H2, and various moderating effects of governance factors. Column (1) shows the baseline results examining H1 based on equation (3). Column (2) shows the results examining H2 based on equation (5). Columns (3) to (8) show the results of the moderating effects of institutional shareholdings, independent directors, duality, auditors, analysts, and the introduction of the anti-corruption campaign, respectively. Please refer to Table 1 for the definitions of the variables and Section 5.3 for the implementation of all moderating effects. ***, ** and * represent significance levels of 1%, 5%, and 10%, respectively. T-statistics are reported in parentheses.

Table 4 Univariate Tests Examining Changes in Impression Management in FLSD Following Exogenous CEO Turnover Events

Changes in ABONTE_strategy around exogenous CEO turnover events at the three-year window (t-1, t, t+1)					
	(1)	**(2)**	**(3)**	**(4)**	**(5)**
Variables	Increase in overpay (N=4)	No change in overpay (N =16)	Decrease in overpay (N=4)	(1) minus (2)	(3) minus (2)
	Mean	Mean	Mean		
ΔABTONE_strategy	0.2617	0.0967	-0.0623	0.1650*	-0.1590*
				(1.8437)	(-1.7787)

Note: Table 4 reports the results of univariate tests to investigate the changes in impression management in FLSD following exogenous CEO turnover events based on CEO health reasons. The three-year window is obtained by requiring the data that cover the outgoing CEO who has been in office at least one year before her departure at time t (i.e., at time t-1) and the incoming CEO who remains in office at least one year after her coming in at time t (i.e., at time t+1). Δ ABTONE_strategy and Δ overpay are calculated by the difference of ABTONE_strategy and Overpay between one year after and one year before the CEO turnover at the time t, respectively. Increase in overpay indicates the group with the exogenous CEO turnover events changing from non-overpay to overpay. No change in overpay denotes the group with the events changing from overpay (non-overpay) to overpay (non-overpay). Decrease in overpay includes the group with the events changing from overpay to non-overpay. The two treatment groups (i.e., firms with increases or decreases in overpay) are compared against a control group (i.e., firms with no change in overpay). ***, ** and * represent significance levels of 1%, 5%, and 10%, respectively. T-statistics are reported in parentheses.

Table 5 The Impact of Excess Compensation on Impression Management & The Moderating Effects of Governance Factors on Such Impact (One-year-lagged dependent variable)

	Dependent Variable: ABTONE_strategy (One-year-lagged)							
	(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**	**(7)**	**(8)**
Overpay	0.0044**	0.0037**	0.0037**	0.0009*	0.0049***	0.0027**	0.0009*	0.0098***
	(2.35)	(2.17)	(2.17)	(1.65)	(2.78)	(2.00)	(1.66)	(2.73)
State*Overpay		0.0233***						
		(3.11)						
Share_Inst*Overpay			-0.0531**					
			(-2.49)					
IndepR*Overpay				-0.0057**				
				(-2.55)				
Duality*Overpay					0.0073***			
					(2.67)			
Big4*Overpay						-0.0019**		
						(-2.10)		
Analyst*Overpay							-0.0018*	
							(-1.66)	
Anti_corruption*Overpay								-0.0172*

								(-1.65)
Anti_corruption								0.0314
								(1.32)
Underpay	-0.0034*	-0.0034*	-0.0033*	-0.0033*	-0.0031*	-0.0033*	-0.0033*	-0.0025
	(-1.93)	(-1.91)	(-1.84)	(-1.87)	(-1.79)	(-1.86)	(-1.88)	(-1.14)
Cons	0.5037***	0.5022***	0.5094***	0.5063***	0.4199***	0.5078**	0.5077***	0.6632***
	(5.52)	(5.51)	(5.58)	(5.55)	(4.65)	(5.56)	(5.56)	(5.08)
Control Variables	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
N	5,233	5,233	5,233	5,233	5,233	5,233	5,233	2,467
Adj R^2	0.1683	0.1696	0.1681	0.1681	0.1629	0.1681	0.1681	0.1689

Note: Table 5 reports the results of H1, H2, and various moderating effects of governance factors by replacing the dependent variable with the one-year-lagged dependent variable and then rerunning the tests of Table 3. Column (1) shows the baseline results examining H1. Column (2) shows the results examining H2. Columns (3) to (8) show the results of the moderating effects of institutional shareholdings, independent directors, duality, auditors, analysts, and the introduction of the anti-corruption campaign, respectively. Please refer to Table 1 for definitions of the variables. ***, ** and * represent significance levels of 1%, 5%, and 10%, respectively. T-statistics are reported in parentheses.

Table 6 The Market Reaction to Impression Management of FLSD and BLPC

	CAR (-1, 1)	CAR (2, 60)	CAR (2, 120)
ABTONE_strategy	0.0159***	0.0111*	-0.0141*
	(2.82)	(1.68)	(-1.91)
ABTONE_percom	0.0021	-0.0397	-0.0021
	(0.27)	(-1.56)	(-0.08)
SUE	-0.0284	-0.0766	0.3585***
	(-1.10)	(-1.02)	(4.09)
Lev	0.0083	0.0327	0.0404
	(0.77)	(1.05)	(1.01)
DA	-0.0082	-0.0611	-0.0062
	(-0.54)	(-1.39)	(-0.11)
SIZE	-0.0068**	-0.1078***	0.0380***
	(-2.06)	(-11.18)	(3.07)
MTB	-0.0008	-0.0058**	-0.0059***
	(-0.84)	(-2.18)	(-2.82)
EARN	-0.0200	-0.0114	-0.1981**
	(-0.55)	(-0.11)	(-2.53)
EARNVOL	-0.0198	0.3677***	-0.2021
	(-0.60)	(3.81)	(-1.48)
RET	0.0006	0.0220***	0.2396***
	(0.27)	(3.33)	(26.44)
ETVOL	-0.0623***	-0.0980*	0.1929*
	(-3.23)	(-1.74)	(1.96)
LOSS	0.0006	-0.0251**	-0.0344***
	(0.17)	(-2.25)	(-2.59)
cons	0.1636**	2.3014***	-0.6909**
	(2.14)	(10.34)	(-2.50)
Firm fixed effects	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes
N	6,679	6,629	4,455
R^2	0.0182	0.0800	0.3560

Note: Table 6 reports the regression results of the market immediate and delayed reactions to the abnormal positive tone of FLSD and BLPC following the empirical settings of Huang et al. (2014).

ABTONE_strategy (ABTONE_percom) is the abnormal positive tone of FLSD (BLPC) derived by the residual from Eq. (1) based on the identified forward-looking strategy-related sentences (the identified backward-looking performance commentaries). Concerning control variables, SUE is a firm's current quarterly earnings minus earnings of the same quarter last year, scaled by the market value at the beginning of the quarter. LEV is the sum of long-term debt and current liabilities divided by total assets. DA is discretionary accruals, measured by the modified Jones model following Dechow et al. (1995). SIZE is the logarithm of the market value of equity at the end of the year. MTB is the market value of equity plus the book value of total liabilities scaled by the book value of total assets. EARN is the annual operating earnings scaled by the book value of assets. EARNVOL is the standard deviation of earnings calculated using data from the last three years. RET is contemporaneous annual stock returns. ETVOL is the stock return volatility calculated using 12 months of monthly return data. LOSS is an indicator variable set to 1 when EARN is negative, and 0 otherwise. In Column (1), the dependent variable *CAR*[-1, +1] is the three-trading-days cumulative abnormal returns surrounding the annual report. Column (1) examines the market immediate reaction to ABTONE_strategy by the regression based on Eq. (6). Columns (2) and (3) investigate the market delayed reactions to ABTONE_strategy by the regressions based on Eqs. (7) and (8), respectively. In Column (2), the dependent variable *CAR*[+2, +60] is the 60-trading-days cumulative stock returns starting the second day after the annual report filing date. In Column (3), *CAR*[+2, +121] is the 121-trading-days cumulative stock returns starting the second day after the annual report filing date. Firm-fixed and year-fixed effects are included in the regressions. ***, ** and * represent significance levels of 1%, 5%, and 10%, respectively. T-statistics are reported in parentheses.

Table 7 The Mitigation of Impression Management in FLSD on Market Reaction to Excessive Compensation

	CAR (-1, 1)
Overpay	-0.0024**
	(-2.12)
Overpay*ABTONE_strategy	0.0050***
	(3.05)
ABTONE_strategy	0.0190***
	(2.83)
SUE	-0.0204
	(-0.79)
Lev	0.0087
	(0.82)
DA	-0.0089
	(-0.59)
SIZE	-0.0068**
	(-2.05)
MTB	-0.0008
	(-0.86)
EARN	-0.0234
	(-0.64)
EARNVOL	-0.0162
	(-0.49)
RET	0.0011
	(0.49)
ETVOL	-0.0597***
	(-3.09)
LOSS	0.0013
	(0.33)
cons	0.1653**
	(2.16)
Firm fixed effects	Yes
Year fixed effects	Yes
N	6,731
R^2	0.0179

Note: Table 7 reports the results of the mitigation of impression management of FLSD on market reaction to excessive compensation by the regression based on Eq. (9). The dependent variable CAR[-1, +1] is

the three-trading-days cumulative abnormal returns surrounding the annual report following Huang et al. (2014). ABTONE_strategy is the abnormal tone of FLSD, derived from the residual from Eq. (1) based on the identified forward-looking strategy-related sentences. Overpay is excessive compensation derived from the residual term from Eq. (2) if the residual is positive. Control variables are used following Eq. (6). Please refer to the Note of Table 6 for definitions of the control variables. Firm-fixed and year-fixed effects are included in the regressions. ***, ** and * represent significance levels of 1%, 5%, and 10%, respectively. T-statistics are reported in parentheses.

Table 8 Robustness Check I: Using Alternative Dependent Variable Estimated from a Tone Model Controlling for an Additional Variable Management Forecast

	Dependent Variable: ABTONE_strategy_2							
	(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**	**(7)**	**(8)**
Overpay	0.0095***	0.0082***	0.0070***	0.0028**	0.0183***	0.0046***	0.0027**	0.0007**
	(3.51)	(2.82)	(2.91)	(2.14)	(3.53)	(2.71)	(2.18)	(2.06)
State*Overpay		0.0021**						
		(2.17)						
Share_Inst*Overpay			-0.0647**					
			(-2.55)					
IndepR*Overpay				-0.0207***				
				(-2.65)				
Duality*Overpay					0.0285**			
					(2.45)			
Big4*Overpay						-0.0490***		
						(-2.65)		
Analyst*Overpay							-0.0058***	
							(-2.92)	
Anti_corruption*Overpay								-0.0199***
								(-3.51)
Anti_corruption								-0.0736**
								(-2.43)

Underpay	0.0007	0.0008	0.0007	0.0008	0.0009	0.0012	0.0008	0.0014
	(0.37)	(0.38)	(0.35)	(0.37)	(0.44)	(0.59)	(0.38)	(0.57)
Cons	-0.1170	-0.1183	-0.1179	-0.1101	-0.1145	-0.1040	-0.1083	-0.1029
	(-0.49)	(-0.49)	(-0.49)	(-0.46)	(-0.48)	(-0.43)	(-0.45)	(-0.28)
Control Variables	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Firm fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
N	7,215	7,215	7,215	7,215	7,215	7,215	7,215	3,299
Adj R^2	0.0720	0.0721	0.0721	0.0721	0.0731	0.0733	0.0722	0.0867

Note: Table 8 reports the results of the robustness test one. This test is done by rerunning the firm-and-year-fixed-effect regressions of Table 3 by replacing the dependent variable, i.e. ABTONE_strategy, with the alternative one, i.e. ABTONE_strategy_2. ABTONE_strategy_2 is estimated from a tone model controlling for an additional variable (i.e., managerial forecasts of one-year-ahead earnings) as a direct proxy for managerial expectations of future performance. Control variables are defined in Table 1. ***, ** and * represent significance levels of 1%, 5%, and 10%, respectively. T-statistics are reported in parentheses.

Table 9 Robustness Check II: Using Alternative Independent Variable – Excess Compensation of the Three Highest-paid Executives

	Dependent Variable: ABTONE_strategy							
	(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**	**(7)**	**(8)**
Overpay_Top3	0.0261**	0.0304**	0.0357***	0.0381***	0.0264**	0.0272**	0.0327**	0.0487**
	(2.09)	(2.33)	(2.74)	(2.73)	(2.06)	(2.18)	(2.42)	(2.34)
State*Overpay_Top3		0.0075**						
		(2.11)						

Share_Inst*Overpay_Top3			-0.2590**					
			(-2.45)					
IndepR*Overpay_Top3				-0.0171*				
				(-1.89)				
Duality*Overpay_Top3					0.0010**			
					(2.11)			
Big4*Overpay_Top3						-0.0250*		
						(-1.78)		
Analyst*Overpay_Top3							-0.0034*	
							(-1.88)	
Anti_corruption*Overpay_Top3								-0.0100**
								(-2.28)
Anti_corruption								-0.0178
								(-1.12)
Underpay	0.0137	0.0120	0.0108	0.0092	0.0136	0.0132	0.0114	0.0191
	(0.99)	(0.86)	(0.78)	(0.66)	(0.99)	(0.96)	(0.82)	(0.90)
Cons	0.1383	0.1378	0.1518	0.1609	0.1386	0.1408	0.1512	0.2861
	(0.70)	(0.70)	(0.77)	(0.82)	(0.70)	(0.71)	(0.77)	(0.84)
Control Variables	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Firm fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

N	6,735	6,735	6,735	6,735	6,735	6,735	6,735	2,756
Adj R^2	0.1001	0.1003	0.1012	0.1008	0.1001	0.1004	0.1004	0.1259

Note: Table 9 reports the results of the robustness test two. This test is done by rerunning the firm-and-year-fixed-effect regressions of Table 3 by replacing the independent variable, i.e. Overpay, with the alternative one, i.e. Overpay_Top 3. Overpay_Top 3 is the cash compensation of the three highest-paid executives. Control variables are defined in Table 1. ***, ** and * represent significance levels of 1%, 5%, and 10%, respectively. T-statistics are reported in parentheses.

Table 10 Robustness Check III: PSM

	Dependent Variable: ABTONE_strategy						
	(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**	**(7)**
Overpay	0.0002**	0.0016**	0.0072***	0.0095***	0.0027**	0.0017***	0.0001***
	(2.04)	(2.19)	(3.18)	(3.58)	(2.47)	(3.33)	(3.02)
State*Overpay		0.0026**					
		(2.26)					
Share_Inst*Overpay			-0.2010***				
			(-3.07)				
IndepR*Overpay				-0.0157*			
				(-1.69)			
Duality*Overpay					0.0102**		
					(2.06)		
Big4*Overpay						-0.0234**	
						(-2.32)	

Analyst*Overpay							-0.0002**
							(-2.05)
Underpay	-0.0009	-0.0009	-0.0010	-0.0009	-0.0009	-0.0008	-0.0009
	(-0.59)	(-0.61)	(-0.66)	(-0.59)	(-0.59)	(-0.51)	(-0.59)
Cons	0.2205	0.2211	0.2092	0.2274	0.2230	0.2225	0.2204
	(1.27)	(1.27)	(1.20)	(1.31)	(1.28)	(1.28)	(1.27)
Control Variables	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Firm fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
N	7,676	7,676	7,676	7,676	7,676	7,676	7,676
Adj R^2	0.0777	0.0777	0.0784	0.0778	0.0779	0.0780	0.0777

Note: Table 10 reports the results of the robustness test three. This test is done by rerunning the firm-and-year-fixed-effect regressions of Table 3 (excluding Column 8) by considering a propensity score matching (PSM) method. The PSM is used to construct the treatment group (including all SOEs) and the control group (including non-SOEs with propensity scores closest to the scores of firms in the treatment group). All control variables, as shown in Eq. (3), are included in the first-stage prediction model. The SOEs are then matched with non-SOEs one-to-one using the nearest propensity scores from this model. ***, ** and * represent significance levels of 1%, 5%, and 10%, respectively. T-statistics are reported in parentheses.

Appendices

1. Identification of Forward-looking Strategy-related Disclosure[16]

We use naïve Bayesian classification (NBC) to identify whether a sentence from the MD&A section pertains to forward-looking strategy-related disclosure or not, with the help of eight research assistants (RAs).[17] The process of identification of forward-looking strategy-related sentences is as follows:

(1) We download the annual reports of non-financial Chinese firms listed on the Shanghai and Shenzhen Stock Exchanges spanning the 2007−2016 period from the Juchao Information Network (www.cninfo.com.cn), an information disclosure website designated by the China Securities Regulatory Commission (CSRC). We then extract the MD&A sections of these sampled filings by titles and split them into sentences, resulting in 2,276,487 sentences based on our initial sample size with 19,437 firm-year observations.

(2) To construct the training data for the NBC implementation, we randomly select 20,556 of these sentences with the help of our eight RAs,[18] who classify/label them into forward-looking strategy-related or backward-looking performance commentary categories based on the labelling rule of forward-looking strategy-related sentences according to Table A1. A sentence classified into any of the five main categories shown in Table A1 will be a forward-looking strategy-related sentence. This labelling results in 49.71% of the training sample being classified as forward-looking strategy-related disclosure (i.e., 10,218 forward-looking strategy-related sentences) and 50.29% as backward-looking performance commentary disclosure (i.e., 10,338 backward-looking performance commentary sentences).

(3) Using a user-defined dictionary that includes the financial terms, we convert each training data sentence (including forward-looking strategy-related and backward-looking performance commentary ones) into two *word lists* for the strategy and percom categories, respectively. We then remove both stop words[19] and the duplicated terms or words from these two *word lists* for obtaining the two final word lists as the word sets

[16] The literature on Computer Science, such as Wang et al. (2021a), has examined the issues and procedures of using NLP in the Chinese context. Please refer to Figure 2 of Wang (2021a) for similarities and differences in the NLP implementation steps between the English and Chinese texts.

[17] These eight RAs are students majoring in the Master of Accounting program at the University of Tianjin University of Finance and Economics in China. To ensure that the training dataset is of high quality, all RAs must be native Chinese speakers and have completed the financial accounting module at the master's level, scoring the highest grade (A).

[18] Initially, the eight RAs read and classify the sentences independently, after which they work in pairs to check their classification results, which are further assessed for inter-coder reliability by each author. If classifications of strategy-related sentences or tone for a certain sentence diverge (accounting for about 4% of our sample in total), the authors re-read the sentence and classify it accordingly.

[19] The stop words include (1) the Chinese characters that are equivalent to English characters such as "the", "a", "an", "in", "at", "and", "for", "on", etc.; (2) all numerical numbers; (3) all modal words; and (4) English letters both in capital and lower-case.

of two categories (cats) – the set for the strategy category (cat_1) and the set for the percom category (cat_2).

(4) To predict/identify whether the remaining sentences (the test sentences) are forward-looking strategy-related ones or not, we segment the test sentences into a list of words (phrases) after removing stop words as done in step (3). The goal is to classify each test sentence into cat_1 or cat_2 from a set of all possible categories (*cats*). Thus, for each test sentence, according to Li (2010), the Naïve Bayesian Classification (NBC) algorithm chooses its best category ($cat*$) by solving the following problem:

$$cat* = \underset{cat \in cats}{argmax}\, P(w_1 \mid cat) * P(w_2 \mid cat) * ... * P(w_n \mid cat) * P(cat) \quad \text{(A1)}$$

where w_1, w_2, … and w_n denote a set of n words/phrases in each test sentence after the segmentation, and cat takes cat_1 and cat_2, respectively. We assume that the probability of each word appearing in a document is unaffected by the presence or absence of other words in the document – its probability of appearing in a sentence is assumed to be independent of each other.

As a result, after the prediction of the NBC algorithm, we obtain that, based on the 2,276,487 sentences in total from our initial sample, there are 1,406,723 forward-looking strategy-related sentences (61.79%) and 869,764 backward-looking performance commentary sentences (38.21%). Further, for our final sample with 9,924 firm-year observations, there are 1,174,595 sentences in total, including 653,462 forward-looking strategy-related sentences (55.63%) and 521,133 backward-looking performance commentary sentences (44.57%).

To validate the effectiveness of our NBC algorithm, we employ the method of N-fold cross-validation. Our findings reveal that (1) for N = 4, the average success rate of the tests is 79.32%, and our NBC algorithm has a precision rate of 76%; (2) for N = 10, the average success rate of the tests is 81%, and the NBC algorithm has a precision rate of 77%.

2. Identification of Sentence Tone

Based on the total of 2,276,487 sentences based on our initial sample size with 19,437 firm-year observations, we continue to use the NBC to determine whether the tone of a sentence is positive, negative, or neutral with the help of our RAs. The process of tone identification is as follows:

(1) To construct the training data, we randomly select 40,875 sentences from the total sentences and classify each sentence into a positive, negative, or neutral category with the help of our RAs. Our tone classification is based on the positive and negative

vocabularies developed by the Chinese Research Data Services platform (CNRDS).[20] After the classification, we have the tone distribution of these training data sentences with 22,680 positive ones (55.49%), 4,730 negative ones (11.57%), and 13,465 neutral ones (32.94%).

(2) Following step (3) in Appendices #1, we obtain the three final word lists as the word sets of three categories (cats) – the sets for the positive category ($cat_{positive}$), the negative category ($cat_{negative}$), and the neutral category ($cat_{neutral}$).

(3) Following step (4) in Appendices #1, to predict/identify whether the test sentences are positive, negative, or neutral, after segmentation, we classify each test sentence into $cat_{positive}$, $cat_{negative}$ or $cat_{neutral}$ from a set of all possible categories (*cats*) by using the NBC algorithm solving the following problem:

$$cat^* = \underset{cat \in cats}{argmax}\ P(w_1 \mid cat) * P(w_2 \mid cat) * ... * P(w_n \mid cat) * P(cat) \quad \text{(A2)}$$

where w_1, w_2, … and w_n denote a set of n words/phrases in each test sentence after the segmentation, and cat takes $cat_{positive}$, $cat_{negative}$, and $cat_{neutral}$, respectively.

As a result, after implementing equation (A2), we obtain that for the total of 1,174,595 sentences based on our final sample: (1) out of 653,462 forward-looking strategy-related sentences, there are 441,475 sentences (67.56%) with the positive tone, 157,840 sentences (24.15%) with the negative tone, and 54,147 sentences (8.29%) with the neutral tone; and (2) out of 521,133 backward-looking performance commentary sentences, there are 148,873 positive sentences (25.61%), 142,514 negative sentences (28.67%), and 229,746 neutral sentences (45.71%).

Finally, to validate the effectiveness of our NBC algorithm, we use the method of N-fold cross-validation. Our findings indicate that (1) for N = 4, the average success rate of the tests is 72%, and the NBC algorithm has a precision rate of 69%; and (2) for N = 10, the average success rate of the tests is 73%, and our NBC algorithm has the precision rate of 70%.

[20] The CNRDS is a widely used Chinese database by studies such as Ren et al. (2022), Wang et al. (2021b), and Yuan et al. (2022). The CNRDS' tone vocabulary is mainly based on the translation of the English dictionary edited by Loughran and McDonald (2011).

Table A1 The labelling rule of forward-looking strategy-related sentences

Main Category	Subcategories	Explanation
1. Analysis of the Market and Industry	Analysis of the external environment	The disclosure of any analysis of the industry background, industry policy, and market competitiveness of the company that is relevant to the company's aim, plan, or further action
	Analysis of the internal environment	The disclosure of any analysis of corporate strategic resources (e.g., intangible assets that increase its competitive advantage) that is relevant to the company's aim, plan, or further action
2. R&D		(1) The disclosure of (i) any impact of recent changes in R&D expenditure, (ii) any details on R&D status, and (iii) the economic consequences of the company's R&D policies that are relevant to the company's aim, plan, or further action; and (2) The disclosure of R&D plans for the next year or the future
3. Corporate strategy	Description of strategic objectives	The disclosure of the company's strategic objectives (i.e., development direction, strategy pattern, strategic development plan, internationalisation strategy), group and division or industry layout, and targets on revenue, cost, profit, market share, etc.
	Strategy implementation	The disclosure of the summary of the realisation, implementation, and adjustment status of the corporate strategy and business plan mentioned in the previous fiscal year
	The performance impact	The disclosure of any impact of corporate strategy on current and future performance
	Risk analysis	The disclosure of (i) any analysis of business risks and financial risks influencing the company's strategy implementation and (ii) any actions/measures to be taken by the company to avoid these risks
4. Future Projects	New products, businesses, and projects	The disclosure of any details on the development of new products, businesses, and projects
	Funding plans	The disclosure of funding plans to achieve the company's strategy of future development (e.g., explaining the capital requirements for maintaining the company's current business and completing investment projects under construction) and major capital expenditure plans for the future (including future known capital expenditure commitments, contractual arrangements, time arrangements, etc.)

	Business objectives and plans	The disclosure of (i) business objectives for the new year (e.g., to enhance the company's competitiveness/brand image and to increase sales, market share, cost reduction, production capacity improvement, R&D scope, etc.); (ii) business plans for the new year, including income and expense plans; and (iii) the strategies and actions that the company intends to take to achieve the above objectives and plans
5. Acquisitions and Disposals	Acquisitions	The disclosure of details on the company's major subsidiaries acquired this year and any impact on overall and future performance
	Disposals	The disclosure of details on the company's major subsidiaries disposed of this year and any impact on overall and future performance

Note: Table A1 displays the labelling rule of forward-looking strategy-related sentences. A sentence classified into any of the five main categories shown in the Table will be a forward-looking strategy-related sentence.

Table A2 Definitions and measurements of control variables used in equation (1)

Definition of Variables	
EARN	Annual operating earnings scaled by the book value of assets
RET	Contemporaneous annual stock returns
CFRATIO	Annual cash flows from operations scaled by the book value of the current liability
ACC	Accruals (earnings minus cash flow from operations) scaled by the book value of assets
SIZE	Natural logarithm of the market value of equity at the end of the year
MTB	The market value of equity plus the book value of total liabilities scaled by the book value of total assets
ETVOL	Stock return volatility calculated using 12 months of monthly return data
EARNVOL	The standard deviation of earnings calculated using data from the last three years
FIRMAG	Number of years since the inception of the firm
NBSEG	Natural logarithm of 1 plus the number of the business segment
NGSEG	Natural logarithm of 1 plus the number of geographic segments
MA	A dummy variable that equals one if a firm makes a merger or acquisition in a given fiscal year and 0 otherwise
SEO	A dummy variable that equals one if a firm has seasoned equity offering in a fiscal quarter and 0 otherwise
SI	Amount of special items reported for the year scaled by the book value of assets
LOSS	An indicator variable set to 1 when EARN is negative, and 0 otherwise
DEARN	Change in earnings before extraordinary item scaled by total assets
AFE	Analyst forecast error, defined as actual earnings per share minus the mean of the analysts' forecasts, deflated by stock price per share at the end of the fiscal year

Note: Table A2 reports definitions and measurements of control variables used in equation (1).

Table A3 Definitions and measurements of all variables used in equation (2)

LnCOMP	Natural logarithm of firm *i*'s CEO's remuneration in year *t*
ROA_{it}	Return on assets for year *t*, calculated as income before extraordinary items divided by total average assets
$ROA_{i,t-1}$	Return on assets for year *t*−1, calculated as income before extraordinary items divided by total average assets
SDROA	The standard deviation of ROA for the five years ending in year *t*−1
MTB	The market value of equity plus the book value of total liabilities scaled by the book value of total assets
MB	The ratio of the market value of equity to the book value of equity averaged over the five years ending in year *t*−1
SIZE	Natural logarithm of the sum of the total market value of equity and the total book value of debt for year *t*−1
CHAIR	Coded one if firm *i*'s CEO serves as chairman of the board of directors, and 0 otherwise
STATE	A dummy variable coded one if the firm is owned by the state and 0 otherwise
SIZE_CompenC	Size of the compensation committee
SALARY_CompenC	The average compensation of the compensation committee members
ISIDIRECTOR_CompenC	The ratio of independent directors on the compensation committee
SHAREHOLD_CEO	The proportion of shares held by the CEO
AGE_CEO	CEO's age
TENURE_CEO	CEO's tenure

Note: Table A3 reports definitions and measurements of all variables used in equation (2).

Table A4 The Impact of Excess Pay on Impression Management in BLPC

	Dependent Variable: ABTONE_percom
Overpay	-0.0028
	(-0.78)
Underpay	-0.0024**
	(-2.26)
State	-0.0039
	(-0.33)
Share_Inst	0.0706
	(1.34)
IndepR	0.0048
	(0.32)
Top2	0.0142
	(0.27)
Big4	0.0290
	(1.60)
Analyst	-0.0065**
	(-2.46)
Top1	0.0983
	(1.04)
Share_Mng	-0.0004
	(-1.39)
Duality	-0.0026
	(-0.48)
Size_BD	0.0189
	(1.43)
AuditC	-0.0016
	(-0.24)
Her10	-0.2154*
	(-1.87)
HHI	0.0724
	(1.34)
Assets	0.0136***
	(2.64)
Lev	-0.0215

	(-1.16)
Growth	-0.0061
	(-1.05)
Acquisition	-0.0014
	(-0.29)
Crosslist	0.0320
	(0.65)
Refinance	0.0007
	(0.16)
Violation	0.0078
	(1.19)
DA	0.0125
	(0.50)
Turn_CEO	-0.0017
	(-0.41)
ROA	-0.0241
	(-0.37)
Dividend	0.0088
	(1.47)
cons	-0.2503**
	(-2.09)
Firm fixed effects	Yes
Year fixed effects	Yes
N	8,437
Adj R^2	0.0109

Note: Table A4 reports the results of a placebo test based on Eq. (4). The dependent variable, ABTONE_percom, is the abnormal tone of backward-looking performance commentary sentences to measure impression management in BLPC. It is obtained by the residual from Eq. (1) based on the identified backward-looking performance commentaries. Overpay is excessive compensation obtained by the residual term from Eq. (2) if the residual is positive. The control variables are the ones in Eq. (3), excluding ABTONE_percom. Please refer to Table 1 for definitions of the control variables. Firm-fixed and year-fixed effects are included in the regressions. ***, ** and * represent significance levels of 1%, 5%, and 10%, respectively. T-statistics are reported in parentheses.