

Credibility of Corporate News Coverage in China: Impact of Commercialization and Conglomeration Reforms

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Abstract: Exploiting recent commercialization and conglomeration reforms in China, this paper examines whether governments can increase the credibility of corporate news by injecting market incentives into state controlled newspapers without relinquishing ownership control. Compared with official newspapers that serve as the government’s mouthpiece, commercialization has created business newspapers that primarily respond to market incentives, while conglomeration merges official newspapers with newly created business newspapers under the same news groups. Using textual analysis techniques, we document that business newspaper articles have less positive tone and political slant than official newspaper articles, suggesting that commercialization increases news credibility and attenuates state influence. We find that the difference in tone and political slant between business and official newspapers is magnified among conglomerated newspapers, consistent with this reform simultaneously increasing the credibility of business newspapers and the mouthpiece role of official newspapers. Our results are robust to using a matched firm-month research design that examines the content of articles written about the same firm in the same month and a difference-in-difference approach to test for conglomeration effects. Finally, using the stock price response to news articles to capture perceived credibility, we find that the stock price response is stronger for business newspaper articles than official newspapers articles, and this difference is larger for conglomerated newspapers than non-conglomerated newspapers. The market is also more credulous towards the positive tone of business newspapers, as indicated by the stronger stock price response to a unit of positive tone in the newspaper articles of business newspapers than official newspapers.

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1. Introduction

State-controlled media is prevalent around the world, especially in emerging economies with autocratic governments (Djankov et al., 2003). These governments, when attempting to develop or maintain market economies, face a dilemma between exerting tight control over the news media to protect their autocratic rule (Tullock, 1987) and granting the press necessary freedoms to perform its information intermediary role. By relaxing the amount of coercion applied to the press through direct ownership and regulation, governments can free the media to respond to market demands for credible information; however, this liberalization could jeopardize the government's political control and stability. Thus, the dual missions of the state-controlled media – to serve as the government's mouthpiece and to serve as a market-oriented information intermediary - require a careful balance between political and commercial objectives, which often conflict with each other.

An independent media is an important institution for establishing and maintaining well-functioning markets. As information intermediaries, media outlets create and disseminate financial information in a timely manner to a wide audience of constituents (e.g., Zingales, 2000; Bushman, Piotroski and Smith, 2004; Bushee, Core, Guay and Hamm, 2010; Soltes, 2010). Additionally, through investigative journalism, the media also serves as a watchdog, performing a valuable governance role in settings where direct monitoring is either costly or ineffective (e.g., Dyke and Zingales, 2002; Miller, 2006; Dyke, Volkchkova and Zingales, 2008; Liu and McConnell, 2013). In response to market-based incentives, journalists and editors will generate and publish news articles that fill the demand for credible and timely financial information. These market-oriented reporting practices help maximize the newspaper's circulation and revenue, and indirectly support the government's market development activities.

However, political forces can adversely influence the editorial practices of the press. Because the media plays a central role in shaping public opinion, especially in portraying the unchallenged authority of autocrats, politicians and their supporters frequently encourage opaque and biased reporting practices, especially with respect to the revelation of adverse news. Prior research documents that politically

controlled newspapers frequently bias the coverage of politicians, political events and government policy (e.g., Enikolopov, Petrov, and Zhuravskaya, 2011; see Stockmann, 2012 for a comprehensive review of the China setting). Even a democratic government can capture the media and bias electoral outcomes (Besley and Prat, 2006), significantly weakening the media's role in political accountability. Political intervention also impairs the market-development role of the media by undermining the credibility and usefulness of published articles. Using cross-country data, Djankov et al. (2003) show that higher average state ownership of the media is associated with fewer listed firms on national stock exchanges. This relation is consistent with the public choice view that the state control of news media is detrimental to financial development.

In this paper, we examine whether two common media reforms - the commercialization and conglomeration of state controlled newspapers – allow the politician to increase the credibility of corporate news articles while maintaining (and possibly strengthening) the government's control over the country's information environment. Prior research establishes that state controlled newspapers positively bias news coverage, and that introducing economic incentives to media can help reduce this bias (e.g. bad news sells). However, very little is known about how market and political forces interact to shape *corporate news coverage*, especially in news media that remain state-owned. Our paper fills this void by examining the tone, political content and informativeness of corporate news articles published in China. Our goal is to shed light on whether and how an autocratic government such as China can balance the dual roles of state-owned media – to provide credible economic news and to serve as the mouthpiece for the government – in the presence of broader economic reforms.

We view China as a natural setting to examine how market and political incentives affect the credibility of corporate news articles published by state-controlled media. The rapid development of China's capital markets has created a demand for credible corporate news; combined with reforms that liberalized newspaper licensing and altered the state's funding of newspapers, the country has experienced a sharp increase in the supply of both business newspapers and corporate news articles. Yet, despite this rapid liberalization of the press, newspapers continue to be controlled by Chinese Communist

Party (CCP, or party) organizations and government entities and subjected to strict government oversight and licensing requirements. And, as in many economies globally, Chinese politicians bear direct and indirect political costs if firms under their control (or other affiliated firms) are reported in a negative light, creating an incentive to use their control of the media to adversely affect the credibility of China's corporate news coverage.¹

Following the arguments of Stockmann (2012) and Zhao (2000), we expect the degree to which a Chinese newspaper favorably biases corporate news and explicitly promotes the political message of the government to vary by (1) the orientation of the newspaper and (2) whether the newspaper is controlled by a commercial news group. The first dimension – the orientation, or objective, of the newspaper – reflects the primary focus and incentives of the newspaper, both in terms of content and audience. Official newspapers (commonly referred to as party papers) serve as the Chinese government's mouthpiece. Official newspapers are operated by local CCP organizations and propaganda departments, primarily focus on reporting political news, and are circulated among a pre-defined party constituency. In contrast, commercialized business newspapers were established during a period of media liberalization to focus (primarily) on reporting financial and economic news demanded by the market economy. And, whereas official newspapers still have guaranteed subscription revenue from certain party organizations, business newspapers lack any direct financial support from the government, and thus are entirely reliant on advertising and subscription revenue to fund operations. Given these structural differences in orientation, audience, and financing sources, we expect business newspapers to be more sensitive to market incentives, and as such, publish more credible corporate news articles (i.e., articles with less positive tone and political content) than official newspapers.

The second dimension relates to whether the control of the newspapers was transferred under an organized business news group as part of China's media reforms. Following the period of media

¹ Such costs include diminished reputational capital within the government and among constituents, thus diminishing the politician's likelihood of re-election (advancement) in democratic (non-democratic) settings. In China, these costs arise from diminished career prospects within government and the CCP organizational structure (Chen, Li and Zhou, 2005; Li and Zhou, 2005) and, more broadly, public dissent that threatens political stability.

liberalization during the 1990s that resulted in the fragmentation of the Chinese press due to the rise of commercial business newspapers, the government encouraged a set of media reforms, which re-organized her control of both official and commercialized newspapers under a single news group, usually in a province or major city. In the process, the government reduced competition between local newspapers (especially between official and commercialized newspapers), improved management practices, increased the political legitimacy of the commercialized business newspapers, and reallocated newspaper resources to better achieve the dual missions of the press. If these reforms achieved the government's objectives, we would expect to see conglomeration activities lead to a greater variance in the credibility of news articles published within the news group. Specifically, we expect business newspapers to become more credible and for official newspapers to maintain or even increase their political role in corporate news reporting after conglomeration.

It is not clear that either of the reforms can achieve the government's expectations. While economic incentives to increase subscription and advertising revenues could orient the newspapers reporting towards their readers' demands, the Chinese government, through her ownership control and tight regulations, can continue to exert political influence that often dominates the market forces from commercialization. In addition, the conglomeration reform may only achieve one side of the intended objective, which is enhancing government control over the commercialized media. Such control could reduce the editorial freedom enjoyed by previously independent business newspapers or impair their market-oriented reported practices, causing deterioration in the credibility of business newspaper articles. Thus, whether commercialization and conglomeration reforms lead to an increase in the credibility of corporate news remains an empirical question.

We test these arguments on a sample of approximately 1.77 million domestic Chinese newspaper articles published about China's listed firms over the period 2000-2010. Consistent with our predictions, we find articles about Chinese listed firms published by market-oriented business newspapers are less positive and contain fewer political slogans than articles published in official party newspapers. We also find that recent media reforms encouraging the conglomeration of Chinese newspapers into state-

sanctioned media groups have (successfully) magnified the differences in article tone and political content between business and official newspapers. Specifically, we observe an increase (a reduction) in the positive reporting bias and political content of articles published by official (business) news outlets that are conglomerated.² The documented divergence in the tone and political slant of these conglomerated newspaper articles is consistent with the objectives of China's media reforms – to increase the market credibility to commercialized business newspapers while to simultaneously strengthen the mouthpiece role of official newspapers.

We find that differences in tone and political content arising from newspaper orientation and conglomeration reforms exist in the broad cross-section of newspaper articles, among both central government and local government owned newspapers (although incrementally stronger for central newspapers), after matching official and business newspaper articles by publication month for the same listed firm (to eliminate selection effects in our data), and after focusing on a subset of newspapers that are conglomerated during our sample period (i.e., a difference-in-difference research design). Supplemental analyses show that the impact of these forces varies by whether the covered firm is state-owned, politically connected, or domiciled in the same province as the reporting newspaper.³

Having established that the orientation and conglomeration affiliation of Chinese newspapers affects the tone and political content of their news articles, our final set of tests examines whether the market reaction to the publication of corporate news articles varies by the expected credibility of the publishing newspapers and articles. First, we document that market-oriented business newspaper articles are associated with a significantly greater absolute stock price reaction than official newspapers, and that this difference is magnified once the underlying newspapers are conglomerated. These relations are directionally consistent with the relative amount of positive tone and political content typically embedded in each newspaper's articles. Second, we show the observed price response is positively correlated with

² This result is similar to the endogenous, profit-maximizing decision to slant political news coverage in the US (see Gentzkow and Shapiro, 2010).

³ This result is similar to the advertising-driven effect documented in the US about the local media's decision to bias the coverage of small, local firms (e.g., Gurun and Butler, 2010).

the tone of the article, and that this relationship is incrementally stronger if the article was published in a business newspaper. Lastly, we show that absolute market reaction to the article is decreasing in the political content of the message. These return patterns are consistent with the commercialization and conglomeration-induced incentives of Chinese newspaper affecting the perceived credibility of published corporate articles.

This study makes several contributions. First, we provide large sample evidence on how state controlled media balance the tradeoff between market and political pressures, as captured by the liberalization, commercialization and subsequent conglomeration of newspapers, with respect to the content and credibility of corporate news. Our results suggest that reforms designed to inject market incentives into corporate news reporting yields the desired positive reporting effects, and that the creation of state controlled news groups simultaneously enhances both the market and mouthpiece roles of the business and official media, respectively. Prior research on media reforms in China uses a much smaller sample of news articles or case study approaches (Zhao, 2000; Stockmann, 2012). In addition, by using corporate news articles of listed firms, as compared with general news articles in prior studies, we can better measure the positive bias in each article by controlling for the financial performance and fundamental characteristics of each firm. Focusing on listed firms also allows us to exploit stock return data to gauge the market's perception of the credibility of the articles, conditioning on the media reforms.

Second, our study extends Djankov et al. (2003), who find that prevalent state controlled media is detrimental to financial market development. A big challenge for emerging market governments is to develop financial markets while maintaining political control over the media. We document one example where, through the injection of market incentives into state controlled newspapers, the government increased the credibility of corporate news without relinquishing ownership control and tight regulation of the press. Future research can investigate how well such commercialized and conglomerated state controlled business newspapers actually fulfill their information intermediary role and what constraints should be eliminated to further improve the corporate news environment.

Third, our study extends existing research on how political and economic incentives affect media bias. Compared with prior research on political incentives, which focus mainly on political news and electoral outcomes (Besley and Prat, 2006; Enikolopov, Petrov, and Zhuravskaya, 2011; Stockmann, 2013), our paper documents the effects of politics on corporate news. There are a few recent studies that examine how market incentives impact reporting biases (Ellman and Germano, 2009; Gurun and Butler, 2012; Green, Hand, and Penn, 2012), but these studies focus on democratic societies using mainly privately controlled newspapers, rather than state-owned newspapers. To our knowledge, our study is the first that looks at the interplay between the political incentives of state controlled newspapers and economic incentives introduced by media reforms on the reporting bias and credibility of corporate news.

Finally, our study contributes towards a broader understanding of the information environment surrounding China's capital markets (see Piotroski and Wong (2012) for a summary). And, because China is the largest economy practicing state capitalization, our paper serves as an important first step towards understanding whether, and under what contextual conditions, China's state-controlled information institutions will be able to fulfill their market development roles within the country's broader institutional, political and economic framework.

The next section presents the institutional background on China's newspapers, discusses recent media reforms, and outlines our primary empirical hypotheses. Section 3 discusses the sample construction and research design and sections 4 to 6 present the empirical results. Section 7 concludes.

2. Background, motivation and hypotheses development

In this section, we provide background information on the development of the Chinese business press. Section 2.1 discusses early reforms that occurred in conjunction with China's burgeoning market economy. Section 2.2 discusses the consequences of these early media liberalization activities and the government decision to create large news groups. Section 2.3 outlines our primary empirical hypotheses.

2.1 Background on early media reforms and commercialization

Since 1978, the Chinese government has relaxed its control over domestic and international information flows to foster economic development and reforms. As a result, the domestic media has to play the dual role of government mouthpiece and an information institution necessary for the building of a market economy. To fulfill this second role, the government liberalized newspaper licensing and CCP committees at lower levels of the government were urged to establish new newspapers capable of supporting economic reforms and development. In conjunction with these initiatives, the government began encouraging newspapers to operate like stand-alone commercial units. Prior to these reforms, the state owned all newspapers and administered every aspect of their operations and finances; subscription revenue was guaranteed and the editorial staff consisted of political bureaucrats who cared little about effective management or budgetary issues. Starting in the early 1980s, the government began cutting subsidies, forcing certain newspapers to rely solely on advertising and subscription revenues, thus creating a new set of market-based incentives for these newspapers.

As a result of both deregulation and budget reforms, a new category of newspapers - called commercialized newspapers - emerged in China. These commercialized newspapers consist of two primary types: business newspapers, which specialize in business and financial news, and metro and evening newspapers, which serve the general public interest in China's larger cities. Commercialized papers are fundamentally different from the official newspapers established prior to these reforms. Whereas the intended audience of official newspapers is party members and government officials, with the sole goal of conveying the government's political narrative to its constituents, commercialized papers target a specific audience and fill a particular market demand for information. Additionally, unlike official newspapers that still continue to receive guaranteed subscription revenue from sponsoring units, commercialized newspapers receive no (or minimal) subsidies and no guaranteed subscriptions from the government. As a result of these differences, commercialized newspapers are more responsive to market

demands for news in order to maximize advertising and subscription revenue.⁴ Together, these commercialization reforms increased the number of newspapers in the country by more than tenfold, from 186 to 1,943, between 1978 and 2009 (Stockmann, 2012).

Despite these liberalization policies, the government maintained, if not strengthened, its control of the country's newspapers. First, both official and commercialized newspaper remained state-owned, and each individual newspaper must be sponsored by a government unit to obtain its operating license.⁵ These formal arrangements subject the newspaper to the bureaucrat and political pressures arising from China's hierarchical structure.⁶

Second, the government continues to control the country's newspapers through the appointment and dismissal of senior editorial staff by the sponsoring organization. Specifically, each editorial appointment requires the approval of the relevant CCP's organization committee, while officials from the Propaganda Department (PD) of the corresponding local government and media regulators will occasionally get involved in appointment decisions. This mechanism ensures that the editorial policies and reporting practices of the newspaper remain aligned with the government's preferences.

Third, the Propaganda Departments of the CCP committees (at every level of government) also strongly influences the reporting behavior of newspapers through their guidance and planning of China's ideological development. The power of the PD and relevant regulatory agencies is further strengthened

⁴ Amongst commercialized newspapers, the business newspapers are the most market-oriented outlets; in contrast, metro and evening newspaper are still responsible for spreading propaganda while trying to appeal to the general public for advertisements (Hu, 2011).

⁵ For example, the *People's Daily*, a national newspaper, is sponsored by the Central Propaganda Department of the CCP Central Committee, while *Beijing Daily*, a local newspaper, is sponsored by the CCP committee at the Beijing municipal level, and the incentives of both newspapers will be shaped by the objectives and agenda of their sponsoring entity.

⁶ The Chinese state is organized based on geographical divisions that span from the center to province, city, county, township and village levels. The state is also composed of the CCP and government units, such as commissions, ministries, bureaus and departments, which exert control vertically from units at the central government level to corresponding units at the lower levels of government. As such, any government unit has to report to the corresponding supervisory unit of the CCP or government agencies through the vertical chain of command, and horizontally to the leadership of the local government where the specific government unit is located. Newspapers are integrated in this broader political structure at their level of government. Thus, obtaining a license requires finding a sponsor within the relevant government framework, with the newspaper then subjected to the bureaucratic and political pressures arising from China's hierarchical structure.

by the absence of laws that protect the freedom of press, allowing politicians to capture the press when deemed necessary.

Lastly, during this period of newspaper liberalization, the government concurrently elevated the news media's regulatory and licensing agency, formerly the Publication Bureau under the Ministry of Culture, to an administrative unit under the direct control of the State Council, renamed the State Press and Publication Administration (SPPA). And, in 2001, the SPPA was further elevated to ministerial-level status and was renamed the General Administration of Press and Publication (GAPP). These elevations serve the purpose of strengthening the political clout and legitimacy of the media regulators while signaling the government's commitment to monitoring, and if necessary controlling, China's news media.

2.2 Economic effects of commercialization and the resultant conglomeration into news groups

2.2.1 Economic consequences of commercialization

Commercialization and marketization reforms had far-reaching effects on newspaper operations, management and reporting incentives in China. As discussed earlier, commercialized newspapers can no longer rely on government sources for funding; as a result, business (metro and evening) newspapers respond sharply to the demands of the business and investment communities (general public) for news coverage in order to compete for more advertisement revenues. This shift in news generation incentives (i.e., which stories to publish) not only benefits the readers, but the government as well. Under the close supervision of the sponsoring government units (i.e., propaganda departments and GAPP), commercialized papers serve as outlets for the general public and the investment communities to vent grievances, and become an important feedback channel for providing the government information gathered at the grass roots level. Similarly, many official newspapers had to balance political and revenue considerations when reporting the news as a result of competition created by commercialized newspapers.

The most significant commercialization changes occurred among China's business newspapers. The demand for business news due to the establishment of China's equity markets, when combined with general commercialization trends outlined above, fueled the growth of business newspapers. This growth

in the business press also was reinforced (and enhanced) by additional supply side forces during the 1990's. Realizing the importance of well-functioning information channels, the government shifted its attitudes towards the business media, injecting credibility and political support into the business model. For example, shortly after the establishment of the two stock exchanges, the Chinese Securities Regulatory Commission, fearing market manipulation and information cascades, created the designated information disclosure system to control the business news. This system requires all financial disclosures and official communications of listed firms to be disseminated through official business news outlets, such as *China Securities Journal*, *Shanghai Securities Daily* and *China Business*. This is an information process that continues today.

Additionally, the government provided tacit approval for domestic entrepreneurs to invest in business news outlets. This new orientation towards a more market driven and independent business media was reinforced by the Asian Financial Crisis in 1997, which resulted in calls for greater transparency in the market. These views were subsequently supported by the government, and as a result, a number of prominent business magazines and financial daily newspapers emerged in the late 1990's and early 2000's, including *Caijing*, *21st Century Business Herald*, *Economic Observer*, *New Fortune Magazine*, and *Business Watch*. These publications are characterized by their focus on business and financial news and almost propaganda free reporting. And, in a few cases, these new ventures even served as watchdog against fraudulent activities of the listed firms.⁷

2.2.2 Conglomeration reforms

In response to the growing prominence commercialized business news during the 1990's and the effect it was having on news coverage, the government embarked on another media reform that orchestrated the conglomeration of existing newspapers from the same locality into commercialized news

⁷ A prominent example is *Caijing*, a financial magazine established in April 1998. Serving as the watchdog of the financial market, they exposed the fraud cases of listed firms such as Qiong Ming Yuan in 1998 and Yin Guang Xia in 2001. They also exposed irregularities and corruption of the mutual fund industry in 2000.

groups. The government aimed to achieve a number of objectives through the formation of these news groups. First, the government wanted to increase its control over commercialized newspapers. Commercialized newspapers had grown in both number and size (total assets, advertisement revenues and circulation) (Zhao, 2000), creating a fragmented market with many newspapers competing in the same localities. Furthermore, many official newspapers were losing in this new competitive landscape, with commercialized newspapers beating them in terms of number of readers and advertising revenues. The government feared that it might lose control of these commercialized newspapers, which no longer depended upon the state for funding, and also recognized that official newspapers were no longer effectively fulfilling their mouthpiece / propaganda mission due to intense competition for readers and advertising revenues. Conglomeration effectively brings quasi-autonomous commercial newspapers under a politically legitimized, central control structure.

Second, combining local newspapers into a single commercialized news group would allow for better coordination of the newspapers activities through a common set of directors, professional editorial board and business objectives. Conglomeration can be used to reduce local competition brought forth by commercialized papers to the official newspapers, to better coordinate the local government's messages across news outlets, improve the division of labor and specialization of news, and improve the overall efficiency of these newspapers' operations. In the group structure, the profits of economically successful commercial newspapers can even serve as a source of subsidies for the official newspapers, easing the pressures exerted on stand-alone official newspapers to cater for advertising revenue.

Finally, conglomeration helped the government to form large domestic news groups capable of competing with foreign news groups that were expected to eventually enter the domestic market through WTO agreements (Lee, He and Wang, 2006). The first of such conglomeration was the formation of *Guangzhou Daily News Group* in 1996; by 2004, up to 38 news groups were formed across China.⁸

⁸ The case of the formation of *Shenzhen Press Group* is presented in Lee, He, and Huang (2006).

2.3 Development of empirical hypotheses

China is practicing market socialism. Although the Chinese government has allowed markets to take over much of the coordination and the allocation of resources, a large portion of the economy is still under the control of the government through direct and indirect ownership (Huang, 2008). In terms of market capitalization, state-owned enterprises (SOEs) continue to dominate the country's two domestic stock markets. And despite the growth of the private sector (Lardy, 2014), the state continues to give favorable treatments to SOEs.⁹

A parallel process has happened to the news media in China. By deregulating the industry, there was a surge in the number of commercialized newspapers. To survive, these commercialized newspapers, especially business newspapers, cater to the readers' demands for more independent news rather than government's propaganda and occasionally play a watchdog role against opportunistic corporate behavior. However, the government still maintains tight control of the newspapers. Although private entrepreneurs have minority stakes in a few individual newspapers, the government still owns one hundred percent of all news groups. The government has decentralized control of newspaper operations and finances to management, but GAAP and the propaganda departments of the CCP continue to exert tight control over news groups and newspapers. The party officially maintains direct and indirect the control over the editorial process, and, when necessary, propaganda departments and GAPP can strictly control the content of the newspapers. Most of the official papers, whether or not they belong to a news group, continue to receive subsidies and guaranteed subscriptions from the government, and, because China remains an autocracy, there is no legal protection over free press.

Nevertheless, the general trend has been for the government to relax the coercion exerted through these regulatory and controlling mechanisms and to allow the media to respond to market demands. As a result of this reform process, politicians have sacrificed much of their ability to exchange economic

⁹ For example, in response to the global financial crisis, the central government by injecting trillions of RMB into SOEs (through the provision of cheap credit) to stimulate investment activity (Deng et al., 2014), while the private sector was starved for cash.

resources for compliance among journalists (as the media has become more independent from the state in terms of management and finances) and the government is left to walk the fine line of balancing political and ideological control over news reporting and liberalization of the media.

Our study examines the impact of these commercialization and conglomeration reforms on the credibility of corporate news reporting in China. Marketization increases the autonomy and independence of news coverage, especially among the business newspapers that are the most commercialized. Because of these market incentives, corporate news articles published by business newspapers should be more critical of covered firms (or less positively biased in tone), contain less political rhetoric, and be perceived by the market to be more credible than articles published by official newspapers.

However, the political control that is maintained by the government through regulations and direct ownership of the media could negate these beneficial effects on the tone, political content and credibility of the news. That is, the political demands exerted by the state owners in Chinese newspapers will outweigh any market demands for credible business news and ultimately undermine the market-based incentives generated by these reforms. In fact, the conglomeration through which official and commercialized newspapers are managed under the same news group may actually reduce the autonomy and/or create disincentives for commercialized newspapers (e.g., by sharing profits with official papers) to cater their news to market demands. Moreover, there are other political forces that cause the newspapers, both official and commercial, to bias corporate reporting. For instance, local governments may exert influence on local newspapers to report positive news on their SOEs. And, even economic incentives do not always induce newspapers to report independently; for example, past research has shown that advertising revenues can be used to bias newspaper reporting (Ellman and Germano, 2009; Gurun and Butler, 2012). Thus, whether the commercialization and conglomeration of China's newspapers have produced corporate news that is more credible and with less bias and political content remains an empirical question.

To address whether these reforms achieve the intended purposes, we first examine if the commercialization and conglomeration reforms affect the credibility of the business and official

newspapers, as captured by the level of positive bias and political slant in the news. We equate high credibility with low positive bias in tone and less political slant. The two hypotheses are as follows:

H1. Business newspapers are less positively biased in tone and containing less political slant than official newspapers, ceteris paribus.

H2. The differential in tone and political slant between business and official newspapers is larger after the conglomeration, ceteris paribus.

To further examine if these reforms have an impact on the perceived credibility of corporate news, we examine the stock price reaction to corporate news conditional upon the expected credibility of these news articles. We examine perceived credibility of the news articles using two sets of tests. First, we compare absolute stock price responses to the news articles conditioning on the two reforms without taking into account the tone and political slant contained in the articles. In this first set of tests, we use the newspaper's orientation and control structure to proxy for the implied credibility of the article (as outlined in H1 and H2), and examine whether the absolute market reaction to news article publication varies by newspaper type. Our second set of tests directly examine whether the characteristics of the news article (tone and political slant), which are expected to vary by newspaper orientation and ownership structure (H1 and H2), influences the market's response to the news. Compared with the first set of returns tests (which only examine whether the reforms can affect market credulity towards each news article as a whole), this second level test captures whether the market in giving more or less credence to each level of positive tone or political slant in the article conditional upon how the reforms affected the reporting newspaper. This leads to our additional two hypotheses.

H3. Business newspapers are perceived by the stock market to be more credible than that of official newspapers, ceteris paribus.

H4. The differential in the perceived credibility between business and official newspapers is greater after the conglomeration, ceteris paribus.

3. Research design, sample construction and descriptive statistics

3.1 Data sources

To perform our analyses, we utilize data from two commercial databases of domestic Chinese language newspaper and magazine articles: Newswise and China Financial Newspaper Searching System. Newswise, established in 1998, archives all variety of newspaper and magazine articles, including corporate news articles published by China's official party newspapers. The China Financial Newspaper Searching System specifically archives articles published by China's business newspapers. The combination of these two archives allows us to gather the most comprehensive set of financial news articles available about China's listed firms. Due to database limitations before 2000 and data collection constraints after 2010, we only use domestic newspaper articles published about China's listed firms between 2000-2010 that are included in these databases.

We use the following procedures to construct our sample of company-specific newspaper articles. First, using the trading name of each listed company, we use an automated article-crawling robot to search the archives of each database to identify all Chinese language articles featuring the listed company. This process was performed for each firm listed on the Shanghai and Shenzhen stock exchanges during our sample period. Second, we attribute individual articles to a specific listed firm based upon the corporate name that appears most frequently in the specific article.¹⁰ Articles where multiple firms appear with the same frequency are regarded as covering all firms. To ensure that our sample consists of press-generated news articles, we specifically exclude articles identified as summary lists (e.g., firms with the largest price change, trading activity, etc.) and articles that relate to regulation-mandated announcements or press releases made by the company (e.g., quarterly earnings reports, annual report, ad hoc filings, etc.). After eliminating articles not published in official or business newspapers, these procedures yield a final sample of 1,773,851 unique corporate news articles about 1,757 unique domestic listed companies, drawn from 103 unique newspapers (47 official and 56 business newspapers), during our sample period.

¹⁰ An alternative attribution approach is assign the article based upon the name highlighted in the article title. We intend to implement this alternative classification approach in the next draft of the manuscript.

3.2 Classification of newspapers

Because our research focuses on corporate news, we only focus on articles published in official and commercial newspapers.¹¹ Newspapers are classified as *official newspapers* if they are under the direct control of the central and local Communist Party Committees (party newspapers) or government institutions (political organ papers) and serve as their mouthpiece. We classify newspapers as a *business newspaper* if they have an orientation towards reporting business, economic and financial news. Most business papers are controlled by news groups (e.g. *21st Century Business Herald* by Nan Fang News Group in Guangzhou), commerce-related ministries (e.g. *Financial News* by the People's Bank of China) or have private individuals or companies as shareholders (e.g. *Economics observer* by Shangdong Sanlian Group Ltd.); only a few business newspapers are still directly controlled by party committees.¹² Because newspapers are formed to fulfill a specific niche and licensed accordingly, these newspaper classifications are stable through time.

We also identify whether or not the newspaper is included in a commercial news group at the end of a specific calendar year, and if so, is labeled as being *conglomerated*. As discussed earlier, the conglomeration of newspapers into news groups has been occurring since the mid-1990's in China as a means for the government / party to jointly liberalize the media, increase the credibility of the news, and support economic development and reforms while regaining political control over a rapidly fragmenting press and competing against possible foreign entrants. Because conglomeration occurs through the process of media reforms, our set of conglomerated newspapers changes over the course of our sample

¹¹ We exclude all metro and evenings newspapers that are considered commercialized newspapers. There could be potential under-identification of official papers as some of the evening papers claim to be official newspapers (e.g., *Hefei Evenings Newspaper*). However, this exclusion should not bias our results.

¹² A very small number of business newspapers in our sample, e.g. *Economic Daily*, despite their business orientation, function as official papers. In the next draft, we will separately identify these few *official* business newspapers and compare them with the remaining sample of *commercialized* business newspapers. Our current treatment of combining them into a single group of business newspapers should add noise rather than bias our results.

period. Our sample contains 60 newspapers controlled by 46 news groups at some point during our sample period.

3.3 Measurement of the tone and political slant of the domestic Chinese financial news article

We measure the tone and political slant of domestic news articles about China's listed firms at the article level. The next two sub-sections outline our measurement of these two characteristics.

3.3.1 Measurement of Tone

We measure the tone of a specific financial news article using a machine learning approach to implement linguistic content analysis. Prior research, such as Antweiler and Frank (2004), Das and Chen (2007), and Li (2010), has used a similar machine learning approach for measuring tone; this approach contrasts to the wordlist approach also used in prior research (see Henry and Leone (2015) for a discussion of the two approaches). Specifically, our approach involves an initial step of manually coding a subsample of 30,000 news articles sentence by sentence.¹³ Each sentence in the article is classified as having a “positive,” “neutral,” or “negative” tone, and the keywords used to make that assessment are recorded. The manually coded data are then input into a LIBSVM classifier algorithm for support vector machines to classify each sentence of the entire sample of the 1.77 million articles as positive, negative or neutral in tone. We use ICTCLAS (Institute of Computing Technology, Chinese Lexical Analysis System) to implement the word segmentation and part-of-speech tagging for the textual analysis of the Chinese articles. Following Tetlock, Saar-Tsechansky and Macskassy (2008) and Stockmann (2012), we measure the tone of each article ($Tone_{ijkl}$) as the number of positive sentences minus the number of

¹³ Our manual coding takes the following procedures: 1) We randomly assigned nine research assistants into three groups. 2) Each group of three research assistants was assigned 10,000 news articles randomly sampled from our full sample of 1.77 million corporate news articles. 3) For each group, their sampled news articles were uploaded to a specially-designed website where each research assistant was required to read each article sentence by sentence and to independently record a judgment about the tone of each sentence in each article. 4) We apply a majority principle to determine the sentiment of each sentence according to the judgments of three research assistants in the same group, and the recorded keywords are labeled with the same sentiment as the sentence.

negative sentences in the article, scaled by one plus the sum of the number of positive and negative sentences. We logarithmically transform this ratio to control for right skewness in the data (see Appendix A for all variable definitions).

Our measurement of *Tone* was selected given the characteristics of our research setting. First, there is no predefined wordlist because this is the first large sample textual analysis on tone using corporate news of China's listed firms.¹⁴ Second, the classifier algorithm in the machine learning approach takes into account the combinations of words and phrases when determining the tone, while textual analysis based on a wordlist simply counts up the number of positive and negative words. Although the classifier algorithm does not analyze the detailed structure and context of sentences in the article, making use of the correlations of words and phrases with the manually coded results can reduce classification errors associated with the wordlist method. Third, the initial steps of manually coding sample articles and applying machine learning algorithms allow us to adapt the tone measurement to the contextual nature of the Chinese language and its capital markets, minimizing methodological shortcomings highlighted in Loughran and McDonald (2014), such as an under-representation of negative (vs. positive) words in other popular dictionaries and borrowing words created in a different discipline, as well as difficulties translating English terms to their Chinese counterparts.

3.3.2 Measurement of Political Tags

We measure the political slant of a specific newspaper article based upon the relative frequency with which Chinese political keywords are included in the story. Specifically, the political slant of the article (*Political Tags_{ijkt}*) is measured as the td-idf realization of the article, where td-idf is the term frequency – inverse document frequency of the article with respect to these political keywords. Essentially, td-idf is a numerical statistic that captures the relative frequency with which a given set of words appear in the document, adjusted for the relative frequency of the word in the corpus, and is

¹⁴ Other than the language difference, because we expect a positive bias to financial news articles in our setting, we did not employ other commonly-used tone definitions which focus strictly on the number of negative words in the article (e.g., Gurun and Butler, 2012; Liu and McConnell, 2013; Jin, Xu and Wang, 2014).

frequently employed by search engines to identify a webpage's relevance for a given search term.¹⁵ We logarithmically transform the td-idf score to control for right skewness in this data.

Our list of Chinese political keywords is based upon the Dictionary of Scientific Development (Xi, 2008). This dictionary of Chinese political phrases represents the comprehensive list of political slogans included in official Chinese Communist Party economic policy documents between 1978 and 2008, and was created by the government to celebrate 30 years of economic reforms. By focusing on the presence, absence and frequency of these explicit political slogans in corporate news reports, we are able to directly link the content of the article to political aspects of the Chinese business environment. Additionally, because we are searching for well-defined, context-specific political phrases (in Chinese) that are essentially being reproduced and/or reiterated in the news article, we are able to overcome many of the dictionary-related methodological limitations associated with prior research and our *Tone* measure.

We assume that the use of political slogans in an article reflects the presence of pro-government political content (or political slant) in the news outlet's reporting of the listed firm, with greater usage of political slogans reducing the credibility of the news article. We expect to observe a positive relation between the article's *Tone* and *Political Tags* if both attributes are designed to help the media convey a positive (and politically congruent) message to the reader about the covered firm, the local economy, and/or the performance of the local government.

3.4 Descriptive evidence

3.4.1 Descriptive evidence: Sample of newspapers and newspaper articles

Table 1 provides descriptive statistics on our sample of newspapers and financial news articles, and highlights several key characteristics of China's newspapers. First, as would be expected given the growth in China's capital markets during the 2000's, we document a steady increase in the number of news articles dedicated to China's listed firms during our sample period. Interestingly, this growth

¹⁵ For robustness, we have also measured *Political Tags* using the number of political phrases included in the news article. All reported results are robust to this alternative measure.

appears to be driven by newspaper coverage decisions, not an overall expansion in the number of newspapers providing financial news coverage. Second, the vast majority of the financial news articles are published in commercially-oriented business papers; in our sample, 86.1% (13.9%) of corporate news articles were published in business (official) newspapers. Third, with respect to newspaper conglomeration, we can observe a general shift in the control structure of both official and business newspapers; this shift is most pronounced during the early years of our sample.

Fourth, panel C highlights the locality of our newspapers. As noted earlier, our sample of financial news articles are drawn from 47 unique official party papers and 56 unique business newspapers. These papers are split between 41 national newspapers (8 official and 33 business) and 62 local newspapers (39 official and 23 business). Interestingly, as reflected by the distribution of articles across these papers, most national newspapers are not controlled within a business group structure, while local governments strongly favor the use of the business group arrangement to allow their newspapers to achieve the party's joint political and market objectives. Lastly, this panel highlights potential selection issues with respect to coverage in our two newspaper article databases. Five provinces (Inner Mongolia, Jilin, Guizhou, Zinjiang and Tibet) are not represented in the sample; two additional provinces (Chongqing and Hunan) are not associated with an official newspaper and thirteen other provinces lack business newspapers in our study. Given these database coverage limitations, we are cautious to examine our main hypotheses using several alternative research methodologies to help mitigate concerns about potential selection biases in our sample.

3.4.2 Descriptive evidence: Tone and Political Tags

Table 2 presents descriptive evidence on the tone and political slant of Chinese newspaper articles about the country's listed firms. As documented in Panel A, the average tone is positive over our sample period and the average financial news article contains 0.183 political slogans.¹⁶ Articles published by

¹⁶ The distribution of *Political Tags* is extremely skewed. The median *Political Tags* realization is zero, and only 10.7% of articles contain one or more political slogans.

local newspapers exhibit a more positive tone and a greater frequency of political slogans than articles published in national newspapers. Conditional upon the newspaper's orientation, we observe that articles published by commercially-oriented business newspapers exhibit less positive tone and contain fewer political slogans than articles published in official newspapers. Lastly, as documented in panel B, the conglomeration of newspapers into a business groups significantly impacts both the tone of the article and frequency of political tagging, with official (business) newspapers experiencing an increase (decrease) in both attributes.¹⁷ Although all of these relations are consistent with our predictions, we caution that these univariate relations do not control for omitted firm, provincial, time period or article attributes that could be inducing the observed differences across settings.

4. Empirical analyses: Influence of newspaper commercialization and conglomeration reforms on the tone and political slant of Chinese financial news coverage

The first half of our paper examines how the commercialization of the media and subsequent conglomeration-related reforms affect the tone and political slant of news articles published about China's listed firms. Exploiting all available Chinese language domestic newspaper articles, our first set of estimations examines how newspaper commercialization impacts the tone and political slant of corporate news article (section 4.1). Our second set of analyses examines the influence of newspaper conglomeration on these attributes (section 4.2). Our third set of analyses examine how newspaper commercialization and conglomeration activities affect the tone and political slant of news coverage conditional upon both the political characteristics of the listed firm being reported on (section 4.3) and the prevailing incentives of local newspapers (section 4.4). These four sections exploit our full sample of Chinese news articles and utilize an unbalanced panel research design to identify the association between newspaper incentives and the tone and political slant of financial news coverage. The last section (section 4.5) discusses limitations and caveats to the preceding newspaper-article level analyses and presents

¹⁷ Untabulated analyses document that the correlation between *Tone* and *Political Tags* is approximately 0.15.

additional evidence using two alternative research designs: one that exploits differences across articles matched on a firm-month basis, and one that exploits conglomeration events (when local newspapers are combined into a business group) during our sample period.

4.1 Influence of newspaper orientation on the tone and political slant of financial news coverage

To examine the influence of newspaper orientation and commercialization incentives (i.e., official newspaper vs. business-oriented newspaper) on the relative tone and political slant of financial news coverage, we estimate variations of the following cross-sectional models using newspaper article-level data:

$$\begin{aligned}
 \textit{Tone}_{ijkt} \textit{ or } \textit{Political Tags}_{ijkt} = & \alpha + \textit{Year} + \textit{Month} + \textit{Industry} + \textit{Province} + \beta_1 \textit{Business Newspaper}_k \\
 & + \beta_2 \textit{National Newspaper}_k + \beta_3 \textit{Outside Province}_{ijkt} + \beta_4 \textit{SOE}_{i,t} + \beta_5 \textit{LogSize}_{it} + \beta_6 \textit{ROA}_{it} \\
 & + \beta_7 \textit{Market-to-Book}_{it} + \beta_8 \textit{Leverage}_{it} + \beta_9 \textit{Return}_{it} + \beta_{10} \textit{Article Length}_{ijkt} + \varepsilon_{ijkt}
 \end{aligned} \tag{1}$$

In these estimations, the dependent variable \textit{Tone}_{ijkt} ($\textit{Political Tags}_{ijkt}$) captures the relative tone of article i in newspaper k about firm j in month t (relative frequency of political rhetoric imbedded in article i in newspaper k about firm j in month t). $\textit{Business Newspaper}_k$ is an indicator variable equal to one if the article was published in a newspaper with a focus on reporting financial and economic news, zero otherwise. To the extent that commercialization increases incentives to respond to market demands and minimizes the impact of political incentives when publishing financial corporate news articles vis-à-vis incentives faced by official party newspapers, we expect a negative coefficient on $\textit{Business Newspaper}$. We also include a set of indicator variables to capture the effects arising from the locality of the newspaper. Central government newspapers are less sensitive to local political incentives to positively bias news than municipal or provincial newspapers (because central government newspapers have greater political power and legitimacy). Also, it is an unwritten rule in China's politics that a politician never criticizes his/her superior; as a result, a central government newspaper can be more critical about local SOEs than the local government newspapers. $\textit{National Newspaper}_k$ is an indicator variable equal to one if the newspaper is controlled by either a central government entity or national party organization, zero

otherwise. Similarly, local newspapers are expected to report more (less) favorably on local (non-local) firms. That is, local newspapers are less critical of local firms (especially SOEs) because of strong incentives to please local government officials, but it is condoned or even encouraged to report negatively on firms domiciled outside its locality. $Outside\ Province_{ijkt}$ is an indicator variable equal to one if the listed firm is located outside the local newspaper's province, zero otherwise.

We also include firm-level control variables (*Log Size*, *ROA*, *Market-to-book*, *Leverage*, and *Return*) to capture fundamental characteristics expected to influence the tone or political slant of media coverage over the reporting period. The indicator variable *SOE* is included to capture a positive political bias introduced because the covered firm is state-owned. Because longer articles afford the reporter greater opportunity to soften a negative news story, wax poetic about good news, or include economic policy issues in the article, we include the log number of sentences in the article ($Article\ Length_{ijkt}$) to control for any systematic differences in the measurement of our dependent variables arising from the length of the underlying article. We include year, month, and industry fixed effects to capture systematic news shocks, systemic political factors and/or seasonality in our data. We include provincial fixed effects to control for differences in underlying institutions, macro-economic conditions, and transparency incentives across these regions.

Table 3 presents select coefficients (and t-statistics) from various estimations of these models.¹⁸ Consistent with our prediction in *H1*, we find that articles published in commercial, business-oriented newspapers exhibit less positive tone and less political tagging than corporate news articles published official newspapers. This result is new to the literature on financial news coverage in China, and reinforces earlier commercialization findings and case studies suggesting that official news outlets are positively biased in their news coverage of political events vis-à-vis commercialized news outlets (both in China and globally). This commercialization effect is robust within subsets of both national and local newspapers and after including controls for firm characteristics that could drive selection issues across the

¹⁸ All t-statistics from multivariate estimations reported in the paper are based on standard errors clustered by firm.

newspaper types, suggesting that our commercialization tests are capturing factors correlated with the political vs. market-oriented objectives of the respective media outlet.

These estimations reveal several other interesting attributes of financial news coverage in China. First, national newspapers articles are less positively biased and contain fewer political tags than articles published in local newspapers. Second, the tone and political slant of local newspapers is influenced by whether the covered firm is domiciled in the same province as the newspaper, with local firms receiving more favorable coverage. Third, large firms and firms with strong recent financial and stock-return performance are associated with more favorable coverage and political slant. Lastly, articles about SOEs tend to have a more positive tone and greater political slant than non-state-owned entities.

4.2 Influence of conglomeration on the relative tone and political slant of financial news articles

Our next analysis examines the impact of newspaper conglomeration activities on corporate news reporting in China. As discussed earlier, conglomeration is a method for the government to retain control over a fracturing newspaper industry while responding to both market demands for credible news and commercialization incentives. Given that conglomerated newspaper groups are state sanctioned, being included in a conglomerate legitimizes the business newspaper within the political system, allowing the paper greater latitude to achieve its market-oriented goals. Similarly, being included in a news group reduces the impact of commercial incentives and competition on official newspaper's reporting activities. If effective, conglomeration will allow the state to achieve two objectives: increase credibility of business news and increase the ability of the state to communicate its message to the public through these two separate newspaper channels.

To examine the impact that the inclusion of newspaper into a business group has on the relative tone and political slant of its financial news articles, we estimate variations of the following cross-sectional models using newspaper article-level data:

$$Tone_{ijkt} \text{ or } Political\ Tags_{ijkt} = \alpha + Year + Month + Industry + Province + \beta_1 Conglomerated_{kt} + \beta_2 Business\ Newspaper_k + \beta_3 Business\ Newspaper_k * Conglomerated_{kt} + \beta_4 National\ Newspaper_k$$

$$\begin{aligned}
& + \beta_5 \text{Outside Province}_{ijkt} + \beta_6 \text{SOE}_{i,t} + \beta_7 \text{LogSize}_{it} + \beta_8 \text{ROA}_{it} + \beta_9 \text{Market-to-Book}_{it} \\
& + \beta_{10} \text{Leverage}_{it} + \beta_{11} \text{Return}_{it} + \beta_{12} \text{Article Length}_{ijkt} + \varepsilon_i, \tag{2}
\end{aligned}$$

In these estimations, *Conglomerated_{kt}* is an indicator variable equal to one if the article was published in a newspaper that is controlled by a news group in year t, zero otherwise. All other variables are as defined in Appendix A. Our estimations of equation 2 are effectively unbalance panel regressions with the coefficient on *Conglomerated* capturing both the effects of newspapers switching control structure during our sample period and the baseline effects associated with being a conglomerated newspaper throughout our sample.

Table 4 presents select coefficients (and t-statistics) from various estimations of these models. Consistent with our predictions in *H2*, we observe that differences in tone and political slant between business and official newspapers increases after the conglomeration. Specifically, we find that the impact of the conglomeration on each of the two types of newspapers is dependent upon the objective of the underlying newspapers. Articles published in conglomerate-affiliated business newspapers have a *less* positive tone and contain fewer political slogans than non-affiliated business newspapers. To the extent that reductions in *Tone* and *Political Tags* are eliminating positive “biases” in the news reporting, the combined evidence is consistent business newspapers being more credible than official newspapers and, more importantly, with conglomeration serving as an effective mechanism to increase the credibility of financial news reporting activities of commercialized business newspapers. In contrast, conglomerate-affiliated official newspapers generate reports that are incrementally *more* positively biased and have a greater frequency of including political slogans than articles published by official newspapers not included in a news group. This increase is consistent with conglomerated newspapers more effectively utilizing their resources and official papers, in particular, better serving their mouthpiece role in China.

These effects are robust to utilizing all newspapers articles (second column), separate estimations using samples of national and local newspapers (columns 3 and 4), and separate estimations for samples of official and business newspapers (columns 5 and 6). Interestingly, conglomeration effects for national

newspapers are significant larger than for newspapers controlled by local government and party units. Together, evidence suggests that conglomeration is an effective mechanism for the government to strike a delicate balance between liberalizing and enhancing the credibility of state-controlled business news coverage and maintaining (and perhaps tightening) her control over the media as broadcasting outlets.

4.3 Influence of listed firms political characteristics on the tone and political content of newspaper articles after conglomeration

In this section, we extend our primary analyses conditional upon two political characteristics of listed firms – state ownership and degree of political connectivity - that are expected to create incentives for newspapers to positively bias their coverage. Our earlier estimations reveal that articles written about state-owned companies are associated with a more positive tone and greater use of political slogans than articles written about private firms. This analysis will examine whether conglomeration incentives differentially impact the coverage of state owned and politically connected firms.

Specifically, we estimate variations of the following cross-sectional models conditional upon the orientation of the newspaper:

$$\begin{aligned}
 \text{Tone}_{ijkt} \text{ or } \text{Political Tags}_{ijkt} = & \alpha + \text{Year} + \text{Month} + \text{Industry} + \text{Province} + \beta_1 \text{Conglomerated}_{ijkt} \\
 & + \beta_2 \text{Conglomerated}_{ijkt} * \text{SOE}_{it} + \beta_3 \text{Conglomerated}_{ijkt} * \text{Connected}_{it} + \beta_4 \text{SOE}_{i,t} + \beta_5 \text{Connected}_{it} \\
 & + \beta_6 \text{National Newspaper}_{ijkt} + \beta_7 \text{Outside Province}_{ijkt} + \beta_8 \text{LogSize}_{it} + \beta_9 \text{ROA}_{it} + \beta_{10} \text{Market-to-Book}_{it} \\
 & + \beta_{11} \text{Leverage}_{it} + \beta_{12} \text{Return}_{it} + \beta_{13} \text{Article Length}_{ijkt} + \epsilon_i, \quad [3]
 \end{aligned}$$

In these estimations, *Connected_{it}* is an indicator variable equal to one if the firm’s balance sheet at the end of year t reflects long-term debt issued from a state bank, zero otherwise. We use the presence or absence of state-bank financing as a proxy for whether or not a firm is politically connected given the highly politicized nature of access to external capital in China during our sample period.¹⁹

¹⁹ Prior research documents that politically connected firms in China are more likely to be granted approval to issue seasoned equity, engage in a rights issuance, issue public debt securities or access state bank financing (e.g., Allen, Qian, and Qian, 2005; Chen and Yuan, 2004; Ayyagari, Demircuc-Kunt, and Maksimovic, 2013).

Table 5 presents select coefficients (and t-statistics) from various estimations of equation (3). These estimations reveal two key findings. First, conglomeration impacts the news coverage of firms lacking political nexus to the government as predicted in *H2*, with conglomeration associated with an average reduction (increase) the positive tone and political content of business (official) newspaper articles. Second, conglomeration results in an incrementally stronger reduction in the positive tone afforded SOEs (*vis-à-vis* non-SOEs) in the business press. In other words, conglomerated business newspapers seem to be removing the general positive bias previously afforded to SOEs by non-conglomerated business newspapers. This sharper (incremental) reduction in *Tone* and *Political Tags* is consistent with business newspapers becoming less sensitive to political pressures after conglomeration. Analogously, we observe that the increase in positive coverage by official newspapers after conglomeration is incrementally stronger in articles written about politically connected firms (*vis-à-vis* articles published about non-connected firms); this relative effect is consistent with official newspapers becoming more politically oriented after conglomeration.

4.4 Incentives of local newspapers: News attributes conditional upon the locality of the covered firm

This section examines, in greater detail, the influence of a commercialized business press and conglomeration activities on the tone and political content of newspaper articles published by local newspapers. As documented in Tables 3 and 4, the effects of commercialization on *Tone* and *Political Tags* are roughly equivalent for local and national newspaper, but the effects of conglomeration are significantly weaker among local newspapers. One reason for this attenuation relates to the degree of legitimacy awarded these different newspapers. Central government-controlled business newspapers have political legitimacy and only need to cater to the objectives of the central government. In contrast, locally-owned newspapers (although legitimized during the conglomeration process) are subject to a web of political / administrative oversight and must cater to wider set of political incentives. As discussed in section 2.1, a local newspaper is subject to a vertical chain of commands from the central government to the corresponding local unit that serves as its sponsor, and it also reports horizontally to the local

government where it is located. As a result, local newspapers have an incentive to (or be required to) provide favorable reports on local businesses, and yet may have latitude to provide more balanced or negative reporting about firms domiciled outside their province. We test these arguments by examining the influence of commercialization and conglomeration activities on the content of articles produced by local (i.e., non-national) newspapers, conditional upon the locality of the covered firm.

Table 6 presents select coefficients from various estimations of equations (2) conditional upon the locality of the newspaper and covered firm. These estimations reveal several interesting patterns. First, focusing on the locality of the listed firm, we continue to observe that local newspapers are more critical of non-local firms, regardless of the newspaper's commercial orientation, with the effect incrementally stronger amongst official newspapers. More importantly, our evidence suggests that because business newspapers are already more critical of non-local firms, the introduction of conglomeration incentives primarily acts to remove the positive bias previously afforded to local firms, with the tone of non-local firms decreasing only marginally as a result of conglomeration. In other words, conglomeration levels the treatment of local and non-local firms in the business press. In contrast, conglomeration enhances the positive bias amongst all firms covered by official newspapers, with the shift in tone incrementally stronger among non-local firms. This pattern is consistent with local official newspapers partially (but not fully) unravelling some of the negative bias afforded to non-local firms before conglomeration. That said, we observe no difference with respect to how the firm's locality affects the political content of articles after conglomeration; in general, local firms continue to receive preferential political content than non-local firms.

5 Alternative research designs: Influence of conglomeration on tone and political slant

5.1 Alternative Empirical Specification: Matched firm-month analyses

The preceding analyses exploit all available Chinese language newspaper articles about domestic listed firms. However, several empirical concerns exist with this analysis. First, there is a selection bias in archive coverage. As documented in Table 1, not all provinces or all newspapers (official or business)

appear to be included in the archives. To the extent this selection bias is non-random, there is a concern that our results are driven by this unobservable selection biases for official and non-official newspapers. Second, articles themselves are endogenously produced by the media, so our results could simply reflect selection biases with respect to the decision to publish an article. For example, official and business newspapers may choose to cover different types of firms or choose to cover firms at different points in time (e.g., conditional upon the sign and magnitude of the news being conveyed). Finally, the average positive tone in our sample may not reflect a positive bias, per se, but instead be a function of our dictionary methodology (incomplete or biased dictionary) or newspaper coverage decisions (e.g., only write about firms with good news).

To address these concerns, we employ a methodology that captures the differences in average newspaper article tone and political content between official and professional newspapers for a given listed firm in a specific calendar month. Specifically, we measure:

$$Diff_Tone_{it} = Average\ Tone_{it}^{Official} - Average\ Tone_{it}^{Business}$$

$$Diff_Political\ Tags_{it} = Average\ Political\ Tags_{it}^{Official} - Average\ Political\ Tags_{it}^{Business}$$

where $Average\ Tone_{it}$ ($Average\ Political\ Tags_{it}$) is the arithmetic average of $Tone_{ijkt}$ ($Political\ Tags_{ijkt}$) for all articles published about firm i in calendar month t in either official or business-oriented newspapers, respectively. The advantage of this methodology is that we are capturing sets of articles published about the same firms over the same time window, thus increasing the likelihood that the newspapers are writing about the same economic performance and events and minimizing selection biases arising at the newspaper level. This methodology is similar to Engelberg and Parson (2011).

Table 7, panel A presents descriptive statistics on these average differences. Consistent with earlier inferences supporting $H1$, we continue to observe that articles published in official newspapers exhibit a more positive tone and greater political content than articles published in business newspapers (i.e., both average $Diff_Tone$ and $Diff_Political\ Tags$ are greater than zero). The effect exists across both national and local newspapers, with the effect again moderately stronger amongst national newspapers.

To test the effects of conglomeration on reporting behavior, Table 7, panel B presents select coefficients from various estimations of the following cross-sectional models:

$$\begin{aligned} \text{Diff_Tone}_{it} \text{ or } \text{Diff_Political Tags}_{it} = & \alpha + \text{Year} + \text{Month} + \text{Industry} + \text{Province} + \beta_1 \% \text{Conglomerated}_{it} \\ & + \beta_2 \% \text{Outside}_{it} + \beta_3 \% \text{Conglomerated}_{it} * \text{Outside}_{it} + \beta_4 \% \text{Conglomerated}_{it} * \text{SOE}_{it} + \beta_5 \text{SOE}_{i,t} + \beta_6 \text{LogSize}_{it} \\ & + \beta_7 \text{ROA}_{it} + \beta_8 \text{Market-to-Book}_{it} + \beta_9 \text{Leverage}_{it} + \beta_{10} \text{Return}_{it} + \beta_{11} \text{Relative Article Length}_{ijkt} + \varepsilon_i \quad [4] \end{aligned}$$

In these estimations, *% Conglomerated* is the percentage of articles about firm *i* published in newspapers controlled within a news group structure in month *t*, and *% Outside* is the percentage of articles written by newspapers outside the firm's province. The explanatory variable *Relative Article Length* measures differences in the average length of official and professional newspaper articles. To the extent that conglomeration leads to official and business newspapers achieving their separate objectives (i.e., increases the divergence in the tone and political content of news articles, as documented in Table 4), we expect *Diff_Tone* and *Diff_Political Tags* to be increasing in *% Conglomerated*. To the extent that official newspapers are incrementally more critical of non-local firms than non-local business newspapers, we expect *Diff_Tone* and *Diff_Political Tags* to be decreasing in *% Outside*.

These firm-month estimations confirm the basic inference found in Table 4 and provide additional support to our *H2*, namely, conglomeration increases the spread in relative tone and political content observed between official and business newspapers. These tests also reconfirm that the divergence between business and official newspapers is much larger (smaller) when the covered firm is domiciled within (outside) the reporting newspaper's province. Finally, these specifications generated inconsistent evidence on whether conglomeration effects vary based upon the state's ownership or locality of the covered firm.

5.2 Alternative empirical specification: Difference-in-difference approach around conglomerations

To specifically isolate the incremental effects of newspaper conglomeration activities, we employ a difference-in-difference methodology that exploits changes in the newspapers control structure during

our sample period. Specifically, we re-estimate variants of equation (2) using only articles published in local newspapers that are conglomerated into a media business group between 2000 and 2010.²⁰ In this cross-sectional specification, the indicator variable *Conglomerated* captures the shift in *Tone* and *Political Tags* arising from the change in control structure (i.e., post-conglomeration related incentives).

The advantage of this methodology is our ability to attribute shifts in article characteristics to incentives created via newspaper conglomeration. The downside is that our analysis is limited to a subsample of 15 local newspapers (controlled by seven news groups). This reduction is the result of limited conglomeration activity after 1999 and because this research design requires at least one official newspaper and one business newspaper to have been conglomerated into the same business group in the year of formation. There is also a concern that we may lack power to detect conglomeration effects in this difference-in-difference specification because (as noted in Table 4) local newspapers exhibit lower sensitivity to conglomeration incentives than national newspapers. Additionally, the conglomeration activity we observe in this analysis is occurring during later stages of the China's media reforms. Because the timing of provincial-level reforms is self-selected, local governments engaging in this activity after 2000 are inherently different than local governments engaging in media reforms earlier.

We present select coefficients (and t-statistics) from these various estimations in Table 8. For each dependent variable, the first estimation uses the full subsample of local newspapers; the next two estimations use subsamples of official and business newspapers respectively. In these separate estimations conditional upon newspaper orientation, we include newspaper fixed effects to control for unobserved heterogeneity of the newspaper. After allowing separate estimations by newspaper orientation, we continue to find evidence supporting *H2*. Specifically, we observe that the effect of conglomeration activity is to attenuate the positive tone and political content found in business newspapers; in contrast, these tests suggest that this sample of local official newspapers kept the status quo following conglomeration. Although these official newspaper effects are less pronounced than those

²⁰ We do not include newspapers that are conglomerated in 2000 to ensure that each newspaper has at least one year's worth of pre-conglomeration articles in this sample.

documented in the full sample, we again caveat that this particular analysis is based on a small sample of late reforming local governments. For these localities, it is possible that official newspapers articles were already very positively biased, hence diminishing one of the political incentives to form news groups.

6. Market evidence on the relative credibility of business oriented and conglomerated newspapers

The preceding analyses document that the commercialization and conglomeration of newspapers in China has impacted the positive tone and political content of news articles about China's listed firms. In this section, we examine whether these actions have improved the credibility of financial news articles, as reflected through the characteristics of the stock price reaction around these article's publication (i.e., hypotheses *H3* and *H4*). Our first set of tests, focusing on the absolute magnitude of two-day stock returns around the publication of a news article $[0,+1]$, are based on the assumption that more "credible" newspaper articles will be associated with a stronger market reaction to the article. Our second set of tests examine whether the relations between the tone and political content of the newspaper article and publication period stock returns varies by the commercialization and conglomeration incentives of the reporting newspaper.

6.1 Absolute market reaction around publication of newspaper articles

Our first set of tests examines the absolute market reaction to the publication of a corporate news article about China's listed firm. Market reactions are measured as the absolute value of the two-day buy-and-hold stock return $[0,+1]$ of the covered firm following the publication of a corporate news article. Day 0 refers to the date of article publication; day +1 is the first trading day after date of publication. The firm's raw return is the two-day compounded buy-and-hold return over the publication window $[0,+1]$. The firm's market adjusted return is the raw return minus the cumulative buy-and-hold value-weighted market return over the same window. If an article is published on a non-trading day (e.g., weekend, holiday period), we measure the market reaction as the absolute return generated on the first trading day after publication.

Table 9 presents average absolute publication window returns for our sample of news articles, conditional upon the newspapers orientation and conglomeration. This descriptive data reveals that the absolute market reaction around the publication of a business newspaper article is significantly larger than the absolute reaction around the publication of an official newspaper article. Moreover, the publication of a conglomerated newspaper article, regardless of the newspaper's orientation, is associated with a larger market response than for articles published by a newspaper outside the news group. However, these relations need to be interpreted with caution as these descriptive statistics do not control for differences in the underlying characteristics of the listed firm and daily return volatility.

To determine whether the publication of news articles about Chinese listed firms has an incremental impact on stock price volatility, we examine whether days associated with the publication of a news article are associated with larger absolute stock price movements than days without an article publication. Specifically, we estimate variations of the following cross-sectional models using all available daily stock return data for our sample of firm-year observations:

$$\begin{aligned}
|Return_{it}| \text{ or } |Market\ Adjusted\ Return_{it}| = & \alpha + Year + Month + Industry + Province + \beta_1 Official\ Article_{it} \\
& + \beta_2 Business\ Article_{it} + \beta_3 Conglomerated_{ijkt} + \beta_4 Non-Conglomerated_{ijkt} \\
& + \beta_5 Official\ Article_{it} * Conglomerated_{it} + \beta_6 Business\ Article_{it} * Conglomerated_{it} + \beta_7 |Market\ Return_t| \\
& + \beta_8 LogSize_{it} + \beta_9 Market-to-Book_{it} + \beta_{10} SOE_{i,t} + \beta_{11} Earnings\ Announcement_{it} + \varepsilon_i \text{ [5]}
\end{aligned}$$

In this model, the dependent variable is the absolute value of firm i's daily raw stock return ($|Return_{it}|$) or daily market-adjusted stock return ($|Market\ Adjusted\ Return_{it}|$) on trading day t. $Official\ Article_{it}$ ($Business\ Article_{it}$) is an indicator variable equal to one if a news article about firm i was published in any official newspaper (business newspaper) on day t or t-1 (or between day t and day t-1), zero otherwise. $Conglomerated_{i,t}$ ($Non-Conglomerated_{i,t}$) is an indicator variable equal to one if an article about firm i was published in any conglomerated (non-conglomerated) newspaper on day t or t-1 (or between day t and day t-1), zero otherwise. $Earnings\ Announcement_{it}$ equals one if firm i issued an earnings report on day t or

day t-1, zero otherwise. All other variables are defined in Appendix A. T-statistics derived using clustered standard errors by firm are presented in parentheses.

Table 10 presents select coefficients (and t-statistics) from various estimations of equation (4). The first set of columns presents coefficients from estimations that explicitly include firm characteristics; the second set of columns present coefficients from the estimation of equation (4) after replacing firm-level characteristics with firm fixed effects. Together, these two sets of estimations yield several insights. First, consistent with the predictions of *H3*, we observe that articles published in business newspapers move market prices more than articles published in official newspapers (effectively increase volatility by 10%), consistent with commercialized papers conveying more credible, value relevant information than official party papers. Second, consistent with *H4*, we observe that newspaper conglomeration incrementally increases the credibility of the business press (as denoted by the significant coefficient on the interaction term *Business Newspaper*Conglomerated*); however, conglomeration seems to have no reliable impact on the credibility of official newspapers.

Table 11 replicates these analyses after restricting our observations to the absolute two-day market reactions [0,+1] to article publications (i.e., $|Publication Return_{ijkl}|$ and $|Market-Adjusted Publication Return_{ijkl}|$). These estimations generate inferences similar to those reported in Table 11, with one exception. We now find that the absolute market reaction to articles published by conglomerated official newspapers is significantly lower than the reaction to articles published by non-conglomerated official newspapers. This decline is consistent with these articles being less credible than official articles published before conglomeration. Taken together, Tables 11 and 12 provide evidence consistent with the predictions of *H3* and *H4* on the effects of media reforms on perceived market credibility.

6.2 Information content of the tone and political content of Chinese newspaper articles

Our second set of tests provide the second level analyses on how much the market gives credence to each level of tone and political content of published newspaper articles – as captured by the stock price response to these attributes – and whether these relations vary by the commercialization and

conglomeration-related incentives of the reporting newspaper. To the extent that the tone of the article is a reflection of the new information conveyed, we would expect a positive correlation between *Tone* and stock returns around the publication of the article. Similarly, to the extent that the political slant of the article introduces noise into the article (i.e., is designed to obfuscate the true nature of the underlying news), we would expect a negative relation between *Political Tags* and the absolute market reaction to the news. Because politically tagging conveys neither positive nor negative economic information, we do not predict a relation between Political Tags and realized returns.

To examine these relations, we estimate variations of the following cross-sectional models:

$$\begin{aligned}
& \textit{Publication Return}_{ijkt} \textit{ or Market Adjusted Publication Return}_{ijkt} = \alpha + \textit{Year} + \textit{Month} + \textit{Industry} \\
& + \textit{Province} + \beta_1 \textit{Tone}_{ijkt} + \beta_2 \textit{Tone}_{ijkt} * \textit{Business Newspaper}_k + \beta_3 \textit{Tone} * \textit{Conglomerated}_{kt} \\
& + \beta_4 \textit{Tone} * \textit{Business Newspaper}_k * \textit{Conglomerated}_{kt} + \beta_5 \textit{Business Newspaper}_k + \beta_6 \textit{Conglomerated}_{kt} \\
& + \beta_7 \textit{Business Newspaper}_k * \textit{Conglomerated}_{kt} + \beta_8 \textit{Market Return}_t + \beta_9 \textit{LogSize}_{it} + \beta_{10} \textit{Market-to-Book}_{it} \\
& + \beta_{11} \textit{SOE}_{i,t} + \beta_{12} \textit{Earnings Announcement}_{it} + \varepsilon_i
\end{aligned} \tag{6}$$

and

$$\begin{aligned}
& | \textit{Publication Return}_{ijkt} | \textit{ or } | \textit{Market Adjusted Publication Return}_{ijkt} | = \alpha + \textit{Year} + \textit{Month} + \textit{Industry} \\
& + \textit{Province} + \beta_1 \textit{Tags}_{ijkt} + \beta_2 \textit{Tags}_{ijkt} * \textit{Business Newspaper}_k + \beta_3 \textit{Tags}_{ijkt} * \textit{Conglomerated}_{kt} \\
& + \beta_4 \textit{Tags} * \textit{Business Newspaper}_k * \textit{Conglomerated}_{kt} + \beta_6 \textit{Business Newspaper}_k + \beta_7 \textit{Conglomerated}_{kt} \\
& + \beta_8 \textit{Business Newspaper}_{it} * \textit{Conglomerated}_{kt} + \beta_9 \textit{Tone}_{ijkt} + \beta_9 \textit{Market Return}_t + \beta_{10} \textit{LogSize}_{it} \\
& + \beta_{11} \textit{Market-to-Book}_{it} + \beta_{12} \textit{SOE}_{i,t} + \beta_{13} \textit{Earnings Announcement}_{it} + \varepsilon_i
\end{aligned} \tag{7}$$

In these equations, the dependent variables are the realized and absolute value, respectively, of firm *i*'s cumulative daily raw stock return (*Publication Return_{ijkt}*) or market-adjusted stock return (*Market Adjusted Publication Return_{ijkt}*) over the two day publication window [0,+1], as defined above. All other variables are defined in the Appendix.

Tables 12 and 13 present select coefficients from the estimations of equations (6) and (7), respectively. Consistent with the Tone of the published article reflecting real economic information, we

find that *Tone* is positively associated with both measures of realized returns. More interestingly, we observe that this relationship is incrementally stronger for commercialized business newspapers. Such a strengthening of the relation suggests that business newspapers are more credible and are better at meeting the market's information needs than official newspapers. This result provides support to our *H3* that commercialization increases market's credulity towards the tone of the articles. However, we observe that the market perception of tone is not affected by conglomeration, indicating that our *H4*, using this second set of tests, is refuted.

Focusing on the political content of these articles, we observe that the absolute market response to publication is decreasing in *Political Tags*, suggestive that politicized articles are viewed as less credible than other articles. After controlling for differences in *Tone*, we find only very limited evidence suggesting that the market's perception of political content is affected by the commercialization and conglomeration incentives of the reporting newspaper. Instead, as documented in the sections 4 and 5, newspapers are likely to contain different levels of positive tone and political content, and it is through this main mechanism that differences in adverse price consequences are expected to arise.

7 Conclusion

This paper provides evidence that media reforms associated with the introduction of market incentives and the formation of commercial news groups are capable of improving the credibility of corporate news reported by state controlled newspapers. That is, we provide evidence suggesting that autocratic governments can use media marketization reforms to enable select state-owned newspapers to fulfill an information intermediary role without giving up ownership control of the media and risking political instability.

Our tests focus on two recent media reforms in China. Through commercialization, the Chinese government has created state controlled business newspapers that primarily respond to market demands. This contrasts with the official newspapers, which predate the media reforms and mainly serve as the government's mouthpiece. The other major media reform involves the formation of news groups through

merging official and commercialized newspapers of the same province or major city into a single news group. This conglomeration of newspapers has dual missions of tightening government control of the then fragmented news market, with official and commercialized newspapers competing fiercely with each other, and further enhancing the commercial and professional practice of newspapers through management by commercial news groups.

Our results show that business newspaper articles have less positive bias and political slant than that of the official newspaper articles, with these differences larger in conglomerated newspapers than non-conglomerated newspapers. The results are robust to alternative research designs that attempt to address selection biases and potential endogeneity concerns in the sample. We also observe that the perceived credibility of the corporate news, as measured by stock price response to the news articles, is higher for business than official newspapers, and that this difference is greater in conglomerated newspapers than non-conglomerated newspapers. Finally, the stock return evidence suggests that the market even gives more credence to the positive tone and political content of business newspapers than official newspapers.

The evidence in this study offers a successful example of how a government uses marketization reforms of the press to enhance the credibility of corporate news. These results have important implications for other emerging economies where many of their governments are autocratic and a large portion of the press, if not all, is under state control (Djankov et al., 2003). Future research should focus on whether the observed increase in news credibility significantly enhances the information environment of the capital market in China. For example, do these news articles convey as much information as news articles published outside China? Did these reforms reduce information asymmetry of the listed firms and/or improve the stock price formation process? Is the improvement in information environment mainly concentrated in the SOEs or non-SOEs or both? Are there other institutional constraints that hamper the press' role in serving as an information intermediary in China?

Another future extension is to understand the types of information being conveyed in these various types of news articles. Although the official newspapers are found to have more positive bias or

political slant, our results show that the stock market reactions to these articles have economic and statistical significance. Does the political content of official news articles convey information to the market, and under what conditions do they have information value? Do these articles convey government policy news that impacts not only the firm being mentioned in the article but the industry in which the firm operates? As compared with official newspapers, do business newspapers focus more on firm specific information and convey less policy or macro-economic news? Answering these questions using our corporate news dataset can further enhance our understanding in how political and market forces shape the reporting incentives of newspapers and their role as an information intermediary in an emerging market.

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Appendix A

Definition of variables

Variable	Definition of Variable
$Tone_{ijkt}$	The natural logarithm of one plus the ratio of the number of positive sentences minus the number of negative sentences about a listed firm in a specific financial news article, scaled by one plus the sum of positive and negative sentences.
Political Tags $_{ijkt}$	The natural logarithm of one plus the frequency of political keywords appearing in the article. The political keywords are from Dictionary of Scientific Development (Edit by J. Xi, 2007), available at http://30.people.com.cn/GB/134884/ . The frequency, measured as the article's tf-idf (term frequency-inverse document frequency) is a numerical statistic that reflects how important a word is to a document. The tf-idf value increases proportionally to the number of times a word appears in the document, but is offset by the frequency of the word in the corpus.
Diff_Tone	The difference in the average <i>Tone</i> between official and business newspapers in a given firm-month. Measured as the average article <i>Tone</i> about firm <i>i</i> in month <i>t</i> in official newspapers minus the average article <i>Tone</i> in business newspapers over the same month.
Diff_Political Tags	The difference in the average <i>Political Tags</i> between official and business newspapers in a given firm-month. Measured as the average article <i>Political Tags</i> about firm <i>i</i> in month <i>t</i> in official newspapers minus the average article <i>Political Tags</i> in business newspapers over the same month.
Official Newspaper $_k$	An indicator variable equal to one if the news article appeared in an official party newspaper, zero otherwise.
Business Newspaper $_k$	An indicator variable equal to one if the news article appeared in a business newspaper, zero otherwise.
Conglomerated $_{kt}$	An indicator variable equal to one if the newspaper is a part of a commercial news group at the end of year <i>t</i> , zero otherwise.
National Newspaper $_k$	An indicator variable equal to one if the newspaper is owned by the central government or national party organization, zero otherwise.
Local Newspaper $_k$	An indicator variable equal to one if the newspaper is owned by a local government entity or local party organization, zero otherwise.
Outside Province $_{ijkt}$	An indicator variable equal to one if the firm covered in the news article is located outside the province of the local newspaper, zero otherwise. Firms and local newspapers are assumed to be domiciled in the provinces where their headquarters are located.
SOE $_{it}$	An indicator variable equal to one if the company is ultimately controlled by either the central or local government. We identify a firm as being state-controlled if the state owns greater than 20% of the firm's equity in year <i>t</i> .
Firm Size $_{it}$	Log of the firm's total market value of equity at the end of fiscal year <i>t</i> .
ROA $_{it}$	The firm's return on assets, measured as net income in year <i>t</i> scaled by total assets at the end of fiscal year <i>t</i> .
Market-to-book $_{it}$	Ratio of the firm's market value of equity to book value of equity at the end of year <i>t</i> .
Leverage $_{it}$	Ratio of the firm's long-term debt to shareholder's equity at the end of year <i>t</i> .
Return $_{it}$	Annual market-adjusted stock return for the firm in year <i>t</i> .
Article Length $_{ijkt}$	Log of the number of sentences contained in a given financial news article about firm <i>i</i> in newspaper <i>k</i> in time period <i>t</i> .
Connected $_{it}$	Indicator variable equal to one if the firm's balance sheet at the end of fiscal year <i>t</i> reflects long-term debt issued from a state bank, zero otherwise.
% Commercial	Percent of firm-month articles published in conglomerated newspaper.
% Outside	Percent of firm-month articles published in a local newspapers outside the province of the listed firm.

Appendix B

Sample of listed firms appearing in domestic Chinese newspaper articles

This appendix provides descriptive evidence on the firms and firm-year observations included in our analyses.

Panel A: Distribution of firm-year observations over time

Year	# of Firm	Percent
2000	922	6.45
2001	1,056	7.38
2002	1,127	7.88
2003	1,196	8.36
2004	1,249	8.73
2005	1,328	9.29
2006	1,337	9.35
2007	1,378	9.64
2008	1,491	10.43
2009	1,564	10.94
2010	1,652	11.55
Total	14,300	100

Panel B: Descriptive statistics on listed firms (firm-years)

	N	Mean	Median	Std. Dev.	P25	P75
SOE	14,300	0.674	1.000	0.469	0.000	1.000
Size	14,300	14.815	14.706	1.046	14.106	15.391
ROA	14,300	0.022	0.030	0.084	0.009	0.056
Market-to-Book	14,300	0.524	0.507	0.270	0.362	0.642
Leverage	14,300	0.028	-0.060	0.663	-0.224	0.152
Return	14,300	3.239	3.178	1.073	2.565	3.850

Table 1
Distribution of domestic Chinese newspaper outlets and corporate news articles

This table presents descriptive evidence on the distribution of domestic Chinese newspaper outlets and articles about Chinese listed firms over time (panels A and B) and across localities (panel C). Newspaper articles were gathered from two commercial databases of domestic Chinese language newspaper and magazine articles: Newswise and China Financial Newspaper Searching System. Due to database limitations before 2000, we only use domestic newspaper articles published about China's listed firms between 2000-2010 that are included in these databases.

Panel A: Distribution of domestic Chinese newspaper outlets over time

Year	All Newspapers	Official Newspapers			Business Newspapers		
		All Newspapers	Conglomerate Newspapers	Non-Conglomerate Newspapers	All Newspapers	Conglomerate Newspapers	Non-Conglomerate Newspapers
2000	72	38	10	28	34	3	31
2001	79	38	14	24	41	8	33
2002	73	36	21	15	37	9	28
2003	90	45	25	20	45	13	32
2004	85	41	26	15	44	17	27
2005	85	41	25	16	44	18	26
2006	76	35	21	14	41	17	24
2007	74	33	22	11	41	15	26
2008	87	45	30	15	42	16	26
2009	71	35	25	10	36	15	21
2010	51	22	17	5	29	14	15
Total	843	409	236	173	434	145	289

Panel B: Distribution of corporate news articles over time

Year	All Newspapers	Official Newspapers			Business Newspapers		
		All Newspapers	Conglomerate Newspapers	Non-Conglomerate Newspapers	All Newspapers	Conglomerate Newspapers	Non-Conglomerate Newspapers
2000	70,749	11,686	3,598	8,088	59,063	1,327	57,736
2001	110,288	16,702	5,676	11,026	93,586	12,519	81,067
2002	110,367	18,095	10,153	7,942	92,272	14,271	78,001
2003	118,301	18,064	10,790	7,274	100,237	19,438	80,799
2004	123,129	15,857	10,834	5,023	107,272	20,045	87,227
2005	186,065	17,635	10,157	7,478	168,430	33,758	134,672
2006	158,148	14,337	9,159	5,178	143,811	25,773	118,038
2007	185,879	19,262	13,494	5,768	166,617	40,655	125,962
2008	238,256	29,255	20,655	8,600	209,001	68,092	140,909
2009	232,989	37,250	22,641	14,609	195,739	74,247	121,492
2010	239,680	48,923	19,824	29,099	190,757	80,704	110,053
Total	1,773,851	247,066	136,981	110,085	1,526,785	390,829	1,135,956

Table 1 (continued)
Distribution of Chinese language newspaper outlets and articles

Panel C: Distribution of domestic Chinese newspaper outlets and corporate news articles across localities

	Newspaper Outlets			Newspaper Articles						
	All Newspapers	Official Newspapers	Business Newspapers	All Newspapers	Official Newspapers			Business Newspapers		
					Conglomerate Newspapers	Non-Conglomerate Newspapers	Total	Conglomerate Newspapers	Non-Conglomerate Newspapers	Total
National	41	8	33	1,344,132	6,117	60,795	66,912	160,674	1,116,546	1,277,220
Beijing	5	2	3	62,822	4,921	24,464	29,385	23,692	9,745	33,437
Tianjin	1	1	-	6,089	4,320	1,769	6,089	-	-	-
Shanghai	5	2	3	62,469	19,672	92	19,764	42,620	85	42,705
Chongqing	1	-	1	3,110	-	-	-	3,110	-	3,110
Hebei	1	1	-	318	-	318	318	-	-	-
Shanxi	1	1	-	1,306	560	746	1,306	-	-	-
Inner Mongolia	-	-	-	-	-	-	-	-	-	-
Liaoning	4	3	1	4,939	4,072	485	4,557	-	382	382
Jilin	-	-	-	-	-	-	-	-	-	-
Heilongjiang	1	1	-	728	728	-	728	-	-	-
Jiangsu	3	2	1	11,878	4,292	1,568	5,860	6,018	-	6,018
Zhejiang	1	1	-	4,298	4,298	-	4,298	-	-	-
Anhui	2	1	1	4,145	812	553	1,365	2,395	385	2,780
Fujian	1	1	-	5,710	3,209	2,501	5,710	-	-	-
Jiangxi	2	2	-	4,012	1,934	2,078	4,012	-	-	-
Shandong	3	3	-	4,096	4,096	-	4,096	-	-	-
Henan	4	2	2	12,874	2,765	-	2,765	10,107	2	10,109
Hubei	3	2	1	14,156	10,877	104	10,981	2,625	550	3,175
Hunan	1	-	1	1,154	-	-	-	1,154	-	1,154
Guangdong	9	3	6	171,190	47,861	7,312	55,173	109,666	6,351	116,017
Guangxi	1	1	-	3,618	1,048	2,570	3,618	-	-	-
Hainan	2	1	1	7,037	1,827	1,286	3,113	2,949	975	3,924
Sichuan	3	2	1	31,788	9,029	-	9,029	22,008	751	22,759
Guizhou	-	-	-	-	-	-	-	-	-	-
Yunnan	2	2	-	3,073	2,368	705	3,073	-	-	-
Shaanxi	1	1	-	690	-	690	690	-	-	-
Gansu	3	2	1	7,555	1,951	1,609	3,560	3,811	184	3,995
Qinghai	1	1	-	406	-	406	406	-	-	-
Ningxia Hui	1	1	-	258	224	34	258	-	-	-
Xinjiang	-	-	-	-	-	-	-	-	-	-
Tibet	-	-	-	-	-	-	-	-	-	-
Total	103	47	56	1,773,851	136,981	110,085	247,066	390,829	1,135,956	1,526,785

Table 2**Descriptive evidence on the tone and political slant of domestic Chinese corporate news articles**

This table presents descriptive evidence on the average tone and political content of domestic newspaper articles about Chinese exchange-listed firms over the period 2000-2010. *Tone* is measured as the natural logarithm of one plus the ratio of the number of positive sentences minus the number of negative sentences in a given corporate news article about a listed firm scaled by the sum of the number of positive and negative sentences plus one. *Political Tags* is the relative frequency of Chinese political slogans appearing in the newspaper article, where frequency is estimated as the article td-idf score using these political keywords. N=1,773,851 newspaper articles.

Panel A: Mean newspaper article *Tone* and *Political Tags* conditional upon newspaper commercial orientation

Measure of article slant:	<i>Tone_{ijkl}</i>			<i>Political Tags_{ijkl}</i>		
	All Newspapers	National Newspapers	Local Newspapers	All Newspapers	National Newspapers	Local Newspapers
Unconditional	0.413	0.405	0.439	0.169	0.154	0.214
Business Newspapers	0.403	0.401	0.415	0.142	0.143	0.138
Official Newspapers	0.474	0.482	0.472	0.333	0.367	0.320
Difference (B – O) (t-statistic)	-0.071 (-120.00)	-0.081 (-72.83)	-0.057 (-71.58)	-0.190 (-180.00)	-0.224 (-120.00)	-0.182 (-110.00)

Panel B: Mean newspaper article *Tone* and *Political Tags* conditional upon whether the newspaper belongs to a business newspaper group (i.e., conglomerated)

Orientation:	Official Newspapers				Business Newspapers		
	All Newspapers	All	National Newspapers	Local Newspapers	All	National Newspapers	Local Newspapers
<i>B1: <i>Tone_{ijkl}</i></i>							
Conglomerated	0.425	0.492	0.574	0.488	0.401	0.383	0.414
Non-Conglomerate	0.409	0.454	0.473	0.431	0.404	0.404	0.425
Diff. (C - NC) (t-stat)	0.016 (35.52)	0.038 (38.69)	0.101 (34.34)	0.057 (43.49)	-0.003 (-5.57)	-0.021 (-27.26)	-0.011 (-5.84)
<i>B2: <i>Political Tags_{ijkl}</i></i>							
Conglomerated	0.196	0.377	0.779	0.358	0.133	0.130	0.414
Non-Conglomerate	0.157	0.278	0.326	0.218	0.146	0.145	0.164
Diff. (C - NC) (t-stat)	0.039 (48.56)	0.099 (36.75)	0.453 (49.82)	0.140 (40.32)	-0.012 (-14.60)	-0.016 (-12.84)	-0.028 (-8.51)

Table 3
Influence of newspaper commercialization on the relative tone and political slant of Chinese corporate news articles

The following panels present select coefficients from pooled, cross-sectional estimations of the following models:

$$Tone_{ijkt} \text{ or } Political\ Tags_{ijkt} = \alpha + Year + Month + Industry + Province + \beta_1 Business\ Newspaper_{ijkt} + \beta_2 National\ Newspaper_{ijkt} + \beta_3 Outside\ Province_{ijkt} + \beta_4 SOE_{i,t} + \beta_5 LogSize_{it} + \beta_6 ROA_{it} + \beta_7 Market\ to\ Book_{it} + \beta_8 Leverage_{it} + \beta_9 Return_{it} + \beta_{10} Article\ Length_{ijkt} + \varepsilon_i$$

The dependent variable *Tone* captures the degree of positive or negative tone contained in article j in newspaper k about firm i in month t. *Tone* is measured as the natural logarithm of one plus the ratio of the number of positive sentences minus the number of negative sentences, scaled by one plus the sum of positive and negative sentences, in a specific news article about the firm. The dependent variable *Political Tags* captures the frequency of a set of political keywords contained in article j in newspaper k about firm i in month t. *Political Tags* is defined in appendix. *Business Newspaper* is an indicator variable equal to one if the reporting newspaper (i.e., newspaper k) is focused on financial and economic news, zero otherwise. *National Newspaper* is an indicator variable equal to one if the newspaper is a national publication, zero otherwise. *Outside Province* is an indicator variable equal to one if the news article relates to a firm domiciled outside local newspaper's province, zero otherwise. All other variables are defined in Table 1 and Appendix A. T-statistics derived using clustered standard errors by firm are presented in parentheses. Models include annual, month, industry and provincial fixed effects [*Year*, *Month*, *Industry* and *Province*, respectively; coefficients not reported]. The superscripts ***, **, * indicate that the estimated coefficient is significantly different than zero at the one, five and ten percent level (two-tailed test), respectively.

Dep. Variable:	<i>Tone_{ijkt}</i>				<i>Political Tags_{ijkt}</i>			
	Newspapers:		National Papers	Local Papers	All	All	National Papers	Local Papers
Business Paper		-0.067*** (-25.779)	-0.068*** (-23.134)	-0.063*** (-21.027)		-0.207*** (-17.340)	-0.214*** (-22.370)	-0.207*** (-13.355)
National Paper	-0.030*** (-15.094)	-0.006*** (-3.922)			-0.055*** (-9.444)	0.019*** (7.809)		
Outside Province	-0.027*** (-9.311)	-0.023*** (-9.775)		-0.038*** (-7.916)	-0.045*** (-4.298)	-0.035*** (-3.886)		-0.077*** (-4.168)
SOE	0.009** (2.165)	0.008** (2.104)	0.009** (2.167)	0.007 (1.477)	0.021*** (2.846)	0.019*** (2.845)	0.014** (2.377)	0.034*** (3.247)
Firm Size	0.010*** (4.662)	0.010*** (4.837)	0.011*** (5.210)	0.008*** (3.513)	-0.000 (-0.081)	-0.000 (-0.128)	0.003 (1.003)	-0.010 (-1.637)
ROA	0.267*** (11.314)	0.265*** (11.402)	0.274*** (11.005)	0.241*** (10.506)	0.085*** (3.221)	0.079*** (3.179)	0.074*** (3.487)	0.109** (2.504)
Market-to-book	-0.003*** (-4.729)	-0.003*** (-4.730)	-0.003*** (-4.899)	-0.002*** (-3.383)	-0.003** (-2.478)	-0.003** (-2.402)	-0.002** (-1.979)	-0.005*** (-2.929)
Leverage	-0.017 (-1.556)	-0.018* (-1.674)	-0.019* (-1.723)	-0.016 (-1.501)	0.036** (2.423)	0.033** (2.405)	0.037*** (3.211)	0.021 (0.917)
Return	0.003*** (3.019)	0.003*** (3.210)	0.003*** (2.686)	0.004*** (3.485)	-0.008*** (-5.834)	-0.008*** (-5.757)	-0.007*** (-5.604)	-0.008*** (-3.936)
Article Length	0.022*** (21.745)	0.023*** (23.657)	0.013*** (15.291)	0.057*** (31.601)	0.119*** (24.890)	0.122*** (25.581)	0.106*** (27.197)	0.177*** (23.157)
Fixed effects	Included	Included	Included	Included	Included	Included	Included	Included
Adjusted R ²	0.0425	0.0481	0.0424	0.0854	0.0655	0.0819	0.0647	0.1301
Observations	1,773,851	1,773,851	1,344,132	429,719	1,773,851	1,773,851	1,344,132	429,719

Table 4
Influence of conglomeration on the relative tone and political slant of corporate news articles

The following panels present select coefficients from pooled, cross-sectional estimations of the following models:

$$\begin{aligned}
 \text{Tone}_{ijkt} \text{ or } \text{Political Tags}_{ijkt} = & \alpha + \text{Year} + \text{Month} + \text{Industry} + \text{Province} + \beta_1 \text{Conglomerated}_{kt} + \beta_2 \text{Business} \\
 & \text{Newspaper}_{ijkt} + \beta_3 \text{Business Newspaper}_{ijkt} * \text{Conglomerated}_{kt} + \beta_4 \text{National Newspaper}_{ijkt} \\
 & + \beta_5 \text{Outside Province}_{ijkt} + \beta_6 \text{SOE}_{i,t} + \beta_7 \text{LogSize}_{it} + \beta_8 \text{ROA}_{it} + \beta_9 \text{Market-to-Book}_{it} \\
 & + \beta_{10} \text{Leverage}_{it} + \beta_{11} \text{Return}_{it} + \beta_{12} \text{Article Length}_{ijkt} + \varepsilon_i
 \end{aligned}$$

The dependent variable *Tone* captures the degree of positive or negative tone contained in article *j* in newspaper *k* about firm *i* in month *t*. *Tone* is measured as the natural logarithm of one plus the ratio of the number of positive sentences minus the number of negative sentences, scaled by one plus the sum of positive and negative sentences, in a specific news article about the firm. The dependent variable *Political Tags* captures the frequency of a set of political keywords contained in article *j* in newspaper *k* about firm *i* in month *t*. *Political Tags* is measured as the natural logarithm of one plus the article's td-idf statistic. *Conglomerated* is an indicator variable equal to one if the reporting newspaper (newspaper *k*) is directly controlled by a commercial news group, zero otherwise. The first set of estimations utilizes the full sample of Chinese-language newspaper articles; the second set of estimations are conditional upon whether the article is published in a national or local newspaper; the last set of estimations are conditional upon the orientation of the newspaper (i.e., official versus business paper). All other variables are defined in Appendix A. T-statistics derived using clustered standard errors by firm are presented in parentheses. Models include annual, month, industry and provincial fixed effects [*Year*, *Month*, *Industry* and *Province*, respectively; coefficients not reported]. The superscripts ***, **, * indicate that the estimated coefficient is significantly different than zero at the one, five and ten percent level (two-tailed test), respectively.

Panel A: Dependent Variable: *Tone_{ijkt}*

	All Newspapers		National Newspapers	Local Newspapers	Official Newspapers	Business Newspapers
Conglomerated	-0.005*** (-3.673)	0.030*** (12.351)	0.113*** (26.366)	0.043*** (15.833)	0.055*** (24.437)	-0.022*** (-13.926)
Business Newspaper	-0.067*** (-25.229)	-0.045*** (-16.651)	-0.054*** (-18.608)	-0.023*** (-6.035)		
Business*Conglomerated		-0.043*** (-15.582)	-0.134*** (-30.253)	-0.052*** (-11.613)		
National Newspaper	-0.010*** (-5.441)	-0.011*** (-6.014)			0.039*** (13.408)	-0.024*** (-10.372)
Outside Province	-0.023*** (-9.753)	-0.022*** (-9.217)		-0.036*** (-7.686)	-0.041*** (-8.194)	-0.017*** (-6.950)
SOE	0.008** (2.106)	0.008** (2.103)	0.009** (2.177)	0.006 (1.452)	0.018*** (3.156)	0.007* (1.707)
Firm Size	0.010*** (4.843)	0.010*** (4.929)	0.011*** (5.305)	0.008*** (3.602)	0.004* (1.724)	0.011*** (5.587)
ROA	0.265*** (11.399)	0.264*** (11.389)	0.273*** (11.002)	0.240*** (10.547)	0.265*** (8.976)	0.264*** (11.130)
Market-to-book	-0.003*** (-4.726)	-0.003*** (-4.706)	-0.003*** (-4.838)	-0.002*** (-3.351)	-0.004*** (-4.425)	-0.003*** (-4.291)
Leverage	-0.018* (-1.673)	-0.018* (-1.665)	-0.019* (-1.720)	-0.016 (-1.546)	-0.014 (-1.009)	-0.018* (-1.741)
Return	0.003*** (3.214)	0.003*** (3.226)	0.003*** (2.729)	0.004*** (3.539)	0.004** (2.531)	0.003*** (2.817)
Article Length	0.023*** (23.588)	0.023*** (23.699)	0.013*** (15.132)	0.056*** (31.115)	0.042*** (28.777)	0.020*** (20.857)
Fixed effects	Included	Included	Included	Included	Included	Included
Adjusted R-squared	0.0481	0.0488	0.0436	0.0877	0.0728	0.0414
Number of Observations	1,773,851	1,773,851	1,344,132	429,719	247,066	1,526,785

Table 4 (continued)**Influence of conglomeration on the relative tone and political slant of corporate news articles****Panel B: Dependent Variable: *Political Tags*_{ijkl}**

	All Newspapers		National Newspapers	Local Newspapers	Official Newspapers	Business Newspapers
Conglomerated	0.030*** (10.854)	0.112*** (11.435)	0.450*** (18.982)	0.091*** (10.563)	0.127*** (16.270)	-0.008*** (-3.263)
Business Newspaper	-0.211*** (-17.488)	-0.159*** (-18.082)	-0.171*** (-21.018)	-0.115*** (-8.521)		
Business*Conglomerated		-0.101*** (-9.627)	-0.453*** (-19.073)	-0.119*** (-11.105)		
National Newspaper	0.042*** (13.922)	0.039*** (13.489)			0.122*** (13.889)	0.011*** (3.979)
Outside Province	-0.035*** (-3.904)	-0.032*** (-3.453)		-0.073*** (-3.967)	-0.092*** (-4.754)	-0.015** (-2.074)
SOE	0.019*** (2.842)	0.019*** (2.843)	0.013** (2.405)	0.034*** (3.237)	0.055*** (3.414)	0.012** (2.326)
Firm Size	-0.001 (-0.147)	-0.000 (-0.060)	0.003 (1.034)	-0.010 (-1.616)	-0.014* (-1.651)	0.003 (1.272)
ROA	0.080*** (3.206)	0.078*** (3.137)	0.073*** (3.505)	0.106** (2.460)	0.102 (1.535)	0.079*** (4.126)
Market-to-book	-0.003** (-2.421)	-0.003** (-2.402)	-0.002* (-1.917)	-0.005*** (-2.915)	-0.010*** (-3.418)	-0.002* (-1.898)
Leverage	0.033** (2.404)	0.034** (2.442)	0.037*** (3.261)	0.020 (0.886)	0.016 (0.463)	0.038*** (3.590)
Return	-0.008*** (-5.763)	-0.008*** (-5.769)	-0.007*** (-5.622)	-0.008*** (-3.916)	-0.012*** (-3.358)	-0.007*** (-5.875)
Article Length	0.122*** (25.635)	0.122*** (25.732)	0.106*** (27.374)	0.175*** (23.272)	0.257*** (28.470)	0.101*** (27.618)
Fixed	Included	Included	Included	Included	Included	Included
Adjusted R-squared	0.0823	0.0834	0.0685	0.132	0.167	0.0524
Number of Observations	1,773,851	1,773,851	1,344,132	429,719	247,066	1,526,785

Table 5
Influence of the political characteristics of the listed firm on impact of commercialization and conglomeration reforms

This table present select coefficients from pooled, cross-sectional estimations of the following models:

$$Tone_{ijkt} \text{ or } Political\ Tags_{ijkt} = \alpha + Year + Month + Industry + Province + \beta_1 Conglomerated_{ijkt} + \beta_2 Conglomerated_{ijkt} * SOE_{it} + \beta_3 Conglomerated_{ijkt} * Connected_{it} + \beta_4 SOE_{i,t} + \beta_5 Connected_{it} + \beta_6 National\ Newspaper_{ijkt} + \beta_7 Outside\ Province_{ijkt} + \beta_8 LogSize_{it} + \beta_9 ROA_{it} + \beta_{10} Market\ to\ Book_{it} + \beta_{11} Leverage_{it} + \beta_{12} Return_{it} + \beta_{13} Article\ Length_{ijkt} + \varepsilon_i$$

The first (second) set of columns present coefficients from estimations using *Tone* (*Political Tags*) as the dependent variable. These tests examine the influence of newspaper orientation and conglomeration conditional upon whether the firm is state-owned or politically connected. State ownership (*SOE*) is based upon whether the government controls the listed firm (owns more than 20% of the firm's equity in year t). Political connections (*Connected*) are measured by whether the firm's balance sheet at the end of year t reflects long-term debt from a state bank. All other variables are defined in Appendix A. T-statistics derived using clustered standard errors by firm are presented in parentheses. Models include annual, month, industry and provincial fixed effects [*Year*, *Month*, *Industry* and *Province*, respectively; coefficients not reported]. The superscripts ^{***}, ^{**}, ^{*} indicate that the estimated coefficient is significantly different than zero at the one, five and ten percent level (two-tailed test), respectively.

Dependent Variable: Newspaper Orientation:	<i>Tone_{ijkt}</i>				<i>Political Tags_{ijkt}</i>			
	Official Newspapers		Business Newspapers		Official Newspapers		Business Newspapers	
Conglomerated	0.057*** (11.985)	0.054*** (11.243)	-0.013*** (-4.960)	-0.013*** (-4.941)	0.114*** (9.094)	0.102*** (8.103)	-0.002 (-0.684)	-0.002 (-0.743)
Conglomerated*SOE	-0.003 (-0.525)	-0.006 (-1.151)	-0.012*** (-4.409)	-0.013*** (-4.472)	0.016 (1.134)	0.002 (0.148)	-0.008* (-1.950)	-0.008** (-2.072)
Conglomerated*Connected		0.027*** (5.086)		0.002 (0.720)		0.126*** (6.165)		0.004 (0.808)
SOE	0.019*** (3.425)	0.041*** (14.351)	0.010** (2.440)	-0.024*** (-10.435)	0.046*** (3.355)	0.130*** (16.454)	0.014** (2.562)	0.011*** (3.991)
Connected		-0.040*** (-8.187)		-0.017*** (-6.932)		-0.092*** (-4.817)		-0.015** (-2.075)
Control variables	Included	Included	Included	Included	Included	Included	Included	Included
Fixed effects	Included	Included	Included	Included	Included	Included	Included	Included
Adjusted R-squared	0.0728		0.0414		0.1670		0.0524	
Number of Observations	247,066	247,066	1,526,785	1,526,785	247,066	247,066	1,526,785	1,526,785

Table 6**Local newspaper analysis: Influence of newspaper and firm locality on the tone and political slant of news articles**

The following panels present select coefficients from pooled, cross-sectional estimations of the following model:

$$Tone_{ijkt} \text{ or } Political\ Tags_{ijkt} = \alpha + Year + Month + Industry + Province + \beta_1 Outside\ Province_{ikjt} + \beta_2 Conglomerated_{kt} + \beta_3 Conglomerated_{kt} * Outside\ Province_{ijkt} + \beta_4 SOE_{i,t} + \beta_5 LogSize_{it} + \beta_6 ROA_{it} + \beta_7 Market\ to\ Book_{it} + \beta_8 Leverage_{it} + \beta_9 Return_{it} + \beta_{10} Article\ Length_{ijkt} + \varepsilon_i$$

The first (second) panel presents coefficients from estimations using *Tone* (*Political Tags*) as the dependent variable. The analyses in this table utilize the full subsample of Chinese-language domestic corporate newspaper articles published by local (i.e., non-national) newspapers. For each dependent variable, the first (second) set of reported estimations utilizes the sample of Chinese-language domestic financial newspaper articles published by local official (business) newspapers. The indicator variable *Outside Province* equals one if the firm covered in the article does not reside in the reporting newspaper's province, zero otherwise. All variables are defined in Appendix A. T-statistics derived using clustered standard errors by firm are presented in parentheses. Models include annual, month, industry and provincial fixed effects [*Year*, *Month*, *Industry* and *Province*, respectively; coefficients not reported]. The superscripts ***, **, * indicate that the estimated coefficient is significantly different than zero at the one, five and ten percent level (two-tailed test), respectively.

Dependent Variable: Newspaper Orientation:	Tone _{ijkt}				Political Tags _{ijkt}			
	Official Newspapers		Business Newspapers		Official Newspapers		Business Newspapers	
Outside Province	-0.049*** (-7.805)	-0.061*** (-8.108)	-0.019*** (-2.789)	-0.043*** (-5.033)	-0.114*** (-4.566)	-0.131*** (-4.169)	-0.034*** (-5.465)	-0.053*** (-2.993)
Conglomerated		0.030*** (3.652)		-0.045*** (-4.358)		0.043 (1.203)		-0.040** (-2.358)
Conglomerated*Outside Province		0.020** (2.135)		0.026*** (2.777)		0.029 (0.701)		0.020 (1.166)
Control variables and fixed effects	Included	Included	Included	Included	Included	Included	Included	Included
Adjusted R-squared	0.0778	0.0836	0.0819	0.0824	0.1752	0.1770	0.0548	0.0549
Number of Observations	180,154	180,154	249,565	249,565	180,154	180,154	249,565	249,565

Table 7 – NEW ANALYSES REQUIRED**Influence of conglomeration: Evidence from matched firm-month newspaper analysis**

Panel A presents descriptive evidence on the average and median differences in the average Tone and Political Tags between articles published in official and business newspapers. Panel B present select coefficients from pooled, cross-sectional estimations of the following models:

$$Diff_Tone_{it} \text{ or } Diff_Political\ Tags_{it} = \alpha + Year + Month + Industry + Province + \beta_1 \% Conglomerated_{it} + \beta_2 \% Outside_{it} + \beta_3 \% Conglomerated_{it} * Outside_{it} + \beta_4 \% Conglomerated_{it} * SOE_{it} + \beta_5 SOE_{i,t} + \beta_6 LogSize_{it} + \beta_7 ROA_{it} + \beta_8 Market\text{-}to\text{-}Book_{it} + \beta_9 Leverage_{it} + \beta_{10} Return_{it} + \beta_{11} Relative\ Article\ Length_{ijt} + \varepsilon_i$$

The dependent variable *Diff_Tone* (*Diff_Political Tags*) is the difference in the average *Tone* (*Political Tags*) between articles published in official and business-focused newspapers for firm *i* in month *t*. *% Conglomerated* is the fraction of articles about firm *i* in month *t* published in a newspaper controlled by an organized business group. *% Outside* is the fraction of articles about firm *i* in month *t* published in local newspapers outside firm's province. All other variables are defined in Appendix A. T-statistics derived using clustered standard errors by firm are presented in parentheses. Models include annual, month, industry and provincial fixed effects [*Year*, *Month*, *Industry* and *Province*, respectively; coefficients not reported]. The superscripts ***, **, * indicate that the estimated coefficient is significantly different than zero at the one, five and ten percent level (two-tailed test). N=67,292

Panel A: Descriptive statistics

Measure of difference: Newspapers:	<i>Diff_Tone_{it}</i>			<i>Diff_Political Tags_{it}</i>		
	All	National	Local	All	National	Local
Mean	0.071	0.060	0.050	0.131	0.201	0.123
(t-statistic)	(84.789)	(48.566)	(38.550)	(67.387)	(53.926)	(45.849)

Panel B: Multivariate Analysis

Dependent Variable	<i>Diff_Tone_{it}</i>			<i>Diff_Political Tags_{it}</i>		
% Conglomerated	0.042*** (7.869)	0.037*** (6.778)	0.013 (0.630)	0.047*** (3.592)	0.019 (1.422)	0.151*** (2.638)
% Outside		-0.090*** (-11.006)	-0.104*** (-8.081)		-0.437*** (-17.192)	-0.387*** (-10.685)
% Conglomerated * % Outside			0.033 (1.508)			-0.112* (-1.913)
% Conglomerated * SOE			-0.005 (-0.523)			-0.056** (-2.360)
SOE	-0.002 (-0.651)	-0.001 (-0.582)	0.001 (0.140)	0.018** (2.568)	0.019*** (2.710)	0.042*** (3.755)
Firm Size	-0.009*** (-7.440)	-0.008*** (-6.862)	-0.008*** (-6.835)	0.002 (0.517)	0.005 (1.522)	0.006 (1.614)
ROA	0.036* (1.924)	0.030 (1.609)	0.029 (1.588)	0.079** (2.288)	0.049 (1.463)	0.048 (1.434)
Market-to-book	-0.001 (-1.616)	-0.001 (-1.251)	-0.001 (-1.264)	-0.006*** (-4.275)	-0.005*** (-3.640)	-0.004*** (-3.578)
Leverage	-0.010 (-1.542)	-0.009 (-1.400)	-0.009 (-1.392)	-0.008 (-0.588)	-0.004 (-0.266)	-0.003 (-0.234)
Return	0.000 (0.281)	0.001 (0.589)	0.001 (0.536)	-0.008** (-2.020)	-0.005 (-1.420)	-0.006 (-1.450)
Relative Article Length	0.029*** (23.616)	0.030*** (23.942)	0.030*** (23.943)	0.162*** (46.306)	0.163*** (46.875)	0.163*** (46.883)
Fixed effects	Included	Included	Included	Included	Included	Included
Adjusted R-squared	0.0321	0.0353	0.0353	0.0905	0.1056	0.1058

Table 8
Impact of conglomeration: Evidence from the formation of local newspaper business groups

The following panels present select coefficients from pooled, cross-sectional estimations of the following models using a sample of local newspapers that commercialized (i.e., were re-organized into a business group) during our sample period (2000-2010):

$$Tone_{ijkt} \text{ or } Political\ Tags_{ijkt} = \alpha + Year + Month + Industry + Province + Newspaper + \beta_1 Conglomerated_{kt} + \beta_2 Business\ Newspaper_{ijkt} + \beta_3 Business\ Newspaper_{ijkt} * Conglomerated_{kt} + \beta_4 Outside\ Province_{ijkt} + \beta_5 SOE_{i,t} + \beta_6 LogSize_{it} + \beta_7 ROA_{it} + \beta_8 Market\ to\ Book_{it} + \beta_9 Leverage_{it} + \beta_{10} Return_{it} + \beta_{11} Article\ Length_{ijkt} + \epsilon_i$$

The first (second) set of columns present coefficients from estimations using *Tone* (*Political Tags*) as the dependent variable. *Conglomerated* is an indicator variable equal to one if the newspaper is controlled by an organized business group in year t, zero otherwise. The first estimation utilizes all available newspaper articles; the second set of estimations are conditional upon the orientation of the newspaper (i.e., official versus business paper). All other variables are defined in Table 1, Table 3 and Appendix A. T-statistics derived using clustered standard errors by firm are presented in parentheses. All newspaper models include annual, month, industry and provincial fixed effects [*Year*, *Month*, *Industry* and *Province*, respectively; coefficients not reported]. Official and business newspaper models include annual, month, industry, provincial and newspaper fixed effects [*Year*, *Month*, *Industry*, *Province* and *Newspaper*, respectively; coefficients not reported]. The superscripts ^{***}, ^{**}, ^{*} indicate that the estimated coefficient is significantly different than zero at the one, five and ten percent level (two-tailed test), respectively.

Dep. Variable:	<i>Tone_{ijkt}</i>			<i>Political Tags_{ijkt}</i>		
	All Newspapers	Official Newspapers	Business Newspapers	All Newspapers	Official Newspapers	Business Newspapers
Conglomerated	-0.045*** (-3.590)	-0.003 (-0.334)	-0.059*** (-3.132)	0.166*** (6.52)	0.081*** (2.746)	-0.101*** (-5.605)
Business Newspaper	-0.001 (-0.120)			-0.034 (-1.367)		
Business*Conglomerated	-0.035*** (-2.835)			-0.200*** (-7.686)		
Outside Province	-0.045*** (-7.212)	-0.068*** (-7.413)	-0.007 (-0.977)	-0.112*** (-5.580)	-0.159*** (-6.254)	-0.081*** (-7.723)
SOE	0.007 (1.306)	0.016** (2.429)	0.008 (1.500)	0.031*** (3.158)	0.049*** (2.844)	0.009 (1.549)
Firm Size	-0.001 (-0.397)	0.001 (0.211)	-0.001 (-0.352)	-0.016** (-2.508)	-0.031*** (-3.366)	-0.005* (-1.767)
ROA	0.257*** (7.732)	0.167*** (3.582)	0.285*** (8.006)	0.023 (0.387)	-0.012 (-0.108)	0.010 (0.305)
Market-to-book	-0.002** (-2.150)	-0.004** (-2.567)	-0.002* (-1.838)	-0.005** (-2.093)	-0.006 (-1.356)	-0.001 (-0.960)
Leverage	-0.009 (-0.647)	-0.011 (-0.657)	-0.019 (-1.341)	0.004 (0.128)	-0.002 (-0.042)	0.002 (0.188)
Return	0.006*** (3.318)	0.010*** (3.322)	0.004** (2.404)	-0.007** (-2.391)	-0.005 (-0.565)	-0.004* (-1.792)
Article Length	0.061*** (17.264)	0.053*** (20.079)	0.074*** (13.603)	0.200*** (20.782)	0.329*** (40.337)	0.103*** (15.128)
Year, month, industry and province fixed effects	Included	Included	Included	Included	Included	Included
Newspaper fixed effects	Not Included	Included	Included	Not Included	Included	Included
Adjusted R ²	0.0826	0.125	0.133	0.176	0.329	0.0657
Number of Observations	73,977	21,219	52,758	73,977	21,219	52,758

Table 9**Absolute market reaction to the publication of news articles about China's listed firms**

This table provides descriptive evidence on the average absolute market reaction to the publication of domestic corporate news articles about China's listed firms. Market reactions are measured as the absolute value of the two-day buy-and-hold stock return [0,+1] of the listed firm around the publication of the news article. Day 0 refers to the date of article publication; day +1 is the first trading day after date of publication. The firm's raw return is the two day compounded buy-and-hold return over the publication window. The firm's market adjusted return is the raw return minus the cumulative buy-and-hold value-weighted market return over same the window. N= 1,771,456

	All Newspapers	Conglomerated Newspapers	Non-Conglomerated Newspapers	Difference (C – NC)	(T-statistic)
Panel A: [Raw Returns]					
Official Newspapers	0.0340	0.0350	0.0328	0.0021	(15.76)
Business Newspapers	0.0372	0.0381	0.0369	0.0012	(18.13)
Difference (O-B) (T-statistic)	-0.0032 (-41.51)	-0.0032 (-28.23)	-0.0041 (-36.23)		
Panel B: [Market-adjusted returns]					
Official Newspapers	0.0274	0.0281	0.0266	0.0014	(12.48)
Business Newspapers	0.0307	0.0312	0.0306	0.0007	(11.26)
Difference (O-B) (T-statistic)	-0.0033 (-49.52)	-0.0032 (-32.75)	-0.0039 (-40.48)		

Table 10
Credibility of Chinese corporate news articles: Evidence from incremental absolute stock price reactions around article publication

This table presents select coefficients from various estimations of the following cross-sectional model:

$$|Return_{i,t}| \text{ or } |Market\ Adjusted\ Return_{i,t}| = \alpha + Year + Month + Industry + Province + Firm + \beta_1 Official\ Article_{i,t} + \beta_2 Professional\ Article_{i,t} + \beta_3 Official\ Article_{i,t} * Commercial_{i,t} + \beta_4 Professional\ Article_{i,t} * Commercial_{i,t} + \beta_5 |Market\ Return_{i,t}| + \beta_6 LogSize_{i,t} + \beta_7 Market-to-Book_{i,t} + \beta_8 SOE_{i,t} + \beta_9 Earnings\ Announcement_{i,t} + \varepsilon_i$$

In this model, the dependent variable is the absolute value of firm i's daily raw stock return ($|Return_{i,t}|$) or daily market-adjusted stock return ($|Market\ Adjusted\ Return_{i,t}|$) on day t. $Official\ Article_{i,t}$ ($Business\ Article_{i,t}$) is an indicator variable equal to one if a corporate news article about firm i was published in any official party newspaper (business newspaper) on day t or t-1, zero otherwise. $Conglomerated_{i,t}$ is an indicator variable equal to one if an article about firm i was published in any newspaper affiliated with a business media group on day t or t-1, zero otherwise. $Earnings\ Announcement_{i,t}$ equals one if firm i issued an earnings report on day t or day t-1, zero otherwise. All other variables are defined in Table 1 and Appendix A. T-statistics derived using clustered standard errors by firm are presented in parentheses. The superscripts ***, **, * indicate that the estimated coefficient is significantly different than zero at the one, five and ten percent level (two-tailed), respectively. N = 3,476,423 firm-days.

Dependent Variable:	$ Return_{i,t} $				$ Market-Adjusted\ Return_{i,t} $			
	Firm Characteristics		Firm Fixed Effects		Firm Characteristics		Firm Fixed Effects	
Control Variables:								
Official Article _{i,t}	0.001*** (2.883)	0.001*** (3.843)	0.001*** (11.699)	0.001*** (7.575)	0.001*** (7.389)	0.001*** (6.571)	0.002*** (15.992)	0.002*** (10.567)
Business Article _{i,t}	0.003*** (30.792)	0.003*** (29.361)	0.004*** (39.177)	0.003*** (35.266)	0.004*** (40.711)	0.004*** (38.547)	0.005*** (51.617)	0.004*** (47.532)
Official _{i,t} *Conglomerated _{i,t}		-0.000* (-1.836)		0.000 (0.362)		-0.000 (-0.771)		0.000 (1.066)
Business _{i,t} *Conglomerated _{i,t}		0.001*** (4.901)		0.001*** (9.072)		0.001*** (7.572)		0.001*** (10.882)
Market Return _{i,t}	0.561*** (216.262)	0.561*** (216.276)	0.561*** (218.059)	0.561*** (218.115)				
Firm Size _{i,t}	-0.024*** (-16.149)	-0.024*** (-16.201)			-0.020*** (-14.888)	-0.020*** (-14.964)		
Market-to-book _{i,t}	0.000*** (10.097)	0.000*** (10.102)			0.001*** (17.826)	0.001*** (17.825)		
SOE _{i,t}	0.000 (0.345)	0.000 (0.344)			-0.000** (-2.119)	-0.000** (-2.124)		
Earnings Announcement _{i,t}	0.004*** (24.226)	0.004*** (24.379)	0.004*** (23.950)	0.004*** (24.098)	0.005*** (31.210)	0.005*** (31.460)	0.005*** (31.247)	0.005*** (31.478)
Year, month, industry and provincial fixed effects	Included	Included			Included	Included		
Year and firm fixed effects			Included	Included			Included	Included
Adjusted R-squared	0.1491	0.1491	0.1438	0.1437	0.0957	0.0958	0.0902	0.0903

Table 11
Relative information content of Chinese corporate news articles: Differences in average two-day [0,+1] absolute stock return around news article publication

This table presents select coefficients from various estimations of the following cross-sectional model:

$$|Publication\ Return_{ijkt}| \text{ or } |Market\ Adjusted\ Publication\ Return_{ijkt}| = \alpha + Year + Month + Industry + Province + \beta_1 Business\ Newspaper_{ijkt} + \beta_2 Conglomerated_{ijkt} + \beta_3 Business\ Newspaper_{it} * Conglomerated_{it} + \beta_4 Market\ Return_t + \beta_5 LogSize_{it} + \beta_6 Market\ to\ Book_{it} + \beta_7 SOE_{it} + \beta_8 Earnings\ Announcement_{it} + \varepsilon_i$$

In this model, the dependent variable is the absolute, two-day [0,+1] raw stock return (*Publication Return_{ijkt}*) or two-day market-adjusted stock return (*Market Adjusted Publication Return_{ijkt}*) around the publication of financial news article j in newspaper k about firm i in month t. *Business Newspaper_{ijkt}* is an indicator variable equal to one if the article was published in a non-official newspaper focusing on financial and economic news, zero otherwise. *Conglomerated_{ijkt}* is an indicator variable equal to one if the article was published in a newspaper controlled by an organized business group, , zero otherwise. *Earnings Announcement_{it}* equals one if firm i issued an earnings report on day t or day t-1, zero otherwise. All other variables are defined in Table 1 and Appendix A. T-statistics derived using clustered standard errors by firm are presented in parentheses. The superscripts ***, **, * indicate that the estimated coefficient is significantly different than zero at the one, five and ten percent level (two-tailed), respectively. N=1,771,456.

Dependent Variable:	Publication Return _{ijkt}				Market-Adjusted Publication Return _{ijkt}			
	Firm Characteristics		Firm Fixed Effects		Firm Characteristics		Firm Fixed Effects	
Business Newspaper _{ijkt}	0.002*** (9.431)	0.001*** (5.281)	0.001*** (9.355)	0.001*** (4.701)	0.002*** (10.885)	0.001*** (7.099)	0.001*** (10.903)	0.001*** (6.397)
Conglomerated _{ijkt}		-0.001*** (-5.738)		-0.001*** (-4.040)		-0.001*** (-4.974)		-0.000*** (-3.191)
Business*Conglomerated		0.001*** (5.517)		0.001*** (4.295)		0.001*** (5.713)		0.001*** (4.568)
Market Return _{it}	0.489*** (47.879)	0.489*** (47.876)	0.491*** (49.919)	0.491*** (49.919)				
Firm Size _{it}	-0.003*** (-13.352)	-0.003*** (-13.374)	0.000 (0.420)	0.000 (0.419)	-0.003*** (-12.485)	-0.003*** (-12.505)	0.000 (0.228)	0.000 (0.228)
Market-to-book _{it}	0.001*** (4.667)	0.001*** (4.665)	0.000** (2.546)	0.000** (2.543)	0.001*** (7.433)	0.001*** (7.432)	0.001*** (5.364)	0.001*** (5.361)
SOE _{it}	-0.001** (-1.993)	-0.001** (-1.992)	-0.002 (-1.080)	-0.002 (-1.079)	-0.001** (-2.061)	-0.001** (-2.060)	-0.002 (-1.213)	-0.002 (-1.212)
Earnings Announcement _{it}	0.003*** (7.492)	0.003*** (7.519)	0.003*** (7.550)	0.003*** (7.568)	0.003*** (10.852)	0.003*** (10.913)	0.003*** (11.311)	0.003*** (11.358)
Year, month, industry and provincial fixed effects	Included	Included			Included	Included		
Year and firm fixed effects			Included	Included			Included	Included
Adjusted R-squared	0.1174	0.1175	0.1055	0.1055	0.0845	0.0845	0.0690	0.0690

Table 12
Value relevance of Chinese corporate news articles: Association between Tone and two-day [0,+1] stock returns around corporate news article publication

This table presents select coefficients from various estimations of the following cross-sectional model:

$$\begin{aligned}
 & \text{Publication Return}_{ijkt} \text{ or Market Adjusted Publication Return}_{ijkt} = \alpha + \text{Year} + \text{Month} + \text{Industry} + \text{Province} \\
 & + \beta_1 \text{Tone}_{ijkt} + \beta_2 \text{Tone}_{ijkt} * \text{Business Newspaper}_k + \beta_3 \text{Tone} * \text{Conglomerated}_{kt} \\
 & + \beta_4 \text{Tone} * \text{Business Newspaper}_k * \text{Conglomerated}_{kt} + \beta_5 \text{Business Newspaper}_k + \beta_6 \text{Conglomerated}_{kt} \\
 & + \beta_7 \text{Business Newspaper}_k * \text{Conglomerated}_{kt} + \beta_8 \text{Market Return}_t \\
 & + \beta_9 \text{LogSize}_{it} + \beta_{10} \text{Market-to-Book}_{it} + \beta_{11} \text{SOE}_{i,t} + \beta_{12} \text{Earnings Announcement}_{it} + \varepsilon_i
 \end{aligned}$$

In this model, the dependent variable is the two-day [0,+1] raw stock return (*Publication Return_{ijkt}*) or two-day market-adjusted stock return (*Market Adjusted Publication Return_{ijkt}*) around the publication of financial news article j in newspaper k about firm i in month t. *Tone_{ijkt}* captures the degree of positive or negative tone contained in article j in newspaper k about firm i in month t. *Professional Newspaper_{ijkt}* is an indicator variable equal to one if the article was published in a non-official newspaper focusing on financial and economic news, zero otherwise. *Commercialized_{ijkt}* is an indicator variable equal to one if the article was published in a newspaper controlled by an organized business group, zero otherwise. *Earnings Announcement_{i,t}* equals one if firm i issued an earnings report on day t or day t-1, zero otherwise. All other variables are defined in Table 1 and Appendix A. T-statistics derived using clustered standard errors by firm are presented in parentheses. The superscripts ***, **, * indicate that the estimated coefficient is significantly different than zero at the one, five and ten percent level (two-tailed), respectively. N=1,771,456.

Dependent Variable:	<i>Publication Return_{ijkt}</i>			<i>Market-Adjusted Return_{ijkt}</i>		
	(1)	(2)	(3)	(1)	(2)	(3)
Tone _{ijkt}	0.006*** (15.553)	0.004*** (5.839)	0.005*** (5.521)	0.006*** (16.563)	0.004*** (6.742)	0.005*** (6.183)
Tone _{ijkt} *Business _k		0.002** (2.425)	0.001 (1.349)		0.001** (2.088)	0.001 (1.027)
Tone _{ijkt} *Conglomerated _{kt}			-0.001 (-1.004)			-0.001 (-0.675)
Tone _{ijkt} *Business _k *Conglomerated			0.000 (0.197)			0.001 (0.902)
Business Newspaper _k		-0.000 (-0.838)	-0.000 (-0.291)		0.000 (0.073)	0.000 (0.680)
Conglomerated _{kt}			0.000 (0.068)			0.000 (0.038)
Business*Conglomerated			-0.000 (-0.879)			-0.001 (-1.589)
Market Return _{i,t}	1.021*** (68.619)	1.021*** (68.633)	1.021*** (68.644)			
Firm Size _{i,t}	-0.000 (-0.286)	-0.000 (-0.294)	-0.000 (-0.288)	-0.000 (-0.136)	-0.000 (-0.143)	-0.000 (-0.136)
Market-to-book _{i,t}	0.001*** (4.888)	0.001*** (4.879)	0.001*** (4.885)	0.001*** (4.963)	0.001*** (4.953)	0.001*** (4.958)
SOE _{it}	-0.001 (-1.049)	-0.001 (-1.042)	-0.001 (-1.043)	-0.001 (-1.085)	-0.001 (-1.076)	-0.001 (-1.076)
Earnings Announcement _{i,t}	-0.003*** (-7.177)	-0.003*** (-7.203)	-0.003*** (-7.265)	-0.004*** (-9.270)	-0.004*** (-9.317)	-0.004*** (-9.385)
Year, month, industry and provincial fixed effects	Included	Included	Included	Included	Included	Included
Adjusted R-squared	0.1593	0.1593	0.1594	0.0111	0.0111	0.0111

Table 13**Association between political tagging and two-day [0,+1] absolute stock returns around corporate news article publication**

This table presents select coefficients from various estimations of the following cross-sectional model:

$$|Return_{ijkt}| \text{ or } |Market\ Adjusted\ Return_{ijkt}| = \alpha + Year + Month + Industry + Province + \beta_1 Tags_{ijkt} + \beta_2 Tags_{ijkt} * Business_{jk} + \beta_3 Tags_{ijkt} * Conglomerated_{kt} + \beta_4 Tags_{ijkt} * Business_{jk} * Conglomerated_{kt} + \beta_6 Business_{jk} + \beta_7 Conglomerated_{kt} + \beta_8 Business_{jk} * Conglomerated_{kt} + \beta_9 Tone_{ijkt} + \beta_{10} |Market\ Return_t| + \beta_{11} LogSize_{it} + \beta_{12} Market\ to\ Book_{it} + \beta_{13} SOE_{it} + \beta_{13} Earnings\ Announcement_{it} + \varepsilon_i$$

In this model, the dependent variable is the two-day [0,+1] raw stock return (*Publication Return_{ijkt}*) or two-day market-adjusted stock return (*Market Adjusted Publication Return_{ijkt}*) around the publication of financial news article j in newspaper k about firm i in month t. *Tone_{ijkt}* captures the degree of positive or negative tone contained in article j in newspaper k about firm i in month t. *Political Tags_{ijkt}* (aka *Tags_{ijkt}*) captures the relative frequency of a set of political keywords contained in article j in newspaper k about firm i in month t. *Business Newspaper_k* is an indicator variable equal to one if the article was published in a non-official newspaper focusing on financial and economic news, zero otherwise. *Conglomerated_{kt}* is an indicator variable equal to one if the article was published in a newspaper controlled by an organized business group, zero otherwise. *Earnings Announcement_{it}* equals one if firm i issued an earnings report on day t or day t-1, zero otherwise. All other variables are defined in Table 1 and Appendix A. T-statistics derived using clustered standard errors by firm are presented in parentheses. The superscripts ***, **, * indicate that the estimated coefficient is significantly different than zero at the one, five and ten percent level (two-tailed), respectively N=1,771,456.

Dependent Variable:	Publication Return _{ijkt}			Market-Adjusted Publication Return _{ijkt}		
	(1)	(2)	(3)	(1)	(2)	(3)
Political Tags _{ijkt}	-0.001*** (-7.553)	-0.001*** (-4.641)	-0.001*** (-3.256)	-0.001*** (-6.988)	-0.001*** (-4.358)	-0.001*** (-3.898)
Tags _{ijkt} *Business _k		0.000 (0.602)	-0.000 (-0.343)		0.000 (1.134)	0.000 (0.824)
Tags _{ijkt} *Conglomerated _{kt}			-0.000* (-1.761)			-0.000 (-1.034)
Tags _{ijkt} *Business _k *Conglomerated			0.000 (0.534)			-0.000 (-0.400)
Business Newspaper _k	-0.000 (-1.145)	-0.000 (-1.162)	-0.000 (-1.117)	-0.000 (-1.169)	-0.000 (-1.206)	-0.000 (-1.188)
Conglomerated _{kt}	-0.000 (-1.116)	-0.000 (-1.124)	-0.000 (-1.052)	-0.000 (-0.808)	-0.000 (-0.825)	-0.000 (-0.779)
Business*Conglomerated	0.001* (1.680)	0.001* (1.687)	0.001* (1.654)	0.001** (2.114)	0.001** (2.130)	0.001** (2.145)
Tone _{ijkt}	-0.006*** (-7.212)	-0.006*** (-7.206)	-0.006*** (-7.379)	-0.006*** (-7.584)	-0.006*** (-7.550)	-0.006*** (-7.585)
Tone _{ijkt} *Business _k	0.003*** (3.894)	0.002*** (3.856)	0.003*** (4.035)	0.003*** (4.816)	0.003*** (4.741)	0.003*** (4.793)
Tone _{ijkt} *Conglomerated _{kt}	-0.001 (-1.014)	-0.001 (-0.990)	-0.000 (-0.670)	-0.001 (-0.935)	-0.001 (-0.878)	-0.000 (-0.662)
Tone _{ijkt} *Business _k *Conglomerated	0.000 (0.283)	0.000 (0.259)	0.000 (0.025)	-0.000 (-0.167)	-0.000 (-0.225)	-0.000 (-0.315)
Market Return _t	0.488*** (47.842)	0.488*** (47.827)	0.488*** (47.829)			
Earnings Announcement _{it}	0.002*** (6.939)	0.002*** (6.939)	0.002*** (6.934)	0.003*** (10.248)	0.003*** (10.249)	0.003*** (10.243)
Firm controls and year, month, industry and province fixed effects	Included	Included	Included	Included	Included	Included
Adjusted R-squared	0.1182	0.1184	0.1184	0.0854	0.0856	0.0857

