Is corporate social responsibility determined by marketization or government drivers? Evidence from China

Abstract: This study focused on data from China's listed companies to investigate how marketization affects companies' corporate social responsibility (CSR), the moderating effect of state-owned enterprises (SOEs), and chief executive officer (CEO) separation. Our results show that marketization positively relates to CSR and that moderating effects exist. The results reveal that China's CSR can be strengthened by the development of the market economy, especially for large companies. Meanwhile, "quasi-government" responsibility and CEO separation are key to promoting SOEs' CSR, especially in small companies. Our study emphasizes the importance of the market economy in promoting the CSR of China's large companies in the long-term and the positive role of the "quasi-government" responsibility in encouraging small SOE participation in CSR. Moreover, based on our results, we provide suggestions for policymakers on further promoting China's CSR.

Keywords: corporate social responsibility; marketization; state-owned enterprises; China

1. Introduction

With the increasing stakeholders' social and environmental concerns, companies' participation in corporate social responsibility (CSR) is emerging growth. Previous studies argue that the traditional shareholder business model is inconsistent with the needs of world economic and social development (Freeman, 1984; Barnett, 2019). Companies have to integrate CSR-related activities into the business model to show they care about stakeholders' needs through CSR reporting (Elkington & Rowlands, 1999), which has already become one of the core hallmarks of good modern corporations (Hartman et al., 2007; Lee, 2008). According to KPMG's report, approximately 12% of the world's largest companies released CSR reports in the early 1990s, and the number has increased to over 80% recently (KPMG, 2005, 2020). Regarding the S&P 500 companies, this number has already reached approximately 98% in 2022 (G&A, 2023). Obviously, CSR reporting already become a main communication channel between companies and stakeholders (Helmig et al., 2016; Peng et al., 2023b).

Therefore, academics have examined the determinants of CSR from different perspectives. Freeman and Dmytriyev (2017) argue that CSR is "a part of corporate responsibilities oriented toward all stakeholders" and should focus on the impact of corporate responsibility on society. Other studies argue that companies' CSR practices are normally based on stakeholders' demands (Ali et al., 2017), while driven by their legitimacy needs (Amoako et al., 2021). This means that CSR could be determined by internal (e.g., firm-specific characteristics) and external (e.g., institutional environment-specific characteristics) factors (Ali et al., 2017; Peng & Zhang, 2022). Moreover, García Martín and Herrero (2020) indicate that the improvement of CSR could balance companies' financial and non-financial performance, which could resolve their agency conflicts (i.e., managers and shareholders) and interests conflicts (i.e., managers and stakeholders). Escobar and Vredenburg (2011) found that environmental discrepancies and corporate resource differences allow companies to integrate social and environmental responsibility into their strategies to achieve simultaneous environmental, social, and economic benefits, reduce institutional pressures, and strengthen their competitive advantage. Meanwhile, Yin and Zhang (2012) argue that formal and informal institutional factors provide the foundation of market transactions for companies, while specific corporate practices are mainly determined by social norms in advanced economies. This means external stakeholders become a core influence factor for companies' CSR-related activities (Ali et al., 2017). For example, consumers from advanced economies exhibit to analyze companies' ethical standards and green behaviors before the decision-making in consumption (Sharma, 2019).

Considering the importance of emerging economies in world economic development, scholars also put forward their arguments about companies' CSR in emerging economies. Previous studies argue that government intervention is critical to companies' CSR strategical decision-making in emerging economies (Zhang et al., 2021), while public awareness of social and environmental issues is much lower (Ali et al., 2017). On the one hand, companies normally undertake less stakeholder pressure for their CSR practices (Ali et al., 2017), such as consumers from emerging economies who are less concerned about companies' CSR practices in their decision-making (Sharma, 2019). On the other hand, companies must follow the regulation requirements to participate in CSR activities for their legitimate purpose in emerging economies (Zhang et al., 2021; He et al., 2023). State-owned enterprises (SOEs) have been given a political motivation in their operation as “quasi-government responsibility” (Lin et al., 2015), which caused their CSR decision-making to be highly consistent with the government interest (Long et al., 2020).

Regarding the largest emerging economy, China’s CSR has attracted much academic attention. Compared to other countries, China has special national conditions (Han et al., 2020) that allow the institutional environment to be the most important influence factor for CSR (Peng et al., 2023b). This environment is characterized by government intervention in the economy, an underdeveloped factor market, an imperfect legal environment (Han et al., 2020), and differences among regions (Bin-Feng et al., 2022). Focusing on these characteristics, studies have explored how government intervention (Zhang et al., 2021), regulations (He et al., 2023), and regional innovation environment (Yu et al., 2020) affect Chinese companies’ CSR. Obviously, the government-dominated institutional environment has a far-reaching impact on CSR in China (Han et al., 2020). Meanwhile, existing research is divided on whether SOEs are more socially responsible than non-SOEs (Tang et al., 2018). Some scholars argue that Chinese SOEs operate not only for financial interests, but also to fulfill political needs (Long et al., 2020), which results in SOEs’ better CSR forming the outcome of their politically motivated strategies and access to government resources (Lin et al. 2015). In addition, CEOs are also important in China’s CSR studies (Qiao et al. 2017). On the one hand, Li et al. (2019) argued that China’s unique Confucian culture, which emphasizes members’ dedication and self-sacrifice for the collective good, may enhance managers’ concern for CSR. On the other hand, China’s marketization process may cause CEOs to focus more on self-interests and returns (Qiao et al. 2017). This may increase the potential risk of opportunistic behavior by CEOs, especially when the CEO is also the chairman of the board (i.e., CEO duality), which may decrease companies' CSR engagement (Peng & Zhang, 2022). Overall, existing studies investigated the role of SOEs' "quasi-government responsibilities" and CEOs in China's CSR. Yet, our understanding of the relationship between marketization, CSR, SOEs, and CEO separation, and does China's CSR is driven by marketization remains scarce.

To fill the gaps, we concentrate on data from China's listed companies from 2013-2019 to empirically test the following research questions: (1) whether China's CSR activities have been transformed from government-driven to market-driven; and (2) whether SOEs still have a role to play as a tool for government intervention, and whether corporate governance can make it better. In other words, our research on these questions aims to determine how market mechanisms and government macro-control determine CSR activities in China. In addition, we categorize our sample into large and small groups based on firm size to examine whether there are differences in the factors influencing CSR in different time periods.

The remainder of this paper is structured as follows: Section 2 reviews the literature and presents several hypotheses. Section 3 presents the methodology, and the results and conclusions are reported in Sections 4 and 5, respectively.

2. Literature Review and Hypotheses

Institutional theory explains why institutional factors influence CSR. Institutional theory argues that organizations are influenced by the institutional environment and face pressures to become isomorphic, and that they are rewarded for conforming to institutional pressures and hindered from not conforming to them (Hendry, 2006). Under such pressures, companies must adapt or restructure their business strategies to ensure that their practices meet regulatory requirements (Li & Lu, 2020), meet the needs of the public (Berrone et al., 2017; Torelli et al., 2020), and are consistent with social norms (Marano & Kostova, 2016). As a type of institutional logic, market logic brings in new market mechanisms of consumer choice and competition, and affects organizations by introducing competitive pressures (Dolbec et al., 2022). In a marketized field, consumers want their needs met (Johnson et al., 1995), making satisfying customer needs an important source of legitimacy (Kates, 2004). Thus, it is desirable for companies to use CSR initiatives to legitimize their behavior (Beddewela & Fairbrass, 2016).

Stakeholder theory explains why stakeholders influence CSR. Stakeholder theory argues that the essence of business is primarily to build stakeholder relationships, produce products and provide services in a way that is valued by stakeholders so that all stakeholders can benefit from them (Dmytriyev et al., 2021). The profitability and survival of a firm depend critically on such established long-term stakeholder relationships (Talbot et al., 2021). By understanding and strengthening such relationships, firms can gain a competitive advantage in knowledge-sharing practices, participatory decision-making, effective governance and innovation (Dyer & Singh, 1998; Morsing & Schultz, 2006). The literature on stakeholder theory defines a stakeholder as "any group or individual that can influence or be influenced by the achievement of the organization's objectives" (Freeman, 1984), and argues that a firm's stakeholders include both internal actors (e.g., employees and shareholders) and external actors (e.g., suppliers, customers, regulators, competitors, local communities and environmentalists) (Neubaum et al., 2012). According to stakeholder theory, firms are facing increasing pressure to be socially responsible (Tura et al., 2019), especially from stakeholder groups (Helmig et al., 2016). Stakeholders are interested in firms because they stand to gain or lose something from the success or failure of the firm (Tran & Adomako, 2021). Therefore, firms perform CSR to meet the demands of different stakeholders who contribute to the creation of financial wealth as they provide access to key resources, as well as risk-taking and reputation creation (Barnett & Leih, 2018; Cordeiro & Tewari, 2015).

Notably, while specific institutional areas can exert pressure on firms to homogenize (Hendry, 2006), firms can exhibit differences to some extent (Khan et al., 2021). The reason for such differences lies in the fact that firms have scarce resources and cannot satisfy the needs of all stakeholders (Barney, 1991; Mahoney & Pandian, 1992). Firms must manage their priorities (Chithambo et al., 2022) and pay particular attention to "key" stakeholders that are essential to their operations (Barnett, 2019), so that they do not conflict with their demands (Chithambo et al., 2022), resulting in a loss of legitimacy (Dolbec et al., 2022). Considering these issues, the motivation of companies to engage in CSR can be understood from the perspectives of institutional theory and stakeholder theory.

2.1 Marketization and CSR

The development of marketization may cause enterprises to change their behaviors to conform to the requirements of market logic. Marketization is defined as "the process of shifting the provision of goods and services from bureaucratic, political or professional means to market arrangements" (Crouch, 2009). The development of this marketization process has changed the dominant economic logic in China, from state socialism, which achieves social goals through state control and resource redistribution, to a free-market economy based on open markets and profit-driven enterprises (Nee, 1992; Peng & Heath, 1996). Specifically, the previous state socialist logic was based on a redistributive economy (Szelenyi, 1978), where goods and services were provided to the state by enterprises, and the state redistributed resources to enterprises and distributed outputs to consumers based on its political and social goals (Park et al., 2006). Under this logic, enterprises responded to the central decisions of governments at the local, provincial, regional and national levels (Greve & Man Zhang, 2017). The strategic decisions of enterprises did not focus on profit, innovation or competition; their task was to fulfill government plans (Zhou et al., 2006), meet production quotas and ensure that employment rates did not decline (Park & Ungson, 2001; Shleifer, 1998). Under this logic, the legitimacy of enterprises came from the state, the government and their organizations (Dolbec et al., 2022), which confer appropriateness and desirability on the enterprises (Zhao, 2012), and enabled those that met the legitimacy requirements to receive government support (Wang et al., 2019). However, this made enterprises tools for the government to achieve social and economic goals, subjecting them to more behavioral restrictions and making it difficult for them to meet the needs of consumers and other stakeholders (Cox & Sallee, 2018). In contrast, under market logic, value is reflected in profit maximization (Lamont, 2012), financial control and efficiency (Ngoye et al., 2019), as well as in the pursuit of self-interest and competition (Thornton & Ocasio, 1999). That is to say, enterprises that follow market logic prioritize profit, competitive advantage and cost reduction (Lee & Lounsbury, 2015). To this end, enterprises integrate the interests and expectations of a wide range of stakeholders in the decision-making process (Ioannou & Serafeim, 2015) to attract socially conscious consumers (Tao et al., 2023), obtain financial support from investors who pursue social goals (Block et al., 2021), maintain competitiveness (Lane & Devin, 2018) and further improve the company's financial performance (Danso et al., 2020). Therefore, the transformation of marketization undermines the original legitimacy of organizations (Dolbec et al., 2022), and creates a market-style mechanism of consumer choice and competition among providers (Lubienski, 2005). Under this mechanism, established organizations must strive to respond to the pressure from these stakeholders, otherwise they will face the loss of new legitimacy (Dolbec et al., 2022).

Under the logic of the market, enterprises may adopt CSR to meet the expectations of stakeholders. Once an enterprise decides to seek contact with stakeholders, one of the most persistent challenges it faces is the consistency between the expectations of stakeholders and organizational decisions (Lane & Devin, 2018). Previous studies have shown that climate change and the use of energy for natural resources have increasingly attracted the attention of various stakeholder groups (Halldórsson & Kovács, 2010). Similarly, social issues such as the development of poverty-stricken areas and income distribution are also of concern to stakeholders (Hörisch et al., 2014). Against this backdrop, to ensure that stakeholders accept the decisions made by the enterprise and increase the possibility of meeting the expectations of stakeholders, enterprises may provide CSR information to the outside, invite stakeholders to offer opinions on CSR topics, or actively involve stakeholders in the enterprise's CSR decision-making (Lane & Devin, 2018). Through these CSR strategies, the enterprise will go beyond organizational boundaries and engage in dialogue with stakeholders, striving to build good relationships with them (Maon et al., 2021), and continuously approach the expectations of stakeholders related to CSR (Carlini et al., 2019). In this process, organizational members, whether consciously or unconsciously, spread CSR information in the environment (Mirvis, 2012), and act as CSR ambassadors for consumers and other external stakeholders (Edinger-Schons et al., 2019). Further, external stakeholders will respond to this CSR information (Maon et al., 2021), and interact with other stakeholders through word-of-mouth, suggestions, and criticism (Lee, 2016). When multiple stakeholders show a high degree of consensus on the importance of some CSR issues, their efforts to interact with other stakeholders may have a greater impact on the enterprise's CSR activities (Opoku-Dakwa & Rupp, 2019), because they represent institutionalized beliefs about legitimate business behavior (Bitektine & Haack, 2015). These external stakeholders will influence the enterprise and its members directly or indirectly, aiming to change the enterprise's interpretation and concept of its CSR issues and the way they solve them (Maon et al., 2021). That is to say, the suggestions of stakeholders to the enterprise will affect the enterprise's participation in the next round of CSR activities (Lane & Devin, 2018).

In summary, market logic creates an environment in which enterprises need to meet the expectations of stakeholders. In this environment, enterprises need to respond to the needs of stakeholders in terms of CSR. At the same time, stakeholders will transmit information about CSR to others and gradually form stakeholder groups. With the further development of marketization, more and more stakeholders may accept CSR and influence more enterprises to adopt CSR activities. Based on this, we propose the following hypothesis:

H1: The development of the marketization process can promote the implementation of CSR activities in enterprises.

2.2 State ownership

SOEs, as quasi-governmental organizations, have quasi-governmental responsibilities to serve citizens. Due to the existence of market failures, such as the inability to distribute the cost of public goods to all beneficiaries through market mechanisms, governments are usually required to assume responsibility for providing public services to all citizens, due to the fact that they can raise funds through general taxation to make all beneficiaries pay all beneficiaries pay (Becker, 2010). Further, in order to be able to introduce a variety of new management methods and procedures from the private sector (Ridley, 1996), for purposes such as increasing efficiency and reducing costs (André, 2010), the government creates a unique organizational sector called quasi-governmental organizations and transfers some of their own powers and responsibilities to them (Gong et al., 2017). According to Becker (2010), quasi-governmental organizations are bodies that lie between the public and private sectors, "one foot in the private side and one foot in the government side". They break down the traditional public-private dichotomy and allow a wider and more diverse range of organizations and individuals to participate in carrying out public tasks (Greve et al., 1999). They receive government funding but is somewhat independent of the government (Greve et al., 1999), meeting the needs of specific groups or performing specific functions to serve all citizens (André, 2010). These services include cleaning up the city's garbage, planting greenery, arresting criminals, and so on (Becker, 2010). For example, quasi-governmental organizations in the United States perform important functions such as managing turnpikes, bridges, airports, and convention centers, and raising funds for housing, health, and education (André, 2010). Based on previous studies, quasi-governmental organizations include local government-owned corporations, public-private corporations, private corporations that contract for public services, selfgoverning bodies and voluntary organizations (Greve, 1999). In addition, SOEs are also part of quasi-governmental organizations (Greve et al., 1999). The largest shareholder of SOEs is the state, and the behavior of the firms is largely influenced by the government (Li & Zhang, 2010). More than shareholder value, the government is likely to emphasize social and environmental objectives (Li & Zhang, 2010). As a result, the purpose of regulating SOEs is not only to make profits but also to meet employment needs, provide public services and facilities, maintain social stability, and so on (Liu & Zhang, 2017). They provide financial support to SOEs (Zhou et al., 2021), and majority shareholders can exert direct stakeholder pressure on SOEs (See, 2009), all of which impose an obligation on SOEs to take on more social responsibility (Liu & Zhang, 2017) to meet the needs of the government as the majority shareholder. Thus, SOEs tend to have more incentives to solve social problems by investing in CSR-related activities (Said et al., 2009) and assuming quasi-governmental responsibility for providing social services (Lee, 2001).

Further, SOEs may be in a better position than non-SOEs to contribute to the relationship between marketization and CSR because of their “quasi-government” attributes. Shnayder & Van Rijnsoever (2018) point out that the expected costs and outcomes of CSR activities drive firms’ choice of particular CSR activities. The goal of non-SOEs is to maximize profits (Ang et al., 2022), and their profit-seeking motivation, characterized by the “rational economic man” (Zhou et al., 2021), makes them more inclined to avoid important issues when fulfilling their social responsibilities (Russell et al., 2016). When firms face stringent financial constraints, their ability to undertake and disclose costly CSR activities is weakened (Kong et al., 2022), which may lead to their selective participation in CSR activities (Shnayder & Van Rijnsoever, 2018). Unlike non-SOEs, according to previous discussions, SOEs are quasi-government organizations (Greve et al., 1999) that are inherently required to achieve many non-economic and social welfare objectives in lieu of the government (Zhou et al., 2021). For example, electric power companies, for which maximizing social benefits is their main business objective (Sun et al., 2019), will sacrifice profits or firm value to take on government-mandated responsibilities (Xu et al., 2020). Under the market mechanism, the increased behavior of consumers using market prescriptions to meet their own social responsibility needs (Sellers-Rubio & Nicolau-Gonzalbez, 2016; Dolbec et al., 2022), as well as inter-firm competition (Lubienski, 2005), enhance the likelihood that firms will engage in environmental and social activities (de Grosbois & Fennell, 2022; Baah et al., 2023). On this basis, due to the image of SOEs as "quasi-government" entities (Zhou et al., 2021), their activities are not only directly supervised by the government (André, 2010), but also supervised by the general public (Zaid et al., 2020). This is not the case with non-SOEs, which are more influenced by the consumers who buy their products (Rhee et al., 2021). As a result, SOEs will be more concerned with the public interest than non-SOEs (Mohd Ghazali, 2007), emphasizing and assuming more CSR in order to satisfy the public (Muttakin & Subramaniam, 2015).

In summary, the fact that SOEs are quasi-governmental organizations makes them inherently endowed with the mission of replacing the government in providing public goods and services to the general public to satisfy the special needs of citizens. They may sacrifice their profits to satisfy citizens' needs in a way that profit-maximizing non-SOEs are unable to do. In addition, they have a larger range of stakeholder groups than non-SOEs because they serve all citizens, whereas the stakeholders of non-SOEs are mainly consumers who buy their products. Under the market mechanism, both SOEs and non-SOEs are required to be socially responsible due to increased competition among firms and the growing power of consumers to demand that firms respond to their increasing demands for social responsibility. However, the "quasi-government" attributes of SOEs, including their broad stakeholder groups and their natural mission to provide public goods, require them to take on more CSR than non-SOEs. Based on this, we propose the following hypothesis:

H2: SOEs can strengthen the relationship between marketization and CSR.

2.3 CEO separation

CEO separation may enable self-interested managers to be unable to pursue their own interests because they are supervised, thereby promoting the relationship between marketization and CSR. Combining the roles of CEO and board chairman into one is often referred to as CEO duality (Lee, 2023), while separating the two roles is referred to as CEO separation (Peng et al., 2023). According to Adam Smith's Wealth of Nations, "Every man is, no doubt, by nature, first and principally recommended to his own care" (Smith, 2012). The pursuit of self-interest and competition is the driving force of the marketplace (Werhane, 2019) and is "inherent" in a market economy (Zhang & Xin, 2019). When self-interested individuals strive to maximize their own material interests and create economic value in the context of free market competition, their actions collectively contribute to economic growth and social welfare (Zhang & Xin, 2019). Therefore, in the context of marketization, managers' motivation to pursue private interests is likely to have a negative impact on the way they engage in CSR activities (Jizi et al., 2014). When the chairman of the board is the same person as the CEO, the effectiveness of the board in overseeing top management is reduced (Firth et al., 2007). CEOs with too much power may utilize the firm's resources for their own benefit rather than for the benefit of stakeholders and shareholders (Uyar et al., 2021). They may focus on the short-term finances of the firm at the expense of the long-term sustainability of the firm (Lee et al., 2023). This may result in less attention and involvement in social or community activities, which may affect CSR-related disclosures (Muttakin et al., 2018), and may even create barriers to CSR implementation (Bhaskar et al., 2023). For example, since the chairman of the board has the power to determine the board's agenda, the CEO, who also serves as the chairman, may withhold important information from the independent directors and may be reluctant to engage in ethical behavior when they perceive CSR activities to be detrimental to their personal interests (Liao et al., 2018). Similarly, they can inhibit stakeholder influence by exercising their power to limit CSR disclosure and hide important information from stakeholders (Tibiletti et al., 2021). Consistent with the above, Gallego-Álvarez and Pucheta-Martínez (2022) argue that CEO duality has more negative than positive effects on the firm. Instead, when the CEO does not hold the position of board chair, the board's ability to control and oversee the firm may limit the CEO's personal discretion (Liu & Luo, 2021). At the same time, the separation of positions may also improve the quality of oversight of key decisions regarding stakeholder responsiveness (Li et al., 2016). Previous research has demonstrated that corporate governance practices such as the separation of the board chair and CEO are effective corporate governance mechanisms for achieving better environmental performance and CSR disclosure (Lu & Wang, 2021).

In summary, the nature of the market economy is leading more and more people to pursue their own interests as marketization develops. When CEOs are self-interested "rational economic beings", part-time chairmen may not be well supervised, giving them the opportunity to engage in self-serving activities rather than CSR activities that benefit stakeholders. Separating the positions can better avoid this situation because when the positions of chairman and CEO are held by different individuals, their behavior will be better monitored by the board of directors and other stakeholders, which will lead them to be pressured to reduce the pursuit of personal interests and engage in more socially responsible activities that are conducive to the long-term sustainable development of the firm. Based on this, we propose the following hypothesis:

H3: CEO separation strengthens the relationship between marketization and CSR.

2.4 State ownership and CEO separation

Separating the positions of chairman and CEO of SOEs may reduce self-interested managers' pursuit of self-interest, thereby facilitating the relationship between marketization and CSR. As previously analyzed, the image of SOEs as "quasi-government" entities (Zhou et al., 2021) may lead them to be more concerned with the public interest than non-SOEs (Mohd Ghazali, 2007), and to assume more CSR (Muttakin & Subramaniam, 2015). However, studies have shown that quasi-governmental organizations may deviate from their mission to serve the public, and their managers may take advantage of their positions of power to pursue individual or collective interests (André, 2010). Such self-interested motives will not only weaken the long-term development strategy of the organization, but also weaken their sense of social responsibility (Xu et al., 2023). This outcome may be a result of the development of marketization, because market economies encourage people to maximize their material interests (Zhang & Xin, 2019). On top of this, the managers of SOEs are also given more autonomy by the government, which expects SOEs to decide on production plans and adopt new practices in response to market demand (Li & Belal, 2018). This may result in CEOs who are gaining power being more reluctant to use issues such as CSR to gain legitimacy (Muttakin et al., 2018). In these two cases, CEOs may become less and less concerned with the well-being of stakeholders (Sajko et al., 2021) and utilize firm resources to pursue their own interests (Uyar et al., 2021). This is because they are able to use their power to conceal important information about the firm from independent directors and stakeholders and reduce participation in CSR activities (Liao et al., 2018; Tibiletti et al., 2021). It has already been demonstrated that ownership structures with strong CEOs lead to lower CSR (Tang et al., 2020). However, when the positions of chairman and CEO are separated in SOEs, the CEO, who has discretionary power, is supervised by the board of directors (Liu & Luo, 2021), which prevents him from concealing important information (Liao et al., 2018). This forces the CEOs of SOEs to pay attention to and participate in social or community activities (Muttakin et al., 2018) and fulfill stakeholders' needs for CSR (Muttakin & Subramaniam, 2015).

In summary, compared to other enterprises, SOEs with separate chairmen and CEOs, due to their special attributes of "quasi-government" and effective corporate governance, their CEOs face greater pressure from stakeholders to implement better CSR practices in order to satisfy stakeholders' needs in terms of the environment and society. Based on this, we propose the following hypothesis:

H4: SOEs and CEO separation strengthens the relationship between marketization and

CSR.

3. Methodology and Data

3.1 Samples and data

In this study, companies listed on the Shanghai and Shenzhen stock exchanges (2013–2019) were selected as sample resources, similar to that in a previous study (Long et al., 2020). As a data resource, we consulted with existing studies to collect CSR data from RANKINS (RKS) (Long et al., 2020), Marketization data from the China Market Index Database (CMID) (Zeng et al., 2021), and firm-specific characteristic data such as state ownership and CEO separation from the China Stock Market and Accounting Research (CSMAR) (Long et al., 2020; Voinea et al., 2022). For the sample selection process, we referred to the approach of Long et al. (2020) to exclude samples from the financial sector and those with missing data. Finally, 3,094 observations were obtained as samples.

3.2 Variable measurements

The dependent variable in our study was CSR (*CSR*), borrowing Long et al.'s (2020) approach to measure these values using CSR ratings from the RKS. The CSR rating is RKS's evaluation of the CSR performance of listed companies based on global standards (Wang et al., 2023), and is scored by at least three experts in three dimensions, including overall evaluation, content evaluation and technical evaluation, with more than 70 sub-dimensions, taking into account the scope of CSR activities and their level of engagement (Luo et al., 2017).

For the independent variable, we adopted the same approach as Zeng et al. (2021), using the score provided by the CMID to measure the marketization (*MARK*) of regions. The China

Marketization Index focuses on the degree of marketization during the period of economic transition and is in line with the characteristics of China's marketization process (Zeng et al., 2021). The CMID has the specific values of this index (Xing et al., 2024). This index is based on the characteristics of different aspects of marketization, with five indices, namely, the relationship between the government and the market, the development of the non-state economy, the degree of development of the product market, the degree of development of the factor market, and the development of market intermediary organizations and the legal and institutional environment (Zhang et al., 2023).

For the moderator variables, we referred to the approaches of Long et al. (2020) to measure state ownership (*SOE*), for which a value of 1 indicates that the firm is an SOE and 0 indicates that the firm is not an SOE. Also, we referred to the approaches of Lee (2023) to measure CEO separation (*CEOSEP*), for which a value of 1 indicates that the firm's CEO and board chairman are not the same person, and 0 indicates that the firm's CEO and board chairman are the same person.

We referred to the approaches and measurements of Peng et al. (2022) and Voinea et al. (2022) to select the firm size (*SIZE*), profitability (*ROE*), leverage ratio (*LEV*), board independence (*BIND*), board size (*BSIZE*), and board meetings (*BMTNG*) as control variables (see Table 1 for variable descriptions).

[insert Table 1 about here]

3.3 Model specification

To examine the impact of marketization on CSR (H1), we utilized the following equations:

$$CSR_{i,t} = \alpha + \beta_1 MARK_{i,t} + \sum_{k=2} \beta_k Controls + \varepsilon_{i,t} \quad (1)$$

where i represents a firm and t represents a time trend. *CSR* refers to CSR, *MARK* refers to marketization, *Controls* refers to control variables, and ε is an idiosyncratic error. In addition, we controlled for year and industry fixed effects in the regression.

We also constructed the following augmented model to determine the moderating effects of state ownership and CEO separation (H2, H3, and H4):

$$CSR_{i,t} = \alpha + \beta_1 MARK_{i,t} + \beta_2 MARK \times SOE_{i,t} + \sum_{k=3} \beta_k Controls + \varepsilon_{i,t} \quad (2)$$

where *SOE* refers to state ownership, and *MARK*×*SOE* refers to the interaction term of marketization and state ownership.

$$CSR_{i,t} = \alpha + \beta_1 MARK_{i,t} + \beta_2 MARK \times CEOSEP_{i,t} + \sum_{k=3} \beta_k Controls + \varepsilon_{i,t} \quad (3)$$

where *CEOSEP* refers to CEO separation, and *MARK*×*CEOSEP* refers to the interaction term of marketization and CEO separation.

$$CSR_{i,t} = \alpha + \beta_1 MARK_{i,t} + \beta_2 MARK \times SOE \times CEOSEP_{i,t} + \sum_{k=3} \beta_k Controls + \varepsilon_{i,t} \quad (4)$$

where *MARK*×*SOE*×*CEOSEP* refers to the interaction term of marketization, state ownership and CEO separation.

4. Results

4.1 Descriptive statistics and correlation analysis

Table 2 presents the sample variable statistics and Pearson correlations. The first column shows the mnemonics of the variables, followed by means, standard deviations, and correlation coefficients. For multicollinearity issues, we calculated the variance inflation factors (VIFs) for all variables, and the results show that VIFs were between 1.03 and 1.28, which means that our study is free of multicollinearity (see Table 2 for VIFs).

[insert Table 2 about here]

4.2 Multivariate regression results

4.2.1 Marketization and CSR

Table 3, column (1) reports the results of Equation (1), indicating the relationship between marketization and CSR (H1). The results also show that the adjusted R^2 in column (1) is 0.258, indicating that our model effectively explains the difference in CSR.

[insert Table 3 about here]

As shown in Table 3, the results of IE and CSR ($\beta_1 = 0.661, \rho < 0.01$) are positively correlated at the 1% significance level. This result indicates that the higher the level of marketization, the higher the CSR. This result is similar to the findings of Han et al. (2020) and Kong et al. (2023). Our results indicate that CSR in China can be enhanced by the development of the market economy. This finding is consistent with our expectation, and H1 is supported.

4.2.2 The moderating effect of state ownership and CEO separation

Columns (2), (3), and (4) in Table 3 report the results of Equation (2), (3), and (4) respectively, showing the moderating effects of SOEs and CEO separation (H2, H3, and H4). The results also show that the adjusted R^2 is 0.261 in column (2), 0.258 in column (3), and

0.260 in column (4), indicating that our model has been effective in accounting for the differences in CSR.

In Table 3, the results of *MARK*×*SOE* ($\beta_1 = 0.145, \rho < 0.01$) was positive at the 1% significance level. According to previous findings and the arguments of Liu and Zhang (2017), Long et al. (2020), Zaid et al. (2020), and Zhou et al. (2021), these results reveal that with the development of the free market economy, SOEs show better CSR than non-SOEs. This implies that "quasi-government" responsibility plays an important role in encouraging SOEs to participate in CSR practices under the regulation of the market economy, and thus H2 is supported.

However, the results of *MARK*×*CEOSEP* in Table 3 are insignificant, which implies that Chinese CSR activities in the market economy environment are not affected by CEO separation, and thus H3 is not supported. Existing studies also show similar results on the relationship between CEO and chairman role separation and CSR (Peng & Zhang, 2022; Bhaskar et al., 2023). For example, Endrikat et al. (2021) reported a positive but insignificant coefficient, while Lagasio and Cucari (2019) reported a negative but insignificant coefficient. In response to this phenomenon, Bhaskar et al. (2023) provide the explanation that risks such as job entrenchment and information asymmetry associated with CEO duality may be mitigated in developed economies with good corporate governance practices. Based on the above explanation, we believe that the insignificant results may be due to the fact that China's market economy is already relatively well-developed, and CSR is more influenced by the external environment and less by corporate governance. Our study confirms the argument that CSR-related activities in developed regions are more influenced by external stakeholders (Ali et al., 2017).

Noticeably, while the results of *MARK*×*CEOSEP* in Table 3 are not significant, the results of *MARK*×*SOE*×*CEOSEP* ($\beta_1 = 0.120, \rho < 0.01$) was positive at the 1% significance level. Based on the results of previous studies and the arguments of André (2010), Liao et al. (2018), and Tibiletti et al. (2021), this result reveals that SOEs that separate the positions of the CEO and the chairman of the board of directors show better CSR than other firms with the development of the free market economy. This implies that CEO separation of SOEs can prevent the opportunistic behavior of CEOs and ensure that CEOs focus on long-term corporate development, and thus H4 is supported.

4.2.3 Further analyses: group discussions by firm size

To provide a deeper investigation of China's CSR and contribute to the field of the CSR of emerging economies, we referred to the approaches of Andries and Stephan (2019) to divide our sample into large and small sample groups, based on the median firm size, and adopted the same regression models as our empirical tests for retesting (see Table 4 for retesting results). The results of the *MARK* in Columns (5) – (8) were positive, whereas all interaction terms in these columns were insignificant. Based on the results of previous studies and the arguments of Wickert et al. (2016), Yu et al. (2017), and Schwoy et al. (2023), this result reveals that external factors such as marketization are more likely to promote CSR in large firms. This means that when companies develop to a certain scale, their corporate governance and policies are relatively comprehensive, which results in the positive role for the SOE "quasi-government" responsibility and CEO separation in promoting CSR becoming limited. Under these circumstances, larger firms tend to focus more on legitimacy (Yu et al., 2017). Thus, promoting market-oriented reforms is a more effective way to strengthen large companies' CSR in China.

Table 4 also shows that the results for *MARK×SOE* in column (2) and *MARK×SOE×CEOSEP* in column (4) were positive at 1% level of significance. Based on the results of previous studies and the arguments of Coppa and Sriramesh (2013), Nejati et al. (2014), and Cheffi et al. (2021), this result reveals that internal factors such as state ownership and CEO separation are more effective in promoting CSR in small firms. This means that marketization has a weaker effect on improving CSR in small firms than in large firms, that CSR in small firms of China is mainly promoted by the "quasi-government" responsibilities of the SOEs themselves, and that good corporate governance is more likely to contribute to the implementation of CSR in small SOEs.

[insert Table 4 about here]

4.3 Robustness tests

In this study, we used alternative control variables for robustness testing. According to previous arguments, total assets can represent the firm size (Lin et al. 2015) and ROA and ROE can represent profitability (Voinea et al. 2022). Therefore, we used total assets (*TOTALASSETS*) to redefine *SIZE* and replaced *ROE* with *ROA*. These results were similar to our empirical results (see Tables 5 and 6 for the results), meaning that H1, H2, H4, and the results of the further analyses pass the robustness tests.

[insert Table 5 about here]

[insert Table 6 about here]

5. Conclusion

In the last few decades, increased stakeholder interest in CSR activities has put enormous pressure on companies to engage in CSR initiatives in order to satisfy stakeholders and gain the legitimacy needed for the survival of the organization. At the same time, academics have begun to pay attention to CSR activities in emerging economies, particularly the factors influencing CSR. In this context, China, as the largest emerging economy, has attracted a large number of scholars to explore the internal and external factors affecting its CSR, arriving at the thesis that its CSR is mainly influenced by government intervention (Zhang et al., 2021). However, as the marketization transition of China's unique environment, few scholars have explored how it and government interventions affect CSR. Therefore, using a Chinese sample, this study examines the relationship between marketization and CSR and the moderating role of SOEs and CEO separation.

Based on the analysis of the study, our results are consistent with the arguments of Institutional Theory and Stakeholder Theory that explain the logic behind firms' engagement in CSR activities. The robust findings based on empirical regression show that marketization is positively related to CSR (H1). This means that in China, the market economy can promote the development of CSR. Since the reform and opening up, the Chinese government has been committed to the development of the market economy and has done its best to create a fair competition environment for enterprises. In this environment, Chinese enterprises need to meet the growing demand for CSR from stakeholders in order to cope with the fierce market competition. Thus, the development of marketization has led to greater stakeholder pressure on firms, which in turn affects their CSR engagement.

Our findings also indicate that SOEs (H2) and SOEs and CEO separation (H4) can positively moderate the relationship between marketization and CSR. This showed that SOEs are more susceptible to the influence of the market economy than non-SOEs in the process of CSR implementation by firms. Also, good corporate governance can strengthen this influence. Although Chinese SOEs have undergone a series of reforms, they still retain some of the attributes of the planned economy, namely "quasi-government" responsibilities. The public and other stakeholders often perceive SOEs as representing the government, which makes their expectations and demands on SOEs much greater than on non-SOEs. At the same time, with the development of the market economy, the government is intervening less and less in the economy, and prefers to use SOEs to guide the market and meet the needs of their citizens. However, the reform of SOEs has given their leaders more discretionary power, which may lead them to pursue their own interests by harming the interests of stakeholders, which will hinder the CSR practices of SOEs. Thus, with the development of the market economy, pressure from the government and stakeholders has made SOEs more eager to engage in CSR activities than non-SOEs. Meanwhile, SOEs need a more complete corporate governance mechanism to ensure the effective implementation of related activities.

On this base, we also divide the sample into large and small firms to further analyze the effects of marketization, SOEs and CEO separation on CSR in different firms. The results show that marketization is positively related to CSR for large firms, and SOEs and CEO separation have no moderating effects. The regression results for small firms are just the opposite, with SOEs and SOEs and CEO separation positively moderating the relationship between marketization and CSR. These results reveal that the CSR of large Chinese firms can be strengthened by the development of marketization. Meanwhile, "quasi-government" responsibility and CEO separation are key to promoting CSR among small firms. The possible reasons for this are that large firms tend to receive more attention and scrutiny from stakeholders than small firms and can afford the cost of engaging in CSR. Smaller firms, however, are more constrained by resources, which makes it possible for them to ignore stakeholder pressures in favor of easing the pressure to survive. In this case, SOE identity and good corporate governance provide these small firms with the resources and competitive advantage to implement CSR activities, which is the price they have to pay for acquiring the resources. Thus, as firms continue to become larger, the factors driving CSR change from the internal characteristics of the firm to the external environment.

This study provides theoretical derivations and empirical tests of the relationship between marketization and CSR from the perspectives of institutional theory and stakeholder theory, which have several theoretical implications. First, using a multi-theoretical perspective, we attempt to explain our research question by combining institutional theory and stakeholder theory. This is different from previous studies. Most previous studies have used a single theory to explain CSR issues, ignoring the limitations of a single theory on some issues. Second, we theoretically explain the relationship between market economy and CSR in China, as well as the impact of SOEs as an indirect government intervention, and discover the role of corporate governance on SOEs. Our study demonstrates the link between the "invisible hand" and the "visible hand" and extends existing CSR research. Finally, further analysis of firm size highlights the drivers of CSR for firms in different life cycles, narrowing the gap in our knowledge of differences in CSR engagement across firms and deepening our understanding of the heterogeneity of firms' activities under isomorphic pressures.

This study also provides recommendations for policymakers. Based on our results, we suggest that policymakers need to recognize the differences in the drivers of CSR among firms at different stages of development and adopt different policies for different firms. Specifically, for large enterprises with relatively well-developed corporate governance and relatively adequate firm resources, their CSR is more influenced by the market economy. Therefore, policymakers should further deepen market-oriented reforms, adhere to market orientation, and promote the transformation of production methods through the regulation of the market's "invisible hand" to provide long-term incentives for CSR in large enterprises. For small and medium-sized enterprises, policymakers should take into account the positive role of the "quasi-government" responsibility of SOEs, adjust the existing CSR-related policies, encourage SOEs to participate in CSR activities, give full play to the leading role of SOEs, guide the market through the "visible hand", and join hands with private enterprises to jointly develop CSR, so as to enhance the overall CSR level of enterprises. In addition, for small and medium-sized SOEs, policymakers should formulate effective corporate governance mechanisms, give full play to the supervisory function of the board of directors, restrain and regulate the behavior of CEOs and other executives, and reduce the asymmetry of information between the stakeholders and the firms, so that the firms can better create benefits for shareholders and other stakeholders.

Finally, considering the limitations and future research, this study focuses only on the Chinese sample, and samples from other countries could not be included in this study. Therefore, expanding the sample source from China to other countries may enhance our understanding of CSR in emerging economies. In particular, cultural differences may provide a new perspective to explain CSR differences among emerging economies. In addition, our study finds that state-owned status can help small firms access survival resources. This finding leads to an interesting question: how does the transformation of non-SOEs into SOEs and the transformation of SOEs into non-SOEs affect CSR-related social and environmental issues? Future research deserves further investigation.

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Table 1 Summarizes all variables

Name of variables	Mnemonics	Role	Measurement
CSR	*CSR*	Dependent variable	CSR ratings from the RKS
Marketization	*MARK*	Independent variable	Index of Marketization of China's Provinces
State ownership	SOE	Moderator variable	Binary variable: value 1 means that the firm is state-owned, otherwise 0
CEO separation	*CEOSEP*	Moderator variable	Binary variable: value 1 means that the CEO does not occupy the chair position of the board, otherwise 0
Firm size	*SIZE*	Control variable	Napierian Log of the total employees of the firm
Profitability	*ROE*	Control variable	Ratio of net profit to shareholders' equity
Leverage ratio	*LEV*	Control variable	Ratio of total liabilities to total assets
Board independence	*BIND*	Control variable	Ratio of the number of independent directors to the total number of board members
Board size	*BSIZE*	Control variable	Total number of board members
Board meeting	*BMTNG*	Control variable	Board meeting frequency per year

Table 2 Descriptive statistics and Pearson's correlation

VARIABLES	**Mean**	**SD**	**VIF**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**
1. CSR	41.678	11.975		1.000									
2. MARK	9.293	1.580	1.03	0.083***	1.000								
3. SOE	0.665	0.472	1.14	0.156***	-0.078***	1.000							
4. CEOSEP	0.848	0.359	1.08	0.065***	-0.088***	0.229***	1.000						
5. SIZE	8.617	1.373	1.19	0.444***	-0.054***	0.180***	0.104***	1.000					
6. ROE	0.073	0.161	1.07	0.073***	0.085***	-0.063***	-0.048***	0.036**	1.000				
7. LEV	0.500	0.199	1.28	0.142***	-0.021	0.175***	0.081***	0.299***	-0.203***	1.000			
8. BIND	37.365	5.497	1.16	0.004	-0.033*	-0.012	-0.087***	0.070***	0.003	0.047***	1.000		
9. BSIZE	9.282	2.036	1.25	0.170***	-0.089***	0.203***	0.114***	0.213***	0.004	0.098***	-0.329***	1.000	
10. BMING	10.364	5.091	1.11	0.097***	0.067***	-0.016	0.004	0.082***	-0.030*	0.296***	0.044**	0.013	1.000
Mean VIFs			1.15										

Note: *, ** and *** represent significance at the 10%, 5% and 1% levels, respectively.

Table 3 Regression results

VARIABLES	(1)	(2)	(3)	(4)
MARK	0.661***	0.603***	0.664***	0.628***
	(4.598)	(4.173)	(4.525)	(4.362)
MARK×SOE		0.145***		
		(3.322)		
MARK×CEOSEP			-0.004	
			(-0.086)	
MARK×SOE×CEOSEP				0.120***
				(2.769)
SIZE	3.704***	3.642***	3.705***	3.641***
	(20.507)	(20.195)	(20.505)	(20.073)
ROE	3.762***	3.946***	3.757***	3.956***
	(3.436)	(3.665)	(3.421)	(3.662)
LEV	-1.349	-1.554	-1.348	-1.519
	(-1.137)	(-1.316)	(-1.136)	(-1.284)
BIND	-0.017	-0.020	-0.017	-0.017
	(-0.472)	(-0.563)	(-0.476)	(-0.471)
BSIZE	0.418***	0.379***	0.419***	0.389***
	(3.881)	(3.465)	(3.889)	(3.568)
BMING	0.101**	0.107**	0.101**	0.104**
	(2.165)	(2.269)	(2.165)	(2.215)
Constant	-10.439***	-9.121***	-10.442***	-9.489***
	(-4.011)	(-3.468)	(-4.014)	(-3.618)
Industry	YES	YES	YES	YES
Year	YES	YES	YES	YES
F	37.816***	37.969***	36.520***	37.462***
Observations	3094	3094	3094	3094
Adj-R	0.258	0.261	0.258	0.260

*, ** and *** represent significance at the 10%, 5% and 1% levels, respectively.

Table 4 Regression results by firm size

VARIABLES	Small enterprises				Large enterprises			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
MARK	0.344*	0.286	0.337*	0.325*	0.977***	0.956***	0.969***	0.955***
	(1.813)	(1.512)	(1.720)	(1.711)	(4.845)	(4.532)	(4.719)	(4.598)
MARK×SOE		0.220***				0.040		
		(4.502)				(0.516)		
MARK×CEOS EP			0.010				0.011	
			(0.167)				(0.124)	
MARK×SOE× CEOSEP				0.181***				0.049
				(3.669)				(0.660)
SIZE	2.223***	2.093***	2.220***	2.096***	4.922***	4.897***	4.919***	4.886***
	(6.678)	(6.357)	(6.644)	(6.317)	(14.213)	(13.849)	(14.144)	(13.794)
ROE	2.206*	2.418*	2.213*	2.420*	6.377***	6.423***	6.392***	6.458***
	(1.691)	(1.919)	(1.695)	(1.906)	(3.861)	(3.892)	(3.834)	(3.901)
LEV	-0.801	-0.664	-0.801	-0.724	1.046	0.871	1.043	0.838
	(-0.630)	(-0.520)	(-0.630)	(-0.567)	(0.477)	(0.390)	(0.476)	(0.378)
BIND	-0.090*	-0.074	-0.089*	-0.074	-0.021	-0.024	-0.020	-0.023
	(-1.786)	(-1.481)	(-1.773)	(-1.476)	(-0.412)	(-0.470)	(-0.397)	(-0.462)
BSIZE	-0.006	-0.073	-0.007	-0.065	0.685***	0.675***	0.684***	0.675***
	(-0.035)	(-0.451)	(-0.044)	(-0.403)	(4.957)	(4.781)	(4.949)	(4.828)
BMING	0.012	0.020	0.012	0.016	0.154**	0.155**	0.154**	0.155**
	(0.240)	(0.415)	(0.240)	(0.342)	(2.136)	(2.147)	(2.136)	(2.134)
Constant	9.485***	10.824***	9.501***	10.396***	-29.358***	-28.808***	-29.327***	-28.705***
	(2.646)	(3.083)	(2.654)	(2.946)	(-5.873)	(-5.482)	(-5.862)	(-5.518)
Industry	YES	YES	YES	YES	YES	YES	YES	YES
Year	YES	YES	YES	YES	YES	YES	YES	YES
F	18.959***	19.722***	18.291***	19.143***	23.634***	23.354***	22.758***	23.154***
Observations	1547	1547	1547	1547	1547	1547	1547	1547
Adj-R	0.136	0.147	0.136	0.144	0.227	0.227	0.227	0.227

*, ** and *** represent significance at the 10%, 5% and 1% levels, respectively.

Table 5 Regression of robustness test

VARIABLES	(1)	(2)	(3)	(4)
MARK	0.587***	0.559***	0.576***	0.566***
	(4.186)	(3.942)	(4.026)	(4.019)
MARK×SOE		0.075*		
		(1.745)		
MARK×CEOSEP			0.016	
			(0.328)	
MARK×SOE×CEOSEP				0.082*
				(1.926)
TOTALASSETS	4.338***	4.288***	4.336***	4.285***
	(23.701)	(23.152)	(23.704)	(23.172)
ROA	1.916	2.278	1.967	2.336
	(0.546)	(0.651)	(0.560)	(0.669)
LEV	-6.419***	-6.421***	-6.419***	-6.447***
	(-4.814)	(-4.832)	(-4.812)	(-4.852)
BIND	-0.050	-0.051	-0.049	-0.049
	(-1.449)	(-1.475)	(-1.425)	(-1.432)
BSIZE	0.331***	0.313***	0.329***	0.312***
	(3.118)	(2.913)	(3.095)	(2.912)
BMING	0.042	0.046	0.042	0.045
	(0.908)	(0.992)	(0.908)	(0.970)
Constant	-71.232***	-69.831***	-71.200***	-69.861***
	(-17.721)	(-16.886)	(-17.738)	(-17.018)
Industry	YES	YES	YES	YES
Year	YES	YES	YES	YES
F	44.794***	43.961***	43.236***	43.906***
Observations	3094	3094	3094	3094
Adj-R	0.284	0.284	0.284	0.285

*, ** and *** represent significance at the 10%, 5% and 1% levels, respectively.

Table 6 Robustness tests by firm size

VARIABLES	Small enterprises				Large enterprises			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
MARK	0.057	0.028	-0.017	0.042	1.154***	1.214***	1.211***	1.183***
	(0.332)	(0.165)	(-0.094)	(0.242)	(5.678)	(5.636)	(5.827)	(5.638)
MARK×SOE		0.145***				-0.107		
		(3.082)				(-1.335)		
MARK×CEOSEP			0.098*				-0.090	
			(1.936)				(-0.987)	
MARK×SOE×CEOSEP				0.173***				-0.069
				(3.560)				(-0.952)
TOTALASSETS	2.281***	2.246***	2.303***	2.250***	5.400***	5.453***	5.418***	5.441***
	(6.958)	(6.891)	(7.004)	(6.880)	(17.047)	(16.920)	(17.033)	(16.855)
ROA	3.235	3.736	3.496	3.884	8.842	7.859	8.521	8.194
	(0.794)	(0.922)	(0.854)	(0.959)	(1.054)	(0.930)	(1.017)	(0.970)
LEV	-3.681**	-3.707**	-3.815***	-3.866***	-4.665*	-4.697*	-4.785*	-4.705*
	(-2.505)	(-2.536)	(-2.593)	(-2.652)	(-1.841)	(-1.844)	(-1.894)	(-1.851)
BIND	-0.106***	-0.096**	-0.099**	-0.094**	-0.072	-0.064	-0.073	-0.069
	(-2.752)	(-2.515)	(-2.572)	(-2.468)	(-1.362)	(-1.207)	(-1.382)	(-1.304)
BSIZE	0.061	0.004	0.047	-0.011	0.517***	0.538***	0.525***	0.528***
	(0.455)	(0.032)	(0.344)	(-0.079)	(3.712)	(3.835)	(3.773)	(3.783)
BMING	-0.110*	-0.103*	-0.106*	-0.097*	0.104*	0.099*	0.106*	0.103*
	(-1.920)	(-1.806)	(-1.846)	(-1.700)	(1.705)	(1.651)	(1.724)	(1.698)
Constant	-16.663**	-15.715**	-17.234**	-15.877**	-95.208***	-96.656***	-95.386***	-96.154***
	(-2.425)	(-2.294)	(-2.500)	(-2.305)	(-13.092)	(-12.997)	(-13.097)	(-12.973)
Industry	YES	YES	YES	YES	YES	YES	YES	YES
Year	YES	YES	YES	YES	YES	YES	YES	YES
F	28.419***	25.706***	27.782***	26.299***	27.664***	26.496***	26.720***	26.555***
Observations	1547	1547	1547	1547	1547	1547	1547	1547
Adj-R	0.159	0.164	0.161	0.167	0.256	0.256	0.255	0.255

*, ** and *** represent significance at the 10%, 5% and 1% levels, respectively.