

Lin, Zhiwei; Jiang, Yihong; Xu, Yixuan

## Article

# Do modified audit opinions have economic consequences? Empirical evidence based on financial constraints

China Journal of Accounting Research

## Provided in Cooperation with:

Sun Yat-sen University

*Suggested Citation:* Lin, Zhiwei; Jiang, Yihong; Xu, Yixuan (2011) : Do modified audit opinions have economic consequences? Empirical evidence based on financial constraints, China Journal of Accounting Research, ISSN 1755-3091, Elsevier, Amsterdam, Vol. 4, Iss. 3, pp. 135-154, <https://doi.org/10.1016/j.cjar.2011.06.004>

This Version is available at:

<https://hdl.handle.net/10419/187555>

### Standard-Nutzungsbedingungen:

Die Dokumente auf EconStor dürfen zu eigenen wissenschaftlichen Zwecken und zum Privatgebrauch gespeichert und kopiert werden.

Sie dürfen die Dokumente nicht für öffentliche oder kommerzielle Zwecke vervielfältigen, öffentlich ausstellen, öffentlich zugänglich machen, vertreiben oder anderweitig nutzen.

Sofern die Verfasser die Dokumente unter Open-Content-Lizenzen (insbesondere CC-Lizenzen) zur Verfügung gestellt haben sollten, gelten abweichend von diesen Nutzungsbedingungen die in der dort genannten Lizenz gewährten Nutzungsrechte.

### Terms of use:

*Documents in EconStor may be saved and copied for your personal and scholarly purposes.*

*You are not to copy documents for public or commercial purposes, to exhibit the documents publicly, to make them publicly available on the internet, or to distribute or otherwise use the documents in public.*

*If the documents have been made available under an Open Content Licence (especially Creative Commons Licences), you may exercise further usage rights as specified in the indicated licence.*



<https://creativecommons.org/licenses/by-nc-nd/3.0/>



## Do modified audit opinions have economic consequences? Empirical evidence based on financial constraints <sup>☆</sup>

Zhiwei Lin <sup>a,\*</sup>, Yihong Jiang <sup>a</sup>, Yixuan Xu <sup>b</sup>

<sup>a</sup> School of Accountancy, Shanghai University of Finance and Economics, China

<sup>b</sup> School of Accounting and Finance, Shanghai Lixin University of Commerce, China

### ARTICLE INFO

#### Article history:

Received 23 April 2010

Accepted 26 April 2011

Available online 27 August 2011

#### JEL classification:

M42

G32

L14

#### Keywords:

Modified audit opinions (MAOs)

Economic consequences

Financial constraints

Earnings management

Government intervention

Political connections

### ABSTRACT

We present a framework and empirical evidence to explain why, on average, 11% of listed firms in China received modified audit opinions (MAOs) between 1992 and 2009. We argue that there are two reasons for this phenomenon: strong earnings management incentives lower firms' financial reporting quality and soft budget constraints weaken the information and governance roles of audit opinions. We find that firms' financial constraints eased after receiving MAOs, which suggests that MAOs have limited economic consequences. Further analysis shows that this phenomenon predominantly exists in government-controlled firms and firms that receive MAOs for the first time. We also find that MAOs have not influenced financial constraints after 2006. Finally, we find that MAOs did not affect borrowing cash flows from banks until 2005, suggesting that MAOs did not start affecting bank financing until that year. We also find that firms receive more related-party financing after receiving MAOs. Our results indicate that a limited effect on bank financing and increased related-party financing reduce the effect of MAOs on financial constraints.

© 2011 China Journal of Accounting Research. Founded by Sun Yat-sen University and City University of Hong Kong. Production and hosting by Elsevier B.V. All rights reserved.

## 1. Introduction

On average, 11% of the annual reports of Chinese listed firms received modified audit opinions (MAOs) between 1992 and 2009, which is much higher than in Britain (2.96%) and other East Asian economies (2.01%).<sup>1</sup> We provide a framework and empirical evidence to explain this phenomenon.

<sup>☆</sup> This paper was supported by the National Natural Science Foundation of China (No. 71172143), and the Major Project of Key Research Institute of Humanities and Social Science of the Ministry of Education, People's Republic of China (No. 2009JJD790030). We appreciate helpful comments from an anonymous referee, Ge Rui and participants at CJAR Summer Research Workshop (2010, Hong Kong, China). All errors are our own.

\* Corresponding author. Tel.: +86 13020284818.

E-mail address: [szstanly@gmail.com](mailto:szstanly@gmail.com) (Z. Lin).

<sup>1</sup> Modified audit opinions (MAOs) include opinions that are unqualified with explanatory paragraphs, and qualified, disclaimed and adverse opinions.



The three factors that affect the probability of receiving MAOs are the likelihood of substantial misrepresentation in annual reports, the competency of auditors and the independence of auditors. The first factor is mainly determined by the incentives of listed companies and the last two factors represent audit quality. The extant literature uses the proportion of firms that received MAOs to proxy for audit quality in China. They argue that an increase in audit risk leads to higher auditor independence and audit quality, which results in an increase in the proportion of firms that receive MAOs (DeFond et al., 2000; Wang and Chen, 2001). Although audit quality is important in determining the likelihood of receiving a MAO, a more important determinant is the probability of substantial misrepresentation in annual reports, which is overlooked in the extant literature.<sup>2</sup> We examine the economic consequences of receiving a MAO and explain why firms in China have a high occurrence of misrepresentation in annual reports.

We argue that the main reasons for the high proportion of MAOs in China are strong earnings management incentives and the limited costs of receiving MAOs. First, a substantial amount of research finds that security regulations (IPO, SEO and delisting regulations, etc.), related-party tunneling and corporate rent-seeking activities provide listed companies with strong incentives to engage in earnings management, which increases the probability of substantial misrepresentation in annual reports (Jiang, 1998; Lu, 1999; Sun and Wang, 1999; Aharony et al., 2000; Chen and Yuan, 2004; Fan and Wong, 2002; Liu and He, 2004; Li et al., 2006; Fan et al., 2008a,b; Luo and Zhen, 2008). Second, firms' investment and financing opportunities are mainly determined by political connections and government intervention (Sun et al., 2005; Xia and Fang, 2005; Luo and Tang, 2007; Fan et al., 2008b; Li et al., 2008; Luo and Zhen, 2008; Luo and Liu, 2009) and not by information asymmetry signaled by MAOs. Thus, receiving a MAO does not necessarily have a large negative effect on firm value. In summary, strong earnings management incentives increase the probability of substantial misrepresentation in annual reports, which results in more modified audit opinions. Also, because MAOs have little effect on investment and financing opportunities, firms choose to accept a high probability of receiving a MAO after considering the costs and benefits.

We focus on the effect of receiving MAOs on firms' financial constraints for two reasons. First, China is an emerging market in which firms have good investment opportunities. However, the capital market is still developing and capital is a scarce resource in China (Lin et al., 1999). We can learn what role accounting information plays in the process of value creation by examining the effect of MAOs on financial constraints, which affect firm investment and financing activities. Second, we can learn about one of the real effects of accounting information by studying the effect of MAOs on financial constraints.<sup>3</sup>

There are two competing views on the effect of MAOs on financial constraints. The first is the Information Asymmetry View (IAV). The audit report conveys important information about the information quality of annual reports; receiving a MAO signals a decrease in information quality and an increase in information asymmetry between firm insiders and outsiders, which increases firms' financial constraints. However, there is another possibility. In China, firms obtain outside financing through help from the government, by using political connections or by building their internal capital market to mitigate the difficulty in obtaining financing from outside sources. To avoid securities regulations or conceal the tunneling or rent-seeking activities of controlling shareholders, firms with relatively poor performance have strong incentives to manipulate earnings, which increase the chance of receiving MAOs. However, to help firms boost performance, governments and controlling shareholders have incentives to help firms acquire more financing, which can soften budget constraints and ease financing constraints. We call this the Soft Budget Constraint View (SCV). These two mechanisms may coexist and if the effect of SCV is larger than the effect of IAV, then firms' financing constraints may remain unchanged or even ease after receiving MAOs. Thus, MAOs do not necessarily create substantial negative effects on firms' investment and financing activities, which could explain the high proportion of firms that receive MAOs in China.

We find that firms' financial constraints ease after receiving MAOs, which means the effect of soft budget constraints is larger than the effect of information asymmetry. Further analysis shows that this phenomenon predominantly exists in government-controlled firms and firms that receive MAOs for the first time. We also find that MAOs do not influence financial constraints after 2006. Finally, we find that MAOs did not affect borrowing cash flows from banks before 2005, which means that MAOs did not start affecting bank financing until that year. We also find that firms obtain more related-party financing after receiving MAOs. Our results show that a limited effect on bank financing and increased related-party financing reduce the effect of MAOs on financial constraints.

Our paper makes two contributions. First, the extant literature explains the probability of receiving MAOs from the perspective of auditor independence. We argue that this is an incomplete view and provide a comprehensive framework to further our understanding of China's audit market based on the country's special institutional factors. This framework represents a specific development in research on the effect of institutions on accounting information (Ball et al., 2000; Ball, 2001). Second, we explain why MAOs have limited information and corporate governance roles from the perspectives of

<sup>2</sup> For example, if there is little misrepresentation in annual reports, then the observed proportion of firms that receive MAOs is near zero even if auditors are fully independent. However, if the probability of substantial misrepresentation increases, then the observed proportion of firms that receive MAOs will increase even if auditor independence remains unchanged.

<sup>3</sup> Receiving a MAO has many economic consequences, including the effect on firm liquidity, the cost of capital, management turnover, etc. These are possible future research questions that could help us further understand the economic consequences of receiving MAOs. We do not examine the effect of receiving MAOs on the cost of capital for two reasons. First, we need stock prices to calculate the cost of capital. However, price is an expectation measure and the market may anticipate the possibility of receiving MAOs and adjust the stock price in advance, which makes it difficult to identify the effect of MAOs on the cost of capital. Second, the stock market in China is not very efficient and the information content of price is low (Morck et al., 2000), which causes large estimation errors when using prices to calculate cost of capital measures.

**Table 1**  
Modified audit opinions in China's stock market.

Year	Listed companies	Number that received audit opinions	Number that received MAOs	Proportion that received MAOs (%)		
<i>Panel A: Proportion of firms that received MAOs in China's stock market</i>						
1992	50	45	2	4.4		
1993	179	154	5	3.2		
1994	291	269	6	2.2		
1995	321	321	36	11.2		
1996	531	529	46	8.7		
1997	745	745	90	12.1		
1998	852	851	147	17.3		
1999	949	948	189	19.9		
2000	1091	1091	178	16.3		
2001	1164	1163	156	13.4		
2002	1228	1228	165	13.4		
2003	1293	1293	109	8.4		
2004	1380	1380	151	10.9		
2005	1375	1375	171	12.4		
2006	1458	1458	150	10.3		
2007	1572	1572	125	8.0		
2008	1626	1626	113	6.9		
2009	1774	1774	118	6.7		
PRC	17879	17822	1957	11.0		
UK		5441	161	2.96		
8 East Asian economies		2834	57	2.01		
Number of MAOs received	Number of firms	Number of MAOs received	Number of firms	Number of MAOs received	Number of firms	Total
<i>Panel B: Statistics for the number of firms that received MAOs</i>						
1	193	6	31	11	1	
2	134	7	20	12	2	
3	89	8	16	13	1	
4	63	9	16	16	1	
5	45	10	9			
Total	524		92		5	621

(1) Chinese sample includes A share and B share firms; all Chinese data comes from the CSMAR database and was compiled by the authors.

(2) The UK data comes from [Lennox \(2000\)](#), including 949 listed companies from 1988 to 1994.

(3) The data on Eight East Asian economies comes from [Fan and Wong \(2005\)](#), including listed companies from 1994 to 1996.

political connections and soft budget constraints. The findings may help regulators to understand the role of accounting information in allocating resources and in designing regulations that are more effective.

The remainder of the article proceeds as follows. Section 2 describes the phenomenon whereby a large proportion of firms in China receive MAOs, provides a simple framework to explain this phenomenon and develops our hypotheses. Section 3 presents the research design, which describes the sample and the research models and defines the variables. Section 4 presents the empirical results. Section 5 concludes the article.

## 2. Research question, theoretical analysis and research hypothesis

### 2.1. Research question

Table 1, Panel A reports the number of firms in the Chinese stock market that received MAOs between 1992 and 2009. We find the proportion of firms that received MAOs has been above 7% since 1995, reaching a peak of 19.9% in 1999.<sup>4</sup> On average, 11% of firms received MAOs in China from 1992 to 2009. We estimate that even after dropping unavoidable MAOs, the proportion of firms that received avoidable MAOs was 7.7%.<sup>5</sup>

According to [Lennox \(2000\)](#), the proportion of firms that received MAOs in Britain between 1988 and 1994 was 2.96%, which is eight percent lower than in China. [Fan and Wong \(2005\)](#) report the proportion of firms that received MAOs in eight East Asian economies from 1994 to 1996 was 2.01%, which is almost nine percent lower than in China. The proportion of firms that received MAOs in China is clearly much higher than in markets in developed countries (such as Britain) and in developing countries (eight East Asian countries). The proportion of firms that received MAOs cannot be compared due to

<sup>4</sup> The proportion of firms that received MAOs in 2003 decreased from 13.4% to 8.4%, which is explained by changes in audit standards ([Wang and Tu, 2006](#)).

<sup>5</sup> We do not have data on unavoidable MAOs, but, in line with [Chen et al. \(2005\)](#), we believe this percentage would not exceed 30% of MAOs; thus, the percentage of avoidable MAOs is 7.7% (11% \* 0.7 = 7.7%).

differences between developing countries and developed countries on dimensions such as capital market development, the quality of listed companies and the level of investor protection. Nevertheless, it is notable that although we share a similar investor protection environment and culture, a much higher proportion of firms received MAOs in China than in other East Asian economies.

Table 1, Panel B summarizes the number of firms that received MAOs from 1992 to 2009. It shows that 621 firms received MAOs during this period. This includes 428 firms that received two or more MAOs, 92 firms received between 6 and 10, and 5 firms received more than 10. The firm that received the most was SHENRUN GUFENG (Chen et al., 2009), which received 18 MAOs from 1993 to 2010. Given these statistics, it is reasonable to ask why so many firms received MAOs in China during this period.

## 2.2. Theoretical analysis

Eq. (1) shows that the probability of receiving MAOs is the joint probability of three factors. The first is the likelihood that there is substantial misrepresentation in annual reports. The second is the probability that auditors (A) find substantial misrepresentation in annual reports, conditional on there being substantial misrepresentation in annual reports. The third is the probability that auditors report substantial misrepresentation, conditional on them finding it. The second and third factors are called professional competence and auditor independence, and represent audit quality (Watts and Zimmerman, 1986).

$$\begin{aligned}
 P(\text{receive MAOs}) &= P(\text{Substantial misrepresentation in annual reports}) \\
 &* P(\text{Auditors find the substantial misrepresentation} \mid \text{Substantial misrepresentation in annual reports}) \\
 &* P(\text{Auditors report the substantial misrepresentation} \mid \text{Auditors find the substantial misrepresentation}) \quad (1)
 \end{aligned}$$

According to Eq. (1), we can explain the high proportion of firms that receive MAOs in China from two perspectives. The first explanation looks at the problem from the perspective of audit quality and assumes that improved audit quality increases the proportion of firms that receive MAOs. DeFond et al. (2000) and Wang and Chen (2001) take the proportion of firms that received MAOs as a proxy variable for auditor independence. They find that the introduction of new audit standards in 1995 and the disaffiliation program in 1997 improved auditor independence, which is proxied by increases in the proportion of firms that received MAOs. Improvement in auditor independence could explain the time-series increase in the proportion of firms that received MAOs, but cannot explain why the proportion is much higher than in European and Asian countries, because there is no evidence that professional competence and auditor independence is better in China than elsewhere. Thus, the explanation for the high proportion of firms receiving MAOs in China must lie in why there is a high probability of substantial misrepresentation.

We believe that strong earnings management incentives and the limited costs of receiving MAOs are the fundamental reasons why firms do not adjust annual reports according to auditors' suggestions, and this is why a high proportion of firms receive MAOs.

### 2.2.1. Strong earnings management incentives

Firms have incentives to manipulate earnings to obtain equity financing opportunities or avoid delisting regulation. First, firms may engage in financial packaging to raise more equity in the IPO process. The findings of Aharony et al. (2000) and Lin and Wei (2000) confirm that firms engage in earnings management in IPOs. Second, in 1996, the CSRC required firms that apply for SEOs to have ROE of at least 10% for three consecutive years. Haw et al. (2005) find that the number of firms whose ROE lies between 10% and 11% is three times higher in the period from 1996 to 1998 than from 1994 to 1995. Chen and Yuan (2004) examine the earnings quality of firms that applied for SEOs from 1996 to 1998. They find that applying firms have more non-operating income and investment income if their ROE is less than 10%. However, although regulators lower the probability of SEOs for these firms, some are given permission to issue new shares. Finally, to avoid intervention from regulators following two consecutive years of losses, firms have strong incentives to manipulate earnings. Sun and Wang (1999) and Wang et al. (2005) find some empirical evidence to support such a hypothesis.

Firms may manipulate earnings to conceal the tunneling activities or rent-seeking activities of controlling shareholders (Fan and Wong, 2002). Leuz and Oberholzer-Gee (2006) use 130 Indonesian listed companies as their research sample and examine whether political connections have an effect on firms' overseas financing decisions and disclosure policies. They find that firms that had intimate connections with Suharto had little incentive to list overseas before the financial crisis, but this changed after Suharto stepped down. This suggests that firms that have political connections do not have incentives to improve disclosure quality. Plenty of research on the Chinese market finds it is common practice for controlling shareholders to expropriate wealth from minority shareholders and engage in rent-seeking activities (Li et al., 2004, 2006; Yue, 2006; He et al., 2008; Luo and Tang, 2009). Firms have an incentive to manipulate earnings to hide such behavior to avoid media pressure or litigation risk.

### 2.2.2. Limited economic consequences of receiving MAOs

Many researchers find that SOEs have soft budget constraints (La Porta et al., 2002; Lin and Li, 2004). Sun et al. (2006) find that state-controlled firms have implicit guarantees from local governments and can obtain more loans from banks. Liao (2007) finds that accounting information reduces information asymmetry in banks' lending decisions, but this relationship

disappears when firms are state controlled. Lu et al. (2008) find that new long-term debt is uncorrelated with accounting information quality, which implies that accounting information does not play an important role in banks' lending decisions. Thus, even if MAOs imply poor accounting information and greater information asymmetry, this may have little effect on firms' debt-raising ability under China's special institutional environment.

In countries or regions with weak property rights protection, firms have incentives to build political connections to secure better protection from government (Li et al., 2008), to gain more loans from banks and more subsidies from the government (Johnson and Mitton, 2003; Faccio, 2006; Li et al., 2008; Fan et al., 2008b). Firms with political connections can obtain more economic aid from the government when they get into financial distress (Johnson and Mitton, 2003; Faccio, 2006). Political connections therefore play a vital role in determining firms' investment and financing opportunities. Yu and Pan (2008) finds that firms with political connections obtain more bank loans and have a longer debt maturity structure. Wu et al. (2008) report similar results and find that the role of political connections is more important in areas with more government intervention. Luo and Zhen (2008) examine the role of political connections in privately controlled listed firms and find that privately controlled firms with political connections have fewer financial constraints and this relationship is stronger in areas with a low level of financial development. In summary, political connections provide privately controlled firms with more investment opportunities and more favorable financing conditions. Thus, for firms with political connections, the role of accounting information quality will diminish or have less influence on firms' investment and financing opportunities.

### 2.3. Hypotheses

The role of an auditor is to issue an opinion on whether a firm's annual reports fairly represent its financial position, operating results and cash flows in all material respects. Auditors issue a MAO if they find there is substantial misrepresentation in a firm's annual report. Receiving a MAO therefore reflects deterioration in accounting information quality or an increase in information asymmetry between outsiders and insiders. Low accounting information quality will increase investors' estimation risk and agency costs, and investors will then ask for higher returns to compensate for the increased risks and costs (Francis et al., 2005; Lambert et al., 2007; Leuz and Wysocki, 2008). The higher the outside financing costs, the larger the financial constraints a firm may face (Fazzari et al., 1988). According to this theory, we expect that MAOs will increase firms' financial constraints. We call this hypothesis the "Information Asymmetry View" (IAV).

Firms manipulate earnings to meet equity-financing requirements or avoid delisting regulations, or to conceal the tunneling or rent-seeking activities of controlling shareholders, which result in a higher probability of substantial misrepresentation in annual reports. Firms receive MAOs if they refuse to adjust their annual reports according to the auditor's suggestions. However, firms can continue to obtain bank loans even with low quality accounting information because of government intervention or political connections. If receiving a MAO does reduce the probability of equity financing and bank loans, then controlling shareholders will help the firm to get through difficult times (Li et al., 2005), and one way of doing so is to provide related-party loans. Therefore, receiving a MAO may result in a soft budget constraint that eases a firm's financial constraints. We call this hypothesis the "Soft Budget Constraint View" (SCV).

In sum, there are two possibilities after receiving MAOs. On the one hand, receiving MAOs means more information asymmetry, which results in increased financial constraints. On the other hand, the financial constraints of firms may decrease after receiving MAOs if they receive more subsidies from the government or assistance from controlling shareholders. If the soft budget constraint effect is larger than the information asymmetry effect, then the net effect of receiving MAOs is a decrease in financial constraints.

## 3. Research design

### 3.1. Sample selection and data sources

The initial sample of this paper is all A-share companies listed between 1998 and 2006. We need information on cash flows to carry out financial constraints tests, but this information was not disclosed in annual reports until 1998. All listed companies adopted the new accounting standards after the completion of the tradable share reform in 2007. Therefore, we choose 1998 as the initial year and 2006 as the final year of the sample in this paper.

In the initial sample, we delete financial industry firms and firms that either have negative fixed assets at the end of year or have missing data. Then, in the final sample, the number of observations per year is 575, 743, 839, 1003, 1077, 1159, 1231, 1309 and 1313 from 1998 to 2006, and the full sample contains 9249 firm-year observations.

To investigate whether the effect of MAOs on firms' financing constraints differ significantly over different time periods, we use the same data collection procedures to create two more samples, one with 695 observations spanning 1995–1997 and the other with 4456 observations spanning 2007–2009.

The data for "net cash flow from operating activities" and "purchases of fixed assets, intangible assets and other long-term assets" cannot be obtained directly from the statement of cash flows before 1998. We use the difference between net profit and total accruals as the estimated value of the "net cash flow from operating activities," and the annual change in the balance of fixed assets as the estimated value of "purchases of fixed assets, intangible assets and other long-term assets."



We collect all financial data on China's listed companies from the CSMAR database. The ultimate controller data is initially from the CCER database and supplemented with hand-collected data. We winsorize the top and bottom 1% of values for all continuous variables to mitigate the effect of extreme values on our empirical analysis.

### 3.2. Research model and variable definitions

Myers and Majluf (1984) and Bernanke and Gertler (1990) point out that information asymmetry and agency costs may cause external financing costs to be higher than internal financing costs. The difference between external and internal financing costs represents the financing constraints of the enterprise. Fazzari et al. (1988) demonstrate that financing constraints cause a positive relationship between corporate investment and internal generated cash flows, and the greater the financial constraints are, the stronger the positive relationship.

On the one hand, if receiving a MAO conveys more information asymmetry and agency costs between the firm and other contract parties, then the financial constraints of the enterprise will increase. On the other hand, a MAO may indicate that the firm will receive more support from the government or controlling shareholders, which will lead to the soft budget constraint problem and thus reduce financing constraints.

Following Zhu et al. (2006) and Luo and Zhen (2008), we use model (2) to test whether receiving MAOs affects the sensitivity of investment expenditure to cash flows from operating activities:

$$INVST_{it} = \beta_0 + \beta_1 OCF_{it} + \beta_2 MAO_{it-1} + \beta_3 MAO_{it-1} \times OCF_{it} + \beta_4 PRIV_{it} + \beta_5 PRIV_{it} \times OCF_{it} + \beta_6 GROWTH_{it} + \beta_7 SIZE_{it} + FixedEffects + \varepsilon_{it} \quad (2)$$

We use model (3) to test whether different types of MAOs affect the sensitivity of investment expenditure to cash flows from operating activities:

$$INVST_{it} = \beta_0 + \beta_1 OCF_{it} + \beta_2 UQAO\_EXPLAN_{it-1} + \beta_3 QUAO_{it-1} + \beta_4 DISC\_ADVS_{it-1} + \beta_5 UQAO\_EXPLAN_{it-1} \times OCF_{it} + \beta_6 QUAO_{it-1} \times OCF_{it} + \beta_7 DISC\_ADVS_{it-1} \times OCF_{it} + \beta_8 PRIV_{it} + \beta_9 PRIV_{it} \times OCF_{it} + \beta_{10} GROWTH_{it} + \beta_{11} SIZE_{it} + FixedEffects + \varepsilon_{it} \quad (3)$$

$MAO_{it-1}$  is a dummy variable, which equals 1 if last year's audit opinion is modified, and 0 otherwise. We also divide MAOs into three categories.  $UQAO\_EXPLAN_{it-1}$  is an unqualified opinion with explanatory paragraphs, which equals 1 if a firm received this opinion last year and 0 otherwise.  $QUAO_{it-1}$  is a qualified opinion, which equals 1 if a firm received this opinion last year and 0 otherwise.  $DISC\_ADVS_{it-1}$  is other modified opinions, which equals 1 if a firm received a disclaimed opinion or adverse opinion last year and 0 otherwise.

We define two variables based on whether firms received MAOs for the first time.  $MAO\_FT_{it-1}$  is "receiving a MAO for the first time," which equals 1 if firms received a MAO for the first time last year and 0 otherwise; and  $MAO\_NOT\_FT_{it-1}$  is "receiving a MAO not for the first time," which equals 1 if firms received a MAO last year but it was not the first time they had received one since their IPO, and 0 otherwise.

$INVST_{it}$  is investment expenditure, which is measured as annual "purchases of fixed assets, intangible assets and other longterm assets" from the statement of cash flows, divided by this year's beginning balance of fixed assets.  $OCF_{it}$  is net cash flows generated from operating activities, which equals annual "net cash flows from operating activities" divided by this year's beginning balance of fixed assets.  $PRIV_{it}$  is the type of ultimate controller, which equals 1 for non-government agencies or individuals and 0 otherwise;  $GROWTH_{it}$  is growth opportunities, measured by annual revenue growth rate;  $SIZE_{it}$  is firm size, which is measured by the natural logarithm of total assets at year end. All the variables used in this article are defined in Table 2.

Compared with firms that received a standard unqualified opinion, the IAV means that information becomes more asymmetrical when the company receives a MAO, which will increase firms' financing constraints. In other words, the positive correlation between investment expenditure and cash flows from operating activities will be strengthened, in which case the coefficient ( $\beta_3$ ) on the interaction term ( $MAO_{it-1} \times OCF_{it}$ ) in model (2) should be significantly positive. The "Soft Budget Constraint View" argues that companies that receive MAOs are more likely to receive government subsidies, obtain bank loans or be propped up by controlling shareholders. This view implies that the correlation between investment expenditure and net cash flows from operating activities may remain unchanged or even become significantly negative after firms receive MAOs, in which case the coefficient ( $\beta_3$ ) on  $MAO_{it-1} \times OCF_{it}$  in model (2) should be zero or negative.

### 3.3. Descriptive statistics and correlation analysis

The descriptive statistics for all of the variables used in this paper are presented in Table 3. The sample period is from 1998 to 2006, and the sample thus includes 9249 firm-year observations. In this sample, 12.2% of the firms received MAOs, of which 7.2% received an unqualified opinion with explanatory paragraphs, 3.8% a qualified opinion and 1.2% a disclaimed opinion or adverse opinion. Of those firm-year observations that received a MAO, 36% received a MAO for the first time and the other 64% not for the first time. In addition, the descriptive statistics show that 22.9% of firm-year observations have

**Table 2**  
Variable definitions.

Variable	Variable name	Definition
$ICF_{it}$	Investment expenditure	Cash payments to acquire fixed assets, intangible assets and other long-term assets divided by the yearly beginning balance of fixed assets; the pre-1988 data uses the change in book value of fixed assets
$NICF_{it}$	Net investment expenditure	The net cash flow of the cash payment to acquire fixed assets, intangible assets and other long-term assets, minus the cash inflow of disposing of the aforementioned assets, divided by the yearly beginning balance of fixed assets
$MAO_{it-1}$	Modified audit opinions	Dummy variable, which equals 1 if the firm received a MAO last year, and 0 otherwise
$UQAO\_EXPLAN_{it-1}$	Unqualified opinion with explanatory paragraph	Dummy variable, which equals 1 if the firm received an unqualified opinion with explanatory paragraph last year, and 0 otherwise
$QUAO_{it-1}$	Qualified opinion	Dummy variable, which equals 1 if the firm received a qualified opinion last year, and 0 otherwise
$DISC\_ADVS_{it-1}$	Disclaimed and adverse opinions	Dummy variable, which equals 1 if the firm received a disclaimed or adverse opinion last year, and 0 otherwise
$MAO\_FT_{it-1}$	First time MAOs	Dummy variable, which equals 1 if the firm received a modified opinion last year and it was the first time since the IPO, and 0 otherwise
$MAO\_NFT_{it-1}$	Not first time MAOs	Dummy variable, which equals 1 if the firm received a modified opinion last year and it was not the first time since the IPO, and 0 otherwise
$OCF_{it}$	Net cash flows from operating activities	Annual net cash flows from operating activities divided by the yearly beginning balance of fixed assets. The difference between net profit and total accrual is used as a proxy for data before 1998
$PRIV_{it}$	Ultimate controller	Dummy variable, which equals 1 if the type of ultimate controller is a non-government agency or individual, and 0 otherwise
$ROA_{it}$	Return on assets	ROA equals net income minus financial expenses divided by year-end total assets
$GROWTH_{it}$	Growth rate	Annual revenue growth rate
$TQ_{it}$	Growth opportunities	TOBINQ = the sum of the market value of equity and net debt divided by year-end total assets, in which the market value of non-tradable equity is measured as net assets
$LEV_{it}$	Leverage	Ratio of debt to total year-end assets
$SIZE_{it}$	Size	The natural logarithm of the total year-end assets
$IND_{it}$	Industry dummies	There are 21 industries in our sample after deleting the financial industry. We generate 20 industry dummy variables
$YEAR_{it}$	Year dummies	Controls for the effect of macroeconomic conditions. There are 9 years of data, so we generate 8 dummy variables

**Table 3**  
Descriptive statistics.

Variables	N	Mean	Median	SD	Min	P5	P95	Max
$ICF$	9249	0.336	0.167	0.537	0.0004	0.007	1.233	3.896
$NICF$	7729	0.301	0.152	0.495	-0.314	-0.005	1.133	3.649
$MAO$	9249	0.122	0	0.327	0	0	1	1
$UQAO\_EXPLAN$	9249	0.072	0	0.258	0	0	1	1
$QUAO$	9249	0.038	0	0.191	0	0	0	1
$DISC\_ADVS$	9249	0.012	0	0.108	0	0	0	1
$MAO\_FT$	9249	0.044	0	0.206	0	0	0	1
$MAO\_NFT$	9249	0.077	0	0.267	0	0	1	1
$PRIV$	9249	0.229	0	0.420	0	0	1	1
$OCF$	9249	0.197	0.165	1.251	-7.920	-0.621	1.173	8.292
$ROA$	9249	0.039	0.049	0.086	-0.400	-0.117	0.135	0.256
$GROWTH$	9249	0.214	0.134	0.564	-0.847	-0.406	0.984	3.807
$TQ$	9249	1.370	1.208	0.544	0.806	0.896	2.369	5.755
$LEV$	9249	0.500	0.485	0.253	0.074	0.163	0.825	1.990
$SIZE$	9249	21.095	21.013	0.949	18.783	19.652	22.758	24.407

Note: To mitigate the effects of extreme values on our empirical analysis, we winsorize the top and bottom 1% value of all continuous variables. Definitions and measurements of all variables are in Table 2.

non-government agencies or individual ultimate controllers, the average total return on assets is 3.9%, the average sales growth rate is 21.4% and the average debt to assets ratio is 50%.

In Table 4 we present the Pearson correlation coefficients for all the variables, in which \*, \*\*, \*\*\* denote a correlation between the two variables is significant at the 10%, 5%, and 1% levels respectively. The correlation results show that the ultimate controllers of firms that receive MAOs are more likely to be non-government agencies or individuals. In addition, the firms that received MAOs have lower profitability, lower growth rates, higher debt to assets ratios and smaller size. Finally, firms that received MAOs cut the amount of investment expenditure in the following year.



**Table 4**  
Correlations.

	ICF	NICF	MAO	UQAO_EXPLAN	QUAO	DISC_ADVS	MAO_FT	MAO_NFT	OCF	PRIV	ROA	GROWTH	TQ	LEV
<i>NICF</i>	0.979***													
<b>MAO</b>	<b>-0.119***</b>	<b>-0.127***</b>												
<i>UQAO_EXPLAN</i>	-0.071***	-0.075***	<b>0.746***</b>											
<i>QUAO</i>	-0.072***	-0.078***	<b>0.533***</b>	-0.054***										
<i>DISC_ADVS</i>	-0.062***	-0.065***	<b>0.300***</b>	-0.030***	-0.022*									
<i>MAO_FT</i>	-0.049***	-0.053***	<b>0.585***</b>	0.464***	0.317***	0.103***								
<i>MAO_NFT</i>	-0.107***	-0.115***	<b>0.773***</b>	0.556***	0.409***	0.288***	-0.061***							
<i>OCF</i>	0.136***	0.128***	<b>-0.017</b>	-0.010	-0.011	-0.008	-0.007	-0.015						
<i>PRIV</i>	0.051***	0.039***	<b>0.070***</b>	0.040***	0.042***	0.041***	0.011	0.078***	-0.005					
<i>ROA</i>	0.164***	0.168***	<b>-0.289***</b>	-0.142***	-0.187***	-0.201***	-0.158***	-0.232***	0.125***	-0.083***				
<i>GROWTH</i>	0.150***	0.146***	<b>-0.071***</b>	-0.024**	-0.057***	-0.056***	-0.075***	-0.028**	0.096***	0.037***	0.259***			
<i>TQ</i>	0.057***	0.048***	<b>0.130***</b>	0.090***	0.046***	0.095***	0.035***	0.133***	0.014	0.048***	0.010	0.003		
<i>LEV</i>	-0.093***	-0.101***	<b>0.354***</b>	0.167***	0.198***	0.320***	0.097***	0.360***	-0.031***	0.114***	-0.459***	-0.020*	0.005	
<i>SIZE</i>	0.041***	0.056***	<b>-0.177***</b>	-0.121***	-0.079***	-0.107***	-0.067***	-0.166***	0.043***	-0.168***	0.231***	0.074***	-0.452***	-0.019

Note: The table reports Pearson correlation coefficients, \*, \*\*, \*\*\* denote significance at the 10%, 5%, and 1% levels respectively. Definitions and measurements of all variables are in Table 2.

## 4. Empirical results

### 4.1. Multivariate regression results

Table 5 reports the regression results for model (2). We are concerned with the coefficient ( $\beta_3$ ) on the interaction term ( $MAO_{it-1} \times OCF_{it}$ ). If receiving a MAO means greater information asymmetry and increased agency costs, then the firm's financing constraints should be strengthened and  $\beta_3$  should be significantly positive. However, if receiving a MAO signals an increase in the firm's operational or financial risks, then the firm has incentives to seek government support or controlling shareholders' assistance, which may lead to soft budget constraints. It would then be easier for enterprises to obtain subsidies from the government or to obtain loans from banks or related parties. In this case, the financing constraints of the firm may be unchanged or even reduced, and  $\beta_3$  should be zero or significantly negative. Column (1) of Table 5 presents the OLS regression results for model (2). The results show that the estimated coefficient ( $\beta_3$ ) on  $MAO_{it-1} \times OCF_{it}$  is  $-0.083$ , and the  $t$ -statistic is  $-2.22$  and significant at the 5% level. This shows that financial constraints decreased after firms received MAOs when controlling for other factors, such as the ultimate controller, growth opportunities, size, year and industry effects. These results show that the role of soft budget constraints is more critical than the role of information asymmetry.

With the regression in column (1) of Table 5, we control for year and industry fixed effects, but cannot guarantee that there are no other unobservable fixed effects that could affect financing constraints. To control for omitted variable bias, in column (2) we use panel data to estimate model (2). Because the  $p$ -value is clearly different from zero in a Hausman Test, we choose the fixed effects model. In column (2), the coefficient on  $MAO_{it-1} \times OCF_{it}$  is still  $-0.083$  and the significance level does not qualitatively change after controlling for unobservable fixed effects, which indicates that the OLS regression results are not caused by unobservable fixed effects. We divide MAOs into three types and investigate whether the relationship we find is driven by the type of MAO. Column (3) presents the OLS regression results for model (3), and column (4) presents the regression results for the fixed effects panel data model. Both results are qualitatively consistent. In column (3), the estimated coefficient for the interaction term on qualified opinions and cash flows from operating activities ( $QUAO_{it-1} \times OCF_{it}$ ) is  $-0.148$ , and the  $t$ -statistic is  $-2.35$  and significant at the 5% level. The coefficient on the interaction term on cash flows

**Table 5**  
Modified audit opinions and financial constraints.

Dependent variable: Investment (ICF)	(1) OLS	(2) FE	(3) OLS	(4) FE
CONSTANT	0.017 (0.13)	0.093 (0.53)	0.039 (0.31)	0.000 <0.000
OCF	0.054*** (3.53)	0.053*** (2.97)	0.054*** (3.54)	0.053*** (2.97)
MAO	-0.195*** (-12.97)	-0.157*** (-10.15)		
<b>MAO*OCF</b>	<b>-0.083**</b> (-2.22)	<b>-0.083**</b> (-2.26)		
UQAO_EXPLAN			-0.177*** (-9.66)	-0.142*** (-7.42)
QUAO			-0.206*** (-8.81)	-0.170*** (-6.98)
DISC_ADVS			-0.274*** (-16.35)	-0.220*** (-10.65)
<b>UQAO_EXPLAN*OCF</b>			<b>-0.048</b> (-1.14)	<b>-0.047</b> (-1.22)
<b>QUAO*OCF</b>			<b>-0.148**</b> (-2.35)	<b>-0.150**</b> (-2.37)
<b>DISC_ADVS*OCF</b>			<b>-0.032</b> (-0.60)	<b>-0.037</b> (-0.74)
PRIV	0.067*** (4.42)	0.073*** (3.62)	0.068*** (4.49)	0.073*** (3.64)
PRIV*OCF	0.010 (0.38)	-0.001 (-0.02)	0.010 (0.40)	0.000 (0.02)
GROWTH	0.108*** (7.15)	0.096*** (6.89)	0.106*** (6.91)	0.094*** (6.62)
SIZE	0.020*** (3.46)	0.012 (1.50)	0.019*** (3.33)	0.011 (1.36)
YEAR	CONTROL	CONTROL	CONTROL	CONTROL
IND	CONTROL		CONTROL	
N	9249	9249	9249	9249
R <sup>2</sup>	0.074	0.059	0.075	0.060

Note: The table reports OLS and fixed effects coefficient estimates and  $t$  statistics (in parentheses) based on robust standard errors that are heteroskedasticity-consistent. \*, \*\*, \*\*\* denote significance at the 10%, 5%, and 1% levels respectively. Definitions and measurements of all variables are in Table 2. Columns (2) and (4) are the results of the fixed effects panel data model. The sample period is 1998–2006.

from operating activities and unqualified opinions with explanatory paragraphs is negative, which is similar to the coefficient on the interaction term on the other modified opinions and cash flows from operating activities; however, neither significantly differs from zero. The results indicate that the findings we reported above are mainly driven by firms that received qualified opinions.

## 4.2. Robustness tests

### 4.2.1. Net cash outflows of investing activities

We implement three additional tests to verify the reliability of the conclusion that firms' financial constraints decrease after receiving MAOs. First, in Table 5, we use cash payments to acquire fixed assets, intangible assets and other long-term assets, divided by the yearly beginning balance of fixed assets to measure firms' investment expenditure (ICF). We also use net cash outflows of investment activities (NICF) as another measure of investment expenditure. NICF is defined as the cash payments to acquire fixed assets, intangible assets and other long-term assets, minus the cash inflow of disposing of the aforementioned assets, divided by the yearly beginning balance of fixed assets. Table 6 reports the regression results using NICF as the dependent variable, and we find no significant differences from the results in Table 5.

### 4.2.2. Tobin's Q as a measure of investment opportunities

Xu et al. (2006) argue that the use of Tobin's Q as a proxy for investment opportunities may introduce measurement error for three reasons: (1) the efficiency of the Chinese stock market needs to be improved; (2) the high volatility and high turnover of the Chinese stock market has led to potential bias in price-based indicators; and (3) dealer participation and market speculation affect the market returns of private holding companies. As a result, we use the rate of sales growth to measure firms' investment opportunities, following Luo and Zhen (2008). To investigate the reliability of our results, we introduce Tobin's Q as a proxy for firms' investment opportunities, which has been widely used in the extant literature (Fazzari

**Table 6**

Modified audit opinions and financial constraints (dependent variable is net cash outflow of investment activities).

Dependent variable: Investment (NICF)	(1) OLS	(2) FE	(3) OLS	(4) FE
CONSTANT	-0.207 (-1.60)	-0.247 (-1.52)	-0.185 (-1.45)	-0.226 (-1.39)
OCF	0.050*** (3.03)	0.047** (2.57)	0.050*** (3.01)	0.047** (2.55)
MAO	-0.169*** (-9.96)	-0.137*** (-7.76)		
<b>MAO*OCF</b>	<b>-0.089*</b> (-1.92)	<b>-0.088*</b> (-1.87)		
UQAO_EXPLAN			-0.147*** (-6.86)	-0.122*** (-5.31)
QUAO			-0.189*** (-7.62)	-0.150*** (-6.18)
DISC_ADVS			-0.249*** (-12.39)	-0.205*** (-9.16)
<b>UQAO_EXPLAN*OCF</b>			<b>-0.052</b> (-1.01)	<b>-0.051</b> (-1.00)
<b>QUAO*OCF</b>			<b>-0.161**</b> (-2.07)	<b>-0.157**</b> (-1.96)
<b>DISC_ADVS*OCF</b>			<b>-0.055</b> (-1.04)	<b>-0.059</b> (-1.19)
PRIV	0.063*** (4.00)	0.066*** (3.33)	0.064*** (4.06)	0.066*** (3.34)
PRIV*OCF	0.029 (0.91)	0.023 (0.61)	0.031 (0.96)	0.025 (0.68)
GROWTH	0.113*** (6.34)	0.099*** (5.85)	0.112*** (6.17)	0.097*** (5.67)
SIZE	0.028*** (4.84)	0.027*** (3.54)	0.027*** (4.74)	0.026*** (3.42)
YEAR	CONTROL	CONTROL	CONTROL	CONTROL
IND	CONTROL		CONTROL	
N	7729	7729	7729	7729
R <sup>2</sup>	0.080	0.065	0.082	0.067

Note: The table reports OLS and fixed effects coefficient estimates and *t* statistics (in parentheses) based on robust standard errors that are heteroskedasticity-consistent. \*, \*\*, \*\*\* denote significance at the 10%, 5%, and 1% levels respectively. Definitions and measurements of all variables are in Table 2. Columns (2) and (4) are the results of the fixed effects panel data model. The sample period is 1998–2006. The sample includes only 7729 observations due to missing data in NICF.

**Table 7**  
Modified audit opinions and financial constraints (using Tobin's Q to proxy for investment opportunities).

Dependent variable: Investment (ICF)	(1) OLS	(2) FE	(3) OLS	(4) FE
CONSTANT	-0.579*** (-3.76)	<0.000 0.000	-0.561*** (-3.69)	-0.489** (-2.34)
OCF	0.058*** (3.72)	0.056*** (3.14)	0.058*** (3.71)	0.056*** (3.14)
MAO	-0.209*** (-13.84)	-0.166*** (-10.66)		
<b>MAO_OCF</b>	<b>-0.077*</b> <b>(-1.94)</b>	<b>-0.076**</b> <b>(-1.99)</b>		
UQAO_EXPLAN			-0.184*** (-9.83)	-0.146*** (-7.47)
QUAO			-0.221*** (-9.46)	-0.178*** (-7.15)
DISC_ADVS			-0.348*** (-19.95)	-0.281*** (-12.93)
<b>UQAO_EXPLAN_OCF</b>			<b>-0.040</b> <b>(-0.88)</b>	<b>-0.040</b> <b>(-0.94)</b>
<b>QUAO_OCF</b>			<b>-0.148**</b> <b>(-2.37)</b>	<b>-0.149**</b> <b>(-2.36)</b>
<b>DISC_ADVS_OCF</b>			<b>0.087***</b> <b>(2.62)</b>	<b>0.067**</b> <b>(2.00)</b>
PRIV	0.073*** (4.71)	0.081*** (3.96)	0.073*** (4.77)	0.081*** (3.96)
PRIV_OCF	0.009 (0.34)	-0.002 (-0.07)	0.009 (0.36)	-0.001 (-0.02)
TQ	0.082*** (6.43)	0.075*** (4.64)	0.084*** (6.57)	0.077*** (4.67)
SIZE	0.043*** (6.62)	0.036*** (3.93)	0.042*** (6.55)	0.035*** (3.78)
YEAR	CONTROL	CONTROL	CONTROL	CONTROL
IND	CONTROL		CONTROL	
N	9249	9249	9249	9249
R <sup>2</sup>	0.066	0.051	0.068	0.053

Note: The table reports OLS and fixed effect coefficient estimates and *t* statistics (in parentheses) based on robust standard errors that are heteroskedasticity-consistent. \*, \*\*, \*\*\* denote significance at the 10%, 5%, and 1% level respectively. Definitions and measurements of all variables are in Table 2. Columns (2) and (4) are the results of the fixed effects panel data model. The sample period is 1998–2006. Tobin's Q is used here is an alternative measure of growth opportunities.

et al., 1988; Fan et al., 2008a; Zhu et al., 2006). Table 7 reports the regression results including Tobin's Q, and the main results are not significantly different from those reported in Table 5.

#### 4.2.3. Financial distress

Our finding that firms' financial constraints decrease after receiving MAOs does not control for the possibility that the relationship may be caused by financial distress. We use two methods to exclude the potential effects of financial distress. First, we delete observations with negative equity to test whether the results in Table 5 are mainly caused by financially distressed companies. The regression results are reported in Table 8. We find that after excluding insolvent firms there are no significant differences between the main results reported in Tables 8 and 5, which confirms that the financial constraints of firms not in financial distress are significantly lower after receiving MAOs.

Second, following Fan et al. (2009), we use three methods to define whether a firm is in financial distress. The first is the Z-score method. We calculate a Z-score for every firm-year observation and determine that a firm is in financial distress if its Z-score is less than 1.81.<sup>6</sup> The second is the financial leverage method. We define a firm as being in financial distress if its leverage ratio is greater than one. The third is the interest coverage ratio method. We define a firm as in financial distress if the firm's EBIT is lower than its financial expenses. We then define a dummy variable, Distressed, coded 1 if the company is in financial distress and 0 otherwise. Table 9 reports the regression results after controlling for financial distress. The results indicate that firms' financial constraints still significantly ease after receiving MAOs even after controlling for financial distress. We retest all of the regressions including these controls for financial distress and all of the reported conclusions remain substantially unchanged, which confirms that the results are not caused by financial difficulties.

<sup>6</sup> Fan et al. (2009) use the following formula to calculate the company's Z-score:  $Z = A * 3.3 + B * 0.99 + C * 0.6 + D * 1.2 + E * 1.4$ , where *A* = EBIT/total assets, *B* = sales/total assets, *C* = market value of equity/total liabilities, *D* = working capital/total assets, *E* = retained earnings/total assets. Book value per share and market price per share are used to calculate the market value of equity (MVE) of non-tradable shares. Using a different method to calculate MVE does not affect the main results of this paper.

**Table 8**  
Modified audit opinions and financial constraints (excluding insolvent firms).

Dependent variable: Investment (ICF)	(1) OLS	(2) FE	(3) OLS	(4) FE
CONSTANT	0.220 (1.61)	0.000 <0.000	0.232* (1.72)	0.159 (0.88)
OCF	0.054*** (3.51)	0.053*** (2.95)	0.054*** (3.52)	0.053*** (2.97)
MAO	-0.183*** (-11.11)	-0.148*** (-9.02)		
<b>MAO_OCF</b>	<b>-0.085**</b> <b>(-2.13)</b>	<b>-0.083**</b> <b>(-2.10)</b>		
UQAO_EXPLAN			-0.170*** (-8.82)	-0.139*** (-6.91)
QUAO			-0.193*** (-7.12)	-0.155*** (-5.56)
DISC_ADVS			-0.274*** (-12.07)	-0.223*** (-8.65)
<b>UQAO_EXPLAN_OCF</b>			<b>-0.047</b> <b>(-1.02)</b>	<b>-0.044</b> <b>(-1.02)</b>
<b>QUAO_OCF</b>			<b>-0.149**</b> <b>(-2.29)</b>	<b>-0.150**</b> <b>(-2.28)</b>
<b>DISC_ADVS_OCF</b>			<b>-0.069</b> <b>(-1.23)</b>	<b>-0.069</b> <b>(-1.23)</b>
PRIV	0.069*** (4.38)	0.074*** (3.55)	0.070*** (4.47)	0.074*** (3.59)
PRIV_OCF	0.010 (0.38)	-0.001 (-0.03)	0.010 (0.38)	-0.000 (-0.01)
GROWTH	0.110*** (6.96)	0.097*** (6.65)	0.108*** (6.69)	0.095*** (6.35)
SIZE	0.017*** (2.86)	0.010 (1.16)	0.016*** (2.80)	0.009 (1.07)
YEAR	CONTROL	CONTROL	CONTROL	CONTROL
IND	CONTROL		CONTROL	
N	9042	9042	9042	9042
R <sup>2</sup>	0.069	0.054	0.071	0.055

Note: The table reports OLS and fixed effect coefficient estimates and *t* statistics (in parentheses) based on robust standard errors that are heteroskedasticity-consistent. \*, \*\*, \*\*\* denote significance at the 10%, 5%, and 1% levels respectively. Definitions and measurements of all variables are in Table 2. Columns (2) and (4) are the results of the fixed effects panel data model. The sample period is 1998–2006. We exclude all observations that have negative shareholder equity.

In sum, the results reported in Tables 5–9 show that financial constraints were significantly reduced after firms received MAOs, and this finding is mainly driven by firms that received qualified opinions. The aforementioned empirical results show that increased information asymmetry as a result of receiving MAOs did not increase firms' financial constraints, as they either remained unchanged or decreased. This supports the view that the role of soft budget constraints is more important than information asymmetry.

#### 4.3. Additional tests

##### 4.3.1. Modified audit opinions and financial constraints: distinguishing between two kinds of ultimate controllers

Many studies indicate that government-controlled listed companies are able to invest in more industries and projects, and find it easier to access finance and obtain government assistance in a crisis (Lin et al., 1999; Lin and Li, 2004; Sun et al., 2005, 2006; Liu et al., 2007). To overcome this competitive disadvantage, private enterprises have strong motivations to establish political connections, which can also help firms to reduce investment barriers, gain access to better financing opportunities and obtain more tax benefits (Johnson and Mitton, 2003; Faccio et al., 2006; Li et al., 2008; Wu et al., 2008, 2009; Luo and Tang, 2009; Luo and Liu, 2009; Luo and Huang, 2008). We classify the sample into two groups according to their ultimate controllers to investigate whether the type of ultimate controller changes the conclusions.

Table 10 reports the regression results based on the two types of ultimate controllers. Columns (1) and (2) present the OLS regression results. PRIV = 0 includes all listed companies whose ultimate controllers are government agencies, and PRIV = 1 includes all listed companies whose ultimate controllers are non-government agencies or individuals. In the government-controlled group, the coefficient on  $MAO_{it-1} \times OCF_{it}$  is -0.096, and the *t*-statistic is -1.85 and significant at the 10% level. In the non-government-controlled group, the coefficient on  $MAO_{it-1} \times OCF_{it}$  is -0.065 and the *t*-statistic is -1.17, which is not significantly different from zero. To control for possible unobservable fixed effects, we use a fixed effects panel data model to run the regression using the two subsamples. Our results are not substantively different. The results in Table 10 show

**Table 9**

Modified audit opinions and financial constraints (controlling for financial distress) ( $INVST_{it} = \beta_0 + \beta_1 OCF_{it} + \beta_2 MAO_{it-1} + \beta_3 MAO_{it-1} \times OCF_{it} + \beta_4 DIS_{it} + \beta_5 DIS_{it} \times OCF_{it} + \beta_6 PRIV_{it} + \beta_7 PRIV_{it} \times OCF_{it} + \beta_8 GROWTH_{it} + \beta_9 SIZE_{it} + FixedEffects + \varepsilon_{it}$ ).

Dependent variable:	(1)	(2)	(3)	(4)
Investment (ICF)	Z-score1	Z-score2	Leverage	Interest coverage
CONS	-0.088 (-0.69)	-0.100 (-0.78)	0.078 (0.60)	0.184 (1.43)
OCF	0.058*** (3.09)	0.055*** (3.29)	0.055*** (3.53)	0.057*** (3.68)
<b>MAO</b>	<b>-0.164***</b> <b>(-10.39)</b>	<b>-0.165***</b> <b>(-10.51)</b>	<b>-0.178***</b> <b>(-11.28)</b>	<b>-0.155***</b> <b>(-9.61)</b>
<b>MAO*OCF</b>	<b>-0.081**</b> <b>(-2.18)</b>	<b>-0.082**</b> <b>(-2.22)</b>	<b>-0.085**</b> <b>(-2.14)</b>	<b>-0.077*</b> <b>(-1.93)</b>
DIS1	-0.083*** (-6.80)			
<b>DIS1*OCF</b>	<b>-0.016</b> <b>(-0.66)</b>			
DIS2		-0.084*** (-7.04)		
<b>DIS1*OCF</b>		<b>-0.010</b> <b>(-0.38)</b>		
DIS3			-0.120*** (-7.20)	
<b>DIS3*OCF</b>			<b>0.018</b> <b>(0.48)</b>	
DIS4				-0.153*** (-11.94)
<b>DIS4*OCF</b>				<b>-0.097*</b> <b>(-1.95)</b>
N	9249	9249	9249	9248
R <sup>2</sup>	0.080	0.078	0.075	0.085

Note: The table reports OLS coefficient estimates and t statistics (in parentheses) based on robust standard errors that are heteroskedasticity-consistent. \*, \*\*, \*\*\* denote significance at the 10%, 5%, and 1% levels respectively. Definitions and measurements of all variables are in Table 2. DIS is a financial distress dummy variable. DIS1 and DIS2 are calculated based on Z-scores. DIS equals 1 if the Z-score is less than 1.81, zero otherwise. Z-score1 uses the book value per share to calculate the value of untradable shares, whereas Z-score2 uses the market value per share to calculate the value of untradable shares. DIS3 equals 1 if leverage is larger than 1, zero otherwise. DIS4 equals 1 if EBIT is less than financial expenses, zero otherwise. The sample period is 1998–2006. We omit regression results on other control variables.

**Table 10**

Modified audit opinions and financial constraints (distinguishing between two types of ultimate controllers).

Dependent variable:	OLS		FE	
	PRIV = 0 (1)	PRIV = 1 (2)	PRIV = 0 (3)	PRIV = 1 (4)
CONSTANT	0.338** (2.30)	-0.342 (-1.05)	0.000 (0.000)	-0.166 (-0.42)
OCF	0.055*** (3.50)	0.062*** (2.69)	0.051*** (2.89)	0.055** (2.04)
MAO	-0.180*** (-10.42)	-0.202*** (-6.16)	-0.143*** (-8.38)	-0.174*** (-5.00)
<b>MAO*OCF</b>	<b>-0.096*</b> <b>(-1.85)</b>	<b>-0.065</b> <b>(-1.17)</b>	<b>-0.086*</b> <b>(-1.70)</b>	<b>-0.076</b> <b>(-1.49)</b>
GROWTH	0.125*** (6.72)	0.081*** (3.12)	0.107*** (6.31)	0.075*** (3.14)
SIZE	0.012* (1.88)	0.042*** (2.82)	0.013 (1.43)	0.032* (1.68)
YEAR	CONTROL	CONTROL	CONTROL	CONTROL
IND	CONTROL	CONTROL		
N	7130	2119	7130	2119
R <sup>2</sup>	0.074	0.101	0.055	0.073

Note: The table reports OLS and fixed effect coefficient estimates and t statistics (in parentheses) based on robust standard errors that are heteroskedasticity-consistent. \*, \*\*, \*\*\* denote significance at the 10%, 5%, and 1% levels respectively. Definitions and measurements of all variables are in Table 2. PRIV = 0 contains all observations for which the ultimate controller is a government agency. PRIV = 1 contains all observations for which the ultimate controller is a non-government agency or individual. Columns (3) and (4) are the results of the fixed effects panel data model. The sample period is 1998–2006.



that the financial constraints of government-controlled companies significantly decreased after receiving MAOs, indicating that soft budget constraints have a greater effect in government-controlled companies.

#### 4.3.2. Modified audit opinions and financial constraints: whether firms received modified opinions for the first time

Table 1 shows that 621 firms were issued modified audit opinions, 428 of which received more than one. It is easy for the market to form expectations if a firm has been issued with MAOs on several occasions. Therefore, firms that receive MAOs for the first time should affect the market more than firms that have received one previously. In accordance with the IAV, if MAOs increase corporate financing constraints, then the results are more likely to show in firms that receive MAOs for the first time. We adopt model (4) to test whether the relationship between financial constraints and MAOs received for the first time differs from that between financial constraints and MAOs received not for the first time.  $MAO\_FT_{it-1} \times OCF_{it}$  tests the effect of receiving MAOs for the first time on financial constraints, and  $MAO\_NFT_{it-1} \times OCF_{it}$  tests the effect of receiving MAOs not for the first time on financial constraints.

$$INVST_{it} = \beta_0 + \beta_1 OCF_{it} + \beta_2 MAO\_FT_{it-1} + \beta_3 MAO\_NFT_{it-1} + \beta_4 MAO\_FT_{it-1} \times OCF_{it} + \beta_5 MAO\_NFT_{it-1} \times OCF_{it} + \beta_6 PRIV_{it} + \beta_7 PRIV_{it} \times OCF_{it} + \beta_8 GROWTH_{it} + \beta_9 SIZE_{it} + FixedEffects + \varepsilon_{it} \quad (4)$$

Column (1) of Table 11 reports the OLS regression results. The coefficient on  $MAO\_FT_{it-1} \times OCF_{it}$  is  $-0.134$ , the  $t$ -statistic is  $-2.06$  and is significant at the 5% level. In addition, the coefficient on  $MAO\_NFT_{it-1} \times OCF_{it}$  is  $-0.056$ , and is not significantly different from zero. Column (2) presents the regression results using the fixed effects panel data model, which are not substantially different from the OLS results. The two regression results show that MAOs affect financial constraints when firms receive them for the first time, and financial constraints do not significantly change when firms receive MAOs not for the first time. Columns (3) and (4) test whether these results are dependent on the type of ultimate controller. The results indicate that firms whose financial constraints reduced after receiving MAOs for the first time were mainly government-controlled listed companies, whereas the financial constraints for non-government-controlled firms did not change significantly after receiving MAOs.

#### 4.4. Alternative explanations

##### 4.4.1. Whether auditors are over-conservative

In addition to the hypothesis regarding the lack of economic consequences arising from MAOs, the high proportion of firms receiving MAOs in China could also be explained by the hypothesis that auditors choose over-conservative audit

**Table 11**

Modified audit opinions and financial constraints (whether modified audit opinion is received for the first time and the distinction between two types of ultimate controllers).

Dependent variable: Investment (ICF)	(1) OLS	(2) FE	(3) PRIV = 0	(4) PRIV = 1
CONSTANT	0.034 (0.26)	0.000 <0.000	0.346** (2.38)	-0.322 (-0.98)
OCF	0.054*** (3.52)	0.052*** (2.95)	0.055*** (3.50)	0.062*** (2.69)
MAO_FT	-0.142*** (-5.89)	-0.129*** (-5.60)	-0.118*** (-4.27)	-0.177*** (-4.15)
MAO_NFT	-0.225*** (-13.66)	-0.174*** (-9.45)	-0.220*** (-13.98) <sup>v</sup>	-0.213*** (-5.75)
<b>MAO_FT*OCF</b>	<b>-0.134**</b> (-2.06)	<b>-0.135**</b> (-2.05)	<b>-0.230**</b> (-2.24)	<b>-0.043</b> (-1.23)
<b>MAO_NFT*OCF</b>	<b>(-0.056)</b> (-1.34)	<b>-0.055</b> (-1.45)	<b>-0.037</b> (-1.01)	<b>-0.080</b> (-0.96)
PRIV	0.068*** (4.45)	0.073*** (3.63)		
PRIV*OCF	0.010 (0.40)	0.000 (0.01)		
GROWTH	0.110*** (7.24)	0.098*** (6.94)	0.126*** (6.78)	0.081*** (3.21)
SIZE	0.019*** (3.32)	0.012 (1.42)	0.011* (1.81)	0.041*** (2.73)
YEAR	CONTROL	CONTROL	CONTROL	CONTROL
IND	CONTROL		CONTROL	CONTROL
N	9249	9249	7130	2119
R <sup>2</sup>	0.075	0.060	0.078	0.101

Note: The table reports OLS and fixed effect coefficient estimates and  $t$  statistics (in parentheses) based on robust standard errors that are heteroskedasticity-consistent. \*, \*\*, \*\*\* denote significance at the 10%, 5%, and 1% levels respectively. Definitions and measurements of all variables are in Table 2. PRIV = 0 contains all observations for which the ultimate controller is a government agency. PRIV = 1 contains all observations for which the ultimate controller is a non-government agency or individual. Column (2) is the results of the fixed effects panel data model. The sample period is 1998–2006.

**Table 12**  
Modified audit opinions and financial constraints (time series tests).

Dependent variable:	1995–1997		1998–2006		2007–2009	
	(1) OLS	(2) FE	(3) OLS	(4) FE	(5) OLS	(6) FE
Investment (ICF)						
CONSTANT	1.336 (0.72)	−0.466 (−0.79)	0.017 (0.13)	0.093 (0.53)	−0.517** (−2.53)	0.000 (<0.000)
OCF	0.086 (1.54)	0.094 (1.62)	0.054*** (3.53)	0.053*** (2.97)	0.035** (2.05)	0.028* (1.75)
MAO	0.100 (0.83)	0.054 (0.45)	−0.195*** (−12.97)	−0.157*** (−10.15)	−0.189*** (−6.06)	−0.141*** (−3.55)
<b>MAO*OCF</b>	<b>−0.336***</b> <b>(−3.21)</b>	<b>−0.318***</b> <b>(−2.94)</b>	<b>−0.083**</b> <b>(−2.22)</b>	<b>−0.083**</b> <b>(−2.26)</b>	<b>0.020</b> <b>(0.41)</b>	<b>−0.004</b> <b>(−0.07)</b>
PRIV	0.241* (1.77)	0.217* (1.83)	0.067*** (4.42)	0.073*** (3.62)	0.123*** (5.70)	0.154*** (5.71)
PRIV*OCF	−0.074 (−0.69)	−0.088 (−0.91)	0.010 (0.38)	−0.001 (−0.02)	−0.023 (−0.85)	−0.025 (−1.05)
GROWTH	0.461*** (4.53)	0.461*** (4.47)	0.108*** (7.15)	0.096*** (6.89)	0.190*** (6.14)	0.164*** (5.59)
SIZE	0.035 (1.11)	0.030 (1.06)	0.020*** (3.46)	0.012 (1.50)	0.039*** (4.49)	0.047*** (4.11)
N	695	695	9249	9249	4456	4456
R <sup>2</sup>	0.182	0.148	0.074	0.059	0.093	0.073

Note: The table reports OLS and fixed effect coefficient estimates and *t* statistics (in parentheses) based on robust standard errors that are heteroskedasticity-consistent. \*, \*\*, \*\*\* denote significance at the 10%, 5%, and 1% levels respectively. Definitions and measurements of all variables are in Table 2. PRIV = 0 contains all observations for which the ultimate controller is a government agency. PRIV = 1 contains all observations for which the ultimate controller is a non-government agency or individual. Columns (2), (4) and (6) are the results of the fixed effects panel data model. Columns (1) and (2) use observations from 1995 to 1997. Columns (3) and (4) use observations from 1998 to 2006. Columns (5) and (6) use observations from 2007 to 2009.

opinions due to high risk.<sup>7</sup> Li and Wu (2002) find the audit risk of auditors increased significantly after 1997. Greater audit risk led auditors to choose more conservative audit opinions to reduce their own risk. Over-conservative audit opinions reduce their usefulness and MAOs may not increase information asymmetry or financial constraints. If the over-conservative auditor hypothesis is true, then firms that received MAOs are likely to have greater information asymmetry and thus have stronger financial constraints in the period when the auditors do not have an incentive to be over conservative. Specifically, the over-conservative auditor hypothesis expects that in the low audit risk period (1995–1997), the financial constraints of the firms receiving MAOs will be significantly greater than in the high audit risk period (1998–2006). We use model (2) to test this alternative hypothesis.

We divide the sample into three stages, the first from 1995 to 1997, the second from 1998 to 2006 and the third from 2007 to 2009. According to the over-conservative auditor hypothesis, the coefficient on  $MAO_{it-1} \times OCF_{it}$  should be significantly positive for 1995–1997, and not significant after 1998. We use the difference between net profit and total accruals as the proxy for net cash flows from operating activities because the statement of cash flows were not reported until 1998, so the data on net cash flows from operating activities and cash outflow for investment in 1995–1997 cannot be obtained. Following Francis et al. (2005), we use model (5) to calculate the total accruals ( $TACC_{it-1}$ ), in which  $\Delta CA_{it}$  is the change in current assets,  $\Delta CASH_{it}$  is the change in the cash account,  $\Delta CL_{it}$  is the change in current liabilities,  $\Delta STD_{it}$  is the change in short-term liabilities and  $\Delta DEPN_{it}$  is depreciation expense in the current period. Additionally, we use the change in the annual balance of fixed assets as a proxy for firms' investment from 1995 to 1997.

$$TACC_{it} = \Delta CA_{it} - \Delta CASH_{it} - \Delta CL_{it} + \Delta STD_{it} - DEPN_{it} \quad (5)$$

Columns (1) and (2) of Table 12 present the regression results for the OLS and fixed effects panel data models and there are no significant differences between the two results, which indicates that there is no obvious missing variable bias in the OLS regression. The OLS results show that the coefficient on  $MAO_{it-1} \times OCF_{it}$  is −0.336, and the *t*-statistic is −3.21 and significant at the 1% level. The results indicate that rather than increasing, financial constraints significantly decreased when firms received MAOs between 1995 and 1997.

The time-series test in Table 12 indicates an important trend whereby the highest decrease in the financial constraints of firms receiving MAOs occurred between 1995 and 1997 and the lowest between 1998 and 2006. Since 2007, the financial constraints of firms that received MAOs have not significantly changed. The time-series trend in the financial constraints of firms receiving MAOs does not support the prediction of the over-conservative auditor hypothesis or the information asymmetry hypothesis, but is consistent with the prediction of the soft budget constraints hypothesis. With the deepening of China's economic reforms, the budget constraints on enterprises (especially state-owned enterprises) have become

<sup>7</sup> Thanks to Doctor Ge Rui of Sun Yat-Sen University for putting forward this alternative explanation, and for suggesting we use the pre-1988 data to test this hypothesis.

**Table 13**Modified audit opinions and debt financing ( $BCF_{it} = \beta_0 + \beta_1 MAO_{it-1} + \beta_2 PRIV_{it} + \beta_3 ICF_{it} + \beta_4 GROWTH_{it} + \beta_5 ROA_{it-1} + \beta_6 LEV_{it-1} + \beta_7 SIZE_{it} + INDFE + \varepsilon_{it}$ ).

BCF	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
CONSTANT	-0.165 (-0.76)	-0.035 (-0.17)	-0.281 (-1.30)	-0.341* (-1.75)	-0.172 (-0.99)	-0.327* (-1.68)	-0.258 (-1.44)	-0.554*** (-3.58)	-0.602*** (-3.96)	-0.782*** (-3.45)	-0.794*** (-6.25)	-1.300*** (-6.76)
MAO	<b>-0.024</b> <b>(-0.89)</b>	<b>-0.012</b> <b>(-0.54)</b>	<b>-0.038</b> <b>(-1.63)</b>	<b>-0.001</b> <b>(-0.03)</b>	<b>-0.020</b> <b>(-0.79)</b>	<b>-0.047*</b> <b>(-1.94)</b>	<b>-0.030</b> <b>(-0.88)</b>	<b>-0.049**</b> <b>(-2.14)</b>	<b>-0.090***</b> <b>(-3.96)</b>	<b>-0.149***</b> <b>(-5.91)</b>	<b>-0.156***</b> <b>(-5.28)</b>	<b>-0.175***</b> <b>(-5.18)</b>
PRIV	0.018 (0.60)	-0.007 (-0.28)	0.021 (0.82)	0.069*** (2.74)	0.053*** (2.64)	0.021 (1.20)	0.011 (0.80)	0.021 (1.55)	0.028** (2.22)	0.024* (1.84)	0.018 (1.41)	0.027** (2.05)
ICF	0.021 (1.26)	0.032** (2.17)	0.090*** (4.46)	0.035** (2.35)	0.021 (1.59)	0.080*** (4.24)	0.133*** (6.61)	0.076*** (4.30)	0.057*** (4.46)	0.067*** (3.79)	0.033*** (2.94)	0.062*** (4.29)
GROWTH	0.080** (2.40)	0.032** (2.07)	0.058*** (2.80)	0.059*** (3.27)	0.031** (1.98)	0.047*** (2.71)	0.020 (1.63)	0.027* (1.83)	0.007 (0.64)	0.035** (2.50)	0.061*** (3.40)	0.069*** (3.72)
ROA	0.288* (1.92)	0.562*** (3.84)	0.498*** (3.63)	1.075*** (5.84)	0.792*** (6.28)	0.172 (1.45)	0.486*** (4.12)	0.392*** (4.09)	0.474*** (5.77)	0.090 (1.04)	-0.153** (-2.19)	-0.130 (-1.31)
LEV	0.367*** (5.30)	0.313*** (5.78)	0.256*** (4.16)	0.304*** (5.41)	0.294*** (5.27)	0.231*** (4.16)	0.232*** (5.46)	0.260*** (5.79)	0.246*** (6.55)	0.151*** (5.35)	0.162*** (5.92)	0.227*** (6.79)
SIZE	0.010 (0.99)	0.002 (0.17)	0.015 (1.43)	0.016* (1.72)	0.013 (1.60)	0.023** (2.47)	0.020** (2.38)	0.032*** (4.22)	0.037*** (5.18)	0.057*** (8.69)	0.048*** (8.22)	0.047*** (7.67)
INDFE	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL	CONTROL
N	518	675	753	885	1001	1069	1115	1188	1173	1390	1507	1546
R <sup>2</sup>	0.172	0.150	0.184	0.168	0.163	0.122	0.144	0.157	0.174	0.205	0.195	0.215

Note: The table reports OLS coefficient estimates and *t* statistics (in parentheses) based on robust standard errors that are heteroskedasticity-consistent. \*, \*\*, \*\*\* denote significance at the 10%, 5%, and 1% levels respectively. Definitions and measurements of all variables are in Table 2. BCF is borrowing cash flows from the Statements of Cash Flows.

**Table 14**Modified audit opinions and changes in related-party loans ( $\Delta RPB_{it} = \beta_0 + \beta_1 MAO_{it-1} + \beta_2 BIG4_{it} + \beta_3 PRIV_{it} + \beta_4 ICF_{it} + \beta_5 ROA_{it} + \beta_6 TobinQ_{it} + \beta_7 LEV_{it} + \beta_8 SIZE_{it} + FE + \varepsilon_{it}$ ).

Change of related-parties' Loans	(1) CRPB	(2) CNRPB
CONSTANT	0.036*** (3.00)	0.113*** (5.19)
MAO	<b>0.004*</b> <b>(1.93)</b>	<b>0.022***</b> <b>(5.41)</b>
BIG4	0.005*** (4.67)	0.012*** (5.48)
PRIV	-0.001 (-0.56)	-0.006*** (-3.29)
ICF	0.002*** (2.75)	0.005*** (3.75)
ROA	-0.090*** (-9.97)	0.088*** (4.58)
Tobin Q	0.002** (2.37)	0.001 (0.63)
LEV	0.034*** (10.46)	0.055*** (8.02)
SIZE	-0.002*** (-4.32)	-0.007*** (-7.32)
Year FE	CONTROL	CONTROL
Ind FE	CONTROL	CONTROL
N	13691	13691
R <sup>2</sup>	0.116	0.060

Note: The table reports OLS coefficient estimates and *t* statistics (in parentheses) based on robust standard errors that are heteroskedasticity-consistent. \*, \*\*, \*\*\* denote significance at the 10%, 5%, and 1% levels respectively. Definitions and measurements of all variables are in Table 2. CRPB and CNRPB are proxies for related-party loans. CRPB is the change of year-end other payables divided by year-end total assets. CNRPB is the change in the difference between other payables and other receivables divided by year-end total assets. The sample period is 1998–2009.

gradually harder and consequently there is less potential to obtain aid from government or controlling shareholders when firms experience operating problems or financial distress, which is indicated by the gradual increase in the financial constraints coefficient on  $MAO_{it-1} \times OCF_{it}$ .

#### 4.4.2. Banks' private information

The probable reason that MAOs do not stimulate an increase in firms' financial constraints is that the financing sources of China's listed companies are mainly controlling shareholders or banks, who have a lot of private information and may not be influenced by public accounting information. In addition, the lending decisions of many banks are based on the availability of mortgages, so again the quality of firms' accounting information may not necessarily affect the bank's lending decisions. If the bank has access to substantial private information or its lending is based on mortgage availability, receiving MAOs will not increase the information asymmetry between firms and banks.

Following Sun et al. (2006) and Yu and Pan (2008), we use model (6) to test the effect of receiving MAOs on firms' borrowing ability.

$$BCF_{it} = \beta_0 + \beta_1 MAO_{it-1} + \beta_2 PRIV_{it} + \beta_3 ICF_{it} + \beta_4 GROWTH_{it} + \beta_5 ROA_{it-1} + \beta_6 LEV_{it-1} + \beta_7 SIZE_{it} + IND FE + \varepsilon_{it} \quad (6)$$

BCF is borrowing cash flows, which is obtained from the statement of cash flows, divided by the yearly beginning balance of total assets. MAO is modified audit opinions, which equals 1 if firms received a MAO last year and 0 otherwise. PRIV is the type of ultimate controller, which equals 1 if the ultimate controller is a non-government agency or individual and 0 otherwise. ICF is investment expenditure, which is defined as cash flows for investment expenditure divided by the yearly beginning balance of fixed assets. GROWTH is firms' growth rate, defined as this year's sales minus last year's sales, divided by last year's sales. ROA is the return on assets, defined as the total profit for last year plus the financial expenses for last year, divided by last year's beginning balance of total assets. LEV is financial leverage, defined as the ratio of debt to total year-end assets; SIZE is firm size, which equals the natural logarithm of the total year-end assets; and IND FE are industry fixed effects.

Table 13 reports the results of annual regressions of the effect of receiving MAOs on firms' bank loans. We find that receiving MAOs in the last year did not significantly decrease firms' borrowing cash flows between 1998 and 2004 (except 2003). However, receiving a MAO significantly reduced firms' borrowing cash flows between 2005 and 2009, suggesting that MAOs have affected bank decisions since 2005. The results indicate that MAOs have information content but did not significantly affect firms' borrowing in the earlier years, partly due to other factors (such as political connections and propping up by controlling shareholders) being more significant.

#### 4.4.3. Analysis based on related-party loans

As reported above, before 2007 financial constraints significantly reduced after firms received MAOs, but since 2007 this has not been the case (see Table 12). This suggests that before 2007, firms receiving a MAO obtained more external financing than firms receiving a standard unqualified opinion. However, based on the analysis of the relationship between bank loans and MAOs, we find that firms' borrowing cash flows did not change after receiving MAOs before 2005, but significantly decreased after 2005 (see Table 13). Therefore, the decrease in financial constraints after firms received MAOs was not due to firms receiving more bank loans.

Based on theoretical analysis and the existing literature (Li, 2004; Jian and Wong, 2010; Jiang et al., 2010), one possible explanation for why financial constraints decreased after receiving MAOs is that firms were able to obtain funds for investment from controlling shareholders or related parties. Referring to Li et al. (2004) and Jiang et al. (2010), we use model (7) to test whether firms received more funding from related parties after receiving MAOs:

$$\Delta RPB_{it} = \beta_0 + \beta_1 MAO_{it-1} + \beta_2 BIG4_{it} + \beta_3 PRIV_{it} + \beta_4 ICF_{it} + \beta_5 ROA_{it} + \beta_6 TobinQ_{it} + \beta_7 LEV_{it} + \beta_8 SIZE_{it} + FE + \varepsilon_{it} \quad (7)$$

Following Li (2004), we use other payables (or other payables minus other receivables) as business loans obtained from other firms.  $\Delta RPB$  denotes the change in related-party loans. We use CRPB and CNRPB as proxies for changes in related-party loans. CRPB equals the other payables at year-end divided by year-end total assets, minus the last year-end other payables balance divided by the last year-end total assets. CNRPB equals the difference between the year-end other payables minus other receivables, divided by the year-end total assets and the last year-end other payables minus other receivables, divided by the last year-end total assets. MAOs denotes modified audit opinions, which equals 1 if firms received MAOs last year and 0 otherwise. BIG4 is the auditor of the annual report, which equals 1 if the auditor is a big four auditor and 0 otherwise. PRIV is the type of ultimate controller, which equals 1 if the ultimate controller is a non-government agency or individual, and 0 otherwise. ICF denotes investment expenditure, which is defined as the cash outflows of investment expenditure divided by the last year's fixed assets. ROA is return on assets, defined as total profit plus financial expenses, divided by total assets. LEV is year-end debt to total assets ratio. SIZE is the natural logarithm of total year-end assets. FE includes year and industry fixed effects.

Table 14 reports the regression results relating MAOs to changes in related parties' loans. The results show that the coefficient on MAOs is significantly positive, which indicates that firms receiving a MAO obtained significantly more loans from related parties than firms receiving a standard unqualified opinion. The results show that a major reason for the significant decrease in the financial constraints of firms that received MAOs is that they were able to obtain more funds from related parties.

## 5. Conclusion

Unlike the analyses conducted from an audit independence perspective, we provide a simple analytical framework for understanding why a high proportion of firms in China receive MAOs. On the one hand, firms have strong incentives to manipulate earnings because regulators use accounting measures to regulate listed companies and because of related parties' tunneling and rent-seeking activities, and earnings management incentives increase the probability of substantial misrepresentation in annual reports. On the other hand, support from government and controlling shareholders increases the soft budget constraint problem. Although receiving MAOs increases information risks, the economic consequences are limited because the allocation of resources is mainly dependent on government intervention or controlling shareholders' activities. These two factors result in a high proportion of firms receiving MAOs in the Chinese stock market.

Our interpretation that too high a proportion of MAOs is not a good thing seems inconsistent with the extant literature, in which researchers believe that issuing more MAOs is an indication that auditors are more independent. Our analytical framework shows that both views are reasonable in certain contexts. Given the quality of firms' accounting information, a higher proportion of firms receiving MAOs denotes higher auditor independence, suggesting that MAOs are helpful for disclosing negative information and helping outsiders determine the quality of accounting information. However, given the level of auditor independence, more MAOs indicates stronger incentives to distort information. When audit quality has not significantly changed, too high a proportion of firms receiving MAOs means more noise in firms' public accounting information.

Auditors will issue a MAO when they believe that financial reports do not fairly reflect a firm's financial position, operating results and cash flows according to the accounting standards. A high proportion of firms receiving MAOs suggests that the accounting information quality of these firms is very poor, which increases the extent of adverse selection of outsiders and the moral hazard of insiders. This situation does not help financial report users to make accurate investment decisions. In addition, it will hinder the resource allocation ability of the stock market in general and the protection of outside investors' interests.

The situation has improved gradually. On the one hand, to protect the legitimate rights of investor and public interests, regulators have introduced many policies and measures to mitigate information asymmetry and agency problems, such as the supervision of related-party tunneling and related-party transactions, the tradable share reforms of 2005, the weakening of the role of accounting earnings in finance regulations, and so on. Listed companies' incentives to manipulate earnings have been reduced by these measures. On the other hand, firms' soft budget constraints have been gradually relieved by the development of financial systems and enhanced competition in the financial markets, along with the weakening of government intervention and political connections. All of these measures help to improve the role of accounting information (particularly audit opinions) in the investment and financing decisions of investors, and increase the economic consequences of receiving MAOs.<sup>8</sup>

The aforementioned reform measures have reduced the proportion of annual reports that receive MAOs because they reduce the incentive for earnings management and increase the economic consequences. This results in more decision-useful accounting information and better protection of investors' interests. In practice, the proportion of firms that received MAOs in 2007, 2008 and 2009 dropped to 8%, 6.9% and 6.7%, respectively. Thus, the weakening of earnings management incentives and the hardening of soft budget constraints have improved accounting information quality in China, with a corresponding decrease in the proportion of firms that received MAOs.

## References

- Aharony, J., Lee, C.W.J., Wong, T.J., 2000. Financial packaging of IPO firms in China. *Journal of Accounting Research* 38 (1), 103–126.
- Ball, R., 2001. Infrastructure Requirements for an Economically Efficient System of Public Financial Reporting and Disclosure. *Brookings-Wharton Papers on Financial Services*.
- Ball, R., Kothari, S.P., Robin, A., 2000. The effect of international institutional factors on properties of accounting earnings. *Journal of Accounting and Economics* 29, 1–51.
- Bernanke, B., Gertler, M., 1990. Financial fragility and economic performance. *Quarterly Journal of Economics* 105 (1), 87–114.
- Chen, K.C.W., Yuan, H., 2004. Earnings management and capital resource allocation: evidence from China's accounting-based regulation of rights issues. *Accounting Review* 79 (3), 645–665.
- Chen, S., Su, X., Wang, Z., 2005. An analysis of auditing environment and modified audit opinions in China: underlying reasons and lessons. *International Journal of Auditing* 9 (3), 165–185.
- Chen, Xinyuan, Xia, Lijun, Lin, Zhiwei, 2009. Why couldn't independent auditing exert the corporate governance function: a case study on Sheng Run Gu Fen's receiving modified opinions in fifteen consecutive years. *Journal of Finance and Economics (China)* (07), 63–75.
- DeFond, M.L., Wong, T.J., Li, S., 2000. The impact of improved auditor independence on audit market concentration in China. *Journal of Accounting and Economics* 28, 269–305.
- Faccio, M., 2006. Politically connected firms. *American Economic Review* 96 (1), 369–386.
- Faccio, M., Masulis, R.W., McConnell, J.J., 2006. Political connections and corporate bailouts. *Journal of Finance* 61 (6), 2597–2635.
- Fan, J., Wong, T., 2002. Corporate ownership structure and the informativeness of accounting earnings in East Asia. *Journal of Accounting and Economics* 33 (3), 401–425.
- Fan, P.H.J.P., Huang, J., Zhu, N., 2009. Distress without bankruptcy: an emerging market perspective. SSRN eLibrary.
- Fan, J.P.H., Jin, L., Zheng, G., 2008a. Internal Capital Market in Emerging Markets: Expropriation and Mitigating Financing Constraints. Working paper.

<sup>8</sup> For example, "Administrative regulation for the securities issuance of listed companies", which came into effect on May 8, 2006, requires enterprises to meet the following clauses before issuing new shares: "The financial reports for the last three years were not issued with modified audit opinions. If the firm received an unqualified opinion with an emphasis paragraph, the items must not have materially adverse effects on the issuer or the adverse effects must have already been eliminated before share issuance."

- Fan, J.P.H., Rui, O.M., Zhao, M., 2008b. Public governance and corporate finance: evidence from corruption cases. *Journal of Comparative Economics* 36 (3), 343–364.
- Fan, J.P.H., Wong, T.J., 2005. Do external auditors perform a corporate governance role in emerging markets? Evidence from East Asia. *Journal of Accounting Research* 43 (1), 35–72.
- Fazzari, S.M., Hubbard, R.G., Petersen, B.C., Blinder, A.S., Poterba, J.M., 1988. Financing constraints and corporate investment. *Brookings Papers on Economic Activity* (1), 141–206.
- Francis, J., LaFond, R., Olsson, P., Schipper, K., 2005. The market pricing of accruals quality. *Journal of Accounting and Economics* 39 (2), 295–327.
- Haw, I.M., Qi, D., Wu, D., Wu, W., 2005. Market consequences of earnings management in response to security regulations in China. *Contemporary Accounting Research* 22 (1), 95–140.
- He, Jiangang, Wei, Minghai, Liu, Feng, 2008. Transfer of benefits, media monitoring and corporate governance: case studies of Wuliangye. *Management World* (10), 141–150.
- Jian, M., Wong, T.J., 2010. Propping through related party transactions. *Review of Accounting Studies* 15 (1), 70–105.
- Jiang, G., Lee, C.M.C., Yue, H., 2010. Tunneling through intercorporate loans: the China experience. *Journal of Financial Economics* 98 (1), 1–20.
- Jiang, Yihong, 1998. An empirical study on earnings management in listed companies—An analysis of threshold on EPS and ROE, Working Paper, Shanghai University of Economics and Finance.
- Johnson, S., Mitton, T., 2003. Cronyism and capital controls: evidence from Malaysia. *Journal of Financial Economics* 67 (2), 351–382.
- La Porta, R., Lopez-de-Silanes, F., Shleifer, A., Vishny, R., 2002. Investor protection and corporate valuation. *Journal of Finance* 57 (3), 1147–1170.
- Lambert, R., Leuz, C., Verrecchia, R.E., 2007. Accounting information, disclosure, and the cost of capital. *Journal of Accounting Research* 45 (2), 385–420.
- Lennox, C., 2000. Do companies successfully engage in opinion-shopping? Evidence from the UK. *Journal of Accounting and Economics* 29, 321–337.
- Leuz, C., Oberholzer-Gee, F., 2006. Political relationships, global financing, and corporate transparency: evidence from Indonesia. *Journal of Financial Economics* 81 (2), 411–439.
- Leuz, C., Wysocki, P.D., 2008. Economic Consequences of Financial Reporting and Disclosure Regulation: A Review and Suggestions for Future Research: SSRN.
- Li, D., Feng, J., Jiang, H., 2006. Institutional entrepreneurs. *American Economic Review* 96 (2), 358–362.
- Li, H., Meng, L., Wang, Q., Zhou, L.A., 2008. Political connections, financing and firm performance: evidence from Chinese private firms. *Journal of Development Economics* 87, 283–299.
- Li, Shuang, Wu, Xi, 2002. Audit failure and securities market supervision: the thoughts on announcement of China securities regulatory commission. *Accounting Research (China)* (02), 28–36.
- Li, Zengquan, Sun, Zheng, Wang, Zhiwei, 2004. Tunneling and ownership structure of a firm: evidence from controlling shareholder's embezzlement of listed company's funds in China. *Accounting Research (China)* (12), 3–13.
- Li, Zengquan, Yu, Qian, Wang, Xiaokun, 2005. Tunneling, propping and M&A: evidence from Chinese listed companies. *Economic Research Journal (China)* (01), 95–105.
- Liao, Xiumei, 2007. Usefulness of accounting information in bank credit decisions: based on the ownership institution constraints. *Accounting Research (China)* (07), 31–38.
- Lin, Shu, Wei, Minghai, 2000. The earnings management by Chinese A-share firms in the IPO process. *China Accounting and Finance Review (China)* 2 (02), 87–107.
- Lin, Yifu, Cai, Fang, Li, Zhou, 1999. *The China Miracle: Development Strategy and Economic Reform*. Shanghai People's Publishing House, China.
- Lin, Yifu, Li, Zhiyun, 2004. Policy burden, moral hazard and soft budget constraint. *Economic Research Journal (China)* (02), 17–27.
- Liu, Feng, He, Jiangang, 2004. Ownership structure and substantial shareholders' choice in interest realizing methods: tentative study on tunneling in Chinese capital market. *China Accounting Review (China)* 2 (01), 141–158.
- Liu, Fengwei, Sun, Zheng, Li, Zengquan, 2007. Government intervention, competition and compensation contracts: empirical evidence from state-owned listed companies. *Management World (China)* (09), 76–84.
- Lu, Jianqiao, 1999. Empirical research on earnings management of China's loss listed companies. *Accounting Research (China)* (09), 25–35.
- Lu, Zhengfei, Zhu, Jigao, Sun, Bianxia, 2008. Earnings management, accounting information and bank debt covenants. *Management World (China)* (03), 152–158.
- Luo, Danglun, Huang, Qiongyu, 2008. The political connections and firm value of private enterprises. *Journal of Management Science (China)* (06), 21–28.
- Luo, Danglun, Liu, Xiaolong, 2009. Political connections, entry barriers and firm's performance. *Management World (China)* (05), 97–106.
- Luo, Danglun, Tang, Qingquan, 2007. On the government control, bank-enterprises relationship and corporate guarantee behavior. *Journal of Financial Research (China)* (03), 151–161.
- Luo, Danglun, Tang, Qingquan, 2009. The performance of institutional environment evidence from China's private listed companies. *Economic Research Journal (China)* (02), 106–118.
- Luo, Danglun, Zhen, Liming, 2008. Private control, political connections and corporate financing: empirical evidence based on China's private companies. *Journal of Financial Research (China)* (12), 164–178.
- Morck, R., Yeung, B., Yu, W., 2000. The information content of stock markets: why do emerging markets have synchronous stock price movements? *Journal of Financial Economics* 58 (1–2), 215–260.
- Myers, S.C., Majluf, N.S., 1984. Corporate financing and investment decisions when firms have information that investors do not have. *Journal of Financial Economics* 13 (2), 187–221.
- Sun, Zheng, Li, Zengquan, Wang, Jingbin, 2006. Nature of ownership, accounting information and debt covenants: empirical evidence from China's listed companies. *Management World (China)* (10), 100–107.
- Sun, Zheng, Liu, Fengwei, Li, Zengquan, 2005. Market development, government influence and corporate debt maturity structure. *Economic Research Journal (China)* (05), 52–63.
- Sun, Zheng, Wang, Yaotang, 1999. A positive study on disposing the resources and controlling the surplus. *Journal of Finance and Economics (China)* (04), 3–11.
- Wang, Yaping, Wu, Liansheng, Bai, Yunxia, 2005. Frequency and magnitude of earnings management of listed companies in China. *Economic Research Journal (China)* (12), 102–112.
- Wang, Yaotang, Chen, Shimin, 2001. An empirical research of disaffiliation program's impact on auditor independence. *Audit Research (China)* (03), 2–9.
- Wang, Yaotang, Tu, Jianming, 2006. Economic consequence of the revision on audit report standard: empirical evidence from capital market. *Journal of Finance and Economics (China)* (12), 75–86.
- Watts, R.L., Zimmerman, J.L., 1986. *Positive Accounting Theory*. Prentice Hall.
- Wu, Wenfeng, Wu, Chongfeng, Liu, Xiaowei, 2008. Political connection and market valuation: evidence from China individual-controlled listed firms. *Economic Research Journal (China)* (07), 130–141.
- Wu, Wenfeng, Wu, Chongfeng, Rui, Meng, 2009. Government context of Chinese listed companies' managers and tax preference. *Management World (China)* (03), 134–142.
- Xia, Lijun, Fang, Yiqiang, 2005. Government control, institutional environment and firm value: evidence from the Chinese securities market. *Economic Research Journal (China)* (05), 40–51.
- Xu, Liping, Xin, Yu, Chen, Gongmeng, 2006. Ownership concentration, outside blockholders, and operating performance: evidence from China's listed companies. *Economic Research Journal (China)* (01), 90–100.



- Yu, Mingguo, Pan, Hongbo, 2008. The relationship between politics, institutional environments and private enterprises' access to bank loans. *Management World (China)* (08), 9–21.
- Yue, Heng, 2006. Large shareholder tunneling and the monitoring role of auditor. *China Accounting Review (China)* (01), 59–68.
- Zhu, Hongjun, He, Xianjie, Chen, Xinyuan, 2006. Financial development, soft budget constraint and business investment. *Accounting Research (China)* (10), 64–71.