An Emerging Market’s Reaction to Initial Modified Audit Opinions: Evidence from the Shanghai Stock Exchange*

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Abstract
This study investigates the valuation effect of modified audit opinions (MAOs) on the emerging Chinese stock market. Here, the term MAO refers to both qualified opinions and unqualified opinions with explanatory notes. The latter can be considered an alternative form of a qualified opinion in China. The institutional setting in China enables us to find compelling evidence in support of the monitoring role of independent auditing as an institution. First, we find a significantly negative association between MAOs and cumulative abnormal returns after controlling for effects of other concurrent announcements. Further, results from a by-year analysis suggest that investors did not reach negative consensus about MAOs’ valuation effect until the second year, exhibiting the learning process of a market without prior exposure to MAOs. Second, we do not observe significant differences between market reaction to non-GAAP- and GAAP-violation-related MAOs. Third, no significant difference is found between market reaction to qualified opinions and market reaction to unqualified opinions with explanatory notes.

Keywords Emerging market; Modified audit opinions; Market reaction; Independent auditing

Condensé
La présente étude s’inspire des travaux existants sur la réaction du marché aux opinions initiales assujetties à des conditions ou assorties de réserves (opinions modifiées dans la suite) et du contexte institutionnel exclusif du marché chinois des valeurs mobilières.

Premièrement, bien que l’économie chinoise progresse petit à petit vers l’économie de marché, les mécanismes du marché jouent un rôle limité dans la régie des opérations commerciales. L’exercice de la comptabilité et de la vérification en Chine est soumis à des règles

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fort différentes de celles qui prévalent dans les pays développés : non seulement est-il réglementé, mais il est géré par les organismes d’État. Le contrôle de l’État revêt la forme de l’établissement de normes professionnelles et de la surveillance directe du fonctionnement des cabinets d’expertise comptable. Il est donc particulièrement intéressant de se demander si le rapport du vérificateur est pertinent à l’évaluation dans un marché où le contrôle de l’État a souvent préséance sur les mécanismes du marché.

Deuxièmement, le marché chinois des valeurs mobilières offre de meilleures conditions de test, analogues à celles que seule l’expérience contrôlée permet d’observer. Ainsi, la réglementation chinoise fait en sorte que les opinions modifiées portent sur le fond (les cas de transgression des PCGR, par exemple) et sur la forme (les notes explicatives considérées par beaucoup comme des quasi-réserves, par exemple), ce qui n’est pas le cas en Amérique du Nord. Une démonstration concrète indiquant si les investisseurs font la distinction entre les différences de fond et les différences de forme des opinions modifiées devrait permettre de mieux comprendre le rôle du vérificateur sur le marché. Un autre facteur institutionnel susceptible d’améliorer le contrôle expérimental est le fait que les règles chinoises en matière de publication d’information exigent que les rapports des vérificateurs soient annoncés le jour même de la publication des rapports annuels, alors qu’aux États-Unis, ils peuvent être annoncés à diverses occasions.

Troisièmement, le marché chinois des valeurs mobilières, comparativement à celui d’économies plus développées comme celle des États-Unis, se caractérise par une application moins rigoureuse des exigences en matière d’information financière. La crédibilité des états financiers publiés par les sociétés chinoises cotées en bourse est susceptible d’être mise en doute, et les vérificateurs ont, auprès des investisseurs ainsi que des autorités de réglementation, la réputation de manquer d’indépendance et de professionnalisme. En outre, le marché est dominé par des particuliers investisseurs qui disposent de ressources limitées pour utiliser l’information financière et qui ont peu d’expérience en ce domaine (Xu et Wang 1997). Compte tenu du fait que ces conditions tendent à réduire les conséquences de l’opinion des vérificateurs au chapitre de l’évaluation, l’observation d’une importante réaction négative du marché aux opinions modifiées démontrerait irrévocablement l’importance de la vérification comme institution dans un marché en évolution.

La vérification indépendante est un instrument de contrôle largement utilisé pour réduire les coûts d’encadrement et augmenter la valeur de l’entreprise lorsque les gestionnaires n’en sont pas les uniques actionnaires. L’aptitude des vérificateurs à déceler les violations de contrats ou les cas de transgression des PCGR par la direction et à en faire rapport est un indicateur clé de leur compétence et de leur indépendance. La demande de services de vérification indépendants était cependant limitée en Chine au moment où l’économie du pays était entièrement contrôlée par l’État. L’instauration de réformes économiques avec le transfert des droits de propriété de l’État au secteur privé et aux investisseurs institutionnels ont fait de la vérification indépendante une institution dans ce pays. Le comité chinois responsable de la réglementation des valeurs mobilières exige notamment que les sociétés cotées en bourse fassent vérifier leurs rapports annuels par des experts-comptables indépendants.

À partir des données de la bourse de Shanghai sur une période de trois ans s’échelonnant de 1995 à 1997, les auteurs analysent la forme et le fond des premières opinions modifiées et en vérifient les conséquences pour le marché chinois des valeurs mobilières en évolution. Les auteurs testent trois hypothèses :
HYPOTHÈSE 1. Ceteris paribus, l'annonce d'opinions modifiées est en relation négative avec les rendements du marché.

HYPOTHÈSE 2. Ceteris paribus, la réaction des investisseurs chinois à des opinions modifiées relatives aux PCGR diffère de leur réaction à des opinions modifiées qui n’ont pas trait aux PCGR.

HYPOTHÈSE 3. Ceteris paribus, la réaction des investisseurs aux opinions avec réserve diffère de la réaction des investisseurs aux opinions sans réserve comportant une ou plusieurs notes explicatives.

Des modèles de régression multiple avec contrôle des annonces simultanées de bénéfices, de dividendes en espèces, de nouvelles relatives à des litiges et de facteurs constants sont utilisés dans les tests appliqués à ces hypothèses sur un échantillon de 844 observations entreprises-années (n = 748 pour le groupe des opinions sans réserve et n = 96 pour le groupe des opinions modifiées).

Les auteurs constatent, après avoir contrôlé les effets des annonces simultanées d'autres nouvelles pertinentes à l'évaluation, que les opinions modifiées sont associées à des rendements négatifs anormaux du marché. Ils ne relèvent aucune différence sensible dans la réaction du marché 1) entre les opinions modifiées relatives à la transgression des PCGR et les opinions modifiées n’ayant pas trait à la transgression des PCGR et 2) entre les opinions avec réserve et les opinions sans réserve accompagnées d’une ou de plusieurs notes explicatives. Cette absence de différence peut être attribuable à l’incapacité des investisseurs chinois à définir la cause des opinions modifiées ou à leur inclinaison à croire qu’il n’existe pas de différence notable entre les opinions modifiées. Compte tenu de leur plan de recherche, les auteurs ne peuvent écarter l’une ou l’autre de ces possibilités. Les tests de sensibilité faisant appel à des variables de bénéfices et de rendement différentes, à diverses caractéristiques de l’espace d’événements et à différentes méthodes de régression ont confirmé la robustesse des principales constatations des auteurs. À partir des résultats globaux des tests, ces derniers concluent que les rapports des vérificateurs sont pertinents à l’évaluation et que la vérification indépendante, à titre d’institution, joue un rôle important sur le marché chinois des valeurs mobilières en évolution.

La forte réaction négative des investisseurs chinois aux opinions modifiées peut être attribuée à une variété de facteurs. Premièrement, l’ampleur des ajustements associés aux opinions modifiées est élevée par rapport aux bénéfices. Selon Chen, Chen et Su (2000), les ajustements suggérés par les vérificateurs représentent en moyenne quelque 80 pour cent du bénéfice d’exploitation déclaré et 70 pour cent du bénéfice net déclaré. Deuxièmement, les sources concurrentes d’information sont insuffisantes sur le marché chinois. Le public n’a pas accès à l’analyse et à la prévision des bénéfices futurs. Pour la majorité des investisseurs chinois, l’information financière annuelle dont fait partie l’opinion des vérificateurs est l’unique source officielle d’information susceptible de les guider dans leurs décisions d’investissement. C’est pourquoi la probabilité que les opinions modifiées présentent un important élément de surprise est élevée. Troisièmement, pour des raisons historiques, les investisseurs chinois soupçonnent les bénéfices comptables déclarés d’être surévalués. Les opinions modifiées confirmeraient donc ces soupçons profondément enracinés des investisseurs en ce qui a trait...
Independent auditing is a widely used monitoring device to reduce agency costs and increase firm value when managers do not own all of the shares. Auditors' ability to discover and report breaches of contract or violations of generally accepted accounting principles (GAAP) by management is a key indicator of their competence and independence. However, there was limited demand for independent auditing in China when its economy was entirely controlled by the state. The introduction of economic reforms, with ownership rights shifting from the state to private and institutional investors, has enhanced the role of independent auditing as an institution in China. In particular, the China Securities Regulatory Committee (CSRC) requires that listed companies have their annual reports audited by independent certified public accountants (CPAs).

Using data from the Shanghai Stock Exchange (SSE), this study analyzes the forms and substance of the initial Chinese modified audit opinions (MAOs) and tests whether they have valuation implications for the emerging Chinese stock market. Empirical findings suggest that, after controlling for effects of accounting earnings and other concurrent announcements, MAOs are associated with negative abnormal market returns, and results from a by-year analysis suggest that investors did not demonstrate a negative reaction to them until the second year. However, we did not observe significant differences in market response (1) between GAAP-violation and non-GAAP MAOs and (2) between qualified opinions and unqualified opinions with explanatory notes. The absence of such differences may be attributable to Chinese investors' failure to recognize the different causes of MAOs, or to their inclination to believe that there is no substantial difference among MAOs. Given our research design, we cannot rule out either possibility. Interviews with market participants were conducted to search for realistic interpretations of the statistical results. An effort was also made to link the empirical findings with the institutional characteristics of the emerging Chinese stock market.

This study is motivated by extant literature on market reaction to MAOs and the unique institutional setting provided by the Chinese stock market. First, although the Chinese economy is gradually moving toward a market orientation, market mechanisms play a limited role in governing business transactions. In sharp contrast to developed economies, the Chinese accounting and auditing profession is not only regulated but also administered by government agencies. The government
exercises control by setting professional standards and directly monitoring the 
operation of CPA firms. It is therefore of great interest to examine whether an audi-
tor’s report is value-relevant in a market where government control often prevails 
over market mechanisms. Second, the Chinese stock market offers us test conditions 
alogous to that observable only in a controlled experiment. For example, Chi-
inese regulations provide us with MAOs with content (e.g., GAAP violations) and 
presentations (e.g., explanatory notes regarded by many as quasi qualifications) not 
observable in North America. Evidence of whether investors distinguish between 
different contents and forms of MAOs will enhance our understanding of the auditor’s 
role in the marketplace. Another institutional factor that may improve experimental 
control is that Chinese disclosure rules require the auditors’ reports to be announced 
the same day that annual reports are published, while in the United States this 
announcement can be made on a variety of occasions. Third, the Chinese stock market 
is characterized by a less rigorous enforcement of financial reporting requirements 
compared with more developed economies like that of the United States. The cred-
ibility of financial statements published by listed Chinese companies is perceived to 
be questionable, and auditors are considered to lack independence and profes-
ionalism by both investors and regulators. Furthermore, the market is dominated by 
individual investors who have limited resources for, and little experience in, using 
financial information (Xu and Wang 1997). Given that these conditions tend to reduce 
the valuation effect of auditors’ opinions, finding a significantly negative market 
reaction to MAOs would provide compelling evidence for the importance of audit-
ing as an institution in an emerging market.

The rest of the paper is organized as follows: section 2 briefly reviews prior 
studies on market response to MAOs and discusses the institutional setting of 
auditing in China; section 3 develops research hypotheses and empirical models; 
section 4 describes test data and reports and analyzes test results; and section 5 
provides concluding remarks.

2. Background

Market response to modified audit opinions

Considerable empirical evidence supports a contemporaneous or delayed correla-
tion between accounting earnings and stock price changes (Ball and Brown 1968; 
Ohlson 1979; Holthausen and Verrecchia 1988; Lev 1989; Ryan 1995). However, 
earnings explain only a small portion of the variation in returns at the earnings 
announcement date. This has led to a search for models to incorporate “nonearn-
ings” information (Beaver 1981; Lev and Ohlson 1982), an important source of 
which may be the auditor’s opinion. A qualified audit opinion has the potential to 
affect market expectations by signaling that earnings generated by the firm are 
noisier or less persistent (or both) than previously assumed by investors (Choi and 
Jeter 1992). The empirical association between MAOs and stock returns has been 
studied extensively in the accounting literature (Baskin 1972; Alderman 1977; 
Firth 1978; Chow and Rice 1982; Dodd et al. 1984; Dopuch, Holthausen, and 
Leftwich 1986; Loudder et al. 1992; Choi and Jeter 1992). These studies report
mixed results. While Chow and Rice and Dodd et al. find no significant market reaction, Dopuch et al., Choi and Jeter, and Loudder et al. report negative price reactions to MAOs. Findings by more recent studies of significant negative market reaction to qualified audit opinions may be attributed to differences in research design (Choi and Jeter 1992), additional control variables (Loudder et al. 1992), and different definitions of events (Dopuch et al. 1986).4

China has become the world’s largest transitional economy and emerging market. As a result, researchers and international accounting firms, particularly the Big 5, have an increasing interest in understanding its rapidly growing stock market and the accounting and auditing practice environment. However, little empirical research has been conducted in China, partly due to a lack of understanding of the institutional setting and partly due to difficulties in data collection. Based on pre-1995 data, Abdel-Khalik and Wu (1996) and Shen (1996) report that there is no evidence that accounting information is associated with stock prices. However, studies that use more recent data suggest that accounting information does affect Chinese investors’ pricing decisions (Liu 1997; Sun, Zhang, and Zhou 1997; Wu and Huang 1997). DeFond, Wong, and Li (1999) study the behavior of auditor choice by listed Chinese companies and find that big audit firms lose their market share as a result of issuing MAOs. They describe this as clients’ “flight from audit quality”. Though DeFond et al. find that MAOs affect Chinese managers’ behavior, so far MAOs’ effect on Chinese investors has not been documented. This is the first study to examine whether auditors’ reports affect investors’ pricing decisions in the Chinese stock market.

Institutional setting of auditing in China
The economic reform of the past two decades has dramatically changed accounting and auditing practice in China. The establishment of the Shanghai and Shenzhen stock exchanges, the promulgation of new accounting and auditing standards, and the development of the accounting profession have played an important role in this process. Yang and Yang (1998) conclude that the monitoring of both public and private enterprises by auditors has been employed by the government as an important mechanism in transforming the Chinese economy from one directed by the “visible hand” of central planning to one guided by the “invisible hand” of market forces.

Independent auditing was virtually nonexistent under the planned economy before the 1980s, when the state both owned and managed enterprises. Parallel to the process of setting Chinese accounting standards along the line of International Accounting Standards (IAS), the public accounting profession underwent substantial growth to meet the requirements of the open-door policy, expansion of the stock market, and decentralization of state-owned enterprises (DeCelles, Maschmeyer, and Zhang 1996).

The first Chinese CPA firm was founded in Shanghai in January 1981. By the end of 1996, there were more than 6,700 public accounting firms in China employing a total of 58,000 CPAs (Yang and Yang, 1998). The professional body, the Chinese Institute of CPA (CICPA), was established in 1989. Under the supervision of
the Ministry of Finance (MOF), the CICPA, a quasi-governmental agency, is responsible for monitoring and disciplining CPA firms. During recent years, the CICPA has been focusing on enhancing the independence of CPA firms by adopting detailed auditing standards and strict disciplinary rules. Furthermore, as all CPA firms were initially established by, and affiliated with, a government-related organization (a government agency, a university, or a large state-owned enterprise, or SOE), the CICPA required that all firms should gradually sever ties with their parent organizations in order to protect professional independence from undue interference. After cutting such ties, CPA firms are reorganized as private professional firms in the form of either a partnership or a limited liability company.

In 1995, the MOF approved the first set of 10 independent auditing standards (AS) drafted by the CICPA, which became effective on January 1, 1996. The second and third groups of standards went into effect on January 1, 1997 and July 1, 1999, respectively. All three were modeled after generally accepted international auditing standards. These AS collectively cover all major issues addressed by auditing standards in developed economies. The MOF and the Chinese Securities Regulatory Commission (CSRC) mandate that publicly traded firms be audited by auditors specially designated for such services. At the end of 1997, 105 CPA firms were authorized to audit listed companies. The practice of these firms is closely monitored by both the CICPA and the CSRC, which have the power to revoke their licenses to audit listed companies if they violate standards. Given the small number of listed companies (740 at the end of November 1997) relative to the number of CPA firms authorized to audit them, the Chinese auditing market is highly competitive.

Although the state remains the controlling shareholder of most listed companies, this control has become increasingly indirect in recent years. Listed companies have been granted considerable latitude in making business decisions, including the selection of auditors. Consequently, auditor selection and accounting choices within Chinese GAAP are now made at the discretion of the management. On the one hand, auditors are under pressure from their clients not to issue MAOs, because auditor switches in China are often found to be associated with receiving MAOs in the preceding year (Chen, Chen, and Su 2000). On the other hand, auditors are also under pressure from the CRSC and the CICPA to abide by auditing standards.

Listed companies in China must follow both general accounting standards that apply to all Chinese companies and an additional set promulgated only for those issuing shares. The former is less conservative and more likely to be manipulated (Chen, Gul, and Su 1999) than the latter, which is consistent with the IAS on most major issues. Listed companies are also subject to disclosure requirements promulgated by the CSRC. These special reporting and disclosure regulations applicable to Chinese-listed companies are collectively referred to as GAAP in this study.

The first modified audit opinion appeared in early 1996, soon after the first set of independent auditing standards took effect. The annual report of Shanghai-based conglomerate Yanzhong Enterprises Co. Ltd. was qualified by Da Hua CPAs for including investment gains and interest income from its affiliated companies in its operating profits instead of reporting them in the nonoperation section as required by Chinese GAAP. This event attracted great media attention and has
been viewed as the turning point in the development of China’s auditing practice, which had previously been considered merely a formality rather than an objective assessment of the credibility of financial statements. The qualified financial statements of Yanzhong for 1995 were published on February 15, 1996, two and a half months before the deadline for releasing annual reports, which was early enough to set a precedent for other CPA firms to follow in issuing their audit reports. Subsequently, 10 qualified auditors’ reports for companies listed on the Shanghai Stock Exchange were issued in fiscal year 1995, 12 in 1996, and 20 in 1997.

China’s generally accepted auditing standards (GAAS) require auditors to issue a qualified opinion for any one of three reasons: (1) GAAP violation, (2) scope restriction, and (3) inconsistency in the application of GAAP (AS No. 7). An explanation must be provided in the audit report to identify the reasons for the qualification. In addition, AS No. 7 recommends that explanatory notes be used with unqualified opinions if the auditor deems it necessary. However, AS does not specify in what circumstances explanatory notes should be employed along with unqualified opinions, which leaves ample leeway for auditors’ discretion. Nine companies listed on the SSE in fiscal year 1995, 18 in 1996, and 27 in 1997 received unqualified audit opinions with explanatory notes. Some companies that received qualified opinions were also given additional explanatory notes during that three-year period.

3. Hypothesis and models

Qualified versus unqualified audit opinions

An audit is one of the mechanisms whereby potential conflict of interest between shareholders and managers can be controlled (Chan and Walter 1996). Modified audit opinions, if interpreted by the market as bad news about the company, are likely to induce negative stock price changes. Although Chinese investors may perceive auditors to be more objective and neutral than managers, auditors have been found to collude with managers in manipulating financial statements (Jiefang Daily September 21, 1999). In addition, Chinese shareholders have a relatively short trading history and no prior exposure to MAOs. Therefore, it remains an empirical question whether MAOs, as a potentially important source of nonearnings information, can be properly evaluated by investors in a timely fashion in an emerging market. This discussion leads to our first hypothesis in its alternative form:

**HYPOTHESIS 1. Ceteris paribus, the announcement of modified audit opinions is negatively associated with market returns.**

GAAP-related versus non-GAAP-related MAOs

A salient feature of MAOs in China is that a substantial portion of them are issued for GAAP violations, a phenomenon unobservable in the United States. One possible explanation for not allowing companies to file financial reports with GAAP violations could be that they are considered more serious offenses than other MAOs by U.S. regulators. Following this argument and assuming that this regulation
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is in line with investors’ reasoning, we can expect a more negative market response to GAAP-related than to non-GAAP-related MAOs. Alternatively, the SEC’s disallowing of financial reports with GAAP violations may be due to the fact that most of them could be resolved before an audit report is issued; therefore, they should be avoided.\(^{10}\) If this is the case, the market reaction is likely to be less predictable; it could be either positive or negative, weak or strong, depending on how investors interpret managers’ decisions (Melumad and Ziv 1997 made a similar argument). To shed light on this issue, we examine whether Chinese investors treat GAAP-related and non-GAAP-related MAOs as categorically different signals in their valuation decisions, and our second hypothesis in its alternative form is as follows:

**HYPOTHESIS 2.** Ceteris paribus, Chinese investors’ reaction to GAAP-related MAOs differs from that to non-GAAP-related MAOs.

Qualified audit opinions versus unqualified audit opinions with explanatory notes

The official interpretation of Chinese Independent Auditing Standards suggests that unqualified opinions with explanatory notes should be issued for events/transactions that “do not have direct influence on financial statements but are important enough to be explained” (CICPA Auditing Standard Committee 1996, 211). Examples given by the CICPA Auditing Standard Committee include important uncertain events, an inconsistency with GAAP that is acceptable to auditors, emphasis of a matter, and dependence on work by other auditors. Strictly speaking, auditors should use explanatory notes only to highlight important issues that financial statement users need to be aware of, which is equivalent to “emphasis of a matter” in U.S. terms.

According to Chinese regulations, companies that receive either qualified opinions or unqualified opinions with explanatory notes have to publish the full text of the auditor’s report along with their annual reports in selected securities journals. Further, the company must report to the CSRC the nature and underlying reasons for the qualification or explanation. However, only companies receiving qualified opinions have to make a similar explanation to shareholders at the annual general meeting. These two types of opinions are also perceived differently by some market participants. Some financial reporters, for example, summarized the difference between the two types of opinions as lawful but unreasonable (unqualified with explanations) versus unlawful (qualified opinions) (Shanghai Securities News April 16, 1996). Anecdotal evidence collected through our interviews with regulators and from our reading of Chinese business publications suggests that Chinese auditors often employ unqualified opinions with explanatory notes as a convenient alternative to qualified opinions in order to minimize the probability of losing their clients while avoiding direct violation of auditing standards.

Therefore, we conjecture that, under the current circumstances in China, an unqualified opinion with explanatory notes should be regarded as a quasi qualification and, consequently, that investors may not perceive any substantive difference between the two. One senior Shanghai auditor openly admits in the widely circulated China Securities Daily (Xu 1998) that the difference between these two categories
is more in the form of presentation rather than in substance. Should appropriate adjustments be made, net income could have differed by as much as 100 million Chinese yuan (RMB) in some cases of unqualified audit opinions with explanatory notes, compared with qualified audit opinions that were issued for differences amounting to only a few million yuan (Xu 1998). The appendix illustrates similarities and differences between qualified opinions and unqualified opinions with explanatory notes. Based on the above analysis, we propose the third hypothesis in its alternative form:

**HYPOTHESIS 3.** Ceteris paribus, investors’ reaction to qualified audit opinions differs from investors’ reaction to unqualified audit opinions with explanatory notes.

**Empirical models**

The following market model is employed for estimating daily abnormal returns:

$$R_{ijt} = \alpha_{ij} + \beta_{ij} R_{mjt} + \epsilon_{ijt}$$  \hspace{1cm} (1)$$

where

- $R_{ijt}$ is the return of firm $i$ in year $j$ on day $t$, and
- $R_{mjt}$ is the market return in year $j$ on day $t$.

The firm-year specific parameters of the model are estimated over a 120-day period, ending 30 days before the announcement date. The 3-day (from day $-1$ to day $1$) cumulative abnormal return (CAR) is calculated as follows:

$$\text{CAR}_{ij} = \sum_{t=-1}^{1} R_{ijt} - (a_{ij} + b_{ij} R_{mjt})$$  \hspace{1cm} (2)$$

where $\text{CAR}_{ij}$ is the 3-day cumulative abnormal return for firm $i$ in year $j$, and $a_{ij}$ and $b_{ij}$ are firm-year specific parameters estimated by using equation 1.

We employ the following model to test Hypothesis 1:

$$\text{CAR}_{ij} = \alpha + \beta_1 \text{YR96}_{ij} + \beta_2 \text{YR97}_{ij} + \beta_3 \text{OP}_{ij} + \beta_4 \Delta \text{EPS}_{ij} + \beta_5 \text{OP}_{ij}^* \Delta \text{EPS}_{ij}$$
$$+ \beta_6 \text{LEGAL}_{ij} + \beta_7 \text{DIVID}_{ij} + \beta_8 \text{REPEAT}_{ij} + \epsilon_{ij}$$  \hspace{1cm} (3)$$

To test hypotheses 2 and 3, we add two variables, $\text{GAAP}$ and $\text{QUAL}$, to equation 3:

$$\text{CAR}_{ij} = \gamma_0 + \gamma_1 \text{YR96}_{ij} + \gamma_2 \text{YR97}_{ij} + \gamma_3 \text{OP}_{ij} + \gamma_4 \Delta \text{EPS}_{ij} + \gamma_5 \text{OP}_{ij}^* \Delta \text{EPS}_{ij}$$
$$+ \gamma_6 \text{LEGAL}_{ij} + \gamma_7 \text{DIVID}_{ij} + \gamma_8 \text{REPEAT}_{ij} + \gamma_9 \text{GAAP}_{ij} + \gamma_{10} \text{QUAL}_{ij} + \eta_{ij}$$  \hspace{1cm} (4)$$
where

\[ i \text{ and } j = \text{firm and year indicators, respectively}, \]

\[ YR96 \text{ and } YR97 = \text{year dummy variables}, \]

\[ CAR = \text{3-day cumulative abnormal return from day } -1 \text{ to } 1, \]

\[ OP = \text{a dummy variable with a value of } 1 \text{ for MAOs and } 0 \text{ otherwise}, \]

\[ \Delta EPS = \text{change in earnings per share scaled by beginning price at day } -1, \]

\[ GAAP = 1 \text{ for GAAP-violation-related MAOs and } 0 \text{ otherwise}, \]

\[ QUAL = 1 \text{ for qualified opinion and } 0 \text{ otherwise}, \]

\[ LEGAL = 1 \text{ for MAOs with announcement of legal contingencies and } 0 \text{ otherwise}, \]

\[ DIVID = 1 \text{ for MAOs with announcement of dividend reduction and } 0 \text{ otherwise}, \]

\[ REPEAT = 1 \text{ for observations receiving MAOs for two or three consecutive years and } 0 \text{ otherwise.} \]

\( OP \) in equation 3 tests Hypothesis 1, and \( GAAP \) and \( QUAL \) in model 4 test Hypotheses 2 and 3, respectively. \( YR96, YR97, LEGAL, DIVID, \) and \( REPEAT \) are control variables. We read the annual reports of all sample companies that received MAOs to identify concurrent announcements of five types of bad news that may induce negative price changes: (1) merger with or take-over by other companies, (2) change of controlling shareholders, (3) change of top executives, (4) litigation against the company, and (5) cash dividend reductions. Only the last two types, litigation and dividend reductions, were found in 5 and 29 annual reports, respectively. Therefore, \( LEGAL \) and \( DIVID \) are included in the model, controlling for effects of concurrent announcements. \( REPEAT \) is employed to control for correlation among repeated observations of MAOs.

To mitigate the effect of possible measurement errors, models 3 and 4 are also tested using an alternative proxy for cumulative abnormal return — namely, the market-index-adjusted three-day cumulative return (i.e., cumulative firm return minus cumulative market-index-return) from day \(-1 \) to 1. Likewise, change in return on equity (ROE) from year \( j - 1 \) to year \( j \) (\( \Delta ROE \)) is employed as an alternative proxy for changes in accounting earnings. ROE is the performance measure specified by the CSRC for delisting and rights-issuing purposes (Haw et al. 1998). As a result of using alternative measures for abnormal return and changes in earnings, models 3 and 4 need to be estimated four times.
4. Data, samples, and results

Test data and samples
Auditors’ opinions and announcement dates were hand collected from the Shanghai Securities News. Return and financial data were retrieved from the Taiwan Economic Journal (TEJ) database. To be included in the sample, a firm had to have enough observations for estimating the market model and no missing values for variables used in models 2 and 3. Our sample includes 844 A-share firm-year observations from the SSE, with 179 (160 clean and 19 modified) observations in 1995, 290 (260 clean and 30 modified) in 1996, and 375 (328 clean and 47 modified) in 1997. Table 1 summarizes MAOs issued to companies listed on the SSE from 1995 to 1997. Of the 19 MAOs in 1995, 10 are qualified opinions, 15 are GAAP-related, and 9 are concurrent with announcements of dividend reduction. In 1996, 12 of the 30 MAOs are qualified opinions, 18 are GAAP-related, and 1 is concurrent with an announcement of litigation, 8 are concurrent with announcements of dividend reduction, and 6 were receiving MAOs for the second time. Of the 47 MAOs in 1997, 20 are qualified opinions, 23 are GAAP-related, 4 are concurrent with announcements of litigation, 12 are concurrent with announcements of dividend reduction, and 15 were receiving MAOs for the second time and 4 for the third time in three years.

Figure 1 summarizes the market-model abnormal returns from day -15 to day +15, with day 0 being the announcement day of audit reports. The figure clearly shows that both the mean and the median are much lower for the MAO group than for the clean group on day 0, indicating a substantial negative market reaction to the announcement of MAOs. As indicated in Table 2, both the mean and the median abnormal return differences between the two groups are significant at the 0.05 and 0.01 levels, respectively. The average abnormal return starts to exhibit a decreasing pattern on day -5, suggesting that information concerning audit qualification begins to be incorporated into share prices five trading days before it is publicly announced. This can be explained either by possible pre-announcement information leakage, or by investors’ early anticipation of the bad news, or both. Any of these three explanations is consistent with our hypothesis that MAOs are associated with negative market returns. This drop bottoms out on day 0 at -2.08 percent, indicating that the public announcement of MAOs is accompanied by the largest share price decrease in a period of 30 trading days surrounding the event. Results using market-index-adjusted abnormal returns (not presented) exhibit a qualitatively similar pattern.

Table 2 presents the descriptive statistics of the clean and the MAO group. On average, firms in the MAO group are significantly \((p < 0.05)\) smaller in size, as evidenced by the mean and median values of total market value \((MV)\). They are also less profitable, as the mean and median \(ROE\) are significantly \((p < 0.01)\) lower for the MAO than for the clean group. Similarly, the MAO group exhibits a significantly \((p < 0.1)\) more negative mean and median change in accounting earnings \((\Delta EPS)\) than the clean group. Consistent with our expectation, both the mean and the median of all four measures of abnormal returns (i.e., market-model abnormal
TABLE 1
Descriptions of qualifications/explanations issued from 1995 to 1997 in the Shanghai Stock Exchange*

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<thead>
<tr>
<th></th>
<th></th>
<th></th>
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<tbody>
<tr>
<td>Number of companies that received qualifications/explanations</td>
<td>19</td>
<td>30</td>
<td>47</td>
</tr>
<tr>
<td>(Qualifications)</td>
<td>(10)</td>
<td>(12)</td>
<td>(20)</td>
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<tr>
<td>Number of CPA firms involved</td>
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<td>16</td>
<td>21</td>
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<tr>
<td>(Big 6)</td>
<td>(0)</td>
<td>(1)</td>
<td>(2)</td>
</tr>
<tr>
<td>Maximum number of qualifications/explanations issued by any CPA firms</td>
<td>4</td>
<td>12</td>
<td>7</td>
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<td>Number of companies that received multiple qualifications/explanations</td>
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<td>11</td>
<td>16</td>
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<tr>
<td>(Maximum qualifications/explanations)</td>
<td>(4)</td>
<td>(4)</td>
<td>(5)</td>
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<tr>
<td>Number of companies with concurrent announcement:</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Litigation</td>
<td>0</td>
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<td>4</td>
</tr>
<tr>
<td>Dividend reduction</td>
<td>9</td>
<td>8</td>
<td>12</td>
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<tr>
<td>Number of companies that received qualifications/explanations consecutively:</td>
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<tr>
<td>For two years</td>
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<td>6</td>
<td>15</td>
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<td>For three years</td>
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<td>n/a</td>
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<td>Reasons for qualifications/explanations:</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>1. GAAP violation</td>
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<td>18</td>
<td>23</td>
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<tr>
<td>2. Consistency violation</td>
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<td>4</td>
<td>5</td>
</tr>
<tr>
<td>3. Scope restriction</td>
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<td>3</td>
<td>6</td>
</tr>
<tr>
<td>4. Others</td>
<td>3</td>
<td>8</td>
<td>8</td>
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</table>

Note:
* Some companies received more than one qualification/explanation.

return (AR) on day 0, cumulative market-model abnormal return (CAR), market-index-adjusted return (MR) on day 0, and market-index-adjusted cumulative abnormal return (CMR) for the MAO group are significantly lower than those for the clean group at conventional levels.

Results and analysis
Table 3 presents correlation analysis results. CAR and CMR are highly correlated, both variables being positively correlated with the two measures of changes in earnings, ΔEPS and ΔROE. Additionally, except for the Pearson correlation with ΔROE, the dummy variable for MAOs (OP) is significantly negatively correlated with measures of abnormal return and measures of changes in earnings at conventional levels. As expected, OP, GAAP, and QUAL are correlated with one another. To mitigate concern about possible multicollinearity when these three variables are
simultaneously tested in one model, we test Hypothesis 1 separately from Hypotheses 2 and 3 by adopting a two-stage testing approach as discussed earlier.

**Main results**
Table 4 presents the regression results for testing all three hypotheses. In all four columns of results from model 3, $\Delta EPS$ and $\Delta ROE$ are positively associated with the two measures of cumulative abnormal return, $CAR$ and $CMR$, at a significance level of 0.05 and 0.01, respectively. The estimated regression coefficient for auditor opinion variable $OP$ (0 for the clean and 1 for the MAO group) is consistently
### TABLE 2
Descriptive statistics

<table>
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<tr>
<th>Variable</th>
<th>OP</th>
<th>Mean</th>
<th>Std. dev.</th>
<th>1%</th>
<th>25%</th>
<th>Median</th>
<th>75%</th>
<th>99%</th>
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<td>1,174.53*</td>
<td>2,240.51</td>
<td>23,776.78</td>
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<td>589.37</td>
<td>1,067.18</td>
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<td>174.03</td>
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<td>0</td>
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<td>-0.02</td>
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Notes:
For t and Wilcoxon test significance, for mean and median difference, respectively:
* Significant at the 0.05 level.
† Significant at the 0.01 level.
‡ Significant at the 0.10 level.

OP = 1 for modified audit opinion (n = 96) and 0 for clean opinion (n = 748).
MV = market value in millions of RMB.
TA = total assets in millions of RMB.
ROE = return on equity (net income/year-end total equity).
AR = market model abnormal return on the day of announcement.
MR = market-index-adjusted abnormal return on the day of announcement.
CAR = market model 3-day (t - 1 to t + 1) cumulative abnormal return.
CMR = market-index-adjusted 3-day (t - 1 to t + 1) cumulative abnormal return.
ΔEPS = change in earning per share (EPS<sub>ij</sub> - EPS<sub>ij-1</sub>) over stock price at t - 1.
ΔROE = change in ROE (ROE<sub>ij</sub> - ROE<sub>ij-1</sub>).
<table>
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<tr>
<th></th>
<th>CAR</th>
<th>CMR</th>
<th>OP</th>
<th>ΔEPS</th>
<th>ΔROE</th>
<th>GAAP</th>
<th>QUAL</th>
<th>LEGAL</th>
<th>DIVID</th>
<th>REPEAT</th>
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<td>(0.027)</td>
<td>(0.000)</td>
<td>(0.000)</td>
<td>(0.225)</td>
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<td>(0.461)</td>
<td>(0.729)</td>
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<td>0.225</td>
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<td>-0.049</td>
<td>-0.045</td>
<td>0.020</td>
<td>0.010</td>
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<td>(0.047)</td>
<td>(0.000)</td>
<td>(0.000)</td>
<td>(0.326)</td>
<td>(0.155)</td>
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<td>(0.555)</td>
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<td>-0.063</td>
<td>-0.011</td>
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<td>0.685</td>
<td>0.215</td>
<td>0.527</td>
<td>0.488</td>
<td></td>
</tr>
<tr>
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<td>(0.011)</td>
<td>(0.017)</td>
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<td>(0.751)</td>
<td>(0.000)</td>
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<td>(0.000)</td>
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<td>(0.000)</td>
<td>(0.000)</td>
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</tr>
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<td>(0.311)</td>
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<td>-0.021</td>
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<td>(0.000)</td>
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<td>0.111</td>
<td>0.311</td>
<td>0.430</td>
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<td></td>
<td>(0.080)</td>
<td>(0.099)</td>
<td>(0.000)</td>
<td>(0.000)</td>
<td>(0.265)</td>
<td>(0.000)</td>
<td>(0.001)</td>
<td>(0.000)</td>
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</tr>
<tr>
<td>LEGAL</td>
<td>-0.045</td>
<td>-0.044</td>
<td>0.215</td>
<td>0.001</td>
<td>-0.370</td>
<td>-0.021</td>
<td>0.111</td>
<td>-0.015</td>
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<tr>
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<td>(0.000)</td>
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<td>(0.000)</td>
<td>(0.551)</td>
<td>(0.001)</td>
<td>(0.673)</td>
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<td>0.009</td>
<td>0.527</td>
<td>0.019</td>
<td>0.015</td>
<td>0.368</td>
<td>0.311</td>
<td>-0.015</td>
<td>0.121</td>
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<td>(0.800)</td>
<td>(0.000)</td>
<td>(0.578)</td>
<td>(0.660)</td>
<td>(0.000)</td>
<td>(0.000)</td>
<td>(0.000)</td>
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<tr>
<td>REPEAT</td>
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<td>-0.015</td>
<td>0.488</td>
<td>-0.024</td>
<td>-0.206</td>
<td>0.403</td>
<td>0.430</td>
<td>0.169</td>
<td>0.121</td>
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<td>(0.733)</td>
<td>(0.662)</td>
<td>(0.000)</td>
<td>(0.491)</td>
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<td>(0.000)</td>
<td>(0.000)</td>
<td>(0.001)</td>
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</tr>
</tbody>
</table>

(The table is continued on the next page.)
Notes:

Pearson (Spearman) correlation in the lower (upper) triangle.

\( n = 844 \) in all cells.

\( OP = 1 \) for modified audit opinion and 0 otherwise.

\( CAR = 3\text{-day} (t - 1 \text{ to } t + 1) \text{ cumulative market model abnormal return.} \)

\( \Delta ROE = \text{change in } \text{ROE}(\text{ROE}_{ij} - \text{ROE}_{ij - 1}). \)

\( GAAP = 1 \) for GAAP violation and 0 otherwise.

\( QUAL = 1 \) for qualified opinion and 0 otherwise.

\( LEGAL = 1 \) for MAOs with legal contingencies and 0 otherwise.

\( CMR = 3\text{-day} (t - 1 \text{ to } t + 1) \text{ cumulative market-index-adjusted abnormal return.} \)

\( \Delta EPS = \text{change in earning per share} (\text{EPS}_{ij} - \text{EPS}_{ij - 1}) \text{ over stock price at } t - 1. \)

\( DIVID = 1 \) for MAOs with dividend decreases and 0 otherwise.

\( REPEAT = 1 \) for noninitial MAOs and 0 otherwise.

negative at conventional significance levels. These results support Hypothesis 1, that investors react negatively to the announcement of MAOs. It should be noted that this negative reaction is observed after controlling for effects of other concurrent announcements, including information contained in accounting profit. Further discussion about these results is provided in a later section.

Results of model 4 show that the estimated regression coefficients for \( GAAP \) and \( QUAL \) are not significant. Therefore, Hypotheses 2 and 3 are not supported. We cannot draw unambiguous conclusions based on these results regarding whether market reactions differ between GAAP-related and non-GAAP-related MAOs, and between qualified opinions and unqualified opinions with explanatory notes, because of the high correlation between variables \( OP, GAAP, \) and \( QUAL \) (Table 3). However, these results are consistent with the general belief in China that unqualified opinions with explanatory notes are quasi qualifications, and that auditors often employ them in place of qualified opinions to avoid losing their clients.\(^{13}\)

The interaction between \( OP \) and \( \Delta EPS \) is negative but not significant, while the interaction between \( OP \) and \( \Delta ROE \) is significantly \((p < 0.01)\) negative. Other than year dummy for 1996, all control variables are not significant in both models.

By-year regression results

A by-year regression was conducted to examine whether the market reaction to audit qualification changed over time. Both ordinary least squares (OLS) and bootstrap results are presented in Table 5, but our discussion focuses on bootstrap results because the sample size for the MAO group \((n = 19)\) is small for the 1995 fiscal year. We generate from the original sample 1,000 full-size \((n = 179, 290, \text{ and } 375, \text{ for } 1995, 1996, \text{ and } 1997, \text{ respectively})\) random samples with replacement, and perform as many OLS regression tests. The null hypothesis that the parameter is not different from zero is rejected at the \( p < 0.01 \) level (two-tailed) if zero lies
TABLE 4
Regression results obtained by using whole sample (t-values are in parentheses)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Model 3 Dependent = CAR</th>
<th>Model 3 Dependent = CMR</th>
<th>Model 4 Dependent = CAR</th>
<th>Model 4 Dependent = CMR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>0.001 (0.332) 0.003 (0.625)</td>
<td>0.001 (0.146) 0.002 (0.605)</td>
<td>0.002 (0.146) 0.002 (0.605)</td>
<td>0.003 (0.605)</td>
</tr>
<tr>
<td>YR96</td>
<td>-0.024* -0.022* -0.025* -0.022* (3.694)</td>
<td>(3.370) (3.802) (3.447) (3.661)</td>
<td>(3.339) (3.768) (3.145)</td>
<td>(3.339) (3.768) (3.145)</td>
</tr>
<tr>
<td>YR97</td>
<td>-0.133 (0.332) -0.116 (0.371)</td>
<td>(0.115) (0.347) (0.096) (0.389)</td>
<td>(0.115) (0.347) (0.096) (0.389)</td>
<td>(0.115) (0.347) (0.096) (0.389)</td>
</tr>
<tr>
<td>OP</td>
<td>-0.031* -0.039* -0.028* -0.035* (2.885)</td>
<td>(3.760) (2.546) (3.375) (2.123)</td>
<td>(2.791) (1.999) (2.556)</td>
<td>(2.791) (1.999) (2.556)</td>
</tr>
<tr>
<td>AROE</td>
<td>0.203* (2.371)</td>
<td>(2.366)</td>
<td>(2.371)</td>
<td>(2.366)</td>
</tr>
<tr>
<td>ΔEPS</td>
<td>0.218* (2.554)</td>
<td>(2.549)</td>
<td>(2.554)</td>
<td>(2.549)</td>
</tr>
<tr>
<td>OP*ΔEPS</td>
<td>-0.055 (0.371)</td>
<td>(0.548)</td>
<td>(0.371)</td>
<td>(0.548)</td>
</tr>
<tr>
<td>ΔAROE</td>
<td>0.100* (4.01)</td>
<td>(4.145)</td>
<td>(4.01)</td>
<td>(4.145)</td>
</tr>
<tr>
<td>LEGAL</td>
<td>-0.023 -0.035 -0.025 -0.037</td>
<td>-0.020 -0.031</td>
<td>-0.020 -0.031</td>
<td>-0.021 -0.032</td>
</tr>
<tr>
<td>DIVID</td>
<td>0.029* 0.033* 0.024 0.028* (1.832)</td>
<td>(2.135) (1.521) (1.803)</td>
<td>(1.846) (2.148) (1.540)</td>
<td>(1.846) (2.148) (1.540)</td>
</tr>
<tr>
<td>REPEAT</td>
<td>0.020 0.018 0.016 0.013</td>
<td>(1.220) (1.089) (0.959) (0.824)</td>
<td>(1.187) (1.054) (0.930) (0.790)</td>
<td>(1.187) (1.054) (0.930) (0.790)</td>
</tr>
<tr>
<td>GAAP</td>
<td>0.005 0.007 0.006 0.008</td>
<td>(0.348) (0.449) (0.412) (0.511)</td>
<td>(0.348) (0.449) (0.412) (0.511)</td>
<td></td>
</tr>
<tr>
<td>QUAL</td>
<td>-0.001 -0.002 -0.002 -0.002</td>
<td>(-0.101) (-0.139)</td>
<td>(-0.101) (-0.139)</td>
<td>(-0.101) (-0.139)</td>
</tr>
<tr>
<td>Adj. R²</td>
<td>0.039 0.052 0.039 0.051</td>
<td>0.037 0.050</td>
<td>0.037 0.050</td>
<td>0.049 0.050</td>
</tr>
</tbody>
</table>

Notes:
* Significant at the 0.01 level (two-tailed).
† Significant at the 0.05 level (two-tailed).
‡ Significant at the 0.1 level (two-tailed).

OP*ΔEPS = interaction term of OP and ΔEPS.
OP*ΔAROE = interaction term of OP and ΔAROE.
YR96 = 1 if year equals 1996 and 0 otherwise.
YR97 = 1 if year equals 1997 and 0 otherwise.
All other variables are as defined in Table 3.
outside the interval between the 0.5 and 99.5 percentiles of the observed distribution of these 1,000 sets of estimated coefficients.

Table 5 shows that the estimated regression coefficient for $OP$ is not significant for the 1995 fiscal year but is significantly negative ($p < 0.05$) for both 1996 and 1997. It also shows that the coefficient for $OP*\Delta EPS$ is positive but not significant for 1995, negative but not significant for 1996, and significantly ($p < 0.05$) negative for 1997. These results suggest that (1) investors did not react negatively to MAOs until 1996 — the second year they dealt with them — and (2) it took investors in this market three years to form a consensus belief about the implication of MAOs on the informativeness of earnings, as indicated by changes in coefficients for $OP*\Delta EPS$.

**Sensitivity test results**

Employing changes in earnings as a proxy for the earnings surprise component in model 3 implies that investors’ expectations of earnings follow a random walk pattern. A lack of sufficient time-series data prevented us from using auto-regressive techniques, since a substantial portion of our sample firms became listed only after 1993. An alternative measure, the earnings and lagged-earnings approach (Biddle, Seow, and Siegel 1995), is employed to incorporate earnings surprise in the market. This approach encompasses a range of alternative specifications for market expectations, including random walk, ARIMA, constant stock price multiple, and combined “levels and changes” specifications (Biddle et al. 1995, 8). The results in panel A of Table 6 show that $OP$ is still significantly negative, indicating that our main results concerning market reaction to MAOs are robust with respect to variations in proxies for changes in accounting profit.

Panel B of Table 6 presents the results of sensitivity tests on event-window specification. A possible effect of market inefficiency on investors’ reaction to the announcement of MAOs is that this information may not be promptly incorporated into the share price — instead, there may be a delayed market reaction. If this is the case, we should observe a delayed market reaction. To examine this possibility, we estimate a simplified version of model 3, while varying the three-day event window from day −7 to day 11. Experimental variables related to Hypotheses 2 and 3 and control variables are omitted from this simplified model to allow maximum delayed effect on $OP$. Results in panel B of Table 6 suggest that there may be a leaking of information about MAOs before they are publicly announced. However, the results do not support the possibility of a delayed market reaction. For the post-announcement period (day 2 to day 11), the only significantly ($p < 0.05$) negative estimate is for the isolated event window between days 5 and 7. Referring to Table 4, it is obvious that the most consistently negative results are observed during the announcement period, days −1 to 1. Together, Tables 4 and 6 show that MAOs are associated with a promptly negative market-valuation effect in China.

One possible alternative explanation for observing this consistently negative market reaction to the announcement of MAOs is that the clean group ($OP = 0$) contains concurrent announcements of other good news, while the MAO group ($OP = 1$) has concurrent announcements of other bad news. Since dividend
TABLE 5
By-year regression results* (t-values are in parentheses)

<table>
<thead>
<tr>
<th>Year</th>
<th>Model</th>
<th>n</th>
<th>Intercept</th>
<th>OP</th>
<th>ΔEPS</th>
<th>OP*ΔEPS</th>
<th>Adjusted R²</th>
<th>F-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>95</td>
<td>OLS</td>
<td>179</td>
<td>-0.004</td>
<td>-0.009</td>
<td>-0.006</td>
<td>0.344</td>
<td>-0.003</td>
<td>0.837</td>
</tr>
<tr>
<td></td>
<td>Bootstrap</td>
<td>1,000</td>
<td>(-0.659)</td>
<td>(-0.533)</td>
<td>(-0.062)</td>
<td>(1.136)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>96</td>
<td>OLS</td>
<td>290</td>
<td>-0.022†</td>
<td>-0.018</td>
<td>0.571†</td>
<td>-0.149</td>
<td>0.036</td>
<td>4.573‡</td>
</tr>
<tr>
<td></td>
<td>Bootstrap</td>
<td>1,000</td>
<td>(-4.583)†</td>
<td>(-1.057)‡</td>
<td>(2.239)†</td>
<td>(-0.433)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>97</td>
<td>OLS</td>
<td>375</td>
<td>0.002</td>
<td>-0.018§</td>
<td>0.719‡</td>
<td>-0.854‡</td>
<td>0.039</td>
<td>6.027‡</td>
</tr>
<tr>
<td></td>
<td>Bootstrap</td>
<td>1,000</td>
<td>(0.500)</td>
<td>(-1.848)§</td>
<td>(3.896)‡</td>
<td>(-3.576)†</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Notes:
All variables are as defined in Table 4.
Bootstrap results are obtained by using 1,000 iterations
* Significant at the 0.01 level (two-tailed).
† Significant at the 0.05 level (two-tailed).
‡ Significant at the 0.1 level (two-tailed).
§ Significant at the 0.1 level (two-tailed).

Increases are the most common type of good news for listed Chinese companies during our sample period, we exclude from the clean group observations with such concurrent announcements, and from the MAO group observations with concurrent announcements of other bad news (litigation, dividend decreases, repeated MAOs). This practice results in a reduced sample of 629 (n = 586 for OP = 0, and n = 43 for OP = 1). We then test model 3 excluding variables GAAP, LEGAL, DIVID, and REPEAT, and the results, as summarized in panel C of Table 6, are not qualitatively different from those in Table 4.

We also perform bootstrap regression tests for both models 3 and 4, and the results (not reported) are not qualitatively different from those in Table 4. Though employing dummy variables is an acceptable approach for controlling fixed effects in panel data (Cheng 1986), we examine the sensitivity of our main results with respect to correlation between years by randomly selecting only one observation from each company to test a reduced version of model 3 where all dichotomous control variables, except year dummies, are excluded. The results (not reported) are not qualitatively different from those reported in Table 4. In addition, when we plot the error terms of all four versions of model 3 between consecutive years, there is no observable pattern. To summarize, our main results regarding investors’ negative reaction to the announcement of MAOs are robust with respect to variation in variable measurement, event-window specification, and control for concurrent announcements of other news.
### TABLE 6
Sensitivity test results (t-values are in parentheses)

**Panel A: Using current and lag EPS for change in accounting profit (n = 844)**

<table>
<thead>
<tr>
<th>Dependent</th>
<th>Intercept</th>
<th>OP</th>
<th>EPS</th>
<th>LAG EPS</th>
<th>OP*EPS</th>
<th>LEGAL</th>
<th>DIVID</th>
<th>REPEAT</th>
<th>YR96</th>
<th>YR97</th>
<th>Adj. R²</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAR</td>
<td>-0.013*</td>
<td>-0.028†</td>
<td>0.187‡</td>
<td>-0.014</td>
<td>0.060</td>
<td>-0.019</td>
<td>0.026</td>
<td>0.029‡</td>
<td>-0.016*</td>
<td>0.007</td>
<td>0.044</td>
</tr>
<tr>
<td>CMR</td>
<td>-0.012‡</td>
<td>-0.023*</td>
<td>0.183‡</td>
<td>0.001</td>
<td>0.028</td>
<td>-0.021</td>
<td>0.021</td>
<td>0.023</td>
<td>-0.017*</td>
<td>0.008</td>
<td>0.043</td>
</tr>
</tbody>
</table>

**Panel B: Sensitivity to event-window specification (n = 844)**

<table>
<thead>
<tr>
<th>Event window</th>
<th>OP</th>
<th>adj. R²</th>
</tr>
</thead>
<tbody>
<tr>
<td>-7 to -5</td>
<td>-0.003</td>
<td>-0.009‡</td>
</tr>
<tr>
<td>-6 to -4</td>
<td>-0.009‡</td>
<td>-0.022†</td>
</tr>
<tr>
<td>-5 to -3</td>
<td>-0.001</td>
<td>0.000</td>
</tr>
<tr>
<td>-4 to -2</td>
<td>-0.011*</td>
<td>-0.005</td>
</tr>
<tr>
<td>2 to 4</td>
<td>-0.003</td>
<td>0.009</td>
</tr>
<tr>
<td>3 to 5</td>
<td>0.000</td>
<td>0.008</td>
</tr>
<tr>
<td>4 to 6</td>
<td>-0.011*</td>
<td>0.000</td>
</tr>
<tr>
<td>5 to 7</td>
<td>-0.003</td>
<td>0.002</td>
</tr>
<tr>
<td>6 to 8</td>
<td>0.009</td>
<td>0.010</td>
</tr>
<tr>
<td>7 to 9</td>
<td>0.000</td>
<td>0.000</td>
</tr>
<tr>
<td>8 to 10</td>
<td>0.009</td>
<td>0.000</td>
</tr>
<tr>
<td>9 to 11</td>
<td>0.000</td>
<td>0.000</td>
</tr>
</tbody>
</table>

**Panel C: Without concurrent announcements (n = 586 for OP = 0 and n = 49 for OP = 1)**

<table>
<thead>
<tr>
<th>Dependent</th>
<th>Intercept</th>
<th>OP</th>
<th>ΔEPS</th>
<th>OP±ΔEPS</th>
<th>ΔROE</th>
<th>OP±ΔROE</th>
<th>YR96</th>
<th>YR97</th>
<th>Adj. R²</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAR</td>
<td>0.005</td>
<td>-0.026*</td>
<td>0.292†</td>
<td>0.190</td>
<td>0.088‡</td>
<td>0.060</td>
<td>-0.017*</td>
<td>0.002</td>
<td>0.058</td>
</tr>
<tr>
<td></td>
<td>(0.717)</td>
<td>(-2.212)</td>
<td>(2.692)</td>
<td>(0.861)</td>
<td>(3.041)</td>
<td>(1.003)</td>
<td>(-2.211)</td>
<td>(0.341)</td>
<td></td>
</tr>
<tr>
<td>CMR</td>
<td>0.007</td>
<td>-0.024*</td>
<td>0.325†</td>
<td>0.140</td>
<td>0.094†</td>
<td>0.052</td>
<td>-0.018*</td>
<td>0.002</td>
<td>0.057</td>
</tr>
<tr>
<td></td>
<td>(1.142)</td>
<td>(-2.008)</td>
<td>(-2.983)</td>
<td>(0.633)</td>
<td>(3.240)</td>
<td>(0.862)</td>
<td>(-2.320)</td>
<td>(0.251)</td>
<td></td>
</tr>
</tbody>
</table>

(The table is continued on the next page.)
Notes:
* Significant at the 0.05 level (two-tailed).
† Significant at the 0.01 level (two-tailed).
‡ Significant at the 0.1 level (two-tailed).
§ The model for panel B is $\text{CAR}_{ij} = b_0 + b_1 \text{OP}_{ij} + b_2 \Delta \text{EPS}_{ij} + b_3 \text{OP}_{ij} \ast \Delta \text{EPS}_{ij}$
   $\quad + b_4 \text{YR}_96 + b_5 \text{YR}_97 + E_{ij}$. For event windows before announcement date, $\Delta \text{EPS}$
   and $\Delta \text{EPS}_\text{OP}$ are not included in the model.

$\text{EPS} = \text{earnings per share scaled by beginning price.}$

$Lag \text{ EPS} = \text{last year's earnings per share scaled by beginning price.}$

$\text{OP} \ast \text{EPS} = \text{interaction term between EPS and OP.}$

All other variables are as defined in Table 4.

Discussion of results
The Chinese investors' strong negative response to MAOs underscores their important signaling effect in an emerging market. However, questions may arise as to how the investors, who did not have prior exposure to MAOs, could react to them so consistently in an incomplete and sometimes irregular market.

The significant market response may be first attributed to the high threshold for issuing MAOs in China. Chen et al. (2000) report that, on average, the suggested adjustments by auditors amount to nearly 80 percent of reported operating income and 70 percent of reported net income, in a group of 47 cases where the modified amount can be identified from audit reports.

A lack of competing information sources in the Chinese market may also explain why announcements of initial MAOs attract so much attention from investors. The development of the financial analysts' profession is still in its very early stages in China — analysis and forecasts of future earnings are not publicly available. To most Chinese investors, annual financial reports containing the auditors' opinions are the only formal source of financial information for their investment decisions. The importance of the announcements of auditors' opinions is also reflected in the extensive media coverage of qualification announcements and the widespread follow-up discussions of the implications of those qualifications that are not found in other markets.

To further explore the underlying reasons for this immediate significant market reaction, we interviewed market participants, including auditors in CPA firms, staff members of the SSE, and securities analysts in investment companies, to learn about their individual views on MAOs (Keller 1983). The evidence we collected revealed several confounding factors. First, due to a long tradition of secrecy in accounting practices, frequently discovered earnings manipulations, and a general lack of confidence in corporate accountants' competence and professionalism, Chinese investors hold a suspicion that reported accounting earnings are likely to be inflated. Given their lack of alternative sources of financial information, MAOs
may confirm investors' deeply rooted suspicions about companies' financial statements, which in turn may predispose their reaction to MAOs in their investment decisions.

Second, audit qualification in China may be considered more a "shock" than an attestation of the information content of the financial statements. In fact, most accounting practices causing MAOs existed before 1995. For example, Yanzhong Enterprises Co. Ltd., the first company to receive a qualified opinion in China, included investment income in its operating income in prior years without any problems. The sudden appearance of MAOs based on familiar practices is likely to be taken by the market as a new signal of further deterioration in a company's operating performance or financial position. In this case, investors would be reacting more to the signal itself rather than to the underlying financial fundamentals. This explains why we observe a more consistently negative regression coefficient on audit opinion than on its interaction term with accounting earnings.

A third confounding factor is that MAOs were often mistaken for an indication of possible corporate bankruptcy. For instance, the general manager of Da Hua CPA (the firm that issued the first audit qualification in China) received many phone calls after the announcement of the qualified opinion inquiring whether it was a negative going-concern opinion. Given their lack of prior experience, Chinese investors might believe that firms receiving MAOs have a higher likelihood of bankruptcy, thus leading to the consistently negative market reaction observed in this study.

However, these confounding factors did not detract from the fact that in the Chinese market the initial MAOs had a significant impact on investors' pricing decisions. The evidence from the SSE shows that MAOs affect investors' pricing decisions and that independent auditing has an economic role to play in an emerging market.

5. Conclusion

This study examines the market reaction to the initial announcement of MAOs in the SSE over a three-year period (1995–97) and provides empirical evidence of the economic impact of auditors' reports in an emerging market. After controlling for the effect of changes in accounting earnings and other concurrent announcements, we find that (1) MAOs are associated with significantly negative market returns, and investors did not show a negative market reaction to MAOs until the second year; (2) a difference in market reaction between GAAP- and non-GAAP-related MAOs is not observed; and (3) a difference in market reaction between qualified opinion and unqualified opinion with explanatory notes is not observed either. Sensitivity tests show that our main results concerning negative market reaction to MAOs are robust. Based on the statistical significance of the test results, we conclude that Chinese investors have arrived at a convergent interpretation of MAOs in their investment decisions and, therefore, that auditor reports have value relevance and that independent auditing as an institution plays an important role in the emerging Chinese stock market.
Appendix

Examples of GAAP and non-GAAP opinions issued

<table>
<thead>
<tr>
<th>GAAP violation</th>
<th>Non-GAAP opinions</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Qualified opinion</strong></td>
<td>24 regional sales branches are not audited; as a result, inventory and accounts receivable amounting to RMB 75 million and 31 million, respectively, cannot be confirmed.</td>
</tr>
<tr>
<td>Investment income is recorded as a negative finance expense, and thus is included in operating income.</td>
<td>The depreciation method changed from straight-line to usage.</td>
</tr>
<tr>
<td>Loss of inventory and accounts receivable amounting to RMB 493 million remained in the balance sheet as assets.</td>
<td>Two overseas subsidiaries are not audited.</td>
</tr>
<tr>
<td><strong>Explanatory notes</strong></td>
<td>The method of allowance for bad debt is changed.</td>
</tr>
<tr>
<td>Standard cost variances amounting to RMB 24 million are not allocated to cost of goods sold.</td>
<td>Two overseas subsidiaries are not audited.</td>
</tr>
<tr>
<td>Three subsidiaries in which the company has less than 50% ownership, but still exercises control, reported net losses amounting to RMB 103 million. The company used the cost method to avoid reporting losses.</td>
<td>The method of allowance for bad debt is changed.</td>
</tr>
</tbody>
</table>

Endnotes

1. Unqualified opinions with explanatory notes are issued in the United States and known as “emphasis of a matter”. However, there is no evidence suggesting that these explanatory notes are used as quasi qualifications, as is the case in China.

2. For example, Dodd et al. (1984) suggested that in the United States there are four possible dates that the market could first learn of the qualification: (1) when annual earnings are first announced publicly, (2) when the annual report is made publicly available, (3) when the 10-K is made publicly available, or (4) when the firm issues a press release describing the qualification.

3. In a market investigation, 81.94% percent of investors surveyed believed that reported earnings could not be trusted (Securities Times May 29, 1999). The vice minister of finance in charge of accounting affairs recently blamed auditors for colluding with their clients in reporting inflated earnings (Jiefang Daily September 21, 1999). The poor reporting quality led the Chinese government to amend the Accounting Law in 1999, which resulted in more severe penalties for mispresentation of financial statements.
4. While Dopuch et al. (1986) and Louderd et al. (1992) focused on "subject to" qualifications only, Choi and Jeter (1992) compared the effects of discretionary consistency qualifications on earnings response coefficients with those of "subject to" qualifications.

5. For example, the penalties for violation of the new auditing standards include revocation of the CPA firm's license to audit listed companies.

6. For example, Chinese Company Law makes it very clear that the board of directors has the ultimate power in making business decisions. The CSRC recently reaffirmed that all listed companies must be cut off from their founding SOEs and that no government agencies or SOEs are allowed to interfere in business decisions made by listed companies (Securities Times April 3, 1999).

7. For example, the Chinese Securities News titled one of its special commentary articles as "Accountants Started to Speak Out Their Concerns" to highlight the importance of the first qualified opinion (Chinese Securities News March 15, 1996). Similar articles were also published in the Shanghai Securities News and Securities Times, the other two major securities newspapers in China, in February and March 1996.

8. Auditors' reports issued for reasons other than inconsistency and scope limitations are treated as GAAP violations in this study.


10. We are grateful to an anonymous reviewer for suggesting this characterization.

11. The TEJ data base provides both market and financial data on Chinese-listed companies issuing A-, B-, and H-shares. At the present time, it is the only machine-readable commercial Chinese data base available to the authors.

12. A-shares are the only shares that domestic Chinese investors can buy and trade. Most listed companies on the SSE issue A-shares only.

13. We find no significant difference in CAR, CMR, ΔEPS, and ΔROE between the GAAP and non-GAAP group, or between the qualified and explanatory groups using t-tests and Wilcoxon tests.

14. Financial statements were regarded as classified government documents before the economic reform and are still being kept secret for most SOEs.

References


