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Market Reaction to Seasoned Offerings in China

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Abstract: This study examines stock market reaction to the announcement of various forms of seasoned issues in China. Our empirical evidence demonstrates that market reactions differ in ways that suggest a difference between management's internal assessment and the market's assessment of the stock price. The market responds unfavourably to the announcement, notably in the case of rights issues and also with regard to open offers. Private placements experience an unfavourable pre-announcement reaction, which contrasts with the favourable reaction after the event. Convertible bond issues generate positive excess returns consistent with the market's confidence that they can help to align management and shareholders' interests. Further investigation shows that market reaction is related to factors specific to the issuer and issue by reference to the period immediately surrounding the issue. Specifically, ownership concentration, agency matters connected with equity offerings, investor protection connected with fund allocation and security pricing, and the influence of powerful moneyed interests together provide an instructive insight into market reaction. Institutional inefficiency pertaining to underwriting, auditing, analysts' forecasts and credit ratings are found to have a weak association with market price, consistent with due public scepticism concerning management and their gatekeepers.

Keywords: seasoned issues, seasoned equity offerings, convertible bond issues, market reaction, information, information asymmetry, agency costs, market infrastructure, China

1. INTRODUCTION

Previous studies have examined the firm's financing decisions and the corresponding market price movements. Differences in price behaviour appear to depend mainly on the available information pertaining to forms of financing and the perceptions of

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the market with respect to the firm's financing decisions (Myers and Majluf, 1984). Within the body of theory, several studies have considered the market implications of securities issues to new as opposed to existing investors, and also the types of issues that are subject to different degrees of regulatory discipline, obligations and incentives (Baker and Wurgler, 2000; Carlson et al., 2006; DeAngelo et al., 2010; Silva and Bilinski, 2015; and Hovakimian and Hu, 2016).

Information asymmetries impinge forcefully in terms of the signals conveyed when securities are issued. The theory of information asymmetries posits that if managers seek to maximize their existing shareholders' wealth, shares will be offered to the existing owners only when the management believe that the firm's equity is undervalued (Myers and Majluf, 1984; and Jenter et al., 2011). The price pressure hypothesis suggests that an unexpected equity issue may also drive down the price by signalling that the firm must make up for a shortfall in unobservable cash flow from operations (Fama and French, 2006; Slovin et al., 2000; and Intintoli and Kahle, 2010). The wealth transfer hypothesis proposes that an unexpected issue of equity reduces the risk of the firm's outstanding debt leading to a wealth transfer from shareholders to bondholders with a net value loss for shareholders (Masulis, 1983; and Elliott et al., 2009). The above foci of discussion have helped to generate interest in the comparative market reaction to the different forms of security issuance (e.g., Barnes and Walker, 2006).

In the case of open offers, a management which favours existing shareholders over new potential shareholders has an incentive to issue equity when shares are overvalued, especially when the firm goes public in a hot market (Gomes, 2001; and Alti, 2006). Issuing new shares increases the number of outsider shares, diluting the ownership stake and aggravating the potential conflict between managers and outside investors, and thereby constraining firm value accordingly (Ginglinger et al., 2012). These impacts are less likely to occur if ownership is already highly concentrated (Slovin et al., 2000; and Holderness, 2009).

In contrast to open offers, private placements are typically offered to a group of sophisticated investors whose certification amounts to a positive signal by way of a quality seal (Wruck, 1989; and Chakraborty and Gantchev, 2013), mitigating undervaluation problems, and averting the negative signals of public offerings (Hertzel and Smith, 1993; and Wang, 2012). They may, however, be vulnerable to agency problems associated with ownership concentration especially when ownership is already low (Wruck, 1989).

In the case of rights issues, take-up can guard against ownership dilution or wealth transfer to new shareholders. Hence, rights issues circumvent the agency costs associated with open offerings by mitigating the impact of asymmetric information problems and lowering transaction costs (Miller and Rock, 1985; Attig et al., 2006; and Fama and French, 2006).

Unlike the securities discussed above, convertible bonds entail contractual disciplines and constraints. These can serve to allay market concerns that arise in respect of other forms of issuance, militating against asset substitution and adverse selection problems associated with plain equity sales (Myers and Majluf, 1984; and Stein, 1992).

Empirical evidence on price effects of equity issues was seminally analysed by Loughran and Ritter (1995) and Spiess and Affleck-Graves (1995). Subsequently, a number of other studies have extensively examined mature markets such as the US (Gao and Ritter, 2010; Henry and Koski, 2010; Alti and Sulaeman, 2012; and Bradley

and Yuan, 2013), the UK (Slovin et al., 2000; Capstaff and Fletcher, 2011; Iqbal et al., 2013; Armitage et al., 2014; and Silva and Bilinski, 2015), France (Ginglinger et al., 2012), Spain (Martín-Ugedo, 2003; and Alvarez and Gonzalez, 2005), Japan (Suzuki and Yamada, 2012), Australia (Lamberto and Rath, 2010), and others. Most of the recent studies in this area of research have been encouraged to a large extent by the increased interest in equity issues worldwide. It has been argued that reduced transaction costs and the globalisation of finance have encouraged firms to acquire equity finance in global financial markets (Kim and Weisbach, 2008). Research interest has been further stimulated by recent periods of the marked unpopularity of equity issues. This has occurred notably since 2000 both in the US and in Europe due, inter alia, to a tendency to favour merger as a means of rapid growth, and also because of low market valuation of companies after the collapse of the technology bubble and an increasingly onerous burden of regulation (Craig et al., 2010; and Gao et al., 2013).

In recent years, security issuance in emerging markets has also attracted research attention (e.g., La Porta et al., 1999; Chen and Yuan, 2004; Cheng et al., 2006; Ahmad-Zaluki et al., 2007; Chen and Wang, 2007; and Luo et al., 2010). Findings differ distinctly across markets as well as overall between emerging and mature settings, especially when marked differences exist in respect of institutional and operational arrangements. These differences engender issues based on reputation, relationships and public policy in supporting financing channels particularly when market maturity is an aspiration (Allen et al., 2005). China is a notable example here, due to its global importance and the evolving nature of its capital markets.

The salient characteristics of security issuance in China are consonant with the country's evolving social, economic and market status as well as the pervading presence of powerful influential groups. The research takes due cognisance of important cultural influences which impinge on market mechanisms. All note agency problems consistent with an underdeveloped institutional infrastructure that is deficient in safeguards against informational asymmetries leading to security mispricing, the deliberate distortion of earnings, and the manipulation of the dividend profile in the period immediately surrounding security offerings. These abuses can operate to the detriment of minority investors and other outsiders. For instance, in the case of rights issues and open offers, the influence of agency costs associated with state ownership comes to bear. In the case of private placements, there are clearly visible signs of both manipulation of issue price in the run-up to the issue by the dominant controlling shareholders and also a propensity to post-issue overinvestment (e.g., Yu et al., 2006).

While acknowledging the progress of the literature on security issuance, there remains scope for a further investigation and comparison of the distinct influences that come into play with different methods of issuance. Early work typically focuses on a single method of issuance for predicting market movements following the announcement without exploring the relative implications of a range of issuance methods for investors. A number of studies explore specific types of issue, for instance open offers (e.g., Slovin et al., 2000; and Barnes and Walker, 2006), rights offers (e.g., Martín-Ugedo, 2003), private placements (e.g., Barclay et al., 2007) and convertible bonds (e.g., de Jong et al., 2011; and Lewis and Verwijmeren, 2014). However, these fall short of offering a comparative perspective of the range of influence on market price exercised by the different methods of issuance. Control and discipline matters should be taken into account, including management's *ex-ante* issue motives and decisions associated with different methods of issuance.

Earlier studies tend to confine themselves to a somewhat limited set of determinants. They give insufficient weight, if any, to the characteristics and perspectives of an issue, issuer and investors (e.g., Cronqvist and Nilsson, 2005; and Rantapuska and Knupfer, 2008). It is necessary to acquiesce in a wide and inter-connected range of factors, paying due attention to the nature of the issue itself, the financial characteristics and outlook of the issuer, and the features specific to each type of security issuance.

Our analytic design differs significantly from previous studies. We provide fresh insights by extending previous work concerned with market price movement surrounding a single type of seasoned issuance to an examination of all four types of seasoned issuance in China. Through our study, we seek to produce insights into an emerging market's progress towards greater efficiency and completeness as well as into factors that both advance and retard such progress. With respect to the context of seasoned issuance, we consider the extent to which the activities of influential market monitors and financial infrastructure builders are reflected in market reaction.

The above account of the scope of our work leads to the following formal research questions: (1) how does the market react to the different forms of seasoned issues?; and (2) which factors most powerfully explain the reactions we observe?

In approaching our research questions, we firstly examine how the market reacts across the range of methods of seasoned issuance and their potential determinants by reference to 1,810 seasoned issues in China from 1991 to 2010 inclusive. We explore the relative impact of open offers, rights issues, private placements and convertible bond issues, and compare the demonstrated preferences of new as opposed to existing investors. We also compare distinguishing influences that have a bearing on individual features of different forms of issuance which are subject to more as opposed to less regulatory discipline, obligations and incentives. Our comparison enables us to observe the play of agency influences in a marketplace whose imperfections provide fertile soil for such influences.

Secondly, our study examines a range of factors that explore *ex-ante* metrics determining the market's perception about the value of the new issue, the issue-related features driving idiosyncratic market reactions surrounding the announcement period, and those security-specific characteristics associated with individual forms of issuance which promise to illuminate operational arrangements, including management and monitoring matters.

Thirdly, we elected to study security issuance with reference to China. This decision was prompted by the fact that China is an emerging economy of global importance whose financial markets are permeated with a particularly large, complex and intriguing body of informational asymmetry problems. Publicly listed firms in China have long experienced the consequences of dual classes of shareholding, unclearly defined property rights, and a lack of legal protection of minority shareholders' rights. Participants in the market include rent-seeking local governments, predatory corporations and dominant shareholders intent on pulling in money and misallocating funds *ex post* by various devices, notably in the form of related-party transactions directed at transferring wealth from minority shareholders to the dominant shareholders and the parent company (Aharony et al., 2010; and Liu et al., 2013). Further, disclosure is far less comprehensive in China than in more mature markets. The resulting challenge extends to many aspects of financing. For instance, Dedman et al. (2015) in their study of dividend policy well recognise the contentious problems presented by China's market, with its limited transparency.

Our findings give us four fresh insights. First, we observe a negative reaction to both open offers and notably rights issues when the issue is announced. Plain equity financing entails adverse-selection costs associated with the perceived unreliability of the underlying assets. Further, contrary to the certification argument, the unfavourable reaction received in the case of private placements in the pre-announcement period is consistent with outside minorities' anticipation of exploitation in the form of price manipulation by the dominant controlling shareholders. In the post-announcement period, the market is reassured by the strategic deployment of assets or cash by targeted investors. In the convertible bond case, the market's reaction is consistent with its opinion that a convertible can align management and shareholders' interests especially when backed by powerful regulation. Second, we find that *ex-ante* measures which reflect the market's pre-announcement predictions of the value of the new issue – manifested in growth opportunities, price run-up and dividend distribution policy – feature significantly among the factors which are specific to the issuer and the type of security issuance. Within this overall set of findings, ownership concentration causes value losses in the offerings of equity where agency problems are predominant, but such problems impinge less in the case of convertible bond issues, due to both inherent disciplines and stringent regulation of convertible bonds in China. Third, within the market mechanisms related to the issue, including underwriting, auditing and analysts, there arise agency matters in the period surrounding the announcement. Weak protection of shareholders appears in the form of security mispricing and market inefficiency in the provision of information to shareholders. These factors powerfully explain the different market reactions. We find particularly instructive evidence of the significance of the intended use of issue proceeds, most notably when these proceeds are committed to high-tech projects or projects which otherwise increase the real asset base. Fourth, with respect to features specific to the type of security, our study reveals that investors are vulnerable to misbehaviour associated with exploitative renunciations in the case of rights issues, price manipulation by controlling shareholders in the case of private placements, and ratings with limited signalling value in the case of convertible bonds.

We contribute to the literature in two respects. By addressing comparatively the range of methods of seasoned issues, we identify how far distinct features of individual types of issuance appear to influence market reaction. A contribution of this different approach is its basis that seasoned offerings differ in terms of market transparency and the efficacy of regulations and public credulity, thereby shaping the market perception of each individual issuance and accounting for the observed differences in market price movements. Further, by analysing individually important determinants of market reaction for each issue and by relating these to investors and to the market as a whole, we produce new evidence of how far both informational asymmetries and free cash flow agency problems germane to security issuance determine differential market reactions. We suggest how dysfunctional misbehaviour at both the institutional and individual levels can be effectively controlled and governed by explicit and implicit disciplines in the context of a non-perfect market such as China. Our empirical analyses provide a more realistic view of how the market, issuers and investors interact in the issuing process, and hence identify new implications for capital market regulators and participants.

The remainder of this paper is structured as follows. Section 2 discusses security issuance and the institutional background in China. Section 3 sets out and discusses

the methodology, as well as develops our hypotheses. Section 4 presents and discusses the empirical results. Section 5 concludes and provides policy implications.

2. INSTITUTIONAL CONTEXT

With the establishment of the two stock exchanges in Shanghai and Shenzhen in 1991, Chinese firms gained an additional financing channel, and equity finance has since become the main instrument for firms seeking new funds. Chinese firms intending to undertake a seasoned issue of securities can essentially choose among rights issues, open offers, private placements and convertible bonds under the existing regulation.

(i) Rights Issues

A distinctive feature of rights issues is that they have the power to maintain ownership balance. This feature influenced China's government to introduce rights issues in 1992 as a seminal substantive step. However, China differs from virtually every other market with respect to the renunciation of rights. In the US, the proceeds of renounced rights are distributed to shareholders by managers of the issue. In the UK, entitlements that are renounced are commonly placed with an intermediary or directly with other investors. The transfer of rights was allowed in China during the period 2000 to 2001, but soon scrapped due to improper trading in the secondary market, which severely damaged investors' confidence.

Rights issues are subject to distinctive regulation whereby issuing firms are required to meet three basic accounting criteria set out by the China Securities Regulatory Commission (CSRC). First, in terms of profitability, there must normally be a record of the certified net profit for three consecutive years and average return on equity (ROE) of no less than 10%. Second, in terms of issue size and frequency of issuance, the number of new shares is strictly limited to 30% of the firm's existing share capital in the year prior to the issuing year, and two consecutive offerings cannot be made in two consecutive accounting periods. A third criterion makes offerings subject to best-effort agreement. However, there is no restriction on the discount on the subscription price and the benchmarking date for pricing.

Rights issues in China also differ from the case of mature markets, where rights issues are frequently used to reduce gearing, especially when bad times generate over-borrowing. In China, rights issuers frequently pay scant attention to the optimal corporate capital structure and accountability to shareholders (Liu et al., 2013). Ownership of companies is dominated by the state, resulting in a capital market that is under the tight control of the government with state ownership accounting for more than 60%. Ownership dilution is accordingly relatively less important than in conventional mature markets. The state-controlling shareholders frequently propose rights offers, but opt later to give up the pre-emptive rights or not fully subscribing their rights. Minority shareholders who are hard put to prevent an issue suffer to the extent that part of the funds raised tends to be dysfunctionally deployed rather than being invested in beneficial projects (Shleifer, 1998). Further, rights are usually sold at a discount in favour of state shareholders with a controlling stake to the detriment of minority shareholders. These factors combine to cause loss of value for public shareholders, thereby impairing public trust.

(ii) Open Offers

Open offers were initiated in 1994 on an experimental basis. Compared to rights issues, open offers to the general public and institutions are subject to less strict issue criteria. The CSRC requires a record of the certified net profit for three years preceding the issuance with an average ROE of at least 6%. In particular, there is no restriction on the quantity of cash that can be raised in a single issue. As a consequence, open offers have become greater in value than rights issues. Table A1 shows that open offers became increasingly popular from 2000 until 2008, when the share-split structure reform had been completed.

With respect to pricing, the subscription price in open offers must not be discounted by more than the average market price of 20 trading days prior to the benchmarking day or the average market price of the last day prior to the announcement of the letter of intent. This guards against issuing artificially and manipulatively priced holdings to powerful applicants, some of whom are able to access loans from connected sources. In an evolving market that aspires to gain a reputation for order and stability, substantial intentional discounting would undesirably lead to speculative and insider stagging opportunities, and published flotation information would be discredited as a consequence.

The issue requirements have been subject to frequent revision by the CSRC. Although the CSRC later tightened the issue criteria, including the restriction on issue size, these criteria remain less restrictive than those applied to rights issues. Hence open offers are vulnerable and lend themselves to manipulation for the purpose of raising large amounts of discretionary cash. Funds drawn from the market are maliciously pooled and channelled into projects that bear little or no relation to the destination set forth in the prospectus – sometimes into fake or fictitious investments. Some projects, even though bearing managerial approval, fall victim to uneconomic issue costs and market underperformance (Liu et al., 2013).

(iii) Convertible Bond Issues

Convertible bonds were formally introduced in 1998. The authorities administer them and their regulation is markedly strict. The CSRC stipulates that (1) the minimum issue amount should be 100 million yuan; (2) total debt balance should not exceed 40% of the firm's net assets; (3) net assets should be no less than 2.5 billion yuan; and (4) the firm must have maintained a record of positive profitability with an ROE of no less than 10% for three consecutive years. Initially, convertible bond issues were confined to state-owned enterprises that meet the criteria with respect to the minimum issue amount, ROE, profitability, total assets and debt-equity ratio. Preference was afforded to firms operating in the fields of energy, raw materials and infrastructure as well as to key national enterprises. In 2001, permission to issue convertible bonds was extended from state-owned enterprises to all listed firms, together with additional stringent criteria on capital adequacy and guarantees: the issuer must have guarantors with joint and several liability or an asset-backed pledge; issuers shall have convertible bonds rated initially at the time of issue and thereafter annually by a qualified credit rating agency. This finally became a requirement for all issues in 2006. Due to these restrictions, convertible bonds are confined to large issues by creditable companies.

Despite strict regulation aimed at governing and ensuring quality and credibility of issuers, abuses of process can and do arise in the form of the same personal, uneconomic 'money collecting', which already exists in open offers and rights issues.[1] Thus, convertible bond issues must be monitored by regulators to prevent dysfunctional discretionary behaviour on the part of management.

(iv) Private Placements

Private placements were only introduced in 2005 at the time of the launch of the share-split structure reform. They are confined either to a group of controlling shareholders or to institutional shareholders with a view to restructuring assets or obtaining fresh cash for investment to facilitate the process of state-ownership restructuring. The accounting-based regulations on private placements are less strict than those associated with any other methods of issuance in terms of financial performance and audited reports. The CSRC only requires a record of net profit for one year preceding the issuance, according to 'Measures for the Administration of Issuance of Securities by Listed Companies (2006)', and 'Interim Measures for Supervision and Administration of Private Placements (2014)'. This is far below the requirements laid down for offers to existing shareholders or to the general public. There are no restrictions on the subscription quotas for investors, and greater flexibility regarding the choice of benchmarking dates for the subscription price, board meetings, shareholder applications and the process of issuance. In addition, there are no mandatory requirements concerning dividend record or post-issue operational performance, as is the case for other methods of issuance. This lenient regulation has encouraged issues by firms seeking to inject sound assets through mergers and acquisitions, or issues by firms with poor performance, or that are under threat of failure and so in need of strategic cash. Private placements quickly became the most widely used financing vehicle for raising equity capital. As shown in Table A1, private placements are implemented far more frequently and in larger volume than any other methods of issuance.

The accounting regulations, however, require that the subscription price must not be below 90% of the average market price in the 20 trading days prior to the benchmark day. Placements for the purpose of company reorganisation must be at no less than the average market price in the 20 trading days before the record date. Unlike

1 Largely encouraged by the Chinese government's policy in support of stock market expansion and the less demanding issue criteria introduced in 2006, an increasing number of firms developed ambitious plans to raise new funds at the beginning of 2008. Ping An Insurance (Group) Company of China, Ltd., which is the second largest insurer in China, announced its intention to raise 160 billion yuan through the issuance of 1.2 billion new shares and 41.2 billion yuan convertible bonds in January 2008. This was claimed to be one of the world's largest ever issues of this type of security. Following their example, 43 firms unveiled issue packages totalling 204.3 billion yuan in a single month. This high frequency unnerved investors who feared corporate exploitation of the government's policy by seizing more money. Investors dumped the shares of these firms amid panic selling, triggering a plunge in the stock market. The Shanghai Composite Index dropped by 17% within 10 trading days following the announcements. The spate of issue plans was dubbed 'SEOgate' – the worst episode of 'pulling money from the market' witnessed in China since 1992 (Tan, 2008). This destroyed investors' confidence almost irreparably. In order to rectify this situation, in 2008, the CSRC issued a series of regulations to improve information disclosure, strengthen the implementation of the legal responsibilities of the parties concerned, ensure the continuation of the dividend distribution system and reform the sponsorship system to safeguard shareholders' interests.

in mature markets where purchasing firms typically comprise arm's length collective investors, purchasers in China normally comprise the controlling shareholders or the parent company of the issuing firm. It is commonly observed that private placement shares are sold at a premium to institutional investors but at a discount to the controlling shareholders and the parent company (Wu et al., 2010). The certification effect associated with private placements in mature markets may accordingly not hold for China's market, since the allocation to the controllers and the parent could offset the benefit of any certification effect (Slovin et al., 2000). Furthermore, the absence of a strict benchmark date is often accompanied by insider trading and the transfer of benefits from minority shareholders to controlling shareholders (Yu et al., 2006).

It is clear from the above discussion that the institutional context of China differs from mature, more efficient markets with respect to the motivation, initiation, management and monitoring of security offerings and the resulting interactions among regulators and players in the market. In particular, in the case of rights offering, the issuers are predominantly state-owned. The largest shareholders typically initiate rights offerings, but opt to give up the pre-emptive rights or do not fully subscribe to their rights. Opportunistically available cash is often harvested without serious consideration of prospective returns or is channelled into related-party transactions, and investors in many cases register their concern by making a poor response to the issue. Open offers frequently exploit timing opportunities and are accompanied by personal activities that depart from shareholder wealth maximisation. Issuers alter the usage of proceeds from that specified in the prospectus, and proceeds may be deployed non-productively (Liu et al., 2013). Private placements are commonly linked to controlling shareholders' entrenched positions to the detriment of minority shareholders. The management attempt to cut the costs of purchasing new shares for the controlling shareholders by timing and manipulating listing suspension prior to the placement announcement (Wu et al., 2010). Convertible bonds are subject to strict accounting regulation and public scrutiny. However, to a lesser extent than other forms of issuance, they remain vulnerable to becoming routes to personal, uneconomic 'money collecting'.

In an attempt to rein in abuses of the issue process and other rent-seeking behaviours associated with fundraising, the government has introduced a series of accounting-based security regulations and policies since 1994, and the new regulations have helped to curb money collecting and selection problems (Chen and Wang, 2007). Nevertheless, these regulations do not invariably carry the full force of law. Their moral authority is under constant challenge, such that violations are common and the perpetrator may suffer as a result of future incredulity on the part of the market (Liu et al., 2013). Although the Securities Law and Company Law have enacted sanctions against wrongdoing, these are not clearly defined in the ordinances. The weak and inefficient regulatory institutions and market environment further hinder the enforcement of laws and regulations. Between 1994 and 2006, the CSRC listings rules were revised ten times in an attempt to prevent abuses of the issue process and rent-seeking behaviours referred to above. Nevertheless, controlling shareholders and parent companies continue to embezzle subsidiaries' funds by raising equity by means of seasoned issuance, to the detriment of minority shareholders. Under an incomplete mechanism for shareholder meetings, it remains difficult for minority shareholders to monitor the extent to which funds are deployed for the benefit of firm value.

In summary, financing misbehaviour is rooted in the state-controlled ownership structure, ineffective legal protection for minority shareholders, weak supervisory institutions, and a predilection among certain private investors for short-term irrational gambling on shares. Furthermore, regulatory weakness and informational opacity together increase the risk of the misallocation of funds. Results are manipulated and under-reported in the personal interests of promoters and intermediaries who are able to exert effective pressure to bear, even on supervisory bodies, including auditors. A particular dysfunctional impact of these imperfections is to undermine trust in the market by deterring long-term, sophisticated institutional and international investors on whom the market's future success depends.

3. METHODOLOGICAL ISSUES

(i) Data and Sample Selection

We analyse 1,810 registered seasoned issues conducted by domestic companies listed on the Shanghai Stock Exchange and the Shenzhen Stock Exchange between 1991 and 2010 inclusive. We collect information regarding seasoned issues from the Seasoned Equity Offerings Database and China's Bond Market Database. We obtain other data for cumulative abnormal returns (CAR) analysis and multiple variable analysis from China's Stock Market Database and the Accounting Research Database.[2] The intended use of proceeds as stated at the time of the announcement is derived from the Wind Financial Terminal and checked in the official newspaper, *China Securities Times*. We include all firms that have been delisted from the stock exchanges to avoid survival bias, but exclude any firm with a seasoned offering that does not have a CSRC report of the filing or of an announcement of intention to issue. To avoid information contamination by other simultaneous corporate events, we exclude certain events occurring within 20 days either side of the announcement of the issue. Such potentially confounding events include the annual report, interim report, corporate restructuring, merger and takeover bids, earnings reports, dividends, stock splits, market buybacks and suspension or delisting from the official listing. After screening for such confounding events, the final sample consists of 1,659 seasoned issues, comprising 974 rights issues, 239 open offers, 375 private placements and 71 convertible bond issues.

To examine how the market interprets the various types of seasoned issue announcement, the issuing firms are disaggregated into open offer firms (OO-firms), private placement firms (PP-firms), rights issue firms (RI-firms), and firms issuing convertible bonds (CV-firms). This grouping enables us to examine significant differences such as those implied by the Myers and Majluf (1984) signalling-based model concerning issues to new as opposed to existing investors as well as issues to public as opposed to targeted investors. The grouping further enables us to examine differences such as those implied by agency debate concerning the distinguishing features of plain equity issues and issues in the context of convertible bonds.

2 These databases have been developed by the Centre for China Financial Research of the University of Hong Kong and by Guo Tai An Information Technology Ltd.

The theoretical discussion in the literature and the distinctiveness of security issuance in the case of China, as discussed, lead us to the expectation that the market will react negatively to rights issues and open offers. It is expected that private placements will likewise result in a negative reaction in the period leading up to the announcement owing to the agency costs which result from price manipulation through the power of self-seeking controlling shareholders. A positive reaction may follow the announcement as the market is reassured by the quality of strategic investment by targeted investors. In the case of convertible bond issues, we expect a positive reaction to the extent that the market anticipates the benefits of strict regulation and contractual discipline.

(ii) Events Study Methods

We adopt a modified risk-adjusted market model to examine the impact of the four types of issue announcement on short-term market price movement. We use the value-weighted Composite Index of the Shanghai and Shenzhen Stock Exchange as the market return for the companies listed on the respective stock exchanges. We define the issue announcement date for each type of issuance according to the CSRC regulatory requirements. For rights issues and open offers, the announcement dates correspond to the first public announcements of the intention to raise equity capital by way of rights and open offers. Under the CSRC listing requirements, an issuer is required to announce promptly both its intention to make an issue and its chosen method of issuance. For private placements, the announcement date corresponds to the announcement of the board meeting date. For convertible bonds, the announcement date is deemed to be the date of the publication of the issue. The daily risk-adjusted abnormal return (AR) is calculated as follows:

$$AR_{i,t} = R_{i,t} - (\alpha_i + \beta_i R_{m,t}), \tag{1}$$

where $AR_{i,t}$ is the abnormal return on stock i on day t; $R_{i,t}$ is the daily actual or realised stock return adjusted for reinvested cash dividends; $R_{m,t}$ is the daily value-weighted market returns with cash dividends reinvested on the index of the stock exchange where the issuing firm is listed; and t is the number of days that elapse before (–) or after (+) the issue is announced. The coefficients α_i and β_i are ordinary least squares estimates of the intercept and the slope for stock i. We estimate the model coefficients using 240 daily stock return observations starting from 300 to 61 days prior to the issue announcement date as defined for each type of issuance. The R_i represents a theoretical value growth of a stock holding over a specified period, assuming that all dividends are re-invested to purchase additional stocks at the price on the ex-dividend day.

Further, we construct the cumulative abnormal returns (CAR) as the sum of the abnormal returns over the event window around the announcement date. Abnormal returns are generated for the five-day event window: two days before the announcement date to two days after it [–2, +2]. This period is considered to be sufficiently long to compensate for any major delayed responses after the announcement date, while being sufficiently short to minimise the number of confounding events. We have conducted tests for various event windows including two, three, five and ten

days surrounding the announcement period. The results show that the five-day event window has the highest *t*-statistic value (see Table 2). Hence, we report results for the five-day event window. Event period CARs are thus computed as:

$$CAR_{i,t} = \sum_{t=1}^{T} AR_{i,t}, \tag{2}$$

where $CAR_{i,t}$ is the cumulative abnormal return of share i from date t to date T.

We construct reference portfolios in addition to a market portfolio as a benchmark for calculating abnormal returns. We construct the reference portfolios with firm size and market-to-book (MB) ratio based on the Fama and French (1993) three-factor model. For a given year, size is the annual reported market value, and MB ratio is the annual reported market-to-book ratio. To construct the reference portfolios in year t, we first divide the firms into two groups according to the firm's market capitalisation (size ranking). Each group is then divided into three subgroups according to the MB ratio (value ranking). We then calculate the average annual return of each subgroup. SMB and HML are calculated as 'small cap minus big' and 'high B/M minus low' to measure the historic excess returns of small size caps and 'value' stocks over the market as a whole.

To test the significance of $AR_{i,t}$ and $CAR_{i,t}$, we compute the standardised residual *t*-test (SRT) based on Bohren et al. (1997). We employ standardised abnormal returns to prevent AR and CAR with large variances dominating the test.

4. EMPIRICAL RESULTS

(i) Abnormal Return and Cumulative Abnormal Return Analysis

Table 1 reports daily abnormal returns (ARs) surrounding the announcement for the four types of seasoned offerings. Distinctive price adjustment patterns emerge. For rights issues, the daily abnormal returns are negative in the interquartile range (the 25th percentile to the 75th percentile) of −0.14% to −0.06% prior to the announcement. The decision to announce a rights offering after a period of significant and negative market returns signals the market's anticipation of the activities of the dominant controlling shareholders whose primary intention is to collect cash from the market with little intention of taking up their rights. This market expectation triggers significant negative price reactions accordingly.

Upon the announcement, the price drops by 0.50% to −0.63%. The dominant or otherwise influential shareholders habitually surrender their subscription rights after the issue announcement with a renunciation rate reaching 90.76% as shown in Table 4. The price drop confirms the prior-market anticipation of cash-siphoning behaviour on the part of self-serving controlling shareholders. The daily abnormal returns then remain at the new low level in the interquartile range of −0.20% to −0.07%, and it appears to take time for the market to revert to its original level. This lengthy recovery indicates a lack of confidence in the market caused by a well-founded anticipation of the commonly observed phenomenon of fund allocation by state controllers in the form of related-party transactions and intra-group transfers. The negative reaction to rights issues in China does not support the conventional

Table 1

Daily Abnormal Returns (ARs) around the Issue Announcement Date by Issue Method

	Rights Issues		*Open Offers*		*Private Placements*		*Convertible Bond Issues*	
Day(s)	*Mean*	*SE*	*Mean*	*SE*	*Mean*	*SE*	*Mean*	*SE*
−30	0.0001	(0.0024)	−0.0008**	(0.0004)	−0.0020	(0.0068)	−0.0010	(0.0007)
−29	0.0002	(0.0021)	−0.0009	(0.0058)	−0.0023	(0.0032)	0.0013*	(0.0007)
−28	−0.0006	(0.0022)	0.0053	(0.0057)	0.0041*	(0.0024)	0.0014	(0.0027)
−27	−0.0009*	(0.0005)	0.0057	(0.0061)	−0.0013	(0.0032)	0.0021**	(0.0009)
−26	−0.0012	(0.0022)	−0.0002	(0.0055)	−0.0011	(0.0027)	−0.0001	(0.0017)
−25	0.0008	(0.0022)	−0.0040	(0.0061)	0.0004	(0.0031)	0.0018	(0.0025)
−24	−0.0013	(0.0018)	−0.0021	(0.0054)	0.0015	(0.0033)	−0.0002	(0.0023)
−23	−0.0001	(0.0019)	−0.0034	(0.0064)	−0.0021**	(0.0010)	(0.0002	(0.0023)
−22	0.0007	(0.0020)	−0.0013	(0.0062)	−0.0013	(0.0033)	0.0009	(0.0025)
−21	−0.0015*	(0.0008)	0.0044*	(0.0023)	0.0011	(0.0029)	0.0013	(0.0021)
−20	−0.0011	(0.0023)	−0.0040	(0.0068)	−0.0009	(0.0032)	0.0021*	(0.0012)
−19	−0.0014	(0.0022)	−0.0021	(0.0068)	−0.0016	(0.0029)	0.0015	(0.0022)
−18	−0.0034*	(0.0018)	−0.0038	(0.0090)	−0.0018**	(0.0008)	0.0038	(0.0025)
−17	−0.0016	(0.0022)	0.0043	(0.0070)	−0.0012	(0.0033)	0.0037*	(0.0021)
−16	−0.0012	(0.0024)	−0.0026	(0.0075)	−0.0026*	(0.0015)	0.0009	(0.0024)
−15	−0.0008	(0.0022)	−0.0037	(0.0056)	−0.0005	(0.0033)	−0.0006	(0.0025)
−14	−0.0013	(0.0019)	−0.0024	(0.0043)	0.0001	(0.0030)	0.0012	(0.0025)
−13	−0.0009	(0.0024)	−0.0002	(0.0036)	−0.0027	(0.0032)	−0.0008	(0.0027)
−12	0.0002	(0.0024)	0.0028	(0.0025)	−0.0013	(0.0033)	0.0018	(0.0018)
−11	−0.0007	(0.0022)	0.0030	(0.0059)	−0.0016	(0.0030)	0.0024*	(0.0013)
−10	−0.0011*	(0.0006)	0.0052	(0.0060)	−0.0025	(0.0033)	0.0035	(0.0026)
−9	−0.0009	(0.0022)	0.0029*	(0.0017)	−0.0022	(0.0033)	−0.0009	(0.0025)
−8	0.0003	(0.0019)	−0.0017	(0.0064)	−0.0084**	(0.0034)	0.0037**	(0.0016)
−7	−0.0013	(0.0018)	0.0028	(0.0064)	−0.0012	(0.0033)	−0.0028	(0.0021)
−6	−0.0021	(0.0024)	0.0041*	(0.0024)	0.0007	(0.0034)	0.0019	(0.0023)
−5	−0.0037*	(0.0020)	0.0032	(0.0066)	−0.0013	(0.0030)	0.0022**	(0.0011)
−4	−0.0014	(0.0020)	0.0081	(0.0078)	−0.0049**	(0.0025)	0.0019	(0.0021)
−3	−0.0021*	(0.0012)	0.0103*	(0.0061)	−0.0033*	(0.0019)	0.0018*	(0.0010)
−2	−0.0019**	(0.0008)	0.0051*	(0.0030)	−0.0028*	(0.0017)	0.0018**	(0.0008)
−1	−0.0013***	(0.0005)	0.0042**	(0.0018)	−0.0026**	(0.0012)	0.0021**	(0.0009)

(*Continued*)

Table 1
Continued

	Rights Issues		*Open Offers*		*Private Placements*		*Convertible Bond Issues*	
Day(s)	*Mean*	*SE*	*Mean*	*SE*	*Mean*	*SE*	*Mean*	*SE*
AD	−0.0063***	(0.0016)	−0.0056***	(0.0021)	−0.0037***	(0.0014)	0.0039***	(0.0002)
1	−0.0048**	(0.0019)	−0.0048***	(0.0018)	0.0051***	(0.0002)	0.0028***	(0.0003)
2	−0.0021**	(0.0010)	−0.0025*	(0.0014)	0.0048**	(0.0024)	0.0021**	(0.0009)
3	−0.0019**	(0.0009)	−0.0035**	(0.0017)	0.0035**	(0.0017)	0.0027**	(0.0013)
4	−0.0021*	(0.0011)	−0.0019**	(0.0009)	0.0023*	(0.0014)	0.0015*	(0.0008)
5	−0.0016*	(0.0009)	−0.0013*	(0.0007)	0.0012**	(0.0006)	0.0014*	(0.0008)
6	0.0014*	(0.0008)	−0.0012*	(0.0007)	0.0023*	(0.0014)	0.0019**	(0.0009)
7	−0.0009**	(0.0004)	−0.0037**	(0.0018)	0.0012	(0.0032)	0.0045*	(0.0025)
8	−0.0011	(0.0042)	−0.0034	(0.0039)	0.0011	(0.0032)	0.0005	(0.0024)
9	−0.0029*	(0.0017)	−0.0016	(0.0025)	0.0019*	(0.0010)	−0.0009*	(0.0005)
10	0.0013	(0.0030)	−0.0012*	(0.0007)	−0.0003	(0.0029)	0.0013	(0.0019)
11	−0.0019*	(0.0010)	0.0008	(0.0061)	−0.0006	(0.0023)	0.0014	(0.0018)
12	−0.0008	(0.0031)	0.0005	(0.0038)	0.0021*	(0.0012)	0.0046**	(0.0023)
13	−0.0005	(0.0032)	0.0011	(0.0027)	0.0014	(0.0032)	0.0011	(0.0025)
14	0.0006	(0.0018)	−0.0029*	(0.0016)	0.0014	(0.0035)	0.0012	(0.0018)
15	−0.0011	(0.0028)	−0.0012	(0.0038)	0.0033**	(0.0016)	0.0016*	(0.0009)
16	−0.0017**	(0.0007)	−0.0027	(0.0065)	0.0016	(0.0031)	−0.0004	(0.0025)
17	0.0003	(0.0035)	−0.0003	(0.0063)	−0.0010	(0.0030)	0.0001	(0.0021)
18	−0.0019	(0.0027)	−0.0027*	(0.0016)	0.0016	(0.0033)	0.0007	(0.0024)
19	−0.0024	(0.0015)	0.0004	(0.0067)	0.0010	(0.0035)	0.0036**	(0.0018)
20	−0.0022*	(0.0013)	0.0006	(0.0056)	0.0027**	(0.0013)	0.0024	(0.0023)
21	0.0008	(0.0145)	−0.0014	(0.0074)	0.0018	(0.0033)	0.0041*	(0.0022)
22	−0.0019	(0.0150)	−0.0010	(0.0066)	0.0004	(0.0033)	0.0029	(0.0025)
23	−0.0021*	(0.0012)	−0.0006	(0.0052)	0.0007	(0.0034)	0.0032*	(0.0018)
24	0.0004	(0.0147)	−0.0008	(0.0076)	−0.0002	(0.0035)	0.0013	(0.0022)
25	−0.0016	(0.0149)	−0.0023	(0.0077)	−0.0003	(0.0029)	0.0004	(0.0024)
26	−0.0019**	(0.0009)	0.0005	(0.0075)	0.0014*	(0.0008)	0.0006	(0.0026)
27	−0.0014	(0.0106)	0.0007	(0.0046)	0.0016	(0.0033)	0.0029**	(0.0014)
28	−0.0004	(0.0111)	−0.0011	(0.0074)	0.0017	(0.0033)	−0.0008	(0.0024)
29	−0.0012	(0.0132)	−0.0024**	(0.0012)	0.0031**	(0.0015)	0.0014	(0.0025)
30	−0.0011	(0.0160)	−0.0020	(0.0046)	−0.0001	(0.0031)	0.0012*	(0.0007)

(*Continued*)

Table 1
Continued

	Rights Issues		*Open Offers*		*Private Placements*		*Convertible Bond Issues*	
Day(s)	*Mean*	*SE*	*Mean*	*SE*	*Mean*	*SE*	*Mean*	*SE*
Before AD								
Mean	−0.0011		0.0013		−0.0015		0.0013	
Minimum	−0.0037		−0.0040		−0.0084		−0.0028	
25th centile	−0.0014		−0.0021		−0.0025		0.0004	
Median	−0.0012		0.0013		−0.0015		0.0017	
75th centile	−0.0006		0.0043		−0.0010		0.0021	
Maximum	0.0008		0.0103		0.0041		0.0038	
After AD								
Mean	−0.0014		−0.0015		0.0014		0.0018	
Minimum	−0.0063		−0.0056		−0.0037		−0.0009	
25th centile	−0.0020		−0.0026		0.0006		0.0009	
Median	−0.0016		−0.0013		0.0014		0.0014	
75th centile	−0.0007		−0.0005		0.0022		0.0029	
Maximum	0.0014		0.0011		0.0051		0.0046	
Observations	931		175		340		81	

Notes:
The table reports mean daily abnormal returns and the standardised residual *t*-tests (SRT) for equation (1) based on the market model for the issue announcements by way of rights issues, open offers, private placements and convertible bond issues.
SE denotes standard error. AD denotes announcement date.
*, ** and *** denote statistical significance based on two-sided tests at the 10%, 5% and 1% levels, respectively.

wisdom concerning managerial opportunism with respect to mispricing achieved by timing the issue (Myers and Majluf, 1984). Rather, our results provide evidence of an aversion to a form of issuance beset by behaviour which militates against the interests of public subscribers.

The market price effects for open offers during the pre-announcement period contrast with those for rights issues but similar patterns occur during the post-announcement period. Open offers evince significant upward movements in price in the interquartile range of −0.21% to 0.43% prior to the announcement. The price adjustments in advance of the announcement are consistent with the timing hypothesis, whereby rational managers create new issues when the shares appear to be over-priced. In reality, according to our data, managers have considerable flexibility when timing the issue, since 0.91% of the offerings occur after a positive price run-up over trading days –30 to –2 (not shown). In response, the market lowers its valuation of the shares by 0.98% upon the announcement, and much of the positive announcement effect then erodes by way of a subsequent rundown in price. The daily abnormal returns settle at the new low level in the interquartile range of −0.26% to −0.05%. Such post-announcement reactions reflect managerial opportunism and agency influences. Free cash flow increases following equity issues. Opportunities for misdirection and the withdrawal of funds abound. Issuers often divert the proceeds sub-optimally away from the use designated in the prospectuses without the prior consent of shareholders (Shleifer, 1998; and Liu et al., 2013). A fund of new, uncommitted resources is bound to be viewed with suspicion, and the issue is accordingly received unfavourably.

In contrast to open offers, private placements show a downward movement in price prior to the announcement in the interquartile range of −0.25% to −0.10%. Targeted investors are typically the controlling shareholders, and private placements are accordingly often accompanied by price manipulation and insider trading with a view to transferring benefits from the public to targeted investors. The management seek to acquire shares at a low price by timing the issue when the price is depressed in favour of the controlling shareholders as noted by Wu et al. (2010). Such favoured investors can then later reap huge financial gains from dealings when the price rises. This opportunism normally occurs immediately prior to or on the trading day itself (Wu et al., 2010). In anticipations, the market reacts with a significant, negative response upon the announcement in the form of a 0.11% drop in market returns.

The market's post-announcement reaction contrasts with the pre-issue case. Most notably, the majority of any daily abnormal returns revert to the level quickly and remain positive following the announcement. Firms that conduct private placements in China are usually underperforming firms including Special Transfer firms and Particular Transfer firms[3] which struggle to maintain their level of operations. Underperforming firms seek an injection of good assets by their controlling shareholders or strategic cash by institutional investors. The favourable reaction following the announcement partly reflects relief as the market witnesses the replacement of bad assets with good assets and/or the introduction of strategic institutional investors. The

3 The CSRC introduced the delisting system in 1998 for firms that suffer financial or other abnormalities. A firm is labelled as a special transfer (ST) if it sustains losses for two consecutive years and its shares are subject to 5% daily price limit movements. If an ST firm fails to become profitable in the third year, its shares are put under particular transfer (PT) and suspended from trading on the Main Board. The PT firm will be delisted if it fails to make a profit within six months of its suspension.

reaction can partly be seen as a response to the certification effect associated with institutional investment. These together serve to offset concerns about any propensity to post-issue overinvestment or related-party transactions.

Convertible bond issues experience a spell of positive daily returns in the interquartile range of 0.04% to 0.21% prior to the announcement. The issue announcement then precipitates a significant market price rise of some 18%. The share price then remains at the new high level following the announcement in the interquartile range of −0.09% to 0.29%. A convertible is an instrument of intrinsically good quality due to its contractual discipline. Conversion terms have the power to signal optimism about future increase in corporate value with the result that convertible issues can help to allay the doubts of a more conservative investor habitat. In addition, convertible issues in China are subject to strict regulatory criteria, guarantee requirements and scrutiny with the result that such issues are typically undertaken by financially sound firms. All of these factors inspire strong market confidence.

Further insights may be gained by examining the CARs over various event windows. These are reported in Table 2. There is a significant, positive CAR over the [–20, –1] window for open offers at the 1% level, whilst the CARs for rights issues and private placements are also significant but negative at the 5% level. The CARs over various other windows in the post-announcement periods, namely [+1, +5], [+1, +10] and [+1, +20], are negative for rights issues mostly at the 5% level and for open offers at the 1% and 5% levels, whereas they are positive for private placements and convertible issues with different levels of significance. The market responses over these events windows are consistent with the ARs presented in Table 1, altogether substantiating a distinctive market perception of risks and prospects pertaining to each form of issuance in China's market.

Further, the average five-day announcement period CAR over the [–2, +2] window is –1.64% for rights issues and −0.36% for open offers at the 5% level. Notably, private placements evince a positive five-day CAR of 0.08% at the 5% level, even though market returns present contrasting pre- and post-issuance patterns. This suggests that private placements are generally regarded as a source of strategic investment, which carries the power to promote the prosperity of firms through the injection of good assets and needed cash. The five-day CAR for convertible issues amounts to a significant 1.27%.

In summary, our observed differing reactions across the forms of issuance are only partially consistent with the empirical evidence for mature markets. Notably, a US rights issue does not trigger a negative price reaction (e.g., Martin-Ugedo, 2003) but we observe a significantly negative reaction in our case of China. A convertible issue induces a negative effect in the US and UK (e.g., Abhyankar and Dunning, 1999; and Lewis and Verwijmeren, 2011), while the opposite holds true for China. A private placement announcement conveys a positive signal in mature markets (e.g., Krishnamurthy et al., 2005; and Akhigbe et al., 2006), but not in the case of our findings for Chinese issuers during the pre-announcement period.

At the same time, our results share common ground with the implications of the information asymmetric hypothesis and the agency cost hypothesis. Managers attempt to exploit mispricing opportunities and investors tend to infer that the firm is overpriced when an open offering is announced, as per Myers and Majluf (1984). The unfavourable market reactions to rights issues and private placements during the pre-announcement period suggest that equity issuance is agency-driven. This impact

Table 2

Cumulative Abnormal Returns (CARs) around the Issue Announcement Date by Issue Method

	Rights Issues		*Open Offers*		*Private Placements*		*Convertible Bond Issues*	
CAR [Event window]	*Mean*	*SE*	*Mean*	*SE*	*Mean*	*SE*	*Mean*	*SE*
CAR [–20, –1]	−0.0277**	(0.0137)	0.0355***	(0.0185)	−0.0426**	(0.0211)	0.0312	(0.0216)
CAR [–10, –1]	−0.0155	(0.0258)	0.0442	(0.0407)	−0.0285	(0.0190)	0.0152	(0.0209)
CAR [–5, –1]	−0.0104*	(0.0056)	0.0309	(0.0210)	−0.0149**	(0.0066)	0.0098	(0.0060)
CAR [–2, –1]	−0.0032*	(0.0018)	0.0093*	(0.0049)	−0.0054*	(0.0028)	0.0039*	(0.0021)
CAR [–1, 0]	−0.0076*	(0.0042)	−0.0014	(0.0016)	−0.0063*	(0.0034)	0.0060*	(0.0032)
CAR [–1, +1]	−0.0124	(0.0120)	−0.0062**	(0.0031)	−0.0012*	(0.0007)	0.0088**	(0.0035)
CAR [–2, +2]	−0.0164***	(0.0023)	−0.0036**	(0.0018)	0.0008***	(0.0003)	0.0127**	(0.0057)
CAR [0, +2]	−0.0132**	(0.0067)	−0.0129**	(0.0065)	0.0062***	(0.0021)	0.0088*	(0.0045)
CAR [+1, +5]	−0.0125**	(0.0054)	−0.0140**	(0.0072)	0.0169**	(0.0086)	0.0105**	(0.0046)
CAR [+1, +10]	−0.0147*	(0.0083)	−0.0251**	(0.0115)	0.0231*	(0.0137)	0.0178*	(0.0093)
CAR [+1, +20]	−0.0263**	(0.0124)	−0.0315***	(0.0127)	0.0366*	(0.0195)	0.0341	(0.0218)
Observations	931		175		340		81	

Notes:

The table reports mean cumulative abnormal returns (CAR) and the standardised residual *t*-tests (SRT) for equation (2) based on the market model for various windows around the issue announcements by way of rights issues, open offers, private placements and convertible bond issues. Event window [–day, +day] refers to the time period from the number of days before the announcement date to the number of days after the announcement date.

SE denotes standard error.

*, ** and *** denote statistical significance based on two-sided tests at the 10%, 5% and 1% levels, respectively.

is mitigated when an issue is supported by protective provisions as in convertible issues or by the injection of strategic resources as in private placements during the post-announcement period – both being forces which combat agency. Overall, the negative market reactions in plain equity issuance reflect the particularly powerful agency problems, which permeate China's informationally opaque market subject as it is to the activities of powerful, personally self-interested and otherwise manipulative investors. This state of affairs accords with our hypotheses, to the effect that the suspicion associated with equity can be allayed by the safeguards achievable through convertible bonds. At the same time, it remains unclear how far the negative average abnormal returns surrounding the time of the announcement in the case of open offers and rights issues are related to the information contained in a range of potential determinants. Likewise, we ask what best explains the contrasting market reaction in the case of convertible bond issues. We further ask why the market price behaves distinctively in private placements. The above observations and discussion substantiate the case for further exploration.

(ii) Multiple Variable Analysis

(a) Hypothesis Development

Our empirical results presented above clearly suggest the existence of distinct market responses to the issue announcement. In order to pursue the observed differences, we estimate multiple variable regression models to explore the relative contribution of three sets of variables to market returns for different forms of seasoned offerings. The variables are designed to represent: characteristics of issuers to capture pre-issue inter-firm variability; characteristics of individual issues before and immediately after the announcement; and features specific to the individual type of security. We use the five-day CAR: two days before the announcement date to two days after it [–2, +2], as the dependent variable. Our variables are described below and formally set out in Table 3.

Pre-issue features. Research evidence suggests that the pre-issue features of issuing firms are crucial in determining the market's perception of the value of the new issue (Loughran and Ritter, 1997; and Barnes and Walker, 2006). We accordingly consider the pre-issue market-to-book ratio, earnings forecasts, price run-up, dividend payment, ownership and firm size preceding the issuance in the estimation.

Market-book ratio ($MB_{pre\text{-}issue}$). Firms with growth prospects frequently have a high market-to-book ratio (Loughran and Ritter, 1995; and Christopoulos and Tsionas, 2004). High MB is commonly associated with dynamism and promise; hence the risk (Fama and French, 1992). In the case of China, there is complementary evidence that a high MB is associated with growth as well as the risk of failure (Chen et al., 2007). An equity issue can fuel latent growth and the market's appraisal of a financing event will reflect this insofar as it is perceptible and credible. Whilst following the broad consensus concerning MB, we recognise that in a market with limited transparency and a measure of corruption, we must be on the alert when examining our results for any signs that a high MB may be influenced by potentially unfavourable factors such as the existence of overvalued growth itself, intangible assets prone to overvaluation, the low quality of tangible assets and the impact of accounting conventions including

Table 3
Definition of Variables

Description	*Variable*	*Definition and Measurement*
Pre-issue characteristics		
Market-to-book ratio	$MB_{Pre\text{-}issue}$	(Total assets + market value of equity – book value of equity)/total assets prior to the issue
Analyst's forecasts	$FCAST_{Diverg}$	Divergence between the analyst's forecasts and actual earnings for the year in which the new issue is undertaken
Run–up in stock prices	*RUNUP*	Market-adjusted abnormal returns over the 180-day window [–181, –1] using the value-weighted market index as the benchmark. The market index is the Shanghai and Shenzhen value-weighted return for the firms listed in Shanghai and Shenzhen Stock Exchanges, respectively
Dividend payment	*DIV*	Dummy variable takes the value of 1 if the issuer paid dividends in the two years prior to the issue; 0 otherwise
Ownership concentration	$Herf_1$; $Herf_3$	Herfindahl index measured as the sum of the squared percentage of shares held by the largest shareholder ($Herf_1$) or as the sum of the squared percentage of shares held by the largest three shareholders within the firm ($Herf_3$), as at the balance sheet date immediately prior to the issue announcement
Firm size	$SIZE_{Pre\text{-}issue}$	Natural logarithm of the firm's market capitalisation prior to the issue, adjusted by the inflation rate in the corresponding year
Issue characteristics		
Discount in subscription price	*DISC*	Discount rate measured by $(P_{sub,t-20} - P^*)/P^*$, where $P_{sub,t-20}$ is the average closing price for the 20 trading days prior to the issue announcement date, P^* is the subscription price for the new shares
Underwriting	$Under_{Standby}$	Dummy variable for standby method takes the value of 1; 0 otherwise
	$Under_{Best}$	Dummy variable for best effort method takes the value of 1; 0 otherwise
	$Under_{Full}$	Dummy variable for full commitment method takes the value of 1; 0 otherwise
	$Under_{None}$	Dummy variable takes the value of 1 if an issue is not underwritten; 0 otherwise
Auditor quality	$AUDIT/AUDIT_{Non-Top10}$	Dummy variable takes the value of 1 if the auditor is a Top-10 auditor; 0 otherwise
Size of offering	$Offer_{ALL}$	$Offer_{ALL}$, $Offer_{RI}$, $Offer_{OO}$, $Offer_{PP}$ and $Offer_{CV}$ measured as the ratio of gross proceeds raised through all issues combined, rights issues, open offers, private placements and convertible bond issues, respectively, over the firm's market capitalisation at the accounting year end preceding the issue
	$Offer_{RI}$	
	$Offer_{OO}$	
	$Offer_{PP}$	
	$Offer_{CV}$	

(*Continued*)

Table 3
Continued

Description	*Variable*	*Definition and Measurement*
Intended use of issue proceeds	$FUSE_{Tech}$	Dummy variable for innovation and high-tech projects takes the value of 1; 0 otherwise
	$FUSE_{Fixed}$	Dummy variable for general fixed investment takes the value of 1; 0 otherwise
	$FUSE_{Intra}$	Dummy variable for intra-firm investment takes the value of 1; 0 otherwise
	$FUSE_{DWC}$	Dummy variable for repayment of debt or financing working capital needs takes the value of 1; 0 otherwise
	$FUSE_{Others}$	Dummy variable takes the value of 1 for other intended uses of issue proceeds not specified above; 0 otherwise
Change in capital structure	ΔDE	Total book value of short-term and long-term debt divided by the market value of the firm, adjusted by the size of offering, as defined in equation (4)
Security-specific characteristics		
Take-up of the rights by the largest shareholders in rights issues	*TAKEUP/ NON-TAKEUP*	Dummy variable in the case of a rights issue takes the value of 1 if the largest shareholders take up the rights; 0 if they renounce the rights
Target buyer in private placements	$BUYER_{Controller}$	Dummy variable in the case of a private placement takes the value of 1 if the shares are sold to the controlling shareholders; 0 otherwise
	$BUYER_{Institution}$	Dummy variable in the case of a private placement takes the value of 1 if the shares are sold to institutional shareholders; 0 otherwise
	$BUYER_{Others}$	Dummy variable in the case of a private placement takes the value of 1 if the shares are sold to shareholders other than the controlling and institutional shareholders; 0 otherwise
Credit rating for convertible bond issues	*RATE*	Dummy variable in the case of a convertible issue takes the value of 1 if the convertible is assigned AA+ and above; 0 if the rating is below AA+ but above A–

historic cost (Pagano and Roell, 1998), or market anomalies associated with cognitive biases and agency costs on the part of investors (Lakonishok et al., 1994). We measure the pre-issue growth prospects of the firm using *MB*, which is defined as the sum of assets plus the market value of equity minus the book value of equity, divided by assets, as at the balance sheet date immediately prior to the issue announcement.

Analysts' forecasts ($FCAST_{Diverg}$). The counsel of share analysts may appear at first sight to be a means of making abnormal gains. The market believes that reputable analysts supply more accurate earnings forecasts than other analysts. Hence, they are able to contribute to market efficiency by reducing asymmetric information among market participants, which militates against mispricing (Bowen et al., 2008). At the same time, the agency cost hypothesis attributes a favourable bias to analysts derived from conflict of interests. Biased reports may arise from analysts' reliance on lines of communication with corporate executives and/or from pressure to favour client companies. From fear of jeopardizing business relationships, analysts may be reluctant to make unfavourable recommendations to current or potential client companies (Francis and Philbrick, 1993; and Feng and McVay, 2010). Such unwillingness appears to apply to China. Analysts in brokerage firms are under intense pressure to gain investment banking business and managers put pressure on brokers to refrain from making unfavourable recommendations (Ang and Ma, 1999). This causes investors to mistrust earnings forecasts published in issue prospectuses. The resulting hypothesis is that earnings forecasts are positively, but weakly, correlated with abnormal returns, regardless of the form of issuance. To test market sensitivity to analysts' forecasts, we use the divergence of analysts' forecasts, $FCAST_{Diverg}$, measured as the difference between the actual and the forecasted earnings for the year when the new issue is undertaken.

Price run-up (*RUNUP*). The timing hypothesis proposes that the management are systematically trying to create a wealth transfer from new shareholders to existing shareholders (Alti, 2006). When the firm becomes over-valued, the management recapitalise the firm through an equity issue. The manipulation of price in the run-up to an offering is eminently feasible in an environment where accounting and auditing standards are flawed (Teoh et al., 1998; Shivakumar, 2000; and Cohen and Zarowin, 2010). In response, the stock market reacts negatively to the issue announcement, which tends to be followed by periods of negative returns. Hypothesising that the reaction depends on both the implications for cash flows and the degree of surprise, we examine market timing across the four types of issue using *RUNUP*, which is measured as the market-adjusted abnormal returns over the 180-day window (event days –181 to –1) using the value-weighted market index as a benchmark.

Dividend payment (*DIV*). The role of dividends as a driver of shareholder value has been subject to controversy over recent decades. Lintner (1956) and Gordon (1959) formalise the popular, traditional position that dividends are a favourable signal which, judiciously managed, can improve firm value. Miller and Modigliani (1961) challenge this traditional position on the basis of their exposition of the ideal markets case. Opponents hold that dividends have a negative impact on shareholder value because firms with high dividend payouts have higher required rates of return and hence lower share prices, or are economically insignificant (Litzenberger and Ramaswamy, 1979; and Ang and Peterson, 1985). Denis and Osobov (2008) provide a cross-country analysis to this effect. Others provide evidence to indicate that dividends are highly relevant to share price but in different directions at different times (Baker and Wurgler, 2004; and Pinkowitz et al., 2006).

While the impact of distribution policy on share price remains inconclusive, dividends may serve as one of the few available credible signals of financial mobility where market efficiency is limited. However, this may be due to the fact that in China low cash dividend payments are very common among listed firms. Those firms that adopt a constant cash dividend policy only account for 5.5% (Allen et al., 2005). It is commonly observed that many of them pay stable dividends prior to an issue, but soon reduce or even suspend dividend payments once the new shares are floated (Fernald and Rogers, 2002). To curb this malpractice, in 2006 the CSRC promulgated the 'Management of Cash Dividends by Listed Companies' with a view to improving the quality of the distribution system and safeguarding shareholders' interests.[4] Despite such efforts on the regulator's part, a dividend may amount to a cash-wasting attempt falsely to signal a promise or as a means of shedding uninvestable cash in a time of decline. Given the inconclusiveness of the debate concerning dividends and special complications in the case of China, it appears to be appropriate to acquiesce in the inconclusiveness of the debate rather than hypothesise in one direction or the other. To capture the potential impact of the distinctive, albeit irregular, prior-issue payment decision, as opposed to the post-issue dividend payment decision, while taking due account of the regulatory requirements, we define dividend payments using a dummy variable that takes the value of 1 if a firm paid a dividend in the two years prior to the issue, or 0 otherwise.

Ownership concentration ($Herf_3$). Significant changes in ownership structure associated with the new issue can materially affect the value of both the existing and the new investors' stakes in the firm (Kothare, 1997). The liquidity hypothesis suggests that large block holdings can increase the liquidity of their stakes if blockholders subscribe for rights and gain a significant portion of new shares (Armitage, 2010). The corporate control hypothesis proposes that blockholders possess greater resources than individual investors and can become better informed. They often command dominant voting power, feel more committed to the firm and, hence, have a greater incentive to monitor the issuer (Gul et al., 2010). Such a control structure will militate against the incentive to invest issue proceeds in projects which serve private interests at the expense of the corporate interest. Against this, agency theory argues that ownership concentration aggravates conflicts notably between minority shareholders and controlling shareholders with voting power. These conflicts and potential abuses operate against a fair market valuation (Slovin et al., 2000).

Corporate ownership in China is highly concentrated in the hands of a single investor or a group of investors – usually the state itself and state-owned enterprises or institutions holding over 60% of the voting shares of firms. This highly concentrated ownership structure has led to entrenchment, encroachment, and appropriation on the part of dominant shareholders to the detriment of minority shareholders, and firm value is severely underestimated. This is all the more serious because the legal protection of external investors is weak. It is commonly observed that the dominant controllers have a strong incentive and opportunity to seize large amounts of cash at their disposal to engage in self-serving expropriation, mostly by means of related-party transactions (Liu et al., 2013). Decisions on seasoned issues cannot therefore be dissociated from the pursuit of private benefits by controllers who show scant regard

4 The CSRC imposed the 'Management of Cash Dividends by Listed Companies' in 2006, which stipulates that issuers must continue with dividend payments in the two years following the new issue.

for minority shareholders. Few public shareholders have participated in discussing issue plans at the available opportunities to exercise any influence on the issue decision. The opportunistic and vigilant pursuit of self-interest on the part of the most powerful and influential shareholders will operate unfavourably. The foregoing discussion leads to our hypothesis that ownership concentration has a negative price effect when a new issue is announced with the strength of the effect depending on the extent of investors' concerns. To test for the significance and direction of the influence of ownership concentration on market returns, we employ the Herfindahl index to measure ownership concentration by way of the largest three shareholders' shareholdings within the firm, $Herf_3$, as at the balance sheet date immediately prior to the issue announcement.

Size of firm (*SIZE*). Stocks of small-capitalisation companies tend to be more volatile than those of large-capitalisation companies (Jain and Kini, 1999). In China, a growing tension exists between the continued pressure to expand the stock market and the lack of new capital. Amid asymmetric information about the small-cap stocks and excessive speculation in the secondary market, investors scramble to buy small-cap stocks at a high price even where their performance and prospects are distinctly lacklustre, with a view to stagging them for short-term gains. Trading in the stocks of large-cap companies is less vulnerable to market fluctuations and subject to more efficient pricing because their performance tends to be more stable and is closely monitored by large, active, sophisticated and credible market participants. However, an unfavourable influence arises when the government's typical retention of direct control over many large firms through majority shareholdings encourages managerial entrenchment and corporate tunnelling. Such a prospect might well be expected to trigger a negative market reaction. Small firms, by contrast, tend to be shielded from government ownership, leaving them free to develop their growth potential (Liu and Pang, 2009). In such circumstances, their managers' interests are more likely to be aligned with those of shareholders. We accordingly hypothesise that market returns are negatively associated with firm size. We measure firm size by the natural logarithm of the firm's market capitalisation prior to the issue, adjusted by the inflation rate in the corresponding year.

Issue characteristics. By way of potentially significant issue characteristics, we consider underwriting, auditing, discount in subscription price, offering size, intended use of issue proceeds, and change in capital structure following the issuance in the estimation.

Discount in subscription price (*DISC*). The market efficiency hypothesis suggests that the subscription price should be directly related to the disparity between the management's assessment of the firm's quality and the market's valuation of the firm (Eckbo and Masulis, 1992; and Armitage, 2010). In an issue where the underwriter expects a lower take-up from existing shareholders, underwriters must incur higher investigation costs and hence impose a higher issue price discount to protect them from the failure of the offer. As an alternative to underwriting, the issuer can reduce the risk of a failed issue equally effectively by setting a sufficiently low offer price relative to the current uninformed market price (Marsh, 1980; and Slovin et al., 2000). In the presence of information asymmetries, a deep discount issue serves as a substitute mechanism for ensuring a full subscription to the offer (Bohren et al., 1997).

Under the CSRC listing rules, the subscription price must be linked to the firm's market price. To prevent deep discounting and protect shareholders' interests, the

CSRC stipulates that the issue price shall not be either below or above the average price for 20 trading days prior to a benchmarking date in the cases of open offers, private placements and convertible issues, while no benchmarking date is set for rights issues. In line with the CSRC's benchmarking dates for pricing, the announcement day for rights issues is deemed to be the first publication of the firm's intention to undertake a rights issue. The announcement day for open offers is deemed to be the first publication of the firm's intention to undertake an open offer. The press release date of the decisive board meeting is taken to be the announcement day for private placements. The date of the announcement of the issue prospectus is taken as the announcement day for convertible issues. Hence, we define the discount in subscription price, *DISC*, as follows:

$$DISC = (P_{sub,\, t-20} - P^*)/P^*, \tag{3}$$

where $P_{sub,\, t-20}$ is the average closing price for the 20 trading days prior to the issue announcement date; and P^* is the subscription price for new shares for each individual issue. A larger, positive *DISC* indicates a higher discount, while a negative number indicates premiums. If the market discount is a reflection of the quality of the issuers, then the market should respond favourably insofar as the issuer is deemed to be a good-quality issuer, whilst the opposite holds for a poor-quality issuer. Further, if the market interprets rights issues as a special offer to state owners, then a relatively lower subscription price in relation to the current market price will be viewed unfavourably and interpreted as a value loss connected with relation-building and opportunistic undertakings on the part of state owners and other inside parties. It is, accordingly, reasonable to formulate our hypotheses for the three cases in accordance with the above discussion.

In respect of private placements, the discount effect may differ according to the targeted investors. To explore this possibility, we distinguish price discount in the case of controlling shareholders from that of institutional investors. We hypothesise that there is a significant, adverse impact on market returns if target investors are controlling shareholders in accordance with agency considerations, but a significant, positive impact if target investors are institutional investors in accordance with a certification effect. To test the significance and direction of the distinctive impacts, we include the interaction terms between price discount and the target investor, namely $DISC \times BUYER_{Controller}$ and $DISC \times BUYER_{Institution}$, in the estimation.

Underwriting (*UNDER*). The signalling model points to the relevance of underwriting to firm attributes. The highest quality firms are expected to prefer an uninsured offer, medium quality firms an underwritten offer and the lowest quality firms a full commitment offer (Heinkel and Schwartz, 1986). The adverse selection hypothesis suggests that undervalued firms will tend to experience higher participation rates and the selection of uninsured issues, leading to a positive price reaction. Low quality firms with an anticipated low participation rate opt for a full commitment contract, thus triggering a negative price reaction (Eckbo and Masulis, 1992). An opposing view holds that the highest quality firms would choose an insured issue because underwriter certification provides them with a quality seal (Gopalan et al., 2011).

In China, all new issues, apart from private placements, must be underwritten in line with the CSRC regulations. In the case of rights issues, the CSRC requires that an issue be underwritten by the best efforts procedure for the sake of quality assurance

and in the interests of state ownership. The procedure is mandatory, which may reduce the quality assurance effect associated with auditing. We accordingly expect a small or zero effect for underwriting. Underwriting decisions on open offers, convertible issues and in particular private placements are at management's discretion. Assuming that the market is aware of the implications of this situation and the costs of the range of options, our corresponding hypothesis is that there is a positive relationship between underwriting and market returns, but that the strength of the effect depends on the risk associated with the chosen method. In descending order of the risk to which the underwriter is exposed, the methods are full commitment, best efforts and standby. We employ three dummy coded variables, $Under_{Full}$, $Under_{Best}$ and $Under_{Standby}$, for the three methods. $Under_{Full}$ takes the value of 1 where an issue is underwritten in full, or 0 otherwise. $Under_{Best}$ takes the value of 1 where an issue is underwritten by best efforts, or 0 otherwise. $Under_{Standby}$ takes the value of 1 where an issue is underwritten by standby, or 0 otherwise.

Auditing (*AUDIT*). The quality of auditing plays an external monitoring role on behalf of shareholders in attesting to the credibility of accounting information produced by management (Cohen et al., 2002). High-quality auditors help to improve the firm's corporate governance and restrain agency problems (Hay and Davis, 2004), whilst low-quality auditors cannot effectively exercise the monitoring of clients' financial reporting processes (Claessens et al., 2002) and may be susceptible to coercion. It is tempting to conclude that a new issue that is audited by a notably more prestigious firm sends a favourable signal to the market. However in an emerging, uncertain market with limited transparency, the contrary possibility must be recognised and tested, not least because sub-contracting to local firms may threaten even a top firm's credibility. In China, all listed firms are required by the CSRC to have their new issues audited by Certified Public Accountants (CPAs).[5] An auditor's commercial relationship with its client may cause it to be unduly accommodating and – either locally or worldwide – there may arise a conflict of interest between the audit and consultancy roles. There have been several cases in China recently where the credibility of audited figures has been challenged, for example, NQ Mobile. Regulators are tightening the rules on short sales in order to contain abuses. There is clearly a greater danger with regard to rights issues, open offers and private placements that do not share the contractual disciplines of convertible bond issues. Accounting standards remain low in practice even though international standards nominally apply, and irregularities are widespread. Analysts are also misled in extreme ways such as hiring employees and renting inventories in advance of their inspections. It follows that auditing can lead to outcomes which enhance firm value when a top firm conducts a full audit without subcontracting, or to outcomes that detract from corporate value when the auditor is deemed unreliable, or indeed to neither when the market sets no store by the audit function. We, accordingly, hypothesise that an issue benefits from the presence of a top-10 auditor. We define a dummy variable, *AUDIT*, that takes the value of 1 for Top-10 auditors, or 0 for auditors who are not within the Top-10 category.[6]

5 CPAs were originally set up and sponsored by the local governments and institutions in the early 1990s, and have been gradually transformed into independent auditors through a series of reforms. CPAs claim to have now adopted international accounting and auditing standards and to function accordingly.

6 The Chinese Institute of Certified Public Accountants (CICPA) has ranked the Top 100 Chinese audit firms since 2002 based on their annual revenues as published by CICPA. As the Top-10 ranking is relatively stable, we extend the ranking to 1998 in order to maintain our sample size.

Size of offering (*OFFER*). The price pressure hypothesis suggests that the market reacts negatively to an increase in the supply of shares because an increased supply of shares tends to force the share price to drop (Asquith and Mullins Jr., 1986). According to agency theory, issue proceeds are vulnerable to sub-optimal investment deployment as management exercise discretion regarding their personal interests even to the extent of threatening corporate survival. Furthermore, raised funds may be withdrawn into associated companies in which managers have more substantial interests, to the detriment of the deprived firm (Bates et al., 2009; and Mann and Sicherman, 1991).

At the same time, larger issues stand to benefit from more vigilant monitoring, and inspire greater market confidence accordingly (Lamberto and Rath, 2010). In this regard, existing research shows a positive association between large issues and large issuers and between large projects and high prospective investment opportunities in both the private and public domains (Jain and Kini, 1999; and Tan et al., 2002). This argument, however, may not hold for China where a larger issue is most likely to be beset with substantial agency costs. Management appropriate cash from the market and direct it into low-yielding investments and tunnelling operations; they even alter the usage of proceeds from that specified in the prospectus, deploying proceeds non-productively, altogether impairing long-term firm value (Liu et al., 2013). We, accordingly, hypothesise that open offers, rights issues and private placements are particularly prone to agency problems due to the *ex-post* utilisation of issue proceeds, leading to a negative market reaction.

Convertible bonds are subject to strict discipline, which mitigates agency dangers (Stein, 1992; and Jiraporn and Gleason, 2007). Further, in China, firms proposing to issue convertible bonds are required by the CSRC to have these rated and reviewed annually in order to account for any outlook changes. The market anticipates effort and disciplined behaviour. In addition, funds raised through convertible issues are often linked with national strategic projects. This is likely to extend the scrutiny of the firm. We therefore hypothesise that a convertible issue is positively associated with market returns. We define the size of the offering according to the type of issuance, $Offer_{RI}$, $Offer_{OO}$, $Offer_{PP}$ and $Offer_{CV}$, which are measured, respectively, as the ratio of gross proceeds raised through rights issues, open offers, private placements and convertible issues over the firm's market capitalisation at the accounting year end preceding the issue.

Intended use of issue proceeds (*FUSE*). The asymmetric information hypothesis addresses new financing events but does not distinguish between the different purposes for which funds will be deployed (Mikkelson and Partch, 1986). Walker and Yost (2008) document that the market reaction depends on the intended use of issue proceeds. The CSRC requires that issuers publish a detailed statement specifying how acquired proceeds are to be deployed across four broad categories. The Wind Financial Terminal provides detailed information for individual projects and their corresponding investment amount. We examine all reports for the 1,810 issues published in the *China Securities Times* for the period 1992–2010 and ascertain that all issuers specify the intended use. Most issuers stipulate multiple usage. In such cases, we adopt the primary stated application as measured by the largest investment amount. We then allocate each case across four categories, namely, innovation and high-tech projects, general fixed investment including the acquisition of other companies, intra-firm investment, and the repayment of debt or financing working capital.

Our hypotheses follow accordingly. As high-tech projects enhance the firm's competiveness and prospects, and the general fixed investment increases the real asset base of the firm, we hypothesise that both impinge positively on market returns. By contrast, intra-firm investment carries high potential agency costs primarily associated with related-party transactions, and hence embodies a negative potential. The repayment of debt or financing working capital needs does not necessarily change the asset structure of the firm, yet such repayment may be harmful to the extent that a lower financial leverage reduces the value of any effective corporate tax shield and that financing additional working capital needs are equated by the market with a less disciplined use of resources by management seeking to shirk their accountabilities. Hence, we hypothesise that there is a negative relationship between the repayment of debt and financing working capital needs and market returns. We employ four dummy coded variables, $FUSE_{Tech}$, $FUSE_{Fixed}$, $FUSE_{Intra}$ and $FUSE_{DWC}$, for the four intended usage of issue proceeds. $FUSE_{Tech}$ takes the value of 1 for innovation and high-tech projects, or 0 otherwise. $FUSE_{Fixed}$ takes the value of 1 for general fixed investment, or 0 otherwise. $FUSE_{Intra}$ takes the value of 1 for intra-firm investment, or 0 otherwise. $FUSE_{DWC}$ takes the value of 1 for the repayment of debt or financing working capital needs, or 0 otherwise.

Change in capital structure (ΔDE): The extent of the vulnerability of equity to agency costs depends on the overall capital structure, in the sense that a leveraged capital structure incorporates disciplines which offset equity's agency costs. Judicious financial leverage helps to ensure that operations are conducted in such a way that they will meet contractual obligations (Myers and Majluf, 1984). An increase in equity is potentially detrimental to existing shareholders to the extent that it reduces the risk of the firm's outstanding debt without necessarily adding to the value of equity (Jensen and Meckling, 1976). This applies even more to the case of China, where the decision to issue equity brings into play the prevalent, widespread agency issues which beset the market. The market duly responds unfavourably in the form of negative market returns. We accordingly hypothesise that a negative relationship exists between the ΔDE ratio and abnormal market returns surrounding the announcement of the issuance. We measure the change in capital structure by introducing the offering size into equation (4) in order to relate the change in capital structure caused by the amount issued to the overall financial resources invested in the firm:

$$\Delta DE = \frac{Debt - \alpha Equity}{MV + (1-\alpha)Equity} - \frac{Debt}{MV}, \tag{4}$$

where *Debt* is the total book value of short-term and long-term debt; *Equity* is the gross proceeds raised in the new issue; *MV* is the market value of the firm on day $t = -30$; and α is the proportion of funds proposed by the issuing firm for refinancing existing debt. The market value of the issuing firm is the product of the share's closing price on day $t = -30$ and the total number of outstanding shares prior to the issue (Tan et al., 2002).

Security-specific characteristics. Features specific to the security issue itself potentially influence the market's perception about the value of a new issue and can be identified in the case of rights issues, private placements and convertible issues. We account in the estimations for take-up in rights issues, targeted buyer in private placements, and credit rating in convertible issues.

Rights take-up (*TAKEUP*): The liquidity hypothesis suggests that large block holdings narrow the investor base of the firm, causing a liquidity reduction in the firm's shares which, in turn, adds to the price pressure on the shares issued. However, if they 'guarantee' a buy-up of a big portion of new shares, large block holdings may lead to increased firm liquidity (Kothare, 1997) and reduced ownership dilution or wealth transfer from old to new shareholders through the lessening of asymmetric information (Eckbo and Masulis, 1992).

In China, the largest shareholders fail to take up their rights on a pro-rata basis, but this does not threaten their controlling status as they hold an ultimately dominant position in the firm by way of a stake exceeding 60%. The management exploit the opportunity to grab money from the market as soon as the firm meets the issue criteria, regardless of whether they have enough cash to subscribe for the rights. Conflicts of interest between the largest shareholders and the uninformed minority shareholders loom large. This would be expected to drive down the share price when the announcement is made. If the largest shareholders take up the rights, the market should respond positively insofar as a lower risk of agency costs will be perceived. This is particularly significant in China's prevailing scenario of conflicting interest, minority exploitation and informational opacity. We accordingly hypothesise that there is a positive relationship between take-up and market returns. We define a dummy variable, *TAKEUP*, that takes the value of 1 if the largest shareholders take up the rights, or 0 if they renounce the rights.

Target buyers in private placements (*BUYER*): In private placements, the shares are offered to selected investors, which are often institutions that may pass them on to the public. Typically targeted at institutional investors, private placements benefit from the certification effect associated with the standing of the chosen investors (Wruck, 1989; and Chakraborty and Gantchev, 2013). Although the placing price must contain some inducement to subscribe, the undervaluation problems associated with the negative signals of open offerings are avoided (Hertzel and Smith, 1993; and Wang, 2012). An offsetting unfavourable impact may, however, arise when a pyramid ownership structure and intra-group cross-holdings produce strong incentives for the controlling shareholders to indulge in – as often in China – related-party transactions and overinvestment (Shleifer, 2000). When targeted subscribers include the controlling shareholders as applies in China, there is an incentive for management to issue shares when they are known to be undervalued in the market. When outside institutional investors are being sought, there is a contrary incentive to issue shares when prices are known to be high (Wu et al., 2010). Our corresponding hypothesis is that the market reacts negatively if the acquirer of shares is the controlling shareholder but positively if the acquirer is an institution. We define a dummy variable, $BUYER_{Controller}$, that takes the value of 1 if the shares are sold to the controlling shareholders, or 0 otherwise.

Rating of convertible issues (*RATE*): The asymmetric information hypothesis predicts that the price reaction to security offerings depends on the sensitivity of firm value to the change in the value of the new securities (Myers and Majluf, 1984). Credit ratings potentially affect share price by adding to public information about the creditworthiness of issuers. In China, the CSRC requires that convertible bond issuers have their convertibles rated and arrange follow-up ratings. All qualified issues must be rated preferably AA+ and above, but no lower than A–. In addition, the criteria are set high in terms of profitability, capital adequacy and guarantees. It follows that the usual benefit of rating in a competitive market is reduced owing to the fact that the

ratings in China tend to be uniformly high as a result of this quality hurdle (Poon and Chan, 2008). Our corresponding hypothesis is that a weak, positive relationship or no relationship exists between credit ratings and market returns. To test the signalling power of rating as discussed by Myers and Majluf (1984), we include credit ratings and define a dummy variable, *RATE*, that takes the value of 1 if the convertible is assigned AA+ and above, or 0 if it is below AA+ but above A–.

(b) Summary of Descriptive Statistics

Table 4 reports the basic characteristics of variables, comparing the idiosyncratic characteristics of both the issuers and the issues across the four types of seasoned issuance. Prior to issuance, it appears that OO-firms have a higher median MB ratio (1.76) compared to RI-firms (1.62) and PP-firms (1.55), while CV-firms evince the lowest level of growth opportunities (1.41). With respect to analysts' forecasts, it appears that analysts are more reserved in the case of rights issues (−0.003%) and private placements (−0.005%), with greater divergence regarding cash offers (0.017%), which reflects their perception of the issuer's prospects and underlying risk-taking in their future operations.[7] The run-up in price is highest for open offers (0.29), corresponding to the most significant increase in market returns prior to the announcement as shown in Table 2, but lowest for private placements at -0.03. Furthermore, the majority of issuers – particularly in the case of private placements – pay dividends in the two years preceding the proposed issue, which is in line with the CSRC requirements. Firms that conduct rights issues, open offers and private placements have a relatively lower ownership concentration (20%, 15%, and 18%, respectively), compared to CV-firms whose ownership is highly concentrated (34%). Overall, this degree of concentration shows that the largest shareholders have absolute control within Chinese firms. RI-firms are the smallest in terms of firm size (17.60), while convertible issuers are the largest (20.99). This supports the claim that convertible issues are the natural preserve of large firms.[8]

With regard to issue-specifics surrounding the issue announcement period, rights issues tend to be made at a far deeper discount (0.66), compared to open offers (0.12). In China, the largest shareholders commonly renounce their rights. This arouses serious concerns among investors regarding potential abuses of the proceeds of the issue, who often react by failing to subscribe. Underwriters set a deep discount in anticipation of a lower take-up to protect themselves from potential failure. Notably among these statistics, the discount for private placements is far smaller, at 0.097 – just below 0.10, the benchmark for discount price in private placements set out by the CSRC. This is evidence to suggest that PP-firms cultivate the price in order to

7 Using analysts' forecasts for earnings per share, we find that CV-firms present the most prosperous earnings forecasts measured by the difference of forecasted and actual earnings per share (12.84%), while the reverse holds for OO-firms (9.02%). In terms of issue guarantees and contractual safeguards, the issue criteria are the strictest in convertible bond issues, helping to restrict issues to sound, well-performing firms. In private placements, the criteria are the least strict, thus making them more attractive to worse-performing issuers.

8 According to the *Interim Measures for the Administration of Issuance of Convertible Bonds by Listed Companies*, which was promulgated in 1997 and revised in 2001 and 2006, a company needs to meet the following requirements in order to qualify for a convertible bond issue: (1) the minimum issue amount should not be less than 100 million yuan; (2) net assets should not be less than 2.5 billion yuan; and (3) the company must have been continuously profitable and the weighted averaged ROE should not be less than 10% in the last three accounting years.

Table 4

Summary Statistics for Variables in Regression Analysis

	Total Sample		*Rights Issues*		*Open Offers*		*Private Placements*		*Convertible Bond Issues*	
Pre-issue characteristics										
$MB_{Pre\text{-}issue}$	2.3794	1.4848	1.6224	1.8236	1.7553	1.6198	1.5456	1.7523	1.4141	0.1881
$FCAST_{Diverg}$	–0.00009	0.0009	–0.00003	0.0045	0.00017	0.0032	0.00005	0.0459	–0.00001	0.0115
RUNUP	0.1549	0.2561	0.1915	0.4943	0.2856	0.1713	–0.0329	0.3188	0.1024	0.1473
DIV	1108	0.7247	578	0.6208	162	0.9310	301	0.8776	67	0.8272
$Herf_3$	0.1982	0.1486	0.2034	0.1472	0.1532	0.1351	0.1767	0.1421	0.3382	0.1626
$SIZE_{Pre\text{-}issue}$	18.8675	0.9610	17.6036	0.7858	18.2577	0.8729	18.1481	0.9337	20.9898	1.2154
Issue characteristics										
DISC	0.5033	1.2042	0.6655	0.934	0.1246	0.1027	0.0965	1.2036	–0.0316	0.3969
$UNDER_{Best}$	835	0.6185	694	1.00	139	0.4947	2	0.0066	0	0
$UNDER_{Full}$	74	0.0548	0	0	64	0.2278	10	0.0329	0	0
$UNDER_{Standby}$	210	0.1556	0	0	55	0.1957	84	0.2763	71	1.00
$UNDER_{None}$	231	0.1711	0	0	23	0.0819	208	0.6842		0
AUDIT	537	0.3519	369	0.3968	98	0.5612	137	0.4029	39	0.49312
$AUDIT_{Non\text{–}Top10}$	836	0.5481	562	0.6032	77	0.4388	203	0.5971	41	0.5070
Size of offering	0.3093	0.3413	0.2907	0.2125	0.4720	0.6165	0.5851	0.6638	0.6791	0.3202
$FUSE_{Tech}$	403	0.2353	221	0.2374	41	0.2020	132	0.2651	9	0.1111
$FUSE_{Fixed}$	660	0.3853	443	0.4758	65	0.3202	122	0.2450	30	0.3704
$FUSE_{Intra}$	362	0.2113	139	0.1493	43	0.2118	162	0.3253	18	0.2222
$FUSE_{DWC}$	128	0.0747	55	0.0591	28	0.1379	35	0.0703	10	0.1235
$FUSE_{Others}$	160	0.0934	73	0.0784	26	0.1281	47	0.0944	14	0.1728
ΔDE	0.1287	0.3606	0.1085	0.2406	0.1926	0.3264	0.1755	0.5680	0.1346	0.2419
Security-specific characteristics										
TAKEUP	86	0.0837	86	0.0837						
NON–TAKEUP	942	0.9163	942	0.9163						
$BUYER_{Controller}$	137	0.2751					137	0.2751		
$BUYER_{Institution}$	202	0.4056					202	0.4056		
$BUYER_{Others}$	159	0.3193					159	0.3193		
RATE (AA+ and above)	46	0.5679							46	0.5679
RATE (below AA+ but above A–	35	0.4321							35	0.4321

Note:

The table reports the basic characteristics of variables across the four types of seasoned issuance. For continuous variables, the reported figures are the median and standard deviation; for categorical variables, the reported figures are the number and proportion as decimals. Continuous variables refer to *MB*, $FCAST_{diverg}$, *RUNUP*, $Herf_3$, *SIZE*, *DISC*, *Size of offering*, and ΔDE. The remaining variables are categorical variables.

For the definition of the variables, see Table 3.

comply with the CSRC benchmark. By contrast, convertible bonds (−0.03) are sold at a premium. Convertible issues are implemented by the largest firms with a strong financial standing, good ratings and credible guarantees, and are backed by strict regulations. The underwriter accordingly expects to experience the least risk owing to the full subscription by a confident market.

All rights issues are underwritten by best efforts, which is in accordance with the CSRC listing rules, whereas 49.47% of open offers are underwritten in this way. In the case of private placements, it is only 0.66%. In addition, 100%, 27.63% and 19.57% of the issues are underwritten by the standby method in convertible issues, private placements and open offers, respectively. Full commitments are mostly used in open offers (22.78%) where the danger of a failed issue looms largest. This compares with 3.29% for a private placement and none for convertible issues. In the case of issues which are not underwritten, the majority of private placements (68.42%) are privately arranged between the issuers and the buyers, but only 8.19% for open offers and none for rights issues.

In terms of auditing quality, more than half of the issuers are not audited by the 'Top-10', except with regard to open offers. This practice may reflect the old adage that 'bad auditors drive out good' with resultant damage to public confidence in the case of rights issues and private placements; whereas, with high quality issuance such as in convertible bonds, where implicit safeguards exist, the issuer sets out to minimise issue costs as in mature markets. The predilection for the Top-10 in the case of open offers (56%) could be explained by the particularly exigent need for issuers to garner every possible resource of credibility in order to convince the market.

With respect to the size of the offering, rights issues are the smallest because their size is contained by the 30% cap imposed by the CSRC. The largest issues are convertible issues (0.68), followed by private placements (0.59) and open offers (0.47). These observations are consistent with Table A1 showing that private placements have overtaken open offers and become the dominant means of equity issuance since 2005 when the full scale of the split-share structure reform was launched. The shift reflects the demand for capital or asset injection for corporate restructuring, which accords with the intention of this reform.

As far as the intended use of issue proceeds is concerned, the most frequently professed destination is general capital investment, directed at increasing the firm's real asset base. This applies to all types of issue except for private placements, and is highest for rights issues (47.58%). Inter-firm allocation is the most frequently stated application in private placements (32.53%). Since private placements are intended to effect inter-firm allocation by means of an injection of fresh cash or assets by the parent, they may inevitably lead to a risk of related-party transactions and agency-driven intra-firm transfers. The repayment of debt and refinancing working capital is the highest in open offers (13.79%). Compared to other groups, more private-placement firms say that they intend to use the proceeds for research and innovation (26.51%).

OO-firms experience a greater amount of change in their debt-equity ratio (19.26%) than other issuers. RI-firms have the lowest level of ΔDE ratio (10.58%), arguably because the smaller issues required by the CSRC restriction limits their impact on the financial structure of the issuers.

With respect to issuance-specific features, in the case of rights issues, 91.63% of the largest shareholders do not take up their subscription rights or do not fully subscribe to their rights, confirming the wide claim that they, normally the state controllers, renounce their rights. In the case of private placements, 27.51% of targeted investors are the controlling shareholders, while 40.56% are institutional investors, a practice which differs from the situation in more mature markets. In the case of convertible issues, more than half of the issuers (56.79%) are assigned AA+ and above, but none is below A– as required by CSRC listing rules. This is evidence to suggest that credit ratings are uniformly high among convertible issuers who have striven to conform to the CSRC issuance rules.

In sum, our initial results indicate potentially significant, distinctive behaviour on the part of issuers across the different forms of seasoned issuance. We indicate in the presentation of our hypotheses how this relates both to the context of finance – notably agency theory – and to the evolving salient aspects of modern China's mixed economy. These distinctions and their underpinnings promise testable insights into finance theory and thereby justify the further analysis that we propose to undertake.

(c) Multiple Regression Results and Discussions

Table 5 presents the estimation results for rights issues, open offers, private placements and convertible bond issues based on ordinary least squares regressions of abnormal returns over the five-day announcement period [–2, +2] on variables that may play a role in determining price effects.

It appears that the pre-issue measures provide the market with certain insights into the quality of the corporate plan to which investors will be committed. The results for the *MB* variable evince instructively contrasting results for the different forms of issues. The regression coefficient on the MB ratio is highly significant and positive in the case of open offers (0.27, $p < 0.01$), but negative in the case of rights issues and private placements (-0.30, -0.23, both $p < 0.05$). It is weakly associated with convertible issues at the 10% level. Combined with the results of the CAR analysis, the positive significance of *MB* in open offers does not seem to suggest that either the market or management set store by corporate growth prospects with higher *MB* presaging greater growth prospects. Rather our findings suggest that *MB* reflects a measure of overvaluation, particularly given the relative opacity of China's market. This overvaluation could partly be the result of over-exuberance and a lack of discrimination on the part of investors, both of which are clearly visible in the form of indiscriminate high volume of applications whenever a new issue occurs. The adverse impact in the case of rights issues and private placements, which are prone to agency problems owing to the predominance of state ownership associated with the issuers, could well reflect the reality that issuers – often the state – take the opportunity to issue at a beneficial price to favoured parties, and the market fears that new investments will not reinforce prospects but will rather encourage controlling shareholders to engage in related-party transactions and overinvestment. Overall, our results suggest that the MB ratio is not perceived as a credible signal of prospects of future investment, but rather as a measure of overvaluation and mispricing or a measure of market anomaly associated with agency costs on the part of inside parties. However, we should be cautious about this interpretation as intrinsic equity values are less reliable in China than in more market-efficient environments.

Table 5

Regression Results of the Five-day Cumulative Abnormal Returns (CARs [−2, +2]) around the Issue Announcement Date by Issue Method

Variable	*Rights Issues*	*Open Offers*	*Private Placements*	*Convertible Bond Issues*
Pre-issue characteristics				
$MB_{Pre\text{-}issue}$	−0.303**	0.273***	−0.226*	0.114*
	(0.150)	(0.106)	(0.119)	(0.067)
$FCAST_{Diverg}$	0.156*	0.208*	0.268*	0.194**
	(0.089)	(0.126)	(0.145)	(0.096)
RUNUP	−0.283***	0.372***	0.271*	0.224***
	(0.109)	(0.124)	(0.153)	(0.078)
DIV	0.127	0.273*	0.255**	0.163
	(0.142)	(0.152)	(0.127)	(0.129)
$Herf_3$	−0.275**	−0.191**	−0.358**	0.257**
	(0.138)	(0.082)	(0.161)	(0.111)
$SIZE_{Pre\text{-}issue}$	−0.161*	−0.254	−0.217	0.138
	(0.096)	(0.157)	(0.133)	(0.146)
Issue characteristics				
DISC	−0.416**	−0.348*	−0.083*	−0.251
	(0.199)	(0.211)	(0.049)	(0.207)
$DISC \times BUYER_{Controller}$			−0.356***	
			(0.132)	
$DISC \times BUYER_{Institution}$			0.268**	
			(0.130)	
$UNDER_{Standby}$		0.242**	0.171*	0.218**
		(0.121)	(0.099)	(0.104)
$UNDER_{Best}$	0.228	0.205**	0.182*	
	(0.141)	(0.103)	(0.102)	
$UNDER_{Full}$		−0.327**	0.137*	
		(0.164)	(0.081)	
AUDIT	0.142	0.197*	0.183*	0.092
	(0.087)	(0.119)	(0.108)	(0.082)
Size of offering	−0.395**	−0.364**	0.219**	0.174**
	(0.163)	(0.161)	(0.087)	(0.085)
$FUSE_{Tech}$	0.498***	0.492***	0.377***	0.462***
	(0.151)	(0.124)	(0.139)	(0.138)
$FUSE_{Fixed}$	0.482**	0.440**	0.501***	0.335**
	(0.219)	(0.176)	(0.167)	(0.165)
$FUSE_{Intra}$	−0.514**	−0.518**	−0.529***	−0.354**
	(0.216)	(0.253)	(0.175)	(0.169)
$FUSE_{DWC}$	−0.523***	−0.478**	−0.468***	−0.413*
	(0.129)	(0.231)	(0.182)	(0.236)
ΔDE	−0.237**	−0.212	−0.337**	−0.144*
	(0.115)	(0.103)	(0.165)	(0.082)
Security-specific characteristics				
TAKEUP	0.312***			
	(0.085)			
$BUYER_{Controller}$			−0.330**	
			(0.164)	
RATE				0.081*
				(0.046)

(*Continued*)

Table 5
Continued

Variable	*Rights Issues*	*Open Offers*	*Private Placements*	*Convertible Bond Issues*
Observations	417	135	261	61
R^2	0.112	0.188	0.552	0.315
F	2.767	1.840	4.852	1.896
p–value	<0.01	0.0307	<0.01	0.0498

Notes:
The table presents regression results where the dependent variable is the CAR over the 5-day window around the issue announcement date, CAR [−2, +2]. The other variables are defined in Table 3. Standard errors are reported in parentheses. *F* denotes the overall *F*-statistic, which is used to test the overall significance of the regression model, with the null hypothesis that all of the regression coefficients are equal to zero. We control for year and industry effects using year and industry dummy variables in all the regressions.
The sample consists of 1,659 eligible seasoned issues by listed firms in China between 1991 and 2010.
*, ** and *** denote statistical significance based on two-sided tests at the 10%, 5% and 1% levels, respectively.

The coefficient on $FCAST_{diverg}$ has the expected sign with different degrees of significance. There is most significance in the case of convertible bonds (0.19, $p < 0.05$) but marginal significance for the other forms of issues. The relatively weak correlation suggests that the market has limited confidence in analysts' earnings forecasts in the case of plain equity offerings in contrast to convertible offerings. In China, as convertible bonds are subject to more rigorous CSRC regulation, they lend themselves to more extensive analysis than the other more opaque methods of equity issuance. This rigour increases the transparency and overall credibility of a convertible offering, leading to favourable market price behaviour.

Our findings in respect of price run-up provide informative differences across the types of issuance. We find a highly significant, positive effect in open offers (0.37, $p < 0.01$) confirming our hypothesis that the price in the periods leading up to the issue comprises evidence that issuers go to market when shares are high or overpriced. This result is consistent with the observations in the CAR analysis as reported in Tables 1 and 2. Our finding supports the position that timing can be most readily achieved as suggested by Alti (2006), and is, in practice, being effected through equity issuance in the form of open offers. Price run-up is, likewise, highly significant and positive for convertible issues (0.22, $p < 0.01$), but the circumstances of convertible issuance invite a different interpretation. In this case, price run-up may reflect the market's confident expectations about the quality of convertible issues due to their greater transparency and disciplinary obligations. Rights issues and placements differ from the foregoing as well as from each other. Price run-up has a negative impact in the case of rights issues (−0.28, $p < 0.01$), but a positive impact on private placements (0.27, $p < 0.10$). For rights issues, the direct extraction of wealth dominates the influence of price run-up. More than 90% of the largest shareholders fail to take up their subscription rights or do not fully subscribe to their subscription rights as shown in Table 4. Investors regard rights issues as an opportunity on the part of the dominant shareholders to gather cash from the market when the price rises and to deploy it dysfunctionally and selfishly even to the extent, for example, of siphoning funds into associated companies where their proportionate interest exceeds that in the issuing company. Our results lend support to Shivakumar's (2000) and Cohen and Zarowin's (2010) arguments that managers exploit mispricing opportunities in an environment where accounting and auditing

standards are flawed. In the case of private placements, agency influences and the dominance of the controlling shareholders prevail. The management cut the costs of purchasing new shares by timing the issue when the price level is low rather than high. Such price manipulation can transfer benefits from the public to the target investors. If and when in due course the price recovers, the market is reassured that controllers are discouraged from taking advantage of the low price. Overall, our findings across the four types of issue are consonant with the patterns of ARs and CARs observed for both the pre- and post-announcement periods as displayed in Tables 1 and 2.

There is no evidence to suggest that market returns are associated with any pattern of pre-issue dividend payments in the case of rights issues and convertible bond issues. Further, they are weakly associated in the case of open offers. Our results fail to support the majority of previous studies that examine the role of dividends in firm value (Baker and Wurgler, 2004; and Pinkowitz et al., 2006), but are evidence to the effect that the market does not believe that pre-issue dividends presage future dividend levels in these issues. According to our data, more than 50% of these issuing firms cut or stop dividend payments shortly after the new issue has been completed (not shown).[9] By comparison, dividend payments appear to impinge positively on private placements (0.26, $p < 0.05$), suggesting that pre-issue dividends are seen to adumbrate future distributions following the issuance. This is also consistent with the observation in Table 4, where PP-firms are the highest and most consistent dividend payers. The results suggest a position whereby PP-firms in particular need to attract and retain investors. Their powerful subscribers possess comparative advantages, including the ability to enforce a desired dividend pattern. Acquiescence on the part of the firm helps ensure that the powerful investors do not bail out when the firm goes public.

Ownership concentration is of considerable importance in shaping market price behaviour. It generates a significant negative impact on rights issues (−0.28), open offers (−0.19) and particularly private placements (−0.36) at the 5% level. Our results contrast with Xu and Wang's (1999) claim that ownership concentration serves to monitor Chinese firms closely. Agency problems permeate fundraising, and public equity investors are poorly equipped to monitor managerial planning and discretion. The stronger effect in the case of private placements corroborates our hypothesis that ownership concentration aggravates the conflicts between minority shareholders and controlling shareholders who are usually the targeted buyers. The role of concentration revealed in our study disagrees with Hertzel and Smith's (1993) report that ownership concentration makes only a minor impact on market returns.

Turning to the issue characteristics around the announcement period, we find that the discount in subscription price is the significant explanatory factor for the five-day CARs in the case of rights issues (−0.42, $p < 0.05$). As discussed in Section 2(i), rights issues are often made in the interests of the largest shareholders and are rejected by minority shareholders. Additionally, more than 60% of shares in RI-firms are non-tradable due to their being owned by public bodies, including the state. This may generate mistrust in the market. Underwriters seek the means of reducing the risk associated with purchasing the shares of a potentially failed issue by setting higher discounts, and the market duly responds unfavourably in the form of negative market returns. The coefficient on open offers is marginally significant. This may be partly

9 In order to govern the dividend payment practice of Chinese firms, the CSRC imposed the 'Management of Cash Dividends by Listed Companies' in 2006. However, those firms that made issues prior to 2006 may have failed to comply with this regulation.

due to the fact that the discount in open offers is far less severe than in rights issues (see Table 4). This may be partly a matter of the underwriters' risk exposure being less significant as any underwriter's allocations will be more easily tradable in view of the opportunity to trade across a wide and highly active habitat of investors. There is no evidence to suggest that the price discount matters in convertible issues. This result supports our expectation that investors worry less about the level of the price set for convertible issues, as their quality is guaranteed by the high rating.

Our findings in the case of private placements are particularly noteworthy. The price discount has a small, negative effect on the five-day CARs with a borderline significance (-0.08, $p < 0.10$). However, when we consider the interaction between the discount and target buyers, we find a marked, contrasting impact – the force of which depends on the market perception of the salient characteristics of targeted investors: notably their risk, reliability and attitude to investment. Specifically, the discount generates a highly significant and negative effect when it interacts with the controlling shareholders, $DISC \times BUYER_{Controller}$ (-0.36, $p < 0.01$) but a positive one when it interacts with institutional investors, $DISC \times BUYER_{Institution}$ (0.27, $p < 0.05$). These results appear to support our expectation that price discount conveys to the market the message that private placements are an offer to the largest shareholders to the detriment of public investors by way of price manipulation prior to the issue and subsequent engagement in related-party transactions. When privately placed shares are issued to institutions which have the ability to promote strategic investment, their subscription implies that they are both willing and able successfully to promote, pursue and consummate such investments – a point noted by Hertzel and Smith (1993). Hence, the certification effect prevails.

Overall, our results with respect to the discount in subscription significantly suggest that the risk of adverse price effects, the quality of issues, and the agency costs pertaining to each type of issuance are taken into account when the new issue is planned.

The impact of underwriting appears to differ according to the type of efforts. The underwriting of rights issues has no impact on market price behaviour. This supports our expectation concerning the rigidity of the CSRC policy with respect to underwriting a rights issue using the method of best efforts. This required procedure takes insufficient account of the potential risk to be borne by the underwriter during the announcement period. In general, the market reacts favourably to the announcement of open offers underwritten by way of standby and best efforts (0.24, 0.21, both $p < 0.05$), but unfavourably in the case of full commitment (-0.33, $p < 0.05$). Our results for open offers appear to be consonant with the adverse selection hypothesis (Eckbo and Masulis, 1992) to the effect that full-commitment underwriting occurs when issues are expected to fail, while the opposite holds for standby and best efforts. Further, underwritten private placements experience significant, positive market returns, regardless of the level of efforts. The results suggest that private placements are of interest to the market despite any price manipulation prior to the issue, not least given the scale of the issues and the opportunity to improve the asset portfolio by introducing cash or directly injecting real assets. The market is accordingly willing to acquiesce in the decision to underwrite a private placement. By comparison, underwriting a convertible issue by standby has a significant, positive influence on market price behaviour (0.22, $p < 0.05$). This is consistent with our expectations based on the instrument's inherent discipline and issuers' desire to minimise issue costs. Taken together, although these results do not appear to consistently support our hypotheses and those formulated in the standard context by Heinkel and Schwartz

(1986) and Gopalan et al. (2011), they at least provide an indication that underwriters in China differentiate among underwriting methods to signal the quality of a new issue while seeking to contain issue costs.

The sign on *AUDIT* is positive for the five-day CARs, as expected, on all equity offerings with prestigious auditors. However, the coefficients are not significant at the 5% level. These weak relationships do not support the view of Hay and Davies (2004) and Claessens et al. (2002) with respect to the external monitoring role of the quality of auditing, but are evidence to the effect that China's investors have limited confidence in the professional competence of auditors. In our additional regressions, we used the 'Big 5' as the measure of prestige auditors (not reported). The significance increases in these regressions but still not to a significance level. Hence, the suggestion remains that the market still doubts the credibility of reports issued by the domestic CPAs. The market cannot but be conscious of the ineffective surveillance of the quality of corporate reporting and auditing processes. The small and non-significant coefficients on convertible issues provide an indication that the market is largely indifferent to the auditor's prestige, which is consistent with our proposition concerning the impact of the regulatory discipline surrounding convertible issues.

As expected, price effects of the size of an offering differ across the forms of seasoned offerings. Size of offering exerts a significant, negative impact on market returns for rights issues at −0.40% and for open offers at −0.36%, which are qualitatively consistent with the negative market price reactions upon the issue announcements shown in Tables 1 and 2. One could argue that the significant decrease in share price may be the result of price pressure on the new shares prompted by increased supply; or that the new issue may convey negative signals about issuers' earning prospects (Miller and Rock, 1985). However, in line with China's position, we submit that marked agency problems associated with the new issues amount to a substantial driving force behind these price adjustments. We observe that 91% of the issuers give up their rights as shown in Table 3. In open offers, issuers exploit the opportunity afforded by the lenient regulations that are not available to rights issues to gather money on a much larger scale. According to a number of studies, this leniency is exploited as issuers deploy resources into non-profitable projects or undertake tunnelling without any accountability on the part of management (Liu et al., 2013). Further inspection of our data confirms that there is a higher percentage of alteration of stated usage in rights issues and open offers than in other offerings (not shown).

By contrast, a positive result emerges for private placements and convertible issues. In the case of private placements, the positive impact (0.22, $p < 0.05$) appears to reflect market trust in institutional subscription because the cash raised will support underperforming firms or cater for the firm's need for strategic cash, these benefits being further compounded by any direct injection by controllers of productive assets. Market trust to this effect offsets anxiety about management's abusive discretionary behaviour in the form of overinvestment and related-party transactions with controlling shareholders and other insiders. The favourable appraisal of the financing event indicates that for the market the size of offering presages valuable productive investments, and may further suggest that investors trust their protective measures, privacy and communication associated with private placements. The positive impact in convertible issues (0.17, $p < 0.05$) confirms our expectations, and also the views of Stein (1992) and Jiraporn and Gleason (2007) concerning the appeal of convertible bonds to the market based on contractual and regulatory control. This result is also consistent with

the fact that convertible bonds are associated with the major strategic evolution of the corporate plan.

Most significantly, the estimates in Table 5 show that the intended use of issue proceeds is a distinct determinant of market price behaviour. Two contrasting findings are particularly eloquent in the following. Firstly, the offerings for high-tech and innovation projects appear to exert highly significant, positive impacts on the five-day CARs, regardless of the type of security issued (0.50, 0.49, 0.38, 0.46, all $p < 0.01$). This result is consonant with our expectations that market price movement is strongly accounted for by the promise of enhancing the firm's competiveness and prospects by the planned implementation of high-tech projects. Further, issues designated to capital expenditure generate significant and positive impacts on market returns (0.48, 0.44, 0.50, 0.34, all $p < 0.05$). The favourable market responses reinforce the suggestion that these projects are believed by the market to enhance firm value by productively increasing the firm's real asset base. The increase in capital expenditure reduces controlling shareholders' discretionary opportunities to expropriate uncommitted resources against the interests of minority shareholders.

Secondly and by way of contrast to the case of issuance for high-tech projects and capital expenditure, issues designated to the purposes of financing inter-firm projects generate a highly significant and negative price effect, regardless of the form of issuance, but most notably in the case of private placements (-0.53, $p < 0.01$). It appears that the market identifies such intentions with rent-seeking by means of the new issue, and infers that *ex post* the danger of related-party transactions is most likely to occur. Further, the market responds negatively to the news of resources being committed to refinancing debt and working capital, regardless of the form of issuance. These price effects respond to actions which do not change the firm's investment in productive assets appreciably if at all, but do serve to increase free cash flow or meet cash flow shortfalls. These results lend support to Walker and Yost (2008) and appear to be plausible in China's culturally distinct, opaque market, where exploitable discretionary funds all too often precipitate moral hazard, leading to the managerial pursuit of personal interests at the expense of external investors.

In summary, the intended use of issue proceeds generates the most powerful impact of any variable on market returns and is the main force in shaping market price movement following the announcement. This disagrees with Denis (1994), who suggests that investment opportunity announcements play a small role in adjusting market prices. The overall findings corroborate our suggestion that the market has insight into the motivation and economic significance of the intended use.

The capital structure measure generates consistent results. The coefficients on the ΔDE ratio are negative with regard to rights issues (-0.24), open offers (-0.21) and private placements (-0.34) at the 5% level, with convertible bonds being -0.14 at the 10% level. This suggests that the resulting decrease in *DE* ratio following the issuance reduces the discipline exerted on management and facilitates rent-seeking behaviour on the part of powerful issuers, as predicted in Myers (1984). The stronger market movement in plain equity offerings is consistent with Chen (2004) to the effect that the management of Chinese firms prefer equity to debt – a decision that brings into play the agency issues which beset the market. The market duly responds unfavourably to equity issues.

Regarding the security-specific characteristics, we find a highly significant, positive price effect if rights are taken up (0.31, $p < 0.01$). Take-up reassures a market that

the abuses associated with rights issues will be less likely to occur or will at least be on a smaller scale. Such reassurance is valuable in a regime where rights are usually implemented in favour of informed, state-controlled shareholders who are in a position to garner rewards by renouncing rights and diverting issue proceeds, leading to a loss of value for the public. Our result is qualitatively consistent with that of Slovin et al. (2000) regarding the potential quality dimension associated with this variable, and provides a clear indication that, in accordance with our hypothesis, rights issues are exposed to agency risks.

Further, we take a closer look at the role of target buyers in the case of private placements. When these buyers are controlling shareholders, a highly significant and negative impact on market returns occurs (-0.33, $p < 0.05$). The negative price reaction appears to contradict the majority of previous studies and theory predictions (e.g., Wruck, 1989; and Chakraborty and Gantchev, 2013), but supports our proposal that in the case of China, the market believes that the controlling shareholders who are target buyers have strong incentives to engage in related-party transactions and overinvestment. Abuses exploit the typical pyramidal ownership structure and intra-group cross-holdings as noted in Liu et al. (2013). Together with the reported evidence from the discount in subscription price, the results markedly underpin our confidence that when the targeted buyer is the controlling shareholder, private placements are a means of issuance that are beset with agency problems which aggravate the tension between the controlling and minority shareholders. However in the case where the target buyer is the institutional investor, the certification effect asserts itself.

No reliably significant excess stock returns are observed for convertible issues that are rated AA and above, with the five-day CARs being 0.08 at the 10% level. Our result contrasts with the more common suggestion – notably the findings of Poon and Chan (2008), which are based on the data available for one of China's domestic credit rating agencies (CRAs) for the period 1997–2003 – suggesting that ratings generate certification effects. On the basis of credit rating reports issued by all qualified domestic CRAs, our results show that the ratings assigned by the CRAs do not convey any new information to the market about the credit risk of convertible bonds. Our findings disagree with the implication of Myers and Majluf (1984) concerning the relevance of ratings to investors, including their ability to reduce informational asymmetries. Rather, our findings favour the contrary position to the effect that ratings are substantially unheeded (Kennedy, 2003; and Lee, 2006). Ratings' visible lack of signalling power confirms our doubts concerning the efficacy of credit ratings due to the uniform credit criteria set out by the CSRC, which may place the independence of the agencies and quality of their grading under question.

(d) Robustness Check and Sensitivity Analysis

Endogeneity. Thus far, we have not considered any potential self-selection bias that might arise as a result of firms self-selecting their issue methods. One cannot rule out the possibility, however, that high-market-return firms are more likely to select open issues; low-market-return firms tend to select rights issues; firms with lower leverage, or whose stock has high market liquidity, are more inclined to opt for convertible issues; and those with a desire to retain corporate control are more prone to choose private placements. In such a case, our previous results, based on the sample of issuing firms, may be subject to self-selection bias in estimated CAR coefficients due to the potential endogeneity of the data. We address this issue by way of the Heckman (1979) two-stage

Table 6

Heckman Two-stage Regression Results of the Five-day Cumulative Abnormal Returns (CARs [–2, +2]) around the Issue Announcement Date by Issue Method

	Section A First-stage Probit Regression with Dependent Variable = Pr(ISSUE)				*Section B Heckman Approach with Lambda Included*			
	Rights Issues	*Open Offers*	*Private Placements*	*Convertible Issues*	*Rights Issues*	*Open Offers*	*Private Placements*	*Convertibles Bond Issues*
Pre-issue characteristics								
$MB_{pre\text{-}issue}$					−0.375**	0.434**	−0.255*	0.155
					(0.154)	(0.112)	(0.137)	(0.102)
$FCAST_{Diverg}$					0.115	0.196*	0.233	0.258**
					(0.116)	(0.103)	(0.245)	(0.122)
RUNUP					−0.258**	0.295**	0.127	0.228**
					(0.126)	(0.144)	(0.079)	(0.104)
DIV					0.219	0.158	0.281**	0.168
					(0.136)	(0.142)	(0.136)	(0.235)
$Herf_3$					−0.264**	−0.337**	−0.365**	0.205*
					(0.114)	(0.166)	(0.174)	(0.106)
$SIZE_{Pre\text{-}issue}$					−0.201*	−0.269*	−0.152	0.287
					(0.115)	(0.164)	(0.204)	(0.196)
Issue characteristics								
DISC					−0.316**	−0.321	−0.113*	−0.058
					(0.160)	(0.254)	(0.064)	(0.039)
DISC × $BUYER_{Controller}$							−0.386***	
							(0.093)	
DISC × $BUYER_{Institution}$							0.273*	
							(0.149)	
$UNDER_{Standby}$						0.314***	0.221*	0.037**
						(0.112)	(0.128)	(0.018)
$UNDER_{Best}$					0.382***	0.296***	0.154*	
					(0.114)	(0.112)	(0.081)	
$UNDER_{Full}$						−0.295**	0.149**	
						(0.143)	(0.075)	

(*Continued*)

Table 6
Continued

	Section A First-stage Probit Regression with Dependent Variable = Pr(ISSUE)				*Section B Heckman Approach with Lambda Included*			
	Rights Issues	*Open Offers*	*Private Placements*	*Convertible Issues*	*Rights Issues*	*Open Offers*	*Private Placements*	*Convertibles Bond Issues*
AUDIT					0.153	0.134	0.216	0.102
					(0.121)	(0.109)	(0.173)	(0.085)
Size of offering					−0.208***	−0.249***	0.328**	0.275**
					(0.069)	(0.032)	(0.164)	(0.136)
$FUSE_{Tech}$					0.423**	0.435***	0.361**	0.324**
					(0.184)	(0.159)	(0.177)	(0.153)
$FUSE_{Fixed}$					0.415**	0.354***	0.533**	0.361*
					(0.172)	(0.129)	(0.217)	(0.198)
$FUSE_{Intra}$					−0.571***	−0.514***	−0.494**	−0.281**
					(0.195)	(0.177)	(0.251)	(0.133)
$FUSE_{DWC}$					−0.527***	−0.462**	−0.408*	−0.346*
					(0.136)	(0.192)	(0.235)	(0.184)
ΔDE					−0.216*	−0.236**	−0.299**	−0.137*
					(0.118)	(0.105)	(0.146)	(0.073)
Security-specific characteristics								
TAKEUP					0.341**			
					(0.157)			
$BUYER_{Controller}$							−0.311***	
							(0.118)	
RATE								0.091*
								(0.056)
Two-stage regression variables								
VOLAT	−0.253**	0.226***	0.316	−0.104				
	(0.115)	(0.084)	(0.214)	(0.132)				
LIQ	−0.246**	−0.291**	−0.228**	−0.275**				
	(0.118)	(0.145)	(0.114)	(0.128)				

(*Continued*)

Table 6
Continued

	Section A First-stage Probit Regression with Dependent Variable = Pr(ISSUE)				*Section B Heckman Approach with Lambda Included*			
	Rights Issues	*Open Offers*	*Private Placements*	*Convertible Issues*	*Rights Issues*	*Open Offers*	*Private Placements*	*Convertibles Bond Issues*
$CAR_{-150,\ -20}$	0.126	0.329**	−0.327***	0.215				
	(0.084)	(0.138)	(0.111)	(0.146)				
MB	−0.314**	0.228	0.219*	0.268**				
	(0.157)	(0.187)	(0.128)	(0.135)				
LEV	−0.108*	−0.343	−0.288	−0.233				
	(0.631)	(0.245)	(0.241)	(0.189)				
SIZE	0.214	0.286*	0.298	0.303**				
	(0.157)	(0.162)	(0.193)	(0.128)				
MAN	−0.229*	−0.268	0.319***	0.184				
	(0.132)	(0.203)	(0.082)	(0.127)				
Lambda					−0.264	−0.453	−0.243	−0.622
					(0.163)	(0.298)	(0.172)	(0.460)
Observations	12,631	12,130	12,234	2640	387	118	259	51
R^2	0.017	0.031	0.012	0.130	0.129	0.143	0.646	0.443
F	2.191	2.078	2.056	2.158	2.339	1.954	4.298	2.085
p-value	0.032	0.042	0.044	0.035	<0.01	0.020	<0.01	0.035

Notes:
The table presents results for the two-stage regression where the dependent variable is the CAR over the 5-day window around the issue announcement date, CAR [−2, +2]. The variables for the first-stage regression are defined as follows. *VOLAT* is a stock market volatility measured by standard deviation of daily returns over the preceding three months on a rolling basis; *LIQ* is a stock market liquidity defined as the relative bid–ask spread, which is measured by the dealer's bid–ask spread divided by the average of the bid price and the ask price; $CAR_{-150,\ -20,\ i,\ t}$ is abnormal return between –150 and – 20 trading days on a rolling basis; *MB* is market-to-book ratio measured by the sum of total assets plus the market value of equity minus the book value of equity, divided by total assets; *LEV* is leverage measured by total liabilities divided by total assets; *SIZE* is firm size measured by natural logarithm of the firm's market capitalisation, adjusted by the inflation rate in the corresponding year; and *MAN* is managerial ownership measured by percentage of outstanding shares owned by managers. The other variables are defined in Table 3. Standard errors are reported in parentheses. We control for year and industry effects using year and industry dummy variables in all the regressions.
The sample consists of 1,659 eligible seasoned issues by listed firms in China between 1991 and 2010.
*, ** and *** denote statistical significance based on two-sided tests at the 10%, 5% and 1% levels, respectively.

regression approach to take into account the self-selection of the issue method. In the first stage, we carry out a Probit regression in which the likelihood of the choice of issue method, denoted by Pr(*ISSUE*), is regressed on a set of variables that might play a role in the firm's issue method decision. This uses the entire sample, including both issuing and non-issuing firms, on the basis of equation (5). We then compute the inverse Mills ratio (non-selection hazard), denoted by λ, from the first-stage Probit estimates of equation (5), and incorporate it into the second-stage regressions to account for any potential endogeneity. The first-stage selection equation is expressed as follows:

$$\begin{aligned}\Pr(ISSUE_{i,t}) = {} & \lambda_0 + \beta_1 VOLAT_{i,t} + \beta_2 LIQ_{i,t} + \beta_3 CAR_{-150,-20,i,t} + \beta_4 MB_{i,t} + \beta_5 LEV_{i,t} \\ & + \beta_6 SIZE_{i,t} + \beta_7 MAN_{i,t} + (industry\ dummies) + (year\ dummies) + \varepsilon_{i,t},\end{aligned} \tag{5}$$

where $ISSUE_{i,t}$ is coded as one for each of the issue methods for firm i in year t, or zero otherwise. Market volatility (*VOLAT*) is measured as the standard deviation of daily return over the preceding three months on a rolling basis. Liquidity (*LIQ*) is the relative bid–ask spread measured as the dealer's bid–ask spread divided by the average of the bid-price and the ask-price. CAR ($CAR_{-150,-20}$) is measured as the abnormal return between –150 and –20 trading days on a rolling basis. Market-to-book ratio (*MB*) is measured as the sum of assets plus the market value of equity minus the book value of equity, divided by assets. Leverage (*LEV*) is measured as total liabilities divided by total assets. Firm size (*SIZE*) is measured as the natural logarithm of the firm's market capitalisation, adjusted by the inflation rate in the corresponding year. Managerial ownership (*MAN*) is measured as the percentage of outstanding shares owned by managers. Year and industry dummies are included to control for year and industry fixed effects, and $\varepsilon_{i,t}$ is an error term.[10] The rationale of independent variables is described below.

The decision to implement a new issue may depend on a variety of factors, including the stock market condition of an individual stock, firm-specific features, and ownership and control considerations. To measure the stock market condition of an individual stock, we use market volatility (*VOLAT*), market liquidity (*LIQ*) and market price performance ($CAR_{-150,-20}$). To capture firm-specific features, we use the firm's potential growth (*MB*), leverage (*LEV*) and firm size (*SIZE*). To measure the effect of ownership and control considerations, we use managerial ownership (*MAN*). We also include the stock's market uncertainty and market liquidity, because the decision to issue may systematically differ between firms, given that each issue method exposes firms to different levels of market uncertainty and market liquidity. High market volatility for rights issues may induce management to issue shares by means of an open offer (Barnes and Walker, 2006). The market liquidity conditions of an individual stock may be instrumental in influencing the firm's choice of issue method, presenting the market with different levels of information friction and costs of trading stocks (Butler et al., 2005). Managers may exploit security mispricing and timing exercising

10 According to the 2012 CSRC Guidance for Industry Classification of Listed Companies, the sample firms are classified into 13 broad industries. Each firm is grouped into one of the industries in each year as: Agriculture, Mining, Manufacturing, Utility, Construction, Transportation, Information Technology, Retail and Wholesale, Real Estate, Financial Institutions (the firms in this industry are excluded from this study), Services, News and Media, and Conglomerates. The industry variable in this study is a time-varying variable.

issues in their belief that the firm is overvalued when a variety of issue methods are permitted (Cready and Gurun, 2010). We include the measures for firm-specific characteristics, because a firm's growth potential and financial structure may influence market perception of the firm and hence the interests of investors (Liu et al., 2013). The decision to issue may systematically differ between well- and under-performing firms as well as high- and low-growth firms (Jain and Kini, 1999). Further, leverage can transgress corporate debt capacity, leading to distress. A seasoned equity issue which affects the debt ratio beyond its optimal level would pose a serious threat to the firm's continuity, and thus influence the management's issue method decision, especially in the case of financially distressed firms (Myers, 1984). Further, larger firms tend to have a lower degree of uncertainty and information asymmetry, but at the same time a greater need for financial resources and financial mobility to meet the demand for future investment because of the scale of their operations (Jain and Kini, 1999). Notably in China, private placements and convertible bonds are preferred, partly because of the cap imposed by the CSRC on rights issues, and later on cash offers, in order to restore order in the issuing market, which would otherwise have been exploited by self-interest-driven issuers (see Table A1). Finally, the firm's issue decision may be driven by corporate ownership and control considerations. Equity issues dilute ownership, which is likely to militate against the managerial control of the firm, deterring management from making issues (Masulis, 1986).

Section A of Table 6 presents the first-stage estimates. Overall, we find that the issuer's desire to increase the stock's market liquidity has a significant influence on the issuing decision, regardless of the specific issue method concerned. At the same time, the issuer's capital structure does not appear to influence the issue method chosen, even in the case of convertible bond issues, and hence does not appear to fit as well as the capital structure hypothesis (Myers, 1984) would suggest. Our further results show that the other variables generate differential impacts on the likelihood of the issue method decision. Lower market volatility and lower growth potential make the firm more likely to opt for a rights issue. Larger market volatility and greater upward price movement tend to induce the firm to issue shares by means of an open offer. Moreover, lower abnormal returns and a stronger incentive to keep ownership and control over the firm lead to a greater propensity to raise equity capital by way of private placements. Greater growth prospects and larger firm size are more likely to give management an incentive to raise cash through convertible issues.

Section B of Table 6 reports the second-stage regression results following adjustment for self-selection by incorporating Lambda, λ, in the regression models. We cannot reject the null hypothesis that there is no sample selection bias, i.e. H_0: $\text{beta}_\lambda = 0$, because all *p*-values are greater than 0.10 in all four cases. Our results thus do not suggest the presence of sample selection bias. Furthermore, corrections for potential self-selection bias have not altered the main results shown in Table 5. The coefficients of the size of the offering continue to be significant and negative in the case of rights issues and open offers, while the opposite holds true in the case of private placements and convertible issues. The results of the other controlled variables remain similar to those reported in Table 5 in terms of statistical significance and sign. Hence, our overall results do not indicate that potential selection bias due to endogeneity is a serious concern for our estimates.

Analysis of the Announcement Period Window [0, +2]. We conducted further analysis of the issue announcement period CARs over the time window of the announcement

Table 7

Regression Results of the Three-day Cumulative Abnormal Returns (CARs [0, +2]) around the Issue Announcement Date by Issue Method

Variable	*Rights Issues*	*Open Offers*	*Private Placements*	*Convertible Bond Issues*
Pre-issue characteristics				
$MB_{Pre\text{-}issue}$	−0.293**	0.251**	−0.219*	0.104*
	(0.136)	(0.123)	(0.111)	(0.063)
$FCAST_{Diverg}$	0.129	0.177	0.154	0.187*
	(0.165)	(0.128)	(0.122)	(0.106)
RUNUP	−0.233**	0.219**	0.192	0.179**
	(0.112)	(0.105)	(0.181)	(0.083)
DIV	0.115	0.214*	0.179*	0.148
	(0.098)	(0.113)	(0.094)	(0.283)
$Herf_3$	−0.327**	−0.226**	−0.396**	0.275***
	(0.161)	(0.103)	(0.185)	(0.108)
$SIZE_{Pre\text{-}issue}$	−0.108	−0.205*	0.141	−0.114
	(0.126)	(0.120)	(0.192)	(0.098)
Issue characteristics				
DISC	−0.418**	−0.369**	−0.139)*	−0.272
	(0.204)	(0.175)	(0.082	(0.179)
$DISC \times BUYER_{Controller}$			−0.402)***	
			(0.159	
$DISC \times BUYER_{Institution}$			0.362)**	
			(0.163	
$UNDER_{Standby}$		0.327**	0.184)**	0.219**
		(0.154)	(0.082	(0.111)
$UNDER_{Best}$	0.237	0.256**	0.194)**	
	(0.165)	(0.125)	(0.096	
$UNDER_{Full}$		−0.409**	0.283)*	
		(0.207)	(0.173	
Audit	0.192	0.214	0.216)	0.104
	(0.123)	(0.158)	(0.277	(0.122)
Size of offering	−0.419**	−0.493***	0.238)**	0.241**
	(0.195)	(0.112)	(0.114	(0.113)
$FUSE_{Tech}$	0.564***	0.602***	0.468)***	0.471**
	(0.214)	(0.227)	(0.145	(0.235)
$FUSE_{Fixed}$	0.587***	0.613***	0.571)***	0.383**
	(0.205)	(0.202)	(0.119	(0.194)
$FUSE_{Intra}$	−0.537***	−0.697***	−0.548)***	−0.365**
	(0.124)	(0.243)	(0.209	(0.173)
$FUSE_{DWC}$	−0.541***	−0.536**	−0.461)***	−0.427**
	(0.102)	(0.234)	(0.280	(0.211)
ΔDE	−0.248**	−0.239**	−0.358)**	−0.186*
	(0.126)	(0.115)	(0.173	(0.097)
Security-specific characteristics				
TAKEUP	0.511			
	(0.102)			
$BUYER_{Controller}$			−0.467***	
			(0.166)	
RATE				(0.158)*
				0.089

(*Continued*)

Table 7
Continued

Variable	*Rights Issues*	*Open Offers*	*Private Placements*	*Convertible Bond Issues*
Observations	393	124	276	58
R^2	0.125	0.151	0.638	0.494
F	2.269	1.706	4.141	2.047
p-value	<0.01	0.049	<0.01	0.032

Notes:
The table presents regression results where the dependent variable is the CAR over the 3-day window around the issue announcement date, CAR[0, +2]. The other variables are defined in Table 3. Standard errors are reported in parentheses. We control for year and industry effects using year and industry dummy variables in all the regressions.
The sample consists of 1,659 eligible seasoned issues by listed firms in China between 1991 and 2010.
*, ** and *** denote statistical significance based on two-sided tests at the 10%, 5% and 1% levels, respectively.

day, and two days afterwards [0, +2]. We used abnormal returns over the [0, +2] window as the dependent variable. The results are reported in Table 7. Compared to Table 5, it appears that the variables featuring the pre-issue characteristics become less significant in terms of the statistical significance and magnitude of the coefficients for the three-day announcement period abnormal returns, except in the case of ownership concentration, as measured by the Herfindahl index. On the contrary, the variables featuring issue characteristics and, in particular, security-specific features, generate more significant and stronger impacts on the three-day announcement period abnormal returns in the majority of cases. Specifically, the size of the offering (*OFFER*) and intended usage of issue proceeds ($FUSE_{Tech}$, $FUSE_{Fixed}$, $FUSE_{Intra}$ and $FUSE_{DWC}$) stand out, especially in the case of rights issues and open offers.

Our results consistently suggest that a temporary increase in firm value following the announcement of an issue is associated with seasoned offerings in terms of the size and scale of the issuance itself, and the subsequent usage of issue proceeds that are intended for high-tech projects and fixed investments. Firm value experiences a temporary reduction when funds are claimed for inter-firm use and debt and working capital refinancing, reinforcing our prior results and remaining consistent with the agency cost. In comparison to the five-day announcement period CARs as reported in Table 5, the stronger impacts of rights take-up (*TAKEUP*) and targeted investors (*BUYER*) substantiate our prior observations that the take-up of the rights by the largest shareholders in a rights issue and the type of targeted buyers in a private placement issue strong signals to the market when it forms a perception on the outlook of issuers and hence the interests of investors. Overall, the apparent market price movements in the three-day announcement period provide clear evidence to suggest that the market is more reactive to the characteristics featuring the issuer and issue in the first three days after the issue announcement.

Analysis of the Offer Period Window from the Day before the Offer Period to the Offer Expiry Date [–A1, X0]. Evidence in the existing literature suggests that the offer period may influence the specific impact of the occurrence of an event (e.g., Heinkel and

Table 8

Regression Results of the Cumulative Abnormal Returns (CARs [–A1, X0]) in the Offer Period by Issue Method

Variable	*Rights Issues*	*Open Offers*	*Private Placements*	*Convertible Bond Issues*
Pre-issue characteristics				
$MB_{pre\text{-}issue}$	−0.128	0.147**	−0.158	0.146
	(0.159)	(0.062)	(0.108)	(0.138)
$FCAST_{diverg}$	−0.213*	0.175*	0.285*	0.275**
	(0.124)	(0.102)	(0.173)	(0.137)
RUNUP	−0.273**	0.253**	0.124	0.217**
	(0.124)	(0.119)	(0.111)	(0.104)
DIV	0.106	0.172*	0.283**	0.165
	(0.113)	(0.103)	(0.139)	(0.123)
$Herf_3$	−0.269**	−0.205*	−0.327**	−0.269
	(0.136)	(0.109)	(0.159)	(0.240)
$SIZE_{pre\text{-}issue}$	−0.238	−0.102*	−0.257*	0.148
	(0.178)	(0.067)	(0.146)	(0.098)
Issue characteristics				
DISC	−0.394***	−0.207*	−0.160*	−0.174
	(0.127)	(0.108)	(0.091)	(0.135)
$DISC \times BUYER_{Controller}$			−0.215**	
			(0.087)	
$DISC \times BUYER_{Institution}$			0.118**	
			(0.056)	
$UNDER_{Standby}$		0.169**	0.193*	0.384**
		(0.071)	(0.102)	(0.185)
$UNDER_{Best}$	0.183	0.127*	0.219**	
	(0.261)	(0.069)	(0.102)	
$UNDER_{Full}$		−0.282*	0.142*	
		(0.162)	(0.083)	
AUDIT	0.273	0.258	0.114	0.062
	(0.185)	(0.196)	(0.181)	(0.057)
Size of offering	−0.357**	−0.336**	0.283**	0.232**
	(0.168)	(0.159)	(0.121)	(0.114)
$FUSE_{Tech}$	0.524***	0.411**	0.401**	0.438**
	(0.196)	(0.167)	(0.176)	(0.175)
$FUSE_{Fixed}$	0.491***	0.415**	0.457**	0.505*
	(0.183)	(0.171)	(0.206)	(0.292)
$FUSE_{Intra}$	−0.512**	−0.431**	−0.511***	−0.426**
	(0.253)	(0.213)	(0.162)	(0.214)
$FUSE_{DWC}$	−0.435**	−0.402**	−0.457***	−0.404*
	(0.182)	(0.197)	(0.135)	(0.217)
ΔDE	−0.123*	0.238**	0.247**	0.311*
	(0.071)	(0.112)	(0.124)	(0.175)
Security-specific characteristics				
TAKEUP	0.304***			
	(0.106)			
$BUYER_{Controller}$			−0.278**	
			(0.132)	
RATE				0.107
				(0.102)

(*Continued*)

Table 8
Continued

Variable	*Rights Issues*	*Open Offers*	*Private Placements*	*Convertible Bond Issues*
Observations	390	135	285	56
R^2	0.134	0.191	0.557	0.241
F	3.195	1.743	4.602	1.938
p-value	<0.01	0.044	<0.01	0.048

Notes:
The table presents regression results where the dependent variable is the CAR over the window from the date before the offer period to the offer expiry date, inclusive, CAR[−A1, X0]. The other variables are defined in Table 3. Standard errors are reported in parentheses. We control for year and industry effects using year and industry dummy variables in all the regressions.
The sample consists of 1,659 eligible seasoned issues by listed firms in China between 1991 and 2010.
*, ** and *** denote statistical significance based on two-sided tests at the 10%, 5% and 1% levels, respectively.

Schwartz, 1986; and Goergen and Renneboog, 2004). We therefore perform further tests on the offer period from the day before the offer period to the offer expiry date [–A1, X0]. The mean (median) duration between the announcement date and the offer expiry date in our sample is 30 (33) days. We use abnormal returns over the [–A1, X0] window as the dependent variable. The results are reported in Table 8. The majority of the results are qualitatively similar to those reported for the five-day announcement CARs. Specifically, the coefficients of discount in the subscription price (*DISC*), intended use of issue proceeds ($FUSE_{Tech}$, $FUSE_{Fixed}$, $FUSE_{Intra}$ and $FUSE_{DWC}$), size of offering (*OFFER*), underwriting (*UNDER*), rights take-up (*TAKEUP*) and targeted investors (*BUYER*) have the same sign with statistical significance, regardless of the type of issuance. Auditing (*AUDIT*) and credit ratings (*RATE*) continue to appear not to be statistically related to the CARs while analysts' forecasts ($FCAST_{diverg}$) are shown to be marginally related to the CARs in the plain equity offerings, providing further support for the weak association between these variables and market returns as identified in our primary analyses. The signs and significance of other variables, such as price run-up, dividend payment practice, ownership concentration and debt-equity ratio, remain largely unchanged in comparison with those from our primary model, except in the case of the market-to-book ratio ($MB_{pre\text{-}issue}$) and firm size ($SIZE_{pre\text{-}issue}$). We are therefore able to conclude that these results largely support our main findings.

Further, we conduct diagnostic tests on multicollinearity in our regressions. The presence of multicollinearity among independent variables can inflate standard errors, which may result in less-efficient parameter estimates. To assess this possibility, we conduct two tests of multicollinearity. First, we check correlations among the independent variables using the correlation matrix. The values range between 0.02 and 0.67, with none exceeding the 0.80 threshold (Gujarati and Porter, 2009). Second, we conduct a variance inflation factor (VIF) test. The values range between 1.25 and 3.49, and none is above the VIF threshold of 10 (O'Brien, 2007). These two tests justify our confidence to the effect that multicollinearity is not a problem in our regressions.

5. CONCLUSION

By reference to 1,659 seasoned issues over the period 1991–2010, we seek to identify and analyse the factors which most powerfully explain the market reaction across the full range of seasoned issuance methods used by Chinese companies. In so doing, we increase insight into an emerging market's progress towards pricing efficiency and also into the factors that both assist and hinder such progress, paying due attention to the activities of influential capital providers, market monitors and financial infrastructure builders.

Our research questions and the attendant hypotheses yield instructive results. Our results demonstrate that market reactions differ in ways that suggest a difference between management's internal assessment and the market's assessment of stock price across the different types of issuance. Open offers and notably rights offers are unfavourably received. Convertible issues generate the most positive signals. Private placements experience an unfavourable pre-announcement reaction, which contrasts with the favourable reaction after the event. Our further investigation shows that market reaction is related to factors specific to issuer and issue, as well as matters specific to the context of China by reference to the period immediately surrounding the issuance.

Our research recognises the progress of China towards greater market transparency and more effective regulation, directed at inhibiting and remedying corporate and individual misbehaviour. This regulation helps to generate information that can signal the quality of a new issue. Despite such progress, public incredulity emerges strongly from our further exploration of the drive behind the price movements surrounding issuance. Such incredulity is reflected in the insignificance that the market attributes to relatively unreliable criteria, namely analysts' earnings forecasts, the potency of the underwriting process, ratings and the quality of auditing services. Concerns such as these are consistent with public scepticism with respect to both management and their gatekeepers. These limitations, in turn, epitomise the constraints within the existing system, where the prevention, control and resolution of market risks are largely dependent on policy adjustments, covenants and other security safeguards. The auditing and ratings professions remain regulated by the government, while the utility of auditing services and credit ratings are not yet fully realised in this less than efficient capital market. Their role does not appear to enjoy the degree of credibility that applies in more mature regimes.

We have reported wide-ranging evidence that public incredulity is well founded. Our results consistently reveal a lack, inadequacy or failure of investor-relevant market mechanisms which would help to reduce informational asymmetries. Specifically, we find evidence of interfering with the market pricing process and the exploitation of resources by powerful, self-seeking control groupings. These occur both in the lead up to and in the aftermath of a security offering and are designed to generate gains at the expense of minority investors and other outsiders. Rights issues, open offers and private placements are particularly affected by agency costs including those of free cash flow. They carry relatively light contractual obligations and can be driven by short-termism and perverse personal incentives. In a setting of informational asymmetries, this degree of managerial discretion compounds a sense of uncertainty. Such imperfections are aggravated by ineffective monitoring and lead to a material departure from shareholder wealth maximisation. Powerful managers can and do abuse

and misappropriate acquired funds. The active involvement of moneyed interests, including the state, is a pervading influence. In the case of convertible bond issues, credible regulatory discipline considerably reduces dysfunctional opportunities.

Centrally, the picture is of a market in progress, contending with agency costs, incredulity and misbehaviour. Our salient conclusion, as reflected throughout the results, is, accordingly, that market reaction betokens the evolving but still immature state of China's equity marketplace and the status of their imperfect corporate control.

Our findings carry policy implications. The identification of the distinctiveness, impacts and threats of the forms of equity issuance suggests where remedial action towards greater market efficiency might be directed. The rewards are more productive capital allocation and apposite financing arrangements with sufficient protection of investors. By way of future research, we hope that our work will stimulate enquiry into its implications for China's increasingly international equity issuance. New insights stand to be gained into the perspicacity of the securities market and the quality of information. Such further enquiry will help to meet the demands of the growing number of sophisticated international investors in China with an interest in the local sourcing of funds and funding partnerships. All of these phenomena will advance China's financial market in its progress towards greater efficiency, completeness and maturity.

APPENDIX

Table A1
Seasoned offerings in China: 1991–2010

	Rights Issues			*Open Offers*			*Private Placements*			*Convertible Bond Issues*		
Year	*No. issues*	*Mean (million yuan)*	*Median (million yuan)*	*No. issues*	*Mean (million yuan)*	*Median (million yuan)*	*No. issues*	*Mean (million yuan)*	*Median (million yuan)*	*No. issues*	*Mean (million yuan)*	*Median (million yuan)*
1991				2	124	124						
1992	2	153	153									
1993	72	113	75									
1994	67	79.3	62	1	768	768						
1995	68	78.9	59									
1996	51	170	107									
1997	122	220	138				1	255	255			
1998	153	239	168	8	414	322				2	175	175
1999	119	237	180	5	1102	1240	2	242	242	1	1500	1500
2000	176	319	230	18	876	745				2	1425	1425
2001	85	375	300	20	898	772				4	1417	1406
2002	20	269	232	28	588	532				5	830	800
2003	25	271	231	17	683	510	1	42.8	42.8	16	1159	800
2004	23	453	205	11	1452	708	2	1249	1249	12	1742	1225
2005				5	5576	786	47	1921	600	3	1203	1034
2006	3	384	219	7	1590	902	123	1599	600	7	627	430
2007	7	3322	1207	24	2570	782	96	1500	704	10	795	460
2008	8	1744	1561	34	1695	996	102	2000	829	5	1544	820
2009	10	1060	559	14	1869	912	123	1743	780	6	777	785.5
2010	17	7409	1030	9	2776	1000	1	5787	5787	8	10797	1600

Data source: GTA database, Guo Tai An Information Technology Company Ltd, 2011.

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