# Chapter 5

# Takeovers in China: empirical tests[19]

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## Introduction

China is an emerging economy going through a massive transition period. This implies that in many aspects, such as the mechanism of corporate takeovers, China still has a long way to go before it reaches the standards of developed economies. It also implies that the market compatible institutional framework in China's transformation context is still evolving. The "rules of the game" to regulate behaviour of economic agents have not yet been established. The remains of the socialist past and the newly introduced market mechanism are both at work. Under such circumstances, the behaviour of economic agents displays "recombinant" characteristics of the half market and the half state socialist past (Stark, 1997). Hence, it is not surprising that some firms adopt a new set of takeover practices while stuck in legacies of the old system.

This chapter empirically studies takeovers in China's stock market. The main purpose is to reveal characteristics of takeovers in China's transformation context. It investigates the motives and the effects of takeovers on China's listed corporations.

Although studies on the Chinese market may follow the methodology in developed financial markets, the Chinese takeover market itself is markedly different. Generally speaking, takeover targets that are listed on a Chinese stock exchange are not absorbed by the bidder. Instead, the bidder gains control over the target company through the purchase of a large equity stake in the target's company. In addition, the state continues to play a very important role in the

[19] I thank Henk Berkman, Joseph Fan and Laurence Fu for comments on an earlier version of this study.

process, in various shapes and forms. As explained by Berkman et al. (2002), the Chinese government uses three different structures to participate in the equity of listed companies: (1) direct control through government agencies, (2) indirect but ultimate control through solely State-owned enterprises, and (3) indirect but ultimate control through legal-person State-owned enterprises, which are joint ventures with private minority block holders. In Chinese takeover deals, control may be transferred from one government agency to another or from an agency to an enterprise that is partly privately owned. The government always retains a very important stake in all listed companies.

We look at our sample of 221 deals that were announced between 1997 and 2003 from various angles. After reviewing previous literature in Section 5.1, and presenting the dataset and methodology in Section 5.2, we first look at the announcement effect on the target's stock price and on the target's trading volume in Section 5.3. We find significant abnormal returns before the takeover announcement is made and observe a significant rise in trading volume on the day of the announcement. In contrast with Berkman et al. (2002) we don't find significant differences between cases where a private enterprise gained control or cases where state-owned enterprises were the bidders. Second, Section 5.4 examines the relationship between the performance of target firms and takeover activity. Third, Section 5.5 looks at insiders' objectives as drivers of takeover activity. Finally, Section 5.6 concludes.

## 5.1 Review of Literature

Most studies on Mergers and Acquisitions (M&A) are based on US and UK data because of the active takeover markets in these countries. In Asia, studies have primarily focused on Japan. But with the development of Asia's economies and stock markets, takeover studies have been done in other countries as well. The general literature on M&A falls into a number of themes. The first step generally is to determine whether M&A is perceived to create shareholder wealth. If an increase in shareholder wealth is found empirically, additional studies can be performed into its sources. Agency theory usually plays an important role in these studies.

As indicated above, studies on the Chinese market may follow the methodology followed in developed financial markets, but the takeover market itself is markedly different. Still, changes in corporate governance may be reflected in the stock market and explained using information that is similar to what we see in more developed equity markets. First, the existing literature is will be reviewed.

### 5.1.1 M&A and shareholder wealth creation[20]

A large amount of research has been dedicated to the effect of M&A over the past 30 years. There are more than 100 scientific studies included in the class most-cited research. But their conclusions are inconsistent with each other. A number of literature reviews have been published over the past decades. Bruner (2002) provided a comprehensive overview of the latest findings along with evidence from earlier studies over the period 1971 to 2001. In this section, we will review this evidence, focusing on event studies analysing the feedback from the market and accounting studies measuring the change the company's financial performance.

#### 5.1.1.1 Findings based on Event Studies

Event studies yield insights regarding returns to the shareholders of target firms, bidders as well as the newly combined firms.

*Returns to target firms*

Most research shows that the M&A transaction delivers premium returns to target firm shareholders. Previous literature reveals returns that are material and significant, despite variations in time period, type of deal (merger versus tender offer), and observation period. Target shareholders receive average abnormal returns in the 20-30% range. For example, in the US, Jensen and Ruback (1983) summarised 13 studies with sample data ending mostly in the 1970's and showed that target shareholders generally got 20% to 30% positive abnormal return around the event.

*Returns to bidders*

The pattern of findings about market-based returns around the announcement date to buyer firms' shareholders is more diverse. About a third of all empirical studies reports negative returns varying from -1% to -3% on average. Another third of all studies report positive returns. The remainder shows value conservation for bidding.

A number of studies consider returns well after the transaction and about half report negative and significant returns. Caves (1989) inferred that these findings were due to "second thoughts" by bidders' shareholders, and/or the release of new information about the deal. But interpretation of longer-run returns following the transaction is complicated by confounding events that have nothing to do with the transaction.

Any inferences about the typical returns to buyers based on returns must grapple with the difficult issue of the size difference between buyers and targets. Buyers

[20] This section is based on Bruner (2002).

are typically much larger than targets. Thus, even if the dollar gains from mergers were divided equally between the two sides, the percentage gain to the buyer's shareholders would be smaller than to the target's. Asquith et al. (1983) reported that the size of the transaction played a role in the effect of the deal. For instance, in takeovers where the target's market value was equal to 10% or more of the buyer's market value, the return to the buyer was 4,1%. But where the target's value was less than 10%, the return to the buyer was only 1,7%.

*Returns to Buyer and Target Firms Combined*

Findings of positive abnormal returns to the seller and breakeven returns to the buyer raise the question of net economic gain from this event. The challenge here stems from the size difference between buyer and target: typically the buyer is substantially larger. Hence, a large percentage gain to the target shareholders could be more than offset by a small percentage loss to the buyer shareholders. A number of studies have examined this by forming a portfolio of the buyer and target firms and examining either their weighted average returns (weighted by the relative sizes of the two firms) or by examining the absolute dollar value of returns. Almost all previous studies report positive combined returns, a majority significant.

Pettway and Yamada (1986) found significant positive abnormal returns for shareholders of merged Japanese firms and insignificant gains for shareholders of merging firms. Pettway et al. (1993) found that shareholders of Japanese firms taking over a US firm gained significant positive return. In Taiwan, shareholders of acquiring firms appeared to realize positive abnormal returns (Yen and Peng, 1993; Huang and Huang, 1995). Yeh and Hoshino (2000) drew the same conclusion by using evidence from 20 Taiwanese corporations involved in takeovers between 1987 and 1992.

#### 5.1.1.2 Findings based on Accounting Studies

A second important stream of research on M&A returns studies profit margins, growth rates, and returns on assets, capital, and equity. Some studies report significantly negative performance after the takeover, some report significantly positive performance, and the rest are in the non-significant middle ground.

Meeks (1977) explored the gains from mergers for a sample of 223 transactions in the United Kingdom between 1964 and 1971. His findings revealed a decline in ROA for acquirers following the transaction, with performance reaching the lowest point five years after. For nearly two-thirds of acquirers, performance was below the standard of the industry.

Mueller (1980) summarised and compared studies done in Belgium, Germany, France, the Netherlands, Sweden, the UK and the US. He concluded that there was no consistent pattern across all countries. In Belgium, Germany, the UK and the US, the merging and merged firms realized a slightly superior performance in

profitability following the takeover. But there was evidence of a decline in France, the Netherlands and Sweden.

Ravenscraft and Scherer (1987) studied 471 acquirers between 1950 and 1977. The novelty in this study was the reliance of the researchers upon a special line-of-business database maintained by the Federal Trade Commission that would permit greater definition of control groups than in previous studies, and more careful assessment of asset values and the impact of accounting method choices. Their principal finding was that profitability was one to two percentage points less for acquirers than for control firms – these differences are statistically significant.

Healy et al. (1992) examined 50 larger US mergers completed between 1979 and 1984. They found merged firms to show significant improvements in cash flow compared to the rest of the industry. Acquirers maintained their rates of capital expenditure and R&D relative to their industries, suggesting that the improved performance was not at the expense of fundamental investment in the business. Most importantly, the announcement returns on stock for the merging firms was significantly associated with the improvement in post-merger operating performance, suggesting that anticipated gains drove the share prices at announcement.

### 5.1.2 Sources of wealth increase

Berkvitch and Narayanan (1993) summarised many individual theories or explanations into three major categories: Efficiency or Synergy, Hubris and Agency Problem. Weston et al. (2001) suggested the form of redistribution was also an important factor to M&A. X. Zhang (2003) promoted the theory of government-direct redistribution to explain M&A in China.

#### 5.1.2.1 Synergy theory

The synergy motive assumes that managers of targets and acquirers would engage in takeover activity only if it results in gains to both sets of shareholders. Therefore, it follows that the measured gains to both target and acquirer shareholders would be positive (Berkwitch and Narayanan, 1993). There are several sources of total value increases.

Efficiency improvements can result from combining firms of unequal managerial capabilities. A relatively efficient bidder may acquire a relatively inefficient target. Improving the efficiency of the target can increase value. There is a lot of inefficient enterprises existing in China. In a long term, M&A will increase value in the view of the theory of total value increased.

The theory of operating synergy assumes that economies of scale do exist in the industry and it results in lower costs with a large number of units of output, especially the costs from fixed asset and R&D. For example, the number of automobile firms in China is the highest over the world while the total output is

less than that of General Motors. Another area in which operating economies may be achieved is in vertical integration. Combining firms at different stages of an industry may achieve more efficient coordination of the different levels.

The theory of financial synergy is based on the lower costs of internal financing in comparison with external financing. Nielsen and Melicher (1973) found that the rate of premium paid to the acquired firm as an approximation to the merger gain was greater when the cash flow rate of the acquiring firm was greater than that of the acquired firm. The debt capacity of the combined firm can be greater than the sum of the two firms' capacities before their merger, and this provides tax savings on investment income (Levy and Sarnat, 1970). In China, the listed firms have the advantage of external financing. Merging a company with low cash flow and large growth opportunities will increase its value.

#### 5.1.2.2 The hubris hypothesis

The hubris hypothesis (Roll, 1986) postulates strong market efficiency in all markets and the prevailing market price of the target reflecting the full value of the firm. The higher valuation of the bidders (over the true value of the target) is due to hubris – their excessive self-confidence (pride, arrogance). The hubris hypothesis maintains that it is the manager who motivates acquisitions and there are no synergy gains. Since the synergy is presumed to be zero, the payment to the target represents a transfer between the target and the acquirer. It follows that the higher the target gain, the lower the bidder gain, and that the total gain is zero (Berkvitch and Narayanan, 1993). Even if there were synergies, competition between bidders was likely to result in paying too much. Even when there was a single bidder, the potential competition of other bidders could cause the winning bidder to pay too much (Weston et al., 2001). Even without competition, managers committed errors of over-optimism in evaluating merger opportunities due to hubris (Roll, 1986).

China's transition economy has entered into its high-speed developing phase and many entrepreneurs try to enlarge their companies in a short time. But at the same time, financial markets remain weak and market prices of the target may not reflect the true value of the firm. Failures of Chinese takeovers may only be partly explained by the hubris theory.

#### 5.1.2.3 The agency motive

Jensen and Meckling (1976) formulated the implications of agency problems. An agency problem arises when managers own only a fraction of the ownership shares of the firm. This partial ownership may cause managers to work less vigorously than otherwise and to consume more perquisites because the majority owners bear most of the cost. The basic idea behind agency theory is that in corporations, stockholders (principals) delegate decision-making authority to managers (agents). However, the utility function curves of agents and principals diverge. This is

because the agents are motivated by their self-interest, while principals aim to maximize their prosperity. This divergence of interests is usually called "agency problem". Several tools are used to lessen the agency problem. Such tools involve monitoring, bonding, and the design of incentive programs. Resulting costs are agency cost, such as monitoring and bonding cost.

Some studies have been explained the agency problem. Among them are diversification of management's personal portfolio (Amihud and Lev, 1981), use of free cash flow to increase the size of the firm (Jensen, 1986), and acquiring assets that increase the firm's dependence on the management (Shleifer and Vishny, 1989). The basic idea is that acquisitions result in the extraction of value from the acquirer shareholders by acquirer management (Berkvitch and Narayanan, 1993). The most important aspect of the above argument for this analysis is that the acquirer management takes M&A as the most suited method to increase its own welfare. We will explain more detail in Section 5.1.3.

#### 5.1.2.4 The theory of redistribution

Redistribution theory claims that takeovers do not create new value and the gains to shareholders in takeovers come at the expense of other stakeholders in the firm. Expropriated stakeholders under the redistribution hypothesis may include bondholders, the government and employees (Weston et al., 2001). Tax saving represents a form of redistribution from the government or public at large. Mergers may be used to substitute capital gains for ordinary income. However, the empirical evidence establishes that tax benefits from a merger may be substantial but not a major force in a sound merger. The market power theory holds that merger gains are the result of increased concentration. If takeovers lead that fewer firms account for substantial percentage of industry's sale, the prices and profits of the firms will contain monopoly elements and monopoly returns.

X. Zhang (2003) promoted the theory of government-directed redistribution in China's institutional environment. This theory suggests that the gains to shareholders come at the expense of the outsider of takeovers. The institutions, such as the government, laws, and regulations, motivate many M&A, which should not happen in the market mechanism. Abnormal returns obtained by shareholders are brought by the redistribution of the wealth from the outside. For example, according to China's company law, the profitability of a listed firm must be above its industry average level, otherwise it will be disqualified from external financing. If the firm has been in red for three years, it will be unlisted. Considering the fame and the benefit to the local economy, the local government usually motivates takeovers to firms with poor financial perform and supplies the acquirers with lower tax rate and profitable assets under its control. In this situation, M&A will not create any value but redistribute the social wealth.

### 5.1.3 M&A and Agency Theory

#### 5.1.3.1 Takeovers as a solution to agency problem

Fama and Jensen (1983) hypothesised that when a firm is characterized by separation of ownership and control, decision systems of the firm separate decision management (initiation and implementation) from decision control (ratification and monitoring) in order to limit the power of individual decision agents to expropriate shareholders' interests. Control functions are firstly delegated to internal mechanisms. A board of directors by shareholders retains approval rights on important matters and monitors the behaviour of managements. Compensation arrangements and the market for managers may also mitigate the agency problem (Fama, 1980). Compensation can be tied to performance through such devices as bonuses and executive stock options. Managers carry their own reputation, and the labour market sets their wage levels based on performance reputation (Weston et al., 2001). When internal mechanisms, such as board composition, ownership structure and incentives, fail to restrict managerial behaviour, the external market for corporate control may come into play. Manne (1965) articulated the function of the market for corporate control. He suggested that when managers fail to maximize shareholder wealth, a takeover motivated to discipline poor managers, is the inevitable result. He emphasized mergers as a threat of takeover if a firm's management lagged in performance either because of inefficiency or because of agency problems.

There are two approaches to examine the motive for a takeover. The first approach is to test whether takeovers are generally directed at poorly performing firms. Morck et al. (1988a) found that hostile takeovers were more likely to be aimed at disciplining poorly performing top management while friendly takeovers were more likely motivated by synergy. After examining 253 targets in the US, Martin and McConnell (1991) reported that target firms significantly underperformed within their industry. In the UK, Kennedy and Limmack (1996) found poor prior performance to be an important characteristic of target firms. Weir (1997) showed that acquired targets were poor performers by examining 94 UK public companies during the period 1990 to 1993.

The second approach is to examine top management turnover around the takeover deal. Analysing 55 US takeovers in the US, Walsh (1988) showed that 37% of top executives left the target firm. Denis and Serano (1996) draw a similar conclusion from their study of 98 US corporate control transactions (77 targets) between 1983 and 1987. Other research also found a substantial number of top executives leaving the firm following a successful takeover. Martin and McConnell (1991) found a top executive departure rate of 60,9 % in the 2-year period following the first bid for a sample of 253 successful US targets between 1958 and 1984. This result was confirmed by Hambrick and Canella (1993), for a sample of 96 US targets listed on the NYSE (1980-1984) and Agrawal and Walkling (1994),

for a sample of 800 US targets (1980-1986). In the UK, Franks and Mayer (1996) reported a departure rate of 90% in the 2-year period following a successful hostile takeover. Kennedy and Limmack (1996) found 65,8% of CEOs leave the company for a sample of 247 UK targets between 1980 and 1984. In contrast, Dahya and Powell (1998) revealed that only 16,5%, 17,5% and 26% for y-3, y-2 and y-1, 47 % of firms experienced a change in the top executive following a successful takeover for the sample of 92 target firms listed on the London Stock Exchange over the period 1989 to 1992.

#### 5.1.3.2 Managerialism

In contrast to the view that mergers occur to control agency problems, some observers consider mergers as a manifestation of agency problems rather than as a solution (Weston et al., 2001). The explanation is that managerial objectives may drive mergers that reduce bidding firms' profitability and shareholders' wealth. Bad managers might make bad acquisitions simply because they want to survive. Managers may overestimate their own ability to run the potential target company (Roll, 1986). This belief may stem from above-average performance in the pre-acquisition period. Managers may take acquisition activity as another successful sample of their own firm. But these predictions are too simple. There are other plausible reasons why bidding firms' managers might overpay in acquisitions. The managerialism theory argues that merger activity is a manifestation of the agency problem of inefficient, external investments by managers. Managers of bidding firms pursue personal objectives other than maximization of shareholder value.

Baumol (1959) simply found that growth of sales was part of the manager's utility function. Mueller (1969) hypothesised that managers are motivated to increase the size of their firms. He assumed that the compensation to managers was a function of the size (sales) of the firm, and he argued that managers therefore adopted a lower investment hurdle rate. Donaldson (1984) suggested that acquisitions attract managers for it would create more top positions for managers. "Growth increases managers' power by increasing the resources under their control and changes in management compensation are positively related to growth" (Jensen, 1988, p.15). Morck et al. (1990) suggested when a firm made an acquisition or any other investment, its managers considered both their personal benefits from the investment and the consequences for the market value of the firm. When an investment provided a manager with particularly large personal benefits, he was willing to sacrifice the market value of the firm. So managers would pay for an acquisition with high private benefits. Especially in large public corporations, managers were typically subject to less monitoring by shareholders.

Management ownership of shares may be the most effective deterrent to investments that dissipate market value. Lewellyn et al. (1985) studied the role of managers in the acquisition and suggested managers with a significant ownership position in their firms will be less likely to engage in acquisition activity which

reduces shareholder wealth. Further they found that returns to acquiring firms were positively correlated with the equity stake of the acquirer's top management, suggesting that top managers' ownership contributes to the alignment of stockholder and management interests. Shinn (1999) employed the event study methodology to investigate the wealth effect of acquisition activities in American communications and publishing industry during 1986 to 1987. He supported the positive and significant relationship between firm performance and the ownership percentage of top managers. But it seemed hard for most large corporations.

#### 5.1.3.3 Large shareholders' private benefits from control transactions

A central premise in modern finance theory is that all common stocks are equal and each shareholder receives benefits in proportion to his fractional ownership. However, a different view has slowly gained importance recently. This view claims that concentrated ownership will change this premise by the impact of block ownership on corporate decisions. A controlling shareholder can obtain some benefits that are not shared by other shareholders. These are the so-called "private benefits of control" (Dyck and Zingales, 2002).

Private benefits of control are often identified as the "psychological value" some shareholders attribute simply to being in control (e.g. Harris and Raviv, 1988; Aghion and Bolton, 1992). The perquisites enjoyed by top executives can also be treated as private benefits of control. But these are not the most important ways. Where does private benefit of control come from? Mostly, it is from the transaction of certain assets or shares. To set a "fair" transfer price is almost impossible. Small deviations from the "fair" transfer price often existed and are hard to be proven in court. When small deviations are applied to large volume trade, it is easy to generate sizeable private benefits. Secondly, because of his or her role in the company, a controlling shareholder has the advantage in information, which might reflect potential opportunities. It is fairly easy for a controller to choose to exploit these opportunities through another company he or she owns or is associated with, with no advantage for the remaining shareholders. The net present value of these opportunities represents a private benefit of control (Dyck and Zingales, 2002).

Empirical studies have confirmed private benefits of control do exist in the real world. Fama and Jensen (1983), DeAngelo and DeAngelo (1985), Demsetz and Lehn (1985), and Stulz (1988), suggested that managers who owned large blocks of stock receiveed corporate benefits disproportionate to their fractional ownership. Bradley (1980) analysed the pricing of 161 successful inter-firm tender offers and found that the average tender-offer price exceeded the post-offer exchange price by approximately 13%. From this he concluded that the value of the target shares did not stem from their proportional claims to the net cash flows of the target firm but rather from the control of the target resources that they conferred. Barclay and Holderness (1989) calculated the pricing of 63 block trades between 1978 and 1982 involving at least 5% of the common stock of NYSE or Amex corporations. These

blocks were typically priced at substantial premiums to the post-announcement exchange price. They argued that the premiums, which average 20%, reflected private benefits that accrued exclusively to the block holder because of his voting power. Dyck and Zingales (2002) constructed a measure of the private benefits of control in 39 countries based on 412 control transactions between 1990 and 2000. They found that the controlling shareholder received private benefits in the control transaction with an average of 14%.

Dyck and Zingales (2002) summarised six factors to affect the size of private benefit of control. The law is the primary mechanism to curb private benefits. The right to sue management, for instance, limits the discretionary power of management and, with it, the ability to extract private benefits (Zingales, 1995) and so does any right attributed to minority shareholders (La Porta et al., 1997). The lower standard of proof in legal suits and the increased scope of management decisions subject to judicial review may constrain management (Johnson et al, 2000).

Shleifer and Vishny (1997) recognized the potential for product market competition to limit private benefits by reducing rents available to be diverted. As Roe (2001) noted, the extent of rents is not driven just by industrial characteristics but by national characteristics, such as the enforcement of competition laws, that leave firms within a country with more rents to be distributed.

Labour is well positioned to monitor, having non legal leverage over the controlling shareholder through the ability to penalize insiders through threats of work stoppages and in some cases direct channels to stop activities through their position on the board (Dyck and Zingales, 2002). But labour's incentives and ability to reduce private benefits cannot be assumed, as labour could combine with the controlling shareholder against the interests of outside investors (Pagano and Volpin, 2000) and may not have access to information to identify many diversionary practices.

Coffee (2001) highlighted the potential "internal policeman" of moral norms and suggested that they accounted for the fact that Scandinavian countries have well functioning financial markets in spite of weak formal protections for investors. Stulz and Williamson (2001) made a related argument about the possibility that culture, defined as "a system of beliefs that shape the actions of individuals in society," may also play a role in determining managerial actions.

Reputation is a powerful source of discipline, and being ashamed in the press might be a powerful deterrent (Zingales, 2000), especially where the press is more diffused. The potential role of the press has been highlighted in several notable success stories for investor activists in both developed and developing countries.

The government also has powers to pass and enforce protections for investors that might limit private benefit of control. Besides regulations, the taxation system plays an important role. Tax authority and minority shareholders have a common objective: to verify the income produced by a corporation. In performing this verification role, the tax authority can directly reduce private benefits by

identifying and disallowing diverting practices, such as the notorious examples in Russia where companies have sold oil to offshore companies completely controlled by controlling shareholders at below market prices (Black et al., 2000; Federov, 2000). In short, effective tax enforcement has features of a public good in that it can reduce private benefits of control.

For listed corporations in China, there is almost always a single controlling shareholder who owns a large-percentage block of the firm's common stock. Concentrated ownership is the most salient characteristic in Chinese corporate governance. In 2001, the average largest shareholders control 50,81% common stock. Over 50% of all directors are appointed by the controlling shareholder.

### 5.1.4 The market for corporate control in emerging markets

Studies of corporate ownership around the world have found that outside of the US and the UK, diffuse ownership is relatively uncommon and that most corporations are controlled by large block holders (see for example: La Porta et al. 1999). Consequently, while mergers and acquisitions (M&A) have been prevalent in Western economically advanced countries, they have been relatively unpopular in emerging markets. So not much research has been done on takeover activity (including M&A, control transfer) and their results are inconsistent.

Several recent papers suggest that mergers and acquisitions have a positive effect on bidders' shareholder wealth in Emerging economies. In Taiwan, shareholders of acquiring firms appeared to realize positive abnormal returns (Yen and Peng, 1993; Huang and Huang, 1995). Yeh and Hoshino (2000) drew the same conclusion by using evidence from 20 Taiwanese corporations involved in takeovers between 1987 and 1992. However, they found that there was downward change in the acquiring firms' profitability from pre-merger to post-merger periods. Yeh and Hoshino (2000) concluded there was no significant correlation between stock returns and the change in accounting performance. In Korea, Bae et al. (2002) examined Korean M&A activity during the 1981 to 1997 period. They found Korean mergers to be associated with a positive announcement effect for the shareholders of the acquiring firms. However, the benefit was not equally distributed among all shareholders: minority shareholders typically lose from the acquisitions while the controlling shareholders gain. Moreover, they found acquiring firms with good performance before the merger worsening after the transaction but those with poor performance before the merger improving after the transaction. In China, Berkman et al. (2002) found that control transfers brought 7,5% abnormal return on average to the shareholders of the target companies. On the other hand, Bhattacharya et al. (2000) found that no abnormal returns for the announcement in Mexican stock exchange because unrestricted insider trading causes prices to fully incorporate the information before it was released to the public. In Chile, Parisi and Yanez (2000) also demonstrated the absence of positive abnormal returns for the target firm during the takeover bidding event window.

Another important feature in emerging markets is that controlling shareholders in emerging capital markets enjoy significantly greater private benefit than their counterparts in the US and the UK With little constraint from the regulation, controlling owners in emerging markets usually hold immense power in decision-making. Chung and Kim (1999) indicated that private benefits of control in Korea represent around 10% of the value of equity, which was negatively related to the fraction of shares that were voting shares and the market value of equity. Bae et al. (2002) drew the consistent conclusion and furthermore they thought that private benefits could be a major motivation for acquisition activities in Korea. In India, Bertrand et al. (2000) showed a larger private benefit, which was attributed to the pyramid structure in Indian companies. However, La Porta et al. (2000) found negative private benefits for controlling holders in Mexico. Johnson et al. (2000) argued that, for less-developed countries, legal reform to reduce private benefits was crucial for further economic and financial development. A case in point was the rapid growth of financial markets in Poland after the introduction of laws that were more protective of minority shareholders (Glaeser et al., 2001).

M&A has contributed to the rapid increase of Foreign Direct Investment (FDI) in developing countries during the late 1990s. During 1997-2001, cross-border mergers and acquisitions accounted for roughly 50% of FDI in Latin America and 70% in Asia (Chari et al., 2004). There are two contrasting views about the FDI in the form of M&A in emerging markets. One view is that mergers and acquisitions provide a stable external financial source for capital scarce countries in contrast to the capricious hot money flows of portfolio equity and short term debt (Frankel and Rose, 1996; Lipsey 2001). The alternative view is that mergers and acquisitions may not benefit to the emerging markets if it involves a forced sale of assets at bargain prices (Krugman, 1998).

Regarding the market effect of FDI in the form of M&A, Chari et al. (2004) showed that cross border mergers and acquisitions in emerging markets from 1988-2002 led to substantial gains for shareholders of both acquiring and target firms: the monthly returns for target firms increased by 5,05% to 6,68% while acquirer returns increased by 1,65% to 3,05%. They argued that the benefits of the M&A transactions stem from the transfer of majority control from emerging market targets to developed market acquirers. The value of M&A will be created by the creation of synergies, access to internal capital markets for target firms and the provision of diversification benefits for the acquiring firms. Acquiring firms may gain from M&A transactions in emerging markets if they have better bargaining power in emerging markets, are able to form better estimates of the true stand alone value of the target, or because they acquire control of the target firm.

## 5.2 Data and Research Methodology

### 5.2.1 Introduction

The empirical section focuses on Chinese companies listed on the two only national stock markets: the Shanghai Stock Exchange (SSE) and the Shenzhen Stock Exchange (SZSE). We exclude companies listed on other local stock markets. As indicated in previous chapters, the Chinese takeover market is special. We may distinguish two kinds of takeovers or control transfers, which are studied separately. On the one hand, there are deals where listed bidders gain control over unlisted target companies. In this case, we focus our attention on the bidders. On the other hand, there are deals where unlisted bidder companies are gaining control over listed target companies. In this case we focus on the targets.

### 5.2.2 Data

Takeover details, the initial announcement date and financial data are collected from annual reports of the individual companies and public announcements by the stock exchanges in Shenzhen and Shanghai. Price and volume data are retrieved using Datastream. The stock exchanges are the original source. Industry data are collected from the cnInfo Website[21] and CSRC Website.

*Unlisted bidding companies gaining control over listed targets*

Based on the list of shareholders disclosed in the annual reports of listed companies, those companies that published a change in their largest shareholder between 1997 and 2003 are selected. However, we exclude the following cases:

1. companies with two or more changes in the majority shareholder between 1997 and 2003;
2. companies without a complete listing year (calendar year) before the control transfer;
3. companies that delisted after the acquisition;
4. the original largest shareholder reduces its holding of shares so that the second largest shareholder becomes the largest shareholder;
5. the original largest shareholder invests with its shares in a new company so that the new company becomes the largest shareholder;
6. the largest shareholder is changed by free transfer;
7. the largest shareholder is changed because shares are transferred according to the order from the law court.

[21] This site (www.cninfo.com.cn) has an automatic link with Shenzhen Stock Exchange web site.

With these criteria, the sample was reduced to 207 cases of acquisitions. Table 5.1 contains descriptive statistics for 207 Chinese public corporations involved in a takerover deal between 1997 and 2003. The target ranges widely in their market value, from RMB 82.22 million to RMB 8.825.26 million, with a mean of RMB 1.969.12 million. The percentage of common stock traded in the block ranges widely, from 4,43% to 74,69%, with a mean of 27,19%.

**Table 5.1 Chinese Domestic Takeovers (1997 - 2003): descriptive statistics**

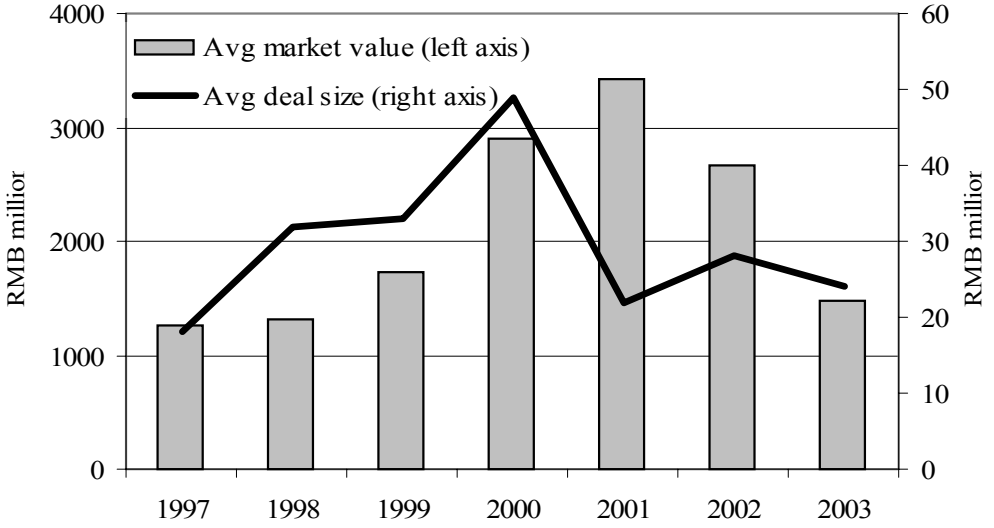
| | **Mean** | **Median** | **Max** | **Min** | **Standard deviation** |
|---|---|---|---|---|---|
| Market value of Targets (RMB mln) | 2180 | 1798 | 17228 | 83 | 1757 |
| The number of total Common Share (RMB mln) | 180 | 138 | 1515 | 9 | 179 |
| Percentage of state-owned shares (%) | 28,0 | 28,0 | 89,1 | 0,0 | 24,0 |
| Percentage of non-tradable shares (%) | 62,0 | 64,2 | 96,2 | 20,3 | 12,6 |
| Percentage of the largest shareholders (%) | 34,9 | 31,0 | 85,0 | 0,0 | 16,4 |
| Percentage of common stock in transaction (%) | 28,8 | 28,0 | 74,7 | 4,4 | 12,7 |
| Transaction Amount (RMB mln) | 146 | 82 | 4810 | 2.4 | 361 |

* 1 US$ = 8.27 RMB

Figure 5.1 shows the development of the M&A market over time. The average size of the target companies almost tripled between 1997 and 2001, but it has since declined significantly. The number of deals also fell, reflecting the depression of global stock markets since 2001 and the decline in M&A since the collapse of the IT bubble.[22] We also find that there is large difference between the size of the target companies and the size of the deals. The reason is that the price of the deal is much smaller than the market price because in most cases shares involved in the deal are non-tradable. It can also be contributed to the low percentage of transfer shares.

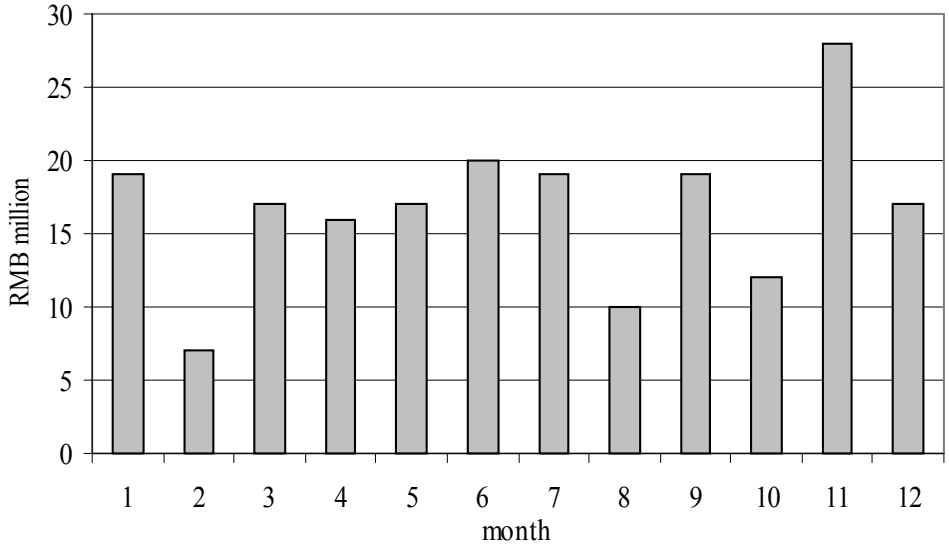
[22] The simultaneous decline of China's stock index with the fall in global sentiment from the middle of 2000 reflects increasing integration of China with global equity markets.

**Figure 5.1 Deal Characteristics Over Time (RMB mln)**




The number of average announced takeover deals are unevenly distributed over the year as shown in Figure 5.2: the month of November sees a jump in the number of observations. Doeswijk and Hemmes (1999) studied 258 M&A cases around the world in 1998 and found a similar pattern. This may be explained by the fact that many poorly performing companies tend to improve their situation through a takeover deal before the end of the fiscal year.

**Figure 5.2 Monthly Number of Takeovers in China (1997-2003)**



*Listed bidding companies taking over unlisted targets*

This sample includes all 14 takeover cases that took place between 1997 and 2003. In fact, there was no such deal in 1997, 2002 and 2003. It should be noted that all cases are listed companies taking over non-listed companies; not the other way around. The reason is that there are several small property rights exchange markets outside Shanghai and Shenzhen, which were originally promoted by the local government. In 1998, the central government decided to close these markets. In order to avoid chaos, the government stimulated a number of listed companies to merge with firms in these small and "illegal" markets. Up to 2003, 20 listed companies applied to the China Securities Regulatory Commission (CSRC) for their takeovers and 14 cases were approved: 1 occurred in 1998, 6 in 1999, 5 in 2000 and 2 in 2001. All companies take shares as payment.

**Table 5.2 List of the 14 merger cases in Chinese stock exchanges (1998 – 2001)**

| Code | Bidding Firms | Target firms | Announcement Date | Exchange Ratio |
|---|---|---|---|---|
| 600777 | SDXC | XMGF | 1998-12-7 | 1:3 |
| 000702 | ZHCL | XCSY | 1999-5-19 | 1:3 |
| 000655 | HGDC | HBJT | 1999-5-22 | 1:1.29 |
| 600100 | XHTF | RYDZ | 1999-6-18 | 1:1.8 |
| 000599 | XDSX | QDHQ | 1999-11-17 | 1:1 |
| 600635 | PDDZ | WXDZ | 1999-12-17 | 1:1.25 |
| 000692 | HTRD | FLGF | 1999-12-31 | 1:1.6 |
| 600726 | LDGF | HYDL | 2000-1-13 | 1:1.5 |
| 600165 | NXHL | HSLJ | 2000-2-28 | 1:1.6 |
| 600108 | YSJT | XLGF | 2000-9-8 | 1:1.25 |
| 000812 | SXJY | HBYY | 2000-9-8 | 1:1.33 |
| 600846 | TJKJ | SDWX | 2000-10-31 | 1:0.6875 |
| 000668 | WHSY | JYSH | 2001-6-7 | 1.3: 2 |
| 000403 | SJSH | JHYC | 2001-6-15 | 1:2 |

### 5.2.2 Methodology

*Cumulative Abnormal Returns (CAR)*

Abnormal returns are computed using the event-study methodology, following Dodd and Warner (1983). Our test period starts 20 days prior to the announcement date and stops 90 days after. We determine normal returns by calculating betas using daily return data over the 200 days preceding the test period, using the Shanghai and Shenzhen Composite index as our benchmark. The daily abnormal return is compounded to get the cumulative average abnormal return (CAR) over various time intervals[23]. We use standard t-statistics to test the hypothesis that the average CARs are equal to zero. An extensive overview of the calculation methodology is provided in the appendix to this chapter. Next, we relate the CARs to various company and deal characteristics, using linear regression methodology.

*Excess volume (EV)*

To determine "normal trading volume", we take the average of the ratio between daily trading volume in the bidder's stock and the total daily trading volume in the 50 largest stocks listed on the SSE over the 200 days until 20 days before the announcement. We define "abnormal volume" during the test period as the difference between the ratio between actual daily trading volume in the stock and total daily trading volume in the 50 largest stocks listed on the SSE on the one hand, and the normal volume on the other. We report median values and perform a sign test in order to deal with potential outliers.

*Accounting-based performance measures*

Accounting financial data are taken from annual reports. For the target firms, the financial data cover two years before the acquisition is completed (y-2, y-1) until two years after the acquisition (y+1, y+2). For the merging firms, the financial data cover two years before the takeover is completed (y-2, y-1) until one year after the takeover (y+1). The takeover is completed at y=0. Of course, the year may differ from company to company.

Corporate performance is measured using four financial indicators:

| | | |
|---|---|---|
| (1) | Return on Equity (ROE) | = Net income / Equity * 100% |
| (2) | Debt / Equity ratio | = Total liabilities / Equity * 100% |
| (3) | Sales growth | = (Sales of current year –Sales of previous year )/Sales of previous year * 100% |
| (4) | Profit income | = Profit of Main Operation / Income of Main Operation * 100% |

[23] See Appendix A for a detailed explanation of the methodology.

Meanwhile, the economy and specific industry factors will have an influence on their effectiveness. Hence, the measured performance for each sample firm is adjusted according to their industry average. Industry-adjusted performance measures for each firm are calculated by subtracting the industry mean from the sample firm value. We use the industry-adjusted performance indicators to measure corporate performance.

*Managerial objectives*

We look at managerial turnover around the takeover and the origin (insider versus outsider) of the new top management. Using a simple regression model, we test whether changes in compensation of top management is related to changes in company size. The small sample (14 cases) limits us in the conclusions we can draw.

## 5.3 Empirical Results 1: price and volume effects

This first empirical study examines the effects of the takeover announcement in China on stock prices and trading volume of target companies. Although takeovers of US companies have been researched in depth, the number of studies on Chinese companies is still very limited.

This study aims to contribute to the literature in a number of ways. First, it is the first direct test of the market's reaction to announcements in China. The presence of a significant abnormal return would provide us with a direct test of the efficiency of the market and the absorption of new information. We relate these abnormal returns to company and deal characteristics. Second, we include volume data in our analysis. Although the target's share price may not move around the announcement date, increased trading volume would indicate shareholders see the announcement as an information event. To our knowledge this has not been done before in China.

### 5.3.1 Price effects

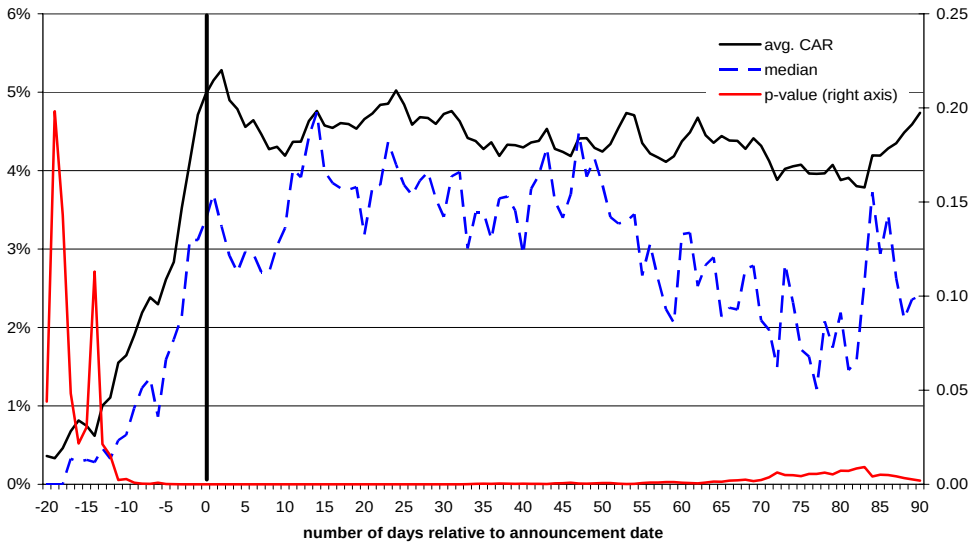
Figure 5.3 illustrates the effects of the announcement on the target's stock price. The 207 Chinese targets in our sample show a positive and highly significant average cumulative abnormal return (CAR AD-20, AD+2) around the announcement date of around 5,28% (median: 3,70%). However, this return is already significant 10 to 15 days before the official announcement is made. This indicates the presence of significant slippage and the use of inside information. Over the 90 days after the announcement, the cumulative abnormal return gradually becomes negative. Table 5.3 presents CARs over various windows. The data confirm the conclusions from Figure 5.3.

**Table 5.3 CARs for Chinese Targets (1997-2003)**

| Window | mean CAR | median CAR | T-value |
|---|---|---|---|
| -20,+20 | 4,66%[a] | 3,18% | 4,20 |
| -10,+10 | 2,64%[a] | 2,61% | 3,45 |
| -5,+5 | 2,26%[a] | 1,50% | 3,74 |
| -2,+2 | 0,13% | -0,12% | 0,73 |
| -1,+1 | 1,04%[a] | 0,97% | 2,75 |
| -20,0 | 4,67%[a] | 3,37% | 6,22 |
| -10,0 | 3,42%[a] | 2,21% | 5,92 |
| -5,0 | 2,68%[a] | 2,34% | 6,31 |
| -2,0 | 0,26% | 0,05% | 1,19 |
| -1,0 | 0,86%[a] | 0,65% | 2,97 |
| 0,+1 | 0,44% | 0,11% | 1,34 |
| 0,+2 | 0,57% | -0,22% | 1,48 |
| 0,+5 | -0,15% | -0,71% | -0,32 |
| 0,+10 | -0,52% | -0,42% | -0,90 |
| 0,+20 | -0,05% | 0,00% | -0,07 |
| 0,+90 | 0,03% | -3,20% | 0,02 |

[a] denotes significance at the 1%-level

**Figure 5.3 CARs of Chinese Targets around the Announcement Date**



*Univariate analysis*

Using the CARs (-20,5) as the dependent variable, we look at various factors that may influence the size of the announcement effect: the size of the transaction, the size of the target company, the target's industry, and the nature of the deal. Table 5.4 presents the mean and median for each group. The p-value below the median refers to a sign test. The T-test and the Mann-Whitney test examine whether the subgroups differ significantly.

For the total sample, the average CAR (-20,5) is 4,97% and the various factors don't appear to be able to discriminate much. Only company size appears to have some discriminating effect: companies whose total assets are smaller than the median appear to show a significantly larger announcement effect than companies whose total assets are larger than the median. The result is significant at 8% level. The nature of the deal has no discriminating power at all. The stock market doesn't care whether the new largest shareholder is a private enterprise or a public agency.

**Table 5.4 CARs for Chinese Targets (1997-2003): univariate analysis**

| | | Number of obs | Mean CAR (p-value) | Median CAR (p-value) | T-Test (p-value) | Mann-Whitney (p-value) |
|---|---|---|---|---|---|---|
| | All Cases | 207 | **4.97%** **(0.000)** | **3.37%** **(0.000)** | | |
| deal size | Deal is larger than median (RMB) | 102 | 4.02% (0.000) | 2.54% (0.003) | -1.23 (0.219) | -1.00 (0.317) |
| | Deal is smaller than median (RMB) | 101 | 6.01% (0.000) | 4.72% (0.002) | | |
| | Percentage of shares in transaction is higher than median | 103 | 5.73% (0.000) | 4.35% (0.002) | 0.921 (0.358) | -1.326 (0.185) |
| | Percentage of shares in transaction is lower than median | 102 | 4.26% (0.000) | 2.56% (0.003) | | |
| target company size | Target company is larger than median (total assets) | 103 | 3.49% (0.000) | 2.07% (0.018) | **-1.88** **(0.063)** | **-1.78** **(0.075)** |
| | Target company is smaller than median (total assets) | 102 | 6.47% (0.000) | 4.59% (0.000) | | |
| | Target company is larger than median (total sales) | 103 | 3.70% (0.000) | 2.07% (0.010) | -1.604 (0.110) | -1.599 (0.110) |
| | Target company is smaller than median (total sales) | 102 | 6.26% (0.000) | 4.76% (0.001) | | |
| industry | Target company is in Manufacturing industry | 141 | 5.62% (0.000) | 3.37% (0.001) | 1.32 (0.190) | -0.70 (0.487) |
| | Target company is not in Manufacturing industry | 66 | 3.60% (0.002) | 3.15% (0.005) | | |
| nature of deal | Public to private | 83 | 5.01% (0.000) | 3.65% (0.001) | 0.041 (0.966) | -0.540 (0.589) |
| | Public to public | 122 | 4.95% (0.000) | 2.71% (0.005) | | |

### 5.3.2 Trading volume effects

Around the announcement day, trading volume appears to be about 2.7 times (median: 1.5 times) larger than in normal periods. In contrast with the stock price, trading volume appears to jump only 1 day before the announcement is made and higher volume persists for 3 to 4 days, after which it returns to normal. The combination of price and volume effects may confirm the general perception in the market that insiders may benefit from private information, while the general public only joins the action when it's too late.

**Figure 5.4 Excess Trading Volume around the Announcement Date**

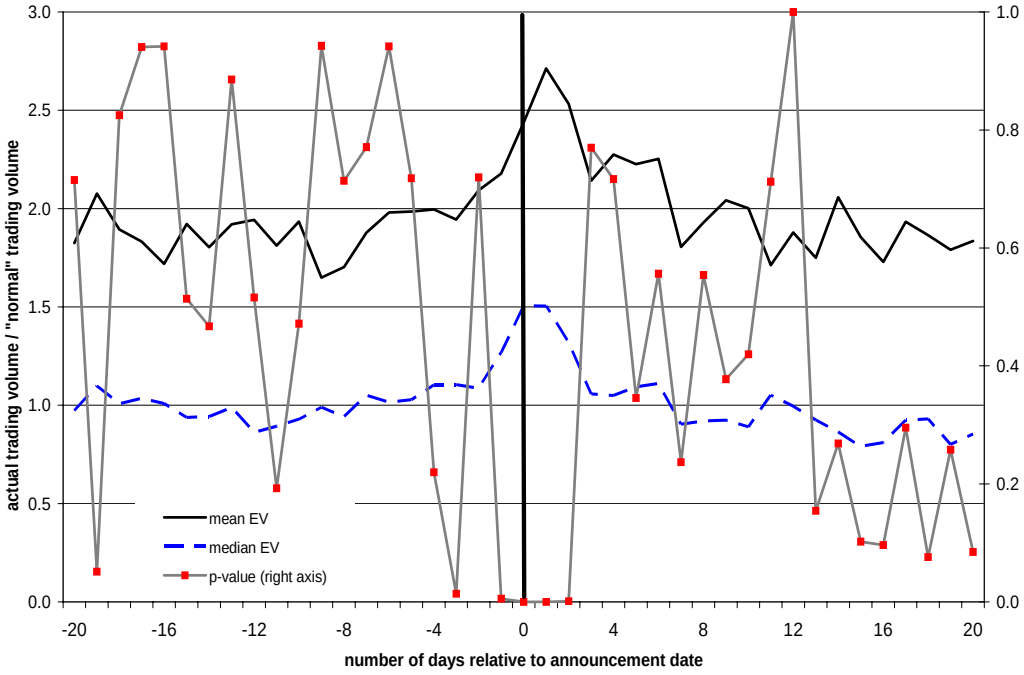


**Table 5.5 Excess Volume (EV) for Chinese Targets (1997-2003)**

| Window | mean CAR | T-value | median CAR | sign test significance |
|---|---|---|---|---|
| AD - 3 | 1.17[c] | 1.74 | 0.75 | 0.014 |
| AD - 2 | 1.24[b] | 2.38 | 0.72 | 0.720 |
| AD - 1 | 1.33[a] | 3.27 | 0.83 | 0.005 |
| AD | 1.51[a] | 4.15 | 0.89 | 0.000 |
| AD + 1 | 1.60[a] | 4.57 | 0.99 | 0.000 |
| AD + 2 | 1.49[a] | 2.80 | 0.84 | 0.001 |
| AD + 3 | 1.33 | 1.58 | 0.67 | 0.770 |
| avg. (-3 , +3) | 1.38[a] | 26.39 | 0.80 | 0.000 |
| avg. (-2 , +2) | 1.43[a] | 24.93 | 0.86 | 0.000 |
| avg. (-1 , +1) | 1.48[a] | 21.54 | 0.90 | 0.000 |
| avg. (0 , +1) | 1.55[a] | 17.33 | 0.94 | 0.000 |

[a, b] and [c] denote significance at the 1%, 5% and 10%-level respectively

## 5.4 Empirical Results 2: discipline versus synergy

The second empirical study tests whether takeovers in China are disciplinary or aim to exploit synergy benefits. We use the 138 listed targets in the sample that took place between 1997 and 2001. We reduced our sample, because we need information about the period after the takeover took place. In order to test our hypotheses, two approaches are adopted. The first approach is to examine whether takeovers tend to be directed at poorly performing firms. Performance is measured using various accounting data. If poor prior performance is a significant characteristic of target firms, we may conclude that Chinese takeovers serve as an external control mechanism on managerial performance. The second approach is to examine board turnover following the completion of the transaction. If key board members, such as the CEO, leave the firm after the completion of the transaction, this is probably motivated by poor managerial performance. Such takeovers are likely to be disciplinary.

### 5.4.1 Results approach 1: accounting performance target company

*Pre-takeover accounting performance*

Table 5.6 shows the performance of takeover targets before and after the event. Accounting data for the acquired firms were taken from annual reports. The financial data cover two years before the acquisition is completed (y-2, y-1) until

two years after the acquisition (y+1, y+2). The takeover is completed at y=0. Of course, the year is different for each company.

**Table 5.6 Non-Adjusted Financial Indicators**

| | Y-2 | Y-1 | Y+1 | Y+2 |
|---|---|---|---|---|
| ROE (%) | -4,95 | -1,78 | 8,11 | 4,65 |
| Debt Equity Ratio | 1.32 | 1.82 | 1.89 | 2.37 |
| Sales Growth (%) | 12,08 | 7,09 | 54,48 | 127,23 |
| Profit Income (%) | 8,27 | 14,82 | 26,43 | 26,73 |

Table 5.7 reports the industry-adjusted performance data for each indicator. This table shows the performance of takeover targets before and after the event, adjusted for the total industry average. Again, accounting financial data for the acquired firms were taken from annual reports.

**Table 5.7 Industry-Adjusted Financial Indicators**

| | Y-2 | Y-1 | Y+1 | Y+2 |
|---|---|---|---|---|
| **ROE (%)** | **-13,53** | **-9,80** | **2,31** | **-0,85** |
| (Test-statistic) | -1.40 | -2.67 | 1.68 | -0.61 |
| (P-value) | 0.080 | 0.004 | 0.048 | 0.270 |
| **Debt Equity (%)** | **30,39** | **84,60** | **87,98** | **127,86** |
| (Test-statistic) | 1.13 | 2.02 | 2.25 | 1.77 |
| (P-value) | 0.130 | 0.023 | 0.013 | 0.040 |
| **Sales Growth(%)** | **-6,07** | **-2,66** | **31,40** | **111,49** |
| (Test-statistic) | 0.77 | -0.57 | 2.81 | 2.04 |
| (P-value) | 0.779 | 0.285 | 0.003 | 0.022 |
| **Profit Income (%)** | **-4,15** | **-0,80** | **6,82** | **6,34** |
| (Test-statistic) | -0.79 | -0.47 | 4.65 | 4.71 |
| (P-value) | 0.217 | 0.318 | 0.000 | 0.000 |

The results show that the profitability of acquired firms is relatively poor before they are acquired. Compared with their industry peers, acquired firms in y-2 underperformed in ROE by 13,53% point and are significantly lower than the industry average at the 8% level. Poor profitability is more obvious in y-1. ROE of acquired firms is 9,80% points lower and significantly lower than the industry average with a p-value at the 1% level. In the year before the takeover takes place, the

debt-equity ratio of target firms is 85% points higher than the industry level (T=2.01). The sales growth of target firms is 6% points lower than that of their peers in y-2 and 2,7% points lower in y-1, but this difference is not significant.

The study of examining the acquired firms' accounting performance indicates a preliminary finding that the poor profitability is a significant characteristic of target firms. So in general, takeovers in China tend to be directed at poorly performing firms.[24]

*Post-takeover accounting performance*

We use industry-adjusted financial data to measure changes in target companies' financial performance. As shown in Table 5.8, target companies' financial situation improves significantly after the takeover. Furthermore, financial indicators in the year after the takeover are compared with those in the year before the takeover (y-1). Table 5.8 presents the result of tests in which we use industry-adjusted financial data to measure the effect of the takeover on target companies. The corporate performance improves in the year after the takeover, compared with that in the year before the takeover. For all variables except the debt-equity ratio, the changes are statistically significant.

The profitability of target companies increases relative to the year before the acquisition. Column 1 shows ROE, Sales Growth rate and Profit Income rate rising in the year after the acquisition by 12,1% points, 34,1% points and 7,6% points respectively. The debt-equity ratio worsens, but this change is not significant. The result is confirmed by the change in financial performance from the average pre-takeover 2 years to the average post-takeover 2 years. As shown in Column 2, ROE, Sales Growth rate and Profit Income rate average post-takeover 2 years after the acquisition increase by 12,4% points, 75,8% points and 9,1% points, while results regarding the debt-equity ratio are insignificant. The improvements are statistically significant at the 1%-level. All together, this suggests an improvement of financial performance that can be attributed to the takeover.

[24] Laurence Fu (Univ. of Auckland) provides another explanation for our results. He discusses the example of Lany corporation that is currently involved in a legal struggle with one of the listed firms. Lany disclosed how this listed firm grew by acquiring state asset through takeovers. What it did was that it sent people to the state firm before the takeover, who adjusted the financial statements to show very negative results. Shortly after that, it took over the company at a bargain, adjusted the financial statements once again in order to be able to show a significant improvement of corporate performance. Lany claims that most private corporations grow by acquiring state assets underground. However, his explanation does not make it clear why there is a similar feature when the takeover happened between two SOEs. The nature of the deal has no discriminating power.

**Table 5.8 Changes in Industry-adjusted Performance Indicators**

| | Change in Performance from the pre-takeover 1 year to the post-takeover 1 year | Change in Performance from the average pre-takeover 2 years to the average post-takeover 2 years |
|---|---|---|
| **ROE (%)** | **12,12** | **12,40** |
| (Test-statistic) | 3.00 | 2.39 |
| (P-value) | 0.00 | 0.01 |
| **Debt Equity (%)** | **3,38** | **50,42** |
| (Test-statistic) | 0.06 | 0.90 |
| (P-value) | 0.48 | 0.19 |
| **Sales Growth (%)** | **34,06** | **75,81** |
| (Test-statistic) | 2.68 | 2.44 |
| (P-value) | 0.00 | 0.01 |
| **Profit Income (%)** | **7,61** | **9,05** |
| (Test-statistic) | 3,85 | 2.87 |
| (P-value) | 0.00 | 0.00 |

### 5.4.2 Results approach 2: management turnover around takeovers

Table 5.9 presents the results of our analysis of top management turnovers around takeovers. Top manager is defined as the general manager, or, if the firm has no such position, the president. For each target firm, the name list of chairman of the board, top manager and the top management team is identified in their annual report.

**Table 5.9 Top Management Turnover around Takeovers**

| | Y=0 | Y+1 |
|---|---|---|
| Chairman of the Board | 66,67%<br>( 86) | 31,01%<br>( 40 ) |
| Top Manager | 55,81%<br>( 72 ) | 35,66%<br>( 46 ) |
| Top Management Team | 50,10% | 27,84% |

* Figures in parentheses indicate the number of companies in the catalogue.

For the sample of 138 targets, 86 (66,7%) experienced a change of chairman of the board and 72 (55,8%) had a new top manager following a successful takeover. At the same time, about half of the members of top management left their position. According to the statistics from Yu (2002), the average turnover rate of the top management team in China's listed firms was only 10% to 20% per year. In other

words, the rate of top management turnover after the takeover is much higher than usual.

Of course, certain management changes may not have any relation to the takeover. In order to examine the reasons behind changes in management, we follow two routes. The first is to examine the motives of the top manager's departure. Some management changes just reflect the "normal" turnover, such as normal retirement, high-level position promotion. Only those changes that have not occurred for the "normal" reasons should be identified as disciplinary management changes. However, it is difficult to gather enough information on the motives for management turnover because most China's listed companies do not reveal the detailed reason about the top manager's departure in public announcements. Hence, this approach cannot be taken in China.

The second method is to examine the origins of the new top manager. Furtado and Rozeff (1987), Reinganum (1985) and Vancil (1987) reported that generally most new top managers came from inside the firm. It can be interpreted that if most appointments to the new top managers' position are outsiders following a takeover, the takeover can be regarded as disciplinary. Here, the insider is defined as an individual who was employed by the target firm at the time he assumed the top manager position. The outsider is defined as an individual who was not employed by the target firm at the time he assumed the top manager position.

Table 5.10 shows information on the origin of new top managers after the takeover. The insider is defined as an individual who was employed by the target firm at the time he assumed the top manager position. The outsider is defined as an individual who was not employed by the target firm at the time he assumed the top manager position. The dramatic increase in the turnover of top management following takeovers and the large number of new managers from outside indicates that most takeovers in China have a disciplinary nature. These results suggest that correction of non-value-maximizing practices by managers is indeed an important purpose of the takeover.

This table summarises the origins of the arriving top managers. It is found that the turnover rate is much higher in post-takeover than it was in pre-takeover: 62,8% in y+0 and 24,8% in y+1 of target companies appoint new chairman of the board; 48,8% in y+0 and 24,8% in y+1 of target companies appoint new top managers from the outside. The dramatically high rate in the turnover of top management following takeovers and the large number of new managers from outside indicates that most takeovers in China have a disciplinary nature. The principal purpose of the takeover apparently is to correct the non-value-maximizing practices of managers.

**Table 5.10 The Origin of New Appointed Chairman of the Board and Top Managers**

| | Y+0 | Y+1 |
|---|---|---|
| **Panel A** | | |
| Percent of Changes in the Chairman of the Board | 66,67% ( 86) | 31,01% ( 40 ) |
| Percent of the Top Chairman of the Board by | | |
| *Outsider* | 62,79% ( 81 ) | 24,81% ( 32 ) |
| *Insider* | 3,88% ( 5 ) | 6,20% ( 8 ) |
| **Panel B** | | |
| Percent of Changes in the Top Manager | 55,81% ( 72) | 35,66% ( 46 ) |
| Percent of the Top Manager Replaced by | | |
| *Outsider* | 48,84% ( 63 ) | 24,81% ( 32 ) |
| *Insider* | 6,97% ( 9 ) | 10,85% ( 14 ) |

* Figures in parentheses indicate the number of companies in the catalogue.

### 5.4.3 Summary

This section examines motivations of takeovers following two approaches. First, four financial indicators are used to measure the corporate performance. Considering the influence of the national and industrial economy on firms' performance, each indicator is adjusted by their industrial average. These industry-adjusted indicators appear to be significantly lower than 0 in the period before the takeover. This indicates that takeovers in China are directed at poorly performing companies. After the transaction, all financial indicators show significant improvement.

Second, the turnover rate for the top management of target firms increases dramatically following a takeover. So our conclusion is that on average, takeovers in China are disciplinary in nature.

## 5.5 Managerial Objectives

The separation of ownership and management characterises the conflict of interest between owners and managers. The corporate managers always pursue goals that may be inconsistent with the value-maximizing goals of the firm's shareholders. Solutions to the problem focus on aligning these competing interests, such as improving the ownership of management. In this part, we test if there is managerial motivation in China's M&A.

The effect of M&A on bidding firms in China is difficult to determine, because most of them are unlisted and relevant information is very limited. We therefore looked for takeover cases where the bidding firm was listed on Shanghai Stock Exchange and Shenzhen Stock Exchange. A 14-firm sample remains and is used as the basis for analysis in this study. All companies used stock as payment. Takeover details, the initial announcement date and financial data are collected by studying annual reports of firms and announcements by the stock exchange.

### 5.5.1 Financial performance of bidding firms around the takeover announcement

Accounting financial data for the acquired firms are taken from their annual reports. The financial data cover two years before the acquisition is completed (y-2, y-1) until one year after the acquisition (y+1). The takeover is completed at y=0. Of course, the year is different for each company. We use three financial indicators to measure corporate performance: (1) Return on equity (ROE); (2) Sales growth; (3) Profit income. Meanwhile, the measured performance for each sample firm is adjusted according to its industry average.

Table 5.11 reports the performance of bidding firms before and after the event. In Panel A, Accounting financial data for the bidding firms are taken from annual reports. Panel B shows the performance of bidding firms before and after the event, adjusted for the total industry average. The results show that the profitability of bidding firms is above the average level before they acquired. Compared with their industry peers, bidding firms outperform in ROE by 4,37% points in y-2 and 6,3% points in y-1. They are significantly higher than the industry average at the 1%-level. The Profit income of a firm is 7,3% points higher than the industry level by y-2 and 6,7% points by y-1. The sales growth of bidder is higher than their peers by 10,43% points in y-2 and by 30,9% points in y-1. All figures are statistically significant at the 1%-level. All data show bidding firms are on average in good shape before the takeover.

**Table 5.11 Financial Indicators of Bidding Firms**

| **Panel A Financial Indicators** | | | | |
|---|---|---|---|---|
| | Year-2 | Year-1 | Year=0 | Year+1 |
| ROE (%) | 14,10 | 14,03 | 10,20 | 8,23 |
| Profit Income (%) | 23,35 | 27,27 | 25,46 | 23,07 |
| Sales Growth (%) | 61,56 | 38,86 | 26,81 | 34,20 |
| **Panel B Industry-adjusted Financial Indicators** | | | | |
| | Year-2 | Year-1 | Year=0 | Year+1 |
| ROE (%) | 4,37 | 6,28 | 3,65 | 2,63 |
| Profit Income (%) | 7,38 | 6,72 | 2,21 | 0,19 |
| Sales Growth(%) | 10,43 | 30,98 | 5,57 | 4,13 |

However, the bidders' stock price begins to slump after the takeover. Table 5.12 presents the result of tests in which we use raw financial indicators and industry-adjusted financial data to measure the effect of the takeover on bidding companies. Corporate profitability worsens after the transaction, compared with that in the year before. But sales increase after the takeover. The changes are statistically significant at the 10% level, except for the industry-adjusted sales growth ratio.

Compared with the year before the acquisition, the profitability of bidding companies has decreased. As shown in Column 1, ROE and Profit Income Rate in the takeover year are 1,97% points and 1,81% points lower than those in the pre-takeover one year respectively. But the sales have increased by 22,32% points. The results become stronger if we compare the data in the post-takeover one year to those in the pre-takeover one year, which is as shown in Column 2, ROE and Profit Income are decreased by 5,80% points and 4,20% points, while sales growth is increased by 50,55% points. All these data are highly statistically significant. The same conclusion could be drawn from the testing of industry adjusted financial indicators. After adjusted, ROE and Profit Income rate in the takeover year are 2,63% points and 4,51% points lower than those in the pre-takeover one-year respectively. But the sales are increased by 5,57% points. In the post-takeover one year, ROE and Profit Income are lower 3,65% points and 6,53% points than those in the pre-takeover one year with high significance, while sales growth is higher 15,39% points with slightly significance. Hence, we find that the takeover will lower the profitability with probably positive impact on corporate sales.

**Table 5.12 The Change in Performance Indicators**

| | From the pre-takeover 1 year to the takeover year | From the pre-takeover 1 year to the post-takeover 1 year |
|---|---|---|
| **Panel A Financial Indicators** | | |
| **ROE (%)** | **-1,97** | **-5,80** |
| (Test-statistic) | -3 | -4.23 |
| (P-value) | 0.005 | 0 |
| **Profit Income (%)** | **-1,81** | **-4,20** |
| (Test-statistic) | -1.45 | -2.67 |
| (P-value) | 0.085 | 0.01 |
| **Sales Growth(%)** | **22,32** | **50,55** |
| (Test-statistic) | 2.87 | 2.52 |
| (P-value) | 0.007 | 0.012 |
| **Panel B Industry Adjusted Financial Indicators** | | |
| **ROE (%)** | **-2,63** | **-3,65** |
| (Test-statistic) | -1.687 | -2.39 |
| (P-value) | 0.058 | 0.016 |
| **Profit Income (%)** | **-4,51** | **-6,53** |
| (Test-statistic) | -2.24 | -2.95 |
| (P-value) | 0.022 | 0.006 |
| **Sales Growth (%)** | **5,57** | **15,39** |
| (Test-statistic) | 0.68 | 0.76 |
| (P-value) | 0.254 | 0.229 |

### 5.5.2 The effect of takeovers on shareholder's wealth

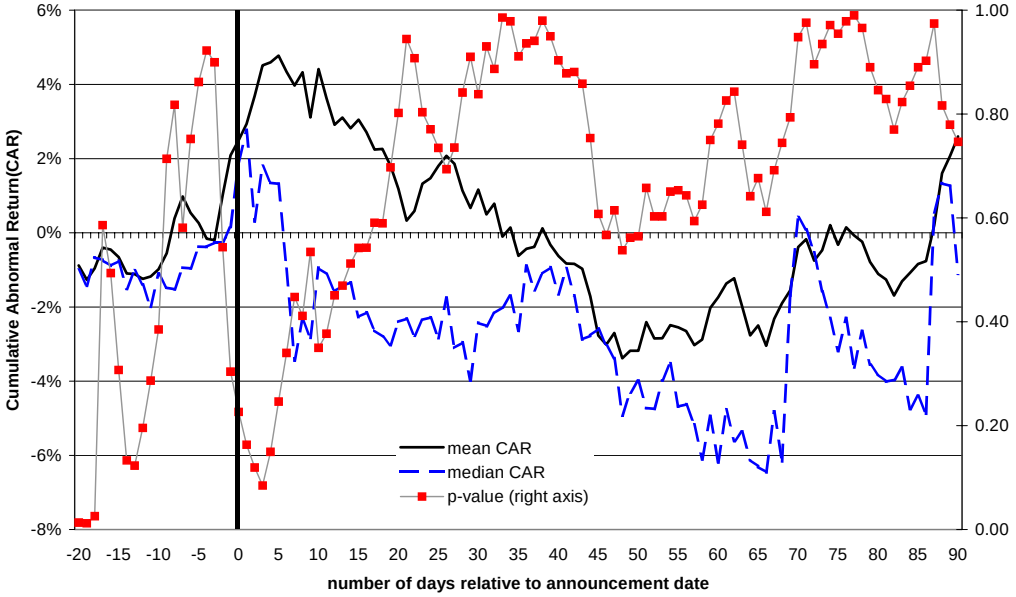
Figure 5.5 and Table 5.13 show the mean and median of cumulative abnormal return (CAR) for the 14 bidding firms from 20 days before the announcement until 90 days after the announcement. Over longer periods the total effect appears to be insignificant. The CAR starts increasing 3 days before the announcement and reaches its peak 5 days after the announcement (4,77%). Afterwards, the CAR falls back to zero about 20 days after the announcement day. This situation shows that the stock market reacts positively to the takeover at first, but when the market calms down, investors seem to realize that the deals will not yield any important profits. So in the longer run, no effect appears is found.

**Table 5.13 CARs for Chinese Bidders (1997-2003)**

| Window | mean CAR | median CAR | T-value |
|---|---|---|---|
| -20,+20 | 1,18% | -2,40% | 0.25 |
| -10,+10 | 5,47% | 0,54% | 1.11 |
| -5,+5 | 4,23% | 0,91% | 1.17 |
| -2,+2 | 3,89%[a] | 3,30% | 2.89 |
| -1,+1 | 1,91% | 1,09% | 1.73 |
| -20,0 | 2,50% | 1,91% | 1.21 |
| -10,0 | 0,25% | -2,05% | 0.11 |
| -5,0 | 1,96% | 0,84% | 1.20 |
| -2,0 | 2,70%[b] | 1,63% | 2.12 |
| -1,0 | 1,48% | 1,29% | 1.59 |
| 0,+1 | 0,85% | 0,41% | 1.30 |
| 0,+2 | 1,61%[c] | 1,15% | 1.95 |
| 0,+5 | 2,69% | 1,28% | 1.11 |
| 0,+10 | 2,33% | -0,17% | 0.76 |
| 0,+20 | -0,90% | -2,55% | -0.28 |
| 0,+90 | 0,52% | -4,23% | 0.07 |

[a], [b] and [c] denote significance at the 1%-, 5%- and 10%-level respectively

**Figure 5.5 Bidders' CARs around the Announcement**



### 5.5.3 Compensation of top management

So far, we did not find any positive announcement effect on corporate value. However, the total cash compensation to top management of the bidding company appears to increase after the deal. Table 5.14 contains some descriptive statistics about managerial ownership and wealth after the takeover. Each company reveals the compensation and the current share ownership of the top managers in its annual report. The total cash compensation includes salary and bonus. Because it is hard to identify the individual incomes, we calculate the total cash compensation in our analysis. We find that the average total cash compensation to management reaches to RMB 490.000 in the post-takeover 1 year, which is 78% higher than that in the year of the transaction. Only in 2 companies, management compensation decreases. The results appear to confirm Jensen's (1988, p.29) observation that growth increases managers' power by increasing the resources under their control, and changes in management compensation are positively related to growth.

**Table 5.14 Managerial Ownership and Wealth**

| Year+1 | Mean | Std.Dev | Min | Max | Median |
|---|---|---|---|---|---|
| Cash Compensation to Management (RMB1,000) | 498.2 | 325.3 | 86.0 | 1250.0 | 455.1 |
| Top Management's Compensation Growth (%) | 78,0 | 124,1 | -18,2 | 418,8 | 72,2 |
| Percentage of Managerial Ownership (%) | 0,03 | 0,02 | 0,00 | 0,08 | 0,03 |
| Market value of managerial ownership (RMB1,000) | 707.5 | 568.1 | 0.00 | 1963.4 | 743.8 |
| Ratio: MV to Cash Compensation (%) | 2,11 | 2,84 | 0,00 | 10,30 | 1,57 |

Next, we test whether management compensation and the scale of the company are related. Because of the unavailability of the income for every manager, the benefits for management from the takeover are measured as the growth in cash compensation to top management (GC). GC is taken as dependent variable in our regression. Then the growth of companies' scale is expressed as the growth rate in their sales. The following regression model is used to test their relation.

$$GC = \alpha + \beta * GS + \varepsilon$$

where GC = management compensation growth
GS = company sales growth

The results are presented in Table 5.15. The coefficient (β) is statistically significant (p=0.08), but the number of observations is limited. Hence, not too much importance should be attached to the results.

**Table 5.15 Regression Results**

| Variable | Coefficient | T-value |
|---|---|---|
| Constant | 0.4389 | 2.39 |
| GS | 0.8545 | 1.78 |
| | | |
| $R^2$ | 0.38 | |
| F-value | 3.15 | |
| # observations | 14 | |

*Management share ownership*

The incentive-alignment implication suggests that the high management ownership may help align the interests of managements and shareholders of the bidder. Table 5.14 shows that ownership of Chinese top management is very small compared to other countries. The average percentage in our sample is only 0,03%, ranging from 0,0% to 0,08%.

A related measure is the relative importance of cash compensation and managerial ownership. It can be formed as the market value of company shares owned divided by cash compensation. The value of managerial ownership is so low that it is only 2,11% of their cash income. So it is not surprising that top managers in China public corporations do not care about the interest of shareholders. Cash compensation is the main part in top managers' income structure. Takeovers give them a good channel to improve their income.

### 5.5.4 Conclusions

Analysing 14 cases from 1998 to 2001 in China, we do not find any clear benefits to the bidding company. Accounting performance is examined by using three financial indicators. The change of financial indicators shows the post-takeover profitability falls, despite the fact that sales probably may grow. Meanwhile, cumulative abnormal stock returns around the announcement date are negative. Apparently, the stock market doesn't expect any benefits from the takeover.

There is some evidence that top management compensation is related to the resources they control. The cash compensation of management increases significantly with the growth of the company. Meanwhile, the managerial ownership is so small that it can be ignored. In short, we find some evidence that managerial objectives drive takeover deals.

## 5.6 Concluding Remarks

A market-compatible institutional framework is still evolving in China and the "rules of the game" to regulate behaviour of economic agents are established slowly. It is not surprising that some firms adopt a new set of M&A practices in a market mechanism, while stuck in legacies of the old system.

This empirical chapter focuses on Chinese companies listed on the two national stock markets: Shanghai Stock Exchange (SSE) and Shenzhen Stock Exchange (SZES). Here a takeover is defined as a deal in which a target company experiences a change of its largest shareholder. We collect information on 221 cases that took place between 1997 and 2003. We use both accounting data and stock market data to examine the characteristics and the effects of takeovers.

The first empirical study examines the effect of the takeovers on the target companies' stock price. We find positive and highly significant average abnormal returns around the announcement date. In addition, trading volume appears to be much higher than that in normal periods. On average, the targets' stock price rises by 4,5% relative to the benchmark around the announcement date, while trading volume jumps up by 50%. The above results confirm the hypothesis that the takeover is viewed as a positive information event. Finally, we observe a strong rise in the stock price before the public announcement and a negative Cumulative Abnormal Returns (CAR) after the announcement. This suggests the presence of significant leaking of information and the insider trading.

The second empirical study focuses on the motivation of takeovers. Using accounting data, we find that targets show poor performance before the takeover. However, the accounting performance of targets improves significantly after the deal is finalized. In addition, the turnover rate for the top management of target firms increases strongly following a takeover and most of new appointed chairman of the board or top managers are outsiders. These results indicate that takeovers in China are directed at poorly performing companies and have disciplinary role.

The third empirical study focuses on 14 takeover cases from 1998 to 2001 in which a listed acquiring company became the largest shareholder of an unlisted target. We don't find any benefits to the bidding company in financial indicators or stock returns, apart from a short-lived jump around the announcement date. A straightforward regression test indicates that the cash compensation of management increases with the growth of the company. Meanwhile, very limited management share ownership is unable to bind managers' behaviour. The relation like in Western firms between managerial incentives and stock ownership (or option) is missing in the Chinese case. Our study shows a relationship between managers' drive to takeovers (cash compensation including bonus) and the sale growth of bidders after transactions. Our study also shows a reduction of bidding firms' profitability and shareholders' wealth.

In the next chapter, we will explain these phenomena in view of institutional economics.

## Appendix A Calculation Cumulative Abnormal Returns (CARs)

We follow other literature and choose a test period of days –20 to +90, which is from 20 days before the announcement to 90 days after the announcement. Day 0 is the date the announcement is made for a particular firm and will be different calendar dates for different firms.

The second step is to calculate the "normal" return or predicted return, $\overline{R}_{it}$ for each day in the event period for each firm. The predicted return represents the return that would be expected if no event took place. There are basically three methods of calculating this predicted return. These are the mean adjusted return method, the market model method, and the market adjusted return method. For most cases the three methods yield similar results. In fact, the market model method is the most widely used method, because it takes explicit account of both the risk associated with market and mean returns. Consistent with other economic studies, this research also chooses the market model method. To use this model, a clean period is chosen and the market model is estimated by running a regression for the days in this period. The market model is:

$$R_{it} = \alpha_i + \beta_i * R_{mt} + \varepsilon_i \qquad (1)$$

Where $R_{it} = \frac{P_{it}}{P_{i(t-1)}} - 1$ is the actual return for Company i in Day t; stock price data for 207 listed companies are collected from the Stockstar website[25]. The estimation period is from day t = -220 to day t = -20 relative to the initial announcement date of the takeover (t = 0); $R_{mt}$ is return of Shanghai and Shenzhen Stock Exchange Composite Price Index. $\beta_i$ measures the sensitivity of firm i to the market – this is a measure of risk, $\alpha_i$ measures the mean return over the period not explained by the market, and $\varepsilon_{it}$ is a statistical error term $\sum\varepsilon_{it} = 0$. The regression produces estimates of αi and βi ; Call these $\overline{\alpha_i}$ and $\overline{\beta_i}$ . The predicted return for a firm for a day in the event period is the return given by the market model on that day using these estimates. That is:

$$\overline{R_{it}} = \overline{\alpha_i} + \overline{\beta_i} * R_{mt} \qquad (2)$$

Where now $R_{mt}$ is the return on the market index for the actual day in the event period.

[25] Stockstar website: www.stockstar.com (in Chinese)

Next the residual, $AR_{it}$ , is calculated for each day for each firm. The residual is the actual return for that day for the firm minus the predicted return. It represents the abnormal return, that is, the part of the return that is not predicted and is therefore an estimate of the change in firm value on that day, which is caused by the event.

$$AR_{it} = R_{it} - \overline{R}_{it} \tag{3}$$

For each day in event time the residuals are averaged across firms to produce the average residual for that day, $AAR_t$, where n is the number of firms in the sample. The reason for averaging across firms is that stock returns are noisy, but the noise tends to cancel out when averaged across a large number of firms. Therefore, the more firms in the sample, the better the ability to distinguish the effect of an event.

$$AAR_t = \frac{\sum_{i=1}^{n} AR_{it}}{n} \tag{4}$$

The final step is to cumulate the average residual for each day over the entire event period to produce the cumulative average residual or return, CAR. The cumulative average residual represents the average total effect of the event across all firms over a specified time interval.

$$CAR_t = \sum_{-20}^{t} AAR_t \tag{5}$$

Once the measures of abnormal returns have been estimated, we must interpret these results. Can we infer with a certain level of confidence that the residuals are significantly different from zero? If we assume that the returns for each firm are independently and identically normally distributed, the $\frac{AR_{it}}{S(AR_i)}$ has a t-distribution. ($AR_{it}$ is the residual for firm i on day t, $S(AR_i)$ is the estimated standard deviation of the residuals for firm i using data from the estimation period and the degrees of freedom are 90). For degrees of freedom above 30, the t-statistic has, approximately, a standard normal distribution. This statistic tests the null hypothesis that the one day residual and cumulative average residual are equal to zero. Intuitively, we are comparing the value of the residual to its estimated sample standard deviation. Only if this ratio is greater than a specified critical value can we reject the null hypothesis with some degree of confidence.

The test statistic for the hypothesis that the one-day residuals are zero is as follows:

$$t_{AAR} = \frac{AAR_t}{S(AAR_t)/\sqrt{n}} \tag{6}$$

where $S(AAR_t) = \sqrt{\frac{1}{n-1}\sum_{i=1}^{n}(AR_{it} - AAR_t)^2}$

The test statistic for the hypothesis that the cumulative average residual is zero is as follows:

$$t_{CAR} = \frac{CAR_t}{S(CAR_t)/\sqrt{n}} \tag{7}$$

where $S(CAR_t) = \sqrt{\frac{1}{n-1}\sum_{i=1}^{n}(CAR_{it} - CAR_t)^2}$