

State Ownership and Market Liberalization: Evidence from China's Domestic M&A Market

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Abstract

We study how state ownership affects the post-merger performance of Chinese acquirers, and find that state owned acquirers (SOEs) experience a significantly larger long-term performance improvement following mergers compared to their non-state-owned counterparts (NSOEs). When partitioning the sample period into acquisitions made prior to and following China's split-share reform of 2005, we find that the post-merger performance improvement of SOE acquirers is largely attributed to the post reform period in which controlling shareholders converted their non-tradable shares into tradable status. Our results are consistent with the interpretation that state intervention in the form of capital market liberalization and alleviation of governance problems, combined with political connections and privileged access to financing have a positive effect on M&A performance that outweighs the inefficiency cost of state ownership in China.

1. Introduction

State ownership has a significant impact on firm value, especially in emerging markets (Megginson and Netter, 2001). China is one of the largest emerging markets in which the government plays a decisive role, which makes this country a desirable laboratory to research the influence of state ownership on corporate policy and performance.¹ Despite various analyses of state ownership in the Chinese market, however, we know very little about its influence on domestic mergers and acquisitions (M&As). In this study, we attempt to bridge this gap in the literature by examining the effect of state ownership on the post-merger change in performance of acquiring Chinese companies.²

There are a few possible ways in which state ownership could affect M&As. On one hand, state-owned enterprises (SOEs), constrained by various social, political and economic objectives, burdened by large labor surplus, heavy debt (Bai, Lu and Tao, 2006) and weak corporate governance (Jian and Wong, 2010) could be less efficient in selecting targets and conducting M&As, hence creating less value for their shareholders and a weaker improvement, or even

¹ While there are several papers that examine the relationship between state ownership and firm performance in the Chinese market, the empirical evidence has provided mixed results. For instance, Chen, Firth, Xin and Xu (2008), Qi, Wu and Zhang (2000), Allen, Qian, and Qian (2005), and Sun and Tong (2003) find that non-state-owned firms have higher profits and efficiency compared to their government-run counterparts. On the other hand, Calomiris, Fishman and Wang (2010), and Jiang, Laurenceson, and Tang (2008), among others, find a positive effect of state ownership on firm performance.

² We follow the extant literature on state ownership in China, and define a company as a state owned enterprise (SOE) if its largest shareholder is a government agency or government institution (see, e.g., Berkman et al., 2010). As of the year 2010, based on this definition, about 80% of China's publically listed firms were considered state-owned enterprises (Campello et al., 2010).

deterioration in performance around mergers compared to their non-state owned (NSOE) counterparts.

On the other hand, state-owned firms could enjoy a number of privileges, such as business networking and access to funding that are not available to non-state companies. For example, Allen et al. (2005) find that most bank credit in China serves the state sector, Wei and Wang (1997) report that Chinese banks favor industrial state-owned companies, and Firth, Lin, and Wong (2008) find that Chinese banks tend to be less strict when lending to firms with a large state ownership stake. In addition, SOE acquirers also receive government funding, tax incentives and support in negotiating and acquiring target firms in industries under tight government control. For instance, Zhou, Guo, Hua and Doukas (2015) find that public SOEs have a strong comparative advantage over NSOEs when acquiring state-owned private targets, and Sun et al. (2002) report that SOEs receive numerous benefits such as preferential access to production inputs and a smoothing or even a bypass of regulatory processes. If state-owned firms make good use of such privileges to get a deal approved quickly, find a trusted M&A partner or access funds for the deal, they could implement their M&A activity at relatively lower transaction costs and costs of capital. Therefore, an alternative hypothesis could be that SOEs could show a larger post-merger performance improvement compared to non-state acquirers.

To test the effect of state ownership on the change in performance of an acquiring firm around the acquisition event, we collect M&A data from SDC and from China's Securities Regulatory Commission (CSRC) for a sample of over 300 domestic acquisitions over the time period 1998-2009, and find that, on average, the market has generally more confidence in NSOE acquirers; specifically, we document a positive stock price reaction to the merger announcements of NSOE acquirers and a negative reaction to merger announcements of SOEs. This result is

consistent with the conventional belief that NSOEs make more efficient and profitable usage of target assets than SOE acquirers.

However, when comparing the change in long-term market and accounting performance, measured as the difference between post- and pre-merger asset productivity, profitability and market and size adjusted buy-and-hold returns, we find that SOE acquirers experience a significantly larger long-term performance improvement compared to their non-state counterparts. When partitioning the sample period into acquisitions made prior to and following China's 2005 split-share reform in which non-tradable shares were converted into tradable status, we find that the large post-merger performance improvement of SOE acquirers is concentrated among M&As conducted shortly before the reform.

Until the year 2005, both SOE and NSOE shares held by Chinese domestic investors were split into tradable and non-tradable categories, with non-tradable shares representing more than two-thirds of China's corporate stocks (Campello, Ribas and Wang, 2014). Both share categories gave their owners identical cash flow and voting rights, yet non-tradable stocks could not be traded in organized exchanges. Existing research shows that this split-share structure created a conflict of interest between controlling and minority shareholders because the wealth of controlling, non-tradable shareholders was largely insulated from changes in stock market prices (see, e.g., Claessens et al., 2002; Fan and Wong, 2002). In its worst form, non-tradable shareholders sought to tunnel resources out of the listed firms at the expense of tradable shareholders (see Cheung et al., 2006; Deng et al., 2007; Jian and Wong, 2010). These challenges were especially pronounced in SOEs, where the top management and board of directors were appointed by the state, and political career concerns and entrenchment led to an

inefficient corporate governance system associated with mismanagement and even fraud.³ By early 2005 it was clear that the split-share structure created an illiquid stock market, with the better Chinese companies choosing to list abroad. Later that year, cognizant of these challenges, central planners put in place the split-share reform.⁴

Our results of a stronger post-merger performance improvement of SOE acquirers compared to NSOEs following China's split-share reform are consistent with the interpretation that reform-induced increase in stock liquidity was particularly beneficial to SOEs that were historically suffering from weak corporate governance (Deng et al., 2007; Jian and Wong, 2010). To the extent that enhanced market liquidity results in market prices that respond more quickly to illicit activities by corporate managers, we would expect a decline in those activities following the reform, and therefore an improvement in the post-merger performance of SOEs compared to the pre-merger period. Increased liquidity might also influence managerial incentives and better align controlling shareholders' interests to those of minority shareholders, as stock values become more strongly tied to firm performance. Indeed Campello, Ribas and Wang (2014) report a positive effect of the reform on firm performance and efficiency, particularly for SOEs, with some evidence of a decline in related party transactions and intercompany loans. Thus reform-induced improved corporate governance, combined with SOEs' political and business connections, privileged access to bank financing and government influence in competing for the right target, could explain the stronger M&A performance improvement of SOE acquirers compared to their NSOE counterparts.

³ Deng et al. (2007) report that 90% of the SOEs that went public between 1997 and 2000 were later involved in "disadvantageous transactions with their parent firms". These transactions were fairly large and represented, on average, more than 13% of the listed firms' assets.

⁴ We describe the reform in more detail in section 2 of the paper.

Our study contributes to the literature in several ways. First, this is the first study to examine how state ownership and stock market liberalization affect M&As in China. Given that the Chinese economy is growing in such a fast pace, it is essential to understand how government intervention and capital market liberalization can alter merger outcomes. Second, China is one of the largest world economies, but we still know very little about how its unique institutional setting affects local industries and businesses. In this study, we provide evidence that M&A outcomes, especially SOE related deals, are significantly affected by government intervention. Consistent with Frye and Shlefler's (1997) 'helping hand model' and with the evidence in Calomiris et al. (2010), our findings support the interpretation that government intervention, possibly in the form of political connections, and capital market reform are helping SOE acquirers in the M&A market and outweigh the inefficiency cost of state ownership in China.

Finally, a number of recent studies look at the economic consequences of equity market liberalization, and our results have clear connections with their findings (see, e.g., Levine and Zervos, 1998; Bekaert et al., 2005; Gupta, 2005; Chari and Henry, 2008 and Campello et al. 2014). Bekaert et al. (2005), for instance, find that openness of equity markets to foreign investment can lead to an average increase of 1% in GDP growth, and Campello et al. (2014) report that the split-share reform in China made stock prices more informative and thus encouraged firms to engage more actively in merger and acquisition deals. Our paper extends findings in this literature by characterizing the impact of equity markets on firms' performance around M&As. While our setting is ultimately related to the conditions of the Chinese economy, our findings provide new insight on the role equity markets play in shaping outcomes in the corporate sector.

The remainder of the paper is organized as following. Section 2 introduces the institutional background of China's M&A market, describes the split-share reform, and discusses its potential implications for M&A performance for state owned firms. Section 3 describes the data, methodology and variables and provides summary statistics. Section 4 presents the main results and Section 5 concludes.

2. State ownership, market liberalization and China's M&A market

2.1. The institutional nature of China's M&A market

The volume of China's M&A market has reached a record high of 268 billion US dollars in the year 2014.⁵ Despite of more than 30 years of privatization, however, the Chinese economy is still significantly influenced by government intervention, and a large proportion of companies are owned or controlled by the government and its affiliates. Consequently, as of 2010, about 80% of China's listed companies are state owned, and most domestic M&A deals, especially in the industrials, resources and energy sectors are led by government controlled firms (Szamosszegi and Kyle, 2011).

In addition to their large prevalence in the Chinese economy, SOEs also have overwhelming power over NSOEs because they receive preferential treatment in industry licensing, tax payment, price setting for products, services and raw materials, and issues related to market entry barriers and financial bailouts (Calomiris et al., 2010; see also Zhang and Ming, 1999– 2003 for descriptions of such benefits). In the M&A market, such discriminatory policies have a major impact on the motivations and outcomes of merger deals that often put NSOEs at a disadvantage compared to state-owned companies. For instance, in 2008, Shanxi Province

⁵ Based on data compiled from ThomsonReuters, ChinaVenture, and Pricewaterhousecoopers analysis. http://www.pwchk.com/webmedia/doc/635579478792786949_ma_press_briefing_jan2015.pdf

embarked on a coal mine reconstruction scheme that was aimed at significantly reducing the number of coal mines. Almost all private coal mine companies were forced to accept the merger offers of SOEs, with the government providing deal valuations that were not based on market or negotiated prices (Zhou et al., 2011).

Furthermore, the Chinese financial market relies heavily on bank financing, which is mainly provided by the four largest state-owned banks. Cull and Xu (2010), among others, find that SOEs receive preferential access to bank loans. Such priority has proven vital for firm performance and growth in China (Francis et al., 2009), and consequently could significantly benefit SOE acquirers.

Despite their large predominance in the Chinese economy, however, SOEs are often criticized for their managerial and operational inefficiency (see, e.g., Chen et al., 2011 for a recent review). This is the case because Chinese SOEs are known for their many social-welfare responsibilities, ranging, for instance, from employment to childcare, and resulting in welfare plans that often deviate from shareholder wealth maximization goals.

Moreover, the tournament-style promotion system based on regional economic performance and social stability creates strong incentives for local government leaders to exert their influence over SOEs for their promotion potential (Cao et al., 2015). Politically connected SOE managers are also expected to achieve social and political goals which may run counter to corporate productivity (You and Du, 2012; Du, Tang and Young, 2012). Because of these policy burdens and inefficient management, SOEs have been historically unprofitable and heavily indebted. The net impact of state ownership on M&A performance is therefore ambiguous and is an empirical question we test in this paper.

2.2. An overview of China's Split-Share Structure Reform

The move towards market liberalization in China is seen by many observers as an ex-post fix to the unsuccessful reform of SOEs initiated in 1979. Since that reform, the profitability of SOEs declined, with many firms becoming immersed in debt. With unclear allocation of property rights and onerous social responsibilities, SOEs had very few incentives to improve their operating efficiency (see Bai et al., 2006). As a result, in the early 2000s, central planners implemented a privatization plan to recapitalize unprofitable SOEs. To keep some degree of control over the privatized firms, the government established share classes, with all state-related and legal person shares becoming non-tradable in the organized exchanges. This setup was known as the dual share ownership, or split-share structure.

More specifically, non-tradable shares were comprised of several types: (1). State shares; (2). State-owned legal person shares; (3). Domestic legal person shares; (4). Foreign legal person shares; (5). Legal person shares raised; and (6). Other, non-tradable shares, including right issuing shares, shares allocated for strategic investors etc. By the end of 2004, about 75% of China's non-tradable domestic shares were state owned. The remaining 25% of non-tradable shares were mostly different categories of legal person shares, which are analogous to shares held by institutional investors with strong state-related roots. The legal person shareholder category was a mix of various domestic institutions, including private companies, state-owned enterprises and non-bank financial institutions such as investment funds and security companies (Xu and Wang, 1997). The key shared quality across these different types of legal person shareholders was that each was economically oriented and geared towards profit seeking, with

relatively more freedom than state shareholders in deciding how to allocate profits and formulate and implement firm strategy (Delios and Wu, 2005).⁶

The direct result of this dual share ownership structure was that SOEs remained under the tight control of non-tradable, government or government affiliated shareholders, and NSOEs were controlled by non-tradable, legal person (institutional) shareholders. Consequently, 98% of all domestic, publically listed companies in China (A-share firms), had anywhere from 20-80% of their shares under the non-tradable structure at the end of 2004 (Campello et al., 2014).

The Chinese split-share structure has long been criticized for causing agency conflicts between non-tradable controlling shareholders and minority tradable shareholders. In fact, the interests of tradable and non-tradable shareholders diverged significantly because these two classes of shares had different prices but the same voting and cash flow rights. Unlike tradable shares, non-tradable share prices were based on the book value of firm assets rather than on the stock's market performance. As a result, controlling shareholders had weaker incentives to monitor executives to maximize enterprise value.

The misalignment of interests between controlling and minority shareholders was particularly pronounced in state firms, where the top management and board of directors were appointed by the state, and political career concerns and entrenchment led to an inefficient corporate governance system associated with mismanagement and even fraud (Deng et al., 2008).

To address the agency conflict between non-tradable controlling shareholders and tradable minority shareholders, particularly in SOEs, China launched the split-share structure

⁶ Xu and Wang (1997) find that the concentration of legal person shareholding is positively correlated with firm profitability while state shares are negatively correlated with firm profitability, which is consistent with the idea that legal person shareholders are more effective than state shareholders in monitoring the firm's management.

reform in 2005, granting trading rights to state-owned and legal person shares. Aiming to abolish trading restrictions on non-tradable shares by the end of 2006, the 2005 split-share reform mandated that holders of non-tradable shares had to compensate holders of tradable shares in exchange for trading rights to sell their shares. Compensation was typically negotiated and granted in the form of cash payments, share transfers, stock options, or warrants. Campello et al. (2014) report that most Chinese listed firms completed the reform, with only 2% of firms failing to meet the December 2006 deadline. Most of the remaining firms complied in January of 2007.

The recent literature (Jiang et al., 2008; Tseng, 2012; and Liao et al., 2014, among others) notes that the split-share structure reform led to remarkable improvements in the quality of corporate governance of SOEs. We therefore predict that by alleviating agency problems in state firms, the split share reform, combined with SOEs' political and business connections, privileged access to bank financing and government support can result in a larger post-merger performance improvement of SOE acquirers compared to their NSOE counterparts.

3. Data

3.1. Sample and Methodology

To examine whether state ownership affects M&A performance, we start by collecting information on domestic M&As conducted by public Chinese firms during the years 1998 to 2009. This sample period is selected to focus on relatively recent mergers and also to have sufficient post-merger performance data.⁷ To make our study comparable to the conventional M&A literature, we focus on transactions that are not self-tender (where the acquirers and target have the same ticker symbols or have the same names if the target is private) and are not between

⁷ The sample period ends in 2009 to ensure that when the study was initiated, at least four years of post-reform data were available for the sample firms.

related parties (where they share the same controlling parent). We also exclude deals where the acquiring firms are in bankruptcy stage, where the acquiring firms' operations have been suspended due to poor financial performance or policy change. Finally, we exclude acquisitions that were conducted for the purpose of public listing (reverse mergers). The transactions included in our sample are therefore deals carried out under normal business conditions for the purposes of, for example, diversification and pursuing new growth opportunities. Lastly, we focus on completed deals in which the acquirer takes over more than 50% of the target firm.

We retrieve information about M&A deals and deal characteristics from SDC. An acquiring firm's financial data, stock information and ownership structure information are collected from CSMAR.⁸

3.2. Description of Variables

We construct several stock and accounting-based measures to evaluate the post-M&A performance of the Chinese acquirers in our sample. Our first measure of performance is the three-day cumulative abnormal stock return (*CAR*) on the acquisition announcement day. We use the standard event-study approach (Brown and Warner, 1985) to calculate *CARs*. To be comparable with the existing literature, we exclude deals with transaction values that are less than 1% of the acquirer's market value four weeks prior to the acquisition announcement. We also require that all the acquirers in the sample have stock information at least 300 days before the announcement date so as to have a 255 day estimation window ending 46 days prior to the announcement. The minimum requirement of the estimation window length is 100 days.

⁸ The China Stock Market and Accounting Research Database (CSMAR) is designed and developed by GTA Information Technology, one of China's main data providers.

A second, long-term, stock performance measure we use in the analysis is the three-year buy-and-hold return (*BHAR*). We calculate an acquirer's market and size-adjusted *BHARs* with the acquisition announcement month as the purchase month. To calculate *BHARs*, we follow Mitchell and Stafford (2000) and measure the three-year buy-and hold abnormal return for each acquirer as the difference between the three-year buy-and-hold return of the acquirer and the three-year buy-and-hold return of an appropriate size and book-to-market portfolio. Both value-weighted and equal-weighted averages of *BHARs* are computed across acquirers.

We also use two additional, accounting based, long-term performance measures, which are an acquirer's total asset productivity, *TAT*, measured as the ratio of sales to the market value of total assets; and return on assets (*ROA*), measured as net income over the market value of total assets. Consistent with previous literature (Fan et al., 2007), we use the pre-M&A accounting figures as a benchmark to evaluate changes in accounting performance in the post-M&A period. Specifically, we calculate the change in *TAT* and *ROA* by subtracting the acquirer's average, industry adjusted *TAT* and *ROA* in the three years prior to the M&A announcement (t-3, t-1) from the merged firm average, industry adjusted *TAT* and *ROA* three years after the M&A announcement (t+1, t+3).⁹

Finally, to measure changes in operating performance around the acquisition deal, we follow Healy, Palepu and Ruback (1992), and use a cash flow based measure of performance, calculated as pretax operating cash flow returns on assets (*OCF/TA*). We focus on a cash flow performance measure because cash flows represent the actual economic benefits generated by the

⁹ To address the concern that changes in performance measures could be driven by industry-wide factors, such as changes in productivity, we follow Healy, Palepu, and Ruback (1992) and adjust our annual accounting performance measures to annual industry performance means from CSMAR. We thank the referee for making this suggestion.

assets. We define operating cash flows as sales, minus cost of goods sold and selling and administrative expenses, plus depreciation and goodwill expenses. This measure is deflated by the market value of assets to provide a return metric that is comparable across firms.¹⁰ As reported by Healy, Palepu and Ruback (1992), this measure excludes the effect of depreciation, goodwill, interest expense and income, and taxes, and is therefore unaffected by the method of accounting for the merger (purchase or pooling accounting) and the method of financing (cash, debt, or equity). As with our other accounting performance measures, we calculate the change in *OCF/TA* by subtracting the acquirer's average, industry adjusted *OCF/TA* in the three years prior to the M&A announcement from the merged firm three-year, industry adjusted average *OCF/TA* following the M&A announcement year.

Throughout the analysis, we also use acquirer and deal specific characteristics. Our acquirer related measures include the market value, four weeks prior to the announcement (*Market Value 4 wks Prior*), measured as the sum of the market value of equity, long-term debt, debt in current liabilities, and the liquidating value of preferred stock; the value of total assets one year prior to the acquisition announcement (*Total Assets*); the market value of the acquirer relative to other listed companies that year that are also in the same quartile (*Size*); the market-to-book ratio (*MtB*), measured one year prior to the acquisition announcement; leverage (*Leverage*), calculated as long-term debt to total assets one year prior to the announcement; and the percentage of tradable shares held by the acquiring firm (*%Tradable*);

Deal characteristics include transaction size (*Transaction Value*), which is defined by SDC as the total value of consideration paid by the acquirer, excluding fees and expenses, and *Relative Size* measured as the ratio of the transaction value to the acquirer's market value 4

¹⁰ We thank the referee for making this suggestion.

weeks before the announcement; We include the percentage of target shares owned by the acquirers prior to the focal M&A announcement (*Toehold*); a dummy variable to denote high-tech industry affiliation for the target firm (*Hitech*); a dummy variable to denote whether the acquirer's two-digit SIC code is the same as the target's (*Related*); and an indicator variable to denote whether the target is a public company (*Public Tgt.*), and whether the acquisition involves a friendly offer (*Friendly Offer*).

Finally, we define state-owned companies (*SOEs*) as firms in which the controlling shareholder (the largest shareholder) is either a central or provincial government agency or a state-owned enterprise. Firms in which the largest shareholder is not affiliated with the government are coded as non-state owned (*NSOEs*).

3.3. Summary Statistics

As can be seen in Figure 1, once we follow the above data selection criteria, we find that the total transaction value of completed domestic M&As involving control rights transfer increases from \$227 million in 1998 to a peak of \$ 20.9 billion in 2008, before it declines to \$ 14.8 billion in 2009. Consistent with the findings in Campello et al. (2014), who argue that following the 2005 split-share reform, firms had better access to capital markets and could therefore more easily finance M&As, Figure 1 shows a significant increase in the value of domestic M&As from 2006 onward.

[Insert Figure 1 here]

As mentioned above, we define state-owned companies (*SOEs*) as firms in which the controlling shareholder (the largest shareholder) is either a central or provincial government agency or a state-owned enterprise. Consistent with Chen et al. (2009), we find that on average, controlling government shareholders in the *SOEs* in our sample have an ownership stake of

about 42% (unreported). Consistent with the interpretation that SOE government ownership is highly concentrated, Chen et al. (2009) also report that the second largest SOE blockholder holds, on average, only 5% of the firm's shares. In addition, Zhou et al. (2010) report that there is only a small chance that a non-state firm (NSOE), in which the second or third largest shareholder could be a government stakeholder, has the same strong political connections and privileges as SOEs. The difference in ownership structure between SOEs and NSOEs is therefore strongly distinguishable and associated with stronger political connections for SOEs.

Note also that during our sample period, we find that the average ownership stake of the government in SOEs slightly declines but remains at around 40% (unreported), suggesting that the split-share reform did not lead to further privatization of SOEs. As argued in several recent related papers (Jiang et al., 2008; Tseng, 2012; and Liao et al., 2014, among others), the main outcome of the split-share reform was a significant incentive alignment between controlling government shareholders and minority shareholders. Thus to the extent that the government remained the controlling stakeholder in SOEs following the reform, the potential effect of market liberalization on M&A performance in state owned companies is unlikely to be driven by changes in ownership structure or privatization.

Table 1 ranks the top fifteen industries with M&A activities by target firm industry size during our sample period. Consistent with its fundamental importance to the GDP growth of manufacturing-oriented emerging markets, the Chemicals and Allied Products industry rank as the most active industry for both state-owned and non-state acquirers. The industries that trail the number one industry, however, show different patterns. Those conducted by SOEs cluster in energy and transportation while those by non-state acquirers cluster in services, machinery and computer manufacturing.

[Insert Table 1 Here]

Table 2 presents summary statistics of the acquirers in our sample by state ownership affiliation. Our sample includes only completed deals where the acquirer holds at least 50% of the target's shares outstanding. Not surprisingly, state-owned acquirers are significantly larger with an average asset size (market value) of \$643.7 million (\$927.8 million), compared to \$298.7 million (\$585.9 million) for non-state owned acquirers. We also measure the acquirer's average relative ranking in the market in the year prior to the acquisition (*Size*) and find similar results, where SOE acquirers are significantly larger than their NSOE acquiring counterparts in the same fiscal year.

[Insert Table 2 Here]

Consistent with the fact that SOEs cluster in traditional industries, SOE acquirers also have a significantly lower market-to-book ratio (*MtB*), suggesting a lower growth potential, compared to their non-state owned counterparts. Table 2 also shows that NSOEs are more likely to acquire high-tech targets and have more tradable shares than their SOE counterparts.

The summary statistics of deal characteristics shows that the average transaction size of SOEs is \$175 million, significantly larger than the \$81.9 million by the non-state acquirers. Compared to NSOEs, SOEs also have a significantly higher percentage of toehold ownership in target firms, are more likely to take over public targets and targets in related industries, and more likely to conduct friendly M&As.

Lastly, Table 2 shows the summary statistics of acquirers' performance in the year prior to a focal M&A, measured by total asset turnover (*TAT*), calculated as the ratio of sales to total assets; pretax operating cash flows to total assets (*OCF/TA*), measured as sales, minus cost of goods sold and selling and administrative expenses, plus depreciation and goodwill expenses over total

assets; and return on assets (*ROA*), calculated as net income divided by total assets. The results show that SOEs enjoy somewhat higher total asset turnover than NSOEs one year prior to the acquisition announcement, however, operating cash flows scaled by assets and return on assets are not significantly different between the two acquirer groups. These comparative performance results could suggest that while SOEs may enjoy some preferential treatment in selling their products, which results in a higher total asset turnover ratio, they are not more profitable than their NSOE counterparts.

4. The Effect of State Ownership on Post-M&A Performance

In this section we examine the effect of state ownership affiliation on the difference between post- and pre-merger performance of Chinese acquirers. We use short and long-term stock performance measures, as well as long-term accounting performance measures, to estimate whether state affiliation is beneficial or detrimental for state owned acquiring firms as compared to non-state acquirers. If SOEs are less efficient in selecting targets and conducting M&As because of agency problems between controlling government and minority shareholders, M&As conducted by SOEs could be associated with weaker improvement, or even deterioration in performance around mergers compared to their NSOE counterparts. On the other hand, if SOEs enjoy privileges that are not available for NSOEs, such as preferential access to government and bank funding and political connections, SOEs could exhibit performance improvement around M&As compared to NSOEs.

4.1. Stock Performance

To examine the change in an acquirer's stock performance following the acquisition announcement, we construct short- and long-term market performance measures. The short-term

performance measure is represented by the three-day cumulative abnormal returns (*CARs*) around the announcement day (-1,+1).

The long-term, stock based performance measure is the three-year buy-and-hold return (*BHAR*). We calculate an acquirer's market and size- adjusted *BHARs* with the acquisition announcement month as the purchase month. The results for *CARs* and *BHARs* are reported in Table 3.

[Insert Table 3 Here]

The results in Panel A show that the average *CARs* of all acquirers with completed deals in our sample are 1.1% (significant at the 1% level), suggesting that the market reacts positively to those M&As. This positive announcement effects, however, is particularly significant for non-state acquirers but insignificant for SOE acquirers. The insignificant announcement effect for SOEs and the positive and significant announcement effect for NSOEs is consistent with the conventional belief that NSOEs make more efficient and profitable usage of target assets as compared to SOE acquirers. A second interpretation may be related to an information spillover effect. Specifically, it may be hard to control for an information leakage during the M&A process for a SOE because of the involvement of multiple parties in the negotiation and approval process. Therefore, information about the deal may have been incorporated in the acquirers' stock prices well before the deal was announced, resulting in insignificant abnormal returns on the announcement date for SOE acquirers.

The average full sample *BHARs* are -6.9% (significant at 1% level), suggesting that the underperformance of the merged firms in our sample. This underperformance, however, is driven by the group of non-state acquirers. Their three-year *BHARs* are -1.46% while SOE acquirers' 3-year *BHARs* are not deteriorating and are positive and statistically significant.

4.2. Accounting Performance

In this section, we examine the effect of state ownership on the change in M&A performance around the acquisition announcement by using long-term accounting measures. We measure the industry adjusted change in M&A performance as the difference between the average value of the industry adjusted performance measure three years after the deal ($t+1, t+3$) and three years prior to the deal ($t-3, t-1$), where t is the year of the acquisition. As noted above, our accounting performance measures are based on the change in total asset turnover (*TAT*), the change in return on assets (*ROA*) and the change in pretax operating cash flows divided by assets (*OCF/TA*). All performance measures are scaled by the market value of assets.

Table 4 presents the summary of changes in performance by state ownership affiliation. The results show that compared to their pre-merger performance, state-owned acquirers experience a significant improvement in all three measures of performance following M&As. Specifically, total asset turnover increases by 1.7 percentage points, operating cash flows scaled by assets by 1.0 percentage point, and return on assets by 0.2 percentage points, significantly higher than the -6.2, -13.0, and -13.3 respective percentage point changes for NSOEs.

[Insert Table 4 Here]

In untabulated tests (available upon request), to verify whether the improvement in performance, especially profitability, is a result of a merger and not some other, economy-wide factor that coincided the same time period, we replicate the results for a sub sample of incomplete acquisition deals. These results suggest that unsuccessful acquisition attempts are associated with a profitability decline for both SOEs and NSOEs, with an insignificant change in performance differential between SOE and NSOEs. This suggests that SOE acquirers seem to create value through M&As.

To examine the source of the long-term performance improvement we document for SOEs following M&As, we continue by splitting the sample into M&As conducted prior to and following China's 2005 split-share reform.

4.3. State ownership and China's split-share reform

To examine whether and to what extent did the split-share reform affect the post-acquisition performance of SOEs, we create four SOE acquirer sub groups, based on the timing of the acquisition compared to the passage of the reform, as well as and its timing compared to when non-tradable shares were converted into tradable status.¹¹ Specifically, our first subgroup includes acquirers that were subject to the government's share reform within less than two years after the acquisition, and also negotiated to convert their non-tradable shares into tradable status within two years after the reform ("*Pre-Reform Negotiators*"); a second subgroup that includes acquirers that were subject to the reform prior to the deal but were still in the process of negotiating with tradable shareholders for trading rights three years or less after the acquisition ("*Post-Reform Negotiators*"); a third subgroup that includes acquirers that were subject to the government's share reform and conversion from non-tradable to tradable share status within less than two years following the acquisition ("*Pre-Reform Non-Negotiators*"); and a final, fourth subgroup of acquirers that was not subject to the split-share reform because the acquisition occurred more than three years before or after the reform and trading rights negotiation dates ("*Unaffected*").

¹¹ Recall that the 2005 split-share reform mandated that holders of non-tradable shares had to compensate holders of tradable shares in exchange for trading rights. The process of negotiating for trading rights could take anywhere from a few weeks to three years (Li, Wang, Cheung and Jiang, 2011).

The summary of performance change for these subgroups are presented in Table 5, where Panel A presents the results of completed deals with control rights transfer and Panel B replicates the same tests for a subgroup of incomplete acquisitions.

[Insert Table 5 Here]

In Panel A, we compare the performance changes around the acquisition event for state-owned acquirers and non-state acquirers. The results show that the performance change differential between SOEs and NSOEs is driven by M&As conducted shortly before the passage of the reform (“*Pre-Reform Negotiators*” and “*Pre-Reform Non-Negotiators*”), and is particularly pronounced and statistically significant among the group of “*Pre-Reform Negotiators*”. These results suggest that the reform was playing an important role in improving the post-merger performance of SOEs, and in particular, the post-merger performance of SOEs in which non-tradable shareholders were negotiating with tradable shareholders for trading rights.

The finding that trading-rights-negotiating SOEs were able to improve their post-merger performance more than the other acquirers in the sample is consistent with a recent paper by Li, Wang, Cheung and Jiang (2011), who find that more profitable firms, or firms in which performance was improving were able to convert their non-tradable shares to tradable status on better terms (by paying lower compensation to minority shareholders for trading rights). Thus to the extent that corporate managers and controlling shareholders knew they had to comply with the reform by negotiating with minority shareholders and converting their shares into tradable status, they had a stronger incentive to improve firm performance not only because they knew that their wealth will be more strongly tied to firm performance once their shares are tradable, but also because better firm performance could allow them to pay less to minority shareholders for the right to trade their shares.

To identify whether the improvement in profitability is caused by M&A synergy or just by the share reform, we also replicate the results by looking at a sample of incomplete deals in Panel B. The results, however, show that there is no significant difference in performance changes between SOEs and NSOEs that are involved in unsuccessful acquisitions.

To summarize, the results in Table 5 suggest that the significantly larger performance improvement of state-owned acquirers is driven by SOEs that were subject to the share reform shortly after the acquisition. Combined with the results of the incomplete deals sample, this suggests that the synergy value of China's M&As depends on two factors: the privilege of SOEs in the process of reorganizing their assets through M&As and the improvement in efficiency, especially profitability, following the M&A through the share reform. The results also suggest that non-state firms, though usually characterized by higher efficiency, cannot achieve the synergy through M&As probably due to their disadvantages in competing for the best assets with their state-owned counterparts.

Table 6 presents the summary statistics of *BHARs* by the four subgroups of SOEs, as defined above. Consistent with the results in Table 5, the significant and positive *BHARs* for SOEs are particularly large for the group of SOEs that experienced the share reform shortly after the acquisition and negotiated for converting their non-tradable shares into tradable status shortly after.

4.4. Regression Analysis

In this section, we conduct regression analysis to verify that the univariate results are not driven by deal, acquirer or target characteristics. The results are reported in Table 7. The dependent variables are ΔTAT , $\Delta OCF/TA$, and ΔROA , respectively. State affiliation is denoted in the year prior to the deal (*State-Owned_{t-1}*) and the share reform variables are measured in the three years

following the deal. Our four reform related sub groups of acquirers are defined as in Tables 5 and 6, where our first subgroup includes acquirers that were subject to the government's share reform within less than three years after the acquisition, and also negotiated to convert their non-tradable shares into tradable status within two years after the reform ("*Pre-Reform Negotiators*"); our second subgroup includes acquirers that were subject to the reform prior to the deal but were still in the process of negotiating with tradable shareholders for trading rights three years or less after the acquisition ("*Post-Reform Negotiators*"); a third subgroup includes acquirers that were subject to the government's share reform and conversion from non-tradable to tradable share status within less than two years following the acquisition ("*Pre-Reform Non-Negotiators*"); and a final, fourth subgroup of acquirers that was not subject to the split-share reform because the acquisition occurred more than three years before or after the reform and trading rights negotiation dates ("*Unaffected*").

We also interact the state ownership affiliation indicator with the *Pre-Reform Negotiators* dummy (*State-Owned* Pre-Reform Negotiators*) and with the *Pre Reform Non Negotiators* subgroup (*State-Owned* Pre Reform Non Negotiators*) to denote whether the acquirer is state-owned and will be affected by the reform in less than three years. Recall that the univariate results show that the SOE acquirers that were showing the largest post-M&A performance improvement were those for which a merger occurred less than three years prior to the reform.

In addition, we include *Foreign Ownership*_{t-1} (a dummy variable that denotes whether the acquirer has foreign ownership at t-1), and *Mgmt Ownership*_{t-1} (an indicator variable that denotes whether the acquirer has management ownership at t-1).

[Insert Table 7 Here]

We also identify whether some non-state acquirers become state-owned following an M&A. To capture any effect of this reverse ownership change, we include a dummy variable, *Non-State to State* $_{(t+1, t+3)}$. All models include year and industry dummies.

Model 1 presents the results for the changes in total asset turnover. After controlling for firm characteristics, state ownership does not explain the changes in asset turnover significantly, suggesting that controlling for everything else, asset turnover is impacted by factors other than ownership structure. More importantly, however, Models 2 - 3 confirm the results for changes in operating cash flows and profitability around the acquisition event. Specifically, Models 2 and 3 show that state-owned acquirers are associated with significantly higher improvement in operating performance and return on assets, with positive and statistically significant coefficients for the *(State-Owned)*(Pre-Reform Negotiators)* interaction term. This result is consistent with the interpretation the positive effect of SOEs on performance improvement is driven by the group of SOEs that experience the share reform shortly after the deal.

The control variables yield some interesting results too. For instance, managerial ownership prior to the deal is associated with a significant profitability improvement, consistent with the literature that performance sensitive compensation strengthens the alignment of interests between the shareholders and the managers (e.g., Guay, 1999; Core and Guay, 2002; Jin, 2002; Coles et al., 2006, among others). Foreign ownership, however, does not impact performance significantly, probably due to foreign investors' small presence in China's public firms (Sun and Tong, 2003).

We next conduct regression analysis for the long-term stock performance around the acquisition event in Table 8. We include all the variables used in Table 7, as described above. Table 8 shows that the coefficient on *State-Owned* $_{t-1}$ is positive and significantly associated with

BHARs. After controlling for firm and deal specific factors, the results show that this positive relationship is still driven by the group of SOEs that experience the share reform shortly before the merger, and where controlling shareholders negotiate with minority shareholders for converting their non-tradable shares into tradable status.

[Insert Table 8 Here]

The results of the control variables are consistent with the M&A literature, where firm size decreases with the announcement effect (Moeller and Schlingemann, 2004) and transaction size increases with it. In addition, firms taking over public targets experience lower long-term stock returns, and *Hi-tech* acquirers underperform their non-high tech counterparts. The variable that measures the reverse ownership change, *Non-State to State* $_{(t+1, t+3)}$, is positive and significant at 5% level, suggesting that non-state firms that become SOEs are able to maintain their efficiency while getting access to privileged treatment from the government upon becoming a state-owned firm.

In sum, the results of the regression analysis confirm that state-owned acquirers experience a strong accounting based performance improvement and higher *BHARs* following M&As. This positive effect is particularly driven by the group of SOEs that experience the share reform shortly after the acquisition.

5. Conclusion

Much of the multidisciplinary literature on M&As suggests that most acquisitions, domestic or global, fail. We revisit the determinants of performance of M&As by examining the effect of state ownership on M&A outcomes using a unique dataset of Chinese domestic mergers.

Our analysis is based on a few facts associated with the Chinese M&A market. First, most firms in China are state owned. Second, many M&As of China's state-owned acquirers are

arranged or assisted by the government (central or local) or its state-owned parent companies. And third, China went through an important dual share status reform in 2005, in which owners of non-tradable shares had to convert their shares into tradable status.

In our analyses, we therefore test the hypothesis that state ownership matters in M&A performance by comparing the change in long-term market and accounting performance, measured as the difference between post- and pre-merger asset productivity, profitability and buy-and-hold returns for SOEs and NSOEs. While we find that the market has generally more confidence in NSOE acquirers in the short-run, we also find that SOE acquirers experience a significantly larger long-term post-merger performance improvement compared to their non-state counterparts. When partitioning the sample period into acquisitions made prior to and following China's 2005 split-share reform, we find that the larger post-merger performance improvement of SOE acquirers is concentrate among M&As conducted shortly before the announcement of the reform.

These findings highlight the important role of the government and its agents in China's capital markets, particularly in the asset restructuring process. The synergy value created by M&As, however, can only be achieved when state-owned acquirers experience market liberalization. Our study sheds light on many of the challenges that the non-state firms need to deal with in order to survive and grow. As it becomes a global trend that firms rely on M&As to get bigger faster so as to extract the benefits of economies of scale and scope, non-state firms in China do not seem to have advantages in this important asset market.

While our paper begs for a more detailed exposition of the channels that are driving these results, our findings are consistent with several other recent studies that show that the split share reform resulted in a significant improvement in corporate governance for Chinese SOEs,

and with other papers that show that SOE acquirers benefit from government intervention through privileged access to state-owned bank funding and political connections. As such, this paper is the first step to better understanding the role of state ownership and financial market liberalization in shaping M&A outcomes in the corporate sector.

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Table 1

Aggregate Transaction Value by Industry and by State Ownership: Top 15 Industries

This table includes all transactions that are not self-tender (where the acquirers and the targets have the same ticker symbols or have the same names if the target is private) and are not between related parties (where they share the same controlling parent). We also exclude deals where the acquiring firms are in bankruptcy and where the acquiring firms' operations have been suspended due to poor financial performance or policy changes. State-Owned Acquirers are defined as firms in which the controlling shareholder (largest shareholder) is a state-owned enterprise or a government agency. Non-State Acquirers include all other acquirers.

Rank	State-Owned Acquirers (N=201)				Non-State Acquirers (N=163)			
	Name	Transaction (\$ mil.)	Percentage	Accumulative Percentage	Name	Transaction (\$ mil.)	Percentage	Accumulative Percentage
1	Chemicals and Allied Products	10,670	27.463%	27.463%	Chemicals and Allied Products	3,428	16.363%	16.363%
2	Primary Metal	5,088	13.096%	40.559%	Business Services	3,298	15.744%	32.106%
3	Transportation Equip.	3,380	8.700%	49.259%	Ind. and Commercial Machinery and Computer Equip.	2,324	11.090%	43.197%
4	Electric Gas and Sanitary Services	2,996	7.710%	56.969%	Electronic	2,061	9.835%	53.032%
5	Heavy Construction Contractors	2,448	6.300%	63.269%	Food	1,531	7.306%	60.338%
6	Oil and Gas Extraction	1,808	4.652%	67.922%	Petroleum Refining	1,486	7.093%	67.430%
7	Electronic	1,805	4.645%	72.567%	Communications	1,421	6.780%	74.211%
8	Business Services	1,412	3.635%	76.202%	Electric Gas and Sanitary Services	949	4.527%	78.738%
9	Local Passenger Transport	1,374	3.537%	79.739%	Durable Good Whole Sale	909	4.340%	83.078%
10	Metal Mining	1,197	3.081%	82.820%	Paper	444	2.120%	85.197%
11	Transportation by Air	1,122	2.888%	85.708%	Oil and Gas Extraction	426	2.031%	87.229%
12	General Merchandise	1,099	2.829%	88.537%	Fabricated Metal	336	1.603%	88.832%
13	Transportation Services	574	1.478%	90.015%	General Merchandise	335	1.600%	90.432%
14	Stone and Concrete Products	431	1.108%	91.123%	Primary Metal	254	1.212%	91.644%
15	Building Construction	403	1.038%	92.161%	Heavy Construction Contractors	229	1.091%	92.736%

Table 2 Summary Statistics

This table includes all deals that are completed, through which acquirers take over 50% or higher of targets' shares. *Size* measures the market size of the firm relative to the rest of all other listed firms in the same year and quartile. *MtB* is the ratio of market value of equity to book value of equity. Leverage is the ratio of long-term debt to total assets. Hitech Acquirers refer to acquirers whose core business is in the high-tech industry. Tradable% refers to the percentage of shares that are tradable. Relative Size is the ratio of the transaction value to the acquiring firm's market value four weeks' prior to the announcement. Toehold is the percentage of target shares owned by the acquirers prior to the focal M&A announcement. Friendly refers to deals that are not hostile takeover. TAT_{t-1} , $(OCF/TA_{t-1}$ and $ROA_{t-1})$ are sales (pretax operating cash flows and net income) to total asset in the year prior to the M&A. The differences between means for SOEs and NSOEs are reported. The symbols *, **, and *** denote statistical significance at the 10%, 5%, and 1% levels, respectively.

	State-Owned Acquirers (N=201)	Non-State Acquirers (N=163)	Diff.
	(1)	(2)	(1)-(2)
Acquirer Characteristics			
Total Assets (\$mil.)	643.735	298.743	344.992***
Market Value 4 wks Prior	927.787	585.928	341.859**
Relative Size	2.684	2.413	0.271***
MtB	2.267	2.901	-0.636**
Leverage _{t-1}	0.481	0.505	-0.024
Hitech Acquirer	0.083	0.128	-0.045*
Tradable%	0.503	0.549	-0.046**
Deal Characteristics			
Transaction Value (\$mil)	175.719	81.900	93.189**
Relative Size	0.313	0.309	0.005
Toehold	0.068	0.033	0.035*
Public Target	0.010	0.001	0.009*
Hitech Target	0.097	0.083	0.014
Friendly	0.889	0.833	0.056*
Related	0.420	0.355	0.065***
Summary of Performance			
TAT_{t-1}	0.743	0.644	0.099*
OCF/TA_{t-1}	0.045	0.053	-0.008
ROA_{t-1}	0.053	0.055	-0.002

Table 3 The Announcement Effect of State and Non-State Acquisitions

This table shows how state affiliation affects an acquirer’s CARs and BHAR. The short-term performance measure is the three-day cumulative abnormal return (CAR) on the day of the announcement. We use the standard event-study approach, excluding deals with transaction values that are less than 1% of the acquirer’s market value four weeks prior to the acquisition announcement. We also require that all the acquirers in the sample have stock information for 300 days before the announcement date so as to have a 255 estimation window ending 46 days prior to the announcement with the minimum requirement of the estimation window length is 100 days. The long-term performance measure is the three-year buy-and-hold return (BHAR). We calculate an acquirer’s market- and size- adjusted BHAR with the acquisition announcement month as the purchase month. The symbols *, **, and *** denote statistical significance at the 10%, 5%, and 1% levels.

	All (N=364)	State-owned (N=201)	Non-State (N=163)	Diff.
Completed and Acquired more than 50%				
CARs (-1, 1)	0.011***	0.007	0.017***	-0.010*
Market- and Size-adjusted BHAR	-0.069**	0.001*	-0.146***	0.147**

Table 4 Changes in Operating Performance

This table presents the summary of the changes in performance by ownership structure. We measure the change in performance as the industry adjusted change in the average value of the performance measure between the three years after the deal (t+1, t+3) and the three years prior to the deal (t-3, t-1), where t is the year of transaction. Total asset turnover (TAT) is measured as the ratio of sales to the market value of total assets; Return on assets (ROA), measured as net income over the market value of total assets; and pretax operating cash flows to assets (OCF/TA) are measured as sales, minus cost of goods sold and selling and administrative expenses, plus depreciation and goodwill expenses, scaled by the market value of total assets. The symbols *, **, and *** denote statistical significance at the 10%, 5%, and 1% levels.

	State-Owned (N=201)	Non-State (N=163)	Diff.
	(1)	(2)	(1)-(2)
Industry Adjusted Performance; Completed and acquired more than 50%			
Adj. Δ TAT	0.017	-0.062	0.079**
Adj. Δ OCF/TA	0.010	-0.130	0.140***
Adj. Δ ROA	0.002	-0.133	0.135***

Table 5 Accounting based M&A Performance Changes of SOEs and NSOEs around the Split-Share Reform

This table presents the accounting post-merger performance changes of SOE and NSOE acquirers, as defined in Table 4. *Pre-Reform Negotiators* are a subgroup of acquirers that were subject to the government's share reform within less than two years after the acquisition, and also negotiated to convert their non-tradable shares into tradable status within two years after the reform; *Post-Reform Negotiators* are a subgroup of acquirers that were subject to the reform prior to the deal but were still in the process of negotiating with tradable shareholders for trading rights three years or less after the acquisition; *Pre-Reform Non-Negotiators* are acquirers that were subject to the government's share reform and conversion from non-tradable to tradable share status within less than two years following the acquisition; and *Unaffected* includes a subgroup of acquirers that were not subject to the split-share reform because the acquisition occurred more than three years before or after the reform and trading rights negotiation dates. The symbols *, **, and *** denote statistical significance at the 10%, 5%, and 1% levels.

	<i>State-Owned Acquirers</i>					<i>Non-State Acquirers</i>		Diff.			
	Pre-Reform Negotiators	Post-Reform Negotiators	Pre-Reform Non-Negotiators	Unaffected				(1)-(5)	(2)-(5)	(3)-(5)	(4)-(5)
	(1)	(2)	(3)	(4)		(5)		(1)-(5)	(2)-(5)	(3)-(5)	(4)-(5)
Completed and Acquired more than 50%											
	N=30	N=49	N=26	N=96		N=163					
Δ TAT	0.065	0.030	0.044	0.076		0.009		0.056*	0.021	0.035	0.067*
Δ OCF/TA	0.062	-0.010	0.024	-0.004		-0.021		0.083**	0.002	0.036	0.018
Δ ROA	0.048	-0.010	0.027	-0.007		-0.016		0.064**	0.006	0.043	0.009
Incomplete											
	N=73	N=294	N=93	N=381		N=533					
Δ TAT	0.067	0.121	0.043	0.060		0.011		0.055*	0.110***	0.032	0.049**
Δ OCF/TA	-0.017	-0.006	-0.013	-0.036		-0.013		-0.004	0.007	0.000	-0.023**
Δ ROA	0.013	-0.002	0.006	-0.028		-0.009		0.022	0.007	0.015	-0.019**

Table 6 Long-Term Market M&A Performance Changes of SOEs and NSOEs around the Split-Share Reform

This table shows how long term stock performance is affected by state ownership and by the split share reform. *Pre-Reform Negotiators* are a subgroup of acquirers that were subject to the government’s share reform within less than two years after the acquisition, and also negotiated to convert their non-tradable shares into tradable status within two years after the reform; *Post-Reform Negotiators* are a subgroup of acquirers that were subject to the reform prior to the deal but were still in the process of negotiating with tradable shareholders for trading rights three years or less after the acquisition; *Pre-Reform Non-Negotiators* are acquirers that were subject to the government’s share reform and conversion from non-tradable to tradable share status within less than two years following the acquisition; and *Unaffected* includes a subgroup of acquirers that were not subject to the split-share reform because the acquisition occurred more than three years before or after the reform and trading rights negotiation dates. The symbols *, **, and *** denote statistical significance at the 10%, 5%, and 1% levels.

	<i>State-Owned Acquirers</i>					Non-State Acquirers		Diff.			
	Pre-Reform Negotiators	Post-Reform Negotiators	Pre-Reform Non-Negotiators	Unaffected							
	(1)	(2)	(3)	(4)		(5)		(1)-(5)	(2)-(5)	(3)-(5)	(4)-(5)
Completed and Acquired more than 50%											
	N=25	N=50	N=23	N=89		N=56					
Adj. BHAR	0.132	0.035	0.051	-0.068		-0.146		0.279**	0.180	0.197	0.078

Table 7 Regression Analysis - Accounting Performance

This table presents the results of a regression analysis of the accounting performance changes around M&As. The dependent variables are Δ TAT, Δ OCF/TA, and Δ ROA, respectively. The ownership state variables are measured in the year prior to the deal and the reform related variables are measured in the three years after the deal. The ownership variables prior to the deal are dummy variables that include State-Owned_{t-1} (denotes whether the acquirer is state-owned), (State-owned) *(Pre Reform Negotiators) (t+1, t+3) (denotes whether the acquirer is state-owned and has shares floated already before the M&A), Foreign Ownership_{t-1} (denotes whether the acquirer has foreign ownership), and Mgmt Ownership_{t-1} (denotes whether the acquirer has management ownership). Year and industry dummies are included for all models. The symbols *, **, and *** denote statistical significance at the 10%, 5%, and 1% levels. The reported p-values in the parentheses reflect White's heteroskedasticity correction. Constants, year and industry dummies are included but not reported for brevity.

	Model 1 Δ TAT	Model 2 Δ OCF/TA	Model 3 Δ ROA
Pre Reform Negotiators (t+1, t+3)	-0.060 (0.315)	0.015*** (0.012)	0.016* (0.097)
Post Reform Negotiators (t+1, t+3)	0.031 (0.504)	-0.001 (0.828)	0.002 (0.684)
Pre Reform Non Negotiators (t+1, t+3)	0.052 (0.292)	0.007 (0.382)	0.008 (0.310)
(State-owned) *(Pre Reform Negotiators) (t+1, t+3)	0.019 (0.704)	0.010 (0.169)	0.017** (0.019)
(State-Owned)*(Pre Reform Non Negotiators) _{t-1}	0.017 (798)	-0.005 (0.556)	-0.014* (0.098)
Non-State to State _(t+1, t+3)	0.008 (0.894)	-0.003 (0.791)	-0.003 (0.864)
Foreign Ownership _{t-1}	0.131 (0.370)	-0.003 (0.889)	0.001 (0.959)
Mgmt Ownership _{t-1}	0.080 (0.705)	-0.003 (0.767)	0.005 (0.724)
Δ Leverage	-0.056 (0.539)	-0.083*** (0.000)	-0.088*** (0.000)
LnTA _{t-1}	-0.030* (0.093)	-0.011*** (0.000)	-0.008*** (0.001)
MtB	0.006 (0.107)	-0.001 (0.522)	-0.001 (0.925)
RelativeSize	-0.039* (0.060)	-0.001 (0.776)	-0.001 (0.890)
Related	0.027 (0.365)	-0.009* (0.043)	-0.010** (0.026)
Toehold	-0.065 (0.401)	-0.005 (0.573)	-0.005 (0.509)
TgtHitech	-0.023 (0.515)	-0.003 (0.525)	-0.004 (0.546)
Obs.	325	325	325
Adj. R ²	0.494	0.328	0.237
Prob.>F	0.000	0.000	0.000

Table 8 Regression Analysis: Long-Term Stock Performance

This table presents the results of the regression analyses of the long-term market value changes around M&As. The dependent variable is the market and size adjusted BHAR. Year and industry dummies are included for all models. Control variables are defined in Tables 6 and 7. The symbols *, **, and *** denote statistical significance at the 10%, 5%, and 1% levels. The reported p-values in the parentheses reflect White's heteroskedasticity correction. Constants, year and industry dummies are included but not reported for brevity.

	Adjusted BHAR	
	Model 3	Model 4
State-Owned _{t-1}	0.224** (0.013)	
(State Owned)*(Pre Reform Negotiators _(t+1, t+3))		0.337* (0.077)
Post Reform Negotiators _(t+1, t+3)		0.211 (0.101)
Pre Reform Non Negotiators _(t+1, t+3)		0.261 (0.253)
Unaffected _(t+1, t+3)		0.134 (0.178)
(State-Owned)*(Pre Reform Non Negotiators) _{t-1}	-0.185 (0.131)	-0.143 (0.301)
Non-State to State _(t+1, t+3)	0.250 (0.147)	0.356** (0.042)
Foreign Ownership _{t-1}		-0.152 (0.756)
Mgmt Ownership _{t-1}		-0.635 (0.135)
Market Size		-0.084** (0.032)
LnTran		0.001 (0.998)
Related		-0.036 (0.678)
TgtPub		-0.488** (0.012)
Toehold		-0.201 (0.109)
AcqHitech		-0.253** (0.037)
Obs.	337	337
Adj. R ²	0.108	0.141
Prob.>F	0.000	0.000

Figure 1

Aggregate Transaction Value of Completed Acquisitions by Year and State Ownership (\$ Billions)

