

# Corruption in state asset sales – Evidence from China<sup>1</sup>

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## Abstract

We document the under-pricing of state asset sales in China, and the impact of these privatizations on firm performance. These asset sales involved stakes in partially privatized firms, providing a benchmark – the price of publicly traded shares – to measure under-pricing. Sales by “dehat” owners – firms misrepresenting their state ownership to elude regulatory scrutiny – are discounted 5-10 percentage points more than sales by other owners. State asset sales positively affect post-transfer performance based on event study evidence and changes in ROA. We provide suggestive evidence that improvements are weaker among “dehat” sellers, highlighting the dependence of privatization outcomes on post-transfer ownership.

**Keywords:** Partial privatization; corruption; state ownership; misgovernance

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## **1. Introduction**

Governments around the world have sold state assets over the past few decades with the twin rationales of improving efficiency and raising revenues. The broad consensus among economists is that the net effect has been positive – post-privatization, companies increase sales, invest more, earn higher profits, and do so without cutting their workforces (see Megginson and Netter, 2001, for the most recent survey).

Yet privatization's history is hardly unblemished. Most notably, corruption in Russian voucher privatizations led to the theft of state assets on a very large scale (Shleifer and Treisman, 2005), undermining in large part the revenue generation rationale for shedding state assets and resulting in increased ownership concentration. On the one hand, Shleifer and Treisman argue that these redistributive consequences of under-priced privatizations were outweighed by the gains from getting productive assets into the hands of those who would use them efficiently. Yet these efficiency gains are not self-evident. The shift to private ownership trades one set of principle-agent and efficiency problems for another – in the Russian context, a partially privatized gas and oil company, Gazprom, had a market valuation of \$0.05 per barrel of hydrocarbon reserves (Exxon Mobile's value was \$13.68 per barrel), implying an astronomical rate of inefficiency and/or misgovernance (MacMillan and Twiss, 2002).

We study these questions of the distributive and efficiency consequences of privatization by analyzing state asset sales in China. The ownership structure of publicly traded Chinese companies affords us a unique opportunity to measure the extent of under-pricing (and hence assess the correlates of stealing) in the sales of government stakes. With this measure of under-pricing in hand, we may then assess whether sales that raise red flags lead to worse post-sale

performance. In this way, we hope to shed light on the possible sources of heterogeneity in the effects of privatization.

Many Chinese companies were partially privatized in the early 1990s through share issue privatizations, yet the government maintained very substantial (usually a majority) holdings in most firms. For the most part, government shares of these publicly listed firms were non-tradable, and could only change hands through privately negotiated sales subject to regulatory approval. Since shares with the same cash flow rights as these government holdings were freely traded in parallel, we have a ready and credible benchmark to assess the extent of under-pricing. We find that negotiated transfers of non-traded shares occur at very steep discounts – on average more than 70 percent – relative to the benchmark of the publicly traded share price. We argue that much of this discount is likely explained by a standard principal-agent problem where insiders at the selling firm – often a state company – do not bear the cost of transferring shares at a discount, and may potentially do so in exchange for a side payment or benefits to friends and family.

Of course, discounted transfers may occur for many reasons; prior research has also documented discounted asset transfers by government sellers (though the magnitudes of the discounts we observe may argue against alternative explanations).<sup>2</sup> For example, governments may choose to sell their holdings quickly and cheaply because of immediate revenue needs or to signal commitment to market reforms. In our case non-tradable shares may be discounted as a result of a liquidity discount.

We therefore provide evidence on the correlates of under-pricing that have no obvious connection to either liquidity or government objectives, by distinguishing sellers that we identify as likely engaging in under-priced sales as a means of transferring value. We focus on sellers where the underlying owner is a municipal or provincial government but has chosen to identify

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<sup>2</sup> See, for example, Morgan Stanley (1997), for evidence on underpriced transfers in Europe.

itself as a private company in transfer disclosure documents. These “dehat” firms<sup>3</sup> face lesser scrutiny than government firms, so insiders wishing to put through under-priced sales “on the sly” would naturally choose to mis-declare ownership in this way. In regressions without year fixed effects, we find that dehat transfers are associated with an incremental 10 percentage point discount relative to the tradable share benchmark. This remains true even after controlling for firm fixed-effects, and also time-varying measures of liquidity considerations, profitability, and other factors.

We find that dehat transfers are concentrated in the early years of our sample, before regulatory reforms in 2002 that increased disclosure requirements for transfers. Reflecting the fact that dehat sales are concentrated in the pre-2002 period, when the inclusion of year fixed effects reduces the point estimate of the effect of dehat ownership to 4.5 percentage points. (We find that a full set of quarter-year fixed effects has relatively little impact on the dehat coefficient after the inclusion of a few indicator variables to account for the timing of these reforms, consistent with the important role of these reforms in the timing of dehat sales).

Also consistent with dehat incorporation as a means of eluding regulatory oversight, dehat transfers are smaller and less likely to be control transactions relative to other government sales – both control and size are deal attributes that trigger greater scrutiny. We also report a parallel set of results for private sellers of non-traded shares<sup>4</sup> where we show that the “transfer discount” for related party transactions – a well-documented source of misgovernance in many developing countries – is 3.7 percentage points higher without year fixed effects and 1.9

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<sup>3</sup> Essentially the converse of the much more widely described red-hat firms, which are privately owned companies registered as government collectives in order to obtain market access and financing. See, for example, Huang (2003), for a description of the red hat phenomenon.

<sup>4</sup> These private non-tradable shares originate through two channels: (1) in a privately controlled firm, the stake of a majority shareholder also cannot trade; (2) some private buyers obtained shares earlier from state sellers through private negotiations.

percentage points higher when time effects are included (though no longer statistically significant).

Critically, we also assess the impact of dehat transfers on subsequent firm performance. The Shleifer and Treisman view holds that the new (private) owners may have stronger profit motives than sellers, so performance may improve. Yet our opening discussion highlights some of the pitfalls of private ownership in the presence of weak private sector governance. In the context of negotiated transfers, it is possible that the type of investor that is willing and able to pay off officials in state-run companies in exchange for a share price discount may also be the type with the means and inclination to tunnel value out of a company where he takes a substantial stake. Thus, the connection between block transfers and subsequent operating measures such as profits or investment is ambiguous.

Empirically, we find significant profit improvements following negotiated share transfers, both as measured by post-transfer return on assets, and also based on event returns. However, we present suggestive evidence that these effects are attenuated for dehat sales. Due to lack of precision, we are unable to make strong conclusions about differences in post-sale performance. We find no evidence of changes in other operational characteristics, including leverage, investment, or firm size.

We make a number of contributions to the literature on privatization and governance in emerging markets.. First, we provide relatively clean evidence of value transfer – likely linked to corrupt side payments – in Chinese asset sales. Further, we present evidence on firms’ post-transfer performance, and how this varies with firm attributes. While our results are broadly consistent with the Shleifer and Treisman view – on average, profits increase – we provide suggestive evidence that this is not the case for dehat sales.

This paper relates most directly to earlier work on state asset sales, which has focused primarily on the governance improvements (and accompanying increases in firm value) that have often come with increased private ownership (see, for example, Gupta (2005) and La Porta and Lopes-de-Silanes (1999)). By contrast, we assess both the corruptibility of asset sales and also examine what governance attributes determine post-sale performance. Our work also relates to the ever-expanding literature on measuring corruption and assessing its causes. Our work is closest to research that looks at corruption and firm valuation in the context of publicly traded companies (e.g., Fisman (2001); Goldman, Rocholl, and So (2009)). Finally, prior research has analyzed the Chinese block transfers we study here (see Chen et.al. (2008) and Huang and Xu (2009)), using them as a means of estimating block control premia and assessing the efficiency gains that resulted.

The rest of this paper is organized as follows: In Section 2 we provide background on relevant Chinese market attributes and institutions; Section 3 provides a description and overview of the data; Section 4 presents our results, and Section 5 concludes.

## **2. Background**

State asset sales in China began in the early 1990's, with the partial privatization of some state-owned enterprises through Share Issue Privatization (henceforth SIP), creating many publicly traded firms where governments – both national and provincial – continued to hold substantial stakes. In addition, millions of former state-owned firms were gradually sold to the private sector, again with governments keeping substantial stakes. These sales reached a peak during

1998-2002 as a result of the central government's widely noted policy of *Guo Tui, Min Jin* ("state-owned firms out and private-owned firms in").<sup>5</sup>

The government wished nonetheless to maintain levers of control in the firms privatized through SIP. As a result, more than two thirds of outstanding shares were not allowed to trade in the stock market; these are referred to as non-tradable shares. Non-tradable shares had three types of owners. First, some were held by state-owned firms that were themselves owned by provincial or city governments; we refer to their holdings as *state legal person shares*. Second, non-tradable shares were directly held by the central government through its State-owned Asset Supervision and Administration Commission of the State Council (henceforth SASAC), or directly by local governments; we refer to these holdings as *state shares*<sup>6</sup>. Finally, some non-tradable shares were held by (generally well-connected) private firms; their holdings are referred to as *general legal person shares*.

While these shares did not trade on an exchange, ownership could be transferred through private negotiation. In the case of state and state legal person shares, a sale required approval by government regulators.<sup>7</sup> Note that when a transfer was made, the shares' classification changed according to the identity of its new owner. For example, if a provincial SOE sold a block of shares to a private company, the shares' classification shifted from state legal person to general legal person.

These "negotiated transfers" create the potential for rent-seeking: The managers of state-owned firms, which possessed large non-tradable holdings in many firms, were responsible for negotiating the prices of share transfers, while the firm (i.e., not the manager) suffered the

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<sup>5</sup> Data on this latter set of government asset sales is very sparse. In any event, since no tradable shares exist for companies without a SIP, we do not have a benchmark value to compare the price set for asset transfers.

<sup>6</sup> Shares held by central government SOEs (*Zhongyang Qiye*) like SINOPEC are also defined as "state shares".

<sup>7</sup> See <http://preview.fec2.mofcom.gov.cn/aarticle/laws/200512/20051201243609.html> for details on regulatory statutes.

resultant cost of a low price. This created an obvious potential for prospective buyers to bribe SOE managers to set low transfer prices in exchange for a private payments.

This principal-agent problem is a function of the extent of monitoring and oversight of negotiated transfer deals. As already noted, sales by state and state legal person sellers faced greater scrutiny than those made by general legal person sellers because of the need for government approval. However, many state legal person sellers were able to avoid greater oversight by registering their shareholdings in transfer deal documents as general legal person shares, thus misrepresenting the true ownership of their holdings. As a result, the seller identity simply showed up as a (private) general legal person in the deal documents. We refer to these companies – state-owned entities with holdings registered as general legal person shares – as “dehat” firms.

While it is relatively straightforward to disentangle the ultimate ownership of dehat shares (obviously we have done so for the purposes of this paper), regulators may choose to avoid delving too deeply into such matters – many CEOs of state-owned firms are former local government officials, and may have close ties to regulators or their political bosses (See Fan, Wong and Zhang (2007) for one description of the political ties of CEOs in listed firms in China). They may also receive side payments themselves in exchange for turning a blind eye.

<<INSERT HERE SOME ANECDOTAL EVIDENCE/COMMENTARY ON DEHATS BEING ASSOCIATED WITH SIDE PAYMENTS>> “Dehatting” is thus a channel for eluding oversight for well-connected company insiders that provides an “ask me no questions and I’ll tell you no lies” absolutism to regulators.<sup>8</sup>

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<sup>8</sup> An obvious question that comes up in this regard is why buyers and sellers do not mislead regulators on other attributes, most obviously price or quantity of shares. This turns out to be much more difficult, since the transfer occurs through the stock exchange itself, which directly observes price and quantity of shares sold.

### *Rules governing negotiated transfers*

All state and state legal person sales had to be reported to government regulators. In addition, deals above certain size cutoffs were reported publicly. These public reporting requirements applied equally to government and private sellers; our data are derived from these public disclosures.

According to Rule 47 in the *Temporary rules on stock issuance and trading administration* (henceforth *Trading Rules*) issued by the State Council of the People's Republic of China in May, 1993, once a legal person entity directly or indirectly holds 5 percent of outstanding shares of a listed firm, it must disclose this holding information publicly within three working days. Once this 5 percent threshold has been reached, the owner of the shares must also disclose its holdings whenever it directly or indirectly buys or sells 2 percent of shares outstanding of the listed firm.<sup>9</sup>

Thus, some deals by either owners with relatively small stakes or transfers of a relatively modest size will not appear in our data. For example, if a firm held 4 percent of outstanding shares as non-tradable shares and sold any proportion of its holdings through private negotiation, no public disclosure would have been required; instead it needed only to register this deal at the appropriate stock exchange. Also if the owner held more than 5 percent of a listed firm, but sold only 1.99 percent, again no public disclosure would be necessary.

State sellers – either government agencies or state-owned firms – faced an additional layer of scrutiny. On May 15, 1996, the government issued a “notification on standardizing the administration of state-owned shares in limited liability companies.” This put in place a requirement that any transfer of state legal person shares obtain approval from local government

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<sup>9</sup> On December 29, 1998, the 2 percent cutoff was increased to 5 percent. This regulatory change took effect on July 1<sup>st</sup>, 1999.

agencies; when the transfer involved state shares, central government approval was required in addition to the approval of provincial regulatory agencies. In the latter case, stricter oversight and disclosure requirements prevented companies from eluding regulation,<sup>10</sup> which may account for the fact that we observe no dehat deals for state owners.

The extent of oversight increased over the course of our sample period. In particular, on December 6, 2001, the CSRC (the Chinese SEC-equivalent) circulated a discussion draft on improving the “administrative method on information disclosure of shareholder changes in listed firms.”<sup>11</sup> This evolved into a final set of guidelines enacted on Dec 1, 2002. According to the new rules, for each negotiated transfer both seller and buyer would be required to disclose the ownership chain tracing back to the ultimate owner. While this does not rule out possible dehat deals, it arguably made them riskier for the parties involved (Li, 2002).

In an overlapping time period, the potential conversion of non-tradable shares was being explored. On June 14, 2001, the Chinese State Council disclosed a temporary act, “Interim Measures of the State Council on the Management of Reducing Held State Shares and Raising Social Security Funds,” enabling the sale of non-tradable state-owned equities into the stock market – a de facto conversion to tradable shares. According to Article 15 of this act, all negotiated transfers of state-owned non-tradable shares were required to obtain Ministry of Finance approval. In practice, the Ministry of Finance and the CSRC simply forbade all negotiated transfers until June 23, 2002 when the government cancelled its plans for the sale of government-owned shares (and hence the large-scale conversion to tradable shares).

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<sup>10</sup> While China is gradually selling off firms held by local governments, it is simultaneously strengthening its control over firms owned by the central government. The latter are generally very large business groups, which may account for the very strict oversight.

<sup>11</sup> <http://finance.sina.com.cn/y/20011207/152075.html>

For our purposes, there are thus five time periods we wish to control for: the “pre” period before any of the announcements described above; expectation of possible non-tradable share conversion, but no expected change in oversight (June 14, 2001 – December 5, 2001); expectation of share conversion and expectation of strengthened oversight (December 6, 2001 – June 22, 2002); no expectation of share conversion but expected strengthened oversight (June 23 – November 30, 2002); and the “post” period following December 1, 2002 where there was greater oversight but no expectation of share conversion.

### **3. Data sources and summary statistics**

The original deal-level data are from the “Negotiated transfer dataset” obtained through CCERDATA, a data provider affiliated with the China Center for Economic Research (CCER) at Peking University. This dataset covers all announced negotiated transfer deals from Feb 8, 1995 to Sep 26, 2007. For each deal, the data include the date when the deal was first announced; the names of the buyer and seller; the stock code and name of the company whose shares were to be transferred; the price per share; and the total number of shares transferred.

Based on the transfer price, we construct our key dependent variable *value loss*, which is defined as 1 minus the ratio of the transfer price to the average price of the corresponding tradable shares during the month prior to the announcement date. Intuitively, this reflects the extent of underpricing relative to the benchmark of the tradable share price. As a measure of deal size we define the ratio of transferred shares over total shares (tradable and non-tradable) as *fraction transferred*. Further, we generate an indicator variable *control* denoting a change in the controlling (i.e., largest) shareholder of the firm as a result of the deal. (In general, directors selected by this controller dominate the board and hence dominate corporate decision-making.)

For each transaction, we obtain annual data on financials such as stock turnover, sales revenues, and other balance sheet information, and data on the ownership structure of the listed firm from CSMAR, a database on Chinese capital markets (much of this database is now also available through Wharton Research Data Services); where necessary, this is supplemented with more detailed data from Resset ([www.resset.cn](http://www.resset.cn)), a widely used database provided and maintained by Tsinghua University. These yearly data are then matched up to each deal (there are often multiple deals in a year for a given firm). We also obtain the pre-deal monthly stock trading information from CSMAR. These data are used to construct control variables, including *turnover* (the average daily trading volume over total shares in the year preceding a deal);  $\log(\text{Sales})$ ; *ROA* (ratio of earnings after interest and taxes to book value of assets),  $\log(1+\text{Tobin's } Q)$  (calculated as the ratio of market value of equity to the book value of assets), and *dividends* (total dividends divided by mean price in the year prior to the deal).

The CSMAR data are used to calculate abnormal returns for dates around each sale. We calculate returns for a range of windows up to one month prior to the transfer announcement to allow for the effects of pre-announcement information leakage about impending transfers – since the deal is the result of buyer-seller negotiation, at least some leaks are likely to occur (this is particularly likely in the case of government sales, since regulators must give approval before the transfer is announced). As we will see in the next section, there is clear evidence of pre-event leakage in the data.

Finally, these data are also used in our later examination of post-deal operating performance. For these analyses, we focus on growth in *assets* (book value of assets), profitability (*ROA*), *investment* (ratio of investment to book value of physical assets), and *leverage* (total borrowing divided by total assets of the listed firm).

We delete all deals that involve the reallocation of state assets within a state enterprise (*Xingzheng Huabo* in Chinese). These are cases where the state simply reshuffles its assets within a business group with transfer price equal to zero. We keep transfers between different state-owned firms where the transfer price is not equal to zero. We also omit the 25 cases where the transfer takes place through secondary market auction, and the 17 deals where we cannot obtain firm-level financial information.<sup>12</sup> This yields a final sample of 2121 deals involving 649 firms.

A critical covariate for our analysis is *dehat*, an indicator variable denoting whether the negotiated transfer seller is a state legal person that has registered its holdings in deal documents as general legal person shares. To construct *dehat*, we manually recorded the registered identities of sellers' transferred shares using the original deal disclosure documents, which can be found in the China Financial Newspapers Database (henceforth CFND), provided by the Shenzhen-based Juling Information Company. In each case, the disclosure documents list the company name and also whether the shares are declared as state-owned or general legal person (i.e., private) owned.

To determine whether this owner had identified itself truthfully as state or private, we begin by looking at the listed company's IPO documents and annual reports that pre-date the transfer.<sup>13</sup> At these earlier dates, there was no incentive for misrepresentation so we expect honest revelation. In cases where the seller is not listed in IPO reports or earlier annual reports, we search the "Business Information System database" (henceforth BISD), which provides a list of large Chinese firms by city of incorporation, along with their subsidiary companies'

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<sup>12</sup> Some newly listed firms may not have traded for an entire year. As a result we cannot calculate turnover or Tobin's Q; also some firms failed to report their total sales (these are likely to be financially stressed firms, which are called "ST" (Special Treatment) firms in China.

<sup>13</sup> Another concern is that the originally state-owned firm itself may have been privatized before the negotiated transfer date. However, this would itself show up as a change in ownership and reported to the stock exchange, and hence observed by us.

ownership status (private or state). Again, we are able to identify firms where there exists a mismatch in state versus private ownership declarations. Finally, for smaller firms not listed in BISD, we performed an internet search using the seller's name and the keywords "Guoyou Qiye" or "Guoyou Konggu Qiye" (meaning state-owned or state-controlled).<sup>14</sup>

Based on the registered and "true" identities of sellers, we classify sellers into four categories: *state* sellers that registered their shares as owned by the central government; *face-value LP* sellers that registered their holdings as state legal person shares; *private* sellers that registered their holdings as general legal person shares (i.e., private) and where we also find that the true owner is private; and *dehat* sellers, where holdings are registered as general legal person shares, but we determine that the ultimate owner is a state entity. Note that both *face-value LP* and *dehat* sellers are owned by state legal person entities, but in the case of *dehat* sellers, the firm has chosen to list ownership (incorrectly) as private in negotiated transfer deal documents.

On the buyer side, we do not observe any differences between registered ownership and true underlying ownership.<sup>15</sup> We define *private buyer* to denote buyers with holdings registered as general legal person shares.

For private sellers, there may also be scope for transferring value through negotiated transfers. In particular, private sellers are for the most part firms that themselves have dispersed ownership. Thus, insiders in these selling firms may wish to transfer shares at a discount to other entities where they possess greater cash flow rights. Any transaction between related parties must

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<sup>14</sup> For example, on some local governments' homepages, firms controlled by the local government are listed. One example of a *dehat* firm thus uncovered is the China Beijing Corporation For International Economic Cooperation (CBCIEC) that registered itself as private when it sold 8,400,000 shares of Zhongyan Fangzhi (stock code: 600763) in July 17, 2001 to Xinjiang D-Long Group which is a privately-control business group controlled by the notorious Tang Brothers. However, according to the Beijing city website ([www.beijing.gov.cn](http://www.beijing.gov.cn)), CBCIEC is a state-owned firm.

<sup>15</sup> There is little incentive for such misrepresentation on the buyer side. If a state company has cash available for a stock purchase, it is likely easier for company officials to tunnel out the cash rather than converting it into overpriced share purchases in exchange for kickbacks or favors. As noted, in practice we found no such transactions in our data.

be publicly disclosed,<sup>16</sup> and we use this information to define an indicator variable, *RPT*, that denotes related party transactions, where such insider transactions could potentially occur.

When we examine post-transfer firm attributes, it is important to keep in mind that transfers result in a permanent shift in the firm's ownership composition and as a result, we wish to assess performance as a function of the *stock* of transfers that has occurred up to that point in time rather than the flow of yearly transfers. To account for the history of transfers for each firm, we calculate *Prior transfers* up to year  $y$  as

$$Prior\ transfers_y = \sum_{y_{fd} \leq y} fraction\ transferred_{fdy}$$

where  $y_{fd}$  is the year of transfer  $d$  for firm  $f$ . We can also define a seller-type specific measure of prior transfers by accumulating fraction transferred for each of *dehat*, *face value LP*, *state*, and *private* sellers.

Finally, we define a set of event indicator variables,  $E_t$  to denote the five time periods described in Section 3. We will also include quarter-times-year fixed effects in some specifications.

### *Summary statistics*

Before proceeding to our econometric analyses, we present an overview and summary of the broad patterns in our data.

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<sup>16</sup> Paralleling our discussion around the dehat classification, there may be concerns that some sellers choose not to reveal that the buyer is a related party. If this is the case, we are likely underestimating the discount of related party transactions.

In Panel 1 of Table 1, we present the summary statistics for the full sample of negotiated transfers. Of particular note, the mean of *value loss* (1 minus the ratio of the negotiated transfer price of non-tradable shares to the average stock price of corresponding tradable shares in the month prior to the deal) is 0.73. While there are many reasons that governments sell ownership stakes at a lower price, in many cases the discount is extreme: for more than 10 percent of transfers, *value loss* exceeds 0.9, and as shown in the table, the maximum is 0.99. More importantly, we will be primarily interested in the correlates of *value loss*, rather than its level, in what follows.

The mean of *fraction transferred* is 0.13; while this is a sizeable fraction of shares outstanding, there are relatively few control deals – only 22 percent of negotiated transfers result in a change in the controlling shareholder. This is indicative of the very high level of ownership concentration in publicly traded Chinese firms.

*Private buyer* has a mean value of 0.69, i.e., in nearly 70 percent of transfers the purchaser is a private company. By contrast, *private seller* has a mean of 0.32, so nearly 70 percent of transfers involve some form of state entity as the seller. Overall, it is thus the case that state sellers and private buyers dominate the share transfer market. *Dehat* sellers account for 23 percent of all sales, or a third of all state-seller deals, while *face-value LP* deals account for 32 percent of transactions.

Finally, we observe that the mean of *dividend* is only 0.4 percent. It will be important to control for this payout rate as well as share turnover, given that one could potentially account for the transfer discount based on the difference in liquidity between tradable and non-tradable shares.

In Panel 2 of Table 1, we present summary statistics to contrast the attributes of *dehat* and *face-value LP* transactions. Recall that the underlying ownership in both cases is a state legal person entity, but in the case of *dehat* sellers, ownership is mis-declared as private in deal documents. The mean value of *value loss* for *dehat* sales is 0.80, versus 0.73 for *face-value LP* sales. Further, *dehat* transactions are smaller (*fraction transferred* = 0.10, versus 0.16 for *face-value LP* sellers), and only 12 percent of *dehat* transactions are control deals (versus 25 percent for *face-value LPs*). These patterns are consistent with *dehat* sellers executing transactions that avoid greater scrutiny by regulators, which may be triggered for larger transactions.

In Figure 1 we show the [-6,+6] moving average for deals per month; we highlight *dehat* and *face value LP* observations for ease of viewing. Interestingly, the two deal types follow similar patterns until the end of 2001, when the number of *dehat* transfers falls dramatically. The number of *dehat* transfers remains well below the number of *face value LP* transfers until the end of 2004, at which point the CSRC announced a conversion plan for non-tradable shares (Haveman and Wang, 2008), essentially putting an end to the negotiated transfer market.

We show the [-6,+6] moving average of *value loss*, highlighting *dehat* and *face value LP* transfers in Figure 2. While the level of *value loss* declines over time, average *value loss* for *dehat* firms is almost everywhere above that of all other seller types. The pattern parallels that of Figure 1 – value loss is generally higher for *dehat* sellers, but with a steady decline for both types of sellers that sets in at the end of 2001. Again, the timing is consistent with the increased regulatory oversight discussed in the preceding section.

#### **4. Results**

We begin by assessing the cross-sectional correlates of *Value loss*. Our main specifications are of the form:

$$\begin{aligned}
 \text{Value loss}_{fd} = & \beta_1 \text{dehat}_{fd} + \beta_2 \text{face value LP}_{fd} + \beta_3 \text{State seller}_{fd} + \beta_4 \text{State buyer}_{fd} \\
 & + \beta_5 \log(\text{Sales}_{fy}) + \beta_6 \text{Turnover}_{fy} + \beta_7 \text{Dividend}_{fy} + \\
 & + \beta_8 \text{Fraction transferred}_{fdy} + \text{Fixed effects} + \varepsilon_{fd}
 \end{aligned} \tag{1}$$

for negotiated transfer  $d$  of the shares of firm  $f$  in year  $y$  (note that in many cases there are multiple transfers for a single firm in a given year). For seller ownership, the omitted variable is private sellers. In all cases, we reported robust standard errors clustered at the level of the listed firm. We report these results in Table 2. In the first column, we include only the ownership variables, *dehat*, *state*, *face value LP*, and *private buyer*. The coefficient on *dehat* is 0.102, significant at the 1 percent level. *Face value LP* is also significant at the 5 percent level in this largely unconditional regression, with a coefficient of 0.031. When we add year fixed effects in column (2), the coefficient on *dehat* drops to 0.045, significant at the 1 percent level. None of the other seller or buyer ownership coefficients is significant at conventional levels.

The impact of including year dummies is not surprising, given the patterns observed in Figures 1 and 2 – *dehat* transfers are concentrated in the earlier years of our sample, when transfer discounts were also highest. These patterns are, in turn, the result of regulatory shifts during 2001-2002, described in Section 2 under *Rules governing negotiated transfers*. Thus, adding year fixed effects effectively washes out the impact of the choice of sellers to make *dehat* transfers when the scope for under-pricing was greatest.

In column (3) we add controls, including  $\log(\text{sales})$ , *turnover*, *dividends*, and *fraction transferred*. The coefficient on *dehat* (and other ownership variables) is largely unaffected, increasing slightly in significance and magnitude. In column (4) we add 2-digit SIC industry fixed effects; again, the results are largely unchanged. We add firm fixed effects in column (5), and the point estimate on *dehat* is again unchanged. Finally, in column (6) we limit the sample to state sellers (i.e. omitting private sellers); again, the results are largely unchanged.

In Appendix Table A1, we provide results that further examine the impact of regulatory shifts during 2001-2002. In the first column, we use event fixed effects – based on the time periods defined at the end of Section 2, to control for regulatory regime. There is a modest increase in the coefficient on *dehat* relative to the year effects specification – 0.051 versus 0.048. Thus, it appears that adding these four timing dummies largely controls for the effect of time, consistent with the primary explanation for the impact of year effects coming from a shift in regulation. In the second column, we include quarter  $\times$  year fixed effects; these results are virtually identical to those with year effects only.

In assessing the magnitude of the *dehat* effect, its coefficient – 0.045 – represents a relatively small fraction of the mean level of *value loss* (0.73). However, there are several important qualifications to be added. Most importantly, as explained above, the time effects included in most specifications may be over-controlling for the choice to make a *dehat* transfer during a period of weaker oversight. Additionally, it is important to keep in mind that some fraction of the negotiated transfer discount is due to fundamentals like liquidity. Given the relative coefficients and standard deviations of *turnover* and *dehat*, their implied magnitudes are comparable; if time effects are omitted, the implied effect of *dehat* is much larger.

We have argued that *dehat* transactions are likely a means of regulatory evasion to accomplish value transfer through under-priced asset sales. In this case, the under-pricing is the result of principal-agent problems in state firms, i.e., insiders do not bear the cost of selling at a discount, but may benefit from side payments or kickbacks in exchange for such discounts. A similar mismatch of incentives may exist for private sellers – an insider at a selling firm may wish to transfer shares at a discount to a separate entity where he holds greater cash flow rights. We therefore look at the impact of related party transactions (*RPT*) on *value loss* in Table 3 (see, for example, Bertrand et al (2002), for a discussion on the tunneling incentives among related parties). The first five columns parallel those of Table 2, but with *RPT* included as a regressor. Consistent with negotiated transfers as a means of tunneling value by private firms, *RPT* takes on a positive coefficient, and in most specifications its magnitude is comparable to that of *dehat*; in this case, *RPT* is no longer significant in the firm fixed effects specification, likely because of the relative rarity of *RPT* transactions (there were only 71 such transfers among private sellers). As with our *dehat* regressions, year fixed effects have a large impact on the *RPT* coefficient. The evidence is consistent with related party transactions occurring primarily in the earlier (less regulated) part of the sample; we also find that simply controlling for regulatory shifts has the same effect on the *RPT* coefficient as including a full set of year dummies (results omitted in the interests of space). Finally, in column (6), we limit the sample to private firms, where related party transactions would be an effective means of tunneling value. The coefficient in this specification increases to 0.069; by contrast, for the sample of state sellers the coefficient on *RPT* is only 0.02 (see column (7)), and is statistically indistinguishable from zero.

The hypothesis that *dehat* sellers are under-pricing their transfers, and hence wish to elude scrutiny, has several subsidiary predictions for the data. As noted in Section 2, larger

transfers trigger greater public disclosure. More importantly, both larger transfers as well as control transactions increase the likelihood of regulatory scrutiny, given the attention that such deals attract in the media. Thus, we expect *dehat* transactions – to the extent that this is a marker for under-priced transactions – to be smaller and also less likely to be control transactions. We examine these additional predictions in Table 4, using specifications that parallel that of equation (1), but with *fraction transferred* and *iscontrol* as the outcome variables. In each case, we present results with just ownership variables and year effects, and also specifications with full controls.

In columns (1) and (2), the coefficient on *dehat* is indistinguishable from zero, implying that *dehat* sales are of comparable size on average to private sales. By contrast, the coefficients on both *state* and *face value LP* are positive, large in magnitude, and significant at the 1 percent level. In column (3) we add firm fixed effects; once again the coefficients on both *state* and *face value LP* are positive and significant, while the *dehat* coefficient is close to zero. We report analogous patterns in columns (4) – (6) for determinants of control transactions. In this case, *dehat* sales are even less likely to result in control changes relative to private sales, while both *state* and *face value LP* transactions are more likely to result in a shift in control. (In the fixed effects specification, we can reject equality of the *face value LP* and *dehat* coefficients at the 5 percent level of significance).

To summarize thus far, we have documented higher discount for transfers by *dehat* sellers, and that such sales are smaller in size and less likely to be control transactions (relative to sales by *face value LP* sellers). We argue that this set of patterns is consistent with *dehat* sales as a means of transferring value out of state sellers.

We now assess whether these under-priced *dehat* sales had any impact on firm performance. As we explain in the introduction, the impact is theoretically ambiguous – there

exist potential improvements in incentives and governance, though these may be offset by an increase in tunneling. We assess the effect of ownership transfers by examining announcement returns and also post-transfer operating performance.

In Figure 3, Panel A, we graph the median cumulative abnormal returns for transfer announcement dates over a one month pre-event the window  $[-d,1]$ , for  $d = \{1,2,3,\dots,30\}$ . Median returns are positive, implying investor expectations of increased post-transfer profitability. There is also striking evidence of pre-transfer information leakage – excess returns begin to dissipate about two weeks before the transfer announcement, and are close to zero on the actual announcement date.

In Figure 3, Panel B, we present CAR's for the sample disaggregated by seller type. For ease of comparing different types of *state LP* transfers, we highlight the lines for *dehat* and *face value LP* sellers. The excess returns for transfers by *face value LP* sellers (as well as *state* and *private* sellers) are clearly positive for sufficiently long windows; by contrast, CAR's associated with *dehat* transfers, while positive, are far lower than those of other seller types. Thus, while investors respond positively to transfer announcements *on average*, these patterns suggest that this response is largely muted in the case of *dehat* sellers.

In the first column of Table 5, we list the mean value of  $CAR[-d,1]$  for a range of windows ( $d = -1,-5,-10,-15,-20,-25,-30$ ); for anything longer than the short two day  $[-1,1]$  window, average returns are positive and significant at least at the 5 percent level. In the second column, we provide a Wilcoxon signed-rank test based on the fraction of transfer announcements where returns are positive. Again, for any window longer than two days, we find that significantly more than half of transfer announcements are associated with positive returns (above 55 percent of announcements for any window).

In Table 6 we look at the determinants of event returns using a regression framework. In all regressions, we include year and 2-digit industry effects, as well as controls for  $\log(\text{Sales})$  and *fraction transferred*. The coefficient on the variable of interest – *dehat* – is negative in most specifications, and for intermediate windows significant at least at the 5 percent level. (For the longer windows – [-25,1] and [-30,1] – the coefficient on *dehat* is large in magnitude, though imprecisely estimated; this lack of precision may result from noise over the long window.) The coefficients on face-value LP are also negative, occasionally significant, and with large standard errors. It is thus difficult to make any sharp conclusions on any difference among these two types of state LP sales.

We next turn to the correlation between transfers and a number of company-level performance measures. To account for the cumulative impact of transfers – ownership changes are permanent and hence we expect that the “stock” of ownership matters rather than the flow of ownership changes – we use the accumulated share transfers up to year  $y$ , *Prior transfers<sub>y</sub>*. Our regressions take the following form:

$$\log(\text{assets}_{fy+1}) = \beta_1 \text{Prior transfers}_{fy} + \text{Controls} + \text{Firm and year fixed effects} + \varepsilon_{fy} \quad (2)$$

In Table 7, we report results for  $\log(\text{assets})$ , *ROA*, *investment rate*, and *leverage* as outcome variables. There is evidence of higher profitability as indicated by the positive coefficient on *prior transfers* in the *ROA* regression, significant at the 5 percent level. This is consistent with the positive announcement returns reported in Tables 5, and also with the view that shifting ownership to private entities is generally better for shareholders. The coefficient on *Prior transfers* is not significant in predicting any other operating measures.

Finally, we disaggregate *Prior transfers* into the cumulative transfers made by each seller type (*dehat, face value LP, state, private*), and present the results in Table 8. While there is a lack of precision in our estimates, the patterns for seller-specific determinants of *ROA* are broadly consistent with a positive impact of transfers on profitability for non-*dehat* firms, while the coefficient on *dehat* is actually negative. Of course, given the large standard errors, we cannot reject that all seller ownership coefficients are equal in magnitude.

## **5. Conclusion**

In this paper, we document the correlates of under-pricing of state asset sales in China, in particular, the higher discounts in transfers by “*dehat*” sellers and in related party transactions. We argue that these patterns are consistent with under-pricing as a means of transferring value away from state sellers. Despite the apparent corruption of sales transactions, we document a positive response from investors – market reaction to announced asset sales is positive, a response that is validated by subsequent improvements in profitability. However, these improvements – both expected and actual – are largely absent for *dehat* sellers.

Our results are broadly consistent with the prevailing view that privatization may improve performance, at least as measured by firm profitability, even when the process is corrupted. However, we also present suggestive evidence that improvements may be relatively limited in companies where we expect corruption to be greatest. This highlights the central importance of how privatization is implemented. In particular, the impact of privatization may hinge critically on post-transfer ownership. While we study China here, weak private sector governance is prevalent in many economies. We therefore hope that the insights from our study

may provide a useful direction for further research in understanding some of the potential pitfalls of privatization, both in formulating theory and also in practice.

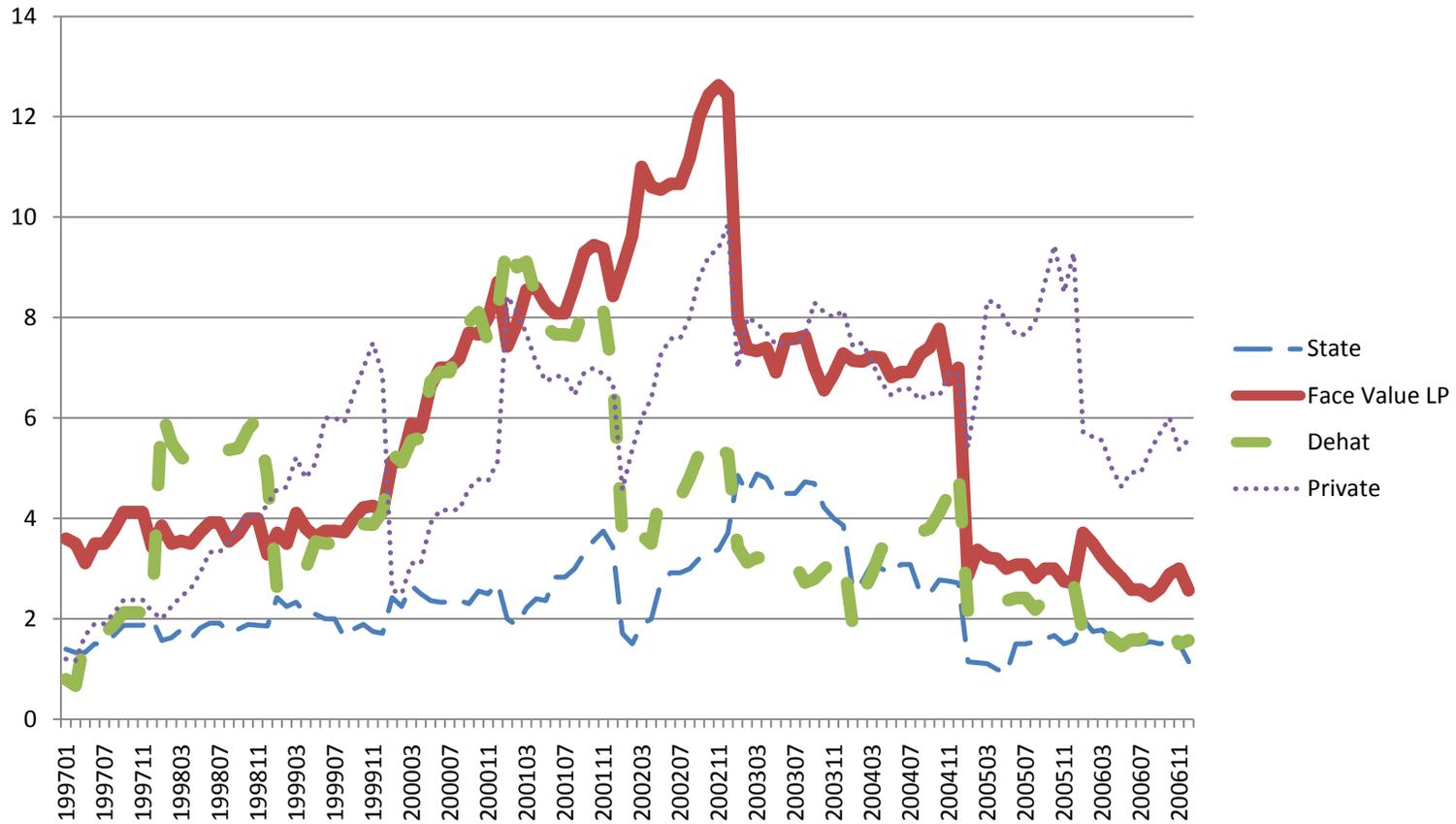
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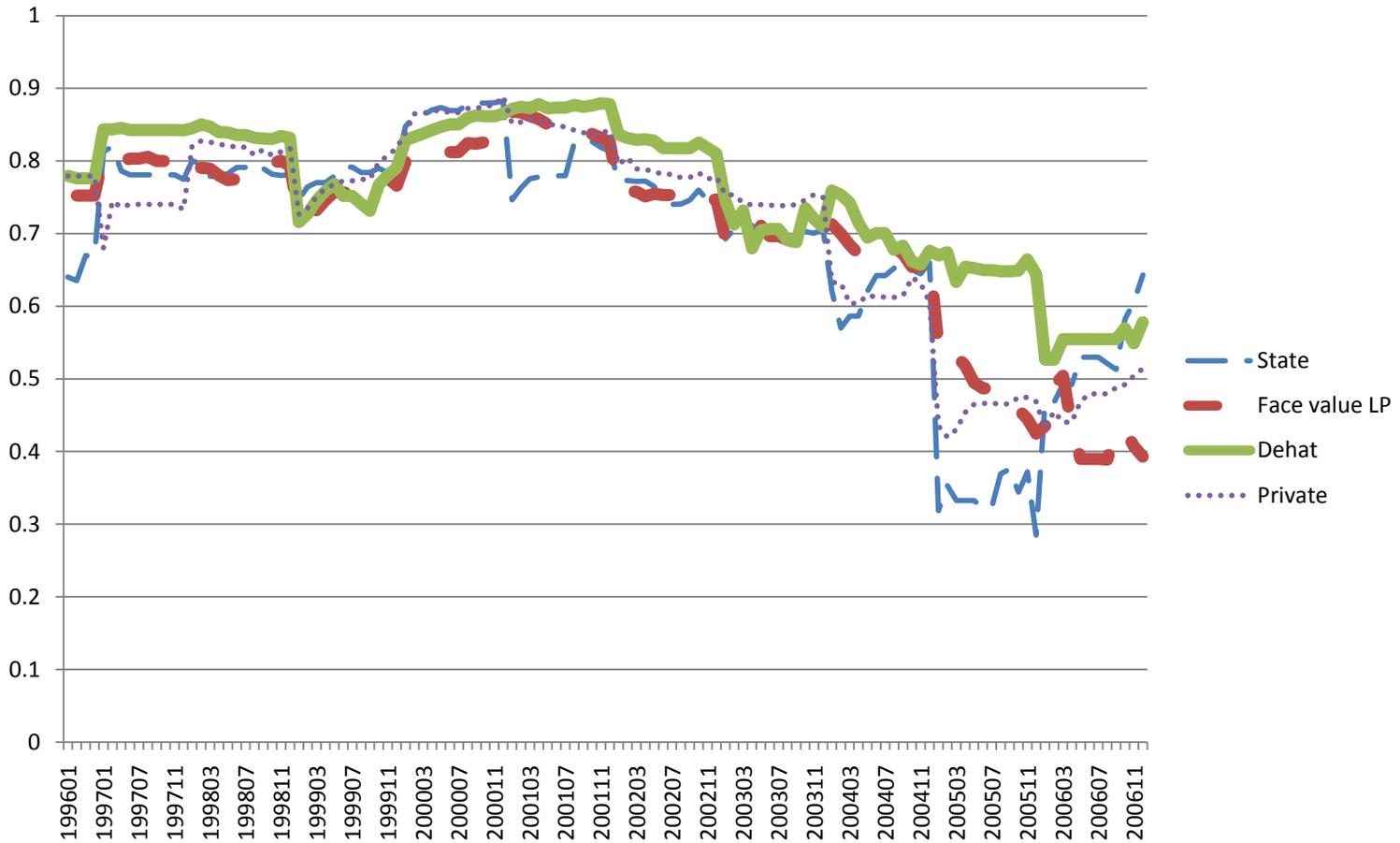
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**Figure 1: Number of negotiated transfer deals by type of seller, [-6,+6] month moving average**



**Figure 2: Mean Value loss of negotiated transfers, by seller type, [-6,+6] month moving average**



**Figure 3: Median cumulative abnormal returns for transfer announcements for windows [-30,1] to [-1,1]**

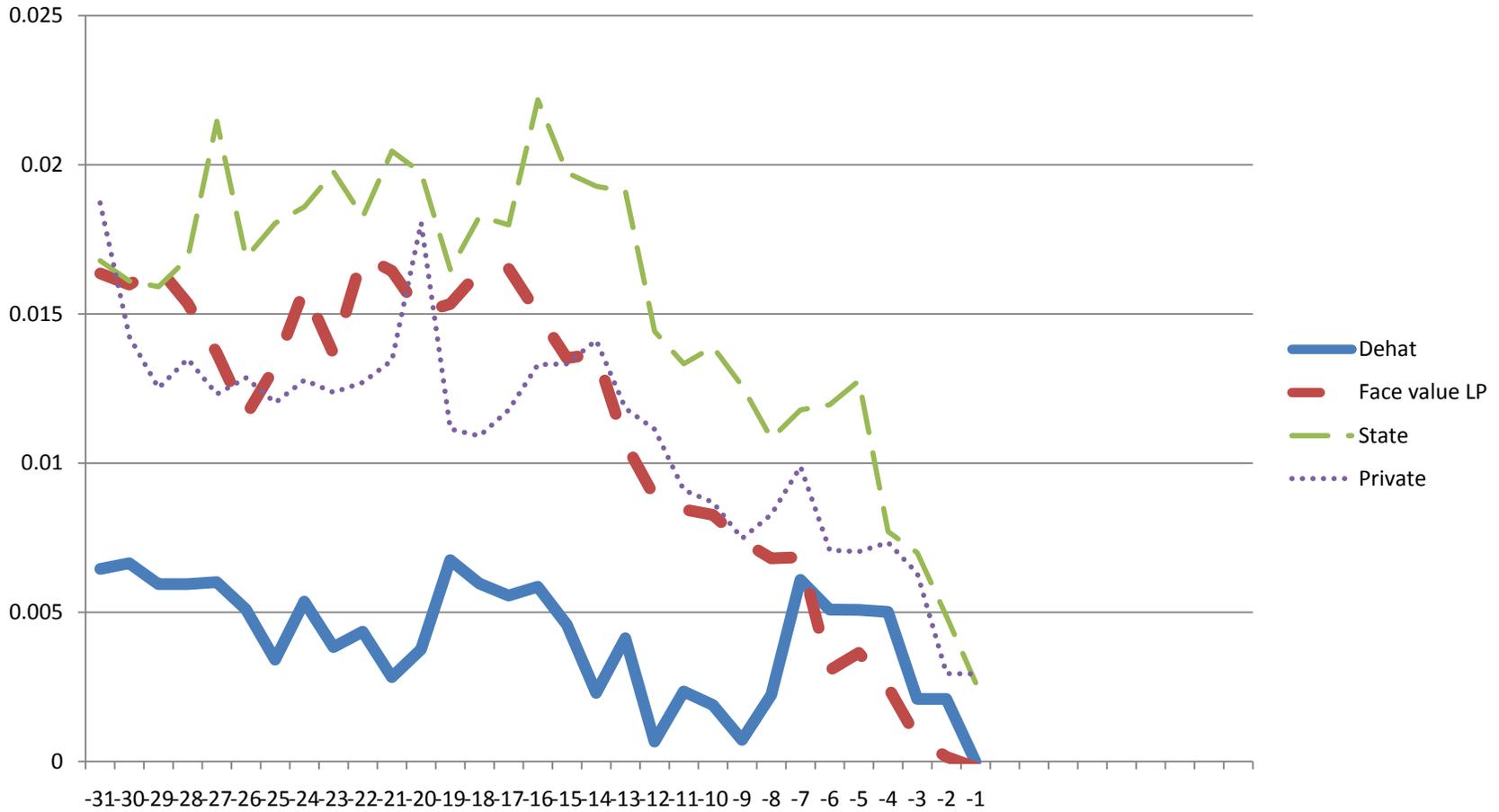


Table 1 - Summary Statistics

Panel 1 - Full sample

	Mean	Std Dev	Min	Max	Observations
Value Loss	0.73	0.21	-2.17	0.99	2121
Fraction Transferred	0.13	0.12	0.00	0.75	2121
Control	0.22	0.41	0.00	1.00	2121
log(Sales)	19.35	1.35	11.67	24.42	2121
Dividend Ratio (*100)	0.40	0.85	0.00	8.24	2121
Turnover	4.18	2.56	0.39	17.77	2121
Private Seller	0.32	0.47	0.00	1.00	2121
Face-value LP	0.32	0.47	0.00	1.00	2121
Private Buyer	0.69	0.46	0.00	1.00	2121
State	0.14	0.34	0.00	1.00	2121
Dehat	0.23	0.42	0.00	1.00	2121

Notes: *Value loss* is equal to 1 minus the ratio of the negotiated transfer price of non-tradable shares to the average stock price of corresponding tradable shares in the month prior to the deal; *Fraction Transferred* is the ratio of shares transferred in this deal to all outstanding shares; *Control* is a dummy indicating whether this deal leads to a change in the ultimate controller of the listed firm; *Log(sales)* is the log value of total sales of the listed firm in the last year; *Dividend Ratio* is the ratio of dividends over price in the year prior to the deal; *Turnover* is average daily turnover in the past year; *Private Seller* is a dummy variable indicating whether the seller is actually a private firm instead of a state firm; *Face-value LP* is a dummy variable indicating the state seller honestly states his shareholdings as state-owned shares in the deal document; *Private Buyer* is a dummy indicating the buyer in this deal is a private firm instead of a state firm; *State Seller* is a dummy indicating the seller is selling state shares; *Dehat* is a dummy variable denoting whether the negotiated transfer seller is a state legal person that has registered its holdings in deal documents as general legal person shares.

Panel 2 - Summary statistics of Face-value LP firms and Dehat firms

	Face-value LP =1	Dehat=1
Value Loss	0.730	0.801
Fraction Transferred	0.156	0.099
Control	0.254	0.121
log(Sales)	19.494	19.191
Dividend Ratio (*100)	0.398	0.314
Turnover	4.149	4.554
Observations	674	480

Notes: *Value loss* is equal to 1 minus the ratio of the negotiated transfer price of non-tradable shares to the average stock price of corresponding tradable shares in the month prior to the deal; *Fraction Transferred* is the ratio of shares transferred in this deal to all outstanding shares; *Control* is a dummy indicating whether this deal leads to a change in the ultimate controller of the listed firm; *Log(sales)* is the log value of total sales of the listed firm in the last year; *Dividend Ratio* is the ratio of dividends over price in the year prior to the deal; *Turnover* is average daily turnover in the past year; *Private Seller* is a dummy variable indicating whether the seller is actually a private firm instead of a state firm; *Face-value LP* is a dummy variable indicating the state seller honestly states his shareholdings as state-owned shares in the deal document; *Private Buyer* is a dummy indicating the buyer in this deal is a private firm instead of a state firm; *State Seller* is a dummy indicating the seller is selling state shares; *Dehat* is a dummy variable denoting whether the negotiated transfer seller is a state legal person that has registered its holdings in deal documents as general legal person shares.

Table 2 – Effect of seller type on value loss

	(1)	(2)	(3)	(4)	(5)	(6)
Dehat	0.102*** (0.016)	0.045*** (0.012)	0.047*** (0.011)	0.043*** (0.012)	0.048*** (0.012)	0.044*** (0.011)
State	0.002 (0.019)	-0.023 (0.015)	-0.014 (0.015)	-0.008 (0.015)	-0.007 (0.022)	-0.003 (0.014)
Face-value LP	0.031** (0.015)	-0.009 (0.012)	-0.002 (0.011)	-0.003 (0.011)	0.015 (0.013)	
Private Buyer	0.002 (0.013)	0.004 (0.010)	-0.001 (0.010)	-0.001 (0.011)	-0.015 (0.016)	-0.003 (0.012)
Dividend Ratio			-1.110 (0.730)	-1.245* (0.745)	-1.407 (1.190)	-2.31*** (0.790)
Turnover			0.009*** (0.002)	0.008*** (0.002)	0.000 (0.003)	0.007*** (0.002)
log(Sales)			0.019*** (0.006)	0.020*** (0.007)	0.003 (0.020)	0.029*** (0.005)
Fraction Transferred			-0.027 (0.036)	-0.037 (0.038)	-0.086* (0.052)	-0.024 (0.038)
Sample	Full	Full	Full	Full	Full	State sellers
Fixed Effects	No	Year	Year	Ind & Year	Firm & Year	Ind & Year
Observations	2121	2121	2121	2121	2121	1439
R-squared	0.04	0.35	0.38	0.42	0.77	0.47

Notes: The dependent variable in all specifications is *Value Loss*, equal to 1 minus the ratio of the negotiated transfer price of non-tradable shares to the average stock price of corresponding tradable shares in the month prior to the deal; *Dehat* is a dummy variable denoting whether the negotiated transfer seller is a state legal person that has registered its holdings in deal documents as general legal person shares; *State* is a dummy denoting the seller is selling state shares; *Face-value LP* is a dummy variable indicating the state seller honestly states his shareholdings as state-owned shares in the deal document; *Private Buyer* is a dummy indicating the buyer in this deal is a private firm instead of a state firm; *Dividend Ratio* is the ratio of dividends over price in the year prior to the deal; *Turnover* is average daily turnover in the past year; *Private Seller* is a dummy variable indicating whether the seller is actually a private firm instead of a state firm; *Log(sales)* is the log value of total sales of the listed firm in the last year; *Fraction Transferred* is the ratio of shares transferred in this deal to all outstanding shares. In all cases, the columns report the results of a linear regression with standard errors clustered at the firm level included in parentheses. In specifications with industry fixed effects, the industry is defined at the 2-digit SIC level. \* significant at 10%; \*\* significant at 5%; \*\*\* significant at 1%

Table 3 - Effect of related party transactions (RPT) on value loss

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Dehat	0.103*** (0.016)	0.045*** (0.012)	0.048*** (0.011)	0.044*** (0.012)	0.049*** (0.012)		0.043*** (0.011)
State	0.005 (0.019)	-0.022 (0.015)	-0.011 (0.015)	-0.004 (0.015)	-0.005 (0.022)		-0.002 (0.014)
Face-value LP	0.033** (0.015)	-0.008 (0.012)	0.000 (0.011)	0.000 (0.011)	0.016 (0.013)		
Private Buyer	0.001 (0.013)	0.004 (0.010)	-0.002 (0.010)	-0.002 (0.011)	-0.016 (0.015)	0.004 (0.023)	-0.002 (0.011)
Dividend Ratio			-1.172 (0.713)	-1.331* (0.733)	-1.327 (1.205)	0.092 (1.227)	-2.32*** (0.794)
Turnover			0.009*** (0.002)	0.008*** (0.002)	0.000 (0.003)	0.008 (0.006)	0.007*** (0.002)
log(Sales)			-0.020*** (0.006)	-0.022*** (0.007)	0.002 (0.020)	-0.007 (0.019)	-0.029*** (0.005)
Fraction Transferred			-0.033 (0.037)	-0.045 (0.038)	-0.088* (0.052)	-0.090 (0.111)	-0.027 (0.039)
RPT	0.037* (0.020)	0.019 (0.020)	0.039** (0.019)	0.045** (0.019)	0.028 (0.020)	0.069** (0.027)	0.020 (0.026)
Sample	Full	Full	Full	Full	Full	Private Seller	State Seller
Fixed Effects	No	Year	Year	Ind & Year	Firm & Year	Ind & Year	Ind & Year
Observations	2121	2121	2121	2121	2121	682	1439
R-squared	0.04	0.36	0.39	0.42	0.77	0.43	0.47

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Notes: The dependent variable in all specifications is Value Loss, equal to 1 minus the ratio of the negotiated transfer price of non-tradable shares to the average stock price of corresponding tradable shares in the month prior to the deal; RPT is a dummy variable indicating whether the seller and the buyer are related parties according to China accounting rules; Dehat is a dummy variable denoting whether the negotiated transfer seller is a state legal person that has registered its holdings in deal documents as general legal person shares; State seller is a dummy denoting the seller is selling state shares; Face-value LP is a dummy variable indicating the state seller honestly states his shareholdings as state-owned shares in the deal document; Private Buyer is a dummy indicating the buyer in this deal is a private firm instead of a state firm; Dividend Ratio is the ratio of dividends over price in the year prior to the deal; Turnover is average daily turnover in the past year; Private Seller is a dummy variable indicating whether the seller is actually a private firm instead of a state firm; Log(sales) is the log value of total sales of the listed firm in the last year; Fraction Transferred is the ratio of shares transferred in this deal to all outstanding shares. In all cases, the columns report the results of a linear regression with standard errors clustered at the firm level included in parentheses. In specifications with industry fixed effects, the industry is defined at the 2-digit SIC level. \* significant at 10%; \*\* significant at 5%; \*\*\* significant at 1%

Table 4: Characteristics of transfer deals - size and control

Dep. Variable	(1)	(2)	(3)	(4)
	Fraction transferred		Control	
Dehat	0.004 (0.007)	0.004 (0.007)	-0.040 (0.026)	-0.033 (0.027)
State	0.103*** (0.010)	0.099*** (0.010)	0.183*** (0.036)	0.173*** (0.035)
Face-value LP	0.056*** (0.007)	0.051*** (0.007)	0.079*** (0.026)	0.071*** (0.027)
Private Buyer	-0.020*** (0.007)	-0.017** (0.007)	-0.036 (0.024)	-0.030 (0.025)
Dividend Ratio		-0.604 (0.405)		-4.928*** (1.532)
Turnover		0.001 (0.002)		0.008 (0.007)
log(Sales)		-0.004 (0.003)		-0.006 (0.010)
Fixed Effects	Year	Ind & Year	Year	Ind & Year
Observations	2121	2121	2121	2121
R-squared	0.11	0.19	0.07	0.14

Notes: The dependent variable in column (1) and (2) is *Fraction Transferred*, the ratio of shares transferred in this deal to all outstanding shares; the dependent variable in column (3) and (4) is *Control*, a dummy indicating whether this deal leads to a change in the ultimate controller of the firm. *Dehat* is a dummy variable denoting whether the negotiated transfer seller is a state legal person that has registered its holdings in deal documents as general legal person shares; *State* is a dummy denoting the seller is selling state shares; *Face-value LP* is a dummy variable indicating the state seller honestly states his shareholdings as state-owned shares in the deal document; *Private Buyer* is a dummy indicating the buyer in this deal is a private firm instead of a state firm; *Dividend Ratio* is the ratio of dividends over price in the year prior to the deal; *Turnover* is average daily turnover in the past year; *Private Seller* is a dummy variable indicating whether the seller is actually a private firm instead of a state firm; *Log(sales)* is the log value of total sales of the listed firm in the last year; In all cases, the columns report the results of a linear regression with standard errors clustered at the firm level included in parentheses. In specifications with industry fixed effects, the industry is defined at the 2-digit SIC level. \* significant at 10%; \*\* significant at 5%; \*\*\* significant at 1%

Table 5 - Event Studies: Summary Statistics and Wilcoxon signed-rank test

	Mean Value	Positive returns (%)	Wilcoxon signed-rank Test	
			Z-value	Prob >  z
CAR[-1,1]	0.004	51.3	2.258	0.024
CAR[-5,1]	0.011	56.7	6.493	0.000
CAR[-10,1]	0.015	55.7	6.328	0.000
CAR[-15,1]	0.018	58.3	7.146	0.000
CAR[-20,1]	0.021	57.3	7.084	0.000
CAR[-25,1]	0.022	56.1	6.467	0.000
CAR[-30,1]	0.022	55.2	5.886	0.000

Notes: CAR[-d,1] is the cumulative event returns over window [-d,1] (d=1, 5, 10, 15, 20, 25, 30, respectively) around the first announcement of negotiated transfers; Data is collapsed at the level of the listed firm X announcement date since some listed firms announced multiple transfers in one day.

Table 6 - Relationship between cumulative abnormal event returns and dehat: Full Sample

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	CAR[-1,1]	CAR[-5,1]	CAR[-10,1]	CAR[-15,1]	CAR[-20,1]	CAR[-25,1]	CAR[-30,1]
Dehat	-0.006*	-0.007*	-0.011**	-0.017***	-0.016**	-0.013	-0.010
	(0.003)	(0.004)	(0.005)	(0.006)	(0.007)	(0.008)	(0.008)
Face-value LP	-0.009***	-0.009**	-0.004	-0.009	-0.006	-0.003	-0.003
	(0.003)	(0.004)	(0.005)	(0.006)	(0.007)	(0.007)	(0.008)
State	-0.008**	0.001	-0.000	-0.003	-0.004	-0.001	-0.002
	(0.004)	(0.005)	(0.006)	(0.007)	(0.008)	(0.008)	(0.009)
log(Sales)	-0.001	-0.003**	-0.006***	-0.004**	-0.003	-0.003	-0.004*
	(0.001)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)
Fraction Transferred	0.037***	0.048***	0.051***	0.073***	0.083***	0.101***	0.111***
	(0.010)	(0.012)	(0.017)	(0.020)	(0.022)	(0.025)	(0.025)
Private Buyer	-0.000	0.001	-0.002	-0.004	-0.003	0.003	-0.003
	(0.003)	(0.004)	(0.005)	(0.005)	(0.006)	(0.006)	(0.007)
Fixed Effects	Industry & Year						
Observations	1984	2032	2043	2062	2068	2070	2073
R-squared	0.11	0.11	0.10	0.11	0.11	0.11	0.11

Notes: The dependent variables are cumulative event returns over  $[-d,1]$  window around the announcement of transfers where  $d=1, 5, 10, 15, 20, 25, 30$ , respectively. *Dehat* is a dummy variable denoting whether the negotiated transfer seller is a state legal person that has registered its holdings in deal documents as general legal person shares; *State seller* is a dummy denoting the seller is selling state shares; *Face-value LP* is a dummy variable indicating the state seller honestly states his shareholdings as state-owned shares in the deal document; *Private Buyer* is a dummy indicating the buyer in this deal is a private firm instead of a state firm; *Private Seller* is a dummy variable indicating whether the seller is actually a private firm instead of a state firm; *Log(sales)* is the log value of total sales of the listed firm in the last year; *Fraction Transferred* is the ratio of shares transferred in this deal to all outstanding shares. In all cases, the columns report the results of a linear regression with standard errors clustered at the firm level included in parentheses. In specifications with industry fixed effects, the industry is defined at the 2-digit SIC level. \* significant at 10%; \*\* significant at 5%; \*\*\* significant at 1%

Table 7 - Relationship between listed firm level financials and prior transfers

Dependent Variable	(1) Log(Assets)	(2) ROA	(3) Investment Ratio	(4) Leverage
Prior transfers	0.022 (0.067)	0.018** (0.008)	0.008 (0.006)	0.009 (0.018)
log(Sales)	-0.697*** (0.044)	0.059*** (0.005)	0.028*** (0.004)	-0.068*** (0.008)
Log(1+Tobin's Q)		0.008*** (0.002)	0.004*** (0.002)	0.003 (0.003)
Kaplan-Zingales Index			-0.001** (0.000)	
Fixed Effects	Firm & Year			
Observations	9149	8694	7516	8901
R-squared	0.88	0.42	0.51	0.66

Notes: The dependent variables are log value of total assets, ROA which is defined as the ratio of net profits (after tax) over total assets, the ratio of investment over total assets, the ratio of total borrowings over total assets of the listed firm respectively; Kaplan-Zingales Index is calculated using Kaplan-Zingales (1997) coefficients for each listed firm in our sample; Prior transfers is the total shares transferred up to that year, divided by total shares outstanding. In all cases, the columns report the results of a linear regression with standard errors clustered at the firm level included in parentheses. \* significant at 10%; \*\* significant at 5%; \*\*\* significant at 1%.

Table 8 - Relationship between listed firm level financials and four types of "Prior Transfers"

Dependent Variable	(1) Log(Assets)	(2) ROA	(3) Investment Ratio	(4) Leverage
Prior Transfers: Dehat	-0.095 (0.182)	-0.141 (0.165)	0.002 (0.020)	0.072 (0.070)
Prior Transfers: State	0.198 (0.144)	0.059* (0.030)	0.004 (0.015)	-0.025 (0.059)
Prior Transfers: Face Value LP	0.049 (0.111)	0.017 (0.036)	0.013 (0.011)	-0.049 (0.051)
Prior Transfers: Private	-0.081 (0.156)	0.075 (0.059)	0.017 (0.018)	-0.085 (0.078)
log(Sales)		0.017** (0.007)	0.004** (0.002)	-0.015 (0.011)
Log(1+Tobin's Q)	-0.698*** (0.044)	0.080*** (0.016)	0.033*** (0.005)	0.024 (0.056)
Kaplan-Zingales Index			-0.001** (0.001)	
Fixed Effects	Firm & Year			
Observations	9149	8871	7671	8986
R-squared	0.88	0.21	0.47	0.43

Notes: The dependent variables are log value of total assets, the ratio of net profits (after tax) over total assets (*ROA*), the ratio of investment over total assets (*Investment Ratio*), the ratio of total borrowings over total assets of the listed firm (*Leverage*); Kaplan-Zingales Index is calculated using Kaplan-Zingales (1997) coefficients for each listed firm in our sample; We disaggregate "Prior Transfers" into four categories based on four seller type: Dehat seller, Face value LP seller, State seller and Private seller. In all cases, the columns report the results of a linear regression with standard errors clustered at the firm level included in parentheses. \* significant at 10%; \*\* significant at 5%; \*\*\* significant at 1%.

Table A1- Effect of ownership on value loss, further time controls

	(1)	(2)
Dehat	0.051*** (0.014)	0.045*** (0.011)
State Seller	0.019 (0.024)	-0.006 (0.022)
Face-value LP Seller	0.033** (0.015)	0.012 (0.013)
Private Buyer	-0.019 (0.018)	-0.014 (0.015)
Dividend Ratio	-2.887** (1.208)	-1.456 (1.184)
Turnover	-0.007** (0.004)	0.000 (0.003)
log(Sales)	-0.002 (0.020)	0.004 (0.020)
Fraction Transferred	-0.122** (0.060)	-0.073 (0.051)
Fixed Effects	Regulatory regime & firm	quarter*year & firm
Observations	2121	2121
R-squared	0.73	0.79

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Notes: The dependent variable in all specifications is *Value Loss*, equal to 1 minus the ratio of the negotiated transfer price of non-tradable shares to the average stock price of corresponding tradable shares in the month prior to the deal; *Dehat* is a dummy variable denoting whether the negotiated transfer seller is a state legal person that has registered its holdings in deal documents as general legal person shares; *State* is a dummy denoting the seller is selling state shares; *Face-value LP* is a dummy variable indicating the state seller honestly states his shareholdings as state-owned shares in the deal document; *Private Buyer* is a dummy indicating the buyer in this deal is a private firm instead of a state firm; Dividend Ratio is the ratio of dividends over price in the year prior to the deal; *Turnover* is average daily turnover in the past year; *Private Seller* is a dummy variable indicating whether the seller is actually a private firm instead of a state firm; *Log(sales)* is the log value of total sales of the listed firm in the last year; *Fraction Transferred* is the ratio of shares transferred in this deal to all outstanding shares. In all cases, the columns report the results of a linear regression with standard errors clustered at the firm level included in parentheses. In specifications with industry fixed effects, the industry is defined at the 2-digit SIC level. \* significant at 10%; \*\* significant at 5%; \*\*\* significant at 1%