# When do controlling shareholders expropriate? Controlling shareholder performance and cash transfer tunneling from listed firms in China

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# Basic question

**Extensive evidence that controlling shareholders tunnel wealth away for their private benefit in publicly listed companies.**

- Bertrand, Mehta, and Mullainathan, 2002; Baek, Kang, and Lee, 2006; Cheung, Rau, and Stouraitis, 2006; Berkman, Cole, and Fu, 2009; Jiang, Lee, and Yue, 2010; and Peng, Wei, and Yang, 2011.

**Unanswered question:** *When* **and** *why* **controlling shareholders engage in tunneling activity to expropriate the firms they control?**

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# More specifically

**When do the incentives of the *controlling shareholder* affect the likelihood of expropriation?**

**There is no direct evidence in the literature at the *micro* level.**

- **Macro level studies**: Bae, Baek, Kang, and Liu (2012), Johnson, Boone, Breach, and Friedman (2000), Friedman, Johnson, and Mitton (2003), and Lemmon and Lins (2003)

- Financial position of **publicly listed firm**: Cheung, Rau, and Stouraitis (2006, 2010); or Peng, Wei, and Yang (2011).

- The controlling shareholder is a black box.

# Why should we care?

Controlling shareholders can either systematically tunnel wealth away in

- all states of the world (for example, they can expropriate a constant percentage of the value of the firm every period), or

- in particular states of the world (for example, if they need capital in order to overcome adverse economic shocks).

Persuading minority shareholders to invest in these firms will likely require different forms of corporate governance mechanisms in these two cases.

Example: Friedman, Johnson, and Mitton (2003) suggest that leverage may act as a mechanism that affects the degree of expropriation during macroeconomic shocks.

But the optimal amount of leverage to reduce expropriation in macroeconomic shocks is likely to be different from the optimal amount in other periods.

# So why doesn't prior literature examine this question?

Lack of data.

When shareholders are individuals, the incentives of the controlling shareholders are difficult to identify and measure.

But in China, most controlling shareholders are non-listed state-owned enterprises (SOEs) whose operating performance can be measured.

# Our hypotheses

**Managers of *under-performing* controlling parents have *higher* incentives to expropriate and tunnel resources out of the publicly listed subsidiaries they control.**

Why would managers of non-listed state-owned firms (essentially government bureaucrats) care about the performance of the firms they manage?

- In China, the performance of these non-listed state-owned controlling firms is extremely important for their managers.

- While these managers may not obtain direct pecuniary benefits, indirect benefits such as political promotions are linked to the performance of the non-listed firms they manage.

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# Our approach

**We obtain non-consolidated financial information for controlling shareholders from China's National Bureau of Statistics' (NBS) Annual Industrial Survey Database.**

- Provides financial statement information for all industrial firms, listed and non-listed.

**We directly link the magnitude of the expropriation of the publicly listed firm at the bottom of the pyramid to the financial performance of its parent higher up in the pyramid.**

- Performance: The operating performance (either the return on assets (**ROA**) and the cash flow-to-asset ratio (**CF**)) of the *non-listed controlling shareholder*

# Proxies for expropriation

## We use two proxies for expropriation:

- Direct evidence on the size of fund transfers (intra-group loans) from the publicly listed firm to its parent (Jiang, Lee, and Yue, 2010) and the market valuation of these intra-group loans.

- Indirect evidence: The value of cash holdings on the publicly listed firm's balance sheet

# Direct flows

**What is the size of intra-group loans extended from the publicly listed firm to its non-listed parent?**

**How does the stock market values these intra-group loans that appear on the publicly listed firm's balance sheet?**

This proxy measures the *ex ante* likelihood that investors place on the event these intra-group loans will not be repaid.

Intra-group loans are current assets (as *Other receivables*) and can be valued in the same way that we value cash holdings.

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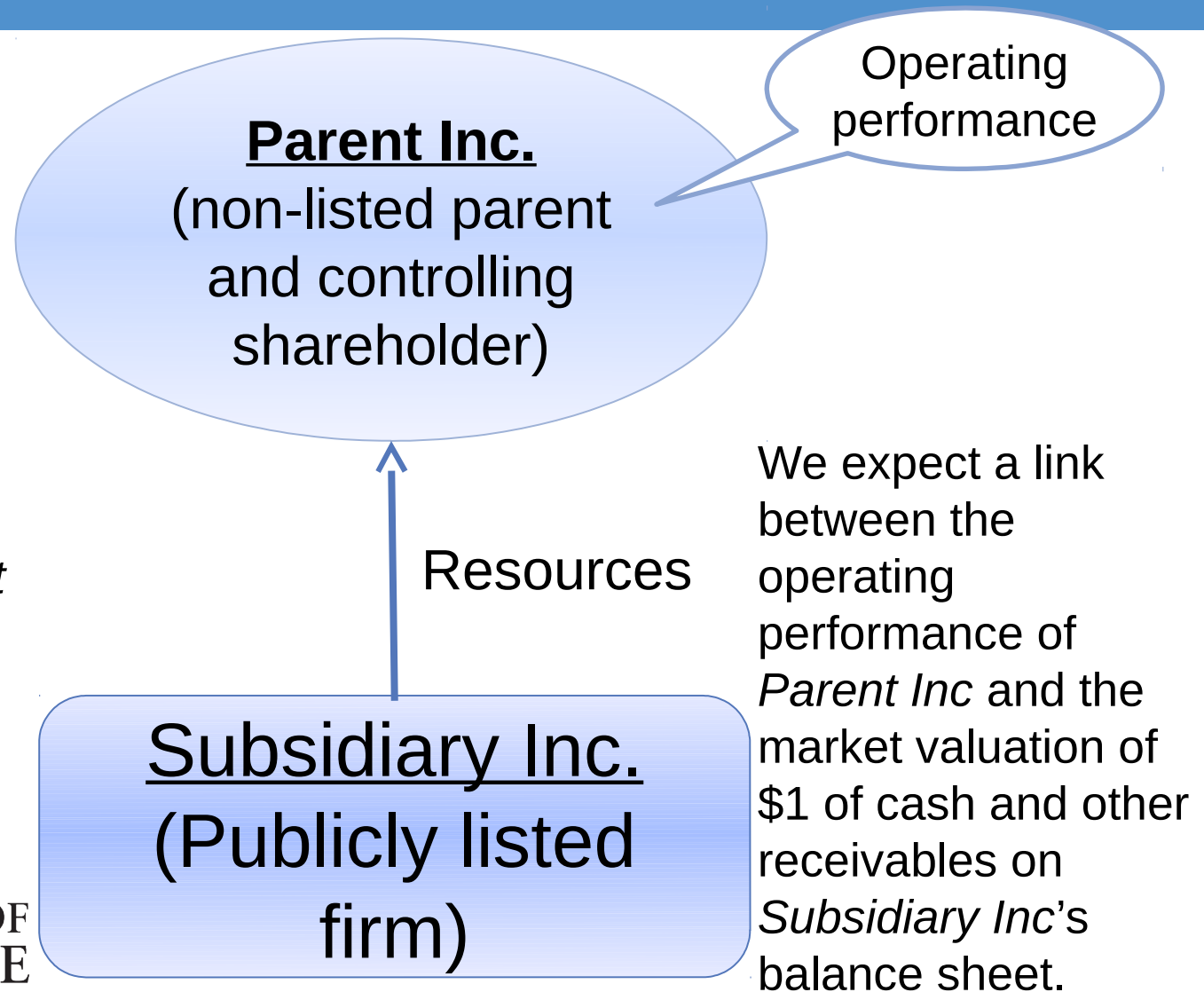
# Indirect evidence

**How does the stock market value the cash holdings that appear on the publicly listed firm's balance sheet?**

**This proxy measures the *ex ante* likelihood that investors place on the event of the assets later being expropriated.**

- "(a)nonymous, transportable assets, such as cash, bearer bonds, or commodities, are **easier to steal** than fixed assets" (Myers and Rajan, 1998).
- The value of cash is likely to be sensitive to the likelihood of expropriation (Dittmar and Mahrt-Smith, 2007).
- There are good models for estimating the value of cash holdings.
- This is indirect: The value of cash may reflect many avenues for expropriation that are difficult to value individually (e.g. different types of related party transactions etc).

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# Hypothetical example

**Parent Inc.** (non-listed parent and controlling shareholder)

Operating performance

If assets on the balance sheet of *Subsidiary Inc.* are likely to be expropriated by its parent and transferred to *Parent Inc.*, the value of cash and cash-like assets is likely to be lower.

Resources

**Subsidiary Inc.** (Publicly listed firm)

We expect a link between the operating performance of *Parent Inc* and the market valuation of $1 of cash and other receivables on *Subsidiary Inc*'s balance sheet.

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# What we do and do not do?

**We are *not* interested in documenting that there is expropriation.**

**This has been shown in many other studies.**

**We are interested in the *timing* of the expropriation.**

- When and Why?

# Data sources

Our sample consists of 488 firms listed on the Shanghai and Shenzhen stock exchanges during 1999-2007 and their non-listed controlling shareholders (parents), representing 2,209 paired firm-year observations for listed firms and their parents.

We end our sample period in 2007 in order to avoid any contaminating effects from the global financial crisis.

We obtain financial information, governance, and return data for China's listed firms from the China Stock Market and Accounting Research (CSMAR) database.

Other factors identified in Jiang, Lee and Yue (2010)

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$$\frac{\Delta OREC_{i,t+1}}{M_{i,t}} = \gamma_0 + \gamma_1\frac{\Delta C_{i,t}}{M_{i,t}} + \gamma_2\frac{C_{i,t}}{M_{i,t}} + \gamma_3 Log(TA_{i,t}) + \gamma_4 ROA_{i,t} + \gamma_5 Marketization\,Index_{i,t}$$

- Second level
  - Third level

$$+ \gamma_6 Ownership\,by\,largest\,Shareholder_{i,t} + \gamma_7 PROA_{i,t} + \gamma_8 PROA_{i,t} \times \frac{\Delta C_{i,t}}{M_{i,t}} + \varepsilon_{i,t}$$

- Fourth level

| | ΔORECt+1/Mt | ΔORECt+1/Mt | ΔORECt+1/Mt | ΔORECt+1/Mt | ΔORECt+1/Mt |
|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) |
| | | | | | |
| **Parent characteristics** | | | | | |
| (1) Parent ROAt | | -0.018 (-0.89) | -0.017 (-0.81) | | |
| (2) Parent ROAt × ΔCt/Mt | | | **-0.428 (-1.82)** | | |
| (3) Parent CFt | | | | -0.020 (-1.39) | -0.015 (-1.05) |
| (4) Parent CFt ×Δ Ct/Mt | | | | | **-0.342 (-2.30)** |
| (5) SOE | | -0.001 (-0.44) | -0.001 (-0.44) | -0.002 (-0.69) | -0.002 (-0.61) |
| | | | | | |
| **Listed firm characteristics** | | | | | |
| (6) Δ Ct/Mt | **0.022 (1.92)** | **0.022 (1.92)** | **0.024 (2.11)** | **0.022 (1.85)** | **0.053 (2.95)** |
| (7) Ct/Mt | **0.023 (2.77)** | **0.023 (2.81)** | **0.024 (2.84)** | **0.022 (2.53)** | **0.023 (2.63)** |
| (8) Log(TA t) | -0.000 (-0.03) | 0.000 (0.01) | -0.000 (-0.00) | -0.000 (-0.16) | -0.000 (-0.19) |
| (9) ROAt | **0.089 (5.87)** | **0.095 (5.91)** | **0.093 (5.81)** | **0.119 (7.04)** | **0.116 (6.83)** |
| (10) Marketization index | -0.000 (-0.46) | -0.000 (-0.40) | -0.000 (-0.42) | -0.000 (-0.40) | -0.000 (-0.43) |
| (11) Ownership by largest shareholder | -0.000 (-0.36) | -0.000 (-0.43) | -0.000 (-0.43) | -0.000 (-0.61) | -0.000 (-0.62) |
| | | | | | |
| Observations | 2490 | 2480 | 2480 | 2254 | 2254 |
| Adj. R2 | 0.034 | 0.035 | 0.036 | 0.040 | 0.042 |
| F | 4.396 | 4.318 | 4.286 | 4.458 | 4.497 |

A publicly listed firm with average cash balances whose parent performs on the cut-off for the top 25% quartile compared to other parents (*Parent ROA*=+2.3%) increases intra-group loans to its controlling shareholder the following year by less than 2 cents [= (0.024×14.1%) + 0.024 + (−0.017)×(2.3%) + (−0.428)×(2.3%)].

A publicly listed firm with average cash balances whose parent performs on the cut-off for the bottom 25% quartile compared to other parents (*Parent ROA*=−2.1%) *increases* intra-group loans to its controlling shareholder the following year by almost 4 cents [= (0.024×14.1%) + 0.024 + (−0.017)×(−2.1%) + (−0.428)×(−2.1%)].

Baseline specification

| | ΔORECt+1/Mt (1) | ΔORECt+1/Mt (2) | ΔORECt+1/Mt (3) | ΔORECt+1/Mt (4) | ΔORECt+1/Mt (5) |
|---|---|---|---|---|---|
| **Parent characteristics** | | | | | |
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| (8) Log(TA t) | -0.000 (-0.03) | 0.000 (0.01) | -0.000 (-0.00) | -0.000 (-0.16) | -0.000 (-0.19) |
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# Is this just another aspect of being in a business group?

**No.**

**In the traditional view of business groups or pyramids, the minority shareholders of the firm at the bottom of the pyramid can protect themselves from potential expropriation by purchasing shares in *all* other firms in the group.**

**In Chinese business groups, minority shareholders cannot protect themselves, because the firms at the top of the pyramids (like in our sample) are not publicly listed.**

**Most business groups in China control only a single publicly listed firm. Less than 4% of the publicly listed firms in our sample share common controlling shareholders.**

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# The market valuation of intra-group loans

$$r_{i,t} - R_{i,t}^B = \gamma_0 + \gamma_1 \frac{\Delta C_{i,t}}{M_{i,t-1}} + \gamma_2 \frac{\Delta E_{i,t}}{M_{i,t-1}} + \gamma_3 \frac{\Delta NA_{i,t}}{M_{i,t-1}} + \gamma_4 \frac{\Delta D_{i,t}}{M_{i,t-1}} + \gamma_5 \frac{C_{i,t-1}}{M_{i,t-1}} + \gamma_6 L_{i,t}$$

$$+ \gamma_7 \frac{NF_{i,t}}{M_{i,t-1}} + \gamma_8 \frac{C_{i,t-1}}{M_{i,t-1}} \times \frac{\Delta C_{i,t}}{M_{i,t-1}} + \gamma_9 L_{i,t} \times \frac{\Delta C_{i,t}}{M_{i,t-1}}$$

$$+ \gamma_{10} \frac{\Delta OREC_{i,t}}{M_{i,t-1}} + \gamma_{11} \frac{OREC_{i,t-1}}{M_{i,t-1}} + \gamma_{12} \frac{OREC_{i,t-1}}{M_{i,t-1}} \times \frac{\Delta OREC_{i,t}}{M_{i,t-1}}$$

$$+ \gamma_{13} PROA_{i,t} + \gamma_{14} PROA_{i,t} \times \frac{\Delta OREC_{i,t}}{M_{i,t-1}} + \varepsilon_{i,t}$$

Original Faulkender and Wang model

Our additional variables

Excess returns relative to Carhart 4-factor model

The sign of this coefficient is what we want to analyze

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Model adapted from Faulkender and Wang (2006). Estimated coefficients can be interpreted as the dollar change in the firm's market value that results from a one dollar change in the explanatory

# The market valuation of intra-group loans

| | (1) | (2) | (3) | (4) | (5) |
|---|---|---|---|---|---|
| **Parent characteristics** | | | | | |
| (1) Parent ROAt | | 1.040 (5.77)*** | | 1.104 (4.60)*** | |
| (2) Parent ROAt × ΔORECt/Mt-1 | | 8.634 (3.30)*** | | 9.426 (2.79)*** | |
| (3) Parent CFt | | | 0.946 (4.93)*** | | 1.009 (4.37)*** |
| (4) Parent CFt × ΔORECt/Mt-1 | | | 3.033 (2.26)** | | 3.092 (1.73)* |
| (5) SOE | | | | 0.031 (2.10)** | 0.045 (2.40)** |
| (6) SOE × ΔORECt/Mt-1 | | | | 0.302 (0.58) | 0.048 (0.08) |
| **Listed firm characteristics** | | | | | |
| (7) ΔCt/Mt-1 | 1.681 (6.35)*** | 1.897 (8.68)*** | 1.834 (7.35)*** | 1.912 (8.03)*** | 1.850 (6.80)*** |
| (8) ΔEt/Mt-1 | 2.461 (6.26)*** | 2.221 (7.27)*** | 2.260 (7.20)*** | 2.202 (6.81)*** | 2.242 (6.64)*** |
| (9) ΔNAt/Mt-1 | 1.082 (5.00)*** | 0.877 (4.57)*** | 0.797 (4.38)*** | 0.870 (4.67)*** | 0.785 (4.70)*** |
| (10) ΔDt/Mt-1 | 0.793 (1.11) | 0.578 (0.81) | 0.589 (0.89) | 0.602 (0.80) | 0.530 (0.77) |
| (11) Ct-1/Mt-1 | 0.619 (2.86)*** | 0.593 (2.92)*** | 0.585 (2.96)*** | 0.605 (2.98)*** | 0.600 (2.99)*** |
| (12) Lt | 0.313 (1.97)* | 0.506 (2.50)** | 0.538 (2.55)** | 0.506 (2.47)** | 0.537 (2.53)** |
| (13) NFt/Mt-1 | 0.217 (1.99)** | 0.323 (2.77)*** | 0.441 (3.25)*** | 0.340 (2.96)*** | 0.471 (4.16)*** |
| (14) Ct-1/Mt-1 × ΔCt/Mt-1 | -1.161 (-1.67)* | -1.207 (-1.85)* | -0.864 (-1.29) | -1.290 (-1.89)* | -0.949 (-1.38) |
| (15) Lt × ΔCt/Mt-1 | -1.930 (-2.68)*** | -2.516 (-4.19)*** | -2.759 (-4.57)*** | -2.492 (-3.95)*** | -2.741 (-4.36)*** |
| (16) ΔORECt/Mt-1 | | -0.084 (-0.30) | -0.354 (-1.47) | -0.319 (-0.95) | -0.407 (-0.83) |
| (17) ORECt-1/Mt-1 | | -1.510 (-3.04)*** | -1.593 (-2.87)*** | -1.500 (-3.01)*** | -1.579 (-2.83)*** |
| (18) ORECt-1 /Mt-1× ΔORECt/Mt-1 | | 3.193 (2.67)*** | 3.079 (3.50)*** | 3.156 (2.27)** | 3.074 (2.95)*** |
| **Observations** | 2208 | 2205 | 2001 | 2200 | 1997 |
| **Adj. R2** | 0.183 | 0.219 | 0.232 | 0.218 | 0.231 |
| **F** | 55.907 | 36.437 | 44.875 | 40.850 | 43.961 |

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# Economic interpretation

For a firm with average levels of intra-group loans on its balance sheet (4% of the firm's market capitalization) whose parent performs in the top quartile (parent ROA=+2.3%), the market values one additional dollar of intra-group loans at 24 cents [=−0.084 + (3.193×4%) + (8.634×2.3%)].

For the average Chinese listed firm in our sample with a parent with average performance (parent ROA=0.1%), an additional dollar of intra-group loans is worth only 5 cents [=−0.084 + (3.193×4%) + (8.634×0.1%)] to its shareholders.

**So, for the average Chinese firm, the market expects that intra-group loans extended to its controlling shareholder represent expropriation and are almost completely non-recoverable.**

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# Is this just a mechanical correlation between the operating performance of the publicly listed subsidiary, the market valuation of intra-group loans on its balance sheet, and the operating performance of its non-listed

Our regressions include a number of controls for the performance of the publicly listed subsidiary. These controls are highly significant in all specifications.

Adding parent ROA has incremental explanatory power in the regressions (and improves the R2), without affecting the magnitude or the significance of the coefficients of the subsidiary's performance proxies.

Finally, since our regressions control for dividend payments, it is not clear why the parent's ROA has incremental explanatory power, unless there are other non-dividend related transfers between subsidiaries and parents, which is what we hypothesize.

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# Conclusions from direct evidence

Firms with underperforming controlling shareholders extend more intra-group loans to their parents.

The market values one additional dollar of such an intra-group loan – by a publicly listed firm whose controlling shareholder is underperforming – at a significantly lower amount than an intra-group loan by a listed firm whose parent is performing well.

Therefore, the performance of the parent appears very significant in explaining both the magnitude of the direct fund transfers from listed subsidiary to non-listed parent, as well as the market's estimate of the value of the resulting receivables on the listed firm's balance sheet.

In other words, publicly listed firms are subject to more tunneling in periods when their controlling shareholders are underperforming.

# Is this enough?

Tunneling of cash from a firm's balance sheet to the pockets of its controlling shareholders can occur through many different channels, only one of which, albeit a very direct one, is intra-group loans.

Other types of related party transactions through which tunneling may occur include transfers of fixed assets between subsidiary and parent, purchases of goods and services (which may affect operating expenses) or the provision of loan guarantees that may materialize in the future.

Unlike intra-group loans, many of these other types of related party transactions are not always disclosed with enough information to allow us to value them with accuracy.

# Indirect evidence: Value of cash holdings

The advantage (relative to intra-group loans): Cash holdings may reflect additional – and possibly much more extensive – avenues of expropriation compared to intra-group loans.

Disadvantage: Intra-group loans represent direct fund flows, whereas cash holdings are only an indirect proxy for expropriation.

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# Parent performance and the level of listed firm cash holdings

$$Log(1 + \frac{C_{i,t}}{NA_{i,t}}) = \gamma_0 + \gamma_1 Log(TA_{i,t}) + \gamma_2 L_{i,t} + \gamma_3 \frac{NWC_{i,t}}{NA_{i,t}} + \gamma_4 MB_{i,t} + \gamma_5 \frac{CF_{i,t}}{NA_{i,t}} + \gamma_6 \frac{CapEx_{i,t}}{TA_{i,t}}$$

$$+ \gamma_7 Ownership\ by\ Largest\ Shareholder_{i,t} + \gamma_8 PROA_{i,t} + \varepsilon_{i,t}$$

Firms hold smaller cash reserves when their controlling shareholders have larger incentives to expropriate.

Dependent variable is the

Coefficient of interest

| | log(1+Ct/NAt) | log(1+Ct/TAt) | log(1+Ct/Mt) | log(1+Ct/NAt) | log(1+Ct/TAt) | log(1+Ct/Mt) |
|---|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) | (6) |
| **Parent performance** | | | | | | |
| **(1) Parent ROAt** | **0.265*** | **0.185*** | **0.101*** | | | |
| **(2) Parent CFt** | | | | **0.122** | **0.085** | **0.036*** |
| **Listed firm characteristics** | Yes | Yes | Yes | Yes | Yes | Yes |
| **Observations** | 2204 | 2204 | 2204 | 2000 | 2000 | 2000 |

# Parent performance and the value of listed firm cash holdings

$$r_{i,t} - R^B_{i,t} = \gamma_0 + \gamma_1 \frac{\Delta C_{i,t}}{M_{i,t-1}} + \gamma_2 \frac{\Delta E_{i,t}}{M_{i,t-1}} + \gamma_3 \frac{\Delta NA_{i,t}}{M_{i,t-1}} + \gamma_4 \frac{\Delta D_{i,t}}{M_{i,t-1}} + \gamma_5 \frac{C_{i,t-1}}{M_{i,t-1}} + \gamma_6 L_{i,t}$$

$$+ \gamma_7 \frac{NF_{i,t}}{M_{i,t-1}} + \gamma_8 \frac{C_{i,t-1}}{M_{i,t-1}} \times \frac{\Delta C_{i,t}}{M_{i,t-1}} + \gamma_9 L_{i,t} \times \frac{\Delta C_{i,t}}{M_{i,t-1}}$$

$$+ \gamma_{10} PROA_{i,t} + \gamma_{11} PROA_{i,t} \times \frac{\Delta C_{i,t}}{M_{i,t-1}} + \varepsilon_{i,t}$$

Excess returns relative to Carhart 4-factor model

The sign of this coefficient is what we want to analyze

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Model adapted from Faulkender and Wang (2006). Estimated coefficients can be interpreted as the dollar change in the firm's market value that results from a one dollar change in the explanatory

# Parent performance and the value of listed firm cash holdings

| | All firms | All firms | All firms | All firms | All firms | Parents with large changes in performance | |
|---|---|---|---|---|---|---|---|
| | CARt | CARt | CARt | CARt | CARt | CARt | CARt |
| **Parent characteristics** | | | | | | | |
| (1) Parent ROAt | 1.224*** | | 1.288*** | | 1.331*** | 1.002 | |
| (2) Parent ROAt × ▲Ct/Mt-1 | **4.401*** | | **5.369*** | | **5.641*** | **9.001 ** | |
| (3) Parent CFt | | 1.116 *** | | 1.186*** | | | 1.019* |
| (4) Parent CFt × ▲Ct/Mt-1 | | **1.203** | | **1.311** | | | **15.066* |
| (5) SOE | | | 0.032*** | 0.052*** | | | |
| (6) SOE × ▲Ct/Mt-1 | | | 0.412*** | 0.179 | | | |
| (7) Local SOE | | | | | 0.012** | | |
| (8) Central SOE | | | | | 0.105*** | | |
| (9) Local SOE × ▲Ct/Mt-1 | | | | | 0.381** | | |
| (10) Central SOE × ▲Ct/Mt-1 | | | | | 0.596** | | |
| **Listed firm characteristics** | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| **Observations** | 2208 | 2004 | 2203 | 2000 | 2209 | 1063 | 507 |

# Economic interpretation

**Marginal value of cash**

- **$0.47** (non-listed *parent* has an ROA in the bottom quartile of parent operating performance)
- **$0.66** (non-listed *parent* has an ROA in the top quartile)
- The difference is $0.19, almost 50%

**What happens if the controlling shareholder is an SOE?**

The difference in value of the marginal value of cash is $0.24

**Does the type of SOE matter?**

Yes. If the firm is controlled by the central government, the marginal value of cash is $0.86. Local government: $0.64

# Alternative explanation

## Does parent performance proxy for parent firm corporate governance (or parent "competence")?

- Are under-performing parent firms those with poor corporate governance or competence?

- No. We replicate our results after including controls for corporate governance variables. The results don't change.

- We eliminate from the sample parent firms that do not exhibit large changes in performance during our sample period and we estimate our model in the sub-sample of parent firms with large changes in performance (with no changes in corporate governance). Same results.

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# Alternative explanation

**Co-insurance**

- The operating performance of the controlling shareholder is a proxy of propping ability.

- The positive relationship between parent performance and the market valuation of the publicly listed firm's cash holdings does not reflect transfers from the publicly listed subsidiary to its non-listed parent.

- Instead it reflects implicit guarantees of assistance from the non-listed parent to the publicly listed subsidiary.

- When the parent performs well, it has adequate funds to assist the subsidiary if the latter faces difficulties, and hence, cash on the subsidiary's balance sheet is valued at "fair" value.

- When the parent performs poorly, it cannot assist the subsidiary if the latter faces difficulties, and hence cash on the subsidiary's balance sheet is valued at less than "fair" value.

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# Alternative explanation

## If it was co-insurance:

- Propping up would be more plausible in smaller publicly listed subsidiaries that are more likely to be financially constrained (Hadlock and Pierce, 2010)

- Propping up is also likely to be more plausible when the subsidiary is small relative to the size of its parent or earns a smaller profit than its parent.

# Coinsurance?

For large firms that do not face financing constraints, the coefficient of the interaction between parent performance and $\frac{\Delta C_{i,t}}{M_{i,t-1}}$ is significantly positive. In contrast, among small and financially constrained firms, we *do not* find a significant relationship between the value of an additional dollar of cash and parent performance.

Controlling shareholders are more likely to expropriate surplus cash from larger financially unconstrained firms, which are more able to raise additional cash from external markets in the future.

This result is more consistent with the expropriation hypothesis than by a potential propping up explanation.

# Coinsurance?

- The larger the losses that the subsidiary is making relative to the parent's losses, the larger the market valuation of a dollar of cash on the subsidiary's balance sheet!

- In other words, as it gets less feasible for the non-listed parent to assist its loss-making publicly listed subsidiary financially, the market's valuation of an additional dollar of cash on the subsidiary's balance sheet increases.

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# Conclusions

- Studies on the expropriation of minority shareholders of publicly listed firms by their controlling shareholders focus on the publicly listed firm and treat the controlling shareholder as a black box

- We link the extent of expropriation of the publicly listed firm to the performance of its controlling shareholder.

- Our findings help us understand *why* the controlling shareholders expropriate.

- We show that the market anticipates the potential expropriation by discounting the valuation of cash and intra-group loans on the firm's balance sheet.