CEO Bonding: Who Posts Performance Bonds and Why?

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What Are Performance Bonds?

- AKA security deposits or risk deposits
- An up-front payment by CEO to firm recoverable with interest conditional on ‘good behaviour’
- Discourages malfeasance because CEO is required to put personal wealth at jeopardy
- Stick rather than carrot of rewarding good performance
- Costless to the firm and thus the prototypical solution to the principal-agent issue
- Yet rarely feature in the CEO compensation literature
Objectives for This Paper

• Revisit theory as to why performance bonds are an attractive solution to the principal-agent problem

• Establish the incidence and size of performance bonds with enterprise data for China (2003)

• Seek to understand the correlates of performance bonds
  • Other incentive pay schemes
  • Corporate governance
  • Individual CEO characteristics
  • Firm characteristics

• Consider implications for understanding of bonds
Summary

In summary, we find that:

- Bonds are relatively common in China
- They are sizeable relative to average worker wages and CEO cash compensation
- They are typically used in combination with other managerial incentives
- Little relation to good corporate governance practices
- Some principal-agent hypotheses confirmed
- Importance of “legacy” effects
Ways to Incentivize CEOs

• Rewarding desirable behaviour
  • Elasticity of pay WRT firm performance (bonuses)
  • Stock holding
  • Stock options
  • Long-term investment Plans
  • Tournaments

• Penalising unwanted behaviour
  • Dismissal threat
  • Merger/acquisition (leading to job loss)
  • Performance bonds/security deposits
Why Use Bonds?

- **Costless**
  - So superior to incentive payments/efficiency wage

- **Monetary value required to discourage bad behaviour is lower than monetary reward for good behaviour**
  - Marginal utility of income (Mirrlees 1976)
  - Prospect theory downside loss (Kahneman/Tversky 1979)

- **Induce worker self-selection**
  - signals worker reliability to the firm (Parsons, 1986)

- **Potential to elicit trust**
  - optimal to have a threat that isn’t used (Fehr and List 2004)
  - important in Chinese context (guanxi)
Empirical Literature

- Only 4 papers
  - Groves et al. (1995); Shirley and Xu (1997); Mengistae and Xu (2004); Bai and Xu (2005)

- All China, confined to state-owned enterprises (SoEs) in the 1980s
  - part of state experimentation to foster capitalism

- Bonds are widespread, sizeable, viewed as analogous to stock options in the West, are genuinely at risk

- Conflicting evidence over whether bonds are substitutes or complements for other incentive mechanisms
Data

• World Bank Enterprise Data
  - 2003 Investment Climate Survey
  - www.enterprisesurveys.org
• Respondent = most senior manager at establishment
  - subset of questions on CEO and corporate governance
• N=2,400 from 18 cities (estimation sample 2,121 to 2,200)
  - whole economy, not just SoE’s
  - well after initial commercialisation of the economy
  - state continues to own substantial parts of economy but declining
  - well-functioning labour market for executives
• Four subsets of data of particular interest:
  - CEO compensation, corporate governance, CEO characteristics and firm characteristics
Data on CEO compensation

• 5 other aspects
  - if CEO pay linked to firm performance and, if so, targets
  - elasticity of CEO pay to firm performance
  - if CEO holds stock in firm and, if so, percentage of stock held
  - if CEO eligible for end of year bonus (nian xin zhi)
  - ratio of CEO pay to middle managers

• Big issue: are these substitutes or complements?
  - complements if multitasking (Holmstrom and Milgrom, 1991)

• Remember China’s CEO compensation mix different from West
  - US: stock options
  - Europe: Long-term incentive plans (LTIPs)
  - China: cash compensation and bonuses, plus stock holding
    - stock options only offered from 2006
Data on Corporate Governance

• 5 aspects
  - if Board of Directors
  - composition of BoD: independents, employee reps
  - stockholder concentration (important in monitoring literature)
  - CEO/BoD “duality”
  - BoD activism (meeting regularity etc)

• Issue: does good CG substitute for incentives?
  - may happen if incentives and CG are substitutes in attracting/retaining talent (Acharya et al, 2010)
  - or if poor CG allows managers to skim profits (Jensen and Murphy 1990)
  - Complementary if transparent CG means principals are less likely to monitor poorly; if good CG makes CEO job easier; if CEO has taste or preference for good CG for reputational spill-over reasons
Data on CEO

- Six aspects (in addition to compensation):
  - nationality
  - education
  - previous labour market experience
  - post prior to becoming CEO
  - Communist Party membership status
  - decision-making autonomy as a CEO

- Does bond induce positive selection?
- Are bonds used as screening device/short leash targeted at “outsiders”?
- Salience of reputational damage and thus role of experience
- Bonds as deferred comp should increase tenure
- Bonds, like other incentives, more likely with > autonomy
Data on Firm

- Seven aspects:
  - size
  - age
  - ownership (state, foreign, family etc)
  - industry
  - location
  - competition faced
  - prior performance/sales

- Bonds less (more) likely in volatile (competitive) markets?
- “Legacy effects”?
  - Locations where others use bonds
  - State ownership, links to CP hierarchy
Modelling

\[ PB_{if} = \beta_w \text{Comp}_{if} + \beta_x \text{CG}_f + \beta_y \text{Ind}_i + \beta_z X_f + \varepsilon_{fi} \]

\(PB_{if}\) dummy identifying payment of bond by CEO \(i\) in firm \(f\)

\(\text{Comp}_{if}\) is a vector of variables capturing the compensation package paid to CEO \(i\) in firm \(f\)

\(\text{CG}_f\) is a vector of corporate governance variables in firm \(f\)

\(\text{Ind}_i\) are individual CEO demographic and job attributes

\(X_f\) are structural firm attributes; epsilon is the error term and the betas are coefficients to be estimated
Prevalence and size of bonds

- 11% pay bonds with median equivalent to nearly \( \frac{3}{4} \) average workers’ wage or 6% of CEO cash compensation

<table>
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<th></th>
<th>SOE</th>
<th>Private</th>
<th>All</th>
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<tbody>
<tr>
<td>No bond</td>
<td>84%</td>
<td>90%</td>
<td>89%</td>
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<tr>
<td>Size of bond (RMB):</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Under 10k</td>
<td>9%</td>
<td>4%</td>
<td>5%</td>
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<td>10k-39k</td>
<td>5%</td>
<td>3%</td>
<td>4%</td>
</tr>
<tr>
<td>40k or above</td>
<td>2%</td>
<td>3%</td>
<td>3%</td>
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<tr>
<td>Median</td>
<td>6,000</td>
<td>10,000</td>
<td>10,000</td>
</tr>
<tr>
<td>Mean</td>
<td>14,615</td>
<td>38,308</td>
<td>30,183</td>
</tr>
</tbody>
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Results Summary (1)

- Bonds and other incentives are complementary
  - CEO’s on incentive plans are 9pp more likely to post bonds
  - Bonds +ve ass with greater pay sensitivity to firm performance
  - Holding stock +ve for posting a bond, but only for larger shareholdings
  - Annual salary bonus contracts +ve for posting bonds
  - Pay ratios are NS

- Corporate governance
  - Generally NS except employee representation on BoD +ve sig

- CEO characteristics
  - Jointly stat sig but driven by CP status and CEO previous position
  - Bonds more likely where firm or party “insider”
Results Summary (2) – the Firm

- Firm characteristics jointly stat sig and all individually so except ownership
- +ve association with age may capture “legacy effects”
- strong correlations with city location, again potentially “legacy effects”
- might interpret % firms with bonds in city in a similar way or else ‘experience good’
- negative association with sales volatility in keeping with principal-agent theory
- but negative association with competition is not. Rather perhaps further evidence of “legacy effects”
Conclusion

- Performance bonds were an important aspect of CEO compensation in the early 2000s
  - high incidence and sizeable
- Bonds complement other types of incentive
- “Legacy effects” apparent raising question as to role for bonds in current period
  - new compensation methods available inc options
- But bond usage no longer confined to SoE’s
- And may foster trust-based relationships encapsulated in *guanxi* which previously relied on pre-industrial connections
- And what about other countries?