

# **FIN536**

# **CORPORATE GOVERNANCE**

**Lecture 10 Controlling  
Shareholders (2)**

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# TODAY'S AGENDA

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- Evidence of Tunneling
  - “*Ferretting Out Tunneling: An Application to Indian Business Groups*” by Bertrand, Mehta, and Mullainathan, 2002, QJE
- A Theory of Pyramidal Ownership
  - “*A Theory of Pyramidal Ownership and Family Business Groups*”, by Ameidá and Wolfenzon, 2006, Journal of Finance

# 1. EVIDENCE OF TUNNELING

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- “*Ferretting Out Tunneling: An Application to Indian Business Groups*”  
by Bertrand, Mehta, and Mullainathan, 2002, QJE
  - Identification of tunneling activities in business groups
  - An Application to Indian Business Groups

# 1. EVIDENCE OF TUNNELING

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- Business group and Tunneling
  - a single shareholder (or a family) completely controls several independently traded firms
  - but has significant cash flow rights in only a few of them
  - The controlling shareholder will want to transfer, or *tunnel*, profits across firms, moving them from firms where he has **low cash flow rights** to firms where he has **high cash flow rights**

# 1. EVIDENCE OF TUNNELING

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- Business group and Tunneling
  - Cash can be transferred in many ways:
    - the firms can give each other high (or low) interest rate loans
    - manipulate transfer prices
    - sell assets to each other at above or below market prices

# 1. EVIDENCE OF TUNNELING

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- Consider a group with two firms
  - *Firm H*: controlling SH has high cash flow rights
  - *Firm L*: he has low cash flow rights
- Suppose that firm L experiences a shock that would cause its profits to rise by 100 dollars in *the absence of tunneling*
  - Actual profits of firm L will rise by less than 100 dollars
  - As the shortfall is being tunneled to H, H responds to L's shock even though H is not directly affected by it
  - We would not expect this pattern if instead H were to receive the shock

# 1. EVIDENCE OF TUNNELING

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- **An Application to Indian Business Groups**
  - In most cases, the controlling shareholder is a family
    - The best-known business families in India are Tata, Bajaj, Birla, Oberoi, and Mahindra
  - Corruption makes corporate governance laws difficult to enforce and shareholder expropriation a major concern in India
- **Centre for Monitoring Indian Economy (CMIE)**
  - Classification of firms into group and non-group firms

# 1. EVIDENCE OF TUNNELING

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- Measure for cash flow right of the controlling shareholder
  - Direct rights: *director ownership*
    - Indian families typically control the firms they have financial stakes in by appointing family members or family friends to the board of directors and to top managerial positions
  - Indirect rights: *other shareholders*
    - Shares held by small, minority shareholders
    - It captures the amount of cash flow rights the family does not own



# 1. EVIDENCE OF TUNNELING

TABLE II  
SENSITIVITY TO OWN SHOCK: GROUP VERSUS STAND-ALONE  
*DEPENDENT VARIABLE: PROFIT BEFORE DIT*

	(1)	(2)	(3)	(4)
Own shock	1.05 (.02)	.10 (.05)	-4.58 (.48)	-5.10 (.47)
<b>Own shock*</b>	<b>-.30</b>	<b>-.30</b>	<b>-.26</b>	<b>-.27</b>
<b>group</b>	(.02)	(.02)	(.02)	(.02)
Ln assets	.16 (.32)	2.98 (.34)	-.33 (.33)	2.47 (.34)
Own shock* ln assets	—	.10 (.00)	—	1.0 (.01)
Own shock* year of incorp.	—	—	.003 (.000)	.003 (.000)
<i>Sample size</i>	18600	18600	18588	18588
<i>Adjusted R<sup>2</sup></i>	.93	.93	.93	.93

a. *Data Source:* Prowess, Centre for Monitoring Indian Economy, for years 1989–1999. All monetary variables are expressed in 1995 Rs. crore, where crore represents 10 million. Sample includes both stand-alone and group firms.

b. All regressions also include year fixed effect and firm fixed effects.

c. Standard errors are in parentheses.

# 1. EVIDENCE OF TUNNELING

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- Group firms should on average under-respond to shocks to their own profits
  - More than 25 percent of all the money placed into a group firm is somehow dissipated

# 1. EVIDENCE OF TUNNELING

TABLE III  
SENSITIVITY TO OWN SHOCK BY DIRECTOR AND OTHER OWNERSHIP  
DEPENDENT VARIABLE: PROFIT BEFORE DIT

	Sample:			
	Groups (1)	Groups (2)	Stand- alones (3)	Stand- alones (4)
Panel A: Director equity				
Own shock	.713 (.009)	-5.075 (.742)	1.058 (.006)	-4.316 (.518)
<b>Own shock * director equity</b>	<b>.025</b> (.003)	<b>.030</b> (.003)	<b>.004</b> (.001)	<b>.019</b> (.001)
Ln assets	.052 (.733)	4.261 (.807)	-.590 (.176)	1.568 (.178)
Own shock * Ln assets	—	.118 (.008)	—	.201 (.006)
Own shock * year of incorp.	—	.002 (.000)	—	.002 (.000)
<i>Sample size</i>	7521	7510	11079	11078
<i>Adjusted R<sup>2</sup></i>	.92	.93	.95	.96

# 1. EVIDENCE OF TUNNELING

Panel B: Other ownership

	Sample:			
	Groups (1)	Groups (2)	Stand- alones (3)	Stand- alones (4)
Own shock	.919 (.023)	-5.764 (.743)	1.033 (.052)	-3.983 (.603)
<b>Own shock * other ownership</b>	<b>-.007</b> (.001)	<b>-.007</b> (.001)	<b>.001</b> (.000)	<b>.002</b> (.000)
Ln assets	1.616 (.724)	5.189 (.806)	-.292 (.166)	2.049 (.180)
Own shock * Ln assets	—	.103 (.008)	—	.154 (.006)
Own shock * year of incorp.	—	.003 (.003)	—	.002 (.000)
<i>Sample size</i>	7521	7510	11079	11078
<i>Adjusted R<sup>2</sup></i>	.92	.93	.95	.96

a. *Data Source:* Prowess, Centre for Monitoring Indian Economy, for years 1989–1999. All monetary variables are expressed in 1995 Rs. crore, where crore represents 10 million.

b. All regressions also include year fixed effect and firm fixed effects.

c. Standard errors are in parentheses.

# 1. EVIDENCE OF TUNNELING

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- Group firms where **director equity** is higher are **more sensitive** to their own industry shock
- The **sensitivity** of a group firm to its own industry shock **decreases** with its level of **other ownership**
  - The under-response to shocks to own profits is larger in low cash-flow-right firms

# 1. EVIDENCE OF TUNNELING

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- More resources are tunneled out of the group firms:
  - When the promoting family has lower equity stakes and where there are higher minority shareholders to expropriate
- Indian groups appear to tunnel by manipulating nonoperating components of profits
  - such as miscellaneous and nonrecurring items

# 1. EVIDENCE OF TUNNELING

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- They examine whether market prices incorporate tunneling
  - High market-to-book firms are more sensitive to both their own shock and shocks to the other firms in their group
- This suggests that the stock market at least partly penalizes tunneling activities

# 2. THEORY OF PYRAMIDAL OWNERSHIP

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- “*A Theory of Pyramidal Ownership and Family Business Groups*”, by Ameida and Wolfenzon, 2006, Journal of Finance
  - In several countries, single individuals or families control a large number of firms
  - The top family often organizes the ownership of the group member firms in a pyramidal structure



## 2. THEORY OF PYRAMIDAL OWNERSHIP

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- A pyramid allows a family
  - to access all retained earnings of a firm it already controls to set up a new firm
  - to share the new firm's non-diverted payoff with shareholders of the original firm.
- Securing control through such arrangements can be particularly beneficial for the family when private benefits of control are large.

# 2. THEORY OF PYRAMIDAL OWNERSHIP

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- Pyramids are not the only way to achieve this separation cash flow from voting rights
  - Why would a family choose to control a firm through a pyramid rather than through direct ownership with dual-class shares?
- Pyramids are much more common throughout the world than are dual-class shares (La Porta et al. 1999).

# 2. THEORY OF PYRAMIDAL OWNERSHIP

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- Why are multiple assets concentrated in the hands of a single family?
- What determines the choice of ownership structure of these firms?

# 2. THEORY OF PYRAMIDAL OWNERSHIP

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- Why business groups?
  - They arise to substitute for missing markets
    - i.e., Labor and financial markets
    - Leff (1978), Khanna and Palepu (1997, 1999)
  - The ability to prop up (inject money into) failing firms
    - Morck and Nakamura (1999), Friedman, Johnson, and Mitton (2003)
  - The use of a group's deep pockets as a strategic tool in product market competition
    - Cestone and Fumagalli (2005)

# 2. THEORY OF PYRAMIDAL OWNERSHIP

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- The ownership structure of groups
  - Separate cash flow from voting rights
    - Reputation benefits (Gomes 2000),
    - Prevent potential raiders from seizing valuable control (Bebchuk 1999)
    - Regulatory or tax considerations (Morck 2003)
- The question still remains as to why a pyramid is the best mechanism to achieve this separation.

# 2. THEORY OF PYRAMIDAL OWNERSHIP

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- Two key assumptions
  - Investor protection is imperfect
    - When investor protection is poor, the family extracts **private benefits** from the firms it controls at the expense of minority shareholders.
  - New businesses are added to the group over time
    - That is, after the family sets up a firm, an opportunity to set up another firm arises.

# 2. THEORY OF PYRAMIDAL OWNERSHIP

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- When new opportunity arises: the family must decide on the ownership structure of the business group
  
- Pyramid vs. Horizontal
  - Under a pyramidal structure, the new firm is owned by all the shareholders of the original firm.
  - Under a horizontal structure, the family can control the new firm by directly holding its shares

# 2. THEORY OF PYRAMIDAL OWNERSHIP

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- Pyramid
  - Although the family shares the security benefits of the new firm with nonfamily shareholders of the original firm, it has access to all of the retained earnings (cash) of the original firm



# 2. THEORY OF PYRAMIDAL OWNERSHIP

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- Horizontal
  - Under this structure, nonfamily shareholders of the original firm have no rights to the cash flows of the new firm, and thus the family captures all the security benefits of the new firm.
  - However, in this case, the family has access to only its share of the retained earnings of the original firm.

# 2. THEORY OF PYRAMIDAL OWNERSHIP

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- The pyramidal structure becomes more attractive for two reasons.
- 1) *Payoff advantage*
  - Poor investor protection leads to high diversion of cash flows
  - Diversion increases the family's private benefits of control, though at the cost of a reduction in security benefits.

# 2. THEORY OF PYRAMIDAL OWNERSHIP

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- The pyramidal structure becomes more attractive for two reasons.
- 2) *Financing advantage*
  - External investors anticipate diversion and discount
  - It is optimal for the controlling shareholders to use internal funds from existing firms to set up new firms before raising any external financing.
  - This makes the family's ability to use all the retained earnings of existing group firms in a pyramid structure more valuable

# 2. THEORY OF PYRAMIDAL OWNERSHIP

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- The pyramidal structure becomes more attractive for two reasons.
- 2) *Financing advantage*
  - In countries that provide low investor protection, this financing advantage is more important because it is more difficult to secure external financing

# 2. THEORY OF PYRAMIDAL OWNERSHIP

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- Conditions that lead to the creation of a business group
  - When its security benefits are low relative to the required investments
  - It is difficult to finance the required investment in the external market
  - Families that already own successful firms might be the only ones with sufficient financial resources to set up the new firm, regardless of whether they are the most efficient owners

# 2. THEORY OF PYRAMIDAL OWNERSHIP

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- Selected empirical implications
  - Lower performance
  - Overinvestment
  - Negative return with new firm
  - Large and Capital intensive industries

# 2. THEORY OF PYRAMIDAL OWNERSHIP

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- 1) Firm value and firm performance are lower in pyramid-owned firms than in unaffiliated firms or horizontal structures.
  - Family business groups should be more prevalent in countries with poor investor protection.

# 2. THEORY OF PYRAMIDAL OWNERSHIP

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- 2) Overinvestment incentive in Pyramids
  - Because the cost of overinvestment is shared with existing shareholders of the business group
  - Such overinvestment is more likely when retained earnings in the group are very large.
  - Thus, pyramids might destroy value if there is too much cash available to the family, a version of the well known free cash flow problem (Jensen 1986).



## 2. THEORY OF PYRAMIDAL OWNERSHIP

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- 3) When a new firm is added to a pyramidal structure, the existing nonfamily shareholders of the pyramid realize a negative return
  - Existing shareholders realize an ex post loss when the pyramid is formed
  - This does not mean that shareholders also lose in an ex ante sense
  - Because the shares in the parent firm are probably priced to reflect future expropriation

# 2. THEORY OF PYRAMIDAL OWNERSHIP

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- 4) Firms in pyramids are larger, or they are more likely to belong to capital intensive industries.
  - pyramids might lead to overinvestment.
  - pyramidal firms should be associated with larger scales of capital investment.

## 2. THEORY OF PYRAMIDAL OWNERSHIP

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- The pyramidal structure itself is not the cause of the increased diversion.
- Rather, the expectation of high diversion makes the pyramidal structure an optimal choice for the controlling family.
  - Driven by a selection effect

## 2. THEORY OF PYRAMIDAL OWNERSHIP

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- New firms with low security benefits relative to their investments require that the family sell more shares to finance them
- As a result, the family's ultimate stake in these firms is low and diversion is high.
- Given high diversion, it is optimal for the family to set these firms up in a pyramidal structure
- Firms with low security benefits relative to their investment requirements are associated with lower ownership concentration and high diversion, and they end up in pyramidal structures

# 2. THEORY OF PYRAMIDAL OWNERSHIP

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- Implications of the existence of business groups
  - Deleterious effects on overall economic efficiency?
  - Inefficient allocation of corporate control through family inheritances (Morck et al. 2000))
  - Hamper the development of external capital markets (Almeida and Wolfenzon 2005)