# Finance: A Quantitative Introduction
# Chapter 12
# Agency theory and corporate governance

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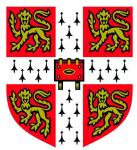

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# Agency theory

An *agency relation* exists when:

- a person, *the principal*,
- hires another person, *the agent*,
- to perform certain tasks or services

Conflict of interest: agent's interests, incentives $\neq$ principal's

- agent:
  - wants to maximize reward for effort
  - or, if reward is given, minimize the effort
- principal:
  - wants to minimize the costs of hiring agent
  - or to maximize the output he or she receives

Effect of conflict of interest:

- principal cannot take for granted that agent will act in principal's best interest
  - not analyzed as moral or legal issue
  - but as economic issue:

    both agent and principal act rationally

    maximize their utility or value
- contract, which formalizes agency relation, is necessary
  - aims to overcome conflict
  - specifies agent's inputs and distribution of the outputs

However, contract will not fully resolve conflict:

1. Contracts cannot be complete, impossible to specify every eventuality
   - Hence, principal has to delegate decision making power
   - can be used to the agent's advantage
2. Agent's inputs and/or outputs not fully observable for principal:
   - effort is hard to measure
   - output co-determined by external factors

Result: *agency costs* have to be incurred:

- to prevent agents from looking after their own interests
- instead of the principal's

In a corporate context, 3 main components of agency costs are:

- costs of contracting
- costs of monitoring
- residual loss: reduction in firm value because of unresolved agency problems

Agency relations are very general:

- we are agent/principal on a daily basis
- companies have agency relations with all business partners

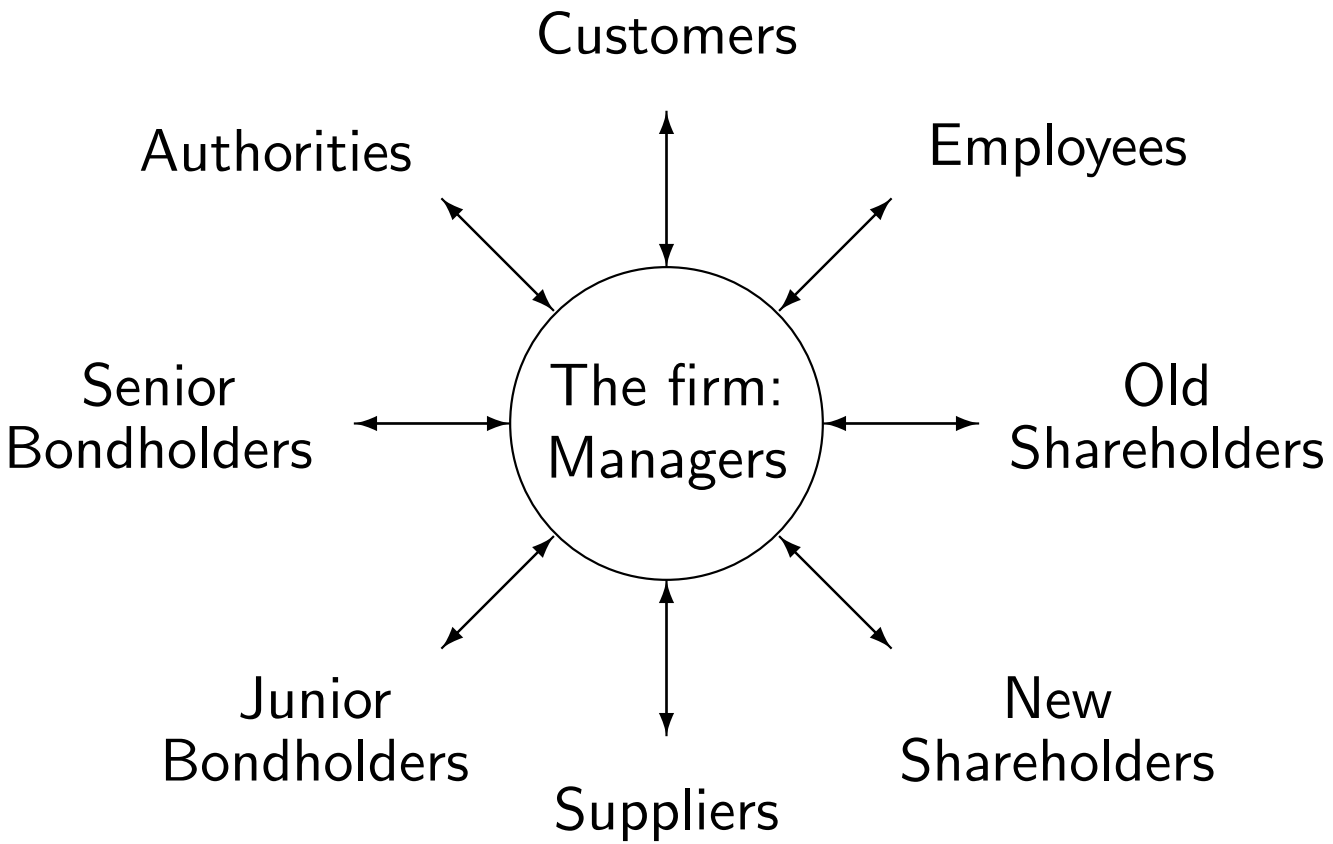
Gives different view of the firm:

- as a 'set of contracts' (Fama)
- or 'nexus of contracts' (Jensen and Meckling)

We have met some agency relations/costs before:

- indirect costs of bankruptcy
- e.g. firms selling durables
- are agents supplying future service and maintenance
- if agent's service becomes doubtful, sales stop (Saab!)




The firm as nexus of contracts

# Optimal contracts big issue in agency theory

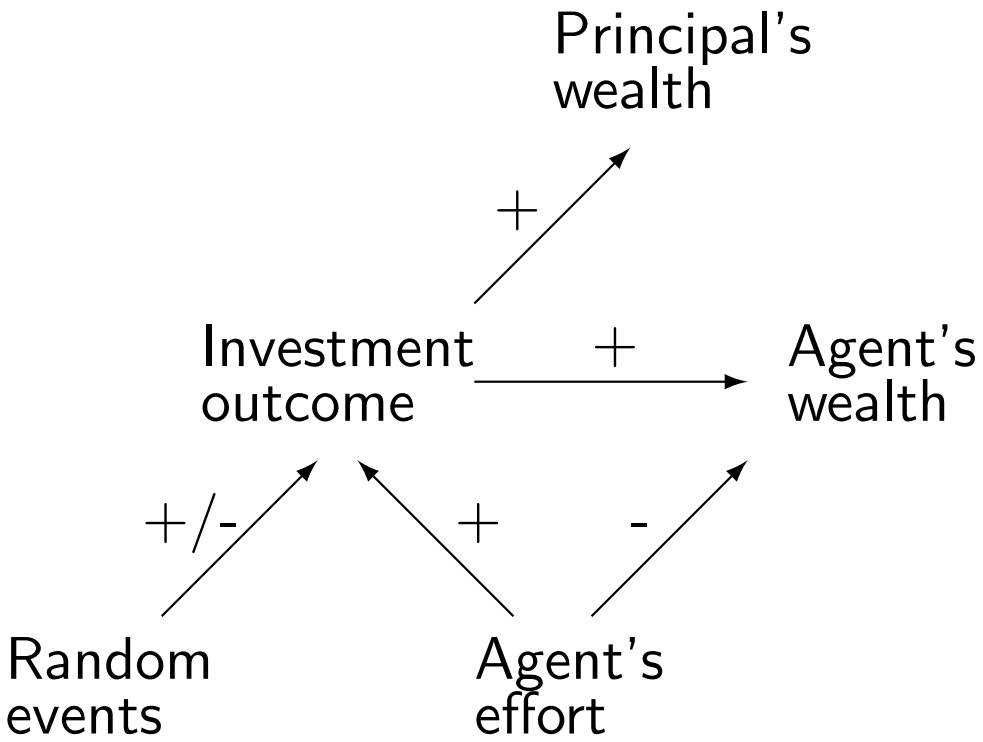
- Optimal if it makes agent maximize principal's goal
- called **first best** contract
- impossible under normal circumstances
- second best contracts have to be used

Why are first best contracts impossible?

- Agent's effort contributes to principal's goal
- agent's (marginal) effort more costly to the agent than principal
    - agent wants to stop before principal
- Outcome also determined by other factors

Structure depicted for investment problem, principal hires a fund manager to invest his (principal's) money:




Structure of an agency problem

Example: selling your house

- You hire an estate agent to sell your house
- agent's fee is % of selling price, say 2%
- appears to align interests of principal and agent:
  - both want highest possible selling price

Conflict lies in agent's (marginal) effort

- you are interested in an additional sales effort
- e.g. organizing one more open house weekend
  - find a buyer willing to pay extra €5 000 or €10 000
- agent's additional fee is only 2%, €100 or €200
  - too little for weekend working hours

The missed price increase is an agency cost

Firm's owners hire managers to run firm

- in their (owners) best interest
- not the best interest of bank (or suppliers, employees, government, etc.)
- can give conflict of interest

In the long run, conflicts have to be resolved

- market parties reach agreement
- learned to negotiate fair share
- cannot fool all banks all the time

Conflict may surface in (next?) deal:

- firm may have little choice
- reward may be too large

How can management reduce value outstanding debt?

1. Increase risk (risk incentive):
   - also called asset substitution
   - gradually replace safe assets with riskier ones
2. Underinvestment
   - occurs in firms in trouble (value debt $>$ assets)
   - good investments only increase value of debt
   - shareholders decide $+$ have to pay $\Rightarrow$ refuse

Example (Saab!):

- end-of-period debt 150, cash flow 75 $\Rightarrow$ default
- investment: replace vital machine, keep production going
- costs 25, payoff 50, extremely profitable
- whole value increase goes to debtholders (75 $\Rightarrow$ 125)
- shareholders have to pay $\Rightarrow$ refuse

3. Increase debt ratio
    - New debt makes outstanding debt riskier
    - outstanding debt loses value
    - becomes value increase for shareholders
4. Reduce seniority of existing debt
    - issue new debt with higher priority
    - give security (mortgage) for new loan
5. Pay dividends
    - also called 'milking the property'
    - or 'asset stripping'
    - leaves less for debtholders

Example of disinvestment to pay dividends or perks:

- Phoenix Venture Holdings paid BMW £10 (no zeros omitted) to take over Rover
- 4 partners invested £60 000-70 000 each
- their return: £42 million

Further details:

- one bought software to "clean" data from personal computer
- another paid $>$ £1.6m to a consultant he had a "personal relationship" with
- MG Rover went into insolvency with debts $>$ £1bn.
- assets sold to China (revived MG brand, produced in China)

Was an investigation, scandal, but no criminal charges

Costs of these agency problems:

- Contracting: complex loan agreements
  - restricting additional borrowing
  - restricting (dis-)investment
  - restricting dividends
- Monitoring:
  - financial reports
  - ratings, credit checks
  - meetings with banks
- Residual loss
  - low, sub-optimal debt limits
  - flexibility: short maturity

How can management reduce value of equity?

1. Safe investments
   - financial distress threatens managers jobs
   - buy job security at shareholders' expense
2. Risky investments
   - bonuses, stock option plans give managers risk incentive
   - extreme case: hedge fund managers 2-20 rule
3. Entrenchment
   - investments that fit managerial expertise
   - makes jobs secure, wages higher
   - oil boss managing high-tech windmills, solar panels?

4. Safe debt ratios
   - financial distress threatens managers jobs
   - buy job security at shareholders' expense
5. Retaining profits, cash, non-strategic assets
   - gives elbow room in times of trouble

Example: KLM (airline) wanted to buy Hilton (hotels)

- no large synergy effect
- transaction stopped by board of directors
- stockholders can diversify much more cheaply
- What would KLM do in times of trouble?
- sell Hilton, survive longer

Costs of these agency problems:

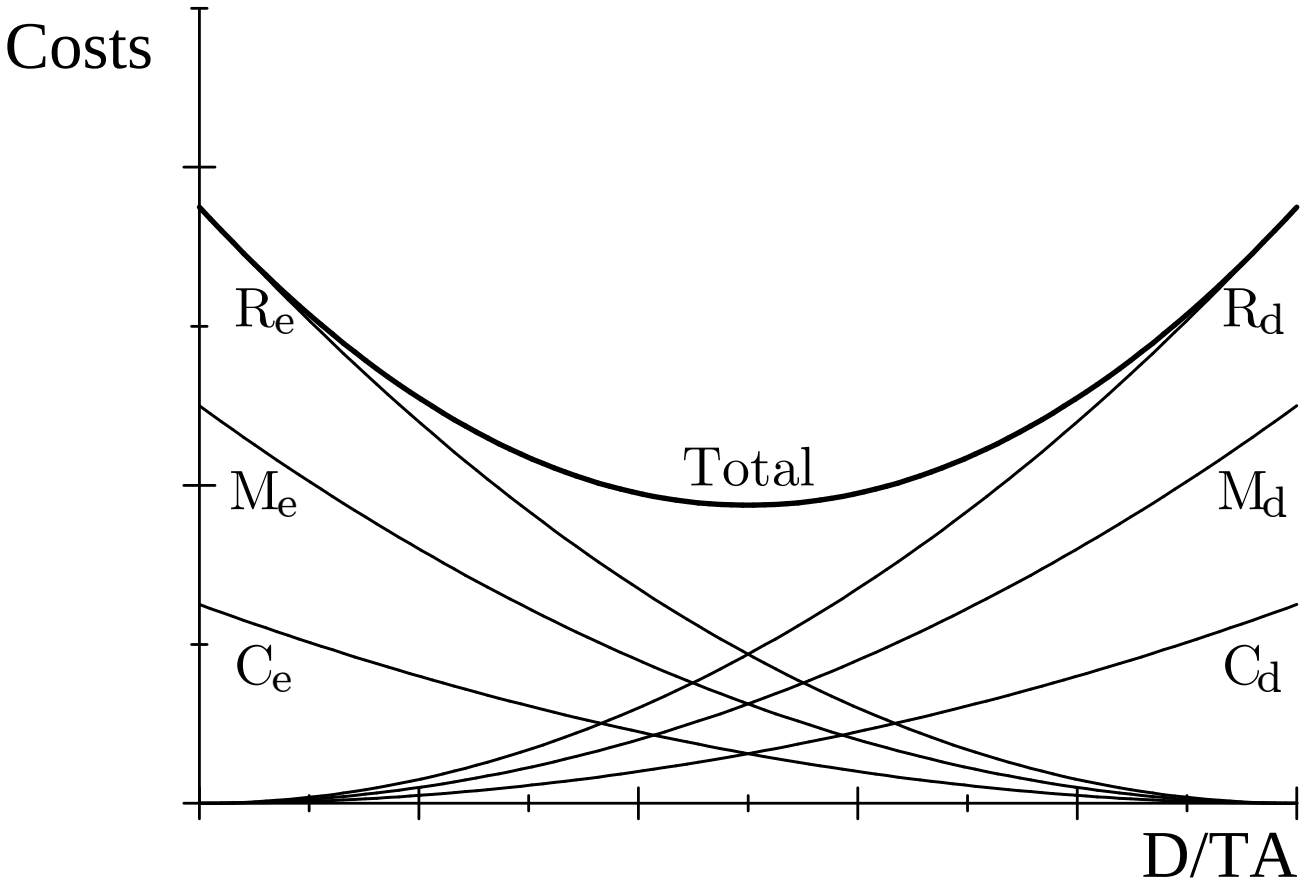
- Contracting:
  - complex corporate governance systems
  - performance related incentives
- Monitoring:
  - audited financial reports
  - board of directors
  - shareholders meetings
- Residual loss
  - low price outside equity
  - low value through sub-optimal debt ratio, high/low risk
  - capital market intervention

# What does agency theory learn us?

- Highlights deviations from full information equilibrium
- Firms are coalitions, not single entities
  - sometimes one coalition partner has upper hand
  - sometimes another
  - this introduces another risk factor
- Explains complexity of financial contracts
- Alternative theory of optimal capital structure
  - if marginal agency costs of debt and equity are increasing function of proportion in total assets (not unrealistic, but not necessarily so)
  - there is internal optimum (min. agency costs)




Agency costs as a function of capital structure, C=contracting costs, M=monitoring costs, R=residual loss, d=debt, e=equity, TA=total assets

Agency theory: a cynical view of the world?

- Applies economic principles to study contracts
  - under risk, asymmetric information, conflicting interests
  - no more cynical than max[*dead*, *alive*] in option pricing
- Often discussed with simple examples
  - ignores long-term, practical aspects
  - easily give impression of short-term, opportunistic behaviour

What evidence is there that agency relations play a role in practice?

The credit crunch □

# Empirical studies

Agency costs important determinant corporate behaviour

- Included in many empirical studies
- often as explanatory variable
- also as object of investigation

Look at 2 empirical studies:

- Managerial entrenchment and capital structure
- Agency problems at dual class companies

Berger et al. (1997) study effect of entrenchment on capital structure

Entrenchment measured as:

- CEO's length of tenure
  - (more entrenched)
- managerial compensation with low performance-sensitivity
  - (more entrenched)
- strength of monitoring by board or large stockholders
  - (less entrenched)

Results consistent with agency theory predictions:

- entrenched CEOs pursue less levered capital structures
- safer, sub-optimal debt ratio gives elbow room and job security

Also analyse changes in leverage after large changes in governance structures:

- Firms are targets of unsuccessful tender offers (outside offer to take over the firm)
  - book value leverage increases by 13%
- CEO is 'forced' to resign
  - leverage rises by 9%

Events mean decreases in managerial entrenchment

- increases in leverage are predictions from agency theory

Masulis et al. (2009) study agency problems in dual-class companies

- dual-class companies have 2 classes of stocks
  - 1 with enhanced voting rights (for founders and top managers)
  - 1 with reduced voting rights (for general public)
- obviously aggravates agency problems managers $\leftrightarrow$ outside stockholders
  - insiders have a greater ability to ensure private benefits and employment
  - they bear smaller proportion of financial consequences

Masulis' evidence consistent with agency theory

- With increasing proportion of insider voting rights:
  - outside stockholders attach less value to firm's cash holdings
  - CEOs receive greater compensation
  - managers become more entrenched
    - more acquisitions
    - large capital expenditures

Findings in line with the predictions from agency theory

- demonstrate that firm value can decrease with insider excess control rights

# Corporate governance systems

Determine how a firm is directed and controlled

- Old issue in finance
  - already discussed by classic economists Adam Smith and Alfred Marshall
- Modern discussion started by Berle and Means (1932)
  - controversial even before published
  - straightforward argument:
    diffuse ownership cannot control management
  - implication: performance inversely related to diffuseness
- Corporate scandals (ENRON) gave new attention

Corporate governance systems:

- assign tasks, responsibilities and incentives
- to firm's managers, shareholders and board of directors
- also have more general purposes:
  - provide accountability, fairness, and transparency
  - in the firm's relationships with all stakeholders

Can be of great value to company (Dittmar et al. 2007):
$1 of cash can have a market value of:

- $0.42 to $0.88 in a poorly governed firm
- good governance approximately doubles this value

2 stylized models of corporate governance:

Anglo-American system

- also called *market centred* or *outsider* system of governance
- management is very autonomous in the system $\Rightarrow$
  - companies that have adopted it called *managed corporations*

German system

- also called *bank centred* or *insider* system of governance
- large owners participate in management decisions $\Rightarrow$
  - companies that have adopted it called *governed corporations*

Anglo-American system:

- modelled around active capital market
  - main provider of capital for firms
- widely spread fragmented ownership
  - corresponds to well-diversified investors

Result: no shareholder large enough to monitor management

- management delegated to managers
- monitoring and control to board of directors who
  - review corporate strategy
  - monitor corporate performance
  - oversee major capital expenditures
  - select, compensate, monitor and replace key executives

Shareholders role limited but strongly protected by law:

- can easily buy and sell (vote with their feet)
- initiate and participate in appointments
- sue managers if they fail
- corrections through capital market intervention (hostile takeovers)

Management is very autonomous:

- gives flexibility, quick re-allocation of assets (including human capital)

Disadvantage:

- short-termism, both of managers and investors

German system

- modelled around active, long-term shareholders
  - not affected by short-term price movements
- concentrated ownership
  - by banks, other companies, families
- much less reliance on market forces
  - hostile takeovers virtually unknown in Germany

Result: monitoring and control through participation

- large investors can afford to be active
  - be represented in board of directors
  - prevent entrenchment, force dividend payments

Concentrated, committed ownership has advantages:

- allows long-term goals
  - technological leadership
  - long term survival
- much less sensitive to short-term price movements
- avoids disruptive capital market interventions

Also disadvantages:

- reduces managerial autonomy
  - less flexibility in resource allocation
- marginalizes position of small shareholders
  - less protected by law

Banks have important role in German system

- provide both debt and equity
- usually hold a minority position in shares

Banks' influence greatly enhanced by two factors:

- proxy rules
  - banks can vote on behalf of investors who deposited shares at the bank
- ownership pyramids
  - inter-related cross holdings
  - e.g. A controls B and C, B and C control D

Example from literature:

- 2 banks exercised 40% votes on shareholders meeting
- did not own any shares themselves

# Which system performs best?

Discussion started by Berle and Means (1932)
used straightforward agency argumentation:

- widely dispersed ownership cannot control management
- managers will maximize own wealth, not shareholders'
- firm performance inversely related to owners dispersion

Would make the German system superior

- concentrated, large ownership can control management
- solve 'free rider problem' of dispersed ownership

Argument ignores other agency relations:

- large shareholders can expropriate small ones
- and other stakeholders (customers, employees)
- will reduce value of firm to outsiders

Dispersed ownership can discipline managers:

- performance related compensation
- making managers owners (paying in shares)
- good corporate governance

But: each solution creates its own problems

Makes best governance structure empirical question

- Rational investors will buy/sell to maximize value
- if concentrated ownership creates value:
  - small owners will sell to big ones
- if close monitoring doesn't pay off
  - large owners will sell to small ones

Likely to be the case under different circumstances

- Volatile environment requires managerial discretion
  - strict control pays off $\Rightarrow$ concentrated ownership
- Stable environment facilitates easy monitoring
  - better suited for dispersed ownership

General picture from the literature:

- ownership structure chosen to maximize firm value
- in given set of circumstances

Has 2 consequences:

- no relation with performance
- ownership structure is endogenous

Latter must be reflected in research design
(not always the case)

- different categories owners distinguished
  - banks, corporate, family, state

Overview of empirical studies (first name only)

| Ownership Characteristic | Endogenous Ownership | Exogenous Ownership |
|---|---|---|
| Concentration | Demsetz (1985) | Bianco (1999) - |
| | | Xu (1999) +* |
| Managerial | Himmelberg (1999) | Craswell (1997) |
| | Demsetz (2001) | Singh (2003) + |
| Family/ | Anderson (2003) + | Gorriz (1996) + |
| groups | Maury (2006) + | Randøy (2003) +* |
| | Pedersen (2003) +* | Villalonga (2006) +* |
| | Lehmann (2000) -* | |
| | Thomsen (2000) +* | |

Specification of ownership category effects

| Study | State Ownership | Corporate Ownership | Family Ownership |
|---|---|---|---|
| Xu (1999) | − | + | 0 |
| Randøy (2003) | | | + founder |
| | | | − non-founder |
| Villalonga (2006) | | | + founders |
| | | | − descendants |
| Pedersen (2003) | − | + | 0 |
| Thomsen (2000) | − | + if bank | − |
| | | − if non-bank | |
| Lehmann (2000) | | + if fin.inst. | − |
| | | 0 if foreign/indust. | |
| | | − if mixed | |