Fall 2008, Hitotsubashi University
Monetary Economics 1
(Corporate Finance)

LECTURE 6

Corporate bond and bank lending

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Issuing corporate bonds

- Difference in the riskiness of corporate bonds
  - Likelihood of bankruptcy
- Bond rating by rating agency
  - AAA, BB, B+, C and so on.
  - Higher the rating, lower the interest rate (= the size of risk premium)

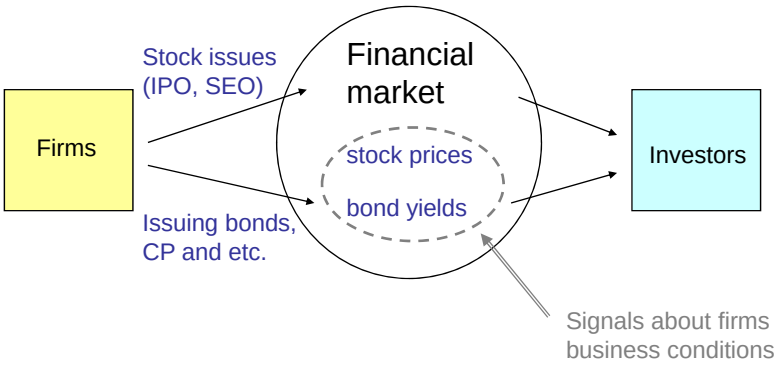
Firm's "reputation" determines bond yield

- Firm's "reputation" is the most important determinant for the firm's cost of capital and cost of market financing.
  - Commercial paper
  - Junk bonds

Rating agency

- E.g. Moodys, Standard and Poor's
- Rating agency provides "information" to the market
  - Analyze firms' business conditions and prospects.
  - Examine balance sheet information and other materials to determine the "rating" of a particular firm.
- Getting profits from institutional investors or from the firms rated by rating agency.

Informational role of asset prices



To raise funds in market, your reputation is necessary

- David Bowie:
  "Bowie bond"
  - Issued in 1997
  - Raised US$ 55 million
  - Recently downgraded by Moody's to Baa3 due to bad business condition in music industry

There can be "Madonna bond" or "Tiger Woods bond". But, can you issue bond in market?

Public (market) debt vs private debt

- It is very likely that you cannot issue bonds to finance your tuitions.
- But, you can borrow from banks
- It is same for corporations: When the firm's reputation is not high enough, they can't issue bonds. But, they can borrow from banks.
  - Reputation does not have to be very low. Just the firm is unknown.

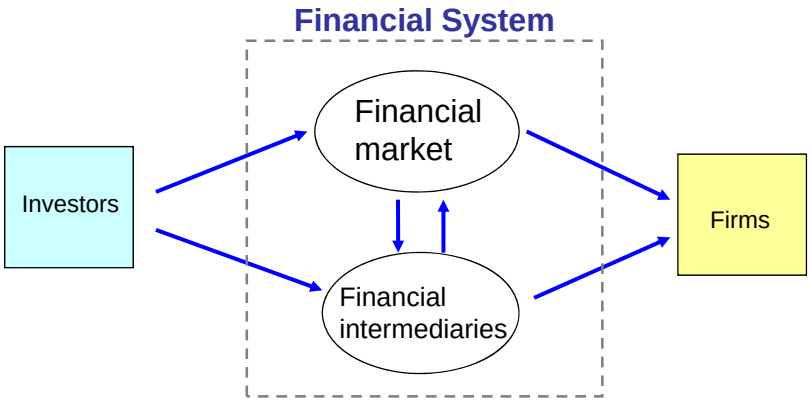
Bank lending and other "indirect" finance

- When market financing is too costly for the firm, the firm will go to:
  - Banks
  - Venture capital
  - Private equity
- Financial intermediaries

The role of financial intermediaries

- **Produce information** about the firm for investors and borrowers
- Solve the agency problem between them
- These are the information that cannot be transmitted or assessed by the pure market system
- Requires some expertise
  - entrepreneurial finance
  - mortgage

Flows of funds in the financial system



Different concepts in information asymmetry (1)

- Judging borrower firm's quality before making loans
- Adverse selection, signaling
- "Hidden information"
- Action: Screening
  - Deciding provide loans or not, Underwriting bond issues

Different concepts in information asymmetry (2)

- Monitoring borrower firm's behavior after loan has been made.
- Moral hazard
- "hidden action"
- Action: Monitoring

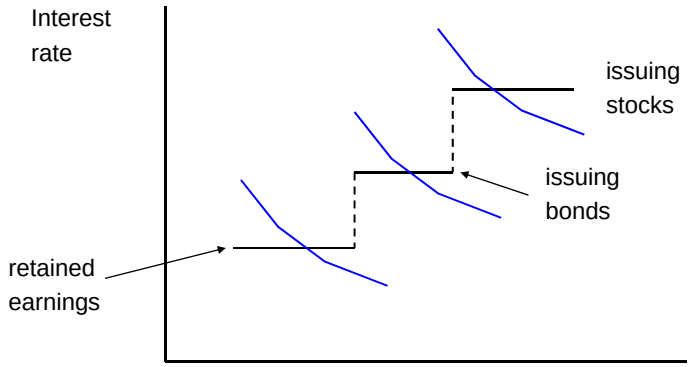
Banks as delegated monitors

- Ex post monitoring of borrowers behaviors
  - Monitoring cost: c
  - No.of investors: n
- Monitoring by each investor: nc
  - Free-rider problem
- Monitoring by the bank: $(c+\pi)/n$
  - π: Bank's profit
  - Yield spreads between deposits and lending

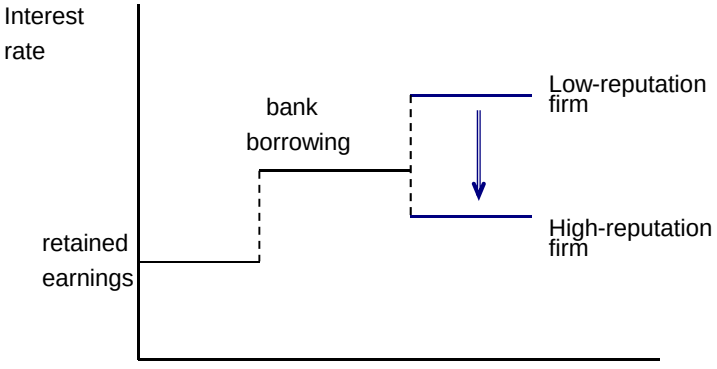
Implications of the model

- Monitoring cost depends on the firm's reputation.
- In the industry that judging firm's quality is not difficult, the dependence to bank financing will be low.
  - Bio tech vs retail industry
- In the country in which economic institutions are established, the dependence to bank financing will be low.
  - Accounting standard and business media

Pecking order for the firm



Choice between bond issue or bank borrowing



Dynamics of the firm's financing decision

- A firm will go to market when its reputation is established
- Entrepreneurial firm starts with
  - own money
  - bank borrowing; venture capital
  - IPO: becomes a public firm
  - Issue corporate bonds: this is already very large firm

Empirical evidence on benefits of financial intermediaries: HKS

- Hoshi, Kashyap, and Scharfsetin (1991,QJE), hence HKS.
- Japanese "firm groups" (Keiretsu)
- Very strong long-term relationship with groups' main banks
- HKS: Analyzed investment behaviors of group firms and non-group firms
- Non-group firms' investments are more sensitive to current cash flows.

Investment equation

- Tobin's q: MK/BK
  - MK: Market valuation of the firm
  - BK: Accounting value ("book" value) of the firm's installed capital.
  - When Tobin's q is higher than one, the firm should invest

$$Investment = \alpha + \beta_1 \cdot Cash + \beta_2 \cdot Tobin's Q + \varepsilon$$

HKS's Table II

	Group Firms	Independent Firms
Cash flow	0.041 (0.033)	0.501 (0.084)
Short-term securities	0.061 (0.024)	0.512 (0.085)
Tobin's q	0.007 (0.03)	0.007 (0.004)

Implications

- Remember, the firm will prefer retained earnings most, as the source of its investment.
- The second will be either corporate bonds or bank borrowings
- Business group affiliation is mostly fixed. In other words, it is exogenous to firms.
- HKS's finiding: Group affiliations (=strong ties with main banks) will stabilize firms' investment activities.

Important reservations

- HKS only looked at the "benefits" of firm's long-term relationship with bank and business group affiliations.
  - HKS themselves stress this point in their paper
- There might be costs.
  - Group affiliation gone bad: Mitsubishi motors
  - Excellent independent firms: Toyota, Honda