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Monetary Economics 1
(Corporate Finance)

LECTURE 9

Changing Financial System: Japanese Experience

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Main ideas of lectures so far

- Business investment decision when:
  - There is no risk.
  - There is risk, but no information asymmetry
  - With risk and with information asymmetry
  - The principal-agent problem
- Risk and information asymmetry are important because they affect cost of capital (=discount rate).
- So that affect efficiency of investments.

Bank as a good guy vs as a bad guy

- Bank as a good guy
  - Banks as a delegated monitors (D.Diamond)
- Bank as a bad guy
  - The firms prefer to market finance because:
    - Bank's Interference to management
    - Hold up problem: The borrower is locked into the long-term relationship with lenders.
  - Typically, the firm increases lenders and eventually switched to market financing.

Market finance or Bank-oriented finance?

- Pure market finance type is an exception in developed economies.
  - Anglo-Saxon origin countries
- Other countries more or less depend on
  - Financial intermediation (including shareholdings)
  - Concentration of ownership
    - Family business
    - Conglomerates
  - Even in developed economies (Japan, Italy, Korea)

Examples

- Japan: Toyota, Matsushita (Panasonic)
  - Mitsubishi, Sumitomo
  - SONY, Honda, Nissan
- Korea: Chaebols
  - Samsung, Hyundai
  - Family domination of Chaebols substantially weakened after East Asian crisis (1997-98) and intervention of IMF/World Bank.
- Italy: Fiat

Decline of banking-oriented finance?

- Most of large Japanese and Korean corporations are heading toward market financing in last 10 years.
- More recently, BRICs (Brazil, Russia, India, China) depend significantly to family own businesses or government control.
- Banking-oriented finance might be a *economic growth highway* for a developing country, but could be an obstacle once its economy and financial system are developed.

Financing is difficult at the initial stage of economic development

- Remember our discussions on financial intermediation
  - Without reputation, raising funds in market will be difficult
  - In the country in which economic institutions are established, the dependence to bank financing will be low.

Financing countries' "take off"

- Public financial intervention
  - Development bank
    - e.g. Japan development bank, Japan Import-export bank
    - Public financial institutions send "signals"
      - Industrial policy
  - International intervention, ODA
    - World bank: e.g. the bullet train in Japan
    - ADBI, JICA

Solving reputation problem by relationship finance

- Long-term relationship with a bank
- Business groups
- Japan up to 1960s
  - Six large business groups (Mitsubishi, Mitsui, Sumitomo, Fuyo,….)
  - Vertical business groups: Toyota, Nissan
- Korea, India

Benefits of relationship finance

- Lowers monitoring cost
- Mitigate moral hazard of borrowers
- Reduce adverse selection
- Reduce the costs of financial distress
- Induce efficient resource (re)allocation within the business group
  - Internal capital market

Reducing the costs of financial distress

- Restructuring of Toyo Kogyo (Mazda): classic case
  - Around the first oil shock (early 1970s): decline of export and over production
  - Kohei Matsuda was third president from the founding family
- Restructuring led by Sumitomo
  - In 1974, Sumitomo sent two officers
  - Announced new loans: crucial to maintain other creditors' confidence
  - Kohei Matsuda was finally pushed out from management in 1977

Costs of relationship finance

- Bank side
  - Empire building motive: Choose size rather than profits
  - Discourage innovation
  - Sometimes have to rescue inefficient firms
- Firms
  - Higher funding costs
  - Too much debt financing
  - Discourage risk-taking

Japanese experience

- Meiji revolution
  - Development of business system in *Edo* era
  - Introduction of Western legal system
- War time finance
  - Resolution of *Zaibatsu* (Prewar family conglomerates)
  - Relationship banking (Business groups)

Post war Japanese experience

- Government intervention
  - Industrial policy
  - JDB, EXIM
  - Postal saving
  - Fiscal Investment Loan Program
  - Interest rate control
  - MoF controlled market finance

Dependence to bank borrowing

	Financial Markets			Borrowed Funds		
Year	Total	Equity	Domestic bonds	Total	Private	Public
1954	21.1 (%)	17.0	4.1	78.9 (%)	70.0	8.9
1960	23.9	19.2	4.7	76.1	68.9	7.2
1965	22.5	17.4	4.9	77.5	70.2	7.3
1970	17.4	12.9	4.3	83.9	76.4	7.4
1975	13.6	9.0	4.4	86.4	78.4	8.0

1970s to early 1980s

- Slow down of economic growth and oil shock
  - Less financial needs
  - Budget deficit → development of JGB market
- International firms
  - Stock issues in foreign market: e.g. SONY
- External pressure
  - US demands financial liberalization

Decline of banking

	Financial Markets			Borrowed Funds		
Year	Total	Equity	Domestic bonds	Total	Private	Public
1975	13.6 (%)	9.0	4.4	86.4 (%)	78.4	8.0
1980	13.3	7.9	4.6	86.7	77.6	9.1
1985	17.0	9.9	5.1	83.0	74.7	8.3
1990	23.5	10.4	6.1	76.5	66.6	9.9
1995	22.2	9.5	8.2	77.8	64.6	13.2

Public intervention in allocation of credit

- Background
  - Wartime finance: no market financing
  - Resolution of Zaibatsu (large shareholders)

  - Catching up process in economic development → lack of capital
  - So called “industrial policy” by MITI
    - Target industries

High growth era (50s to early 70s)

- Japan Development Bank
  - Financing of industrial infrastructure: Railroads, Highways, Bridges, Major roads
  - Direct financing of target industries: “signaling” effect. cf. MITI’S industrial policy
- Japan EXIM
  - Promotion of Japanese exports.
  - Credibility of Japanese firms or financial institutions were low in abroad.

Did public intervention work in high growth era?

- Public guidance of investment– mixed answer
  - Yes: MITI, Aoki
  - No: M.Fukao, D.Weinstein
    - Targeted industries or moving target?
    - Direct evidence suggests government guidance is ineffective, especially in rescuing declining industries.
    - Profits of keiretsu firms tend to be lower than independent firms.
- Debate will continue.
- But, some well-known assessments such as *East Asian Miracle* (WB) apparently overemphasize the importance of government intervention in Japanese (and perhaps East Asian) development.

From mid 70s: Industrial structural change

- Government attempts to rescue declining industries generally failed.
  - Coal mining
  - Textiles
- Social costs and benefits of slow adjustment process
  - unemployment

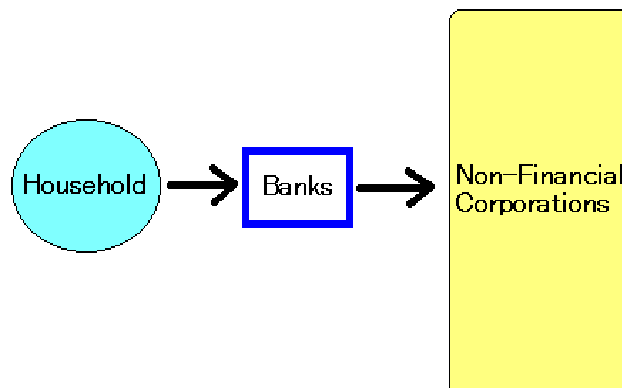
Current status of public financial institutions (1)

- No active role in “promotion of industries”
  - General importance of FI has declined.
  - Financial innovations. New types of financial institutions such as venture capital.
  - Internationalization of financial market.
  - Public FIs such as DBJ are not very good at picking winning industries.

Current status of public financial institutions (2)

- "Buffering" declining industries.
- Substituting when private banks withdrew funds for their own financial problems.
  - But, is it efficient? Or politically motivated move?
  - Slowing structural change?
- New Move: Restructuring Business

Japanese financial system up to 1970s



1970s to early 1980s

- Slow down of economic growth and oil shock
  - – Less financial needs
  - – Budget deficit → development of JGB market
- International firms
  - – Stock issues in foreign market: e.g. SONY
- External pressure
  - – US demands financial liberalization

The first half of 1980s

- Large firms of established reputations began to switched to market financing.
- In 1984-1983: Media talks about Tokyo as the international financial center. This caused the boom in Tokyo' commercial real estates.

Mid 1980s: Turning point

- 1985: Plaza agreement
  - The dollar had been overvalued in 1980s
  - Following Plaza agreement among G5 countries, Japanese yen began to decline very rapidly from the second half of 1985.
  - Oil price declined too.
- Serious recession in 1986
- Bank of Japan lowered interest rate.

Monetary expansion and the Bubble economy

- Speculation in asset markets: real estate prices

  Land prices up

  → Collateral value of real estates goes up

  → Bank lending increase

  → Equip investments increase

  → Demand for real estates goes up

  → Further increase in land prices

- Key elements of this story
  - Collateral lending
  - Continuing real estate price increase in post war period

Other aspects

- Stock market boom: the cost of equity finance declined
  - More firms switched from bank borrowings to market financing
  - Those who did not want to increase their debts issued warrants and convertibles, as backdoor equity financing
- Banks lost their borrowers
  - They have to find new borrowers
  - Real estates, construction, resort business and etc.
    - New borrowers. Banks had have very few previous experience in screening and monitoring.

Convertibles, Warrants

- Convertible bonds: Bonds that can be converted into stocks
  - Issued as corporate bonds. Latter, it can be converted into stocks at the predetermined prices.
  - If they were not converted, will be repaid as ordinary corporate bonds
- Warrants: Bonds with the call options on stocks
  - Corporate bond part will remain in anyway.

Why do firms issue convertibles?

- Jeremy Stein (1992): Convertibles as Backdoor Equity Financing
  - If the firm continues to grow and its stock price continues to increase, convertibles will be converted into stocks. Then, there will be no cost of debt financing (bankruptcy cost).
- Three types of firms: Bad, Medium, Good

Financing strategy of each type

- Bad:
  - Convertibles will not be converted ex post. So issuing convertibles will simply increase total amount of debts. So choose equity issue.
- Medium:
  - Convertibles will be converted and the cost of debt financing will be lower. So issue convertibles.
- Good
  - Very low cost of debt financing. So issue straight debts.

Implications of the model

- Issuing convertibles has the advantages for:
  - Rapidly growing firm
    ← Needs funds & high expected future cash flows
  - Relatively small and unknown
  - High debt/equity ratio
    ← Debt financing is costly

MCI case: 1978－1983

Based on HBS case 386-110 by Bruce Greenwald

- MCI Communication Corporation
  - Long-distance phone company
  - IPO in 1972: $ 30 million
  - Negative profits in next several years
- But, the MCI's business itself was rapidly growing
  - Total assets: $ 161 million in 1978, $2,071 million in 1983.

Capital structure as of 1978

- March 1978: total debt $ 173 million
  - Book value of equity: $ 30 million
  - Market value of equity: $ 40 million
  - So MCI was in a typical 'debt overhang' situation
  - Too high cost of debt financing
  - Want to avoid equity financing too

Issues of convertibles (1)

- December 1978
  - Could not get exemption interest payment, because it had not paid corporate tax.
  - Issued convertible preferred stock: $ 28 million
- September 1979: $ 67.5 million
- October 1980: $ 49.5 million
- All three issues were latter converted into ordinary stocks.

Issues of convertibles (2)

- Subordinate debts
  - July 1980: $ 52.5 million
  - April 1981: $ 105.9 million
- Convertible subordinate debts
  - August 1981: $ 100 million
  - May 1982: $ 250 million
  - Both issues were latter converted subordinate debts.

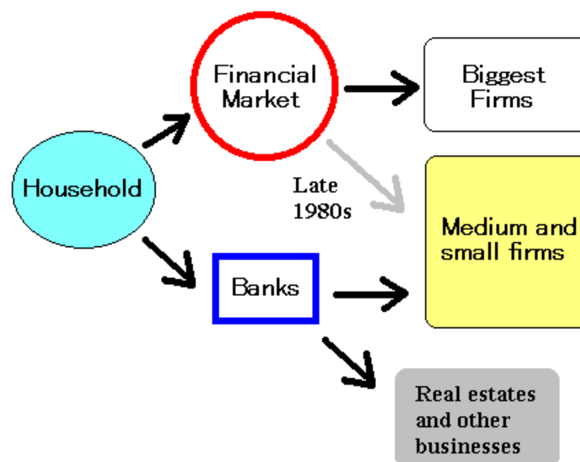
Issues of convertibles (3)

- March 1983: $ 400 million of convertible subordinate debts
- July 1983: $1 billion of synthetic convertibles = straight debts + warrants
- Competition with AT&T became stiff. Profits and stock price stagnated. Neither issues were converted:
  - In June 1986, MCI sold 18% of its stocks to IBM
  - December 1986: Significant restructuring, including major layoffs.

Issues of convertibles by Japanese firms

- 1970s to early 1980年: Significant deregulation in corporate financing
  - 1st half of 1980s: Large firms issued stocks, warrants, and convertibles in foreign markets (mainly US).
  - 2nd half of 1980s: Many firms issued stocks, warrants, and convertibles in domestic market.
  - Most of them were issued in 1988 and 1989
- 1990s
  - Straight debts and CPs have become dominant
  - Issues of warrants and convertibles have negative impacts on stock prices

Japanese financial system in 1980s and in early 1990s



Monetary tightening and the burst of the bubble

- In 1989, BoJ raised interest rate, stating that they were “preparing for potential inflation”
  - Several further interest rate hikes followed.
  - Tokyo stock market had peaked at the end of 1989, and then began to decline.
  - Land prices began to decline little latter.
  - The economy continued to grow until 1992.

Prolonged recessions

- Land prices go down
  → Collateral value of real estates goes down
- The cycle began to work in the opposite way
- So called ‘non-performing problem’
- Political economy
  - LDP traditionally has its roots in agricultural areas and small-medium size firms.
  - Agricultural cooperative and credit cooperative: Jusen problem
  - Ministry of Finance: the convoy system
  - Deposit insurance

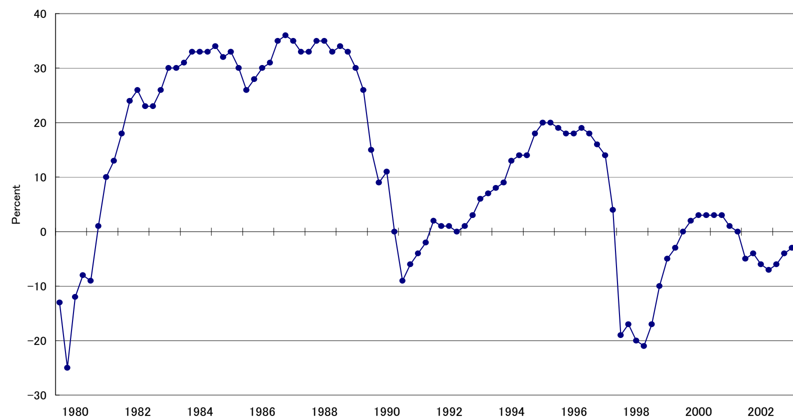
Japanese economy: 1997-1999

- 1997
  - April: Increase of consumption tax: from 3% to 5%
  - Summer: Asian currency crisis started
  - November-December: Banking panics
    - Hokkaido-Takusyoku Bank (Among the biggest regional banks)
    - Yamaichi Securities Co. (Among the big four)
- 1998 and 1999
  - Credit crunch
  - Slow down of the real economy and deflation
  - Zero-interest rate policy by BoJ
  - Two of long-term credit banks disappeared
  - Mergeres of major banks started

Was there credit crunch?

- In general, NO. Exception is late 1997 and 1998
- Before 1997: “Evergreening Loans”
  - Additional lending to effectively insolvent firms.
  - Manipulation to avoid losses on the bank’s balance sheet.
  - The funds that should had been spent to more productive investments were used to let Zombie firms to survive.
  - Evergreening loans = Zombie lending

BoJ’s business survey on the bank’s attitude toward lendings: “Easy” – “Tough”



Increase of bank borrowing (%)

	Construction	Real Estates	Other sectors
• 1991-1997	3.73	5.68	1.66
• 1998-2002	-4.23	-7.81	-3.95
• 1991-2002	0.41	0.06	-0.68