

Emergence of China and The Economy of South Korea

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China-Korea Economic Relations

- ▶ Formal diplomatic relationship established in 1987
- ▶ Expanding economic relations between the two
- ▶ In 2004, Korea's exports to China \$49.8 billion and its imports from China \$27.8 billion
- ▶ Korean FDI in China at 2004 yearend \$8.9 billion

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Outline of the Paper

▶ **Purpose:** Linkage between Trade and Korea's FDI in China and its Effect on Economic Interdependency between China and Korea

- ① Changing **Export Structures** of China and Korea
→ **Convergence** in the export structure
- ② China-Korea **Bilateral Trade**
→ increasing bilateral trade
→ Increasing bilateral trade in **parts & components**
- ③ **Korean FDI in China** a key factor behind ① and ②:
Expanding linkages through production sharing

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① Changing Export Structures of China and Korea

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□ Share of Technology Category in Total Exports(1/3)

▶ **China's export structure rapidly **converging** to that of Korea**

- China has achieved a large increase in the export of **ICT products**.
- Korea has steadily increased the exports of both **ICT and med-high tech products**.

< China >

< Korea >

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□ Share of Technology Category in Total Exports(2/3)

▶ **In 1992-2003 China increased the share of exports of **Computers & Office products and Radio, TV & Comm.****

- "High tech" in China—Are they really high tech?
* Production of some those products only requires **simple labor-intensive processes**.

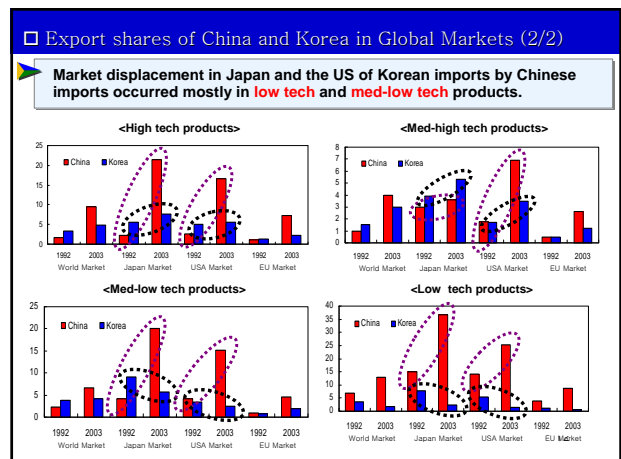
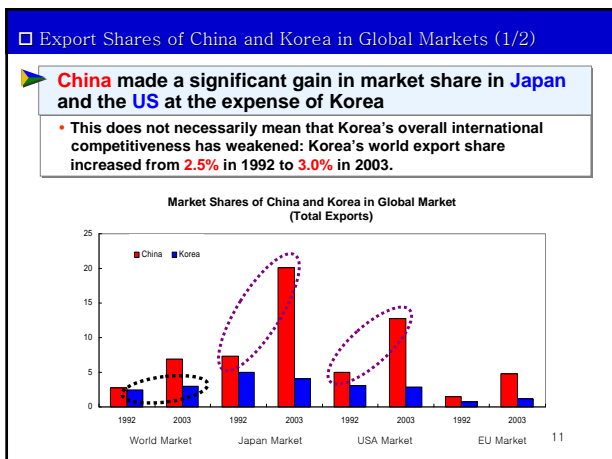
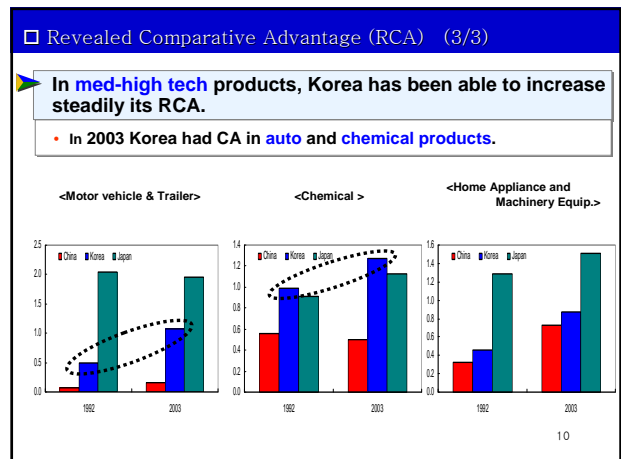
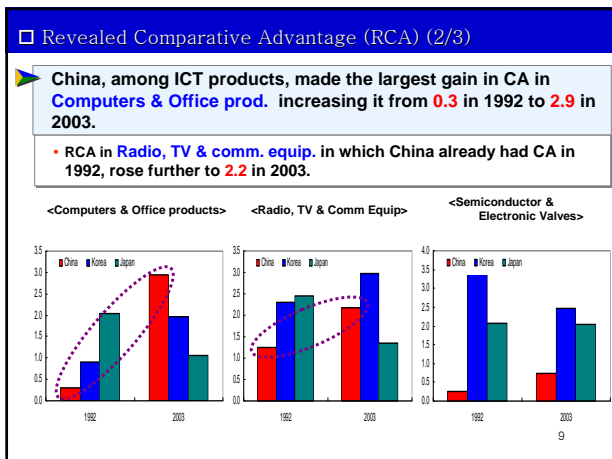
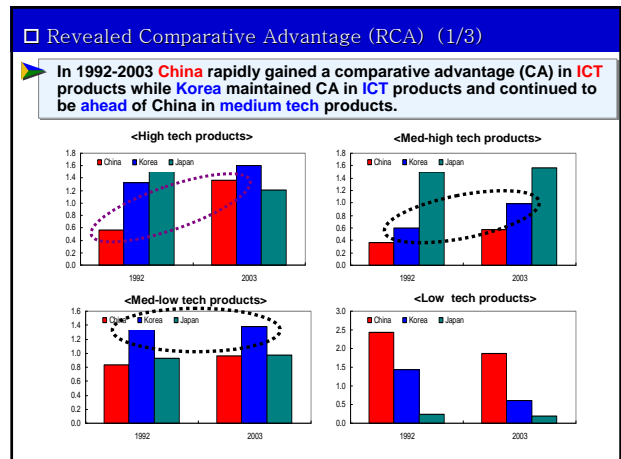
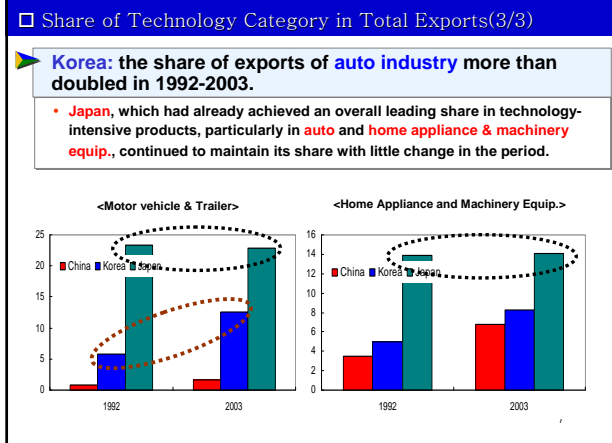
< Major High tech Products >

<Computers & Office products>

<Radio, TV & Comm Equip>

<Semiconductor & Electronic Valves>

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② China-Korea Bilateral Trade : trends and characteristics

- ▶ Has the increase in Korea-China bilateral trade been greater than the average — the growth of their respective trade with other countries in the world?
- ▶ Has Korea's FDI in China contributed to the increasing trade intensity between the two?

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□ Export/Import Intensity for Korea (1/2)

▶ Korea's export-intensity with respect to China increased from 1.3 in 1992 to 2.8 in 2003, while Korea's import intensity with respect to China increased from 1.6 to 1.7.

<Destination of Korea's Exports as % of total Exports and Export Intensity>

<Origin of Korea's Imports as % of total Imports and Import Intensity>

□ Export/Import Intensity for China (2/2)

▶ China's import-intensity with respect to Korea increased from 1.2 in 1992 to 3.2 in 2003, while China's export-intensity with respect to Korea increased from 1.0 in 1992 to 1.6 in 2003.

<Destination of China's Exports as % of total Exports and Export Intensity>

<Origin of China's Imports as % of total Imports and Import Intensity>

□ Factor behind the Increase in Trade Intensity between the Two

▶ The increase in trade intensities can be attributed to the "international fragmentation" driven by large FDI from Korea to China.

- Effect of FDI on trade differs depending on which segment of the production process has moved to the host country

<Two Typical Types of International Fragmentation induced by FDI>

□ Destination of Parts Exports for Korea (1/3): Total Parts

▶ In 1992, Korea exported parts mainly to advanced countries such as the US. By 2003, China became the largest market for Korea's parts exports with its share of Korea's total parts exports increasing from 1% in 1992 to 22% in 2003.

<Destination of Korea's Parts Exports as % of Its Total Parts Exports>

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□ Destination of Parts Exports for Korea (2/3): ICT products

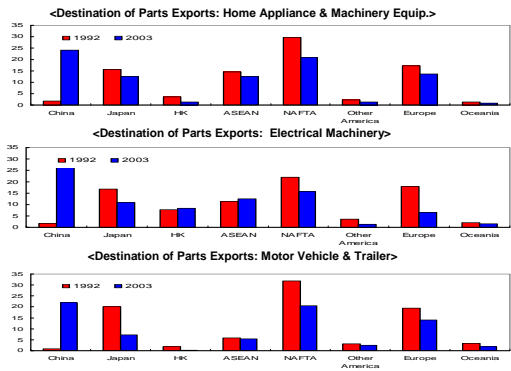
<Destination of Parts Exports: Computer & Office Products>

<Destination of Parts Exports: Radio, TV & Comm. Equip.>

<Destination of Parts Exports: Semiconductor & Electronic Valves>

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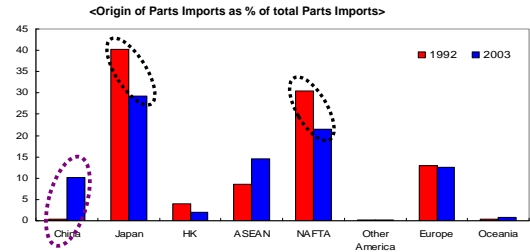
□ Destination of Parts Exports for Korea (3/3): Med-high tech



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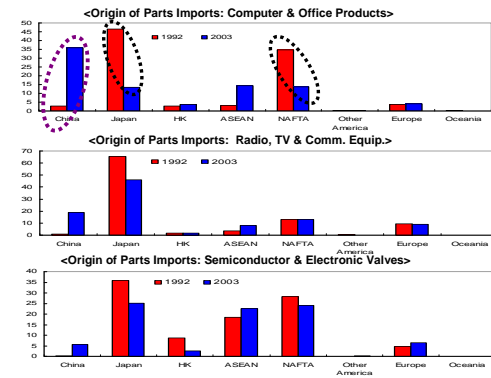
□ Origin of Korea's Parts Imports (1/3): Total Parts

▶ In 1992, Korea imported parts mainly from advanced countries such as Japan and the US. By 2003, imports from those countries decreased while imports from China increased.



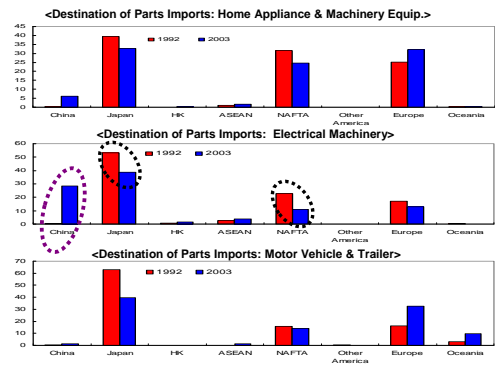
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□ Origin of Korea's Parts Imports (2/3): ICT products



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□ Origin of Korea's Parts Imports (3/3): Med-high tech



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③ Does Korean FDI in China promote their bilateral trade?

▶ Using survey data on Korean FDI, we investigate firm-level evidence on how Korean FDI in China has affected the bilateral trade between Korea and China

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□ Survey Data on Korean FDI

▶ KIET(Korea Institute for Industrial Economics and Trade) surveys of 1996 and 2003

- 1996: 615 Korean parent companies (216 large, 399 SMEs), 952 offshore affiliates
- 2003: 748 Korean parent companies (89 large, 659 SMEs), 1,050 offshore affiliates (211 large, 939 SMEs)

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□ Motives for Korean FDI by Region (as of 2003)

- ▶ Key motives for investing in China: cheap labor and large markets
- **Market access** is the most important motive for large firms.
 - **Cheap labor** is the most important motive for SMEs.

(%)

	Natural resource	Low-cost labor	Market access	High technology	others	Total
China	3.4	42.6	33.0	0.0	21.0	100
North America	0.0	7.1	71.4	0.0	21.5	100
Europe	0.0	3.7	55.6	0.0	40.7	100

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□ Motives for Korean FDI in China by Industry (As of 2003)

- ▶ Cheap labor is an important factor for investing in China for not only Korean light manufacturing firms but also for its **K-intensive** manufacturing firms.
- How can **K-intensive** firms be attracted to invest in L-abundant China?
 - **"International Fragmentation"** in production processes
 - * High-tech components are produced in a country with technological capacity while components are assembled in L-abundant countries.

(%)

	Natural resource	Low-cost labor	Market access	High tech	others	Total
Textiles/Apparel	2.5	62.2	16.8	0	18.5	100
Footwear/Leather	4.1	63.3	20.4	0	12.2	100
Electronics/Telecomm Equip	0.6	46.3	23.8	0	29.3	100
Fabricated Metals	0.0	46.7	33.3	0	20.0	100
Machine/Equipment	2.7	27.0	47.3	0	23.0	100

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□ Effect of Korean FDI in China on Bilateral Trade

- ▶ **Procurement** of intermediate goods and materials by Korean affiliates in China has become increasingly **localized**. Howling out in Korea?

Sources of **Procurement** (intermediate goods/materials) by Korean affiliates in China (%)

	Local Procurement		Import				total	
			Korea		Third countries			
	1996	2003	1996	2003	1996	2003	1996	2003
Manufacturing	27	46	65	37	9	18	100	100
Electronics/co-mm. Equip.	14	57	86	36	0.1	7	100	100
Petro-chemical	1	37	63	47	36	16	100	100
Textile	46	63	54	26	0.2	11	100	100
Automobile	79	41	21	59	0.0	0.0	100	100

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□ Concluding Remarks

- ▶ Effect of China's emergence on Korea
- China is converging to Korea in export structure.
 - Pressure on restructuring of Korean industries
 - Expanding bilateral trade between the two
 - Korea's loss in third markets more than offset by increase in parts exports to China
 - FDI has had a positive effect on bilateral trade, especially on parts trade and production sharing.

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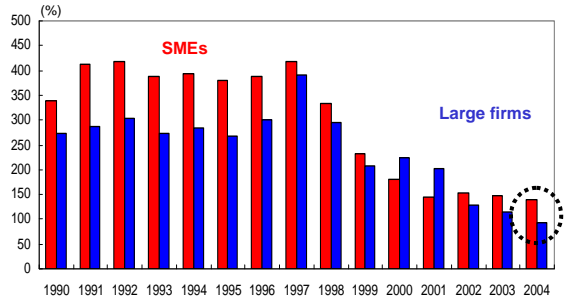
<Appendix> Structural Change in Financial Behavior by Agents

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1. Firms

Firms focused on strengthening their financial soundness through the reduction of borrowing

Debt Equity Ratios for Firms : Large vs. SMEs



Korean firms' debt-equity ratio is even lower than those of advanced countries.

International Comparison of Debt-equity ratio (%) (the end of 2004)

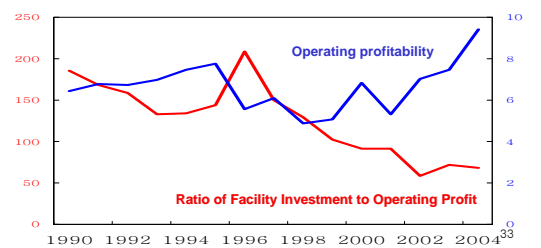
Country	Debt-equity ratio (%)
Korea	104
U.S.	141
Japan	162
Germany	241

1) Figures for Japan and Germany are the end of 2002.

Firms' ratio of facility investment to operating profit has been steadily decreasing since the financial crisis.

- Although large firms' operating profits have been expanded for the last 2 years, their investment pattern continues to be 'conservative'.

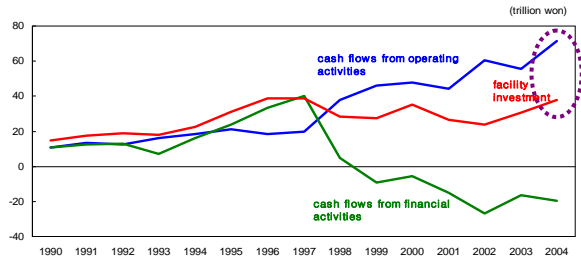
Operating Profitability and Ratio of Facility Investment to Operating Profit by Listed Firms (%)



[Annex 1] Facility Investment & Cash Flows of Listed Firms

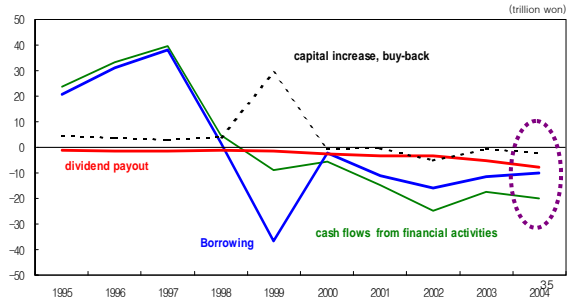
Although cash flows from operating activities have substantially increased since the crisis, yet investment remains at pre-crisis level. Why have listed firms taken a "conservative investment" approach?

- Adjustment of over-investment made before the crisis,
- fewer investment opportunities (rise of the Chinese economy)
- pursuit of multinational-firm style financial structure.



[Annex 2] Decomposition of Cash Flows from Financial Activities of Listed Firms

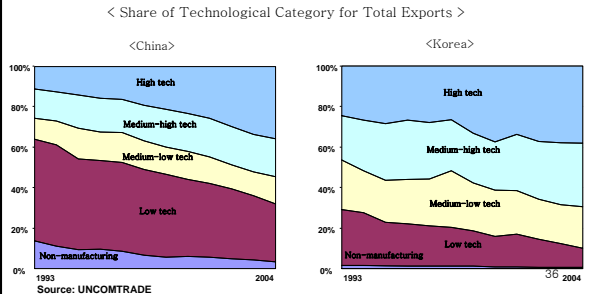
In 2004, cash flows from financial activities of listed firms totaled 20 trillion won : Debt repayment 10 Tril won, Dividend payouts 8 Tril won, Buy-back & etc. 2 Tril won



[Annex 3-1] Rise of the China

China's export structure is rapidly converging with that of Korea

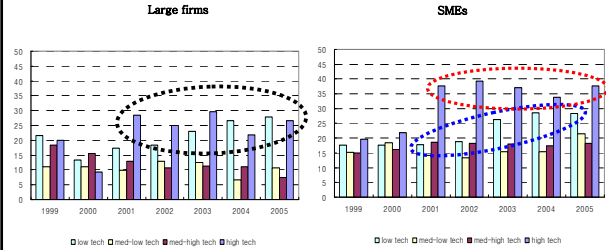
- Particularly, China achieved a large increase in the export of ICT products.



[Annex 3-2] Impact on Profit Performance for Korean Firms

- The rise of China has been a major factor behind the deterioration of profitability for labor-intensive industry
- Share of SMEs with negative operating profits has been concentrated not only in low-tech but also in high-tech, particularly ICT industries.

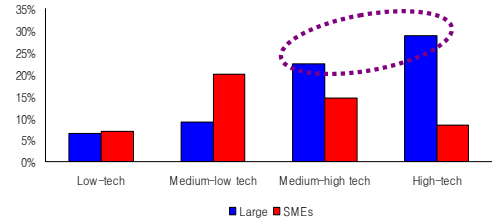
< Share of firms with negative operating profits by industry (%) >



Facility Investment Growth Rate in Manufacturing by Technological Level (1/3)

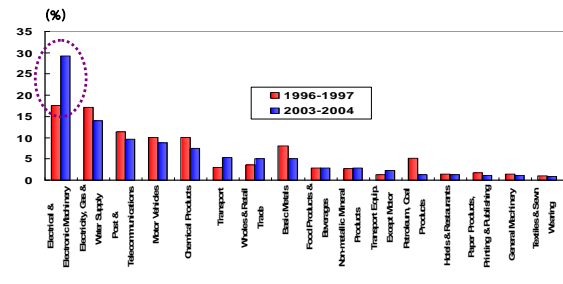
- For large firms, investment has been focused in high and medium-high tech industries, while SMEs have focused on medium tech industries.
- SMEs are far behind large firms in investment in high tech industries

Growth Rate of Facility Investment (2000-04)



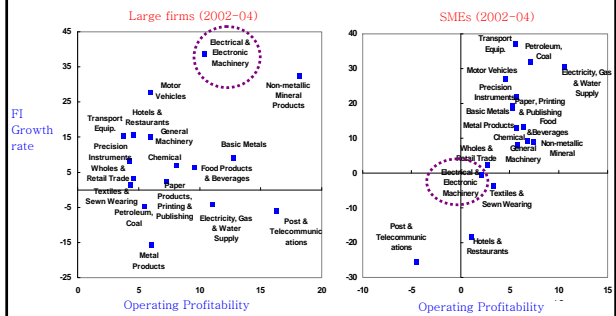
Facility Investment Growth by Sub-industry (2/3)

- Compared to 1996-97, facility investment in Electrical & Electronic Machinery increased markedly during 2003-04.



Facility Investment Growth and Operating Profits (3/3)

- Strong positive correlation between operating profits and facility investment.

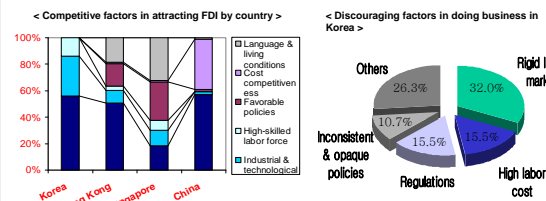


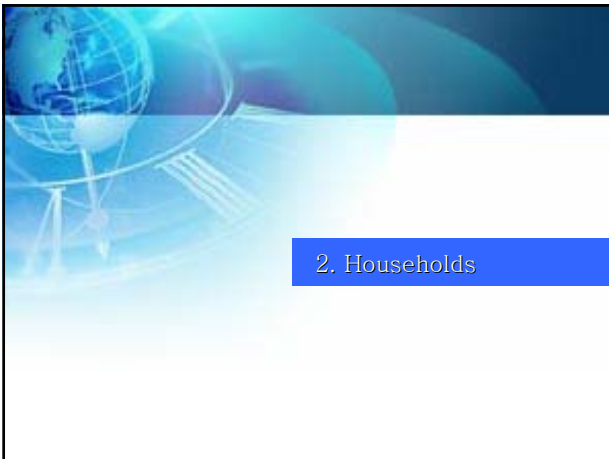
[Annex 4] Factors behind Sluggish In-bound FDI (1/2)

- Korea has far under-performed in its potential as a destination for FDI.
- During 2000-02, although Korea was ranked 18th out of 140 countries based on potential in attracting FDI, Korea's actual total in-bound FDI ranked 107th (UNCTAD,2004)

[Annex 4] Factors behind Sluggish In-bound FDI (2/2)

- According to KDI's survey of foreign investors, Korea offers competitiveness in market size, industrial and technological base, and high-skilled labor force.
- However, rigid labor market and regulations act as barriers.

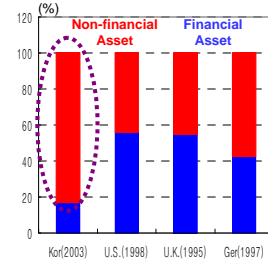




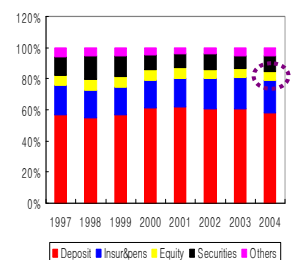
2. Households

Households prefer to hold **real estates** rather than **financial assets**, of which equity accounts for less than 1% of total assets.

Composition of Total Assets for Households : int'l comparison (%)



Composition of Financial Assets for Korean Households (%)



Why do Korean HH prefer real estate holdings? High return and relatively low risk.

Mean and Standard Deviation of Returns for HH Assets (1997-2004, 3-yr holding, %)

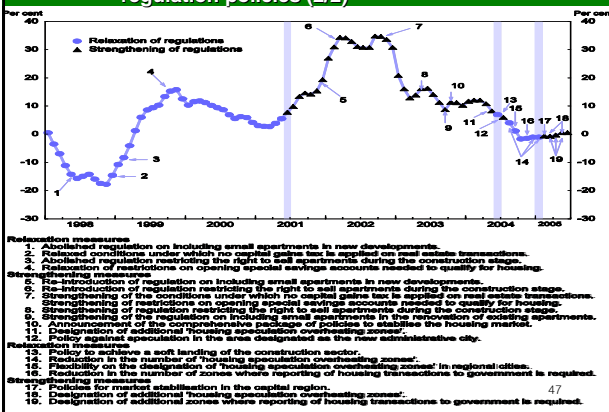
	Apartment	House	Equity	Deposit
Rate of Return	36.1	25.4	8.9	28.5
Standard Deviation	18.6	13.7	46.1	8.3

[Annex 5] Time consistency problem in Real estate regulation policies (1/2)

Korea has followed a **stop-and-go pattern** of policies, alternating between 1) **strengthening** the extensive array of regulations on the housing market to limit price increases and 2) **easing** of regulations to stimulate construction sector.

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[Annex 5] Time consistency problem in Real estate regulation policies (2/2)



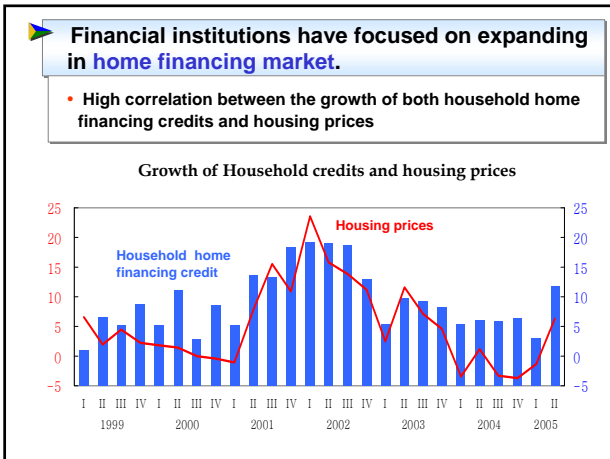
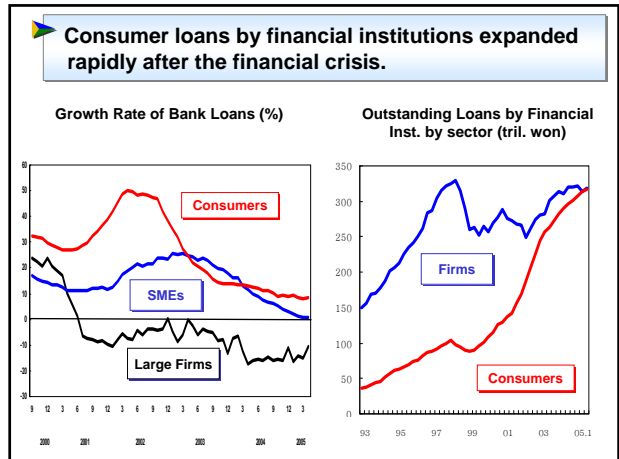
The ratio of number of retail investors in stock market to total population is low in Korea. In particular, investors between ages 30s and 40s comprise a large share.

International comparison of retail investors in stock markets by age group (%)

	<30	30~39	40~49	50~59	>60	Total
US	34.3	51.8	58.3	61.4	47.1	48.9
UK	20.4	31.5	37.0	41.2	34.8	31.5
Neth.	12.1	25.6	33.7	40.1	38.6	33.5
Germany	18.6	21.8	22.0	21.0	17.1	18.9
Italy	11.9	27.5	24.2	23.4	15.8	18.9
Korea	3.6	12.8	7.6	5.8	2.7	7.8



3. Financial institutions

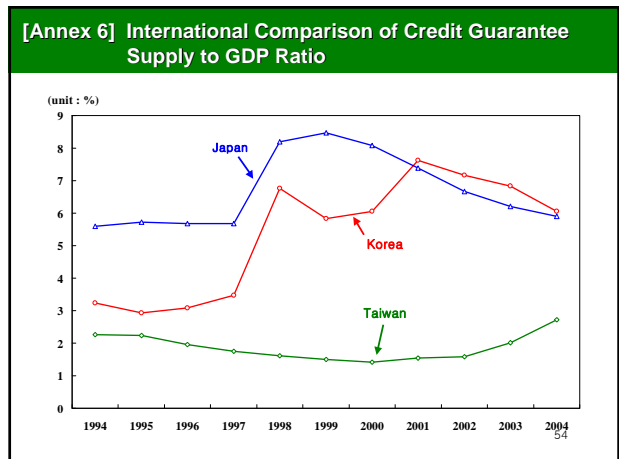
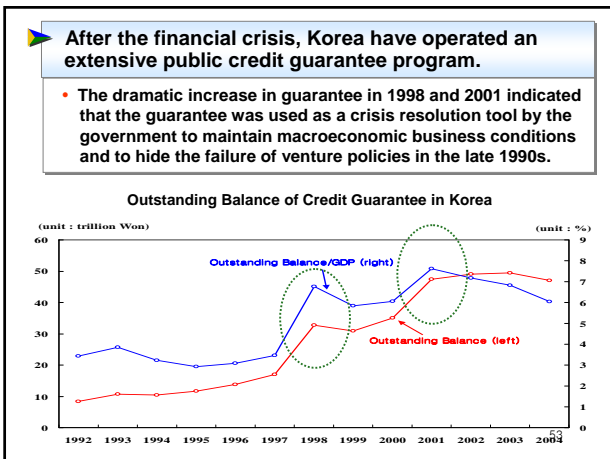


Reasons why financial institutions favor HH home financing credit markets?

- lowest Probability of Default (PD) for Mortgages
- lowest level of Loss Given Default (LGD) for Mortgages
- favorable net interest margin for HH credit

PD, LGD for Banks' Loan Portfolios

	PD	LGD	PD * LGD
Large firms	1.08%	34%	0.37%
Mid-sized firms	2.43%	48%	1.17%
Small firms	6.92%	28%	1.94%
Mortgages	0.82%	17%	0.14%



▶ The profitability of the non-guaranteed firms has outperformed those of the guaranteed firms over the entire periods.

- Among the guaranteed, as the guarantee period increases, the profitability tends to deteriorate, especially in the post-crisis period.

Operating Profit to Sales Ratio by Guarantee Periods (%)

