

Korean Economy and the Role of Finance

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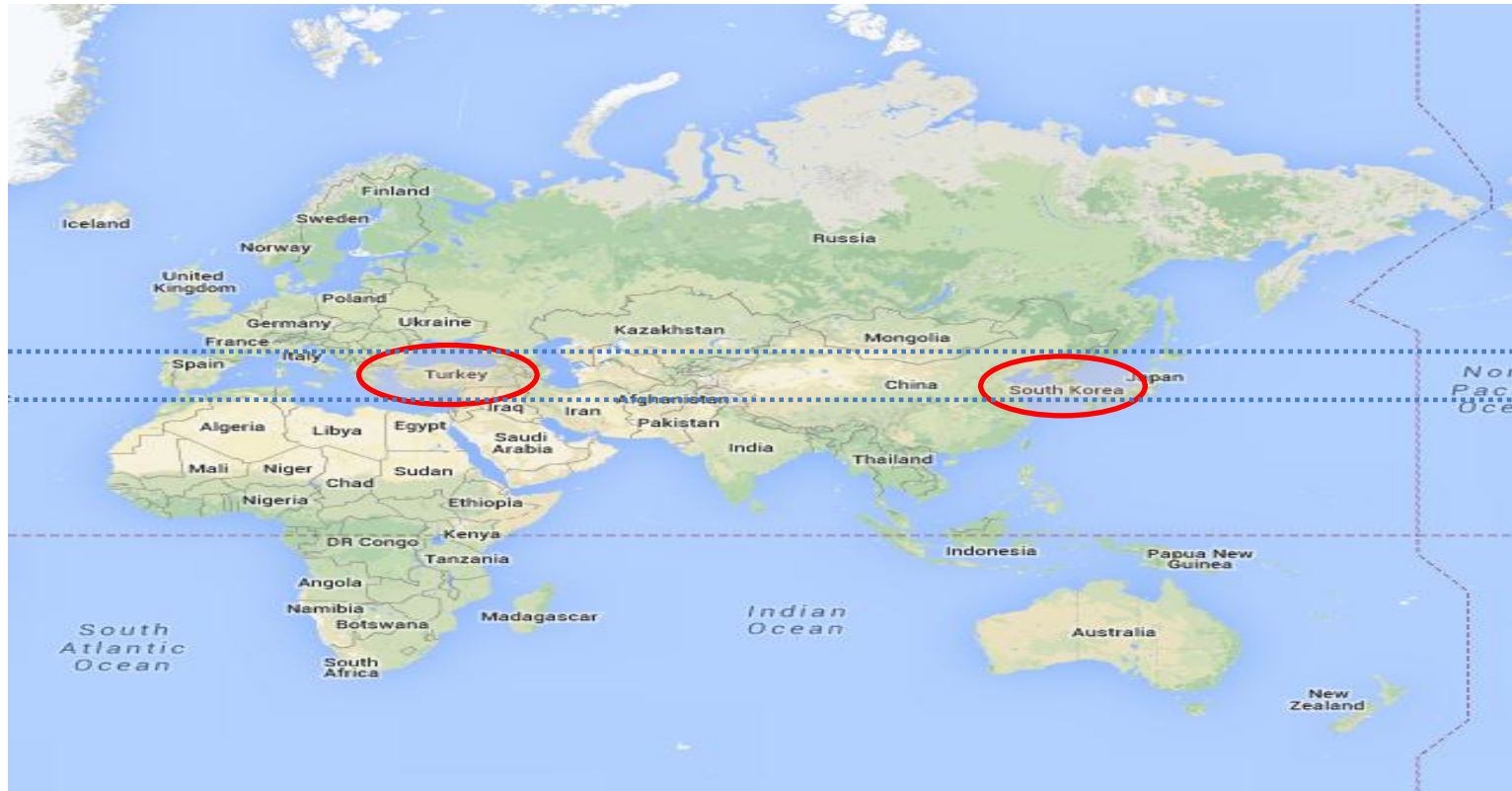
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I. The Driving Forces of Korean Economy: Historic Overview

Korea and Turkey: Many Things in Common

- ❖ Peninsula, in the same latitude, far eastern (western) Asia, the color of national soccer team (red), G20, Korean war (1950), FTA (May 2013)



Perspective on Economic Policy

- ❖ Two pillars of economic policy
 - How to activate **economic growth**(upside potential) without threatening **economic stability**(downside protection)?

- ❖ The history of Korea's economy is a history of “transformation” or “adaptation” to a new economic paradigm
 - Sometimes we have been successful, sometimes we have failed

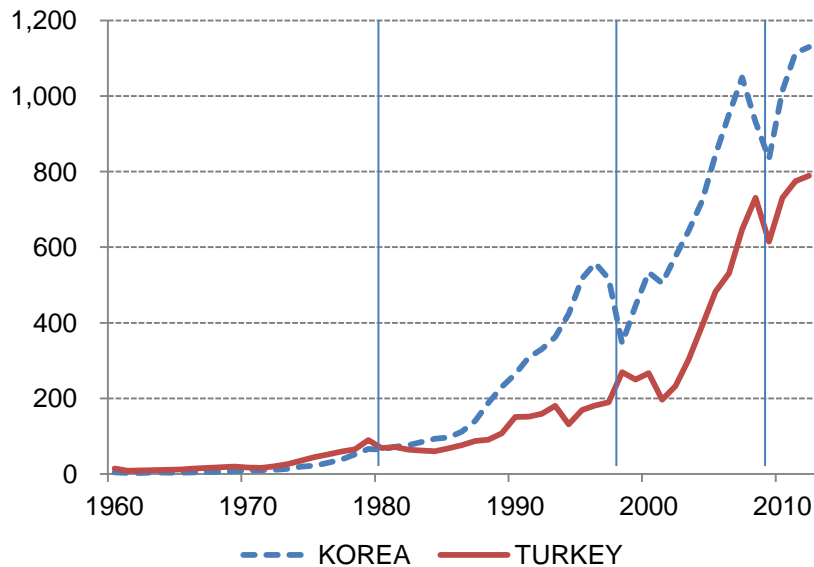
- ❖ While, at the first stage, governments take the initiatives in economic development, markets and private sectors gain power and influence as the nation's economy develops

- ❖ As the economy develops, opens up and becomes more sophisticated, finance(capital market and financial industry) plays pivotal roles in the sense that it leads real sector industries

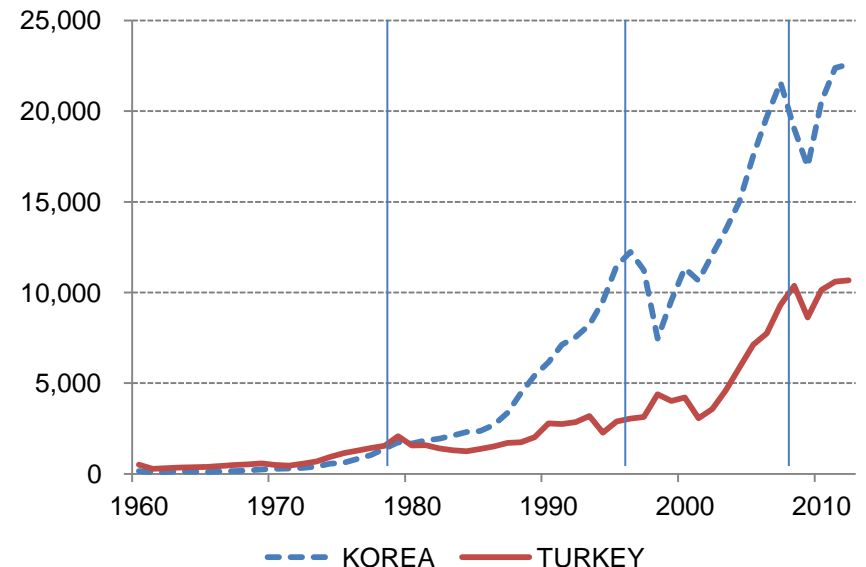
Comparison of GDP: Turkey vs. Korea

❖ From economic perspective, what made the difference? What explains this?

Current GDP (billion USD)



GDP per capita (USD)



What happened to Korea from the early 1980s up to 1997?

❖ Industrial policy

- Transition from heavy chemical industry to electronic industry
- Promotion of exports (tax, fixed exchange rate system)
- Business strategy based on global perspective (e.g., Samsung)

❖ Educational policy

- Expansion of college education

❖ Monetary policy

- Money supply targeting rather than inflation targeting

❖ Financial policy

- Privatization of commercial banks, capital market infrastructure
- Opening of capital markets (1993)

❖ Bottom line: effective economic transformation combined with favorable global environment

Financial crisis in 1997

- ❖ **Heavy reliance on leverage**
 - Domestic firms, financial institutions

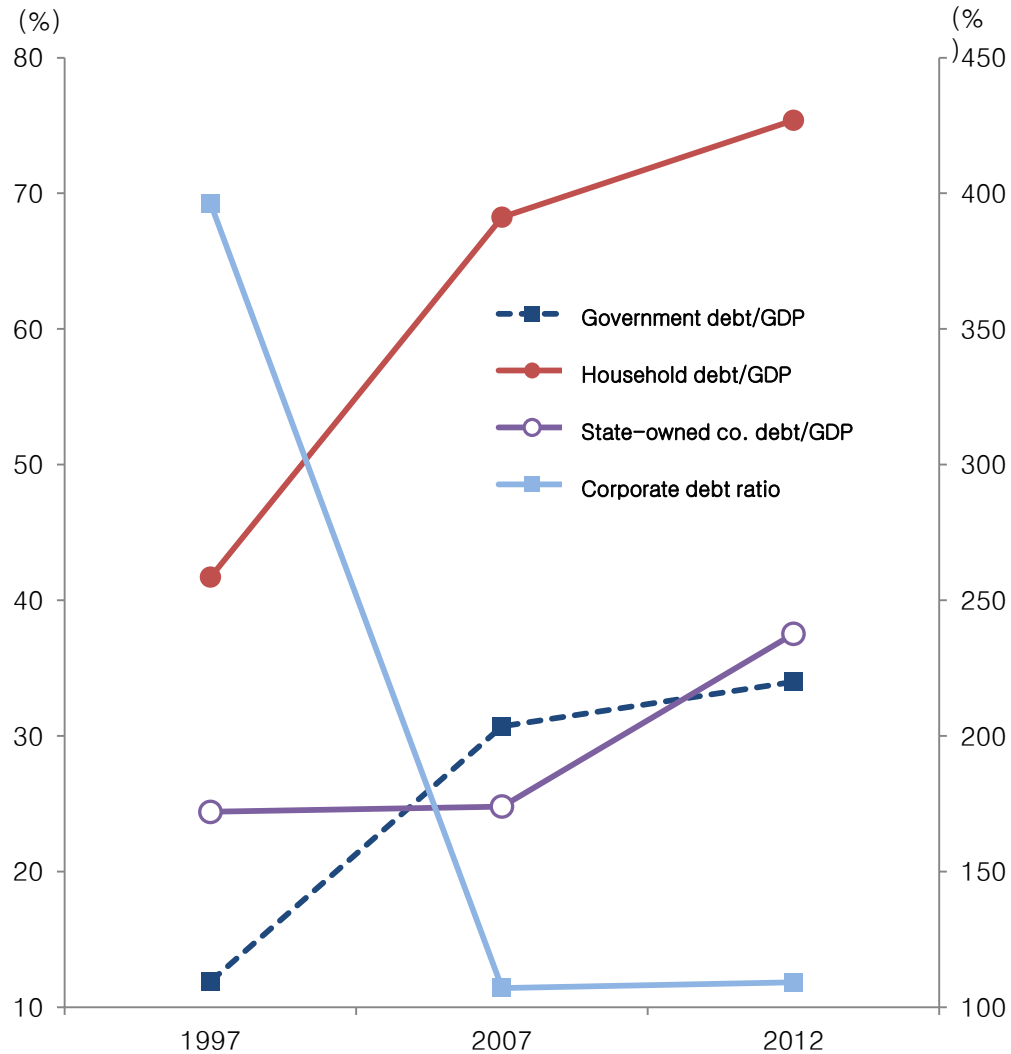
- ❖ **Sudden stop of capital flows**
 - Small and open economy w/o international currency
 - Short-term FX bank loans from foreign banks

- ❖ **Lack of current account surplus**
 - Critical factor not just for economic growth but also for the economic safety net

- ❖ **Undeveloped capital market**
 - Excessive reliance on commercial banks
 - In a crisis, diversification of financing sources toward capital market is critical

- ❖ **Bottom-line: ineffective economic transformation especially in the financial sector**

Leverage and Systemic Risk

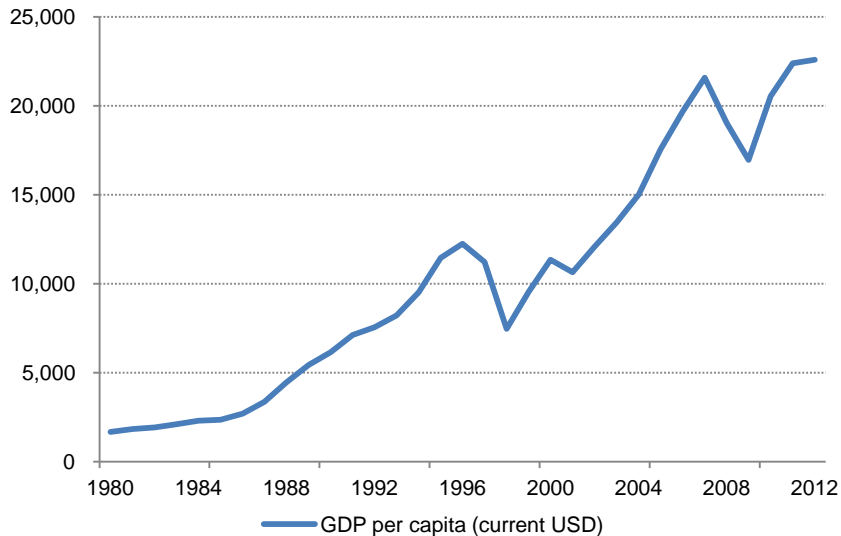


Source: MOEF, BOK

Recovery from the crisis: A tough, bitter journey

- ❖ Korea effectively bounced back but with deep scars on Korea's economy and society
 - E.g., Income inequality got worse, serious unemployment issues

GDP per capita (USD)



Credit Rating (S&P)



Korean economy in 1998–2008

- ❖ Floating FX system, sufficient foreign reserves
- ❖ Decrease in leverage ratio of corporations
- ❖ Better corporate governance
- ❖ Corporate restructuring market
- ❖ Activation of capital markets
- ❖ Advancement of financial services industry

Financial Crisis in 2008

- ❖ Liquidity crisis, not economic crisis
- ❖ Current account surplus, sufficient foreign reserves
- ❖ Sudden stop of capital flows
- ❖ We need to consider “their perspective,” not “our perspective”
- ❖ Policy measures in place
 - Ceiling on banks’ FX short-term loan
 - Ceiling on banks’ FX derivatives
 - Ceiling on loan to deposit ratio
 - Credit rating upgrade, decrease in CDS premium on FX stabilization bond

Korean Economy in 2008–2013

- ❖ **Fundamental paradigm shift toward low growth, low interest rate era**
 - The basic assumption about Korea's economy has dramatically changed

- ❖ **Growth engines for the next generation**
 - Creative economy, integrated industries, green economy
 - Outbound investments, primary income balance

- ❖ **Why is Korea safe under the current turbulence triggered by QE tapering?**
 - Consistent current a/c surplus, sufficient foreign reserves, reduction of short-term foreign borrowing, upgraded credit rating, stable CDS premium of FX stabilization bond

- ❖ **Economic policy that emphasizes innovative SMEs, mid-cap companies to reduce dependence on large corporations (e.g., Samsung, Hyundai)**
 - We now see the negative side effect of selective and concentrated growth policy
 - After the 1997 financial crisis, the linkage between economic growth and employment has weakened (growth w/o employment)

The Importance of the Current Account Surplus

- ❖ Why is the current account surplus important?
 - GDP, credit rating, and CDS premium
- ❖ Korea's economy heavily relies on exports for economic growth
 - Therefore, a current account surplus is critical
- ❖ Korea's current account surplus is mainly influenced by the commodity balance
 - Service balance and income balance account for lesser portions
- ❖ We need to expand the concept of current account surplus
 - Commodity balance + service balance + income balance

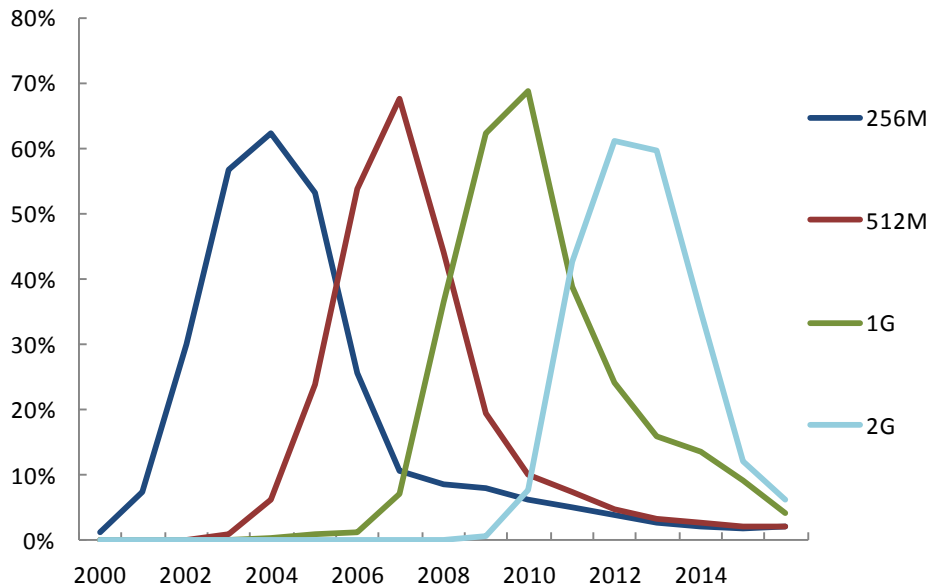
II. Real Sector Industries as Growth Engines

ICT Industry: Key Success Factor

❖ A series of single hits rather than a home run

- Samsung started DRAM in 1983, caught Japan in 1998, and became #1
- Clear target: predictable technology path, widely applicable, mass production

<Semi-conduct DRAM Market Share Trend>

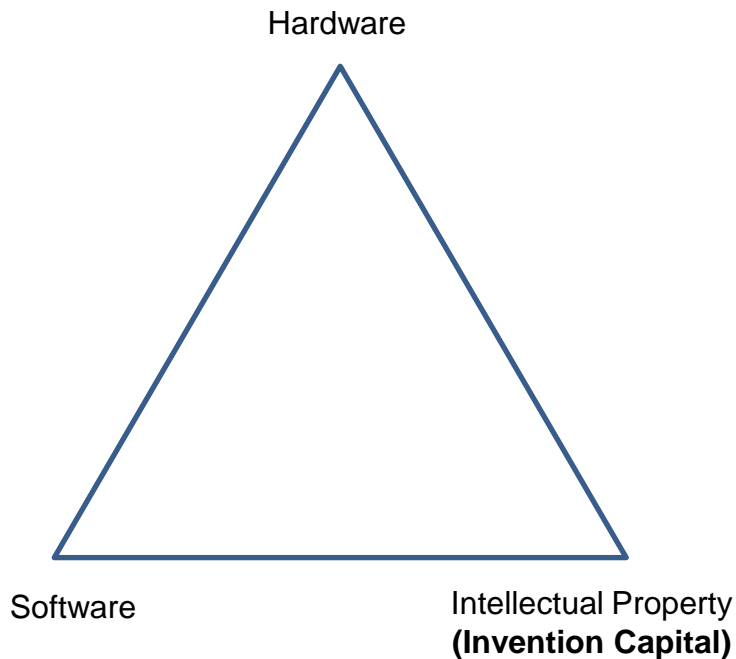


< Giacomo Balla, The Dynamics of Moving Dog >



3 Pillars in ICT Industry

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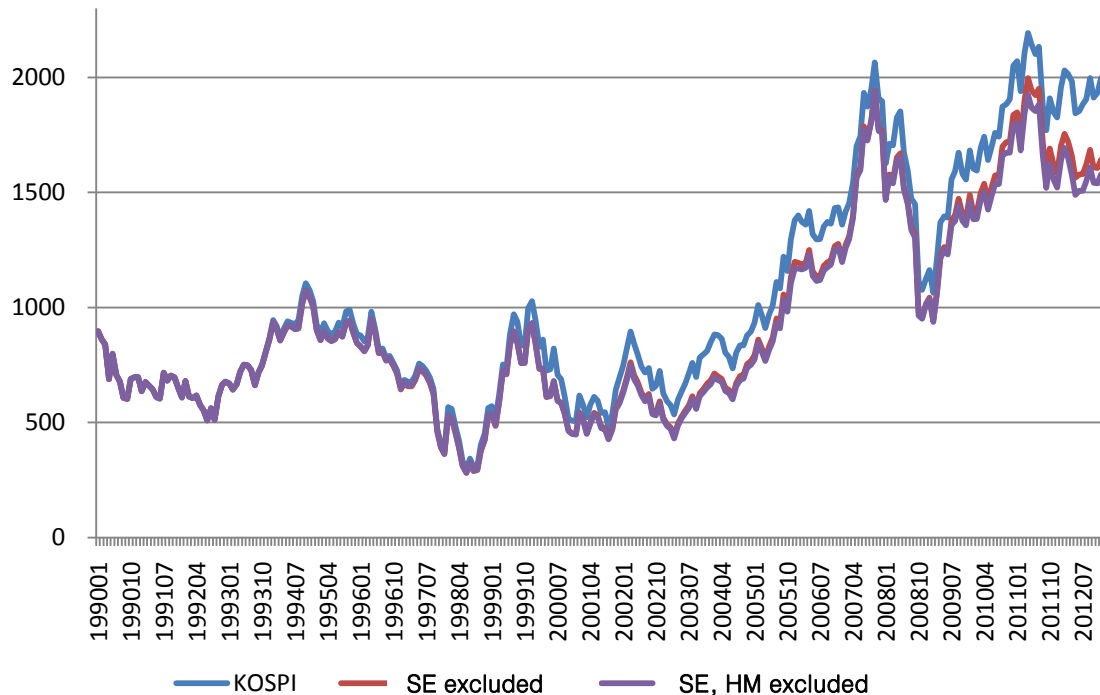


<Top 10 Shipbuilding Companies (2012)>

	Company	Country	Sales	Profits	Market Value
1	Samsung Electronics	Korea	\$187.8 B	\$21.7 B	\$174.4 B
2	Intel	USA	\$53.3 B	\$11 B	\$105.7 B
3	Qualcomm	USA	\$20.5 B	\$6.6 B	\$111.6 B
4	Taiwan Semiconductor	Taiwan	\$17.4 B	\$5.7 B	\$89.9 B
5	Texas Instruments	USA	\$12.8 B	\$1.8 B	\$38.8 B
6	ASML Holding	Netherlands	\$6.2 B	\$1.5 B	\$28.9 B
7	Broadcom	USA	\$8 B	\$0.7 B	\$19.7 B
8	SK Hynix	Korea	\$9.6 B	-\$0.1 B	\$18 B
9	Applied Materials	USA	\$8.1 B	\$0 B	\$16 B
10	Tokyo Electron	Japan	\$7.6 B	\$0.4 B	\$8.5 B

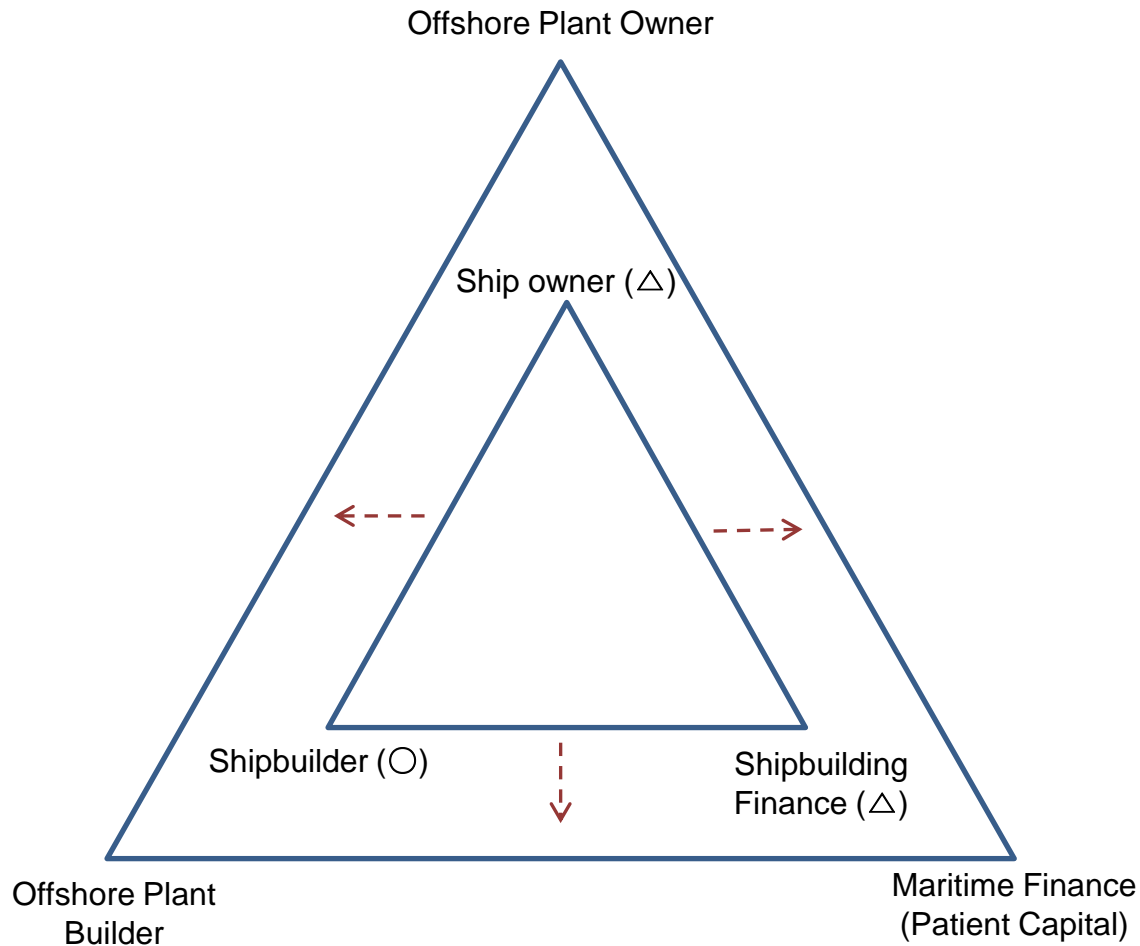
ICT Industry and Korea's economy: overdependence on Large Cap Companies

- ❖ KOSPI goes where Samsung goes
- ❖ Large cap companies get most of their operating income from abroad
 - Foreign sales: Samsung Electronics (85%), Hyundai Motors (70%), LG Chemicals (65%)



3 Pillars in Shipbuilding Industry

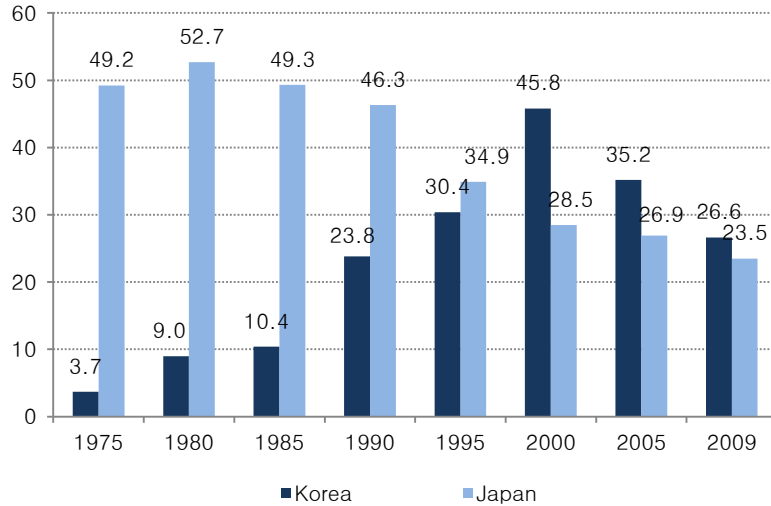
- ❖ Korea need to develop ship owners (asset players) and shipbuilding finance
 - From shipbuilding industry to maritime industry



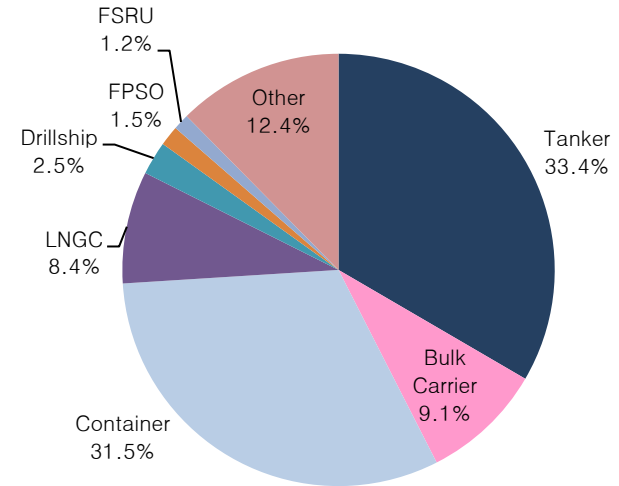
Shipbuilding Industry



Market Share, Amount of Orders (%)



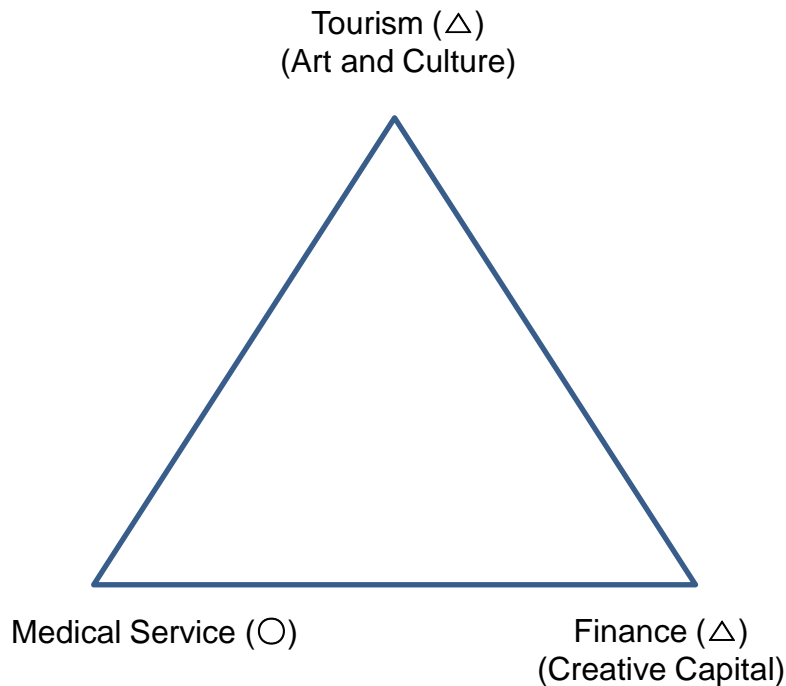
Orders by Ship Type



Top 10 Shipbuilding Companies in the World in 2012

Ranking	Name	Gross Tonnage	Ships
1	Hyundai Heavy Industry – Ulsan, South Korea	93,893,700 GT	1428
2	Daewoo Shipbuilding – Okpo, South Korea	68,284,087 GT	834
3	Samsung Heavy Industry – Geoje, South Korea	58,082,349 GT	785
4	Hyundai Samho – Samho, South Korea	28,414,515 GT	372
5	Mitsubishi Heavy Industry – Nagasaki, Japan	19,506,548 GT	315
6	Tsuneishi shipbuilding – Numakuma, Japan	17,824,038 GT	492
7	Oshima Shipbuilding – Oshima, Japan	16,983,004 GT	539
8	Hyundai Mipo – Ulsan, South Korea	16,715,650 GT	618
9	Imabari Shipbuilding – Marugame, Japan	15,692,687 GT	393
10	Shanghai Waigaoqiao – Shanghai, China	15,096,900 GT	164

3 Pillars in Medical Tourism Industry



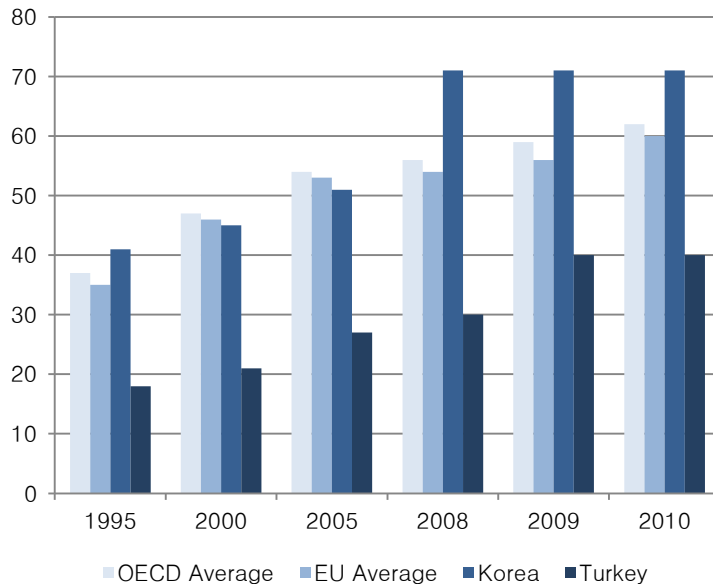
- ❖ A growth engine for the next generation
 - Korea (from China), Turkey (from EU)
- ❖ Inbound Strategy
- ❖ Outbound Strategy

III. Educational Investments as a Growth Engine

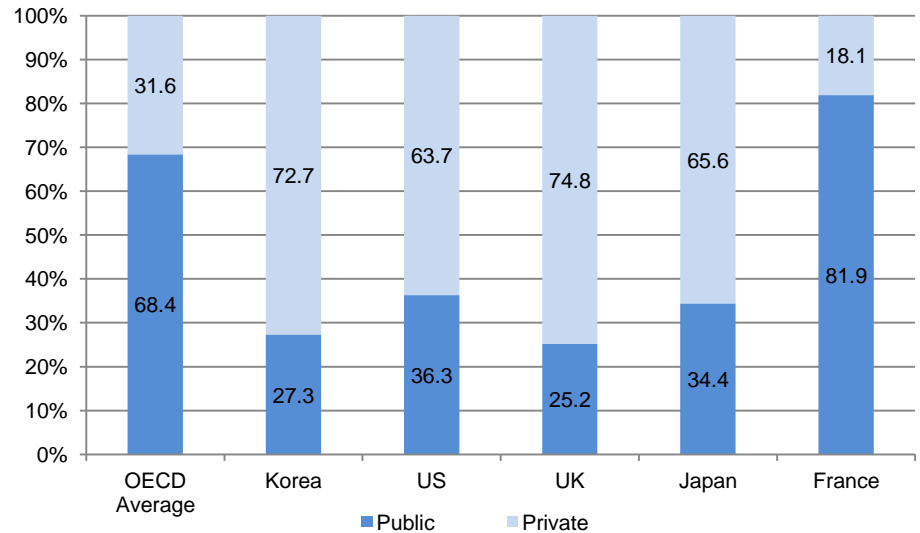
Education and Finance

- ❖ College entrance rates are the highest in the world.
- ❖ The funding sources for education costs are mostly from the private sector and not public funding
 - Student loans (1981), securitization based on student loans (2005), Korea Student Aid Foundation (2009)

Trends in entry rates at the tertiary level



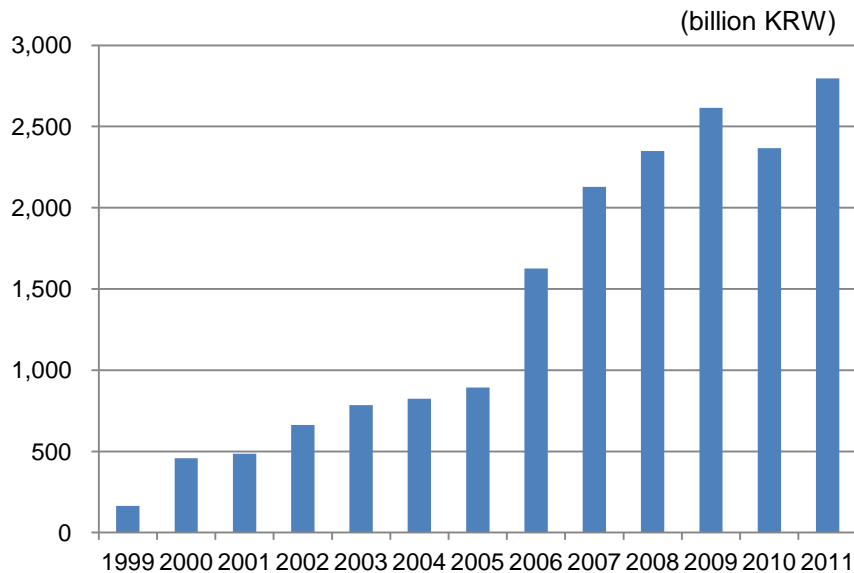
Relative proportions of public and private expenditure for tertiary education



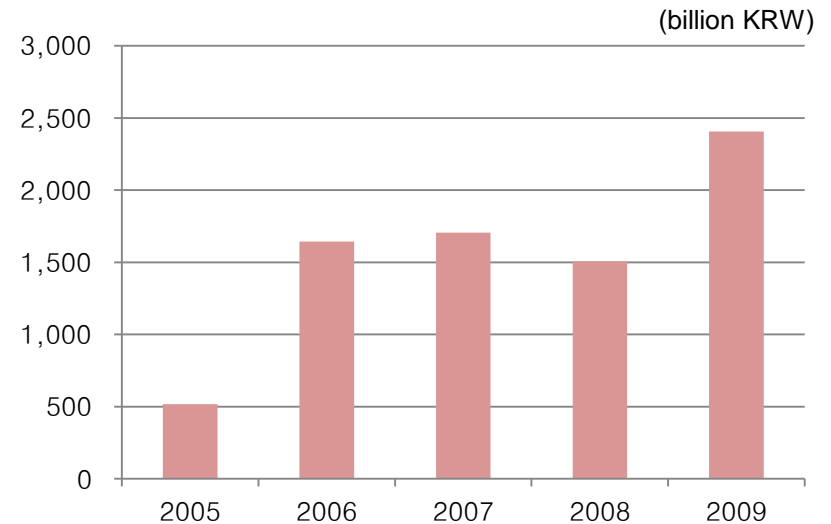
Student Loan and SLBS

- ❖ Student loan and Student loan based ABS(SLBS) are major sources of financing for higher education

Student Loan



SLBS



IV. The Role of Financial Industry and Capital Markets

The Role of Financial Markets

- ❖ The essential functions of finance
 - Financing, investments, risk management

- ❖ Risk absorption capacity is limited and if the capital markets can't handle it all, then the government has to step in and take the risk. As a result, fiscal soundness is threatened
 - Hence, the development of capital markets is crucial

- ❖ Patient capital provider
 - Government, government-sponsored FI (KDB, KoFC), National Pension Service, life insurance, private equity

- ❖ Under the low growth, low interest rates environment, asset management is important

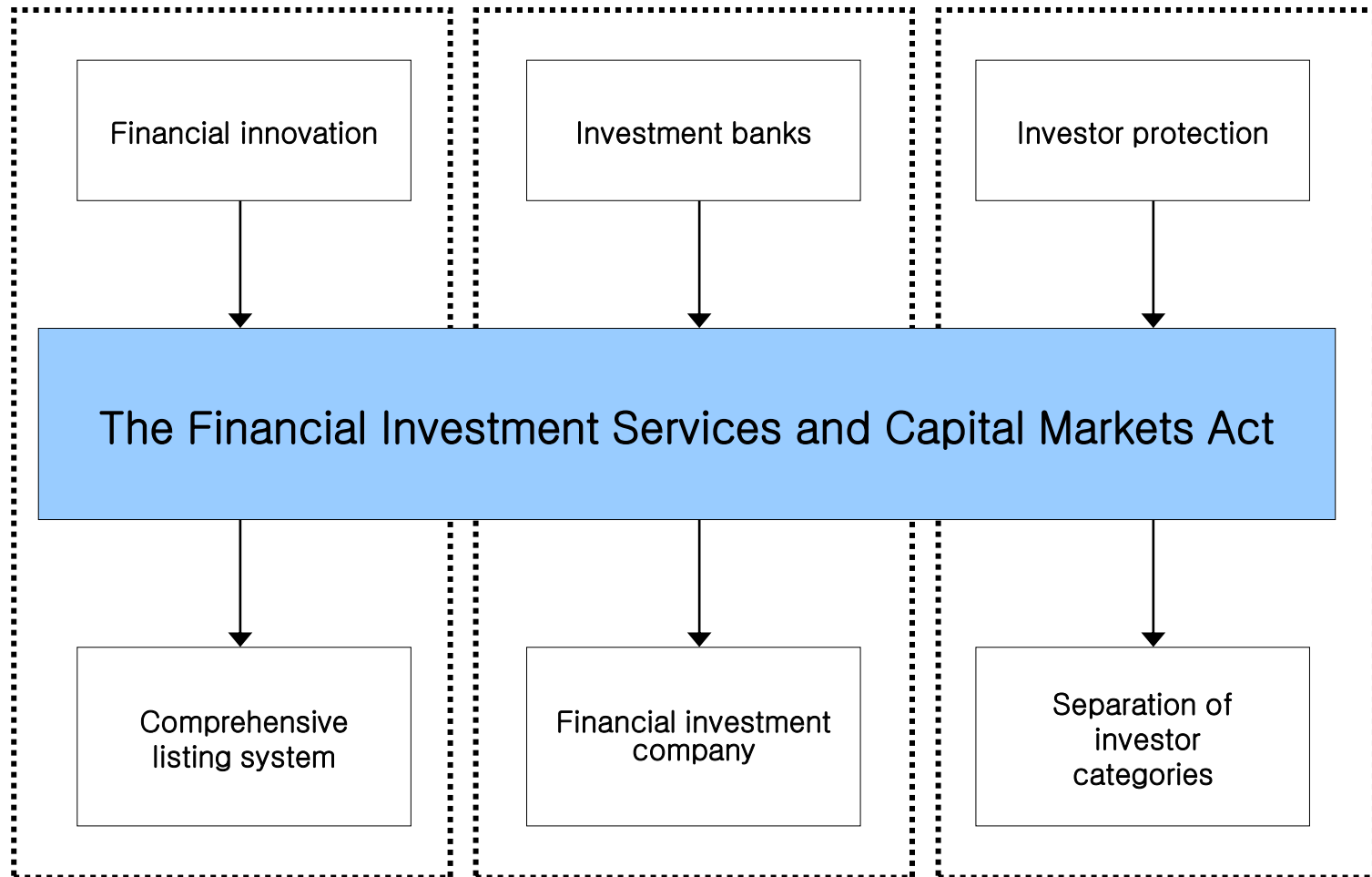
- ❖ To improve income balance for the sake of current account surplus, Korea needs to expand investments in foreign securities

Changing Properties of Capital

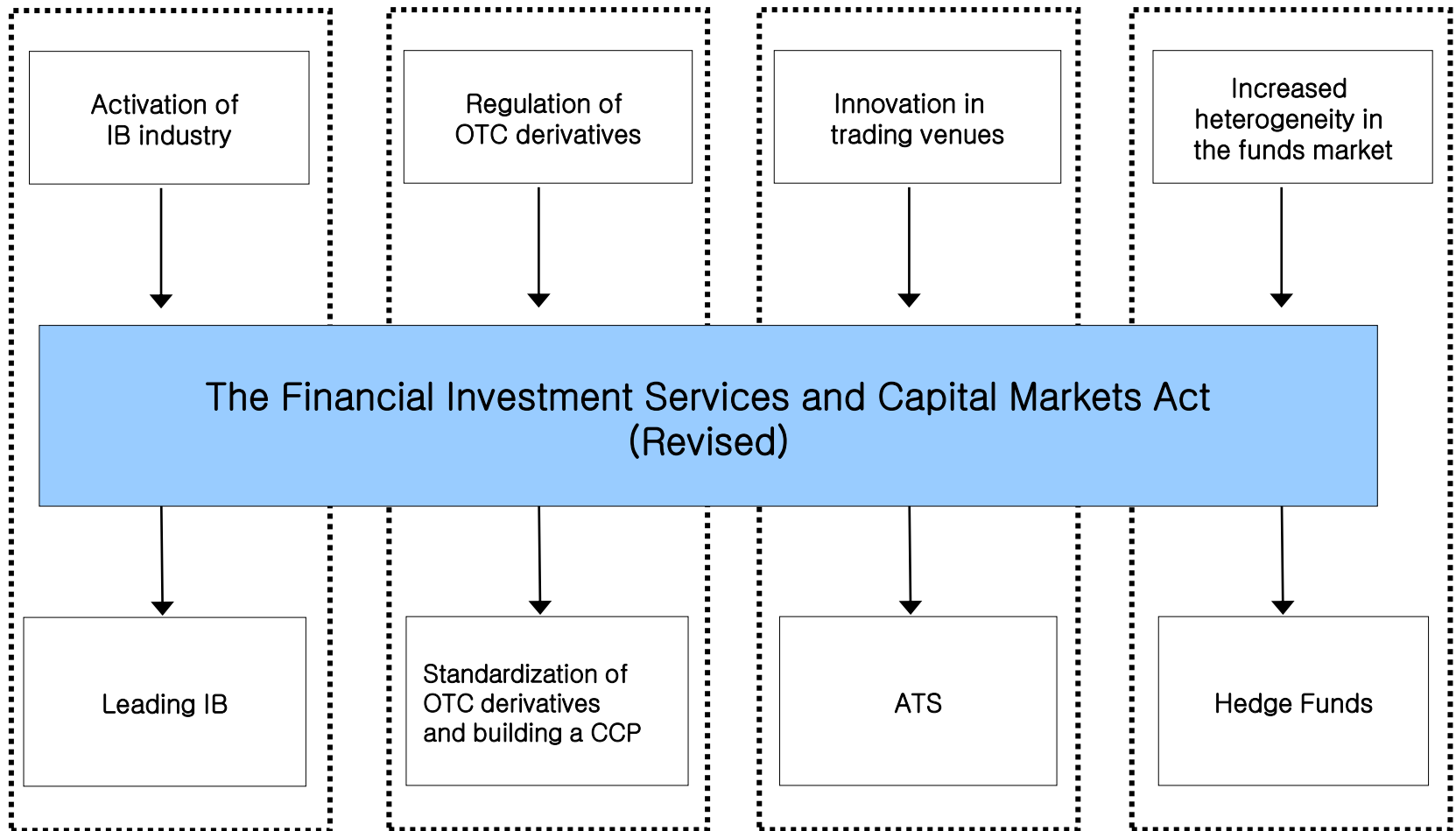
- ❖ Economic and technological advances are demanding a new type and function of capital
 - Capital for fixed facilities
 - Capital for M&A
 - Capital for intellectual property (“invention capital”)
 - Capital for risk absorption (“patient capital”)
 - Capital for social impact (“philanthropic capital”)

- ❖ In response to the changing uses of capital, the capital markets and financial institutions must also transform themselves
 - Financial institutions that best understand and use the new types of capital will emerge as power players in the global economy

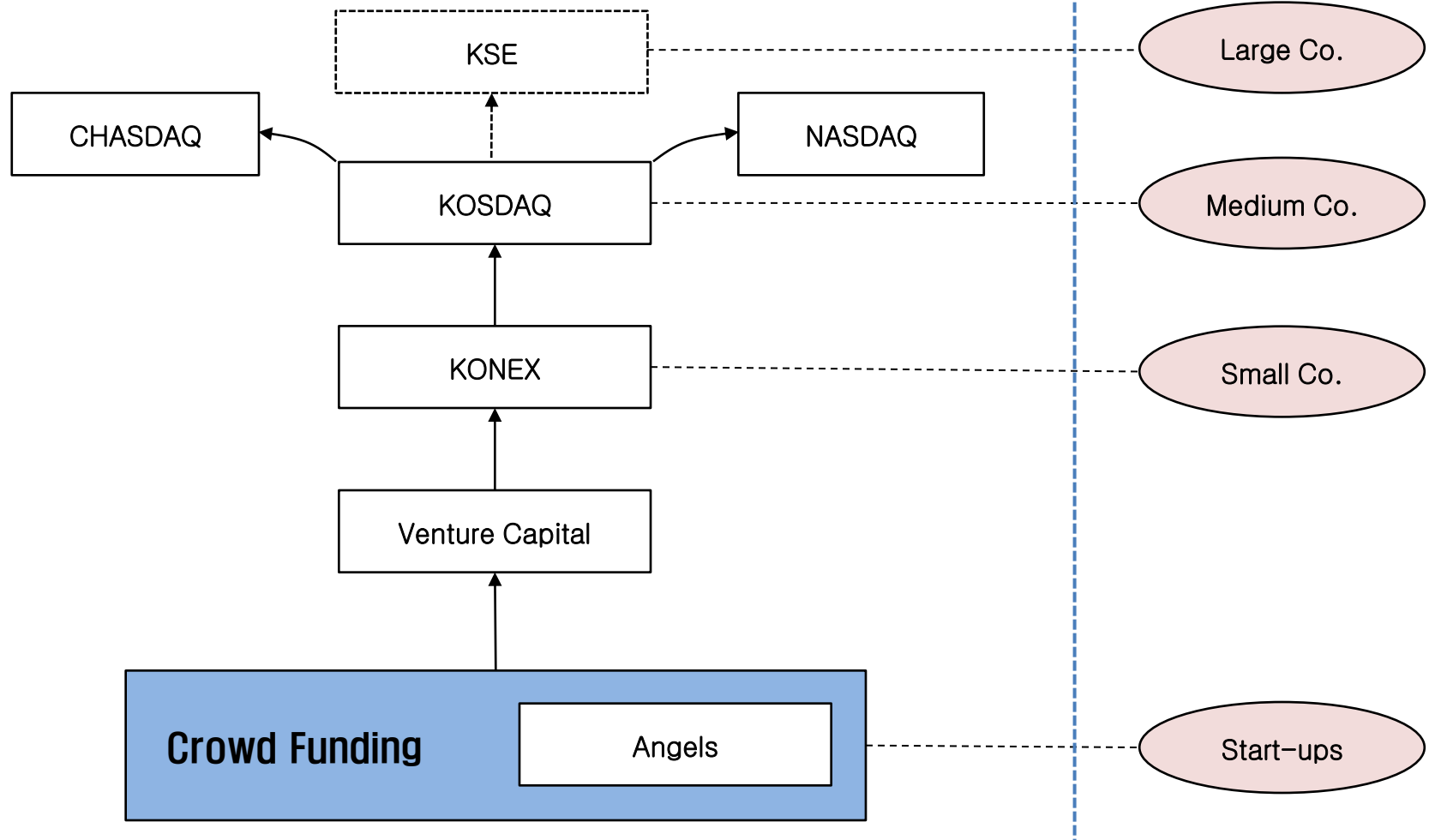
Framework for Capital Market Architecture (1): The Financial Investment Services and Capital Markets Act



Framework for Capital Market Architecture (2): The Financial Investment Services and Capital Markets Act (Revised)

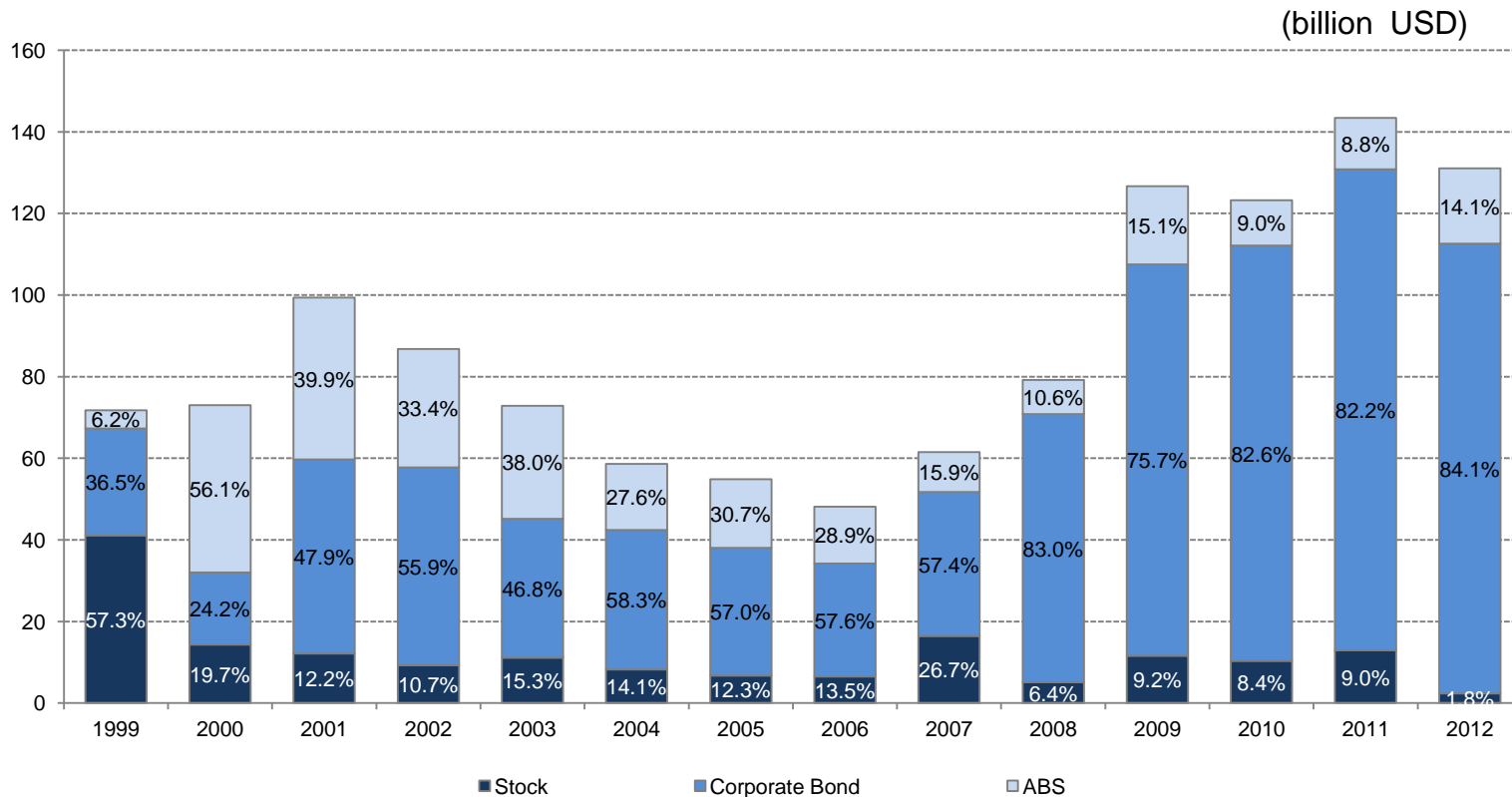


Equity Market System for SMEs and Venture Companies



Korean ABS Market

- ❖ ABS is one of the major security classes in the Korean capital market
 - ABS plays a significant role especially for the companies with lower credit standing



Key Success Factors of Korean ABS Market

- ❖ **Effective legal framework: “The ABS Act”**
 - who can be originators, what kind of assets can be securitized, what kind of securities can be issued, what process should be followed

- ❖ **Clear definition of “True Sale”**
 - By clearly defining “true sale”, regulators have removed legal uncertainties related to asset transfer and, as a result, encouraged active involvement from a wide variety of originators, investors and lbs

- ❖ **Detailed and prompt and information disclosure**
 - Financial Supervisory Commission(FSC) provide a platform, DART system(electronic disclosure system), through which detailed information is quickly disclosed

Key Success Factors of Korean ABS Market



❖ Gradual expansion of originators

- Through a stepwise expansion of originators, the government has prevented illegal behavior sometimes associated with high risk companies and has given market players the opportunity to adjust to a new business

❖ Credit enhancement: banks and public credit guarantee funds

- For a primary CBO, the government-owned credit guarantee funds (KCGF, KTCGF) have been the major source of credit guarantee

❖ The CBO fund as a demand pool for subordinated ABS

- At introductory stage, we used to have CBO fund which is required to invest more than 25% of its fund in subordinated bonds

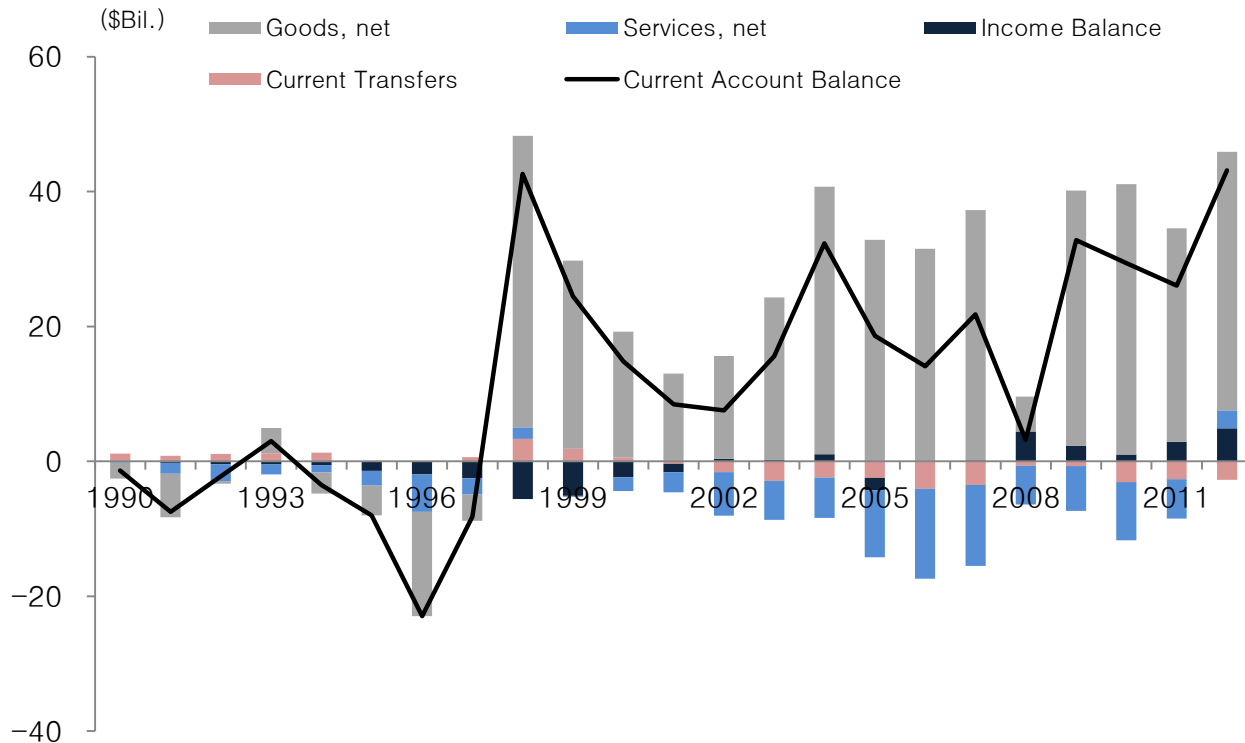
Recommendations of World Banks to Turkey's Capital Market (2012)

- ❖ Increase in overall savings of the country
- ❖ Supply side issues: Issuers
- ❖ Demand side issues: Investor Base
- ❖ Meaningful benchmark sovereign yield curve
- ❖ Capital markets intermediaries issues: investment banks and brokerage firms
- ❖ Widen range of risk management products: futures and options
- ❖ Credit rating issues
- ❖ Enabling regulatory Frameworks, including resolving taxation issues
- ❖ Market infrastructure: trading platform, clearing, settlement and custody
- ❖ Modernize the Capital Markets Law to enable innovation and product development

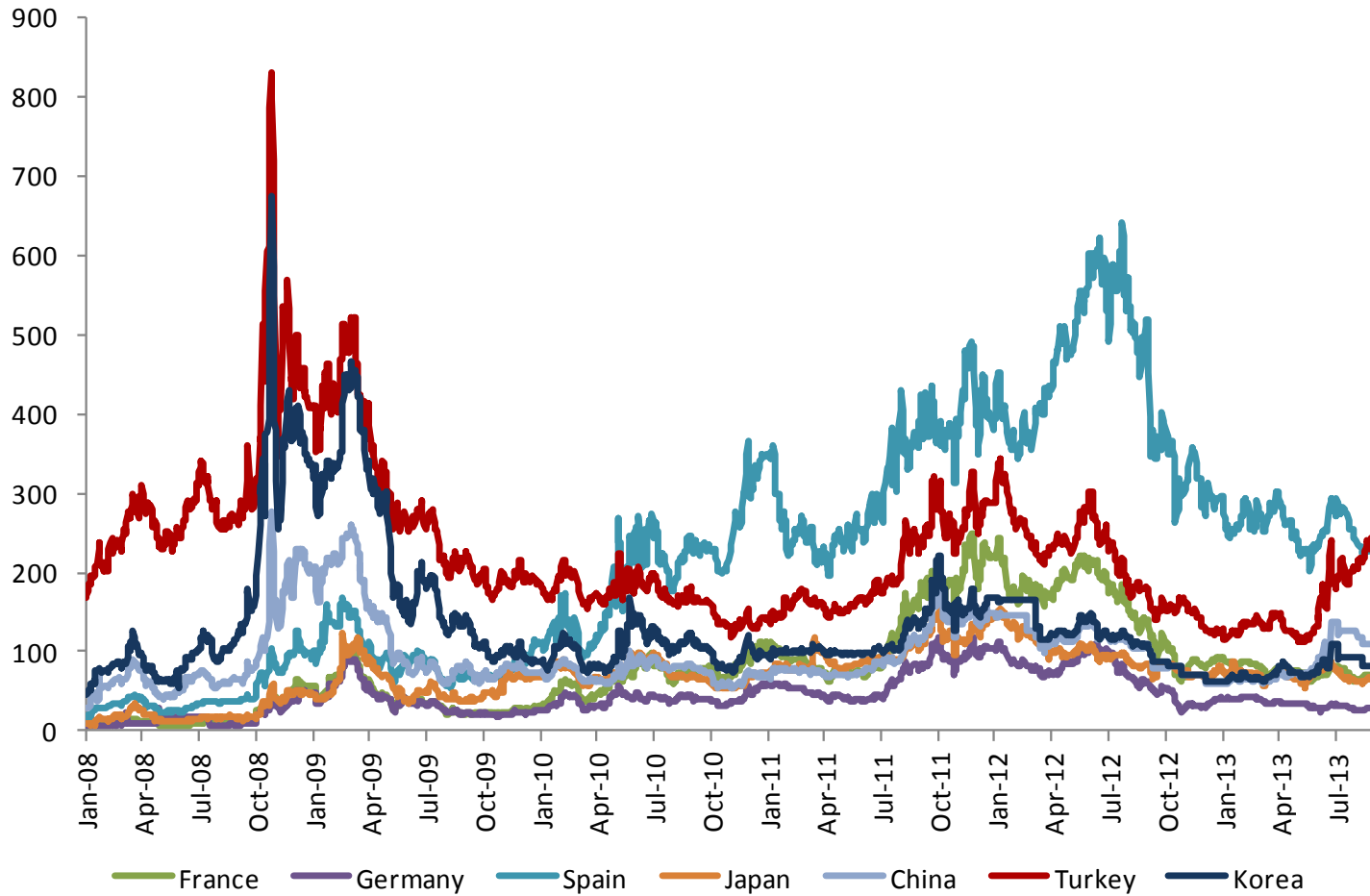
V. Volatility and Systemic Risk: Causes and Responses

Why is Volatility of Korean Economy High?

- ❖ Korea needs to increase the proportion of “service balance” and “income balance” in the current account balance



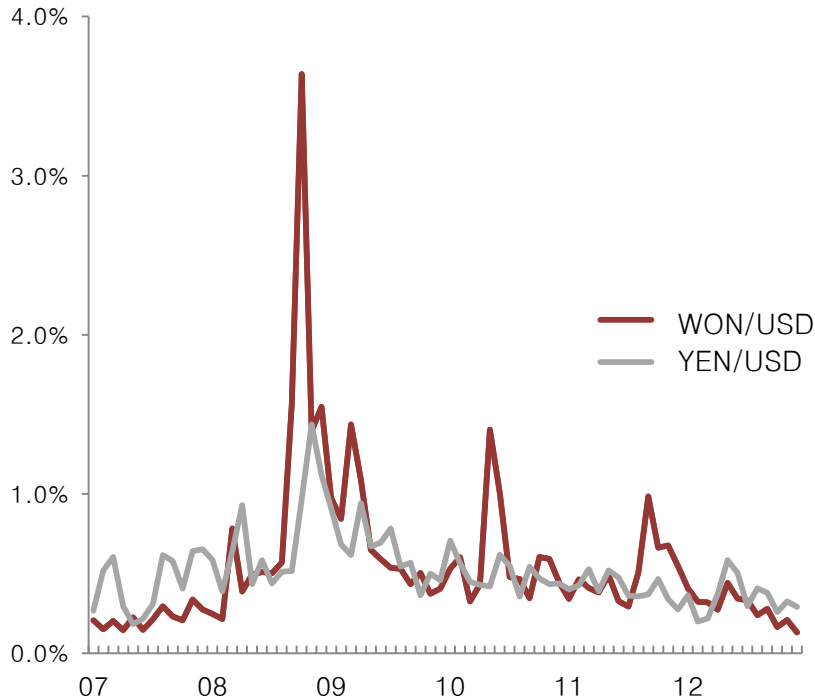
The Fluctuation of the CDS Premium and Systemic Risk



Why is FX Market Volatility High? (1)

- ❖ Korea's FX market shows high "volatility of volatility(kurtosis)"
 - Volatility is low in normal times, but extremely high in turbulent times

FX volatility: won/dollar vs. yen/dollar



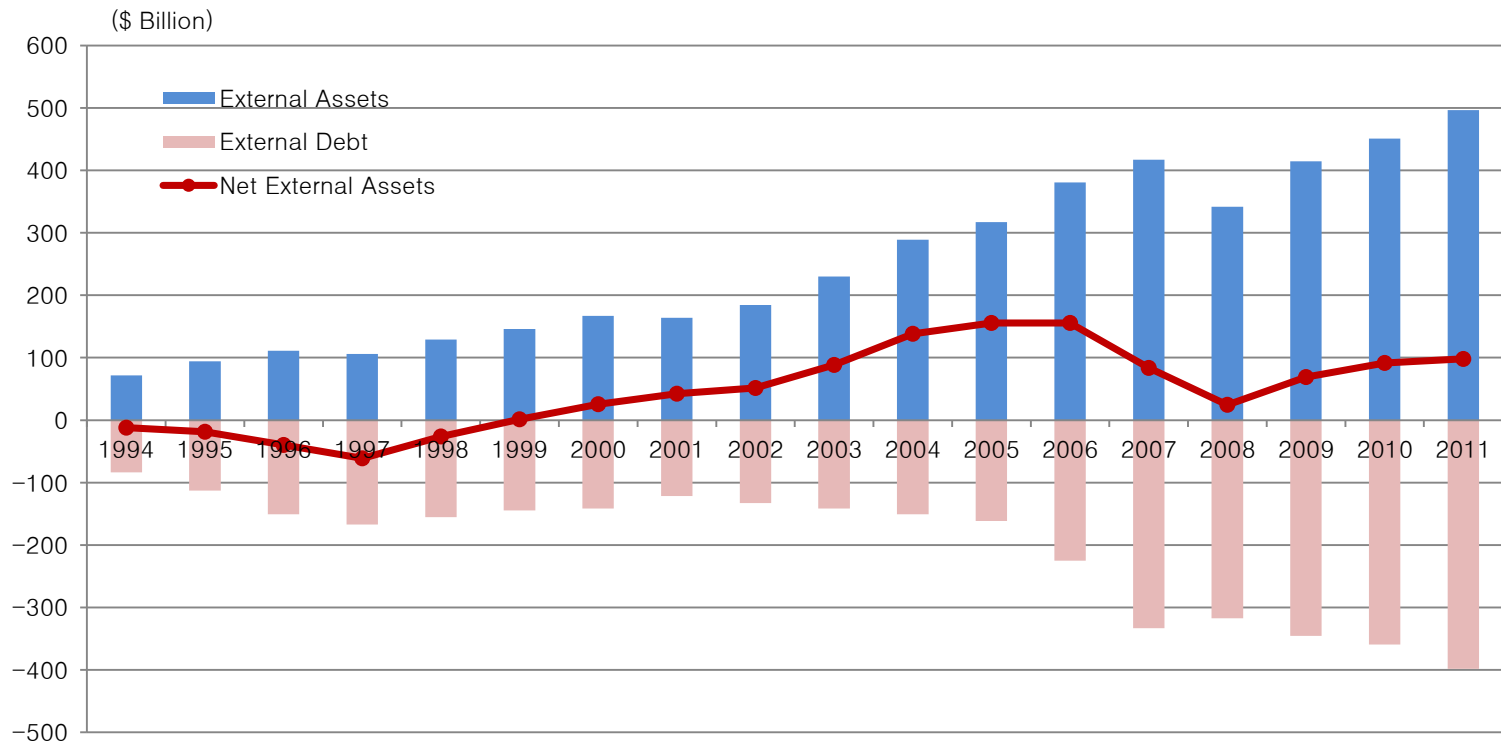
note: day by day volatility

<International Comparison>

Currency	Pre-Lehman (Jan. 2007 ~ Sept. 2008)	Post-Lehman (Sept. 2008 ~ March 2009)	After April 2009 (April 2009 ~ March 2013)
Japan (yen)	0.51	0.90	0.44
Canada (dollar)	0.34	0.78	0.50
Turkey (lira)	0.52	0.97	0.53
UK (pound)	0.29	0.82	0.47
Euro	0.37	0.94	0.52
Korea (won)	0.35	1.65	0.49
Brazil (real)	0.46	1.84	0.64
South Africa (rand)	0.58	1.75	0.77
Mexico (peso)	0.24	0.95	0.58
Thailand (baht)	0.20	0.28	0.19
Singapore (dollar)	0.21	0.46	0.28
China (yuan)	0.09	0.04	0.05

Why is FX Market Volatility High? (2)

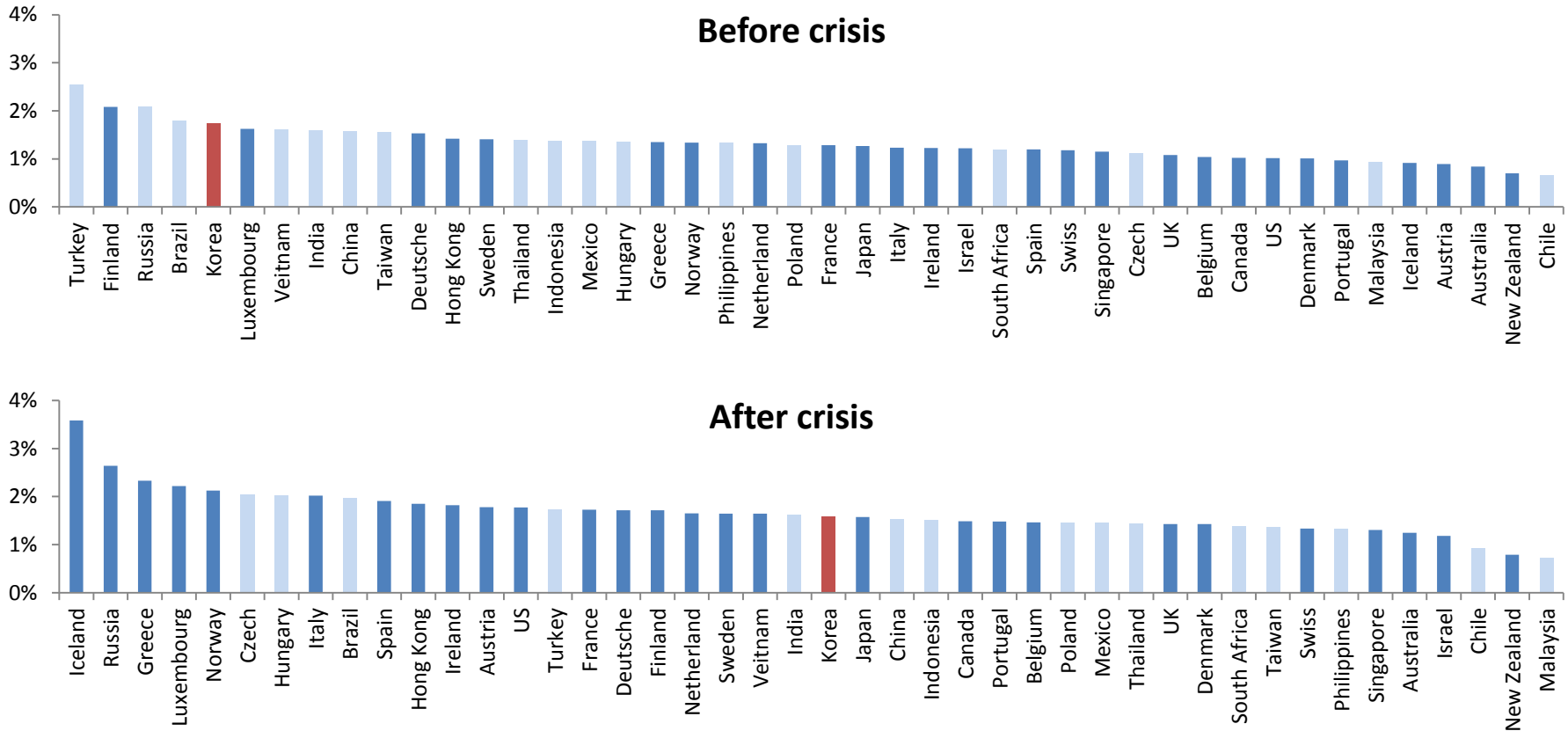
- ❖ Although Korea's foreign asset holdings are larger than liabilities, the country is still vulnerable to currency crises due to liquidity shortages
 - Not only the size, but also the composition of foreign reserves is important
 - Who owns the assets and who bears the liabilities?



Volatility in the Equity Market (1) : Variance before and after the Crisis



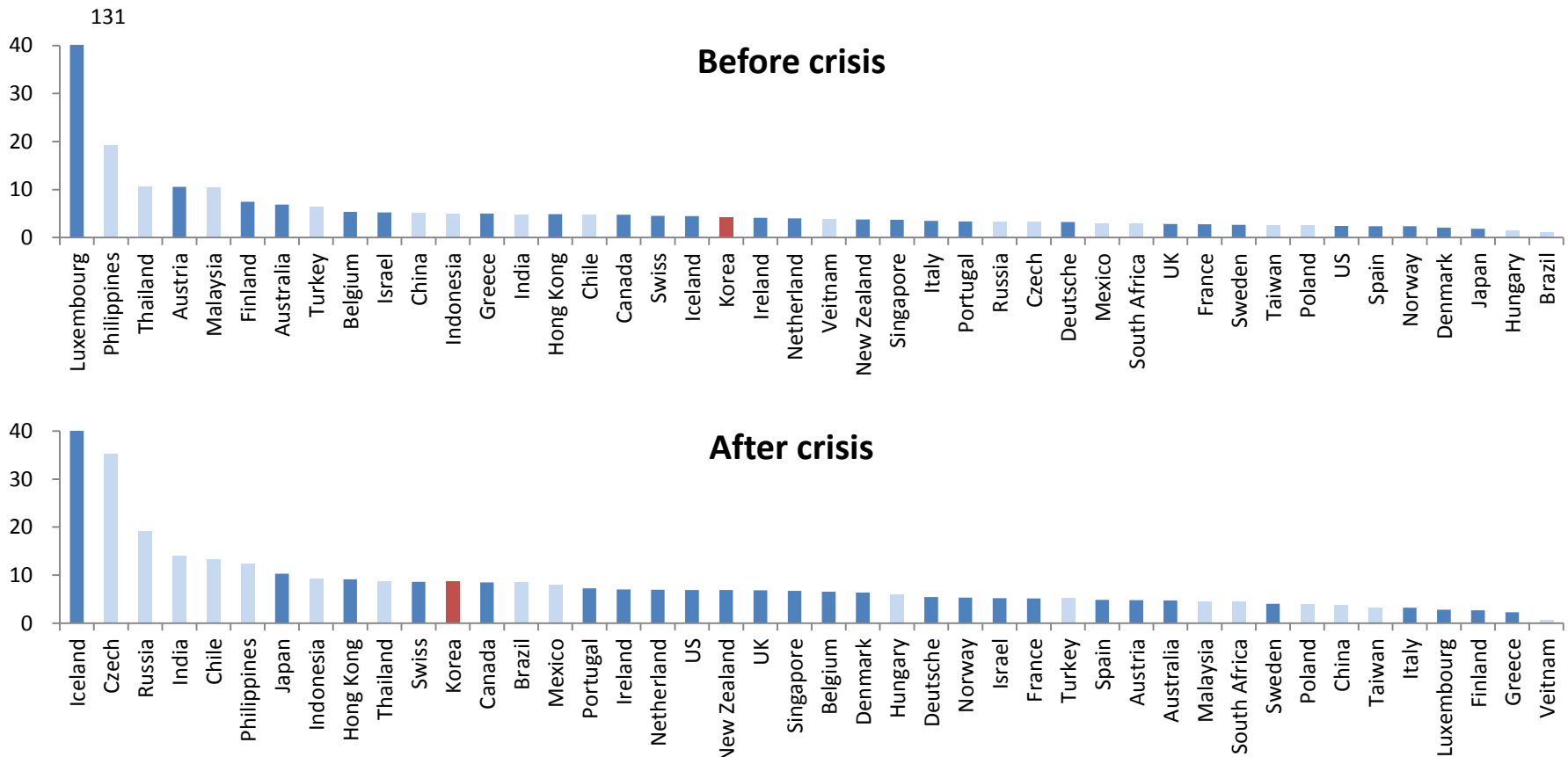
❖ Korean stock market volatility has decreased after 2008 financial crisis



* Measured using daily returns

Volatility in the Equity Market (2) : Kurtosis before and after the Crisis

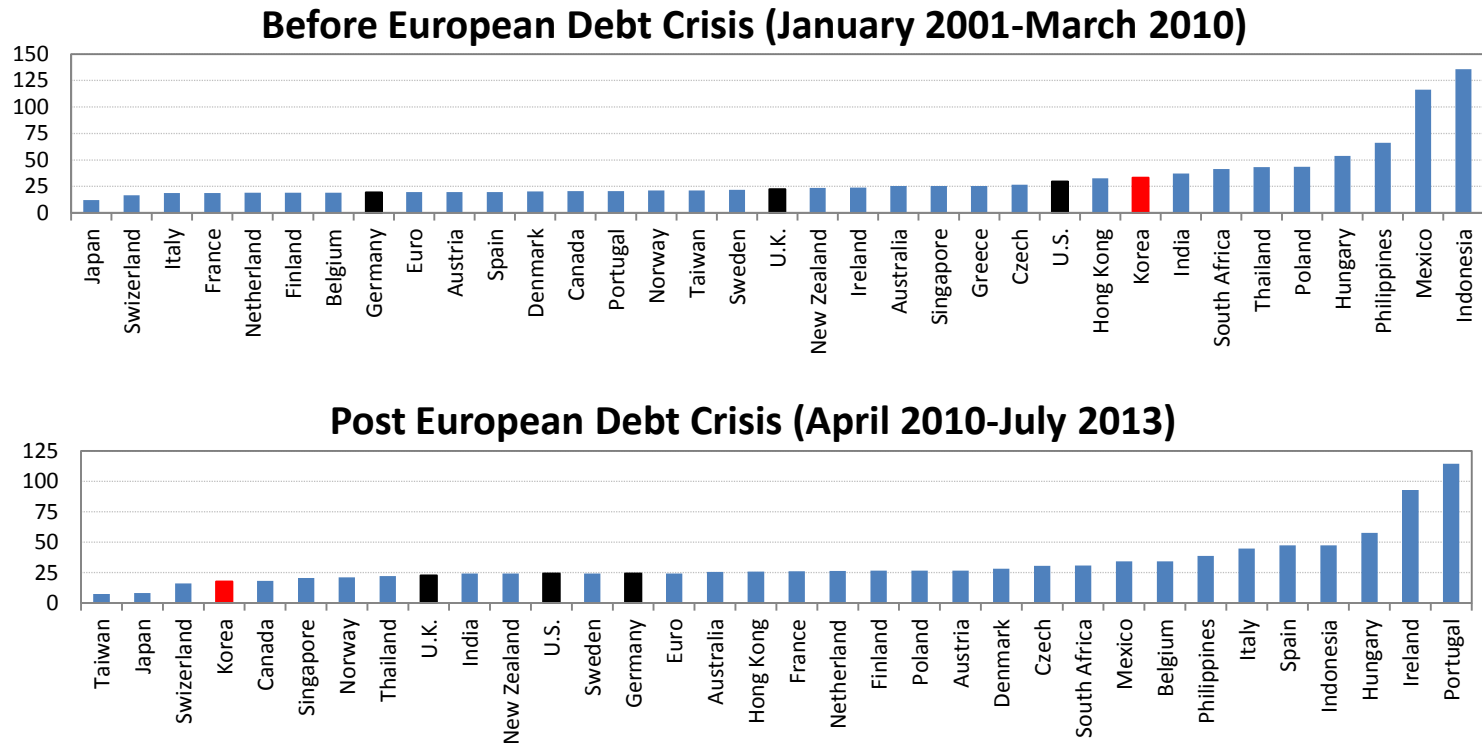
- ❖ Kurtosis, the likelihood of occurrence of extreme stock returns, has increased after 2008 financial crisis



* Measured using daily returns

Volatility in the Bond Market (1): Gov. Bond

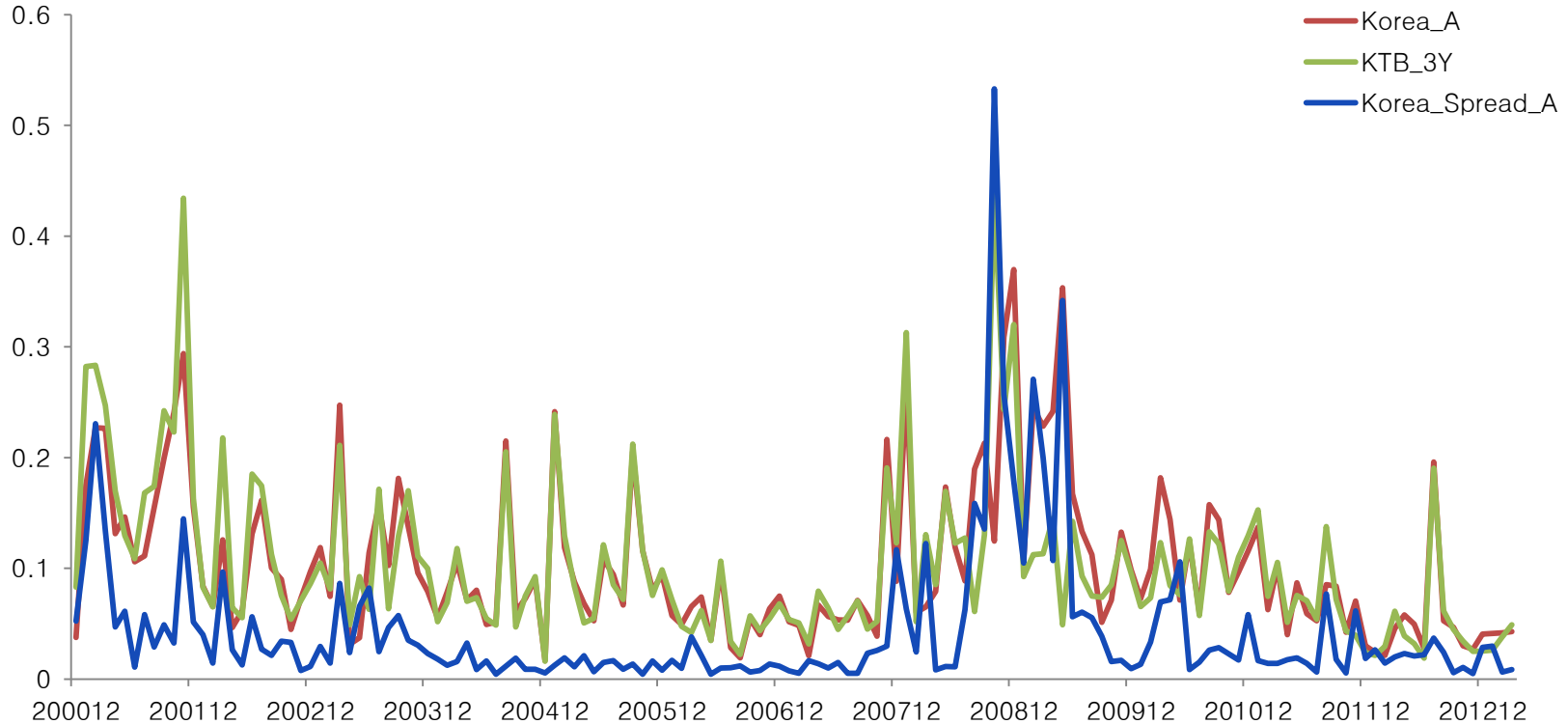
- ❖ Korean government bond market volatility has decreased after European debt crisis



Note: volatility is measured by standard deviation of monthly yield changes

Volatility in the Bond Market (2): Credit Spread

- ❖ Volatility of the credit spread is too low but kurtosis is large
 - Volatility is low in normal times, but very high in turbulent times



VI. Concluding Remarks: Policy Implications

Policy Implications for Turkey

❖ Economic policy that balances growth and stability

- Effective economic policy should consider both economic growth (upside potential) and economic stability (downside protection) at the same time

❖ Times are different

- Korea can be a very good reference . However, Turkey cannot take the same approach as Korea did in the past because the times are completely different

❖ Industrial policy and financial policy should go together

- Unlike Korea's era of high growth, in the future a country cannot pursue high growth rates without developing the financial industry and capital markets

❖ Expansion of government spending is a double edged sword

- It is increasingly difficult for countries to achieve high economic growth based solely on government spending and investments.
- If investors, especially foreign investors, do not have confidence in government fiscal soundness, then that can lead to serious problems

Policy Implications for Turkey

❖ Pay attention to systemic risk

- Where does Turkey's systemic risk come from?
- Sudden stops of capital flows, over-reliance on one industry

❖ Again, the current account surplus is especially important

- A current account surplus contributes not only to growth but also to stability
- Turkey needs to develop industries that will contribute to the current a/c surplus, e.g., goods exporting industries, imports replacing industries, service industry

❖ Do it your own way

- If we can fight the enemy when we want, where we want, how we want, then we can win the battle (e.g. Sultan Saladin)