

Korea Money & Finance Association

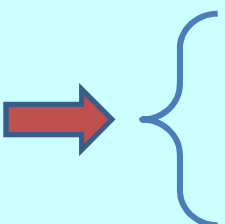
Winter Symposium

The role of finance to tackle the longevity risk in Japan: experience and suggestion

Jan. 26th, 2012
Seoul, Korea

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Japan Society of Monetary Economics

Japanese Experience

- Japan is rapidly aging
 - Social security expenditure is rapidly growing, leading to fiscal crisis
 - Government bond dependency ratio is 50% which is made possible by the historically lowest interest rate
 - Reduced birth rate is a globally common problem
 - Migration is very small
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- Reform Social Security
 - Delay Retirement Ages
 - Immigration, including an increase in foreign visitors
 - Raise Birth Rate

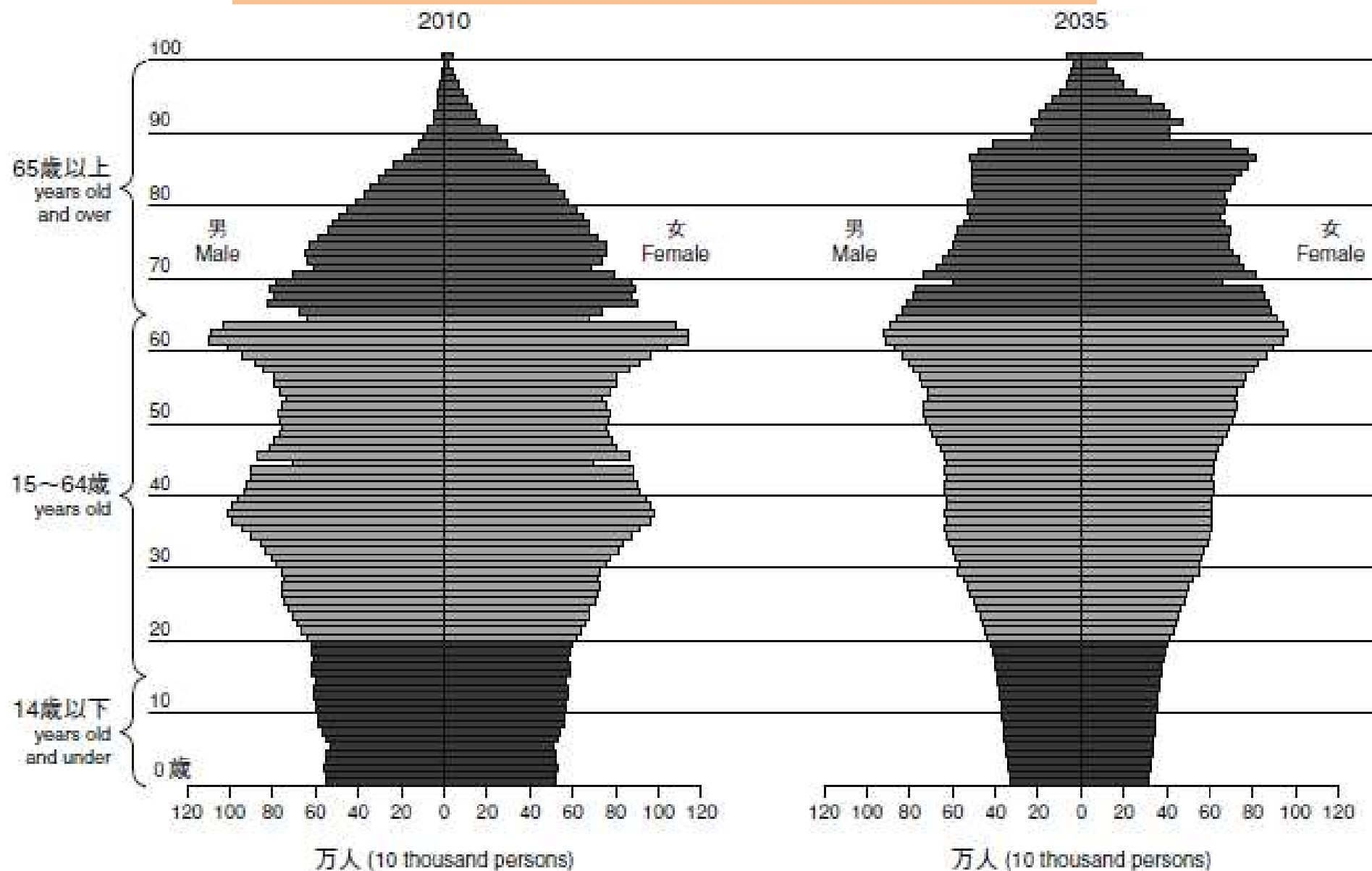
Japan's Financial Market

- Characteristics: Huge Financial Assets with very low rates of return
- Stock investments have not been good: Many trials to facilitate stock investments have been unsuccessful
- Financial Market is not a Magic Stick to solve the problems of aging society

Suggestions

- Enhance Economic Growth based on technology and free trade in Asian Market
- Supply growth Funds to Asian market: A small increase in the rate of return helps a lot
- Turn the Longevity risk to opportunity by taking Asia as one and own market
- Asia is the land of opportunity for Financial Industry

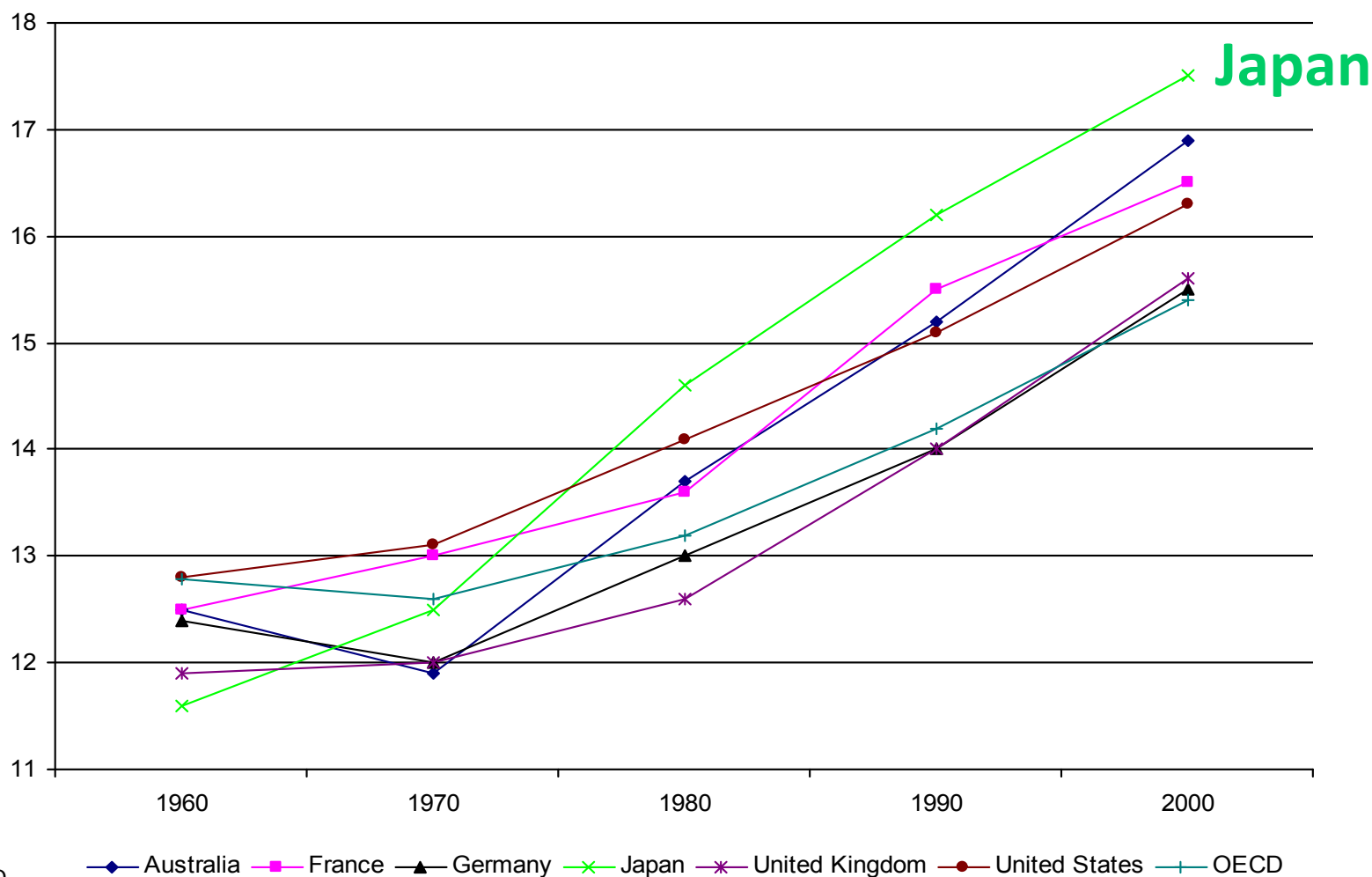
Japan: Population Pyramid



Japan is the country of longest life expectancy

Life Expectancy at Age 65

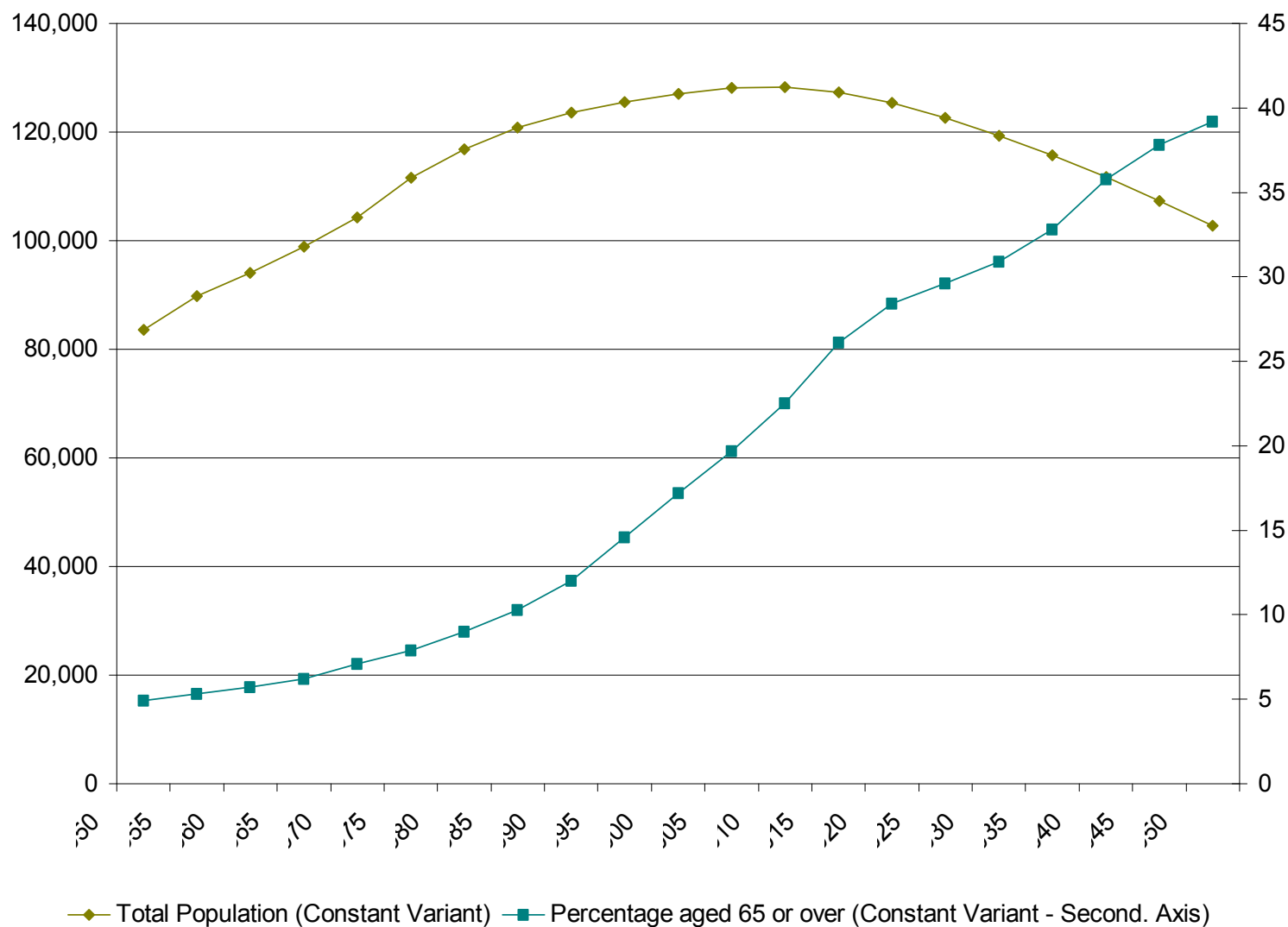
Australia, France, Germany, Japan, United Kingdom, United States and OECD Average Males – 1960-2000



Source: OECD

Japan's Demographic Shift over a Century

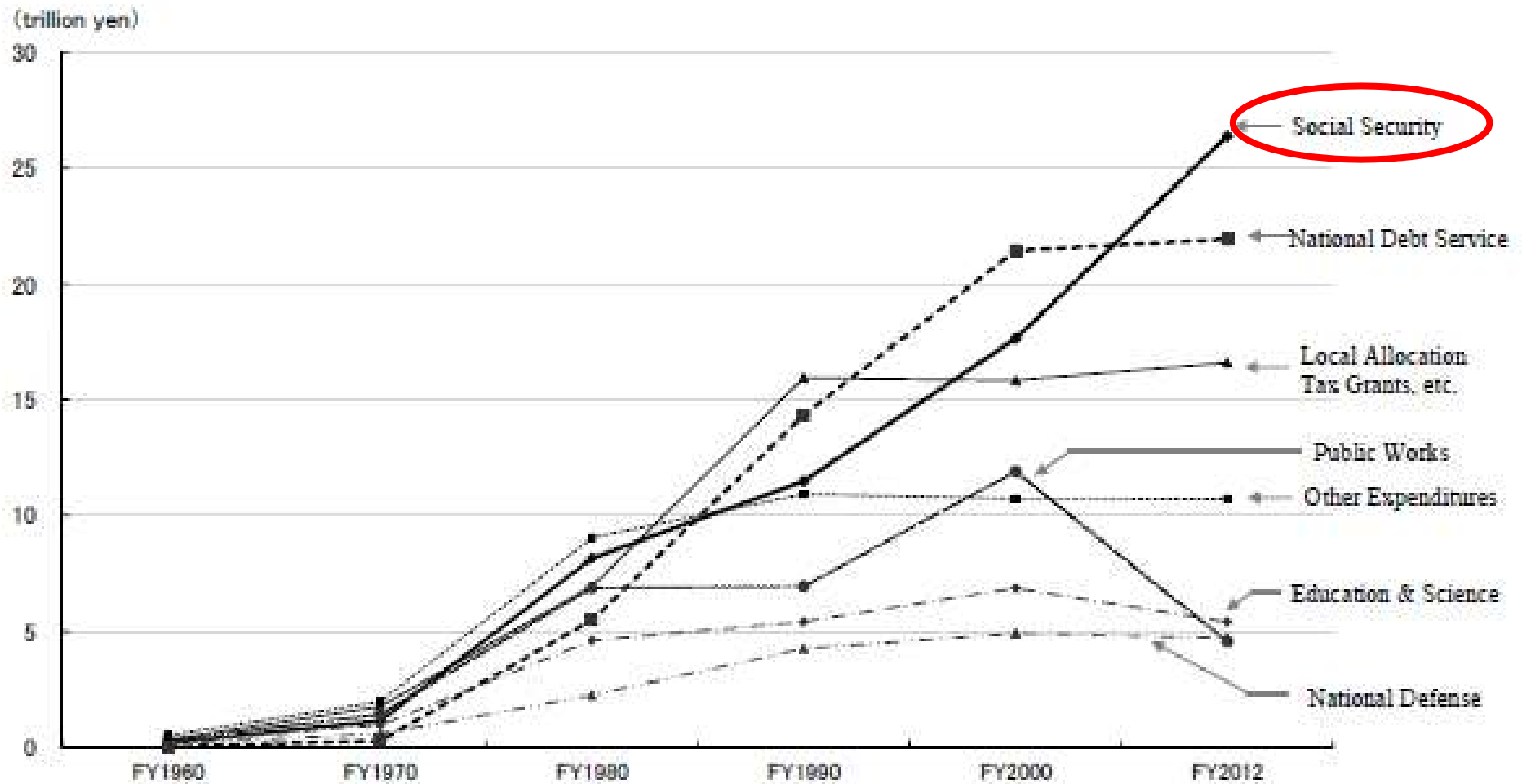
Total Population and Percentage of Population aged 65 or over Constant Fertility Variant Japan – 1950 - 2050



Source: Population Division of the Department of Economic and Social Affairs of the United Nations Secretariat, World Population Prospects: The 2004 Revision and World Urbanization Prospects: The 2003 Revision, <http://esa.un.org/unpp>, 03 May 2005; 4:55:44 PM.

Social Security Expenditure is the No. 1 and rapidly growing part of expenditure

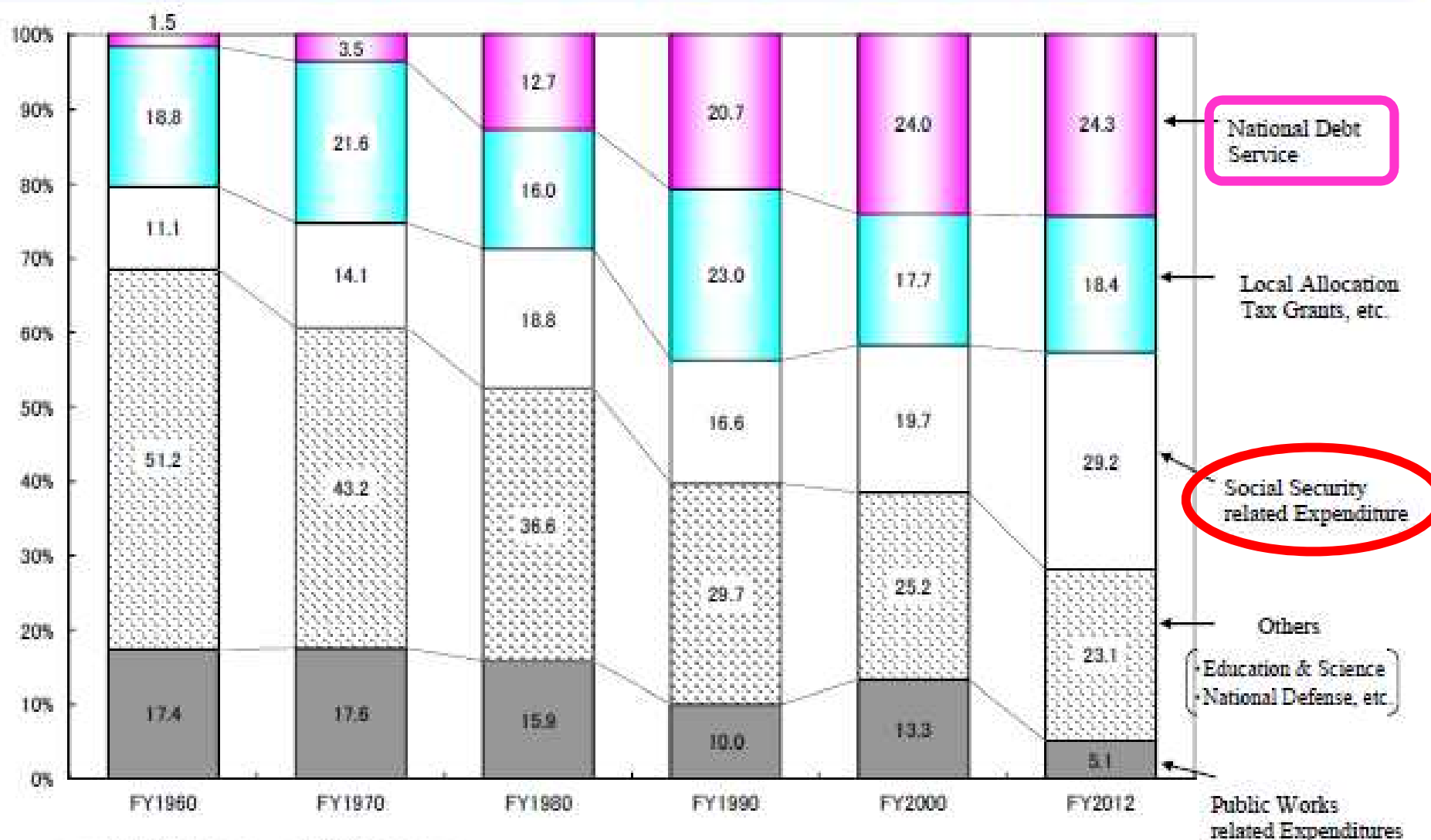
Trends of Major Expenditures in the General Account



(Note) FY1960-2000: Settlement, FY2012: Draft budget

Social security expenditure has been almost tripled during the last five decades

Ratio of Major Expenditure Items in the General Account

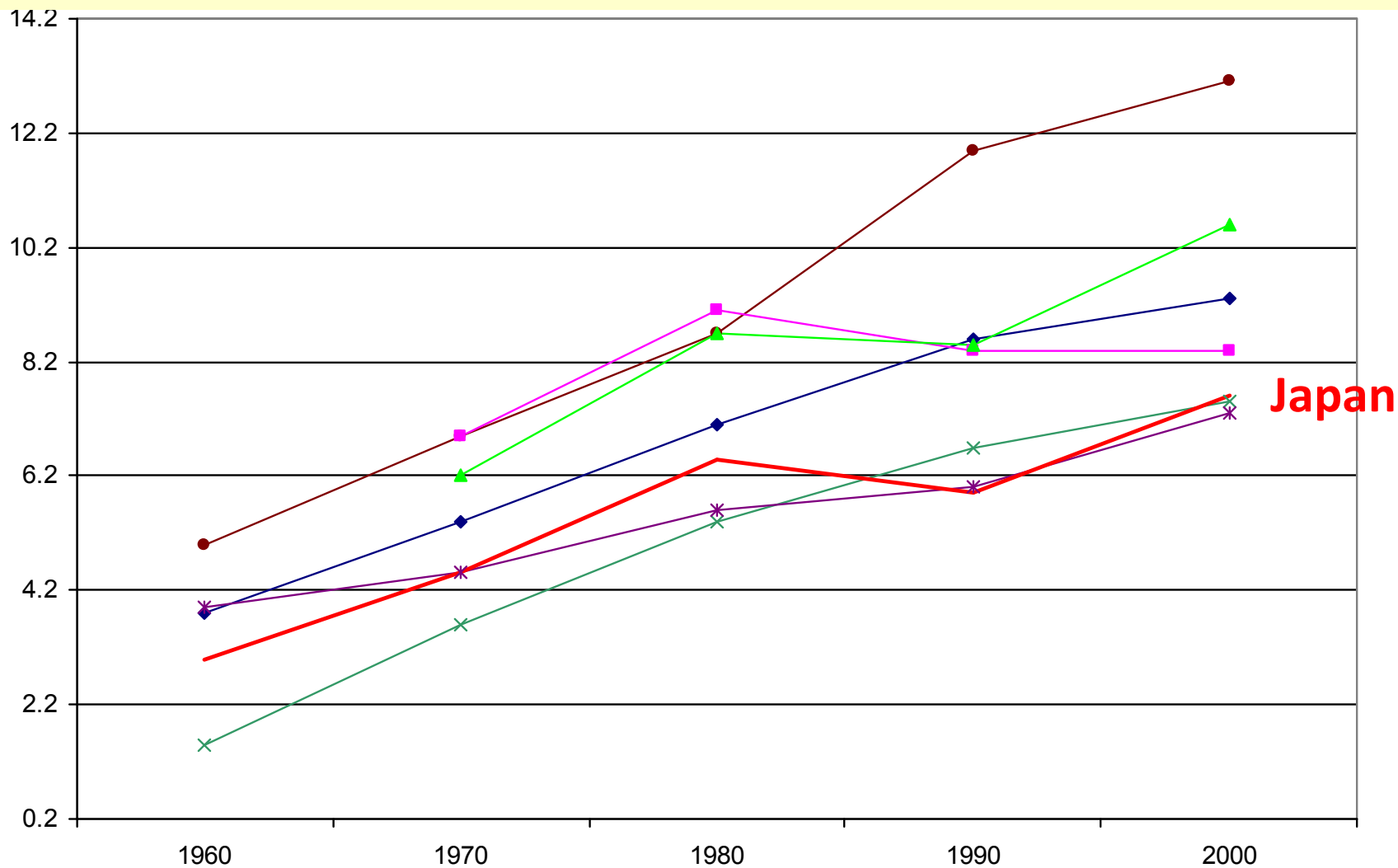


(Note) FY1960-2000: Settlement, FY2012 Draft budget

Japan's Health Care Expenditure is still expected to increase

Total Expenditure on Health as % of GDP

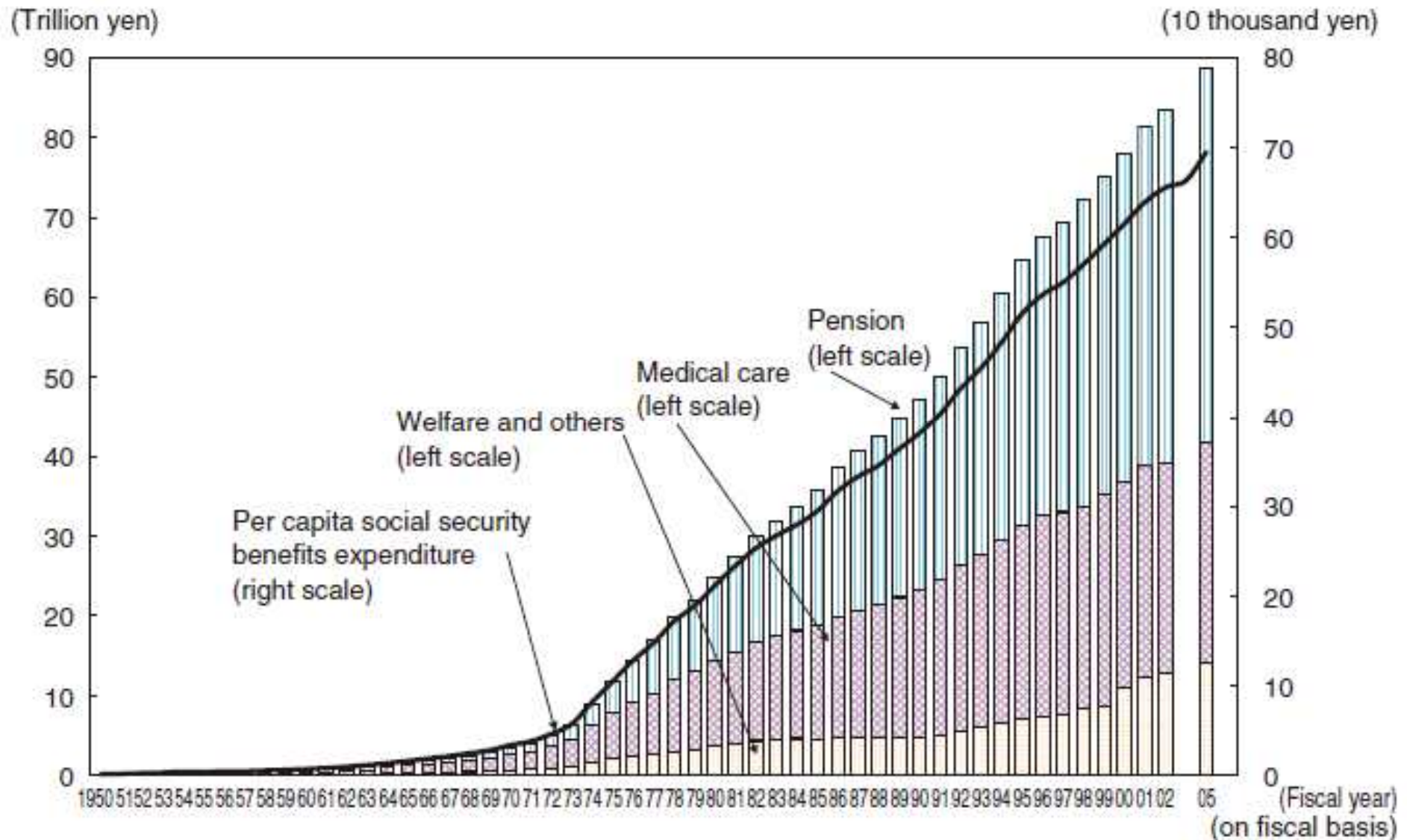
France, Germany, Japan, Spain, Sweden, United Kingdom and United States
1960 - 2000f



Source: OECD. OECD
Health Data, Third
Edition, 2004.

◆ France × Spain * United Kingdom ● United States ■ Sweden ▲ Germany — Japan

Japan: Trends in Social Welfare Expenditure



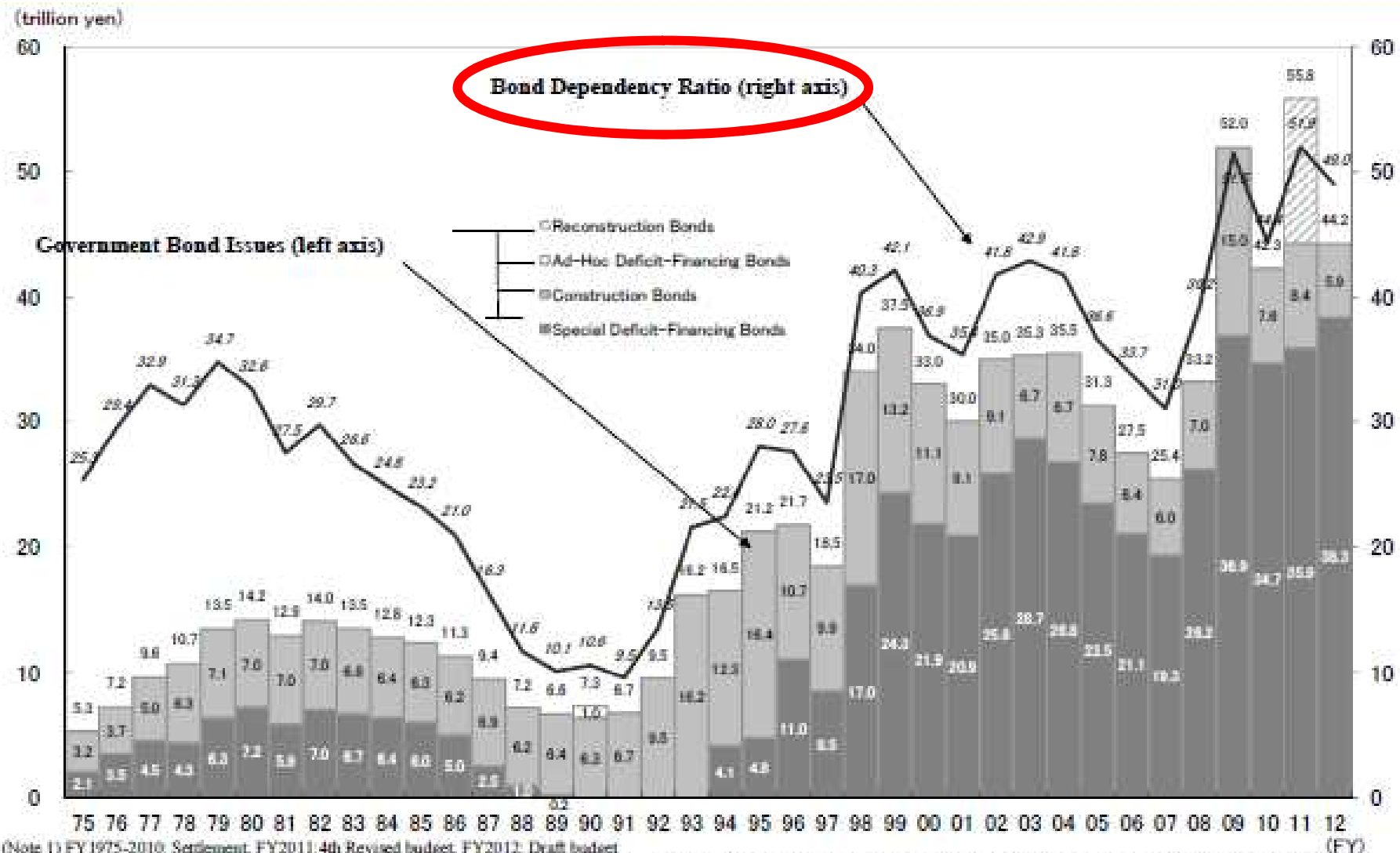
Source: National Institute of Population and Social Security Research "The Cost of Social Security in Japan Fiscal Year"

The figures for fiscal 2005 (budgetary basis) are calculated by MHLW Social Security Counselor's Office

Note: Per capita social security benefits expenditure for 2005 is obtained by dividing the total social security benefits expenditure by total population as of January 1, 2005 (final report)

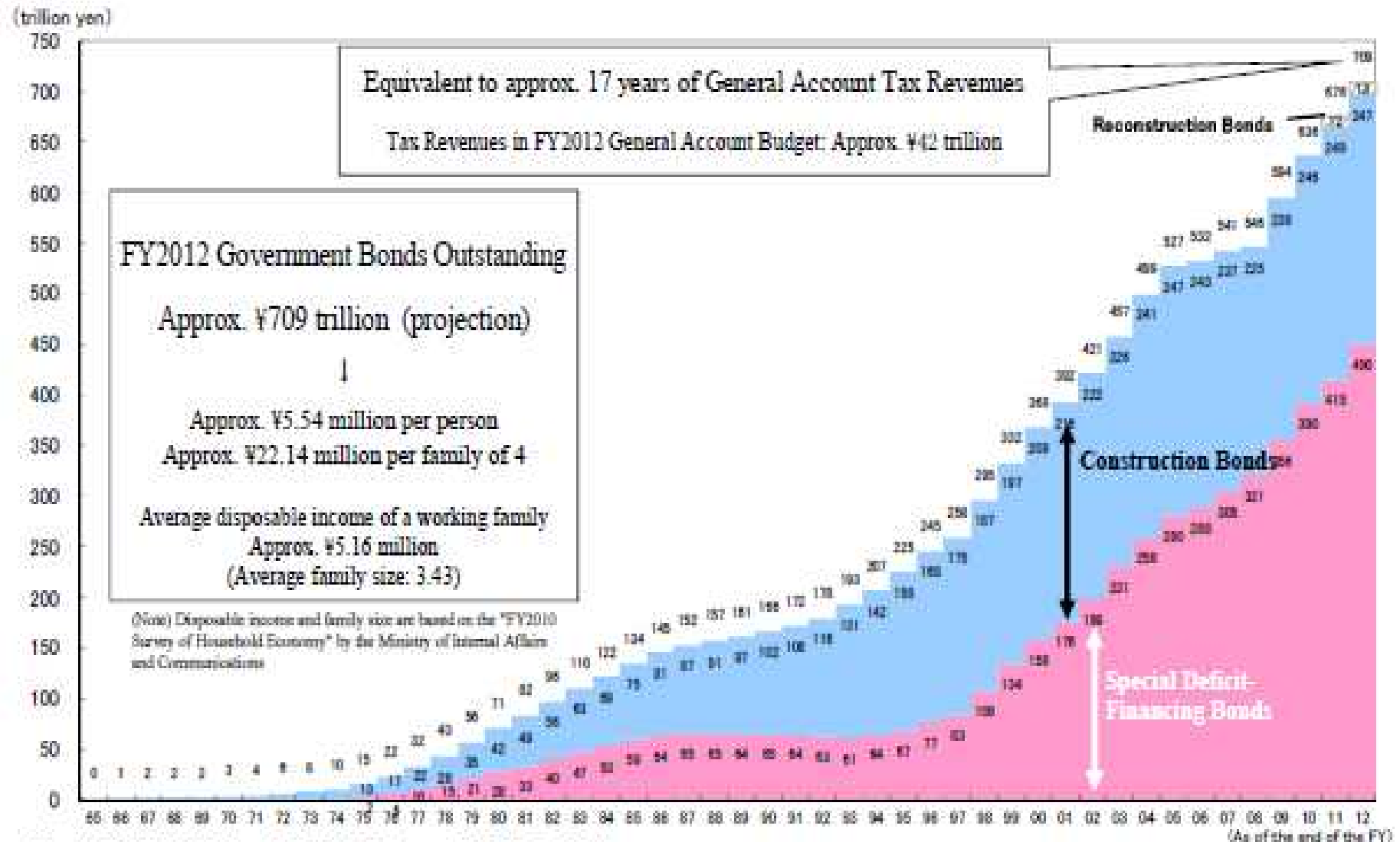
Japan's Government bond dependency ratio is 50%

(3) Government Bond Issues and Bond Dependency Ratio



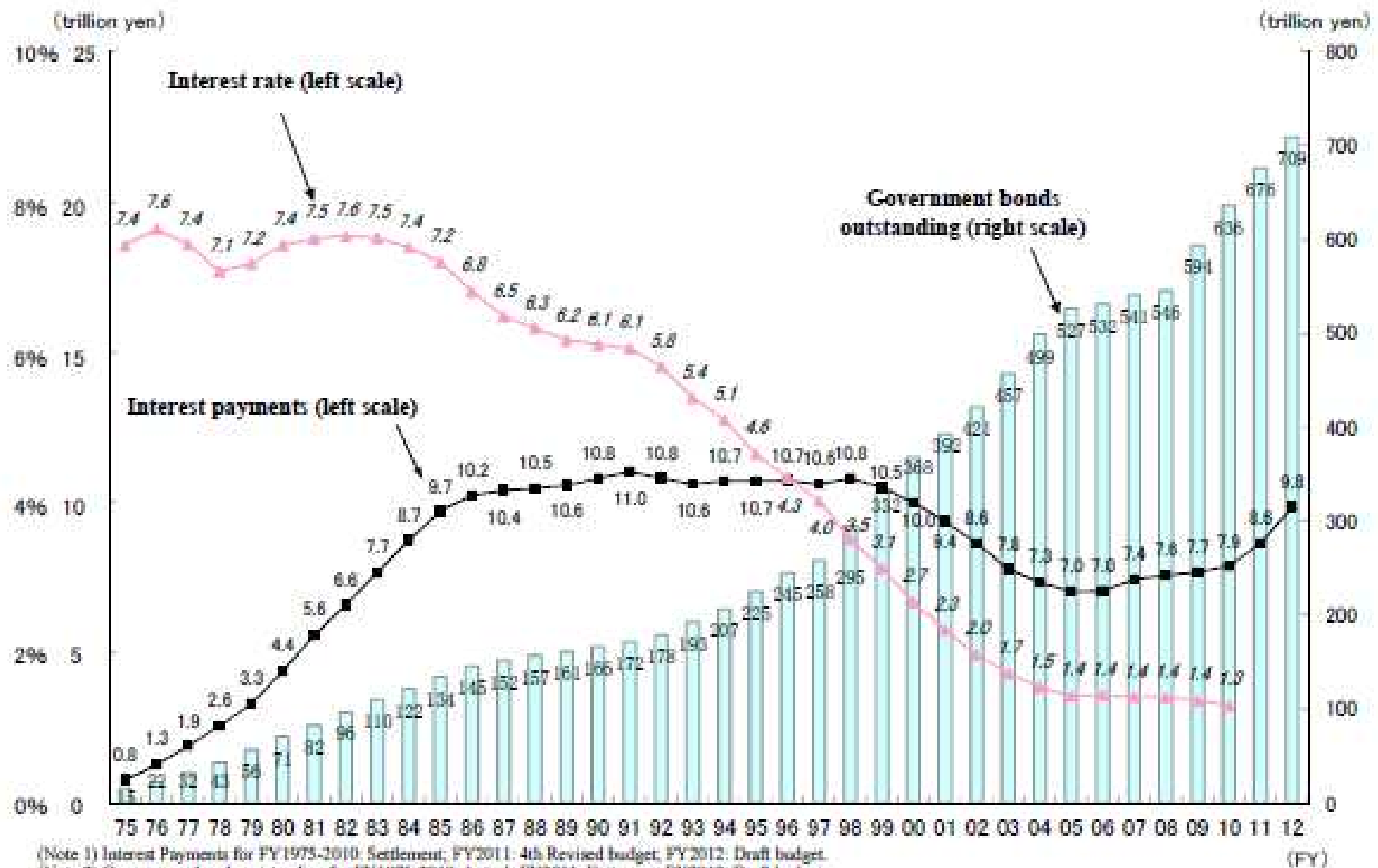
Government Bonds are accumulated rapidly after the burst of the bubbles in early 1990s

Accumulated Government Bonds Outstanding

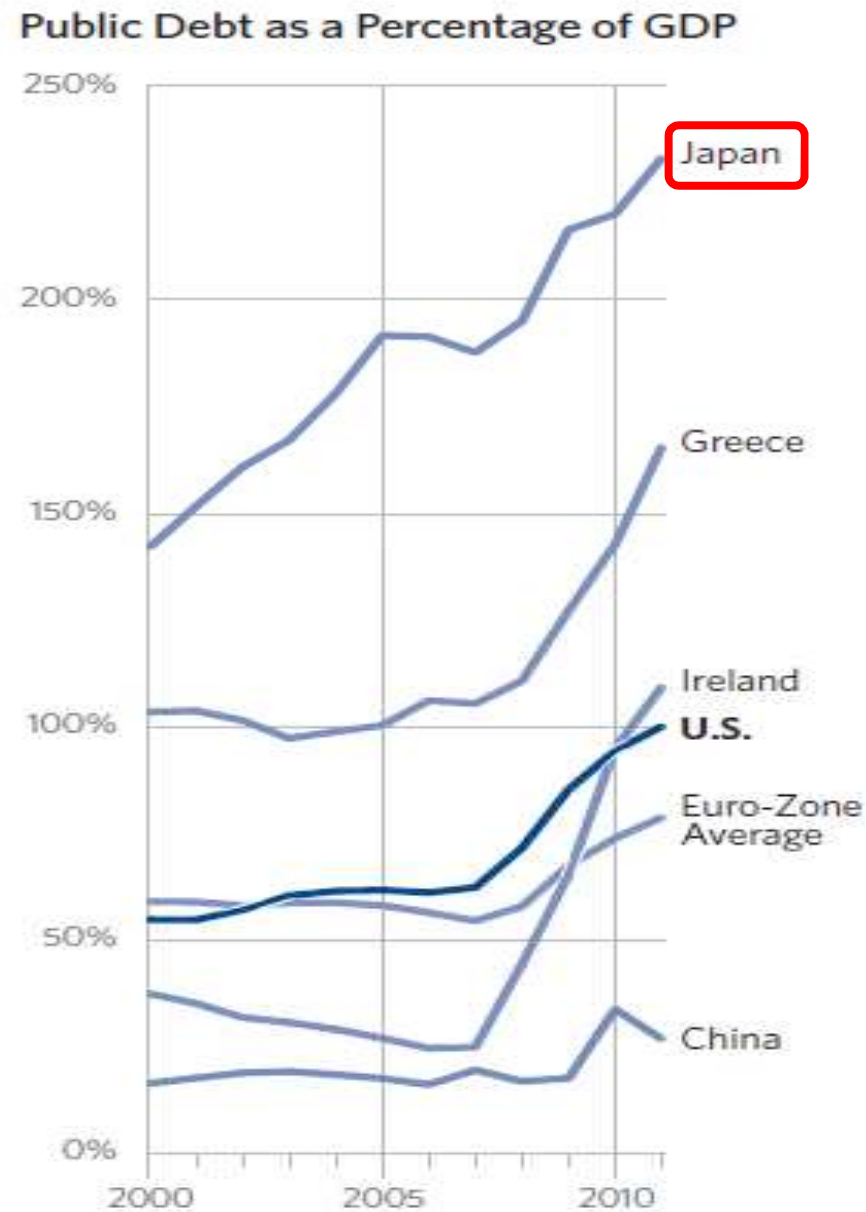


High Government bond dependency ratio is made possible due to an extremely low interest rate

Trends in Interest Payments and Interest Rate



Japan's Public Debt/ GDP Ratio is the worst in the world



Reduced Birth Rate is globally common

Fertility Rates for Nations with below Replacement Fertility 1970 – 2000

	1970	1980	1990	2000		1970	1980	1990	2000
Armenia	3.24	2.31	2.62	1.28	Kazakhstan	3.35	2.9	2.72	1.88
Australia	2.86	1.9	1.91	1.75	Korea, Rep	4.27	2.56	1.77	1.43
Austria	2.29	1.62	1.45	1.34	Latvia	1.96	1.86	2.02	1.16
Barbados	3.02	2.03	1.74	1.75	Lithuania	2.37	2.03	2.03	1.27
Belarus	2.31	2.03	1.91	1.29	Luxembourg	1.98	1.5	1.62	1.78
Belgium	2.2	1.67	1.62	1.61	Macao	3.12	2.3	1.75	1.15
Bosnia	2.85	2.09	1.7	1.6	Macedonia	3.1	2.51	2.06	1.76
Bulgaria	2.17	2.05	1.81	1.27	Malta	2.03	2.05	2.05	1.81
Canada	2.26	1.74	1.83	1.55	Moldova	2.58	2.39	2.39	1.4
Channel Isl.	N/A	1.41	1.71	1.75	Netherlands	2.57	1.6	1.62	1.72
China	5.78	2.54	2.1	1.9	Norway	2.5	1.72	1.93	1.85
Croatia	N/A	N/A	1.63	1.39	Poland	2.2	2.28	2.04	1.34
Cuba	3.85	1.95	1.69	1.58	Portugal	2.76	2.19	1.43	1.51
Cyprus	2.6	2.46	2.42	1.91	Puerto Rico	3.15	2.55	2.2	1.9
Czech Rep.	1.93	2.07	1.89	1.15	Romania	2.89	2.43	1.84	1.31
Denmark	1.95	1.55	1.67	1.77	Russia	1.99	1.89	1.89	1.21
Dominica	N/A	3.92	2.7	1.9	Singapore	3.09	1.74	1.87	1.45
Estonia	2.16	2.02	2.04	1.24	Slovak Rep.	2.39	2.31	2.09	1.34
Finland	1.83	1.63	1.78	1.73	Slovenia	2.24	2.08	1.46	1.22
France	2.48	1.95	1.78	1.88	Spain	2.84	2.22	1.33	1.24
Georgia	2.65	2.25	2.21	1.08	Sweden	1.94	1.68	2.13	1.55
Germany	2.03	1.44	1.45	1.35	Switzerland	2.09	1.55	1.59	1.46
Greece	2.34	2.23	1.4	1.32	Thailand	5.44	3.48	2.27	1.84
Hong Kong	3.34	2	1.27	1.02	Trinidad	3.59	3.3	2.36	1.75
Hungary	1.97	1.91	1.84	1.29	Ukraine	2.09	1.95	1.85	1.2
Iceland	2.79	2.48	2.31	1.98	United Kingdom	2.44	1.89	1.83	1.68
Ireland	3.93	3.23	2.12	1.87	United States	2.48	1.84	2.08	2.13
Italy	2.43	1.64	1.26	1.23	Yugoslavia	2.28	2.26	2.08	1.71
Japan	2.14	1.75	1.54	1.36					

Source: World Development Indicators, The World Bank.

Net migration (per year)

(thousands)

Europe, Japan and United States – 1995 – 2010

	1995-2000	2000-2005	2005-2010
Europe	1,057	1,083	792
Japan	56	54	54
United States	1,240	1,160	1,150

Source: Population Division of the Department of Economic and Social Affairs of the United Nations Secretariat,
World Population Prospects: The 2004 Revision and World Urbanization Prospects: The 2003 Revision,

<http://esa.un.org/unpp>, 04 May 2005; 1:27:47 PM.

Average effective age of retirement and official age 1997-2002

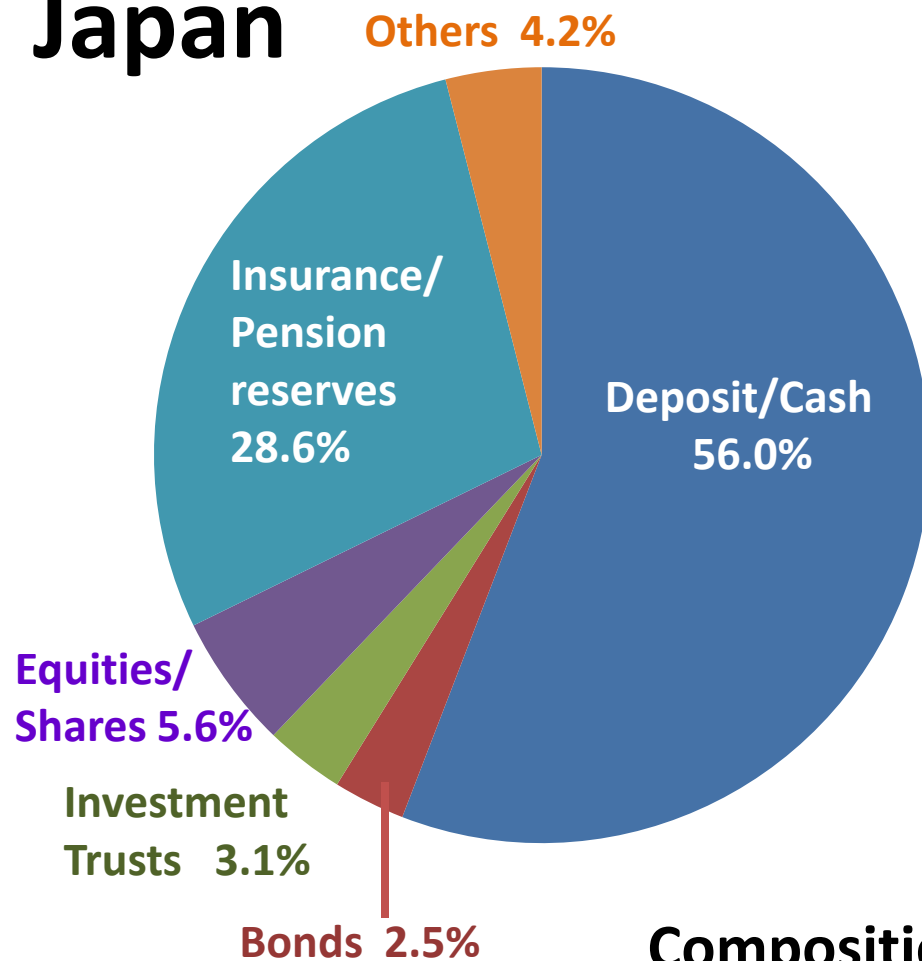
	Men		Women	
	Average Effective Retirement Age	Official Retirement Age	Average Effective Retirement Age	Official Retirement Age
Belgium	58.5	65	56.8	62
France	59.3	60	59.4	60
Germany	60.9	65	60.2	65
Japan	69.6	60 → 65	65.7	60 → 65
Korea	68	60	66.8	60
United Kingdom	63.1	65	61.2	60
United States	65	65	62.9	65
OECD Average	63.3	63.9	61.4	62.6

Source: OECD.

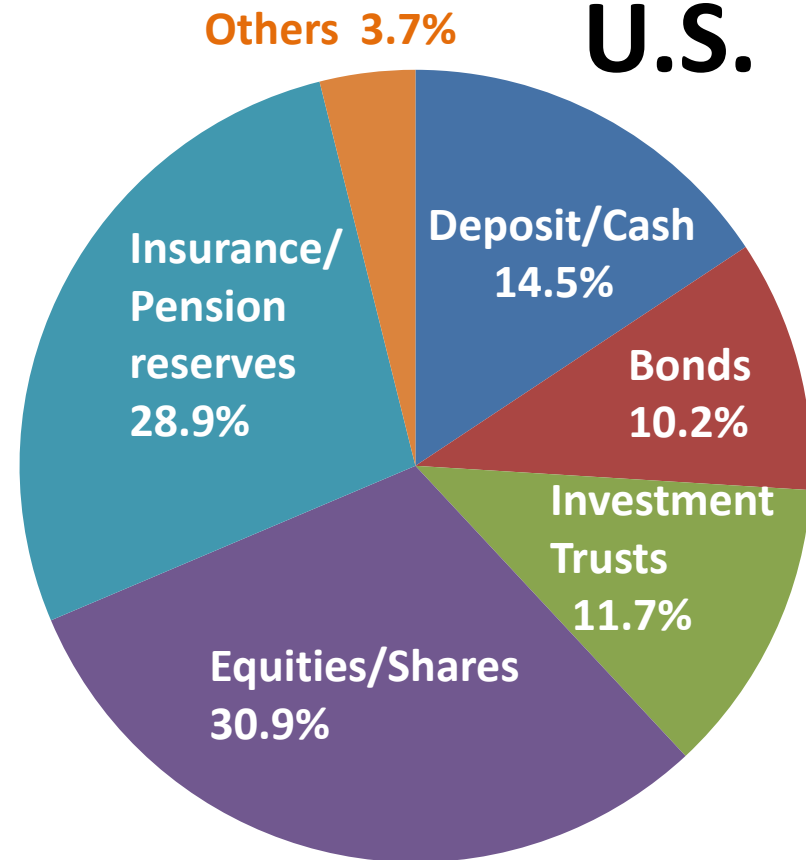
Japan has the second largest households financial assets (1,456 trillion yen, 2009) after the U.S. which are held dominantly as deposits and cash with practically **zero** interest rate

→ Small increase in the rate of return could lead to a large benefits

Japan

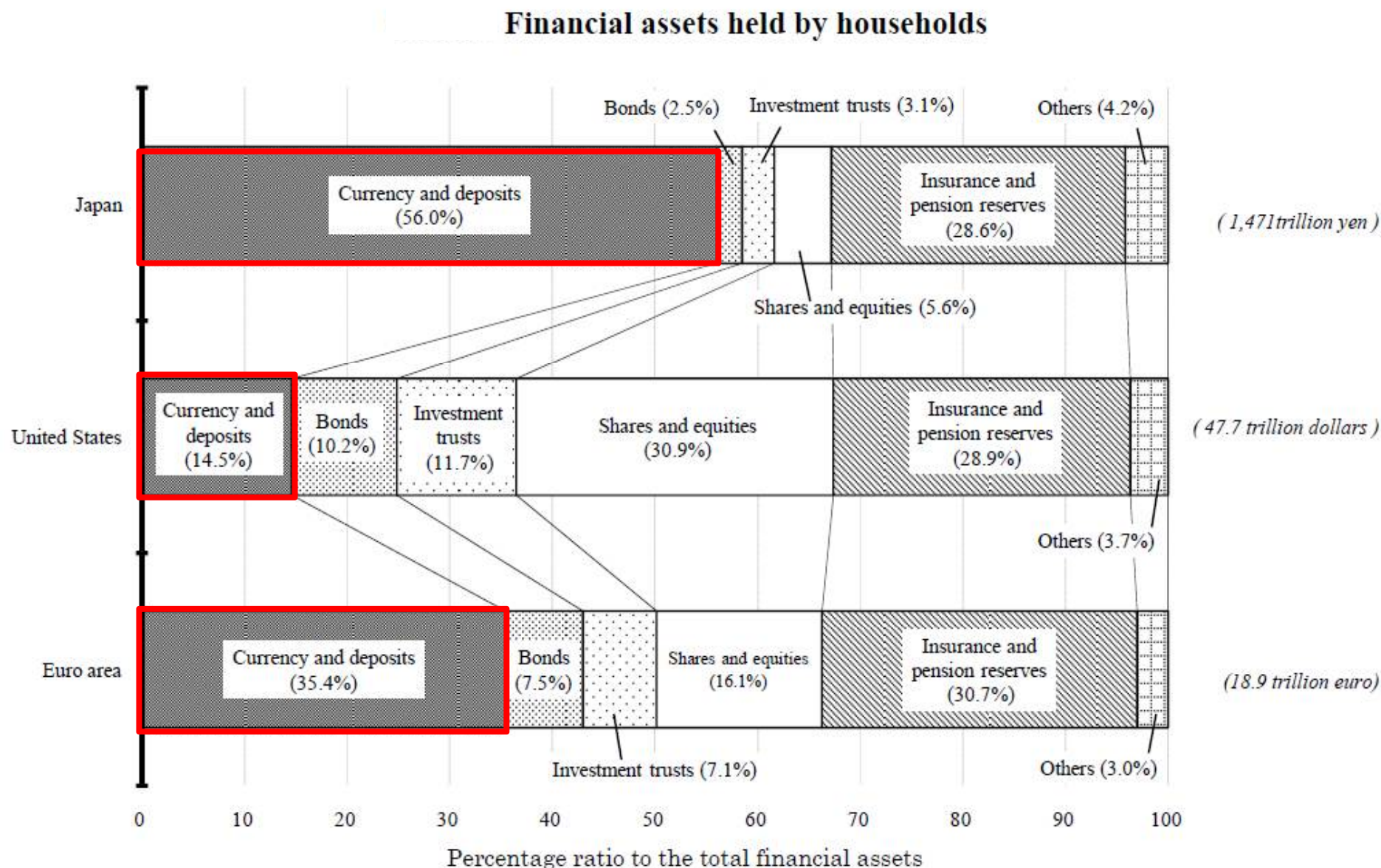


U.S.



Composition of Household Financial Assets
(2011.9.30)

Japan's households financial asset holdings is very conservative among OECD countries. How to utilize the 1,456 Trillion yen assets efficiently to support the **aging society**?

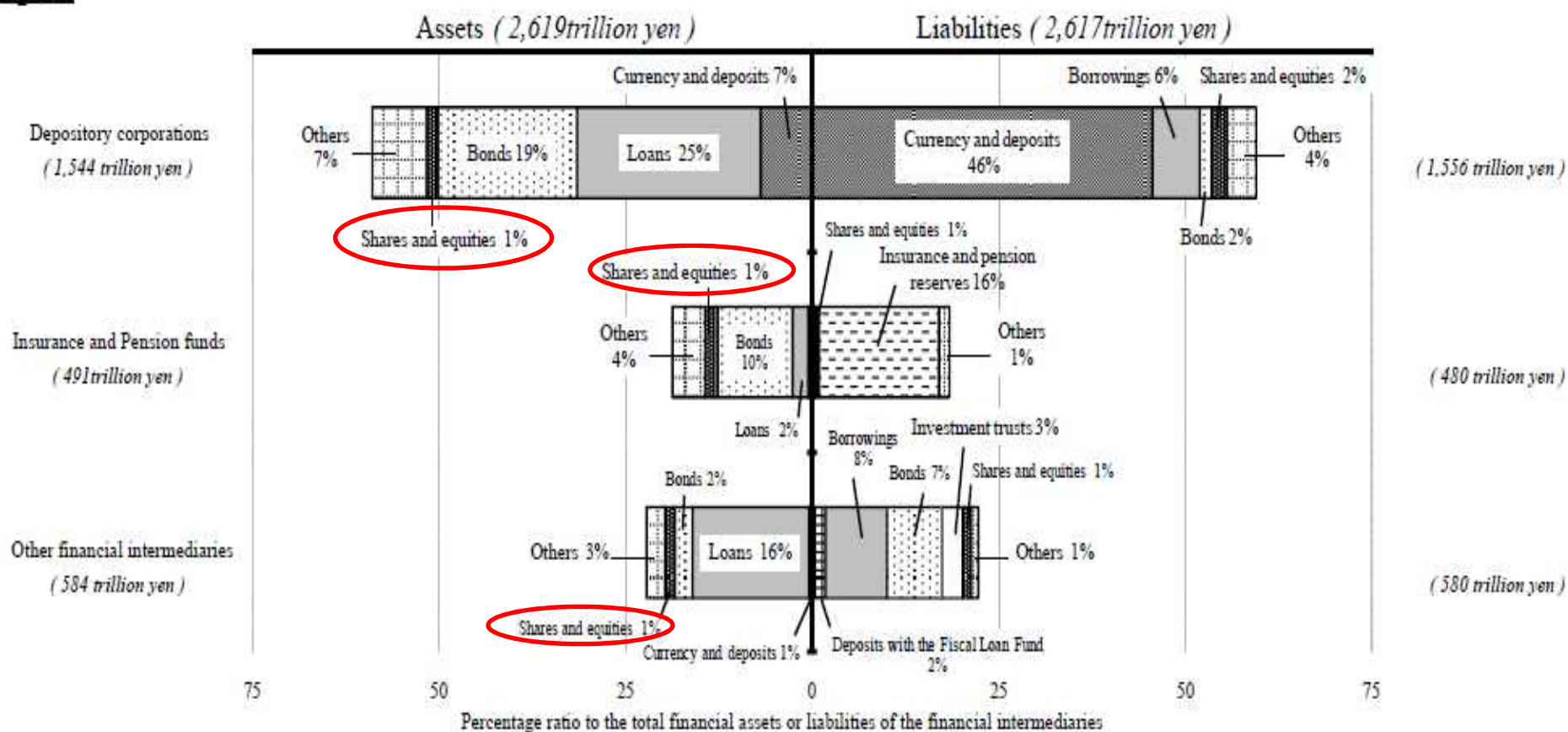


(Source: Bank of Japan, End-Sep. 2011)

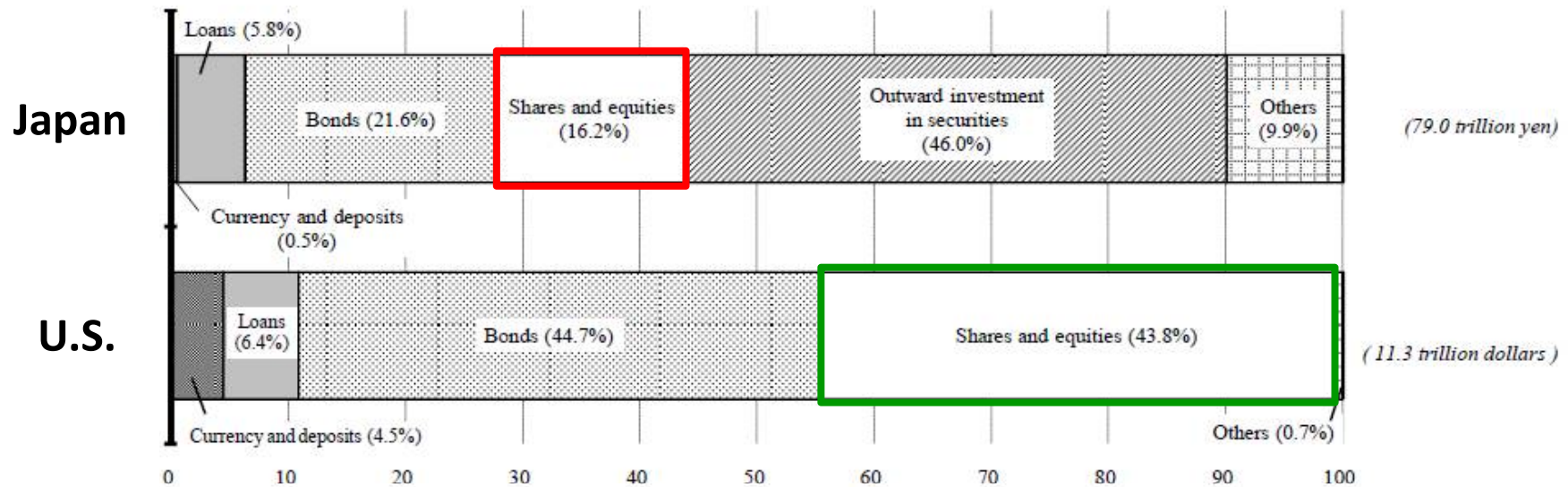
Financial Intermediaries do not invest in shares and equities as well

Financial assets and liabilities of financial intermediaries

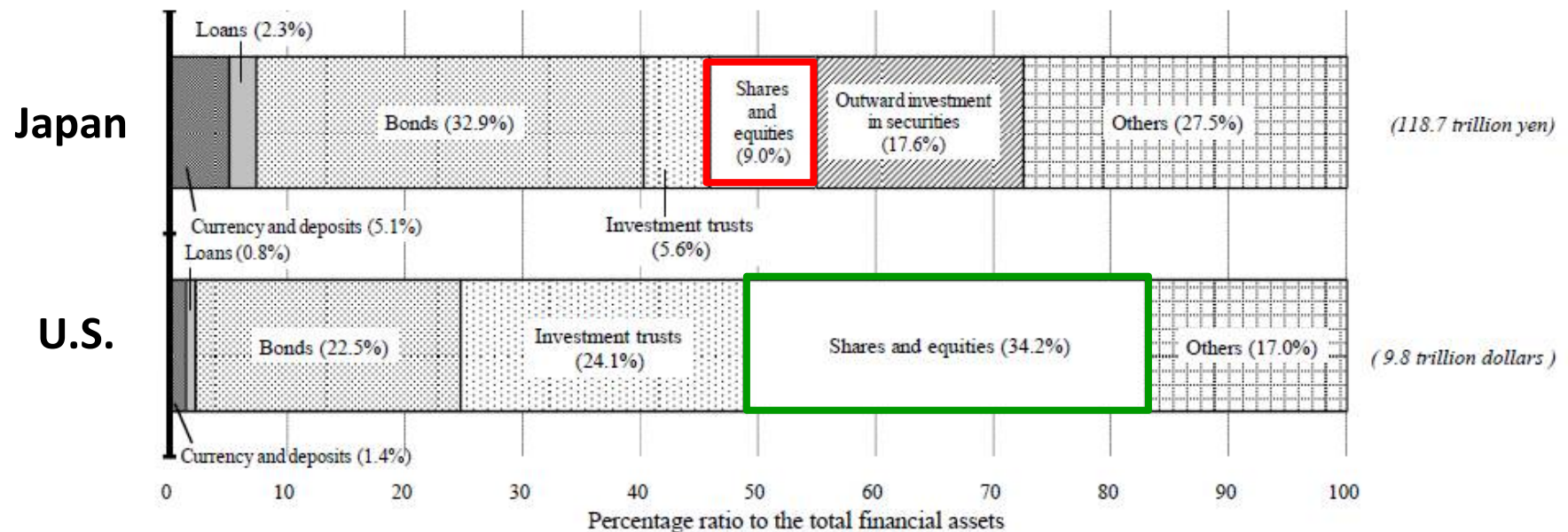
Japan



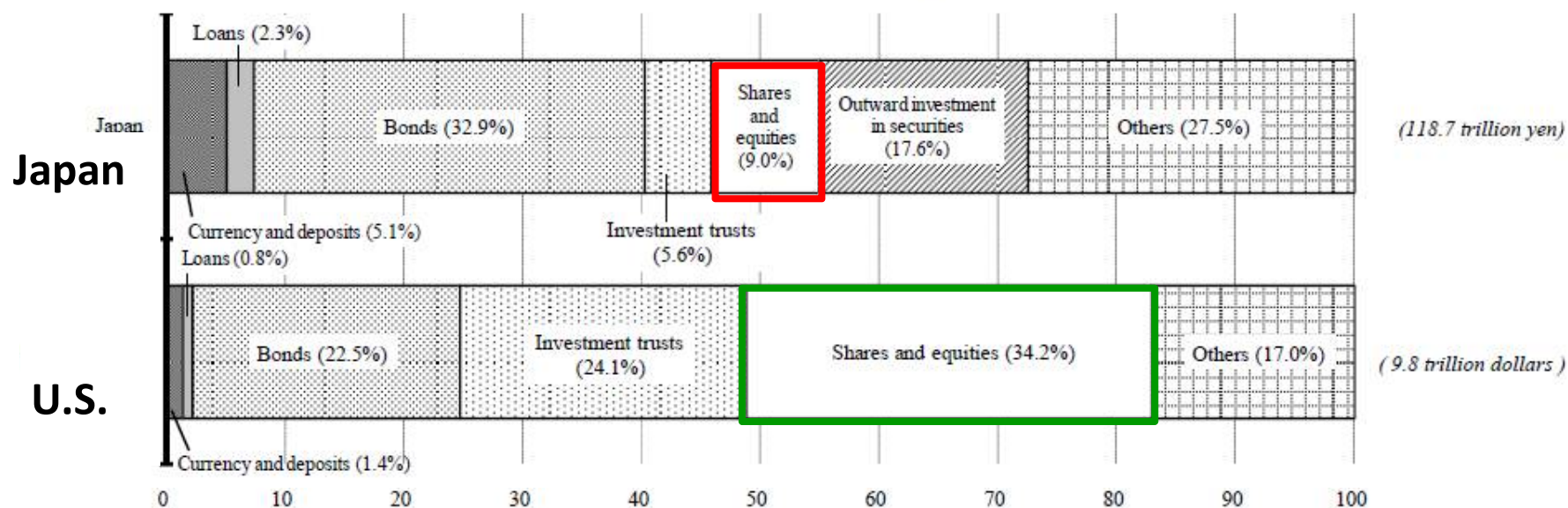
Financial assets held by investment trusts



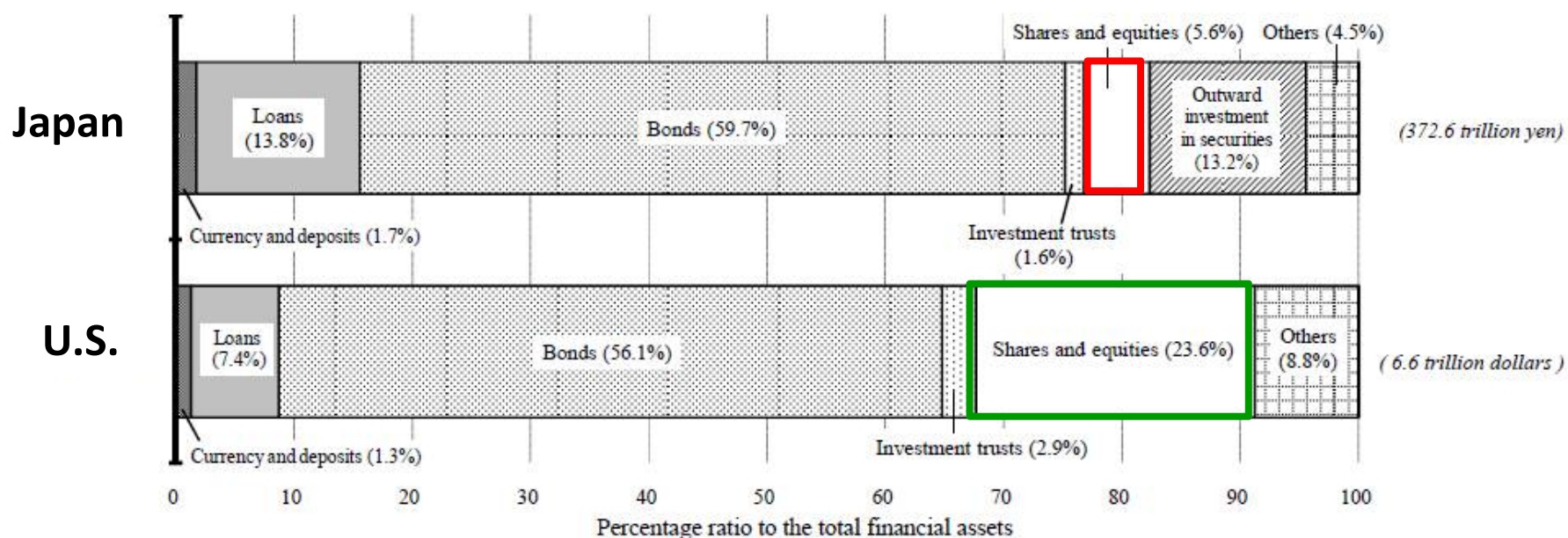
Financial assets held by pension funds



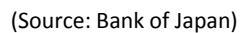
Financial assets held by pension funds



Financial assets held by insurance



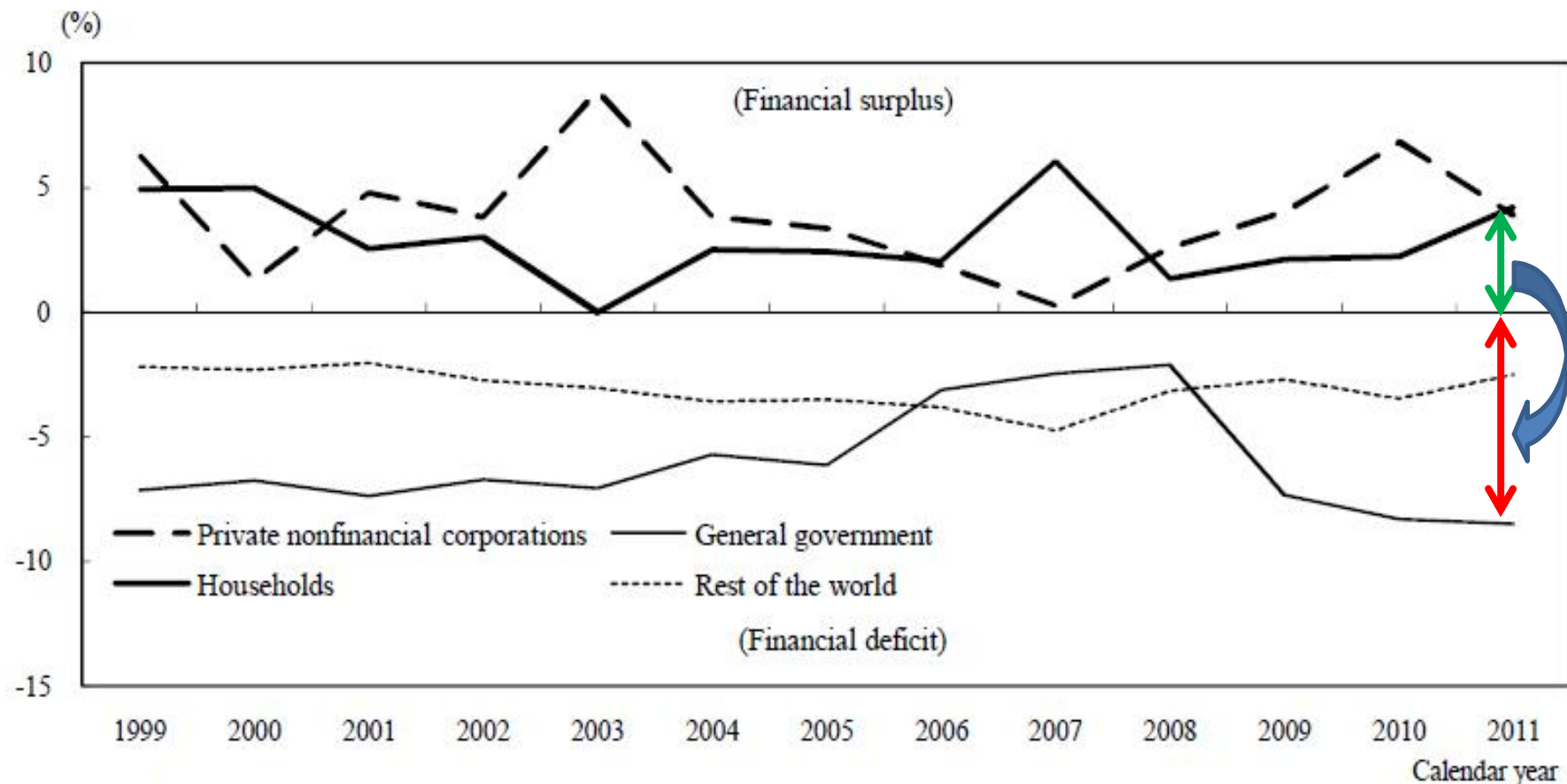
Unit: trillion yen



Financial Surpluses in private sectors are dominantly absorbed by the government sector

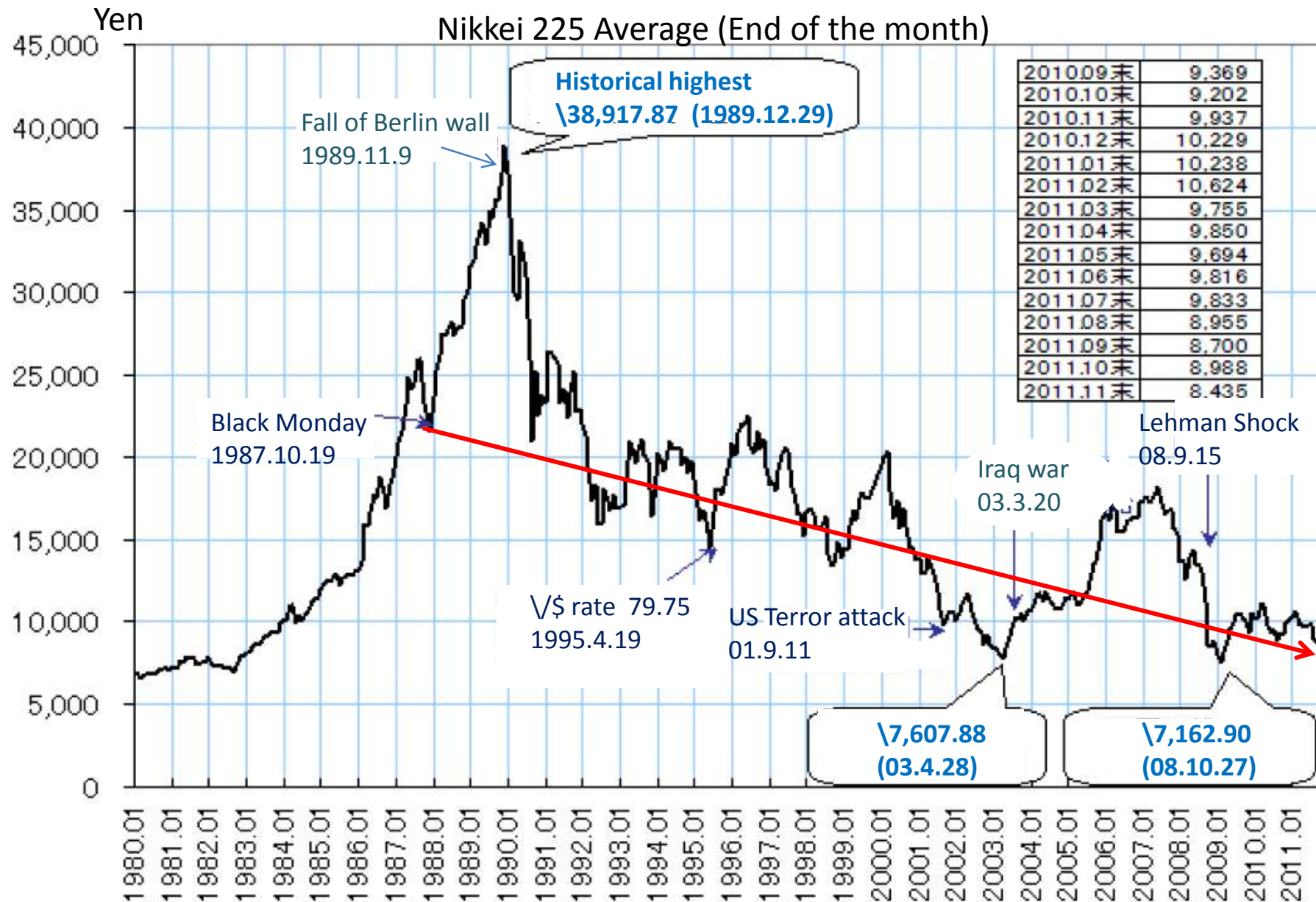
Financial surplus and deficit of major sectors (as a percentage of nominal GDP)

Japan



(source: Bank of Japan)

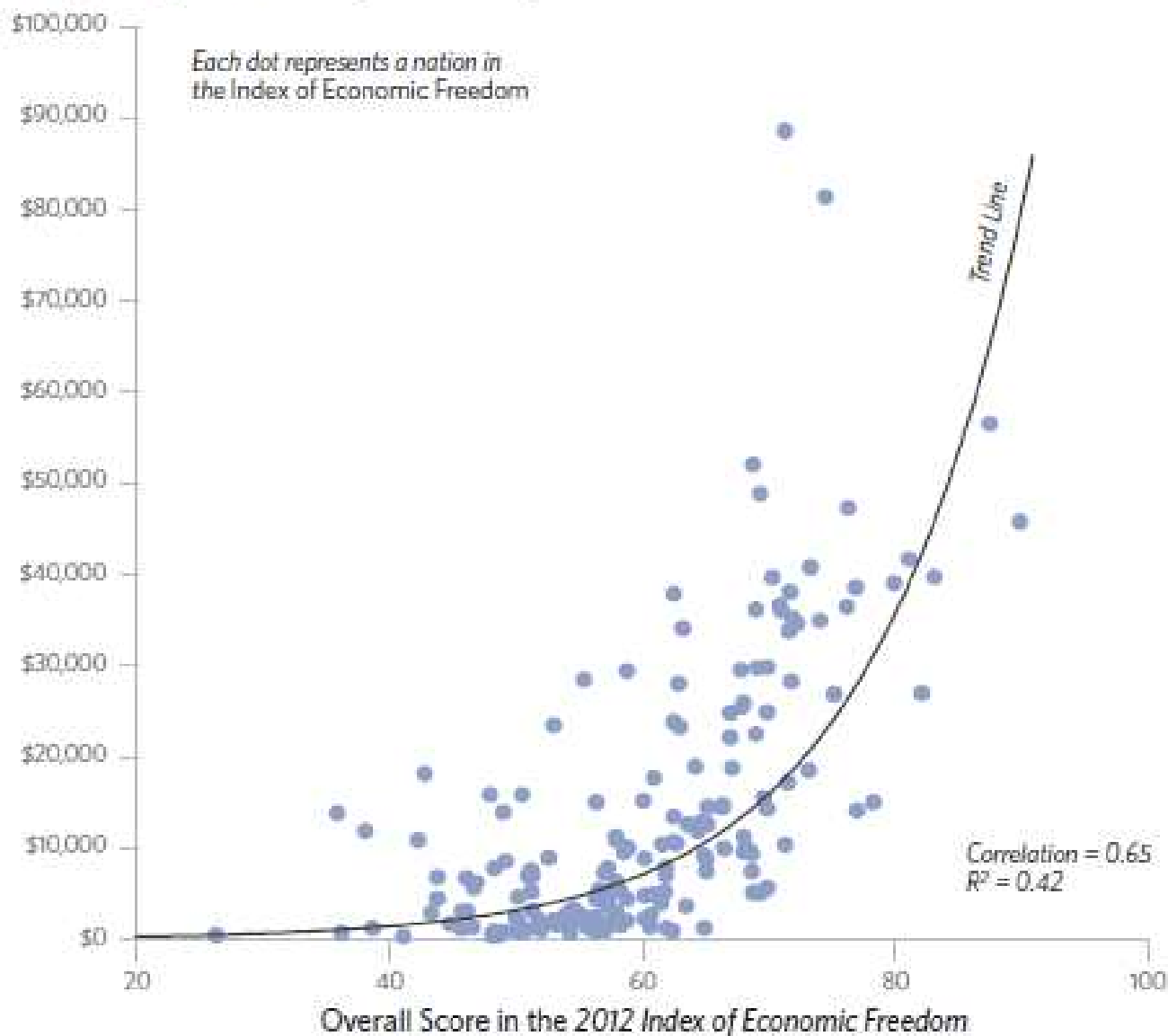
Falling stock prices justify conservative private financial asset holdings and small share of equity holdings.



Economic Freedom and GDP per Capita

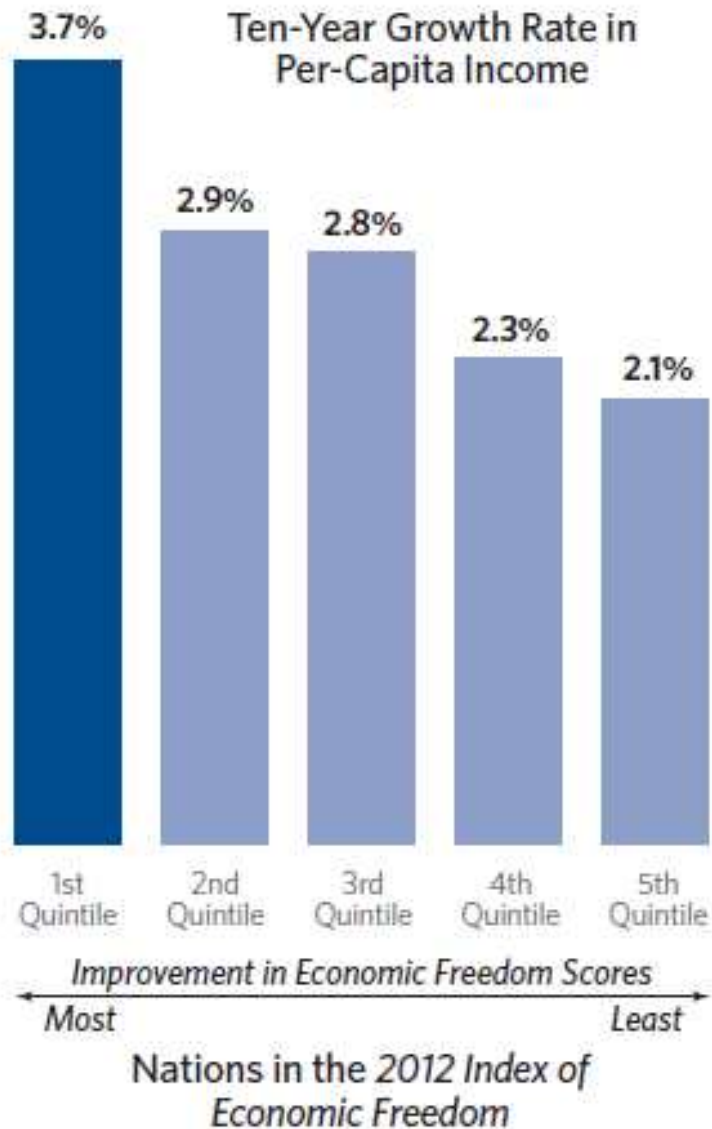
Economic Freedom Promotes Prosperity

GDP per Capita (Purchasing Power Parity)



Economic Freedom promotes Economic Growth and Technical Progress

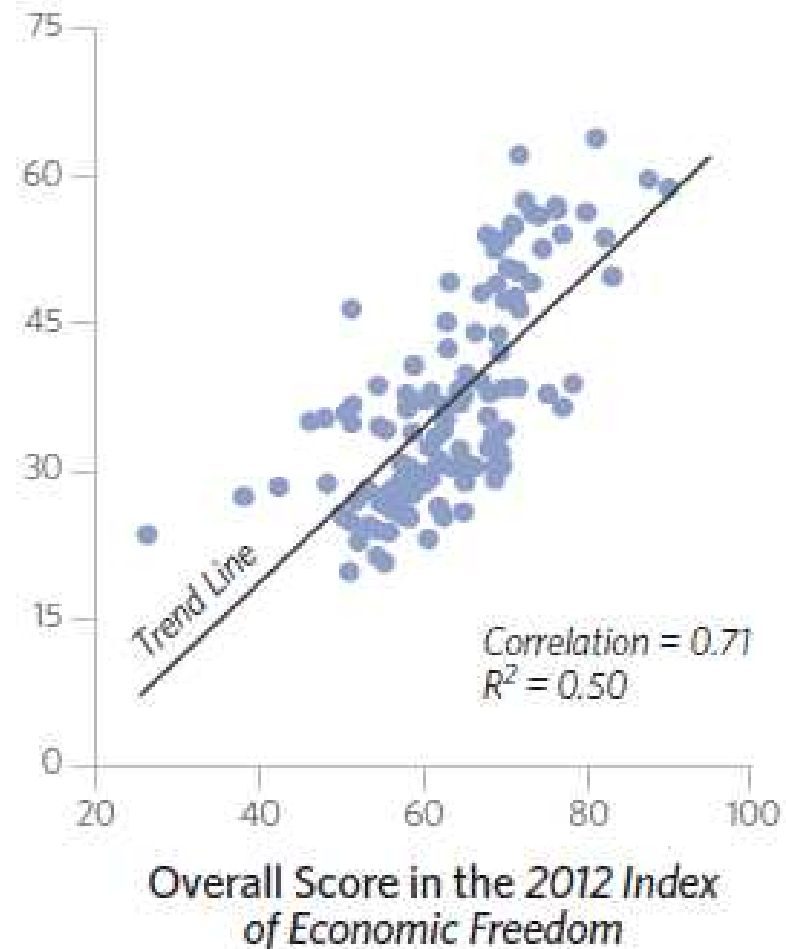
Economic Freedom and Economic Growth



Economic Freedom and Innovation

Each dot represents a nation in the Index of Economic Freedom

Innovation Capacity

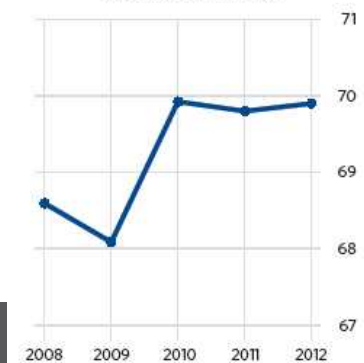


2012 Ranking of *Index of Economic Freedom*

1	Hong Kong	89.9	26	Germany	71.0
2	Singapore	87.5	35	South Korea	69.9
3	Australia	83.1	47	United Arab Emirates	67.8
4	New Zealand	82.1	54	Mexico	65.3
5	Switzerland	81.1	60	Thailand	64.9
6	Canada	79.9	67	France	63.2
7	Chile	78.3	92	Italy	58.8
8	Mauritius	77.0	99	Brazil	57.9
9	Ireland	76.9	119	Greece	55.4
10	United States	76.9	123	India	54.6
11	Denmark	76.2	138	China	51.2
12	Bahrain	75.2	139	Vietnam	51.3
13	Luxemburg	74.5	144	Russia	50.5
14	United Kingdom	74.1	
15	Netherland	73.3			
16	Estonia	73.2	174	Venezuela	38.1
17	Finland	72.3	175	Eritrea	36.2
18	Taiwan	71.9	176	Libya	28.3
19	Macau	71.8	177	Cuba	28.3
20	Cyprus	71.8	178	Zimbabwe	26.3
21	Sweden	71.7	179	North Korea	1.00
22	Japan	71.6			

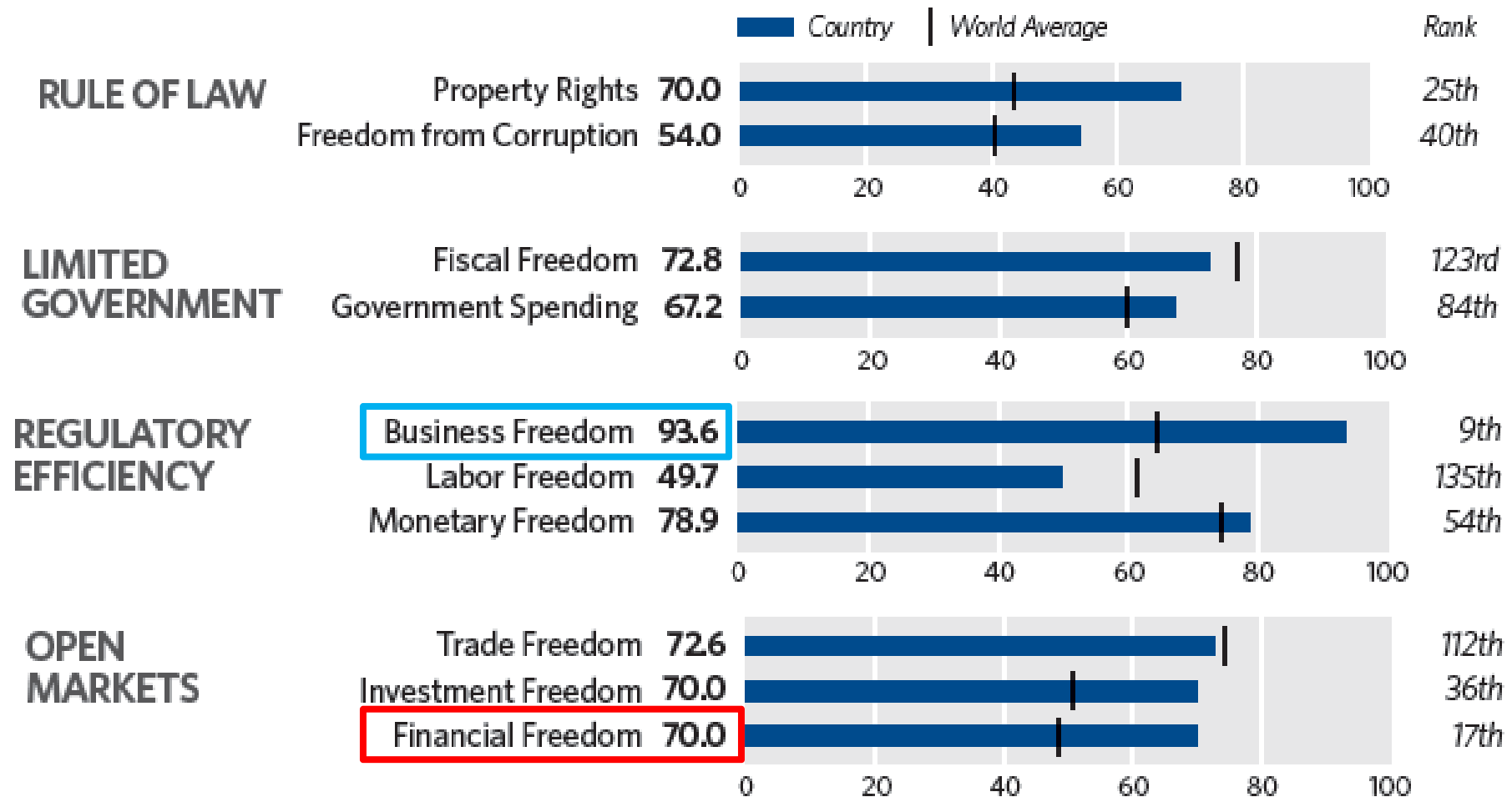
Korea has high rankings in *Business Freedom and Financial Freedom*

Freedom Trend

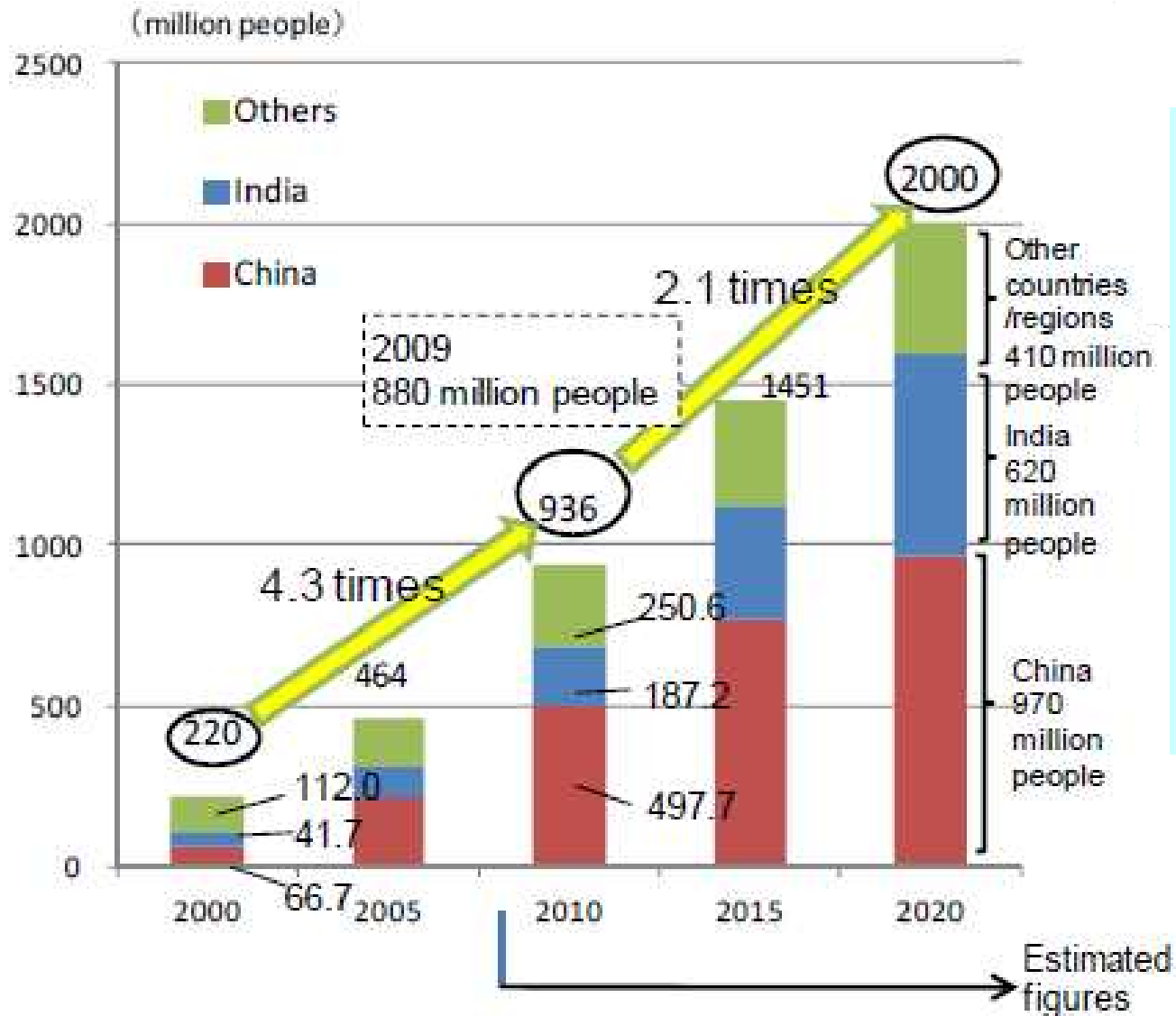


SOUTH KOREA

THE TEN ECONOMIC FREEDOMS



Asia's middle-income population will more than double within the next 10 years.



Population:

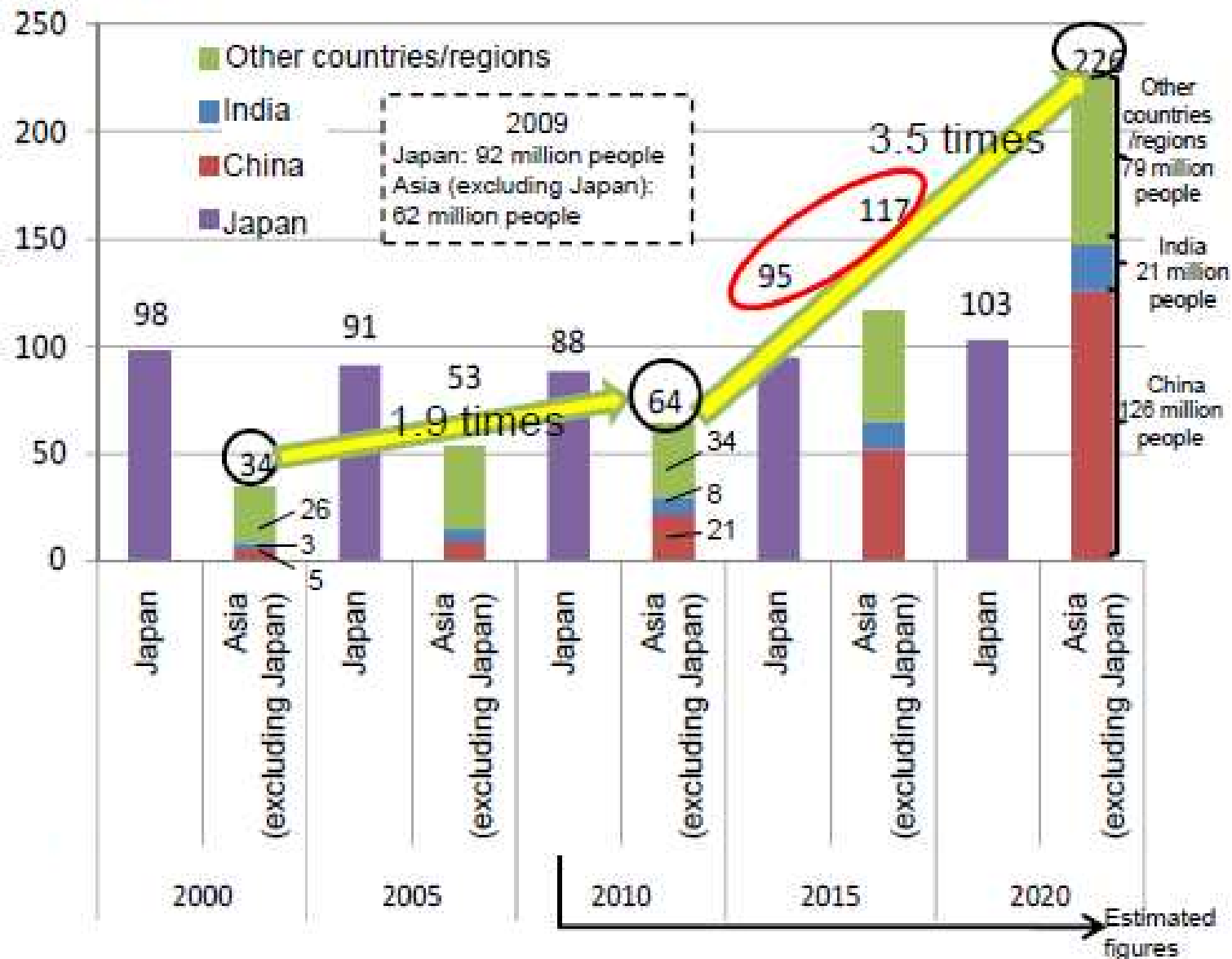
Asia: **3.3 billion**
(**50% of World population**)

NAFTA: 440 million

EU: 500 million

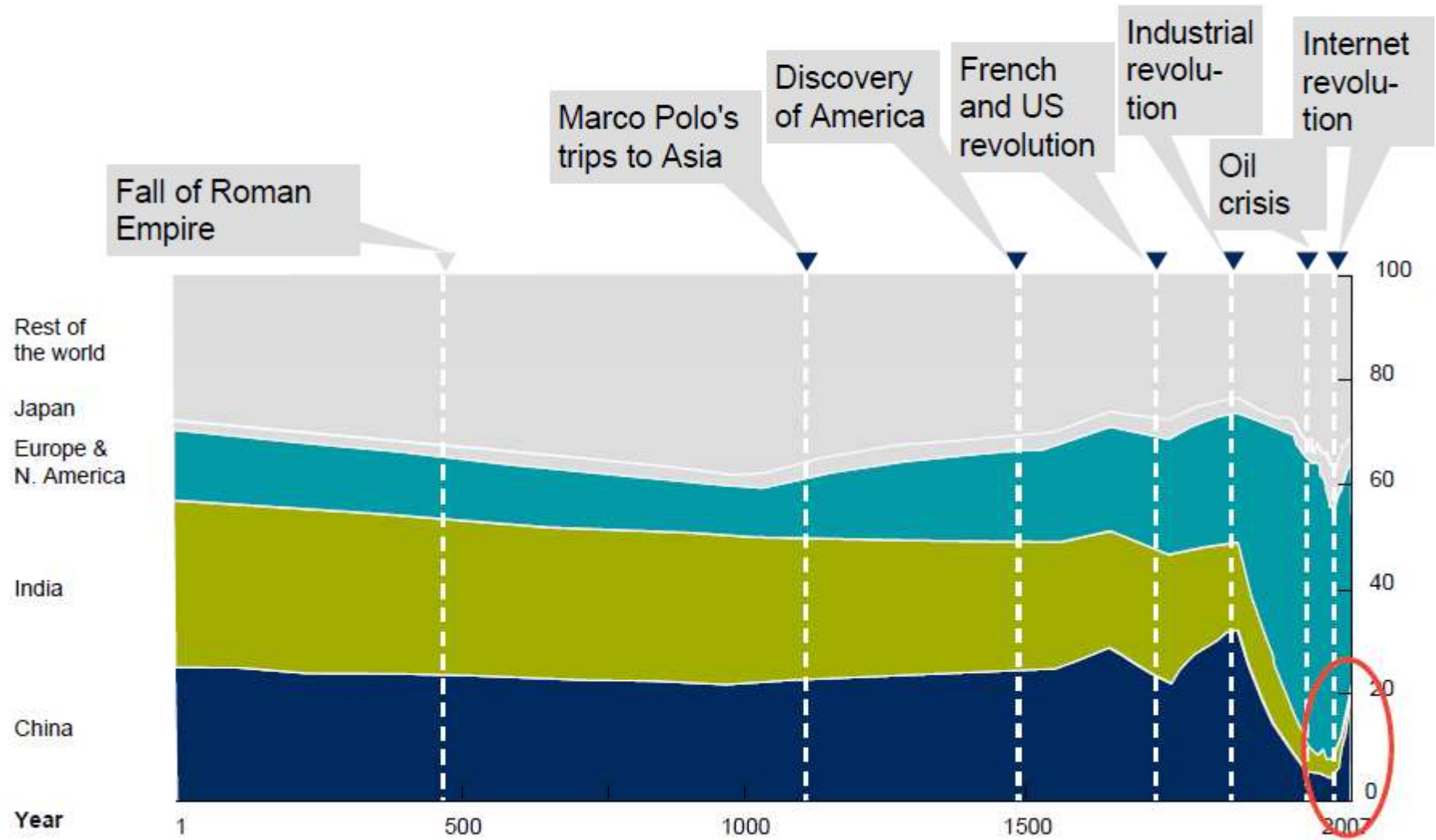
High-income population in Asia (excluding Japan) to exceed that of Japan within the next 5 years

(million people) Changes in the Population of Asia's High-Income Segment



... as Asia looks set to return to its natural “half share” of the world economy

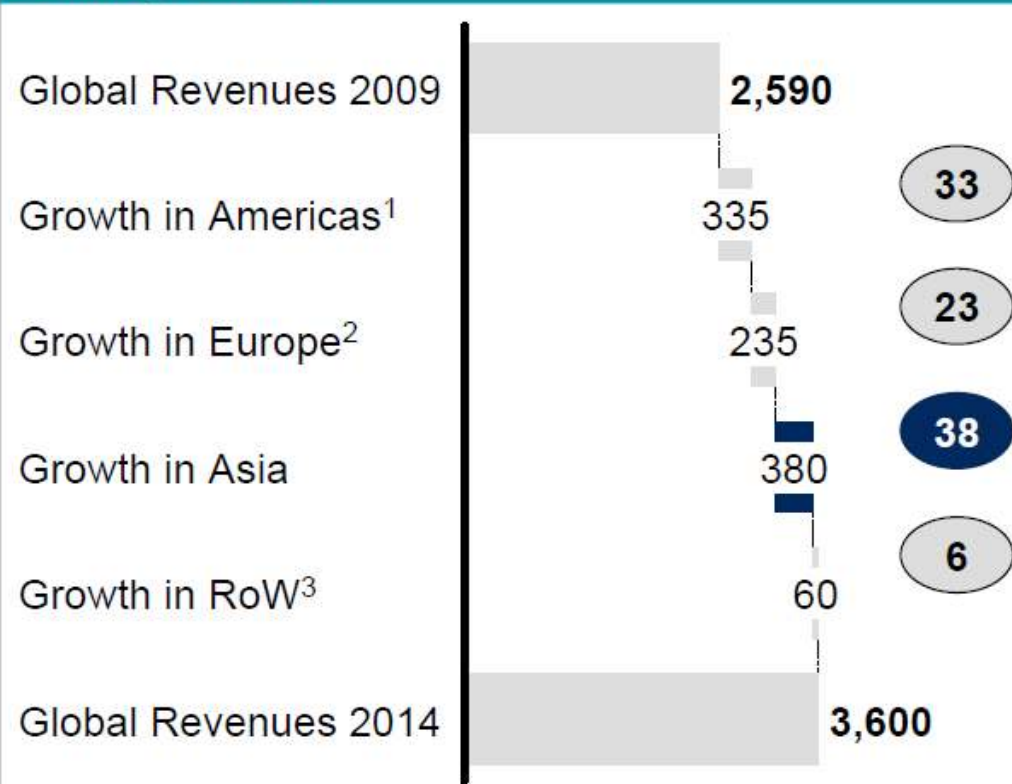
Share of total world GDP (1 AD-2007 AD), GDP share, percentage



Going forward, Asia will be the land of opportunity with ~40% of incremental global banking revenues

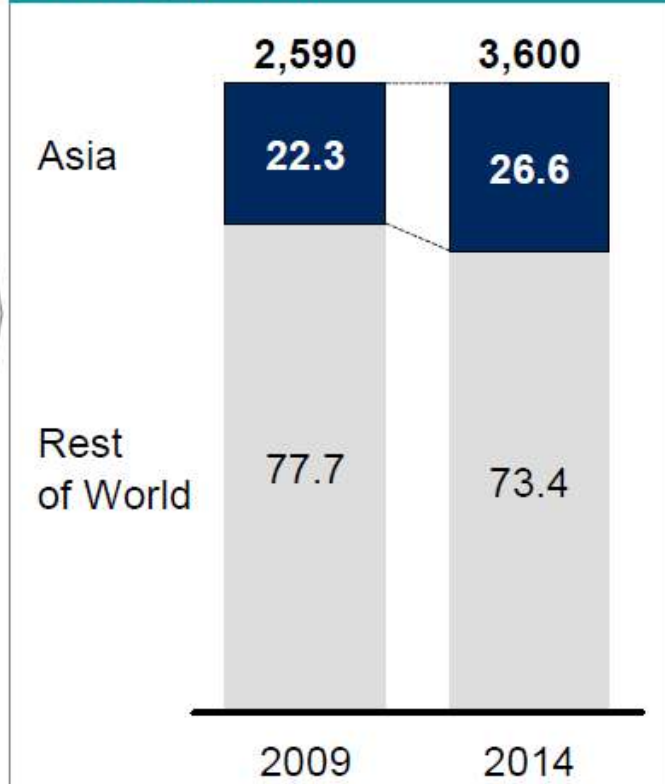
(x) Percentage share of incremental growth

Global banking revenue pools, risk-adjusted US\$ bn; Percent



- 1 Includes North America and Latin America
- 2 Includes Eastern Europe and Western Europe
- 3 Includes Africa and the Middle Eastern region

Asia's share in global banking revenue pools US\$ bn; Percent



What is the Role of Financial Market to tackle Longevity Risk?

- Financial Market is **not a magic stick** to solve the problems of aging society directly.
- Basic solution is to boost the **economic growth** which gives resources to reduce the longevity risk
- Financial market is the key sector that contribute to enhance economic growth
- Economic Growth comes from **technical progress and free trade**
 - ➡ Promote Economic Freedom
- Early 2010s is the second part of the third industrial revolution
- Financial Market should help to boost the economic growth through the supply of growth money to **the growth center of the world - Asia**
- Take the huge potential of Asian market into the own economy to boost economic growth of the own country
- Japan/Korea are located in the heart of Asia: Both the source of technical progress
- Asian is growing due to technology diffusion facilitated by internet revolution
- Aging society creates new opportunities, when a economy is seen from a **boarderless** environment ➡ Take Asia economically as one country
- Turn the longevity risk into **new opportunities**
- Elderly people have huge financial assets that could lead to huge new markets, when their needs are correctly matched by appropriate goods and services
- Asia will be the **land of opportunity** with ~40% of incremental global banking revenue