

Challenges Faced by and Corporate Strategy of a Japanese Life Insurer

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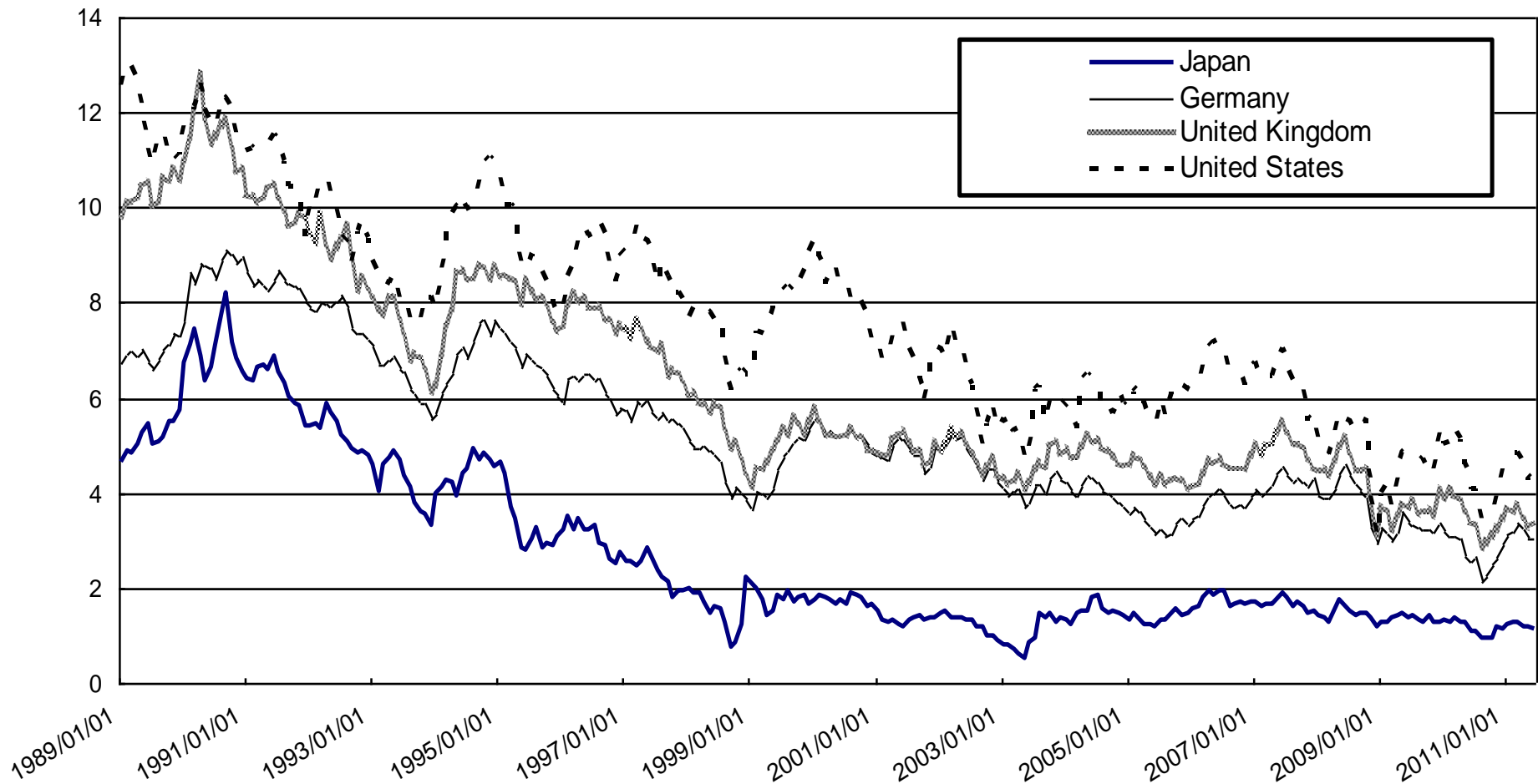
Tao of supervision and risk management – Yin and Yang

Japan experienced a low interest rate environment

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- Interest rates remain low for a long time

Government / Treasury Bonds (10 year) Interest Rate



Stock market has been also disappointing

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- Low interest rate coincided with poorly-performing stock prices

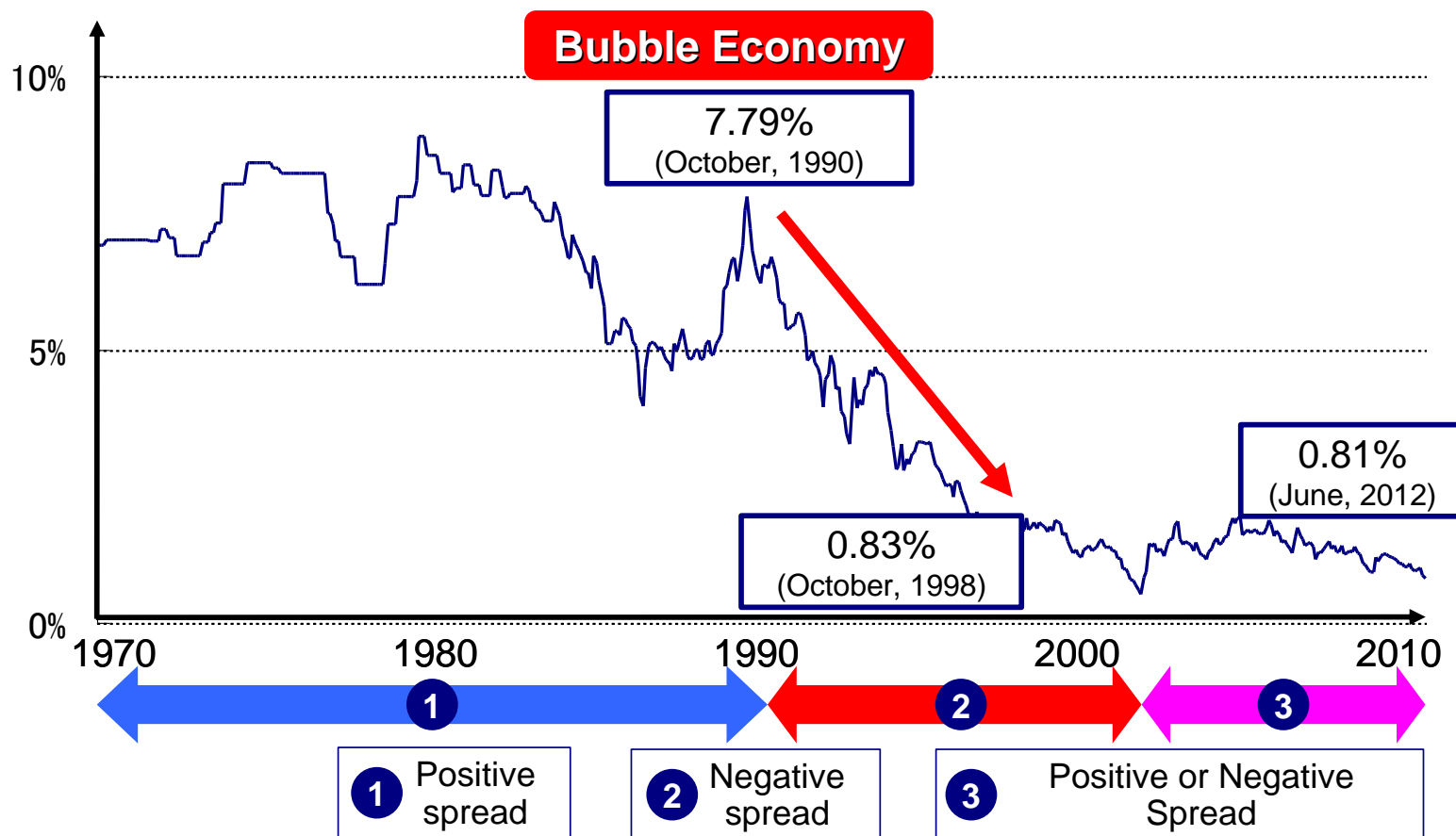


Negative spread problems in 1990s

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- After the collapse of the bubble economy, Japan experienced a long-lasting, severe investment environment with low interest rates and poor performing stock prices. This, combined with a market dominated by long-term insurance products with high guaranteed returns, led to negative spread problems in the mid 1990s, although most Japanese life insurers endured the severe business environment.

10-year Interest Rate in Japan



Measures to reduce negative spreads

■ The following are some examples of the measures taken by our company to reduce negative spreads during the difficult time.

■ **Reduce guaranteed interest rate**

■ **Secure mortality profit by enhancing protection-oriented products**

■ **Reduce operating expenses and personnel expenses**

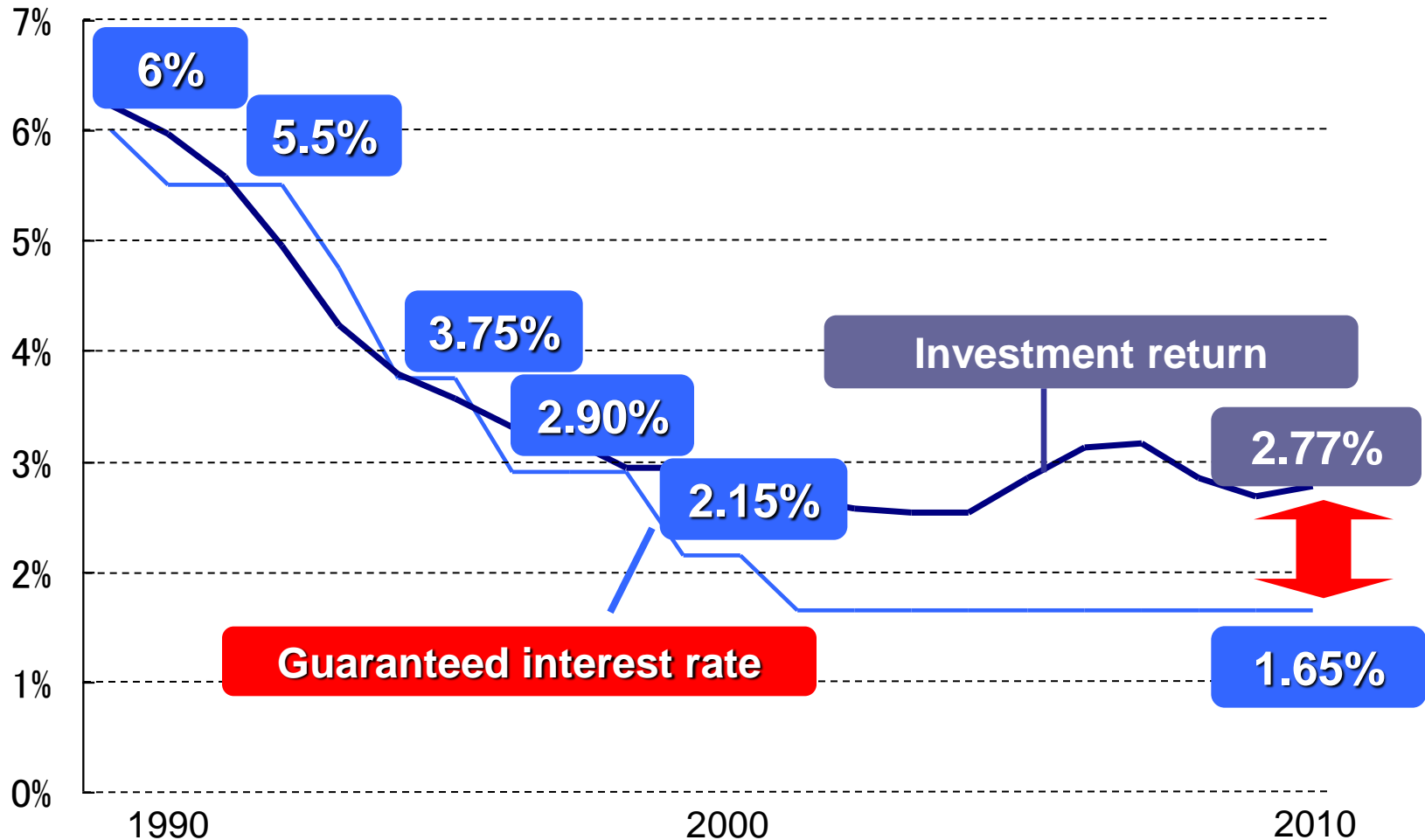
■ **Change investment strategies to match the characteristics of insurance liabilities, and sophisticate risk management**

■ **Accumulate additional policy reserves and enhance capital**

Measure I: Lowering guaranteed interest rate

- Reduced the guaranteed interest rate gradually for new policies

Lowered guaranteed interest rate



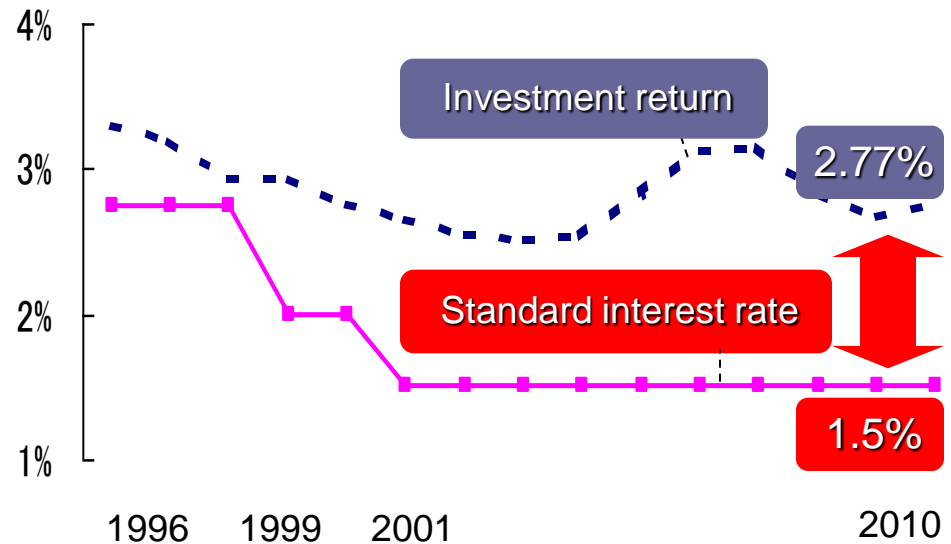
Regulatory incentives to reduce assumed interest rate

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Standard Reserve Valuation System (Since 1996)

- This system requires to calculate the minimum policy reserve by using an interest rate prescribed by the supervisory authority. (based on 10 year Japanese government bonds)
- Where pricing is detached from the statutory interest rate, they may be significant additional reserving costs

Trends in the Standard Interest Rate



Continuity test – a mechanism to reflect the effect of rate change

- This amended Insurance Business Law also requires life insurance companies to conduct future cash flow tests to ascertain whether there would be any difficulty with the firm continuing its operations
- Japan's Actuarial Standards of Practice allows covering negative spread by surplus from future new business when conducting the "continuity test".

Measure II: Securing mortality profit

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- Secured stable mortality profit
- Continued to develop protection-oriented products

Stable mortality profit

(Billions of Yen)

	2005	2010
Mortality profit	540	437.4

Undistributed earnings	236.8	231.2
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Protection-oriented products

Customers can select insurance products from a well-balanced product portfolio

Whole life

Term life

Death coverage

Dread Disease

Nursing care

Serious diseases and nursing care coverage

Medical coverage

Medical

Cancer

Saving and retirement coverage

Endowment

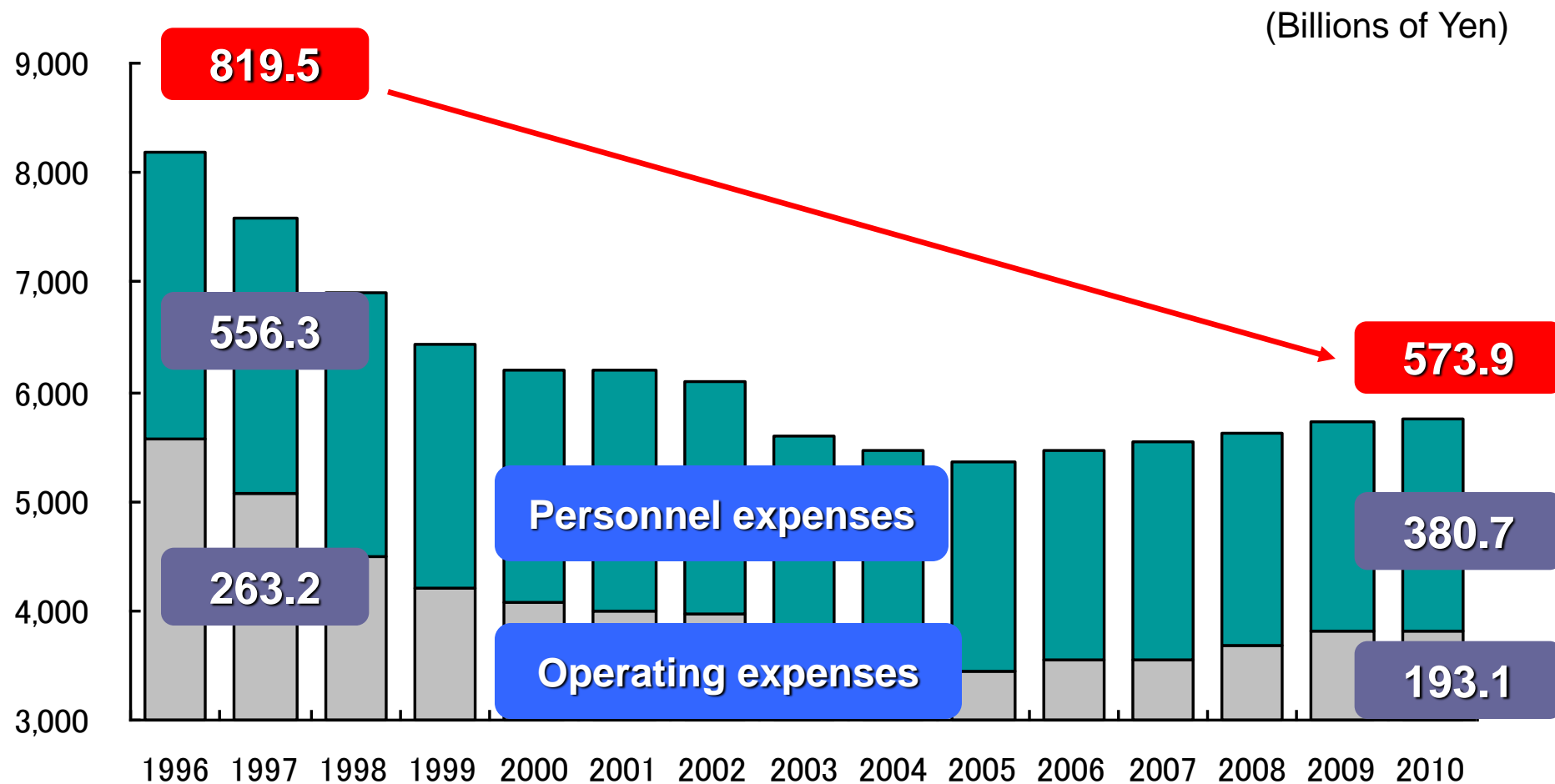
Annuity

Measure III: Reducing expenses

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■ Reduced operating expenses and personnel expenses

Trends of expenses



Measure IV: Changing investment strategies

- Changed investment strategies with more focus on ALM
 - increase in yen-denominated fixed income asset
 - extend asset duration

Breakdown of asset portfolio

	2000	2005	2010
Public and corporate domestic bonds	27%	36%	46%
Loans receivable	29%	20%	18%
Domestic stocks	17%	22%	13%
Foreign securities	11%	10%	12%

※hedged foreign bonds is included in the bond category.

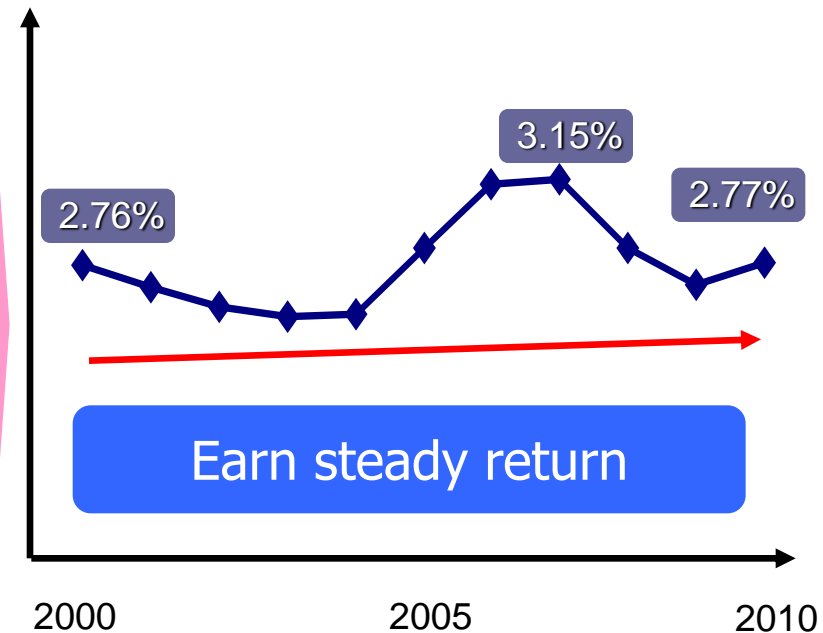
(Market Conditions)

Long-term interest rates	1.28%	1.77%	1.25%
Nikkei Stock Average	¥13,000	¥17,060	¥9,755

Shift to long-term assets

	2000	2005	2010
Average asset duration	6.1years	8.0years	10.9years

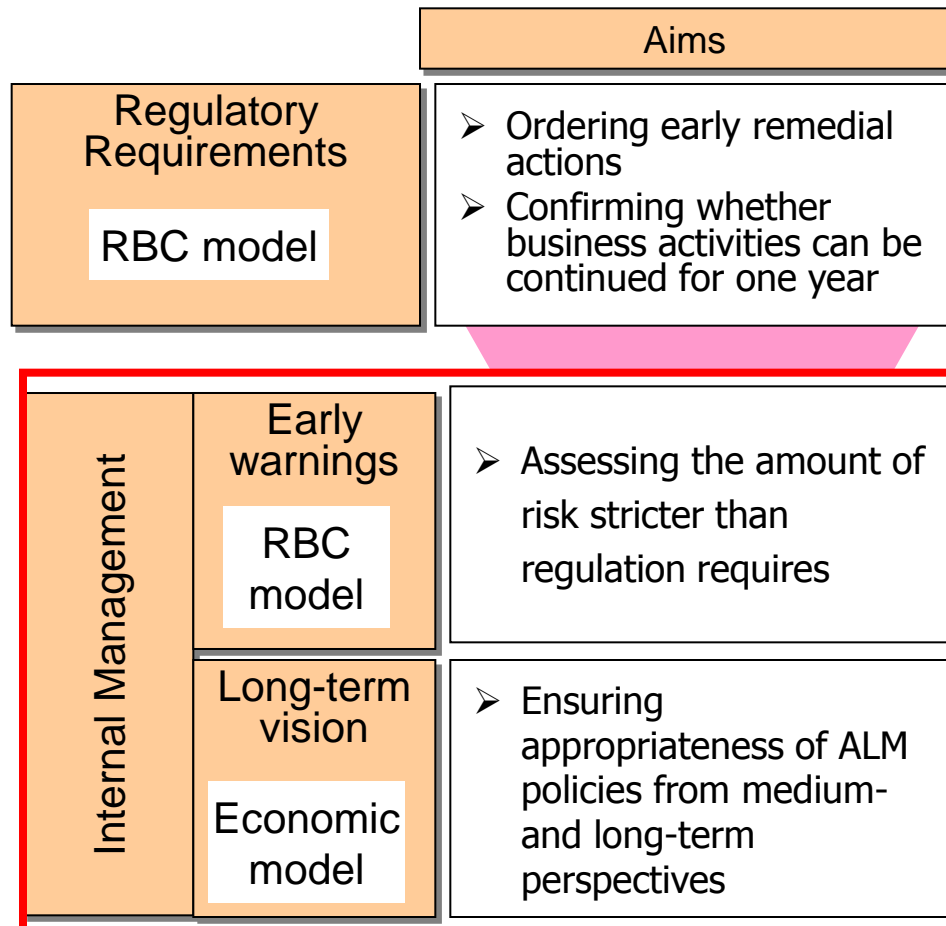
Investment return



Measure V: Enhancing risk management

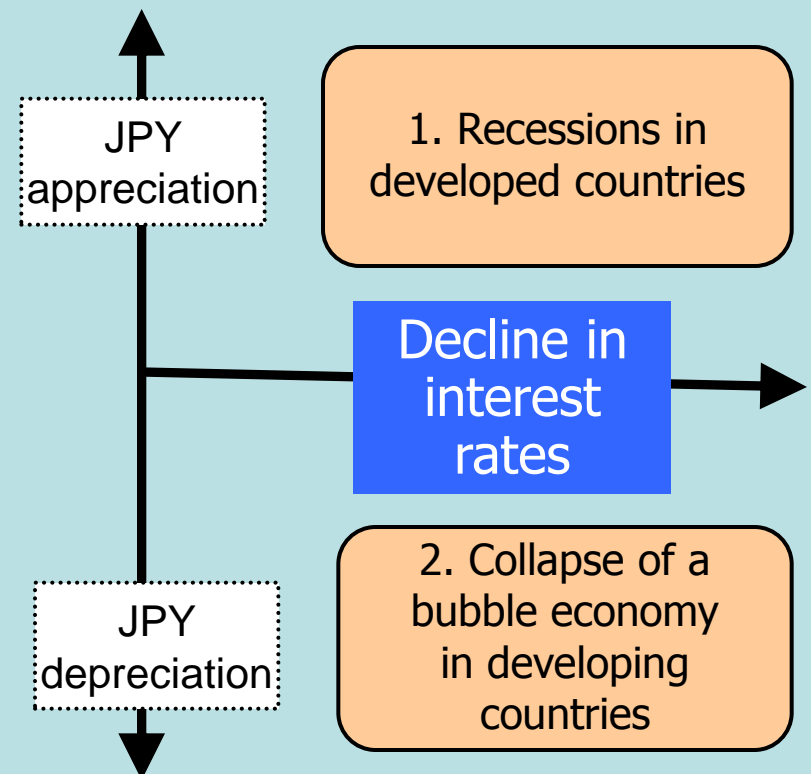
- For the purpose of internal management, developed and used both an RBC model (**early warnings**) and an economic model (**long-term vision**)

Regulatory Requirements and Internal Management



- **Stress Tests:** Verify the adequacy of the ability to respond to a variety of events that could have a significant effect on profits

Stress scenario



Measure VI: Accumulating policy reserves

- Accumulated additional policy reserves, corresponding to the estimated future effect of "negative spreads"

Accumulation of additional policy reserves

Policy Reserves

**Approx.
¥40trillion**

- Reserves set aside by "lock-in method" in accordance with the laws and regulations
 - For example, policies issued in 1990 are still evaluated at 6 percent, their guaranteed interest rate.



Additional policy reserves

**Approx.
¥1.2trillion**

- Accumulated additional policy reserves approx. ¥1.2 trillion since 2006

Reduction of the Negative Spread

Negative Spread Improvement Effect

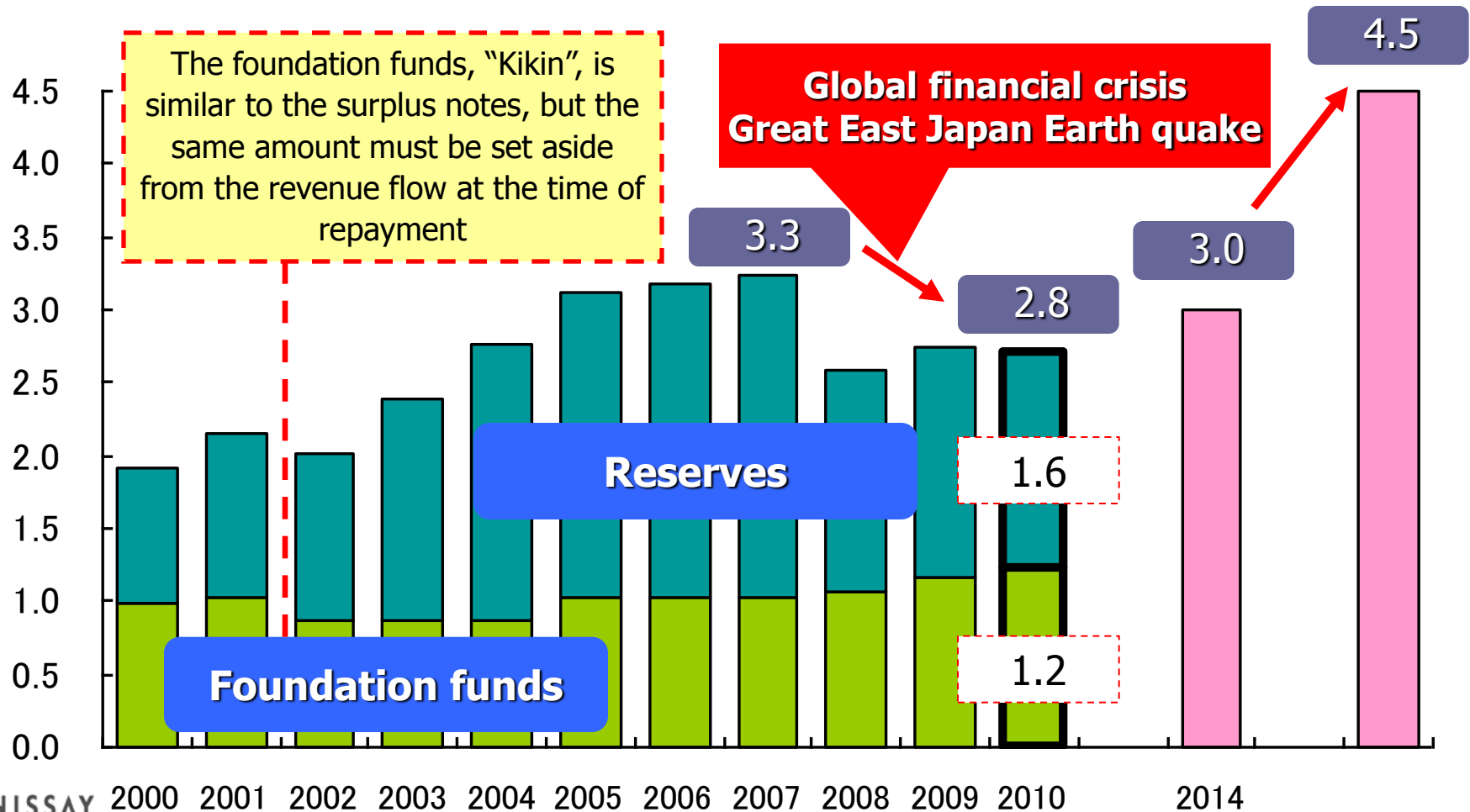
In terms of	2010
Amount	¥60 billion
Average guaranteed interest rate	24BP

Measure VII: Enhancing capital

- Enhanced capital by accumulating internal reserves and pursuing external foundation funds

Enhancement of capital

(Trillions of Yen)



Recovery from negative spread problems

- After more than a decade struggle, negative spread problems have been almost overcome: **Investment return > Average guaranteed interest rate**

Measures to
reduce
Negative
Spread

Reduce
guaranteed
interest rate

Secure
mortality
profit, and
reduce
expenses

Change
investment
strategies, and
sophisticate risk
management

Accumulate
additional policy
reserves and
enhance capital

Trends of investment gains

(Billions of Yen)

	2000
Difference between investment return and average guaranteed interest rate	(1.01%)
Impact of Negative Spread	(340)
Undistributed earnings	249

2005	2006	2007	2008	2009	2010
(0.44%)	(0.09%)	+0.08%	(0.10%)	(0.14%)	+0.07%
(150)	(30)	+30	(40)	(60)	+30
237	293	281	185	255	231



Fighting against low interest rates and negative spread problems



Demographic challenges and opportunities and longevity risk

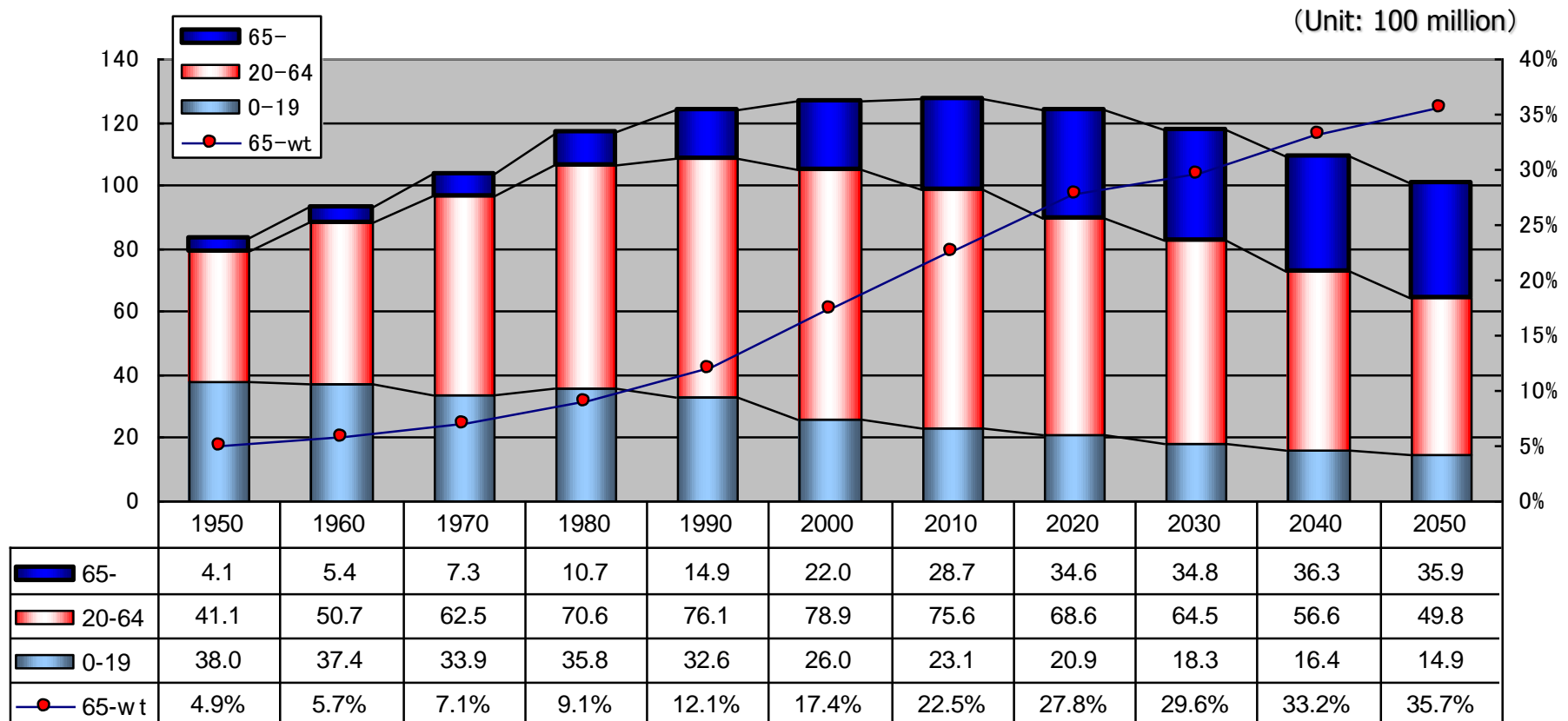


Regulation and valuation: Issues identified in the Asia Pacific region



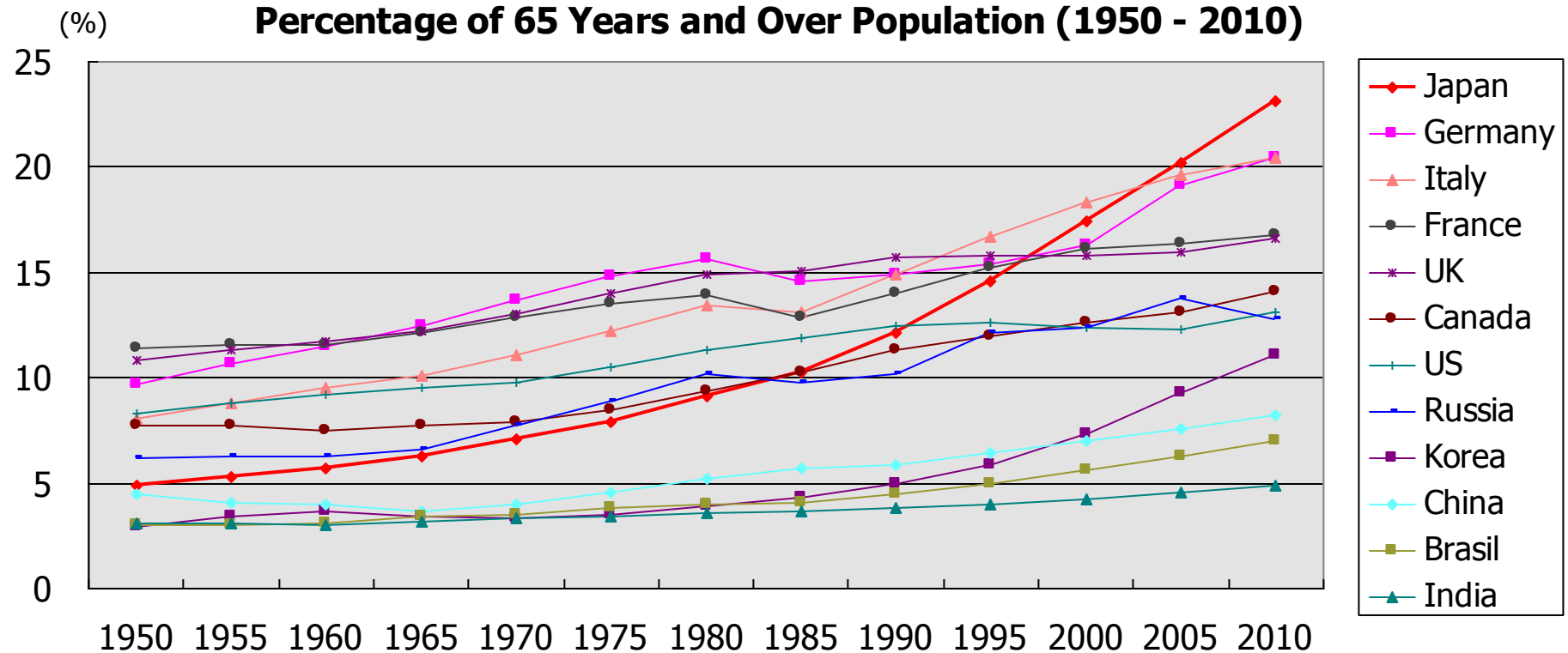
Tao of supervision and risk management – Yin and Yang

- Japanese population: 127 million 760 thousand as of 1 October, 2005, a drop of 0.02% from the previous year and decreasing since then
- Aged 65 and older reached 25.6 million, which exceeded for the first time 20% of total population and increasing since then



(Source: National Institute of Population and Social Security Research "Japan's projected population")

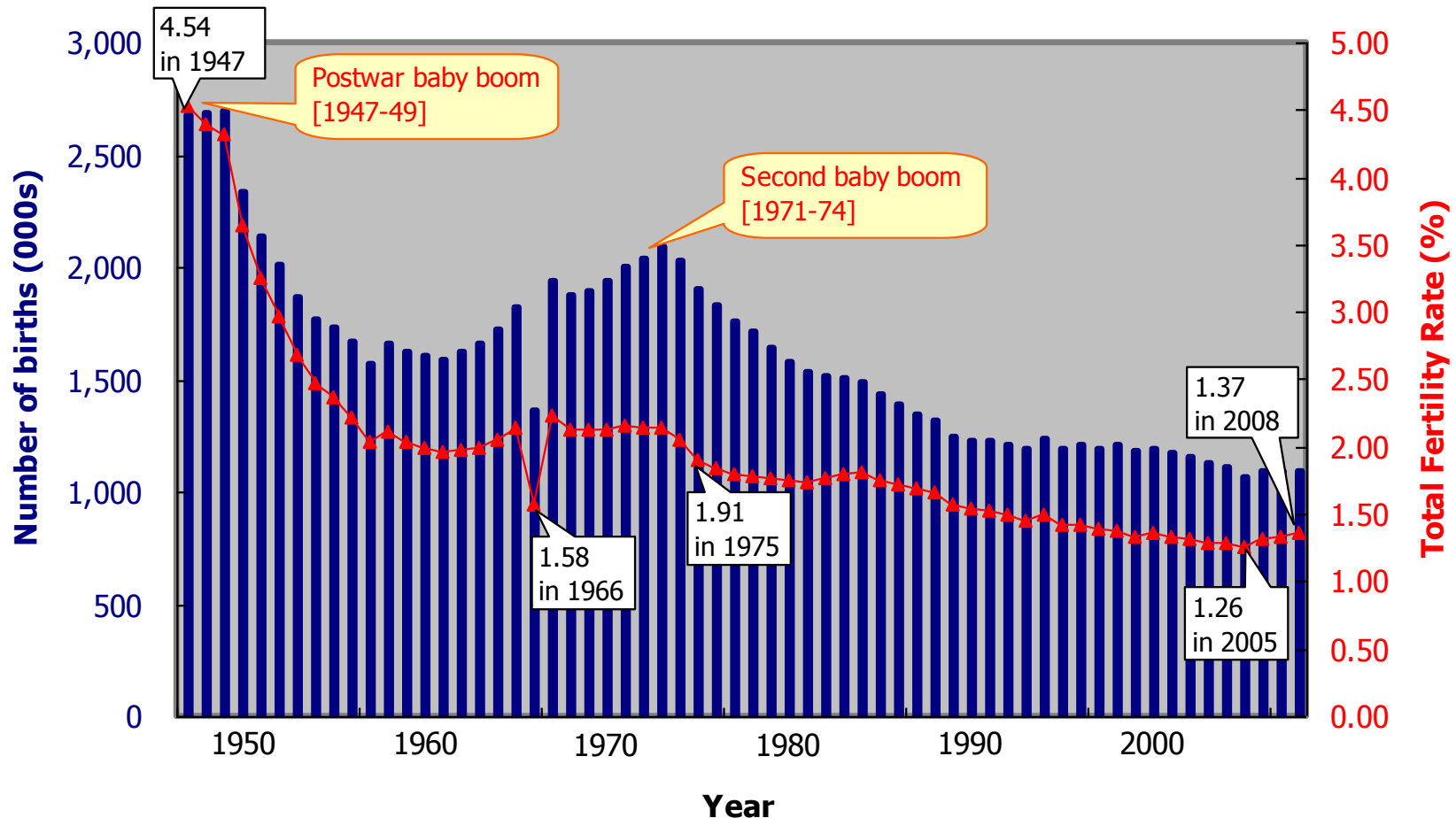
- Japan was in the lower-rankings until the 1980s, in the middle in the 1990s, and is already the highest in the early 21st century



(Source: Statistic Bureau, Data is based on United Nations, "World Population Prospects," The 2010 Revision
Note: Data for Japan is based on "Population Census of Japan")

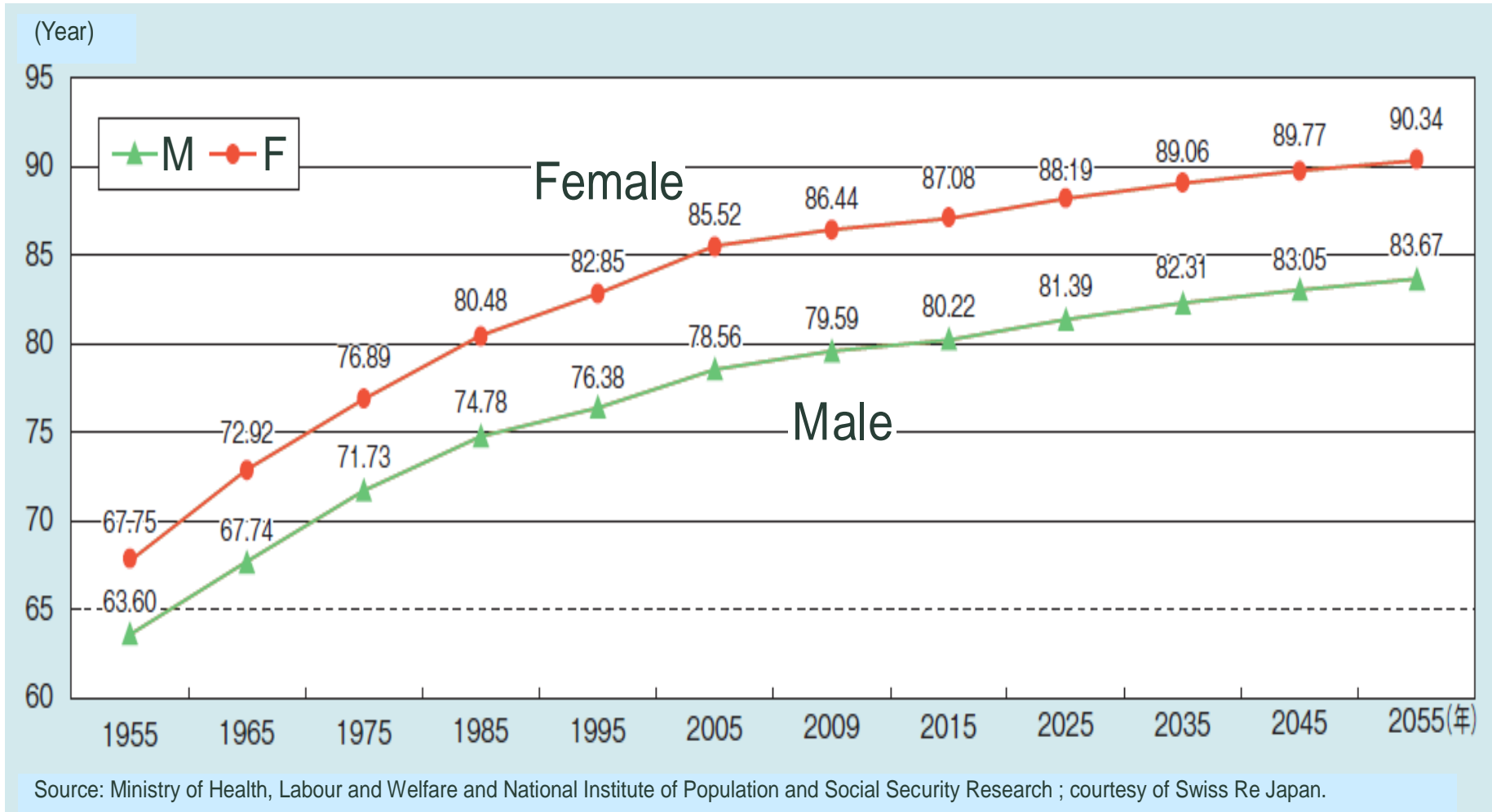
Lower fertility rate - Trends in number of births

- Total fertility rate has dropped from 4.54 in 1947, to 1.91 in 1975, and to 1.26 in 2005
- Baby Boomers reaching retirement age!



(Source: Ministry of Health, Labor and Welfare, Vital Statistics)

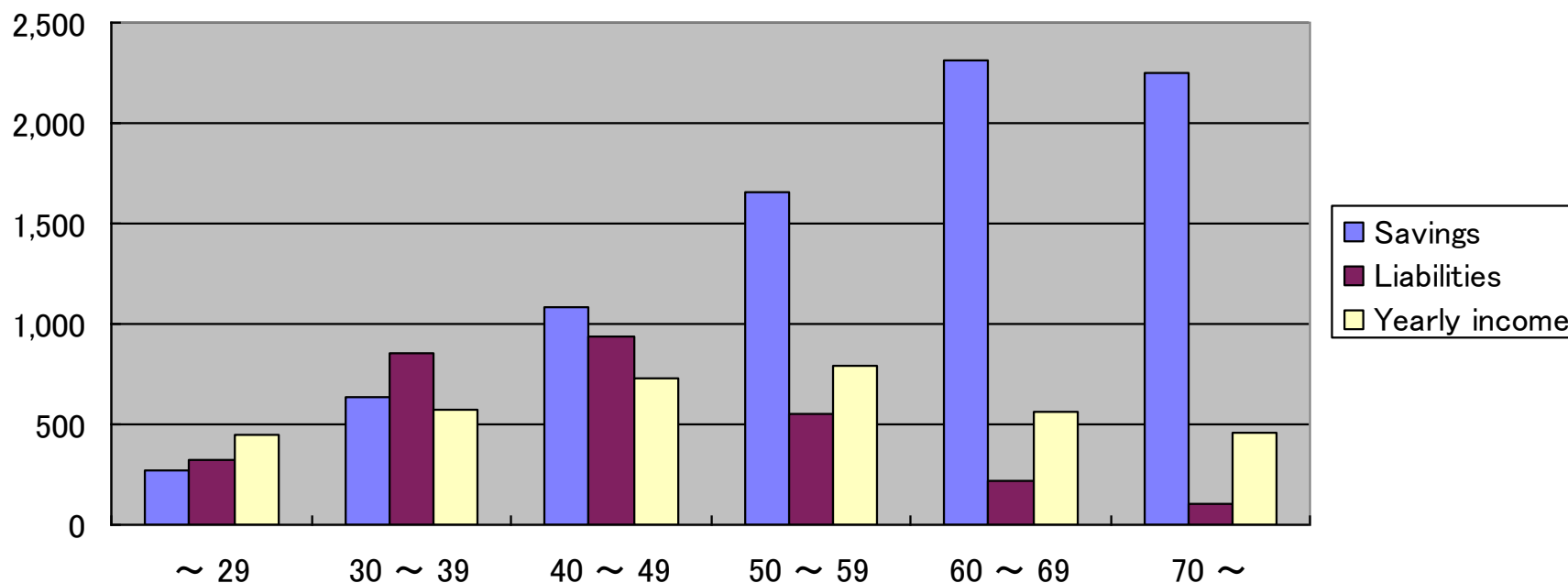
- Japanese life expectancy is among the highest in the world.
- Many Japanese women live alone for around 10 years after their husbands pass away.



■ Savings per household by age in 2010

- ▣ Savings are 2.7 million yen for a householder under age 30
- ▣ 8.5 times larger at 23.14 million yen for a householder age 60 or older
- ▣ Liabilities to be higher as age increases up to the ages 40 to 49, at which age they peak and begin to decrease

(million yen)



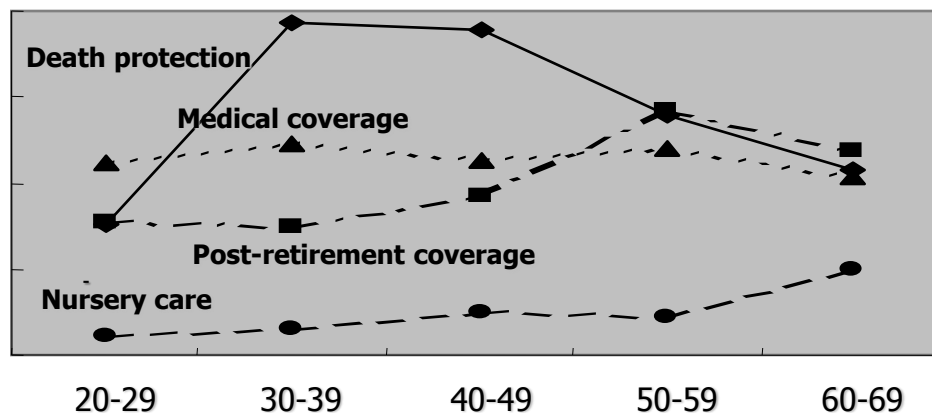
(Source: Annual report on the family income and expenditure survey. Income and expenditure, Statistics Bureau, Ministry of Internal Affairs and communications 2010)

Changing life insurance needs

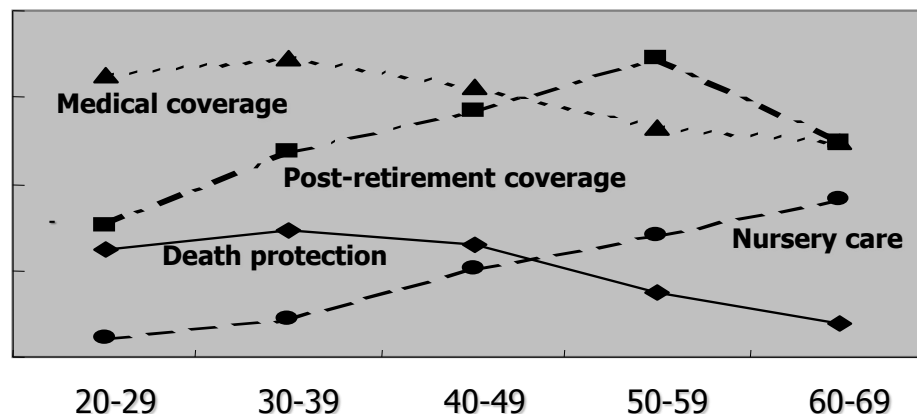
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- In recent years, the baby boomers became aged over 50 with independent children, and needs are shifting from death protection to medical and post-retirement coverage

[Men]



[Women]

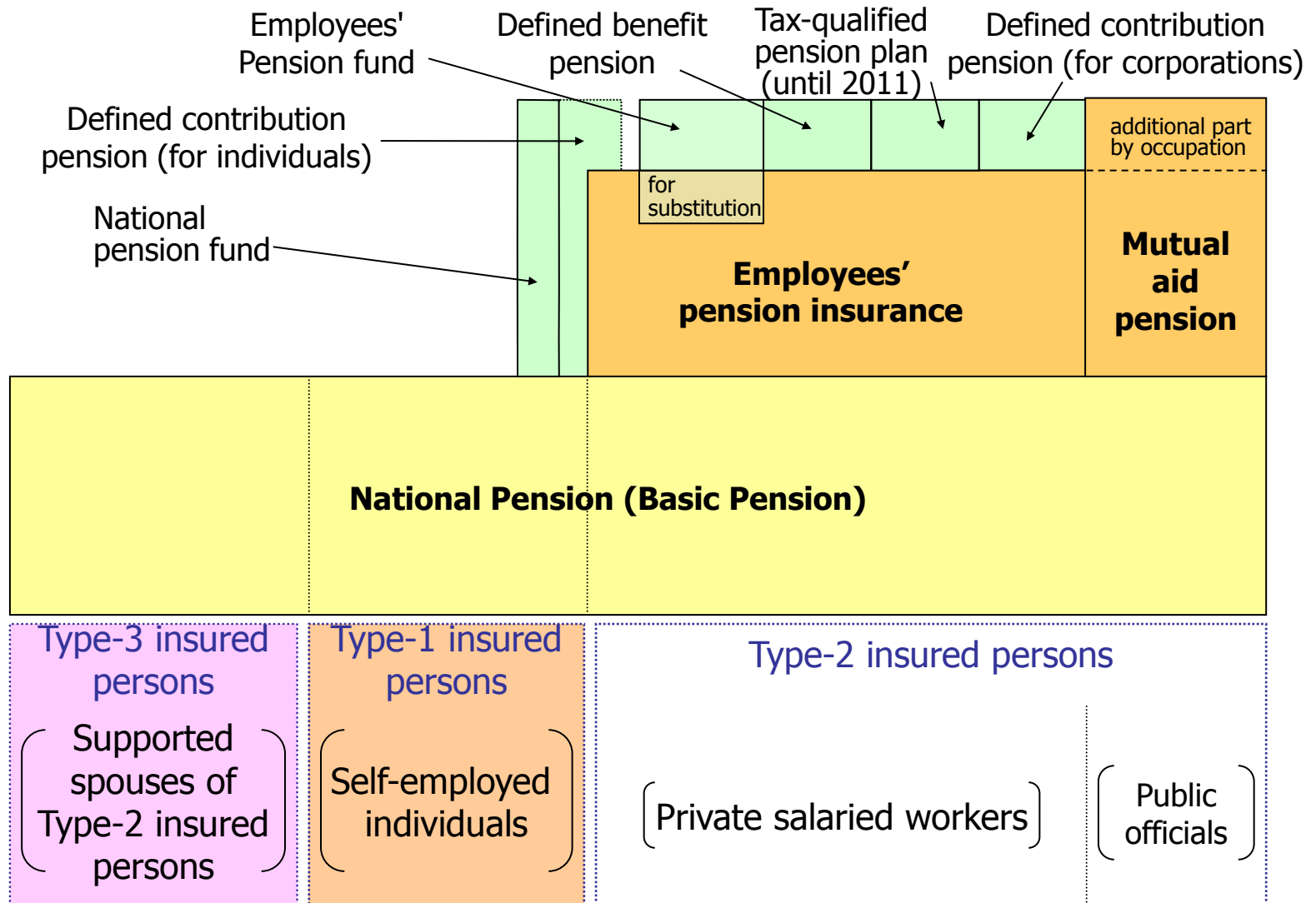


(Source: Japan Institute of Life Insurance "Survey on coverage")

Structure of the pension system in Japan

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- Roles of life insurers in the pension system are evolving



(Source: Ministry of Health, Labor and Welfare)

The pension system in Japan and longevity risk

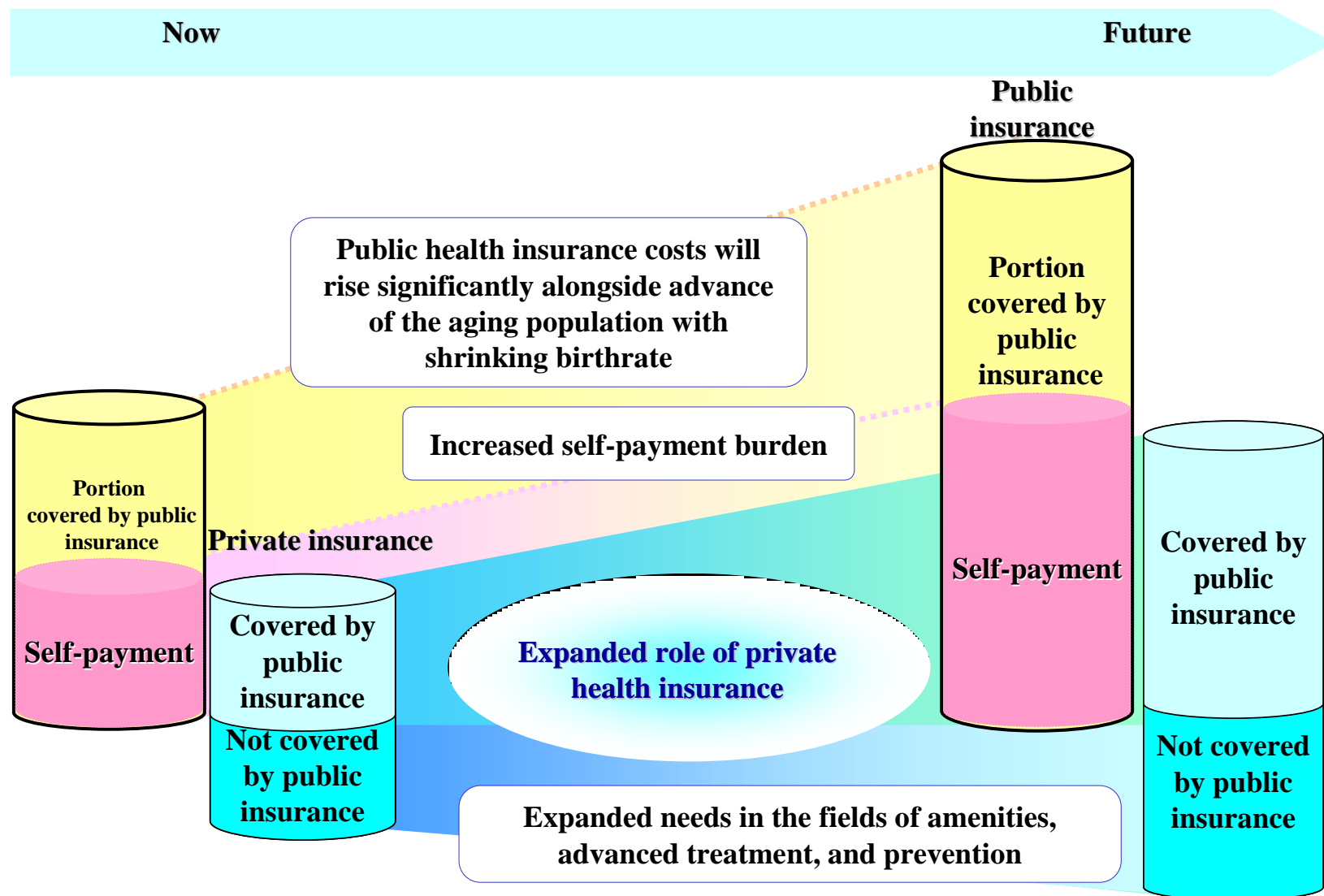
- The public pension provides a whole life annuity and the corporate pension provides a supplement in the form of a lump sum retirement payment or fixed-term annuity

Pension system	Typical form of payment	Other features
① National Pension	whole life annuity	-
② Employees' Pension Insurance	whole life annuity	survivor's pension
③ Corporate Pension	lump-sum retirement allowance or fixed-term annuity	some companies provide whole life annuities with a guaranteed term
④ Self-Private Pension	fixed-term annuity	options for whole life annuity with guaranteed term and lump-sum are available

- Longevity risk is mainly borne by government, employers, and individuals.
- Life insurers are subject to longevity risk, in case where the option for whole life annuity is chosen by policyholders for self-private pension.

Evolving roles of public and private health insurance

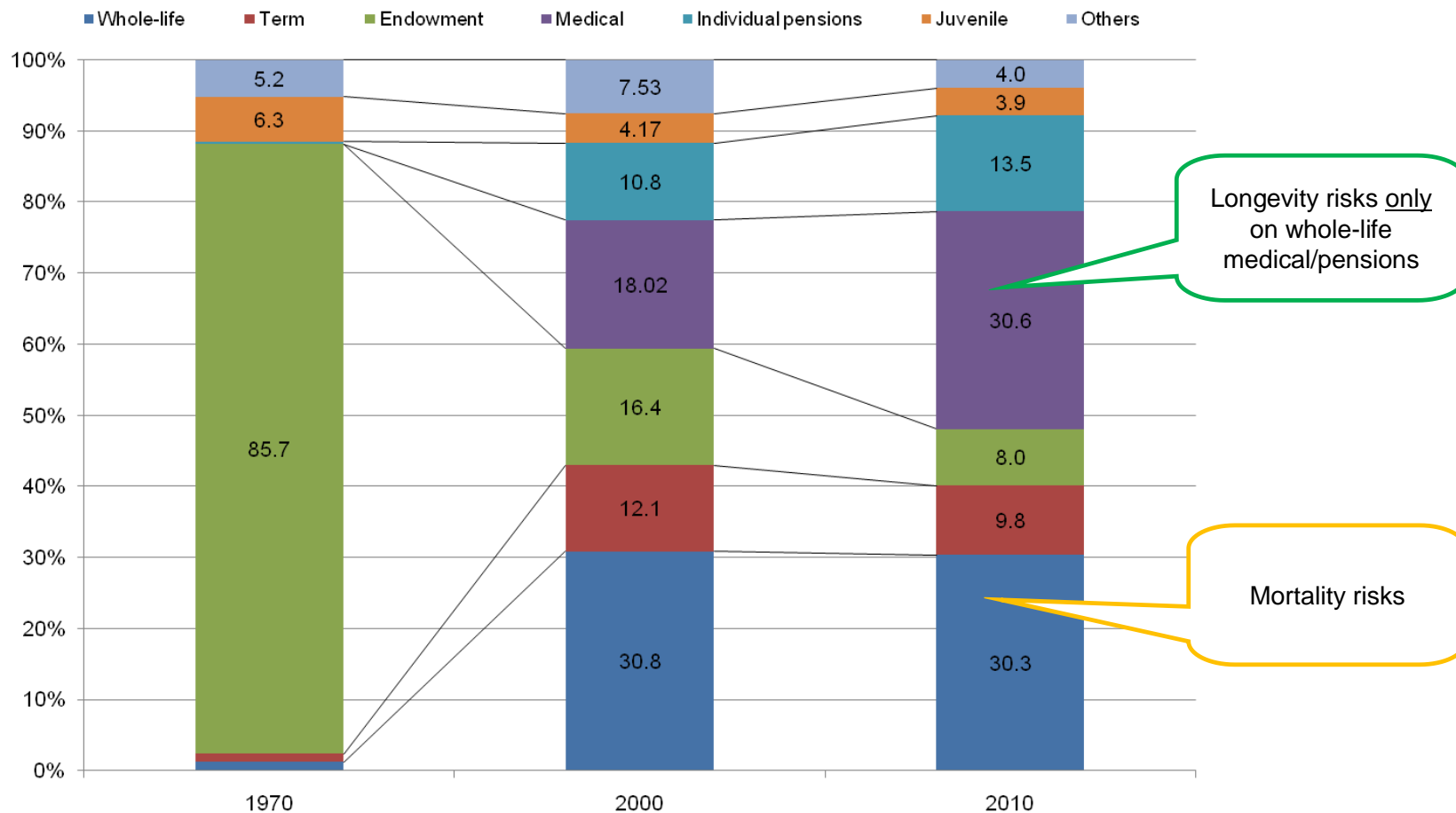
- Separate roles of public and private health insurance are evolving to respond to the aging population



Changes in product portfolio and longevity risk

- Offsetting between longevity risk and mortality risk
- Japanese life insurers' exposure to longevity risk is limited but gradually increasing

Changes in Product Portfolio (Number of Policies in Force)

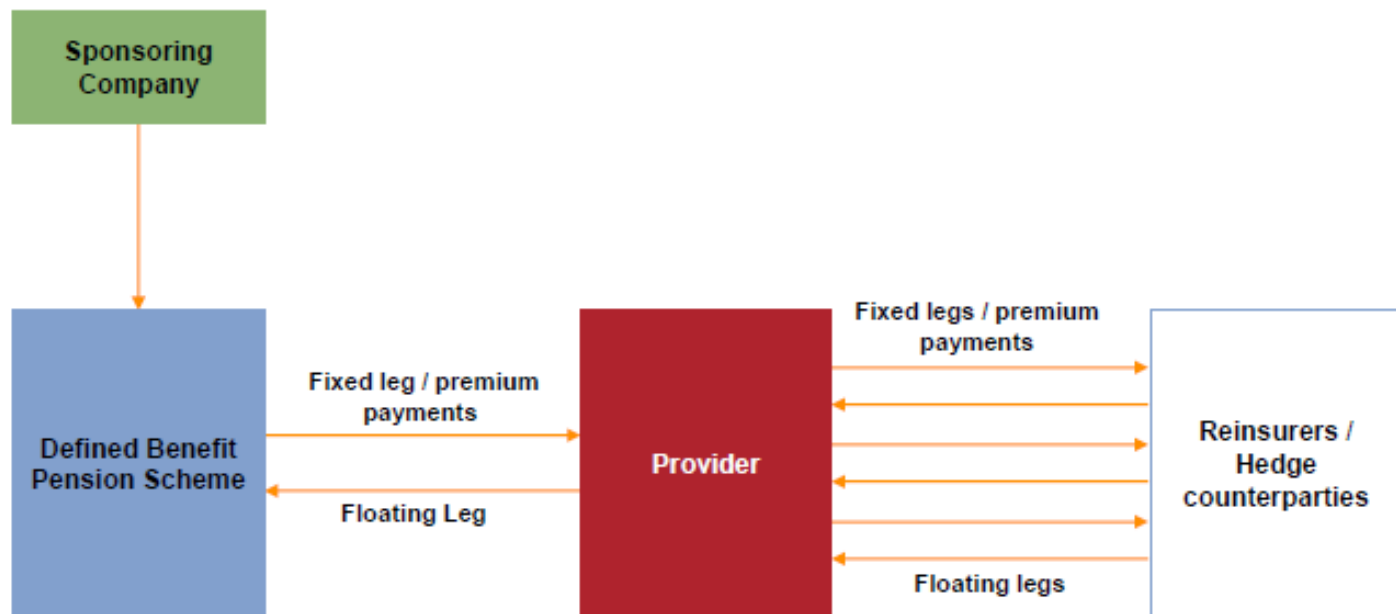


(Source: Life Insurance Association of Japan)

Other measures to mitigate longevity risk

- Longevity Risk Transfer
 - ▣ Buy-out & Buy-in
 - ▣ Longevity Swaps
- Longevity as asset class for investors?

Longevity Hedge Transaction Structure



(Source: Deutsche Bank AG)



Fighting against low interest rates and negative spread problems



Demographic challenges and opportunities and longevity risk

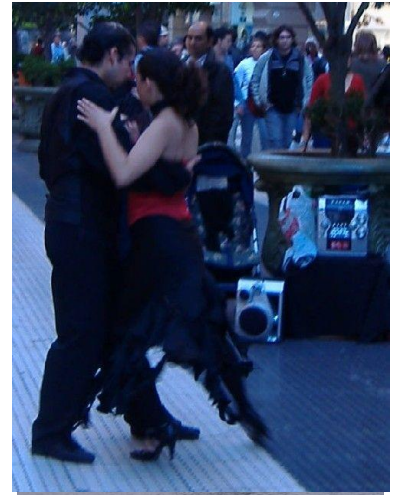


Regulation and valuation: Issues identified in the Asia Pacific region



Tao of supervision and risk management – Yin and Yang

- **Economic-based regime should have a long-term vision**
- **If a short-term-minded solvency regime were implemented**
 - ▣ **Significant volatility** for long term products
 - ▣ Driven to transfer risks over to customers
 - ▣ Refrain from investing in non-fixed income assets
- **Unintended consequences might occur if banking regulations were copied for insurers**
 - ▣ Insurers play an important role as **long term investors**
 - ▣ Life insurers play an increasing role in the social security system
 - ▣ **Diversity** needed to support a sound development of the environment

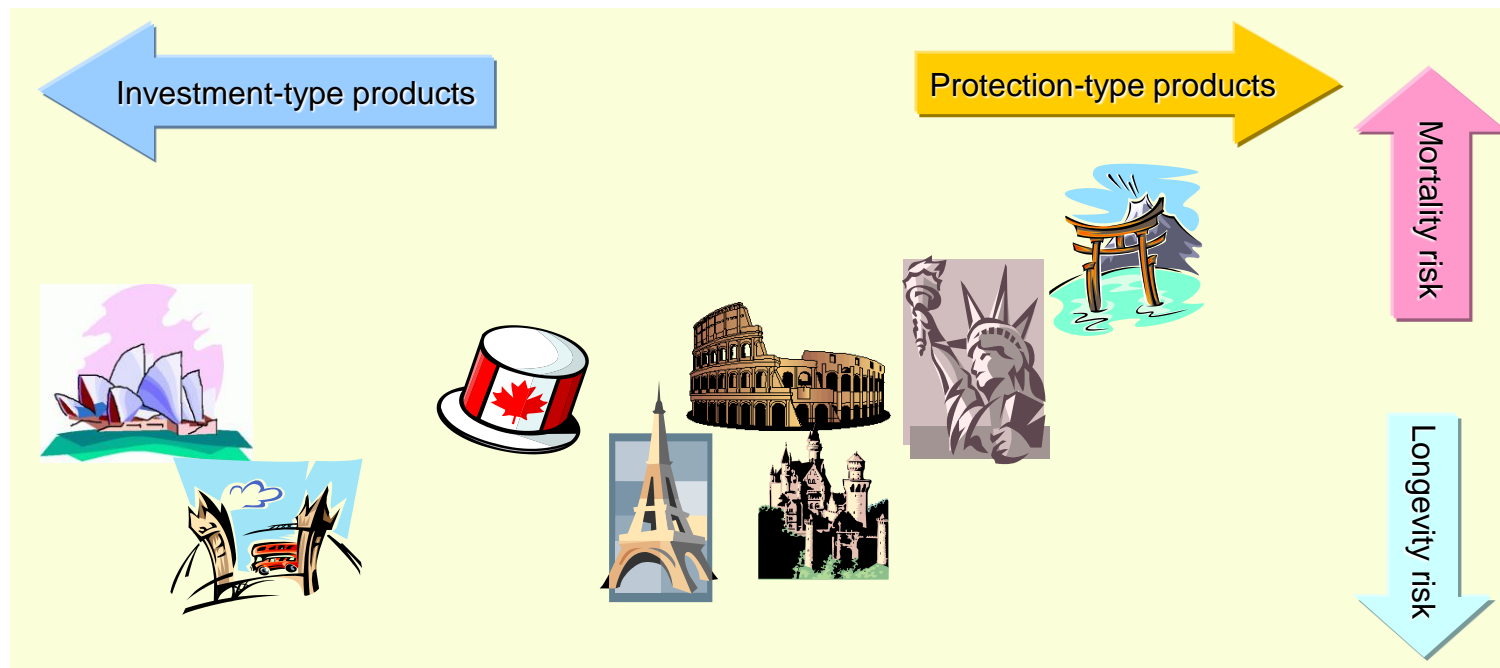


(Photo – Buenos Aires, Argentina)



(Photo – Sydney, Australia)

- **“One-size-fits-all”** model would not work
- **Different business models by jurisdiction**
 - Consumers' **risk preference**
 - **Expected roles** of the insurers
 - State of **development of financial markets**





Fighting against low interest rates and negative spread problems



Demographic challenges and opportunities and longevity risk



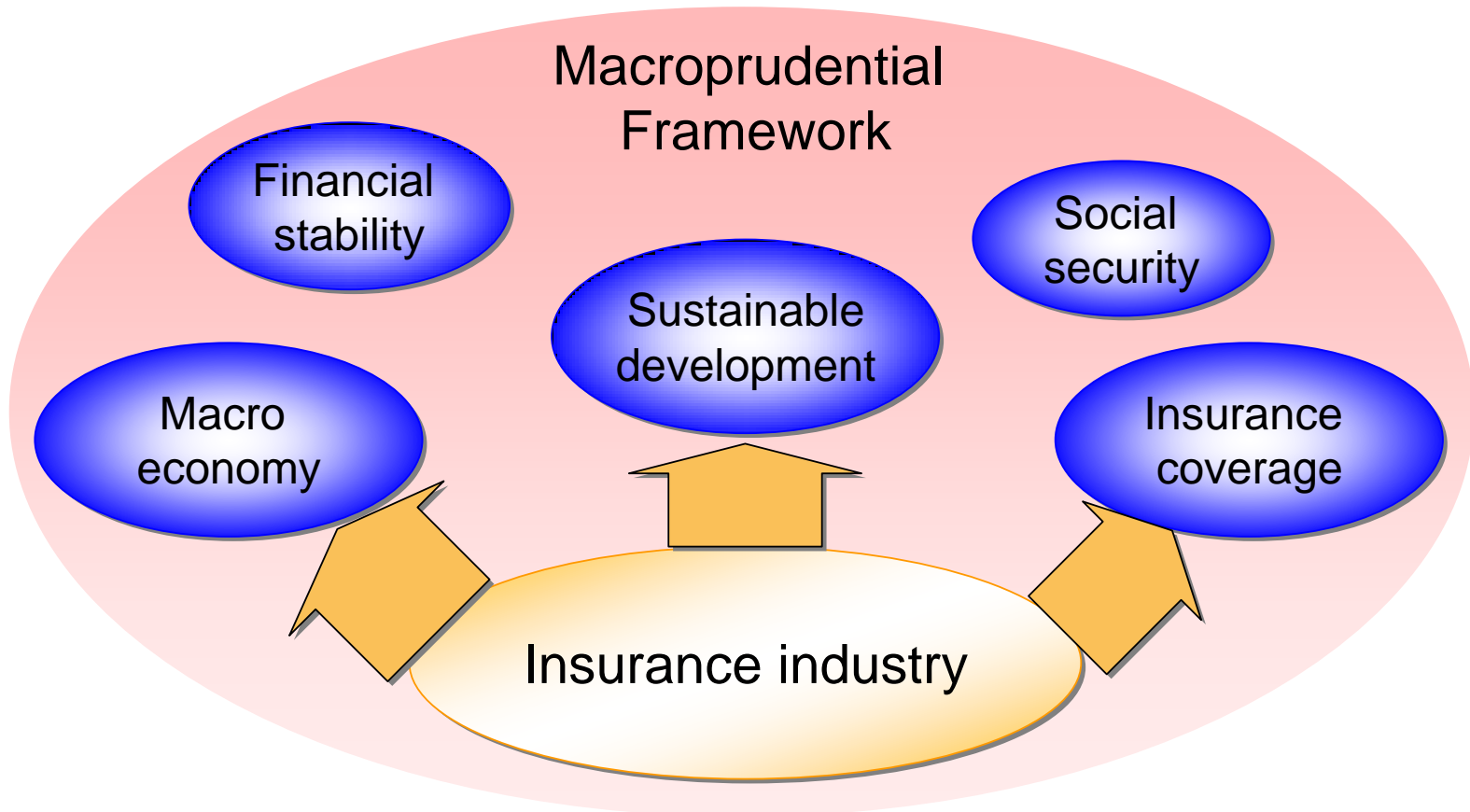
Regulation and valuation: Issues identified in the Asia Pacific region



Tao of supervision and risk management – Yin and Yang

Macroprudential Framework

- Macroprudential Framework would not mean merely monitoring of systemic risks, but should holistically cover all the key dimensions



Conclusion: yin and yang

- **Tao of supervision and risk management with a holistic framework**
- **Some words from Taoism**
 - **Be aware that the world is cyclical**
 - **Don't go to the extreme, otherwise you will fall**
 - Bring the balance of yin and yang to the universe
 - **In order to manage the world, you should control yourself**
 - In order to implement international standards, you should first know your own country

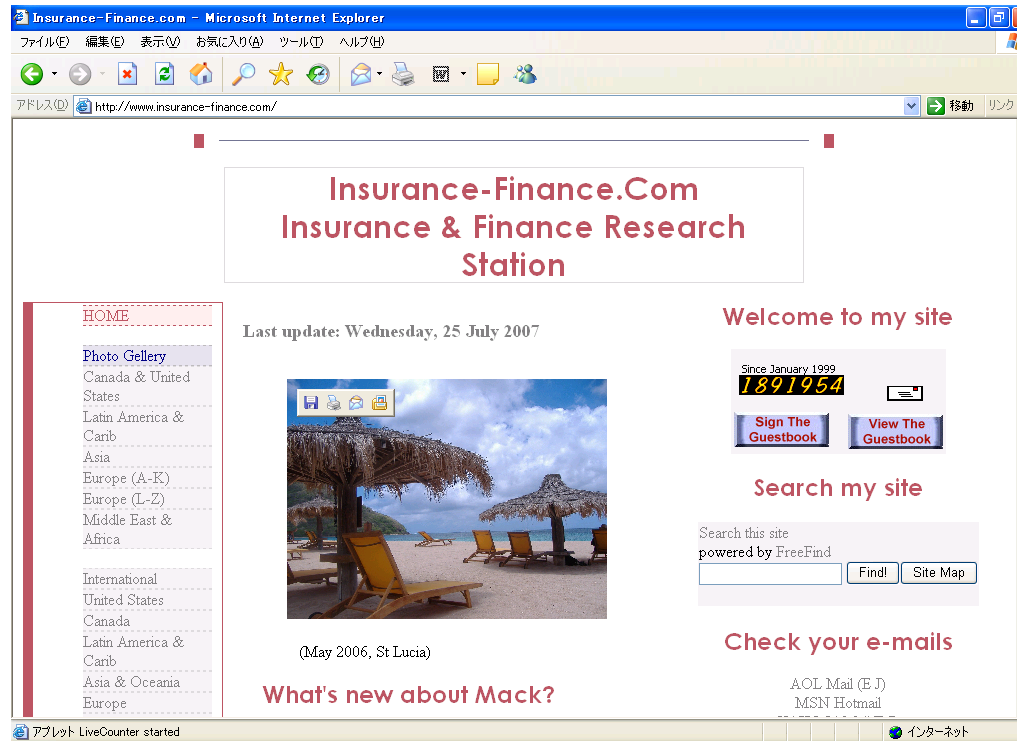


(Photo – Tao Garden, Chang Mai, Thailand)

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*Any questions? email to **m-okubo@nliinter.com**
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