

**The 18<sup>th</sup> East Asian Actuarial Conference**

# **The Challenges and Opportunities for Life Insurance Industry in Taiwan**

**Jennifer L. Wang  
Vice Chairperson,  
Financial Supervisory Commission, Taiwan  
October 13, 2014**



# AGENDA

- ❑ **Global Challenges of the Longevity Risk and Solutions**
- ❑ **Challenges and Opportunities of Life Insurance Industry in Taiwan**
- ❑ **Building a better future**



# Top 5 Challenges for Insurance Industry and Actuary

1. Longevity Risk and Population Change
2. Risk Management and Financial Stability
3. Financial Reporting with Fair Value
4. Global Regulatory Uncertainty
5. Environment and Climate Changes



# **Global Challenges of the Longevity Risk and Solutions**





# The Impact of Longevity Risk

- ❑ An unprecedented improvement in population longevity has occurred globally over the course of the twentieth century.
- ❑ Longevity risk represents a critical threat to pension funds and life insurers.
  - increases the payout period and the liability costs of providing annuities
- ❑ Hedging longevity risk has received serious attention
  - mispricing on annuity products or misallocation of investment strategies could cause substantial deficits.



# The Impact of Longevity Risk

**Table 4.2. Longevity Risk and Fiscal Challenges in Selected Countries**  
(In percent of 2010 nominal GDP)

	(1)	(2)	(3)	(4)
	Household Total Financial Assets (2010) <sup>1</sup>	Net Present Values of Needed Retirement Income	General Government Gross Debt (2010)	Increase in Net Present Values Given Three-Year Increase in Longevity
United States	339	272 – 363	94	40 – 53
Japan	309	499 – 665	220	65 – 87
United Kingdom	296	293 – 391	76	44 – 59
Canada	268	295 – 393	84	42 – 56
Italy	234	242 – 322	119	34 – 45
France	197	295 – 393	82	40 – 54
Australia	190	263 – 350	21	36 – 49
Germany	189	375 – 500	84	55 – 74
Korea	186	267 – 357	33	39 – 52
China	178	197 – 263	34	34 – 45
Spain	165	277 – 370	60	39 – 52
Hungary	108	190 – 254	80	34 – 45
Czech Republic	89	216 – 289	39	36 – 48
Poland	88	160 – 213	55	27 – 35
Lithuania	80	189 – 252	39	34 – 45

Sources: National flow of funds accounts; national accounts; IMF (2011c); and IMF staff estimates.

Note: Range of values in columns 2 and 3 cover, at low end, a replacement rate of 60 percent of preretirement income and, at high end, an 80 percent replacement rate for retirees aged 65 or older to maintain preretirement standard of living during 2010–2050 period.

<sup>1</sup>For China, 2009.

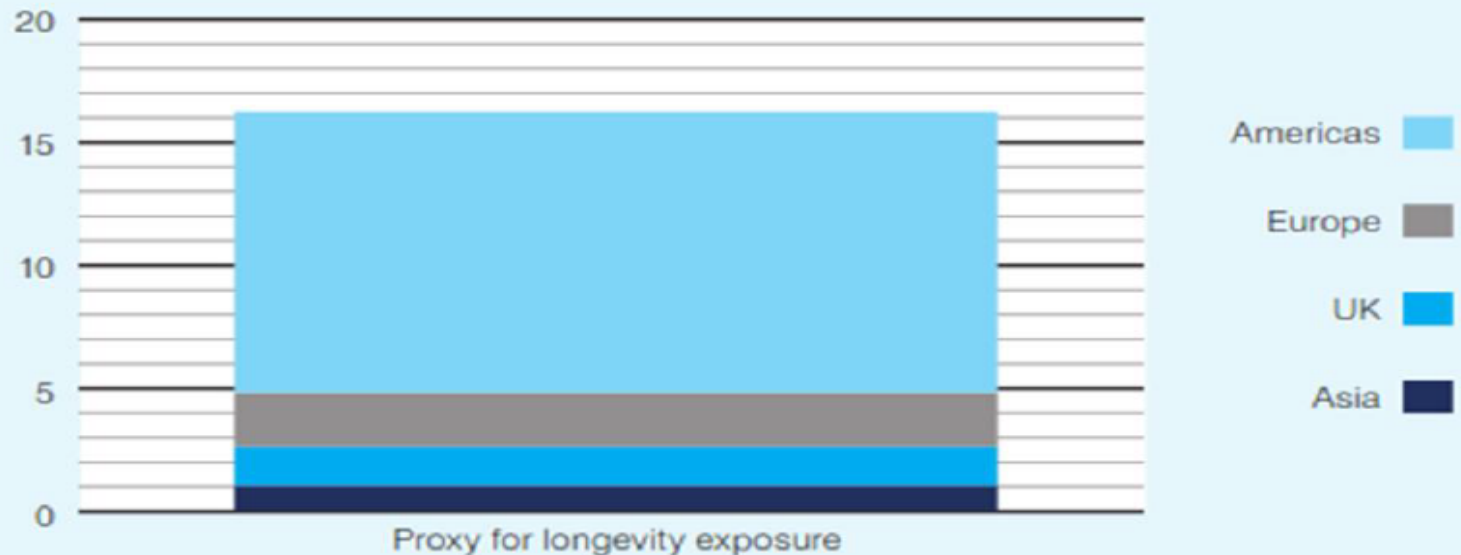


# The Impact of Longevity Risk

**Global longevity risk exposure estimates range from \$15 to \$25 trillion**

**Figure 3.1 Funded global longevity risk exposure, as measured by total pension assets in OECD registered countries**

**Pension assets (€ trillion)**

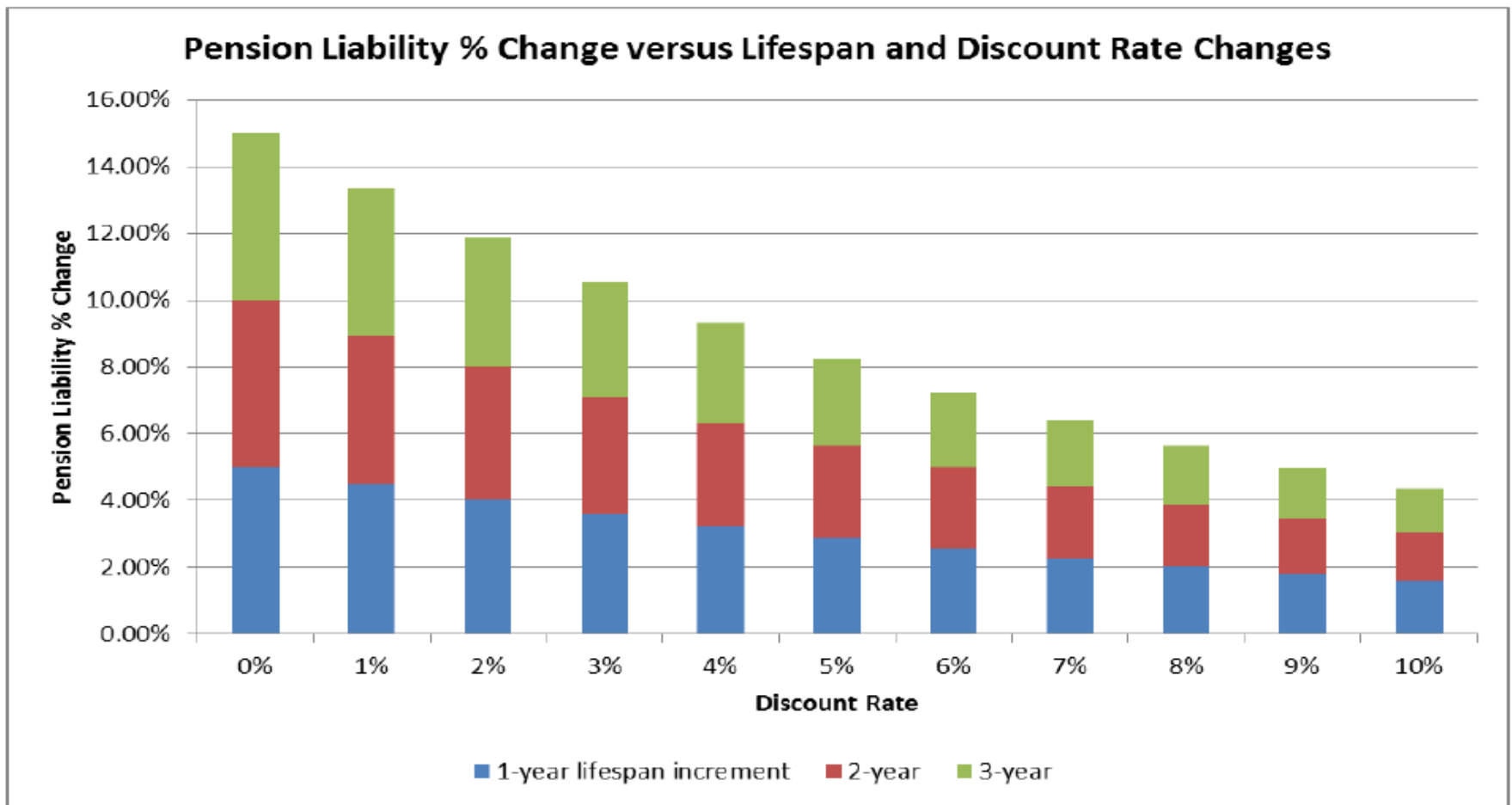


Source: OECD data



# The Impact of Longevity Risk

## Longevity underestimation is expensive







# Solutions for Longevity Risk

a better models to predict mortality rates

the discrete-time models

the continuous-time models

a better strategies to hedge longevity risk

Nature hedging strategy (insurer)

Mortality securitization

- Longevity bond (EIB 2004/2007)
- Life settlement related products

Pension buy-ins/buy outs

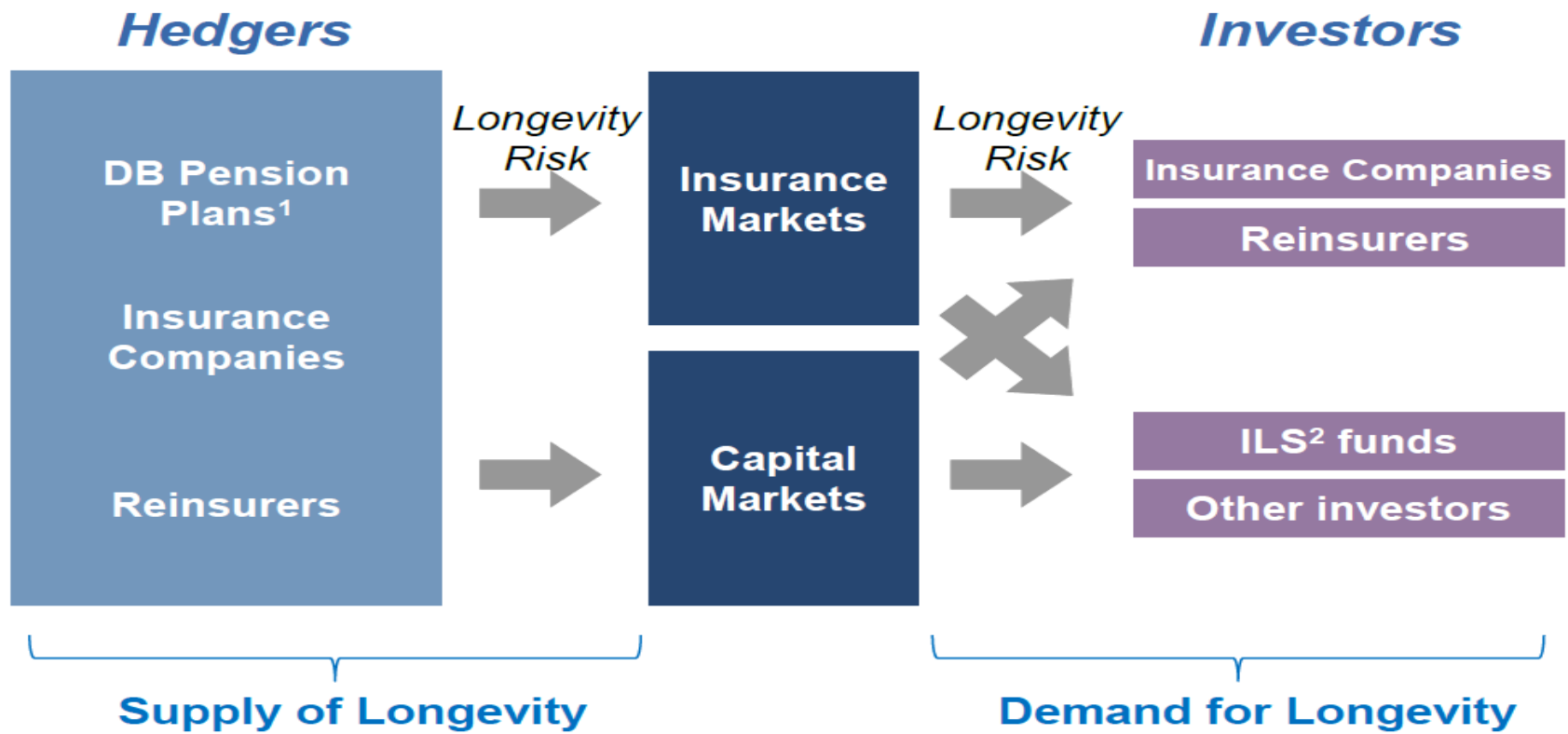
Longevity derivative

- Mortality forward (q forward)
- Survivor forward (S forward)
- Longevity swap (reinsurance)
- Longevity future
- Longevity options



# New birth of Longevity Risk Market

The longevity market involves two distinct channels and multiple participants



<sup>1</sup> DB = Defined Benefit

<sup>2</sup> ILS = Insurance-Linked Securities



# New birth of Longevity Risk Market

- **The market for pure longevity risk transfer has grown slowly since 2008**
  - Insurance companies were the first hedgers
  - Investment banks were intermediaries for capital markets longevity swaps
  - Pension plans entered the market 18-months later in mid-2009
  
- **Since birth there has been significant product innovation**
  - Insurance vs capital markets
  - Longevity swaps vs q-Forwards
  - Index-based hedges vs actual lives
  - Value hedges vs cash flow hedges
  - Out-of-the-money versions to hedge tail risk
  - Basis-risk minimization
  - Investor-friendly products for the capital markets

*The challenge:*  
**To develop standardization to raise liquidity and grow the market**



# New birth of Longevity Risk Market

## Insurance companies were the first hedgers in the longevity swap market

- The 1990s saw several non-public longevity swap reinsurance transactions
  - But had virtually no impact on market development
- The market really started in 2008-09
  - Investment banks were innovators and intermediaries
- Longevity reinsurance via swaps is now commonplace

### *Early longevity swap transactions*

Date	Insurer	Counterparty	Format	Value (£mm)
Jan 2008	Lucida	J.P. Morgan	Capital markets*	100
Jul 2008	Canada Life	J.P. Morgan	Capital markets	500
Feb 2009	Abbey Life	Pacific Life Re	Insurance	1,500
Mar 2009	Aviva	Royal Bank of Scotland	Capital markets	475

\* This was actually a "q-Forward" – see later.

Source: [http://www.artemis.bm/library/longevity\\_swaps\\_risk\\_transfers.html](http://www.artemis.bm/library/longevity_swaps_risk_transfers.html); <http://www.insurancedaily.co.uk/2009/02/10/pacific-life-re-announces-longevity-deal-with-abbey-life/>; Norwich Union/Partner Re/RBS Press Release March 19, 2009; PGA



# New birth of Longevity Risk Market

Longevity swaps executed by DB pension plans in the UK total \$80 billion (or £47 bn)

Date	Pension Plan Sponsor	Counterparty	Format	Value (£mm)
Jul 2014	BT	Prudential (U.S.A.)*	Insurance	16,000
Mar 2014	Aviva	Swiss Re, Munich Re, SCOR*	Insurance	5,000
Dec 2013	BAE Systems (2 plans)	Legal & General	Insurance	1,800
Dec 2013	Carillion (5 plans)	Deutsche Bank	Capital markets	1,000
Dec 2013	AstraZeneca	Deutsche Bank	Capital markets	2,500
May 2013	Bentley	Abbey Life (Deutsche Bank)	Insurance	400
Feb 2013	BAE Systems	Legal & General	Insurance	3,200
Dec 2012	Liverpool Victoria Friendly Society	ReAssure (Swiss Re)	Insurance	800
May 2012	Akzo Noble	ReAssure (Swiss Re)	Insurance	1,400
Dec 2011	Pilkington	Legal & General	Insurance	1,000
Dec 2011	British Airways	Rothsay (Goldman Sachs)	Insurance	1,300
Nov 2011	Rolls-Royce	Deutsche Bank	Capital markets	3,000
Aug 2011	ITV	Credit Suisse	Capital markets	1,700
Jan 2011	Pall	J.P. Morgan	Capital markets	70
Jun 2010	British Airways	Rothsay (Goldman Sachs)	Insurance	1,300
Feb 2010	BMW	Abbey Life (Deutsche Bank)	Insurance	3,000
Dec 2009	Babcock International	Credit Suisse	Capital markets	300
Dec 2009	Royal County of Berkshire	ReAssure (Swiss Re)	Insurance	750
Sep 2009	Babcock International	Credit Suisse	Capital markets	350
Jul 2009	RSA Insurance Group (2 plans)	Rothsay (Goldman Sachs)	Insurance	1,900
Jun 2009	Babcock International	Credit Suisse	Capital markets	500
<b>Total (27 longevity swaps)</b>				<b>£47,270mm</b>

\* These are reinsurers who transacted directly with a captive insurer.

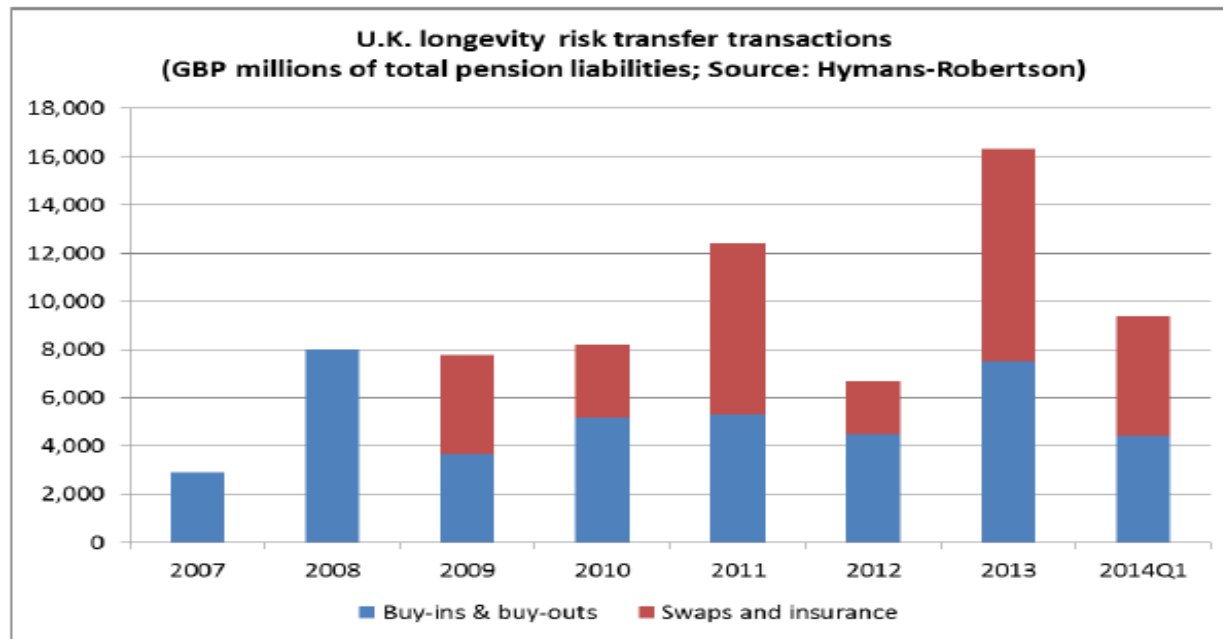
Source: Lane Clark & Peacock LLP, Grant Thornton, Hymans Robertson, PGA  
LONGEVITY 10 - 2014

Sorce: Guy Coughlan (Pacific Global Advisors) 13



# New birth of Longevity Risk Market

**Transaction volumes are a small fraction of total longevity risk transfer potential**



Royal London	RGA	Reinsurance	£1,000	May-14
Total UK	PIC / Hannover Re	Buy-In + Reinsurance	£1,600	Jun-14
BT	Prudential (US)	Swap	£16,000	Jul-14
Rothsay Life	Prudential (US)	Reinsurance	£1,000	Aug-14

Sorce: Guy Coughlan (Pacific Global Advisors)



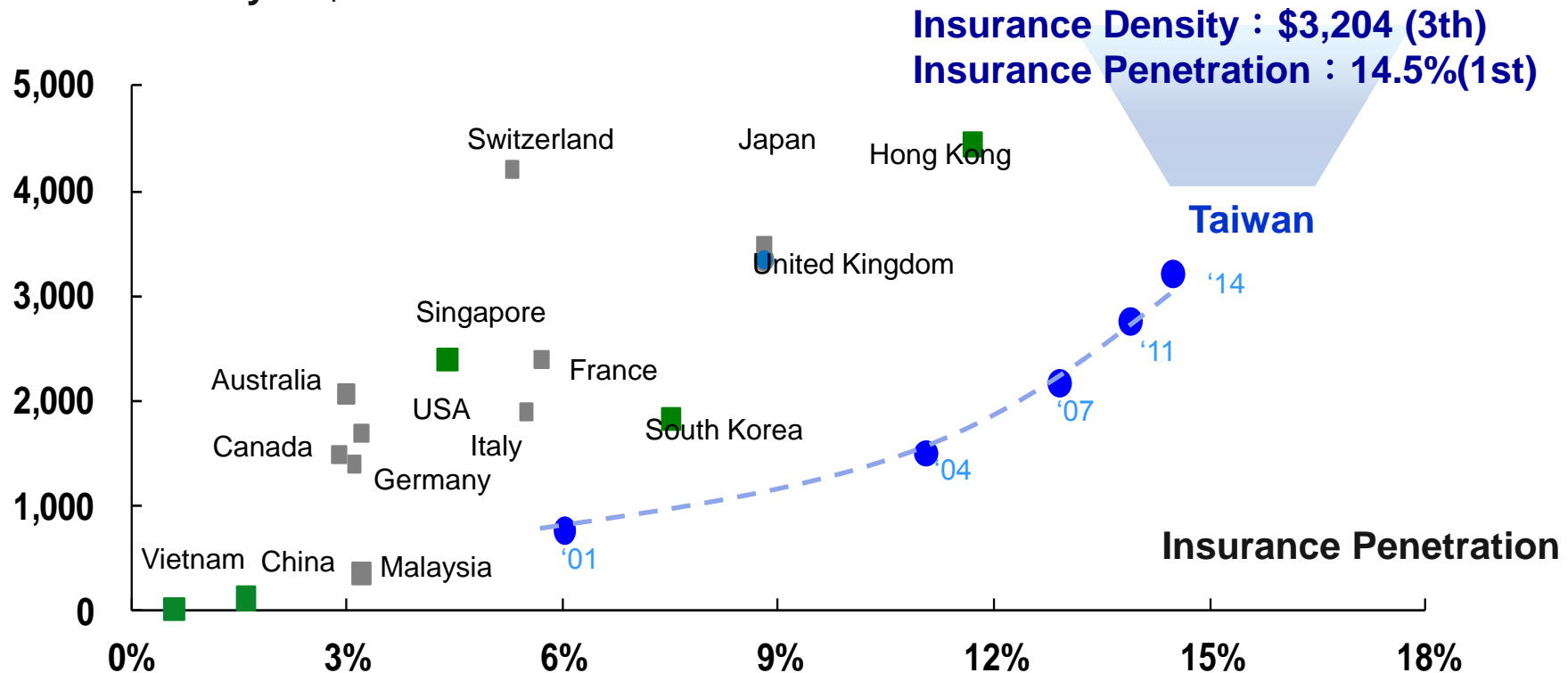
# **Challenges and Opportunities of Life Insurance Industry in Taiwan**





# Importance of Life insurance market

## Insurance Density in \$USD



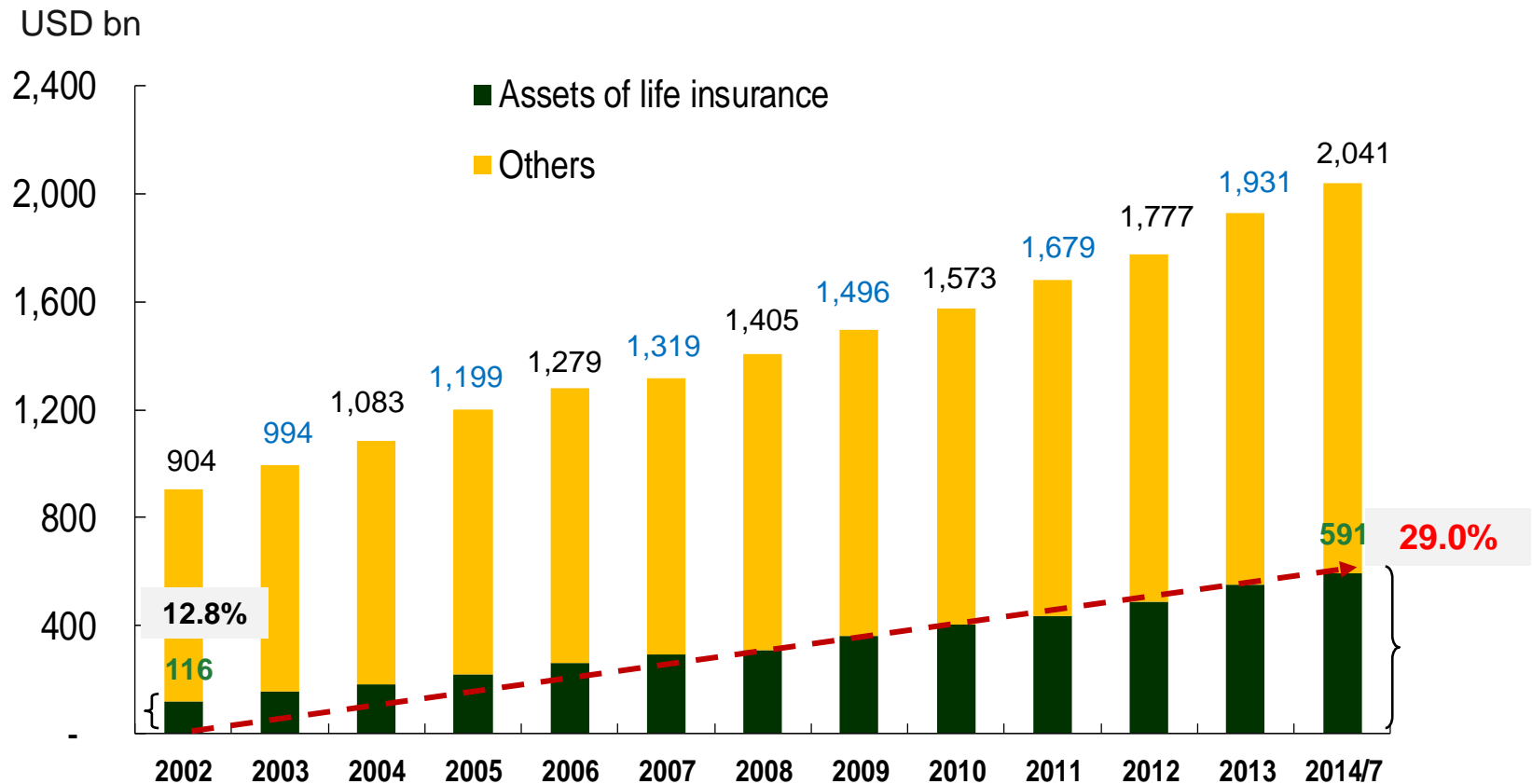
Note: Insurance Penetration = Premiums/GDP  
Insurance Density = Premiums per capita

Source: Swiss Re sigma no.3/2014





# Importance of Life insurance market

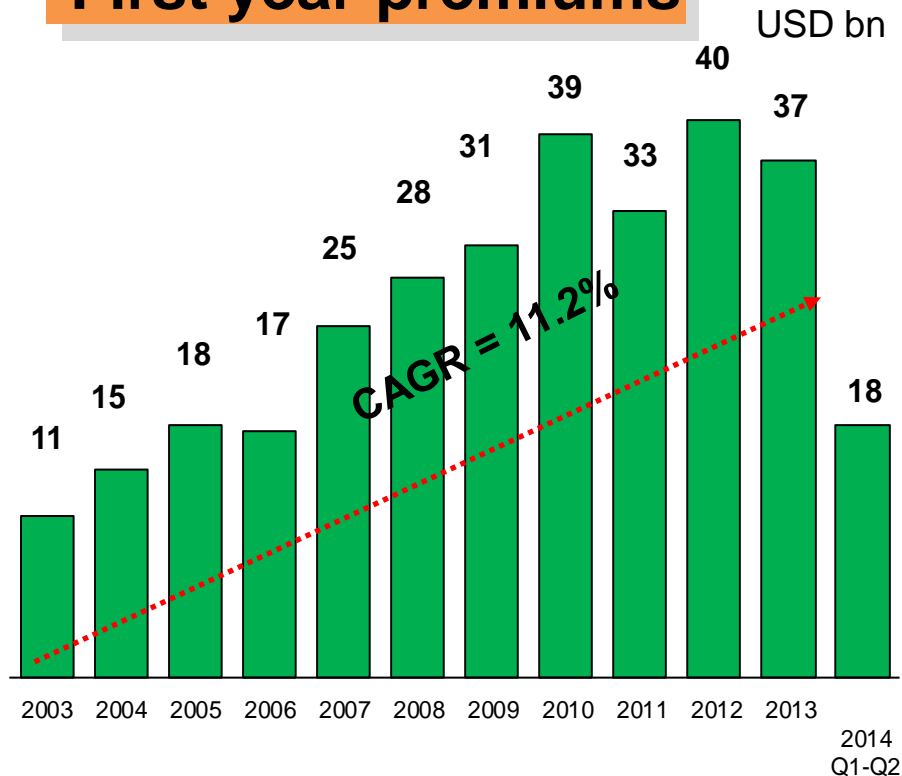


- The ratio of the assets of Taiwan life insurance industry to all financial sector's total assets has continued to increase from 12.8%(2002) to 29.0%(2014/7).
- Life Insurance industry is becoming the important industry in Taiwan.

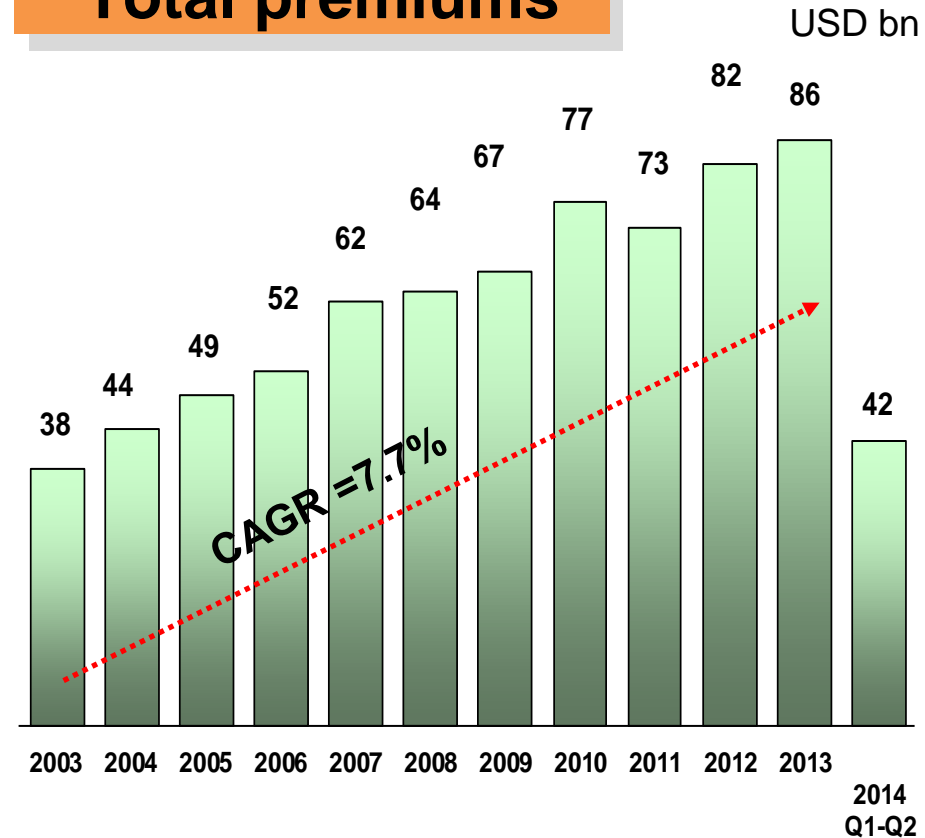


# Growth of Life Insurance Market

## First year premiums



## Total premiums



Source: The Life Insurance Association

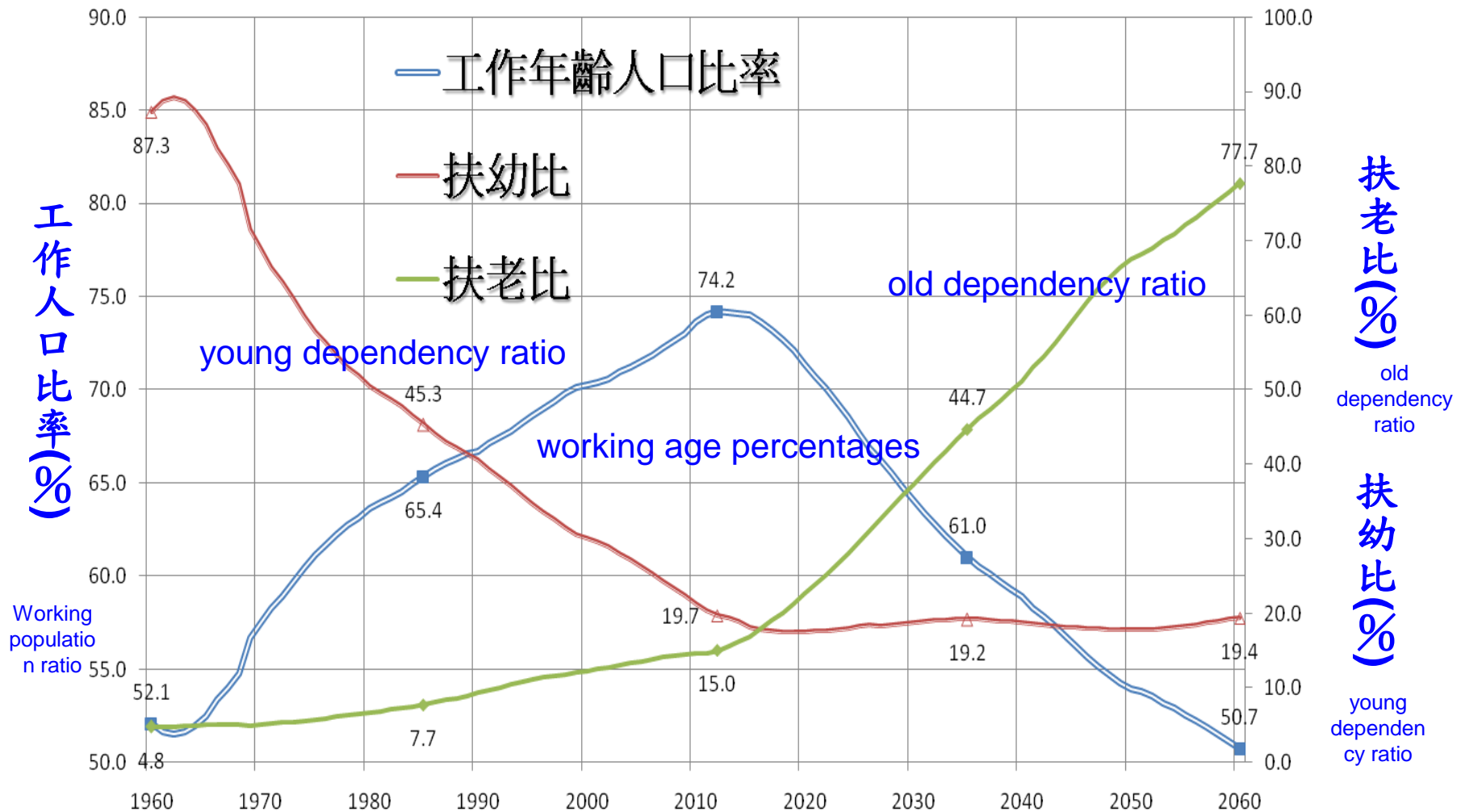


# Changing Population Structure

- ❑ Current life expectancy: total population: 79.84 years; male: 76.72 years; female: 83.2 years
- ❑ The fertility rate has dropped from 4.1% in 1971 to less than 1% in 2011.
- ❑ Taiwan working population start to begin declining in 2015.
- ❑ According to the statistics from Ministry of the Interior, seniors accounted for 9.74 percent of the total population in 2005. This figure is expected to rise to 20% in 2031, and 38% in 2050.
- ❑ By 2030, every 2.7 working persons will have to support one elderly person, which is triple the burden of working persons today.

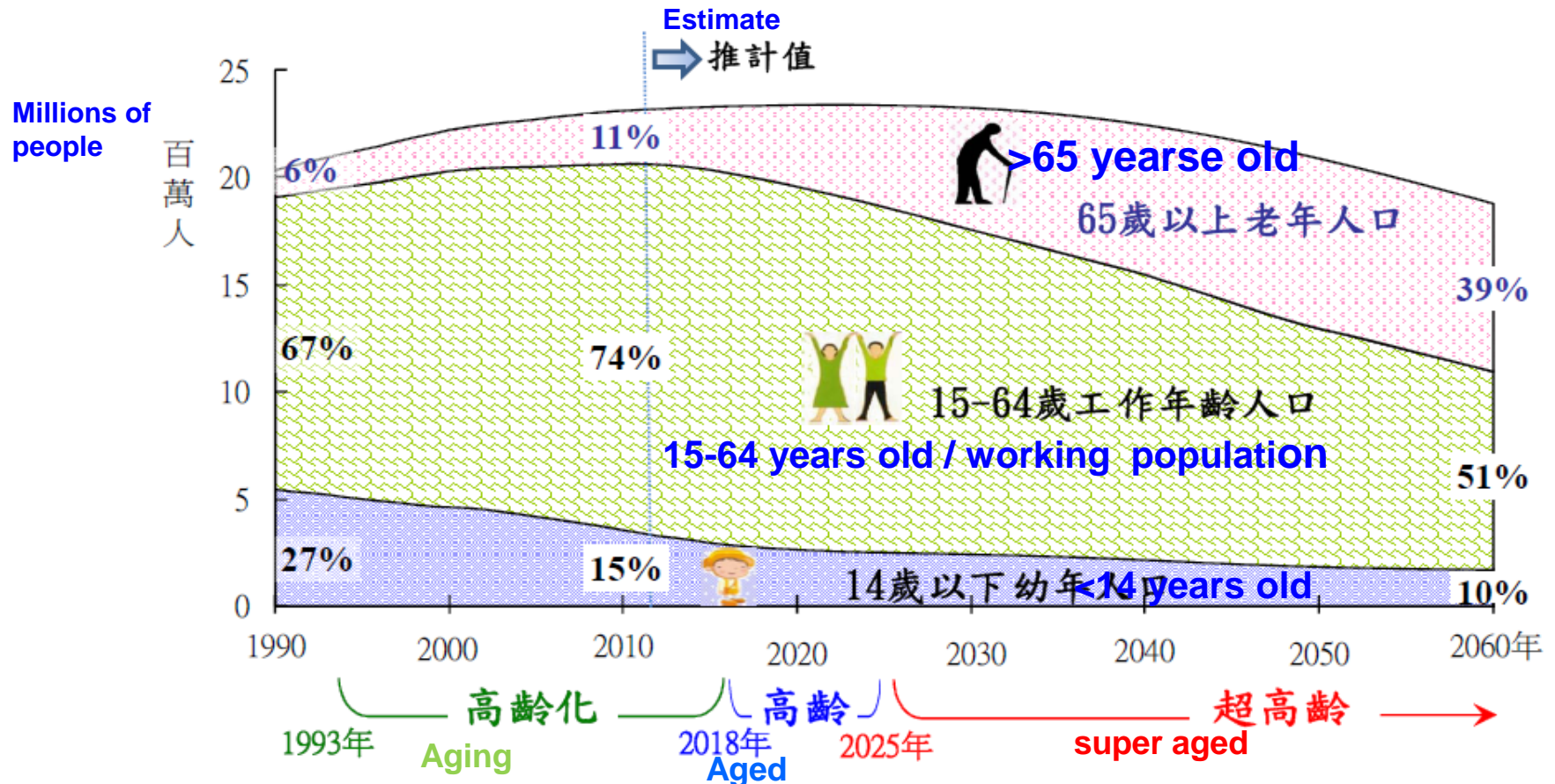


# Changing Population Structure





# Changing Population Structure



Source: Council for Economic Planning and Development

Taiwan became an ageing society in **1993**. It is expected to become an aged society in **2018** and a super aged society in **2025**.



# Challenges of Population Change

- ❑ Demographic ageing means more retired people receive annuities for longer periods, which increases the government's pension burden. At the same time, however, declining fertility means fewer people to pay premiums.
- ❑ The changing population structure will increasingly severe funding problems for social insurance and pension funds.
- ❑ Government has established the Annuity System Reform Taskforce in 2012 to undertake the pension reforms.
- ❑ The future will see more and more reliance on financial market, especially annuities, long-term care and other retirement protection products of the life insurers.



# **Challenges of Life Insurance Market**

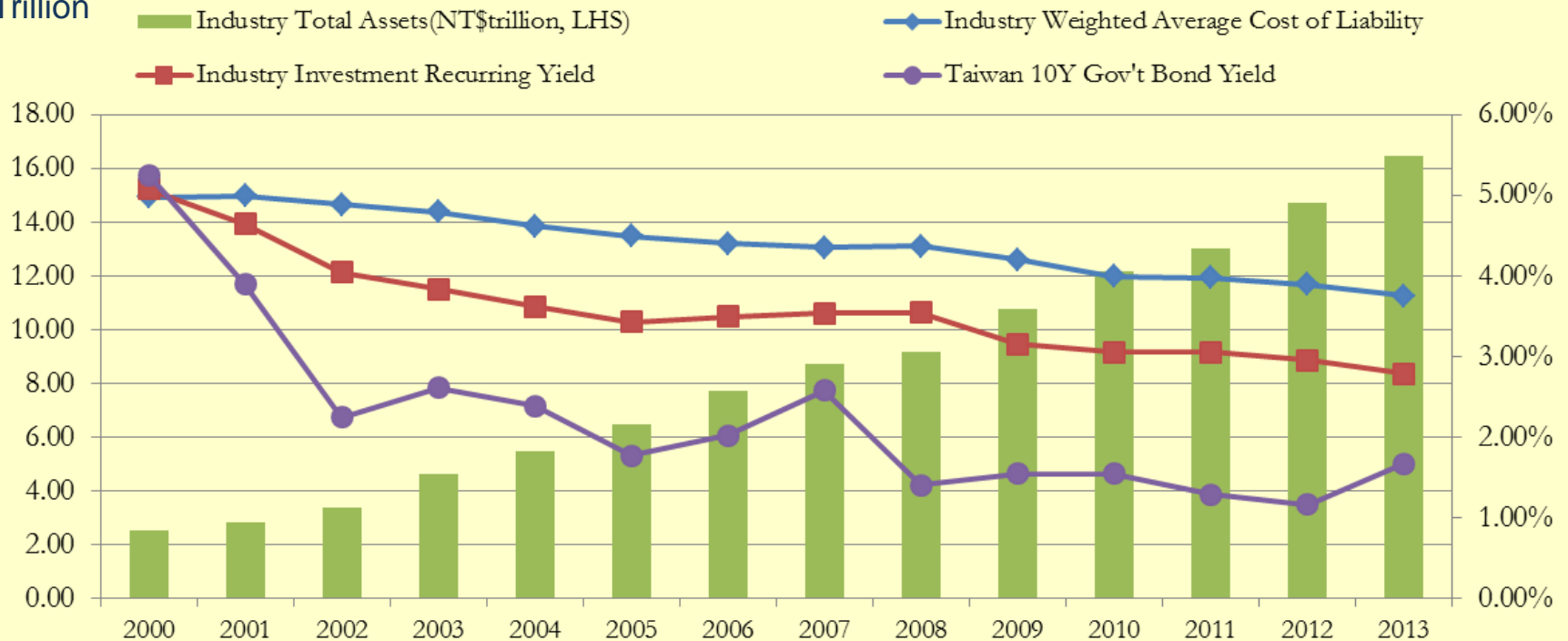
- ☐ **Population change**
- ☐ **Low interest rate and negative spreads of insurance policies.**
- ☐ **Highly leverage and under capital.**
- ☐ **Lack of long-term bond market and appropriate investment vehicles for asset-liability management in the local capital market.**
- ☐ **Adoption of international accounting and insolvency standards.**



# Persistent Low-rate Environment

Taiwan Dollar,

Trillion



Source: Central bank of Taiwan, Taiwan insurance Institute, Cathay Life Insurance Company

Since 2000, the average liability cost of insurance companies in Taiwan declined 120 bps. But the investment yield decreased 230bps. In 2013, the investment yield is only 2.8%, whereas the gap between liability cost (3.8%) is still significant.





# **How to Create Solutions**

- ☐ **Provide better investment environment**
- ☐ **Change the product mix**
- ☐ **Strengthen Capital**
- ☐ **Improve risk management by establishing ERM system, CRO and ALM committee**
- ☐ **Improve operation efficiency**
- ☐ **Create new insurance market**
- ☐ **Innovative insurance products**



# Provide Better Investment Environment

- ❑ FSC has launched a “Bond Market Development Project” to spur local bond market development.
  - More supply for high yield foreign-denominated bonds
  - Insurers are allowed to invest local foreign-denominated bonds (RMB bond) without limitation
- ❑ Encourage insurance capital to invest in domestic infrastructure projects and high-quality growth enterprises in order to effectively help economic growth and financial market.
- ❑ Encourage insurers to participate in government infrastructure projects and long-term care industry.
  - insurers can to invest in BOT infrastructure projects, with a distinction made between project management and project financing.
  - Insurers can invest in the long-term care infrastructure, including both physical facilities and systems.
  - encourage insurers to invest in long-term care industry and use such investments to support development of their long-term care insurance products.



# Relax Investment Restrictions to Enhance Investment Returns

**Increase the flexibility of Asset Allocation**  
**Relax investment limitations for qualified insurers**

## Investment Quota

2001 : Real Estate quota  
19%→30%  
2007 : Overseas Investment quota to 45%  
2012 : Policy paid in  
foreign currency  
can be excluded  
from the 45% limit  
2014 : Overseas acquisition can be  
excluded from the  
45% limit

## Investment Category

1992 : special projects,  
public utilities  
2002 : Agency MBS  
2007 : REAT, REIT  
2012 : Investment over-  
seas real estate  
through SPV or  
Trust structure

## Investment Area

1992 : Overseas Invest-  
ment  
2010 : China

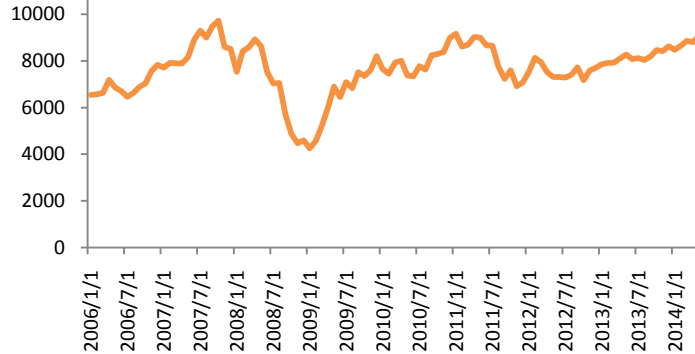
## Others

2012 : Foreign-exchange  
reserve



# Change Insurance Product Mix

Taiwan Stock Market Trend



## Balance investment risk

- Create natural hedging or liability hedging by changing product mix
- Control the mortality and expense margin

## Regulation measures

### 1. Sell more investment-linked products :

Lower the liability cost , increase the expense margin benefit for Insurance company.



### 2. Promote some insurance-protection products :

Stabilize the mortality margin benefit for insurance company.

EX: Non-participating insurance product; Health and accident policies



# Strengthen Capital

## Strengthen Insurers' Capital



Insurers are required to calculate the RBC Ratio semi-annually  
→ **Ensure solvency & Safeguard the interests of policyholders**  
《Taiwan is the first three countries adopting RBC regulations in Asia》

【Strengthen Total Adjusted Capital】

Annual  
Review

【Enhance Risk-Based Capital】

Differentiate insurance premium of Insurance Guaranty Fund



# Adoption of IFRSs

Company Type	Year	2013	2014	2015	2016	2017	2018 and after
	Version						
ordinary company	2010 version (adoption now)	(1)					
	2013 version			(2)			
	Latest version endorsed by FSC					(3)	

1. **Phase I** : all listed and OTC companies will be required to adopt T-IFRS (2010 version) in 2013.
2. **Phase I & Phase II** : unlisted public companies be required to adopt T-IFRS (2013 version) in 2015 and after.
3. Starting from year 2017, IFRS adoption will be updated by each announcement endorsed by FSC.



# Improve Capital Requirements and RBC System

## International

Financial Statement

IFRS Insurance Contracts & IFRS 9

Solvency

EU: Solvency II  
International: IAIS (ICP & BCR & HLA & ICS)

【International Trends】

**Market-Consistent Basis**

## Taiwan

FSC

**Steering Committee**  
(held regularly)



FSC has established steering meetings, including regulators, scholars and insurers, regularly to discuss related issues and to set up the future structure of supervision regulations.

### Comprehensively Review the RBC System

**Future Directions**

- ✓ Valuation Basis : cost → market-consistent
- ✓ Reference : international standards with jurisdiction discretionary
- ✓ Differentiated Supervision : develop the internal models and enhance the ERM

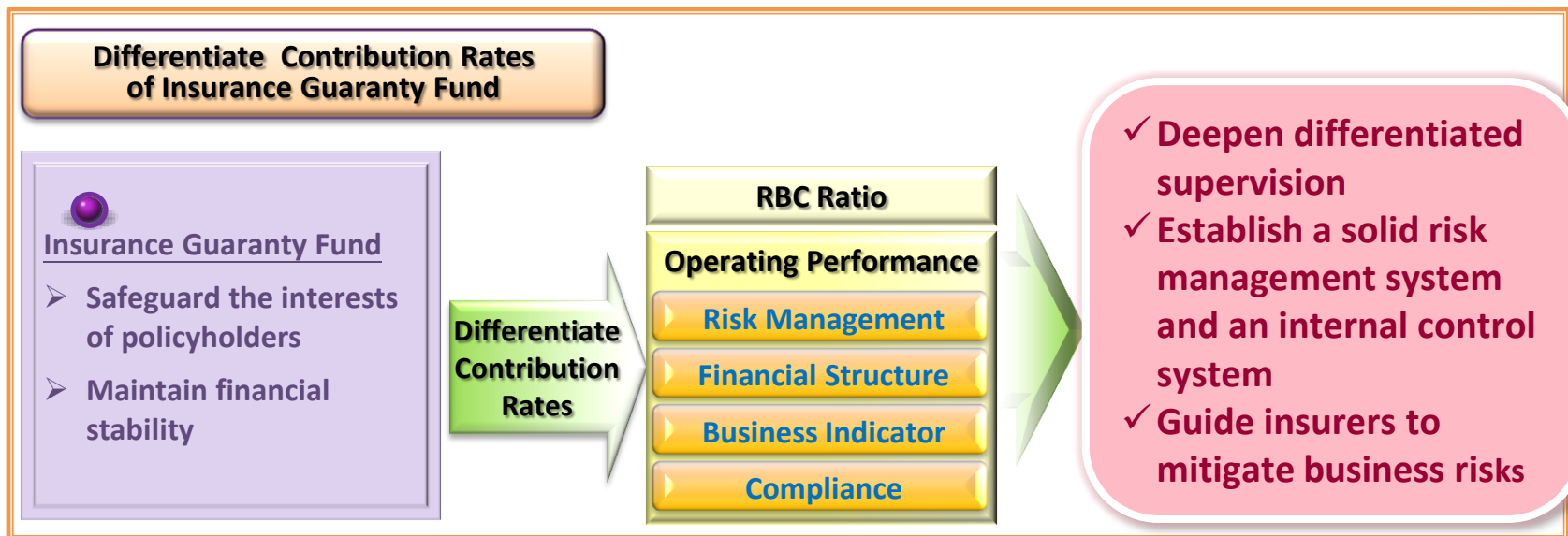


# Strengthen Risk Management Development of ERM

## Mitigate Business Risks of Insurers

To improve risk management

- ❑ Set up ERM system and Asset-liability management committee
- ❑ Establish Chief Risk Officer (CRO)







# **Build a Better Future**



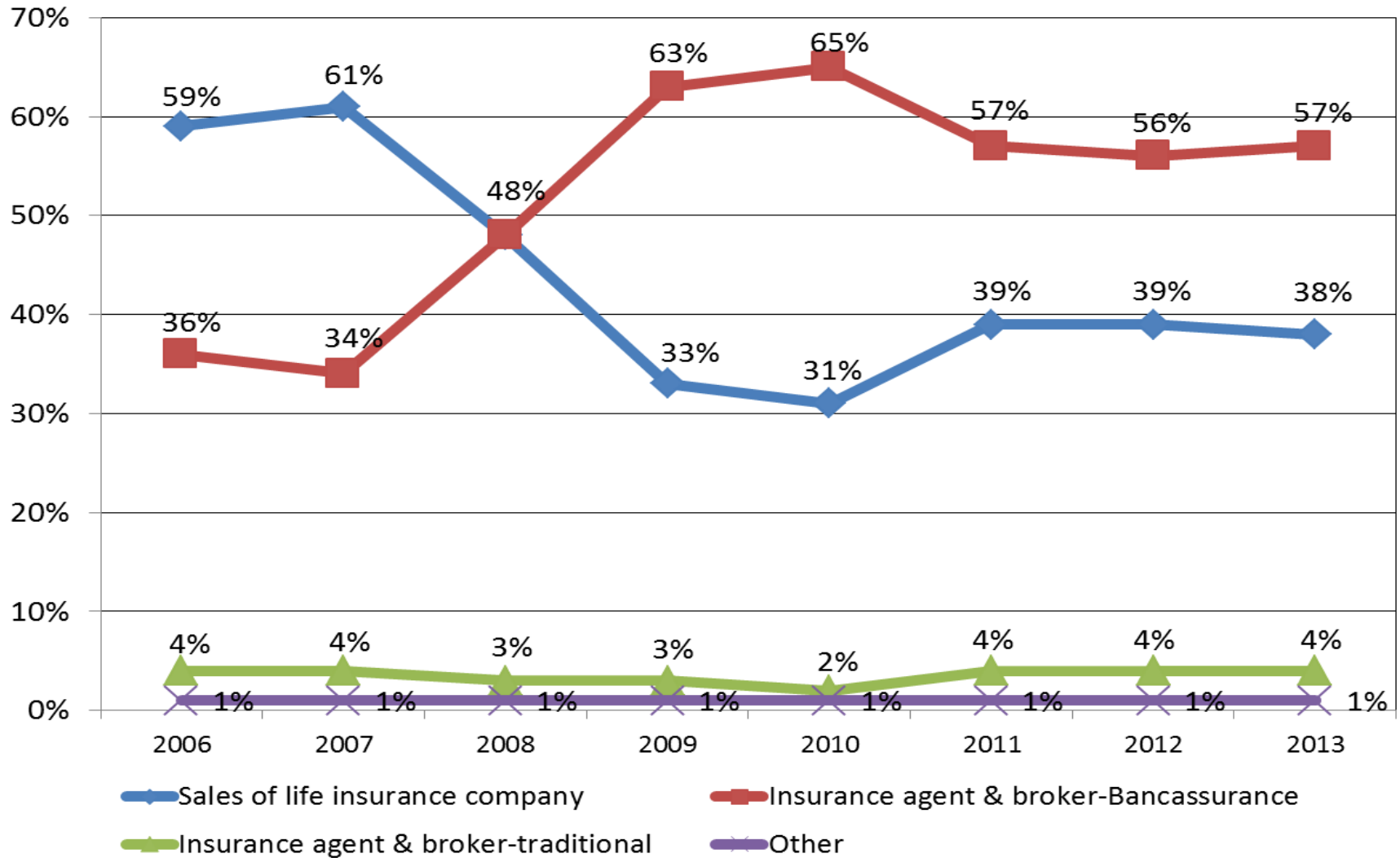


# **The Future Potentials in Taiwan**

- ❑ Increase demand of bancassurance market**
- ❑ Develop Microinsurance market**
- ❑ Develop e-commerce insurance market**
- ❑ Develop Offshore Insurance Unit (OIU) Business**
- ❑ Increase demand for retirement products**
- ❑ China insurance market**



# Increase Demand of Bancassurance Market





# Develop Microinsurance Market

- **Encourage insurers to provide microinsurance for economically disadvantaged people since 2009.**
- **With active promotion by the FSC, microinsurance insurance premium has significant growth.**

## Policy Guidance and Incentive

**Well Performance  
Company**



- 1. Increase approval of new products.**
- 2. Priority review for the application of insurance products.**
- 3. Lower rate of insurance guaranty fund.**

## Future Direction

**Relax  
restrictions  
On insured**

**Increase  
coverage**

**Reward well  
performance  
company**



# Develop E-commerce Market

## • Current Procedural:

To get an electronic signature certificate, the consumer should bring his ID to the counter of insurance company in person.



The insurance company issues the electronic certificate.



The consumer could then buy insurance online with the certificate.

## Future Directions

Method	Noninsurance financial electronic signature certificate, or apply a set of ID and password at the insurance company's counter, or even the company's exist customer can directly apply the ID and password online.
Type	Travel insurance, Personal injury insurance, Term insurance , Annuity, Endowment.
Payment	Credit card, eATM, Bank tranfer, Convenient store(7-11)



# Develop Offshore Insurance Business

- FSC has launch "Free Economic Pilot Zone Project". The principles are: (a) deregulation of financial service and products (b) keeping talent and assets inside the country.
- To make insurance firms more internationally competitive, the FSC allow insurers to establish an offshore insurance unit (OIU) to conduct offshore insurance business.
- Under OIU, FSC will allow insurance firms to provide a wider range of products and services beyond the limitation of current insurance law and regulations.



# Increase Demand for Retirement Products

## Longer life

- The average lifespan in Taiwan increases by an average of 0.13 years annually.

## Higher medical costs

- Average annual medical expenses for the elderly in Taiwan are triple the national average.

## Greater need for long-term care

- Disabled population rising by 20% per year. Long-term care will become increasingly important.

## Current retirement market is very limited

- ❑ Annuities only account for 14% of total life insurance premium income.
- ❑ Total long-term care insurance premium only account for 0.41% of total life insurance premium income.



# Future Retirement Market

## □ Group Annuity Market

**Member investment choices under employer DC pension plans**

- ✦ Private university DC pension
- ✦ New Labor Pension DC Scheme
- ✦ Government Employees' and School Staffs' Insurance (GESSI) second-tier DC schemes

## □ Individual Annuity Market

Demand for individual annuity is raising significantly.

## □ Long-term Care insurance Market

With active promotion, long-term care insurance contracts in force rose from 250,000 in 2007 to 420,000 in 2012. It is expected to be more than double the size in 2014.





# Tax Incentives for Retirement Products

- ❑ The Financial Supervisory Commission and with the Ministry of Finance have established a Joint Task Force on Financial Sector Taxation to devise suitable tax incentives to encourage consumers to buy more insurance to plan for retirement.
- ❑ By offering more tax incentives of annuity and long-term care insurance, we hope to encourage laborers to build up their retirement savings.



# **Innovative Insurance Products and Hedging Strategy**

## **Innovative retirement protection products**

- ❑ Foreign currency interest-sensitive annuities**
- ❑ Variable annuities with guaranteed benefits**
- ❑ Enhanced annuities**
- ❑ Variable-benefit long-term care products**
- ❑ Reverse mortgages/annuity**

## **Encourage longevity hedging for life insurers**

- ❑ Internal longevity risk management system**
- ❑ Life settlement related product**
- ❑ Longevity swaps and other longevity hedging products**



# Foreign Currency Insurance Products

## The Pros of foreign currency products

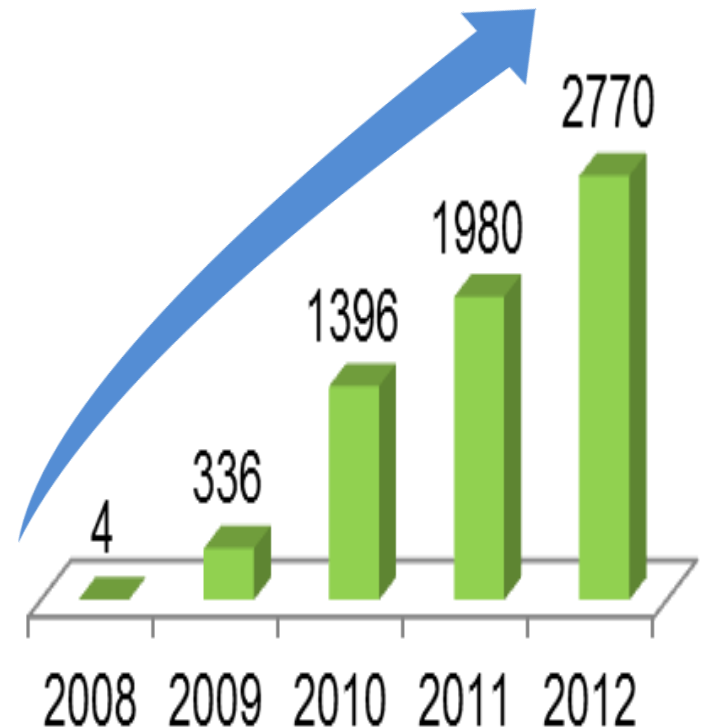
- **Insured side :**  
High pricing interest rate  
➔ cheaper premium.
- **Insurers side :**  
Hedge currency risk and  
Provide better benefits.  
➔ Good for ALM and improve  
the investment return.

Open USD 、 EUR 、 AUD from 2008  
Open RMB from 2012

➔ **The sales volume keeps improving  
for foreign currency products.**

## FYP of foreign currency products

(NTD : 100 million)





# China Insurance Market

- ❑ The growth potential of China's insurance market could increase the insurers' underwriting capacity and help to resolve longevity risks in Taiwan.
- ❑ Investing RMB bonds and Chinese equity markets can improve investment returns for life insurers in Taiwan .
- ❑ RMB bonds in Taiwan has a significant growth.
- ❑ We have also allowed investment-linked insurance policies to link to RMB-dominated investment products.
- ❑ We encourage life insurers to underwrite annuity, health insurance and microinsurance products in China market.
- ❑ FSC will work on increasing the mutual benefits of cross-strait collaboration between Taiwan and China.



# **Key to the Better Future**

**Life insurance companies need to do:**

- **Long-term commitment and business plan**
- **Enhance capital and financial strength**
- **Improve operational efficiency**
- **Improve risk management**
- **Improve corporate government**



# Conclusion

Looking to the future, the FSC will keep refining all the policies and strategies to create a more favorable environment to spur domestic financial and insurance markets.

Through differentiated management, we will simplify the management procedures and provide more elastic control in business for qualified and well performance insurance companies.





*Thank you for your  
attention!*

