6th Asian Conference on Pensions & Retirement Planning

Pension Reforms in Current Economic Climate

INTERNATIONAL TRENDS

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1st February 2010
International trend or trends

- Trends are as diverse as the contexts in terms of:
  - Demographic equilibrium
  - Public private balance
  - Economic development
  - Legacy
  - Political context
  - Prudential framework

- Much uncertainty remains in the global economy which leads to more focus on controlling exposure to risks
Ratio of GNI to GDP vary from 1.2 in Japan to 10.6 in Viet Nam
1.4 in OECD -30
2.0 in Asia -22

In international US$ PPP
Source: Society at a Glance 2009
Asia-Pacific Edition
OECD/Korea Policy Center
Some common impacts of the crisis

- Risk based approach to governance and management
  - Governments as well as employers shifting risks to individuals
- Concerns about public employees pensions
- Proactive management of financial risks
  - Competitive professional management of both private and public funds
- Using dynamic retirement ages to mitigate increasing longevity & decreasing fertility
  - Dependency ratios going up faster
  - Retirement ages moving up too slowly
Asia Pacific Countries

- Compared to OECD, countries in Asia Pacific generally have
  - Better current demographic balance but waste it on low retirement ages
  - Less mature, well-functioning pension systems
  - Low replacement ratios exacerbated by restrictive definition of pensionable earnings
  - Prevalence of lump sums over life annuities
  - High proportion of informal-sector workers
  - Mostly public programs rather than diversified multipillar mixed public private systems
The diagnostic

- History will show that the 2008 US credit crisis, which became a global financial and real sector crisis, was not caused by the failure of Lehman Bros in September 2008.
- That may have been the visible spark that lit the fire but the dry wood had been piling up and the real causes are much deeper than that single event.
- The roots of the crisis have deepened over many years, the causes are many and complex, the remedies will need to be comprehensive and the cure will take time.
- Actuaries have reacted by helping clients to implement a new integrated and comprehensive approach to risk management known as ERM.
What is ERM?

- **Enterprise Risk Management (ERM):** a structured and disciplined approach aligning strategy, processes, people, technology, and knowledge with the purpose of evaluating and managing risks a private or public entity faces as it creates value.
- **Risk:** the threat of an event, action, or loss of opportunity that, if it occurs, may adversely affect values of the organisation.
- **Risk Appetite:** phrase used to express the overall level of risk the organisation is willing to take to achieve its objectives.
- **Risk Tolerance:** quantitatively defines the level of risk we are willing to accept with respect to each of the organisation’s important risks.
- **ERM** is applicable to the whole range of pension, provident fund and social security programs, whatever the financing approach selected by the sponsor, to manage the risks that could affect the solvency and the sustainability of the program and impact adversely on the sponsor be it a Government or an Employer.
The imbalance has been building up. It will take time to correct!
Causes are many and complex
Pension funds, mutual funds and insurance companies have the largest balance sheet of all institutional investors excluding banks and governments.

Banks have been hit harder but got more help!

Write downs and deleveraging hit banks market caps and constrain credit availability going forward

While JPMorgan considers this information to be reliable, we cannot guarantee its accuracy or completeness.

Source: Bloomberg, Jan 21th 2009
Pension funds on average have suffered less than banks.
The DC programs hit harder

- In DB programs future contributions are a buffer
- Participants in DC programs feel the covenant governing their expectations has been broken.
  - New entrants forcibly enrolled in a DC program while the DB program was maintained for existing employees may challenge the discriminatory treatment
- Non-financial DC programs not hit as hard which leaves the pure DC programs at the bottom of the list
- Time is not ripe for further conversion of DB to DC but a switch back to DB is unlikely
  - more pressure to add minimum guarantees in private DC programs or expand basic public programs providing minimum DB pensions with longevity guarantees
- Crisis has increased pressure on offering participants more freedom of choice and outsourcing may become more popular
Fairness issue between participants in public and private programs

- Public sector plans often DBs while in private sector DCs are more frequent
- As Public Sector schemes can be maintained in DB form which Private Sector employers can no longer afford, participants in funded plans severely hit by the crisis feel unfairly treated
- Need to ensure that the true costs of state pension commitments are recognized in compliance with IAS 25 and disclosed in a transparent manner to minimize the perception of unfairness
Adjusting to the new economic climate

- Prior to the crisis the EU was in the process of revising the prudential framework for banks and insurance companies; the crisis gave an impetus to reviewing pensions as well.
- Solvency II and its risk capital requirements not likely to apply to pensions but some improvements are in the works.
- Current proposals are illustrative of what to expect in the EU and the larger OECD context with gradual extension to other countries.
There is some support for harmonisation at the EU level, within a principles-based framework rather than rules-based, for the harmonised regime to be tailored to the specific features of occupational pensions and the diverse ways in which they are delivered throughout Europe.

There appears to be a broad consensus that the overall objective of solvency rules should be to provide:

- a high degree of security for future pensioners,
- at a reasonable cost to the sponsors and
- with the right incentives for risk management.
There is more to pension security than a uniform set of solvency rules. A holistic view is required, recognising the trade-offs implicit in social and labour law between:

- the quality and quantum of pension benefits and
- the security of pension delivery systems.

The three pillar system used elsewhere in financial services may provide a suitable template for further examination.

Two of the 8 principles currently proposed are climate driven:

- Risk based
- Countercyclical

From:
Pension Security in IORPs
Draft report of working party
European Actuarial Consultative Group
21 September 2009
Proposed best practice principles for supervisory requirements

1. Forward-looking and risk-based
2. Market consistent
3. Transparent
4. Proportionate
5. Balanced
6. Flexible
7. Counter-cyclical
8. Practical

A clear immediate challenge

- While we wait for the responses to the 2008 « economic crisis » to crystallize there is an important issue to address that has become perceived as a more immediate risk.
- Increasing longevity has been with us for a long time but with the multiplier effect of decreasing fertility, it is becoming a « demographic crisis » as dependency ratio curves turn up.
Historical Perspective

- **<1650: Pestilence & Famine:** Life expectancy: 20 to 40
- **1650- 1920: Receding Pandemics:**
  - Life expectancy to 50
  - Top cause of death shift from infectious to chronic diseases
- **1920- 2000: Degenerative diseases of affluence:**
  - Life expectancy reaches 70+
- **2000+: Delayed degenerative diseases**
  - Increase in survival period above at 65+ results in higher proportion of elderly
Old Age Dependency ratios 65+/20-64

Real ratios higher because Retirement ages mostly below 65
Old Age Dependency ratios 65+/20-64

Ratios above Asia-14 average for 2010

- Australia
- Hong Kong, China
- Korea
- New Zealand
- Japan
- Singapore
- Thailand
- Asia-14
- OECD-30

Graph showing the trend of old age dependency ratios from 1980 to 2050.
Longevity has positive effects

- Multiple socio-economic impacts
- Beneficial for society as a whole but entails risks as it means changes
- Challenge is to reap benefits and control risks
- Requires deeper understanding of a complex interaction of causes and driving forces
- Post-retirement longevity risks can be managed through cohort based annuities
## Comparison of Pay-outs on calendar and on cohort basis

<table>
<thead>
<tr>
<th>Calendar year</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attained age</td>
<td>65</td>
<td>66</td>
<td>67</td>
<td>68</td>
<td>69</td>
<td>70</td>
</tr>
<tr>
<td>With then calendar year mortality</td>
<td>18,250</td>
<td>17,647</td>
<td>17,052</td>
<td>16,469</td>
<td>15,899</td>
<td>15,346</td>
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<tr>
<td>With mortality for Year of Birth 1944</td>
<td>21,125</td>
<td>20,394</td>
<td>19,674</td>
<td>18,969</td>
<td>18,281</td>
<td>17,614</td>
</tr>
</tbody>
</table>

### Mortality rates with improvements 2%/yr

| Age  | 0,013195 | 0,014522 | 0,016175 | 0,018154 | 0,020457 | 0,023086 | 0,026040 | 0,029319 | 0,032923 | 0,036853 | 0,041108 | 0,045688 | 0,050594 | 0,055825 | 0,061380 | 0,067262 |
|------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| 65   | 0,014232 | 0,015852 | 0,017435 | 0,019647 | 0,019254 | 0,018869 | 0,020868 | 0,023538 | 0,026502 | 0,029760 | 0,033312 | 0,037158 | 0,041298 | 0,045733 | 0,050461 | 0,055483 | 0,060800 |
| 66   |          | 0,014522 | 0,015852 | 0,017435 | 0,019647 | 0,019254 | 0,018869 | 0,020868 | 0,023538 | 0,026502 | 0,029760 | 0,033312 | 0,037158 | 0,041298 | 0,045733 | 0,050461 | 0,055483 |
| 67   |          |          | 0,015852 | 0,017435 | 0,019647 | 0,019254 | 0,018869 | 0,020868 | 0,023538 | 0,026502 | 0,029760 | 0,033312 | 0,037158 | 0,041298 | 0,045733 | 0,050461 | 0,055483 |
| 68   |          |          |          | 0,017435 | 0,019647 | 0,019254 | 0,018869 | 0,020868 | 0,023538 | 0,026502 | 0,029760 | 0,033312 | 0,037158 | 0,041298 | 0,045733 | 0,050461 | 0,055483 |
| 69   |          |          |          |          | 0,019647 | 0,019254 | 0,018869 | 0,020868 | 0,023538 | 0,026502 | 0,029760 | 0,033312 | 0,037158 | 0,041298 | 0,045733 | 0,050461 | 0,055483 |
| 70   |          |          |          |          |          | 0,019254 | 0,018869 | 0,020868 | 0,023538 | 0,026502 | 0,029760 | 0,033312 | 0,037158 | 0,041298 | 0,045733 | 0,050461 | 0,055483 |
| 71   |          |          |          |          |          |          | 0,018869 | 0,020868 | 0,023538 | 0,026502 | 0,029760 | 0,033312 | 0,037158 | 0,041298 | 0,045733 | 0,050461 | 0,055483 |
| 72   |          |          |          |          |          |          |          | 0,020868 | 0,023538 | 0,026502 | 0,029760 | 0,033312 | 0,037158 | 0,041298 | 0,045733 | 0,050461 | 0,055483 |
| 73   |          |          |          |          |          |          |          |          | 0,023538 | 0,026502 | 0,029760 | 0,033312 | 0,037158 | 0,041298 | 0,045733 | 0,050461 | 0,055483 |
| 74   |          |          |          |          |          |          |          |          |          | 0,026502 | 0,029760 | 0,033312 | 0,037158 | 0,041298 | 0,045733 | 0,050461 | 0,055483 |
| 75   |          |          |          |          |          |          |          |          |          |          | 0,029760 | 0,033312 | 0,037158 | 0,041298 | 0,045733 | 0,050461 | 0,055483 |
| 76   |          |          |          |          |          |          |          |          |          |          |          | 0,033312 | 0,037158 | 0,041298 | 0,045733 | 0,050461 | 0,055483 |
| 77   |          |          |          |          |          |          |          |          |          |          |          |          | 0,037158 | 0,041298 | 0,045733 | 0,050461 | 0,055483 |
| 78   |          |          |          |          |          |          |          |          |          |          |          |          |          | 0,041298 | 0,045733 | 0,050461 | 0,055483 |
| 79   |          |          |          |          |          |          |          |          |          |          |          |          |          |          | 0,045733 | 0,050461 | 0,055483 |
| 80   |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          | 0,050461 | 0,055483 |

Comparison of Pay-outs on calendar and on cohort basis
Females Life Expectancy

Underestimating has been systematic!
An inconvenient truth?

• Precautionary principle justified but most countries too slow in moving up retirement age
  • Would increase the GDP but false economics argue early retirements create jobs!
  • Policy decision too hard to sell if not a crisis?
• Are we « Deniers » of longevity trends? Or may be only « Non-believers »
• Possible Plan B would be lifestyle change to 4 day week and indefinite retirement ages
  • 50% more leisure time when families can enjoy it
• Or maybe a Plan C? Your challenge!