

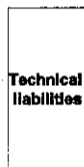
Financial Reporting & Solvency II Regulation

Two visions on presentation of the economics of the business

Will it have an impact on the Cost of Capital for the Insurance Industry?

Accounting view for the Valuation of Technical Liabilities

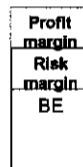
Traditional Accounting



- Liabilities valuation based on management assumptions
- Calibrated for no profit at inception (entry value)
- Recognition of profit over the life of the contract
- No separate disclosure of Best Estimate (BE)
- Limit volatility in P&L
- No separation for valuation of financial risks and non financial risks

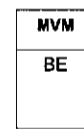
Future Accounting models under discussion

ENTRY



- Market consistent valuation of BE and risk margin
- Calibrated for no profit at inception (entry value)
- Recognition of profit over the life of the contract but based on release from risks
- Explicit disclosure of margins (1)
- Limit volatility in P&L
- No separation for valuation of financial risks and non financial risks
- Loss recognition based on market value

EXIT



} market consistent value

- Market consistent valuation
- Calibrated to be able to transfer liabilities to a third party
- Might lead to profit at inception
- Disclosure of BE
- Separation of valuation of financial risks and non financial risks as Market Value Margin (MVM) only required for non financial risk

(1) Not clear that companies feel at ease with this disclosure

(2) Close to CFO Forum proposals

Key elements for the coherence of the two visions – success factor

- Need of a coherent terminology in Accounts and Solvency II (same concepts = same definitions).
- Requires market consistent value to be explicit part of accounting technical liabilities
- The accounting technical liabilities should be kept at a reasonable level which does not interfere with fungibility and correlation needs
- There is a need for a well developed argumentation to justify a different presentation between Solvency and Financial Reporting
- Need the supervisors and the EC to accept this overall framework.

Key elements in the development of a new Regulatory and Financial Reporting Framework

- Facts:
 - Valuation of insurance business by financial market is lower than other industries
 - There is a general consensus from users that traditional accounting standards do not adequately reflect inherent economics of business
 - ⇒ As a result, increased number of supplemental disclosures such as embedded value but does it not create more confusion?
- Questions:
 - Will the framework proposed be accepted by the users and the regulators as it probably increases the complexity?
 - Is there a risk of further opaqueness discount because of the industry's fear for the consequences of transparency and volatility in P&L?

Changing life cycles and their impact on insurance

Didier Blanchet
INSEE, France

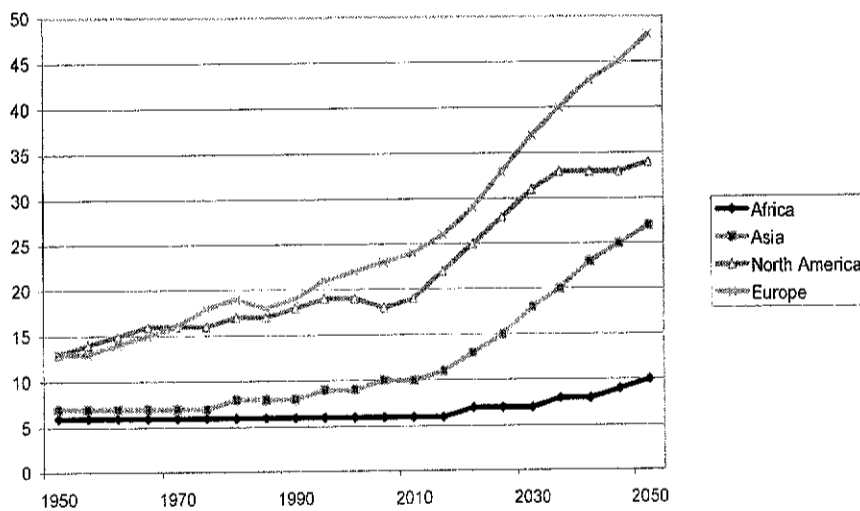
Three aspects

- Changing life cycles and population ageing : an overview
- Their macro-consequences for the general economic context where insurers operate
- Some more specific consequences for life insurance

Changing life cycles and population ageing : an overview

Ageing : a general trend

Ratio 65+/15-64 (UN projections, medium variant, in %)



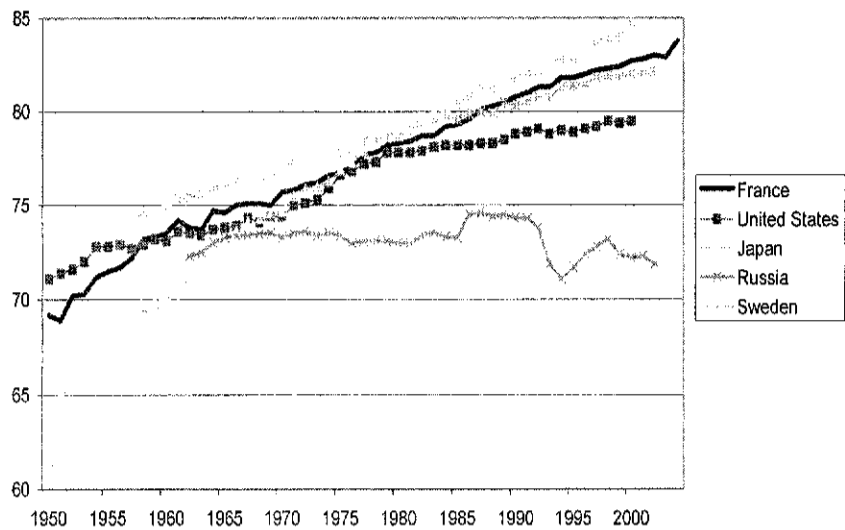
Underlying factors

- Three factors
 - Increasing life expectancy (LE)
 - Baby-boom
 - Baby-bust
- How do they interact ?
 - Increasing LE generates a regular ageing trend
 - Two steps for the baby-boom effect : ageing first slows down, then reaccelerates (when baby-boomers grow old)
 - The baby-bust will exacerbate this trend, but with a varying intensity across countries

The margin of uncertainty

- The baby-boom effect is unavoidable
- Uncertainty concerning current fertility levels only plays in the very long run.
- Two schools of thought on mortality trends:
 - Past demographic projections have been generally relatively conservative on mortality. This leads some specialists to predict that LE will go on increasing at a sustained rate.
 - But some others underline factors going in the opposite direction: decreasing returns on medical progress, new pathologies, delayed impact of a decreasing selection at birth,
- At this stage, no apparent inflexion for western developed countries : things remain opened

LE at birth (women)



About macro-consequences

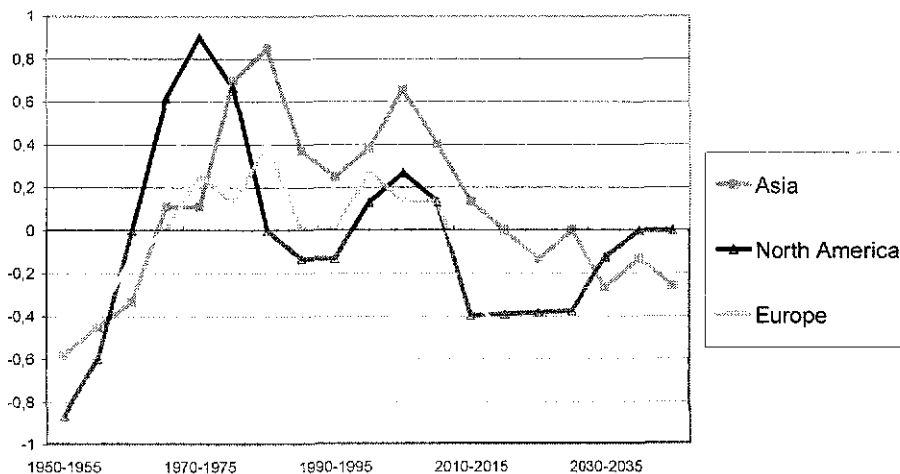
- General economic growth
- Capital markets

General economic growth

- Mechanical (one-per-one) effects on potential growth, total and per head
- The mechanical effect on per capita growth is equal to the change in the global support ratio (15-64/total population)

Contribution of the global dependency ratio to growth of GDP/head

(Source UN, medium variant, % per year)



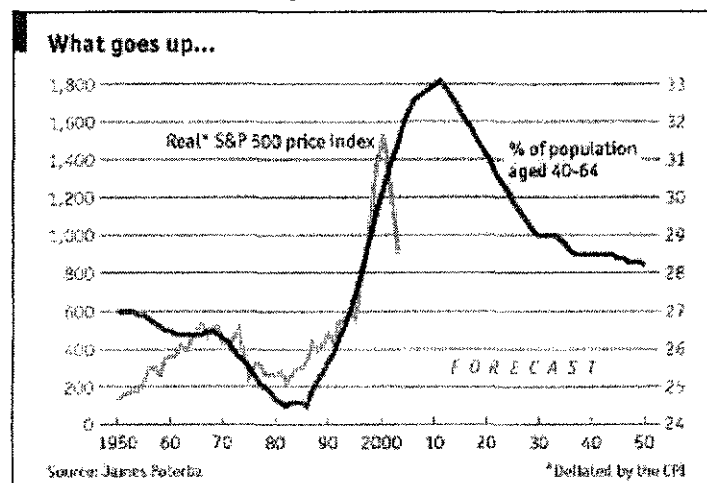
Non mechanical effects

- Will the true effect be stronger or lower than that ?
 - A negative impact of ageing on productivity : seems to be weak, and no fatality (life long learning)
 - Possible compensation of higher dependency ratios by higher LFP rates

Impact on capital markets

- Conventional wisdom derived from standard life-cycle theory (LCT) : older people are dissavers and aging should depress savings rates.
- More precisely, there are two steps : higher dissavings are a compensation for a first phase of increased savings by large cohorts of baby-boomers who anticipate large retirement needs.
- Leads to the so-called *asset meltdown hypothesis* (AMH).
 - Assets bought at increasing prices during the first phase will be resold to later cohorts at depressed prices.

A (weak) illustration of the first phase



The AMH hypothesis : what implications ?

- Reminds us that, in principle, funded pension systems are not less affected by demographic shocks than unfunded ones (even when they have higher returns in the long run)
- But not necessarily sufficient to predict a dramatic decline in asset prices for the next decades

The AMH hypothesis : is it relevant ?

- Empirical validation remains weak
- Naive LCT is challenged on many aspects:
 - Agents are more myopic and less rational than assumed by the theory
 - Under current conditions, people remain savers during their retirement period (bequest motive)
- But actual behaviour could come closer to LCT if pension levels decline and if institutional innovations make it easier to consume one's capital after retirement (e.g. reverse mortgage).

Some more specific
consequences for insurance

The demand for old age insurance

- Even if people move closer to expected life-cycle behavior, the impact of ageing will remain mediated by many other parameters.
- If pension reforms succeed in maintaining high replacement ratios through massive postponement of retirement age, the impact on demand for additional coverage could remain weak.

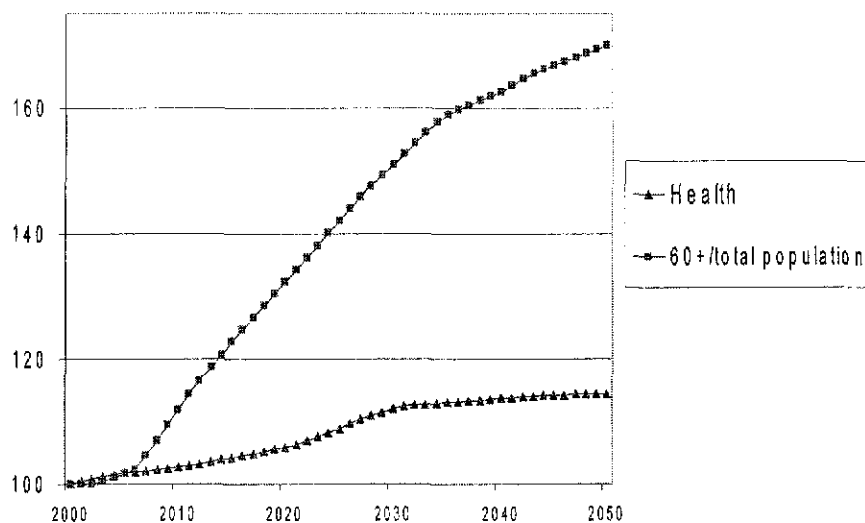
But demand should remain dynamic ...

- ...if people go on retiring early (by choice or because of labour shortage)
- ...or if they wish to compensate for less generous indexation rules of pensions after retirement (that will progressively erode their relative standard of living).
- ...or if they worry about consequences of ageing for health and invalidity.

Health and invalidity

- Same uncertainties at the macro level as for global life-expectancy.
- The mechanical elasticity of health expenditures to global ageing is (paradoxically) lower than for pension expenditures

The pure impact of aging on health expenditures (an example)



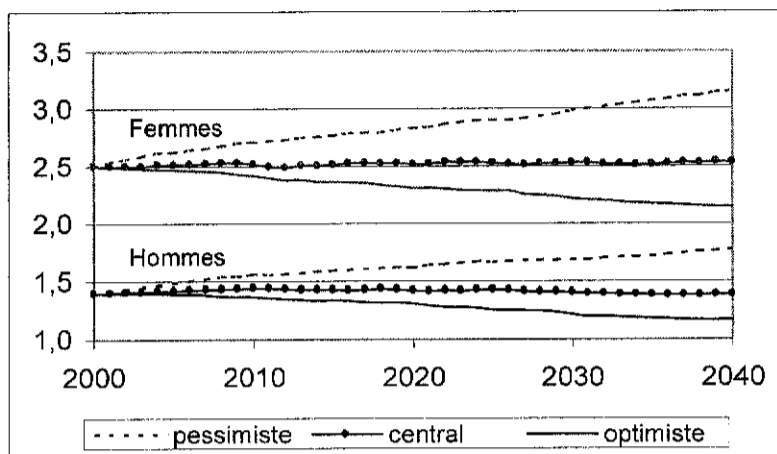
Ageing and health expenditures : the uncertainties

- This is due to the fact that the age profile of health expenditures is much smoother than the profile of pension expenditures.
- There is also the question of knowing whether the profile of expenditures will or will not move rightwards in parallel to the average age at death.
- This question also arises for old age invalidity.

Old age invalidity

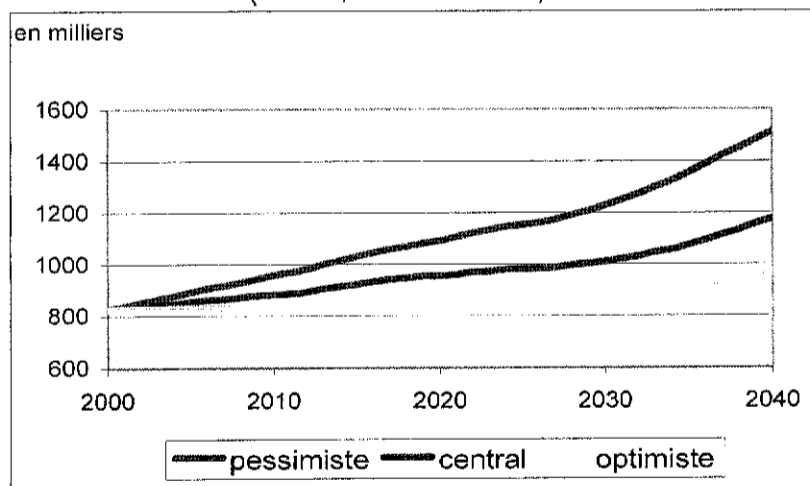
- Little doubt that the phenomenon will gain importance
 - But the order of magnitude will depend on the average duration spent in invalidity
- One example of projections for France

Assumptions on the average length of the period spent in invalidity



Implications for the number of old age dependant

(France, source : INSEE)



The need for coverage

- Demand for additional coverage will of course depend on the way this risk will be covered by social insurance.
- A scenario of indexing invalidity benefits on prices makes this increase manageable for public finances, but at the cost of a strongly reduced level of coverage at the individual level : who will cover the difference ?