

Retirement Payouts and Risks Involved

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Structure

- Different types of payout options
 - Lump-sum (pros and cons)
 - Programmed withdrawals (pros and cons)
 - Annuities (pros and cons): LR
- Different types of annuity products: according to the type of guarantees provided, determining the impact of different risks
- Examine the risks combined: “super-additivity effect”

Several dimensions to classify annuities

How they are financed

- Single premium
- Flexible premium (contributions)
 - Fixed
 - Variable

Primary purpose

- Immediate pay-out
- Deferred (accumulation)

Underlying investment

- Fixed
- Variable
- Equity-indexed

Nature of the pay-out commitment

- Fixed-term or annuity certain
- Life annuity
- Temporary annuity
- Guarantee annuity

Providers

(accumulation or payout phase)

- Qualified
- Non-qualified

People covered

- Single
- Joint-and-survivor

Way the annuity is purchased

- Individual
- Group

Others

- Tax advantages
- Enhanced vs impaired annuities
- Inflation indexed annuities

Part 1 of this Presentation

- Retirement payouts under occupational DC plans.
- Increasing importance of DC plans, but DB-focused regulation in several countries.
- What should be the main forms(s) of benefit payment at retirement?
- How should choice be regulated?
- Who should provide such “products”?

[Many country examples provided in paper.]

“Traditional” DC Approach and its Problems

- Accumulation phase investment risks (not today).
- Point-in-time sale of investments – markets down.
- Point-in-time purchase of life annuity – interest rates down.
- Life annuity purchases in uncompetitive markets.

End result: two people with identical careers retire with substantially different pensions, simply because of different retirement dates, and problem cannot later be corrected.

Alternative to life annuity: lump sum

- Easy to administer; no complex calculations.
- Retiree can retire debt, finance healthcare, start new business, satisfy bequest motive, etc...
- Flexibility to self-annuitize and to earn higher investment returns, but most lack necessary ability and discipline.
- Retiree assumes all longevity risk.
- Capital may eventually be exhausted, and retiree resorts to welfare. Moral hazard?

2nd alternative: programmed withdrawals

- Retiree still assumes longevity risk, but more financial discipline.
- Programs attempt to replicate “average” life annuity.
- Useful alternative when annuity market is not well developed and regulated.
- Satisfies bequest motive.
- Capital may eventually be exhausted.
- Longevity: ability to re-spread remaining capital, but declining payments?

Life annuities in simplest forms

- Full longevity insurance, ...unless provider goes bankrupt.
- Retiree loses control of investments.
- In simplest form, fails bequest objective.
- Insurers heavily regulated regarding investments, reserving, etc.... Negative effects on pricing?
- Declining number of providers?

Country practices

- Lump sums only – HK, India, Thailand, Luxembourg*.
- Programmed withdrawals only – none.
- Life annuities only – many European countries, Colombia.
- Lump sum or programmed withdrawals – China, Malaysia.
- Lump sum or life annuity – Belgium, Japan, Spain, USA.
- Partial lump sum + annuity - Ireland, Italy, Portugal, SA, UK.
- Life annuity or programmed withdrawals – Canada*, Chile, Costa Rica, Mexico, Peru, Russia.
- All options – Denmark (private plans), Australia.

More complex life annuities

- To (partially) satisfy bequest motive:
 - Cash refund or modified refund annuities.
 - Annuity with N-year guarantee.
 - **Longevity insurance** (balance is self-annuitized).
- To protect surviving spouse:
 - Joint & survivor annuities.
 - Spousal sign-off.

But, all except longevity insurance are more expensive!

Longevity insurance (one form)

- At retirement, individual buys deferred annuity to commence at much later date, e.g. 20 years later, at end of average life expectancy, etc...
- No cash surrender value.
- No benefit on death before commencement date.
- Consumes about 15%(?) of retirement capital.
- Longevity insurance on spouse?

Indexed and variable annuities

- Simple guaranteed indexing.
- With-profits annuities.
- “Variable”: several different definitions:
 - Payments fluctuate with investment performance.
 - Payments recalculated based on both investment and longevity experience.
 - (Even) more complex forms

Reducing annuity purchase costs

- Freedom to select most competitive rate.
- Laddered annuities/laddered purchases.
- Reduce or eliminate “anti-selection”:
 - Mandatory annuitization.
 - Choice made well in advance.
- State annuity fund or equivalent.
- Buy longevity insurance & self-annuitize balance.
- DC pension fund retains annuity. **Danger!**

Regulating or encouraging choice?

- Human nature to elect lump sum?
Protecting people against themselves?
- Level of social security beneath occupational plan, and form in which it is paid.
- Lump sums only after minimum level of annuitization.
- Tax treatment must be consistent with government's objectives!

Ideas for Consideration by China (Eas)

- Impose maximum on current lump sum payments?
- Encourage or require programmed withdrawals to replicate series of lifetime payments?
- Add life annuities to list of payout options.
- Implement tax provisions that encourage retirees to choose option(s) favored by government.

谢谢。

colin.pugh@wanadoo.fr

Part 2



Colin
To
Pablo

Annuities and the risks involved

- Overall project on annuities & risks involved
- Risks: longevity, interest rate, inflation and investment risks.
- What distinguishes the different type of annuity products is the type of guarantees they provide
- The impact of different risks on annuities depends on these guarantees.

Annuities and the risks involved

- Put the different risks in context
- Last year, we compared the impact of LR with that of interest rate.
- This year, the combined impact of LR, investment risk and inflation.
- Important to look at the combined impact of risks: “super-additivity” effect.

Modelling the increase in annuity liabilities

- As a result of:
 - Improvements in mortality and life expectancy
 - Changes in interest rates
 - Benefits adjusted to inflation
- Separately and combined.
- For payout phase alone (individual aged 65): immediate, fixed, life-time annuity
- For both accumulation and payout phases together (individual aged 25): deferred, fixed, life-time annuity

Modelling assumptions

- Reference case:
 - No improvements in mortality and life expectancy
 - Interest rates at 5.5% nominal
 - Benefits are not adjusted for inflation
- Improvements in life expectancy through the entire age structure (life table) such that improvements at birth are 1.2 years per decade and at age 65, 0.8 percent per decade.

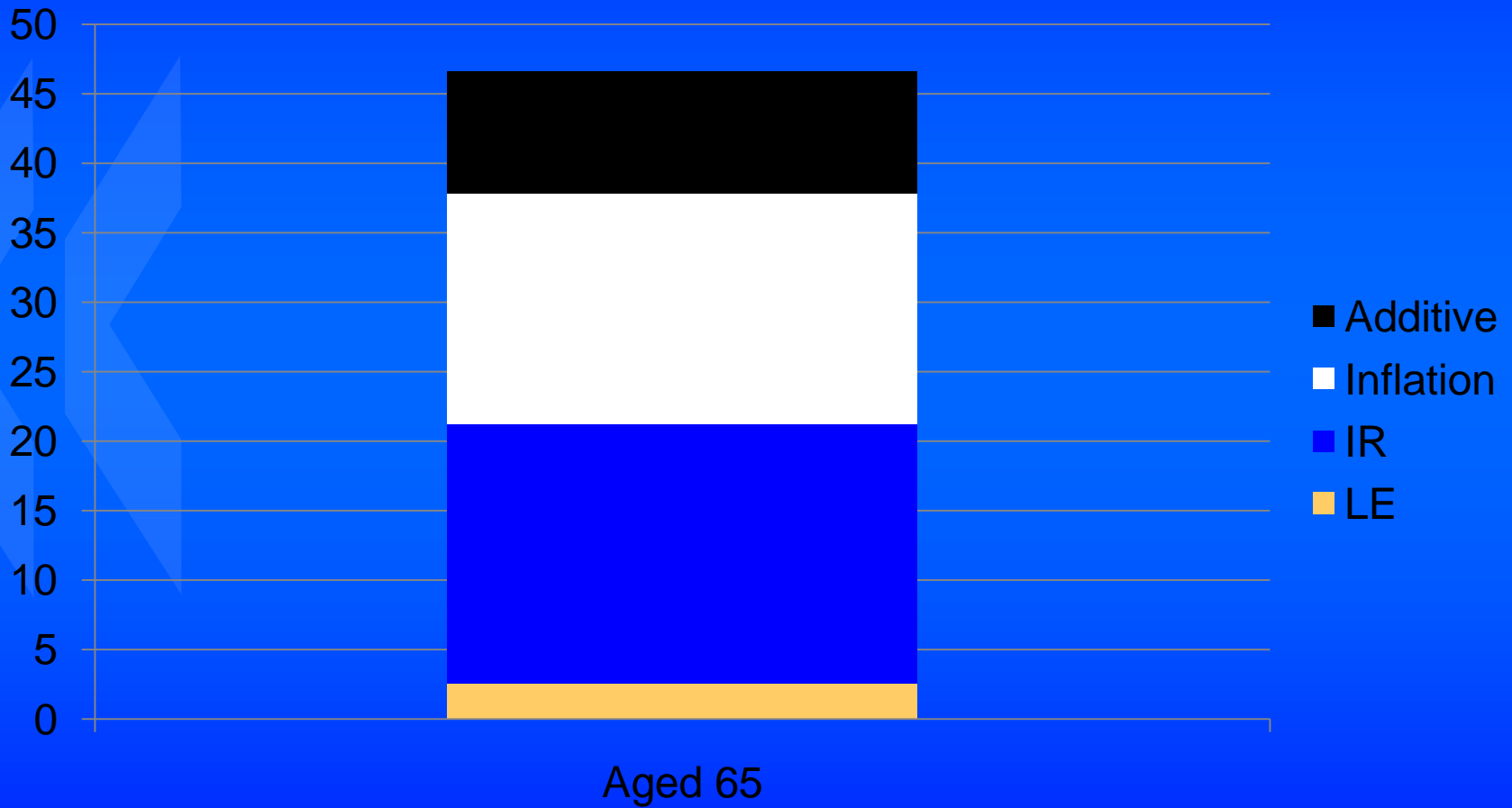
The separated impact

	Improvements in life expectancy (1.2 birth; 0.8 65)	Changes in interest rates (5.5% to 3.5%)	Benefits adjusted to inflation
Payout phase (Individual aged 65)	2.6%	18.6%	16.6%
Accumulation and payout phases (individual aged 25)	20.5%	154.9%	16.6%

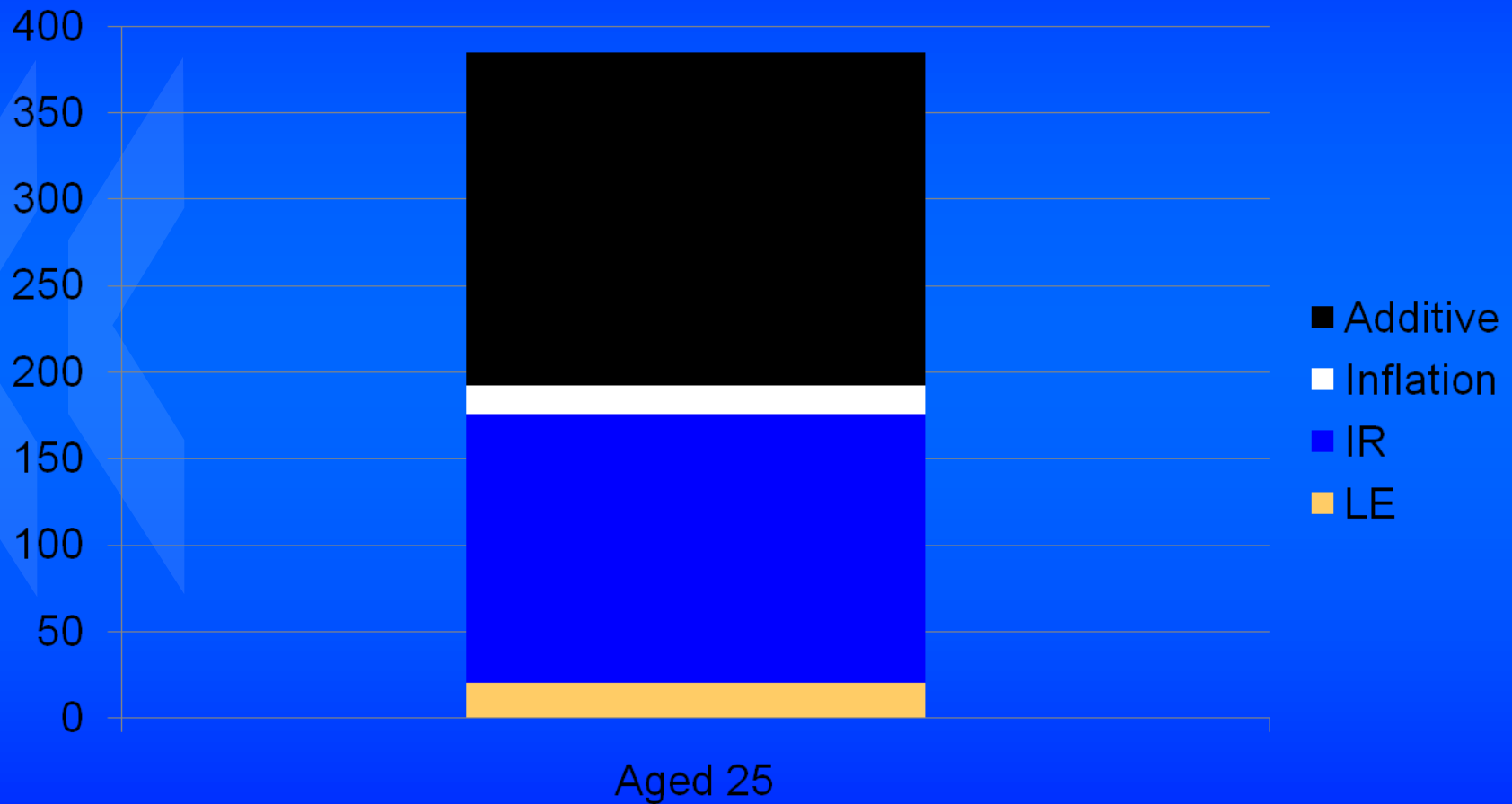
The combined impact

	Improvements in life expectancy (LE)	Improvements in LE and changes in interest rates (IR)	Improvements in LE, changes in IR and benefits adjusted to inflation
Payout phase (Individual aged 65)	2.6%	22.5%	46.6%
		Higher than 2.6%+18.6%	Higher than 2.6+18.6+16.6
Accumulation and payout phases (individual aged 25)	20.5%	315.1%	384.9%
		Higher than 20.5%+154.9%	Higher than 20.5+154.9+16.6

Payout phase



Accumulation and payout phases





THANK YOU!

pablo.antolin@oecd.org

<http://www.oecd.org/daf/pensions>