

# **Designing the Payout Phase: Main Policy Issues and Options**

**Roberto Rocha**

5<sup>th</sup> Contractual Savings Conference, The World Bank/IFC  
Washington DC, January 10, 2012

# Structure of the Presentation

- **The Payout Phase**
  - Where do we stand today?
  - Where are the most relevant experiences?
- **Regulation of Payout Products**
- **Regulation of Payout Providers**
  - Institutional Arrangements
  - Pricing/Marketing Regulations
  - Prudential Regulations
  - Risk-Sharing Arrangements
- **Main Policy Options**

# The Payout Phase: Where do we Stand?

- **Design of payout phase remains a relevant issue**
  - Despite recent reform reversals, several countries have preserved their second pillars, payout phase approaching
  - Some countries are introducing complementary DC schemes for civil servants
- **Design of payout phase remains a challenge**
- **Need to balance the needs and risks of pensioners**
  - Needs: Adequate retirement income, bequests, liquidity
  - Risks: Longevity, investment, and inflation risks (plus annuity risk, bankruptcy risk)
- **Many different options to design the payout phase**
  - 5 countries probably provide the most relevant experiences

# **The Payout Phase:**

## **Where are the Most Relevant Experiences?**

- **Australia, Chile, Denmark, Sweden and Switzerland**
- **All 5 countries have large DC-based second pillars**
  - Mandatory or quasi-mandatory
- **But there are important differences:**
  - in the structure and role of different pillars of the pension system
  - in the regulation of payout options
  - in the levels of annuitization
  - in institutional arrangements
  - in pricing/marketing regulations
  - in prudential regulations
  - in the use of risk sharing arrangements
- **The 5 countries provide a rich combination of experiences and lessons for other countries**



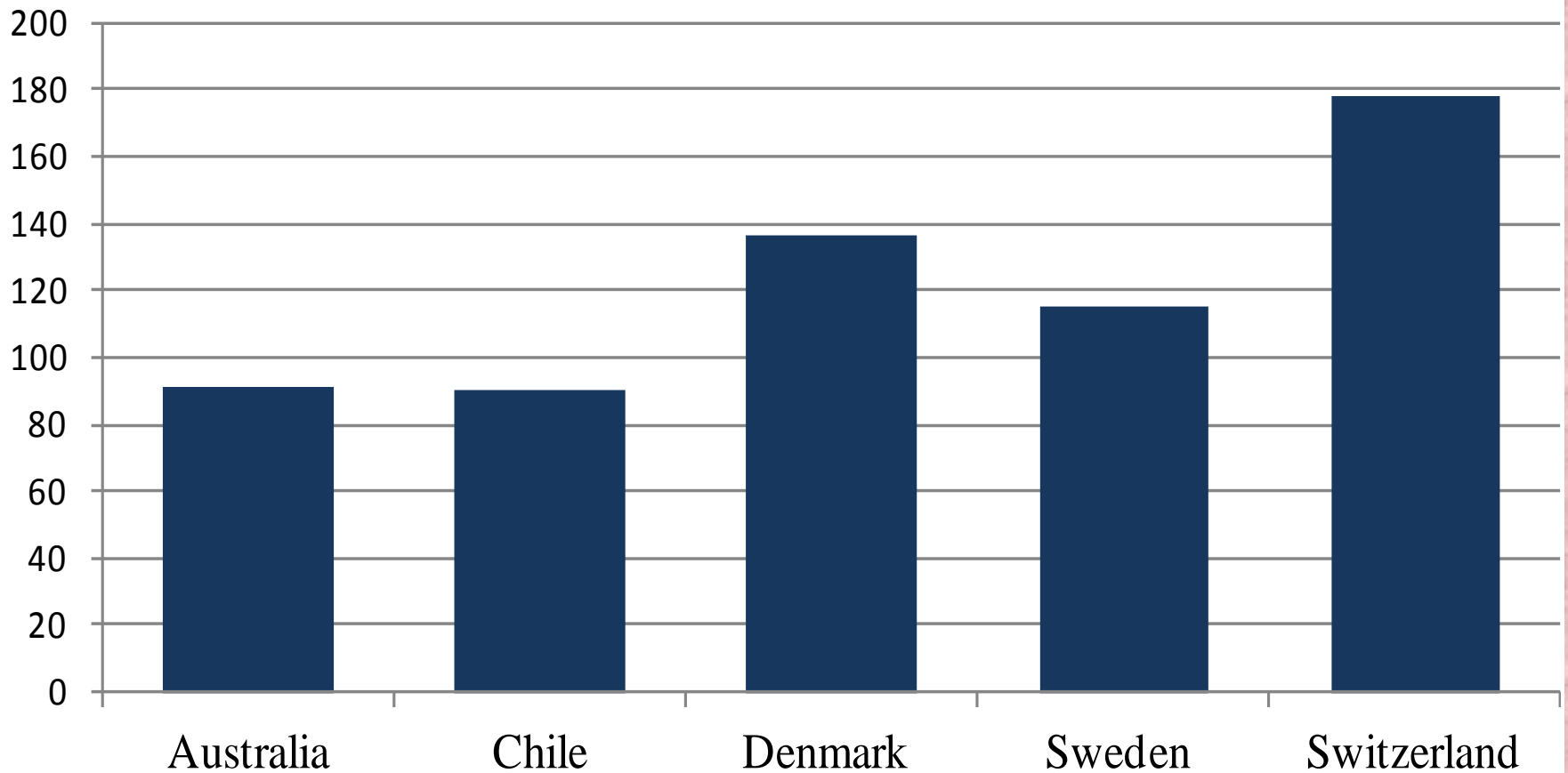
# The Payout Phase:

## All the Selected Countries Have Second Pillars

<b>Country</b>	<b>Pillar 0</b>	<b>Pillar 1</b>	<b>Pillar 2</b>	<b>Pillar 3</b>
<b>Australia</b>	Yes	No	<b>Yes</b>	Yes
<b>Chile</b>	Yes	No	<b>Yes</b>	Yes
<b>Denmark</b>	Yes	No	<b>Yes (2)</b> <b>(Central + Occupational)</b>	Yes
<b>Sweden</b>	Yes	Yes	<b>Yes (2)</b> <b>(Central + Occupational)</b>	Yes
<b>Switzerland</b>	Yes	Yes	<b>Yes</b>	Yes

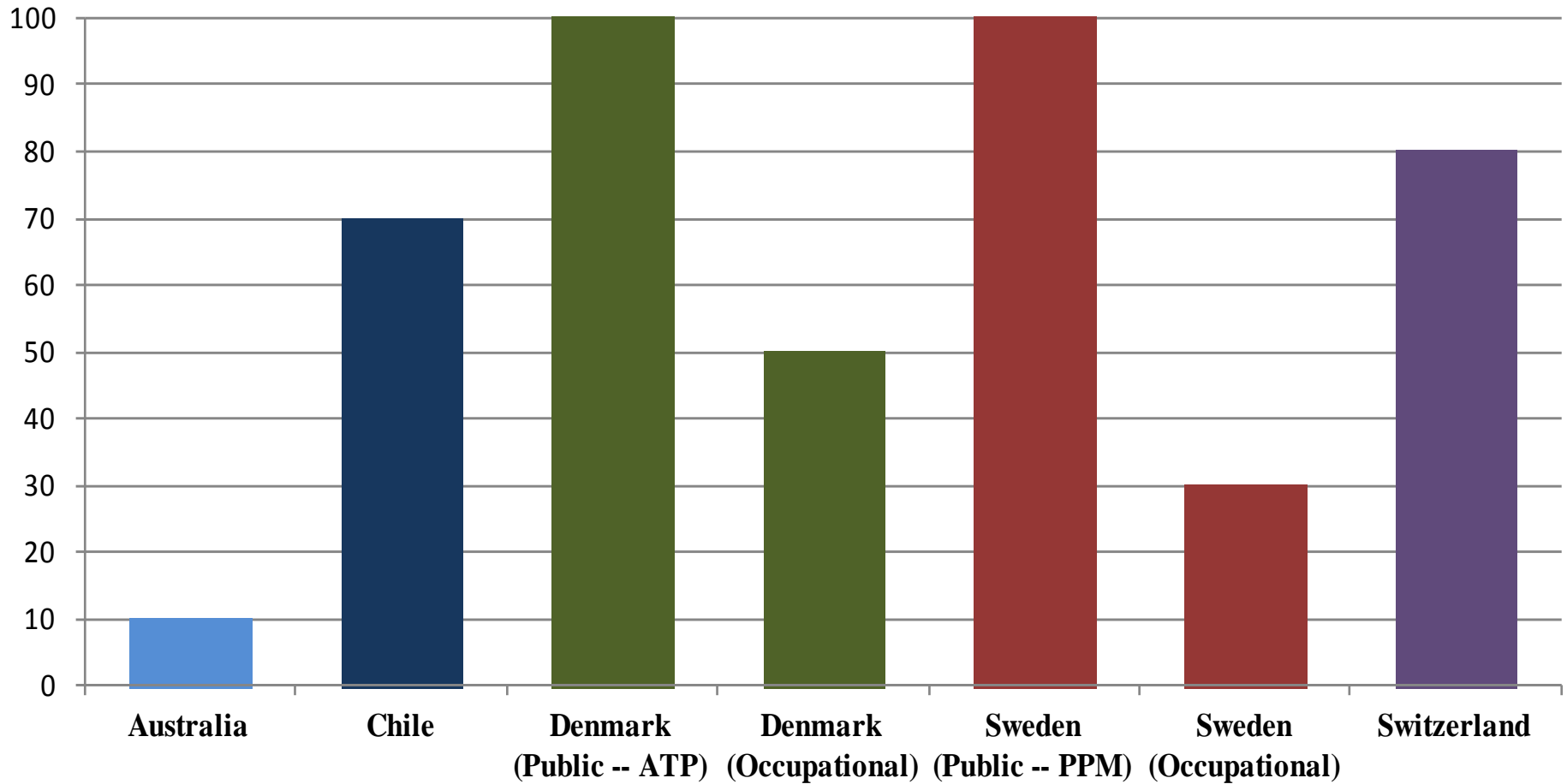
# The Payout Phase: All Second Pillars Have a Meaningful Size

## Retirement Assets (% of GDP) (Assets of DC Pensions Funds + Insurance Companies)



But the Levels of Annuitization are Very Different  
(reflecting primarily the regulation or plan rules of payout products)

### Levels of Annuitization (%)



# Regulation of Payout Products

- **There are many different payout products**
  - Lump-sums
  - Phased withdrawals (PWs) with different rules
  - Annuities: Term/Life; Fixed/Escalating/Variable; Nominal/Real; Single/Joint; Period-guaranteed/or not
- **No single product can address all needs and risks**
- **Most countries restrict lump-sums to achieve minimum levels of annuitization**
- **Real fixed life annuities are only widely offered in Chile**
  - Although other countries offer conditional price indexation
- **Most countries have allowed riskier products (term and variable annuities, PWs) but only with minimum annuity**
- **Variable annuities are part of risk-sharing arrangements**
- **Period-guaranteed annuities are popular when offered**



# Properties of Different Payout Products

Flexibility  
Protection



	Protections Offered			Other Benefits	
	Longevity Risk	Investment Risk	Inflation Risk	Bequests	Liquidity
Lump-sum	No	No	No	Yes	Yes
Term annuity	No	Possible	Possible	Yes	No
Lifetime phased withdrawal (PW)	No	No	No	Yes	No
Variable life annuity, minimum payment guarantee + bonus	Possible/ Shared	Shared	Shared	No	No
Variable life annuity, unit-linked	Shared	No	No	No	No
Fixed nominal life annuity	Yes	Yes	No	No	No
Escalating nominal life annuity	Yes	Yes	Partial	No	No
Fixed real annuity	Yes	Yes	Yes	No	No
Fixed real annuity, period guarantee	Yes	Yes	Yes	Partial	No

# Illustration: Menu of Products in the Five Countries

(More restricted in Chile and the centralized schemes of Denmark and Sweden)

	Lump-Sums	Term Annuities	Lifetime PWs	Fixed Nominal Life Annuities	Fixed Real Life Annuities	Variable Annuities
Australia	<b>Yes</b>	<b>Yes</b>	<b>Yes</b>	<b>Yes</b>	<b>No</b>	<b>Yes</b>
Chile	<b>No *</b>	<b>No</b>	<b>Yes</b>	<b>No</b>	<b>Yes</b>	<b>Yes</b> (combination)
Denmark	(1) <b>No</b> (2) <b>No</b>	(1) <b>No</b> (2) <b>Yes</b>	(1) <b>No</b> (2) <b>Yes</b>	<b>No</b> (guaranteed benefit only)	<b>No</b> (conditional)	<b>Yes</b>
Sweden	(1) <b>No</b> (2) <b>No</b>	(1) <b>No</b> (2) <b>Yes</b>	(1) <b>No</b> (2) <b>Yes</b>	<b>No</b> (guaranteed benefit only)	<b>No</b> (conditional)	<b>Yes</b>
Switzerland	<b>Yes *</b>	<b>No</b>	<b>No</b>	<b>Yes</b>	<b>No</b> (conditional)	<b>No</b>

\* Restrictions apply by regulation or plan rules

# Regulation of Providers: Institutional Arrangements

- **Centralized provision, as adopted in Denmark and Sweden, offers many advantages, but also risks:**
  - **Possible advantages:**
    - Large risk pooling
    - Scale economies
    - Facilitates adoption of risk-sharing arrangements
  - **Possible disadvantages:**
    - Political interference in annuity pricing
    - Political interference in asset management
- **Decentralized provision as adopted in Chile also offers advantages and risks**
  - Pensioners can benefit from competitive and more innovative annuity market
  - But can also be harmed by oligopolies, lack of transparency, high brokerage fees

# **Regulation of Providers: Pricing/Marketing Regulations**

- **Switzerland has regulated annuity pricing through rules for annuity conversion factors**
  - May have addressed annuity risk and ensured a “good deal” for couples but has resulted in large transfers across pensioners
  - Rigidity in price rules also jeopardized the resiliency of providers
- **Chile has regulated marketing through caps on brokers’ commissions and an electronic quotation system**
  - Regulatory response to abuses in the 1990s
  - Relevant example for decentralized and open (non-occupational) payout systems
- **Other countries have forbidden brokerage activity**
  - E.g., Colombia



# Regulation of Providers: Prudential Rules

- **Early efforts to introduce risk-based supervision including risk-based solvency rules penalizing mismatches**
  - Calce rule in Chile, traffic light system in Denmark and Sweden
- **Trends in insurance regulation reinforce this approach (e.g.. Solvency II)**
  - Fair valuation, use of market discount rates, use of cohort tables, buffers for investment and longevity risks
- **Adoption of a modern risk-based supervision approach is challenging in many countries**
  - Lack of adequate capital market instruments, lack of accurate and updated mortality tables, lack of risk management skills, and lack of supervisory skills



# Regulation of Providers: Risk-Sharing Arrangements

- **Some payout products have risk-sharing properties**
  - Some variable annuities entail the sharing of risks between pensioners and providers
- **More comprehensive risk-sharing arrangements have been adopted in Denmark and Sweden (and TIAA-CREF in the US)**
  - The whole pool or specific cohorts can share longevity risk
  - Investment/inflation risks can be shared or shifted to participants
- **Risk-sharing arrangements operate more easily in centralized arrangements or large occupational schemes**
  - But have also been adopted in competitive markets (Denmark)
  - They always require very transparent rules/operating procedures

# **Main Policy Options: Payout Products**

- **Policy makers should target an adequate level of annuitization but avoid excessive annuitization**
- **Lump-sums should be subject to reasonable restrictions**
- **Real fixed annuities are in principle the best option for annuitization, but require good inflation hedges**
- **Escalating nominal annuities are an attractive alternative**
- **PWs with life expectancy formula are also an attractive product (slow depletion of balance)**
- **Policy makers should favor a combination of payout options**
- **Joint annuities should be required for married couples**
  - Especially when unisex mortality tables are adopted
- **Annuities with guaranteed periods provide an element of bequest and should be allowed**

# **Main Policy Options: Institutional Arrangements**

- **Centralized provision of annuities and other products merits consideration, especially in countries with downsized second pillars**
  - Central agency needs to be ring-fenced
  - Asset management can be decentralized
- **Decentralized structures have worked well in Chile but require vigilance over growing oligopolies**
  - Annuities market needs to remain contestable
  - Marketing activities need to be regulated (see next slide)

# **Main Policy Options: Pricing/Marketing Regulation**

- **Pricing regulation à la Switzerland should be avoided**
  - May lead to very large and unintended transfers and/or jeopardize the solvency of providers
- **Countries with decentralized and open (non-occupational) annuities markets should adopt an electronic quotation system (Chile)**
- **Broker activity/financial advice needs to be regulated, (and fees possibly capped) to prevent abuse**
- **Complete prohibition of brokerage activity is, however, questionable**



# Main Policy Options: Prudential Regulation

- **Adoption of risk-based approach to supervision**
  - Adoption of risk-based strategy with long-run objectives
  - Start with simple risk-based solvency rule encouraging matching
  - Examine variants of traffic light systems
  - Develop updated/dynamic mortality tables
  - Develop/implement regulations on internal risk management
- **Related capital market agenda for the payout phase**
  - Public debt management: provision of long duration bonds, including inflation-indexed bonds
  - Development of private fixed income instruments, including inflation-indexed instruments
  - Development of derivatives markets, especially interest rate swaps
  - Development of longevity bonds



# Main Policy Options: Risk-Sharing Arrangements

- **Risk-sharing arrangements are an attractive option**
  - Helps address complex risks such as longevity and market risk, strengthen resiliency of providers, especially in the absence of an adequate supply of instruments
- **However, risk-sharing arrangements also introduce challenges**
  - Effective pricing rules (e.g. through aggressive cohort mortality tables) to minimize subsequent adjustments
  - Transparent rules to avoid transfers of income across different cohorts
  - Transparent rules to avoid excessive appropriation of profits by shareholders



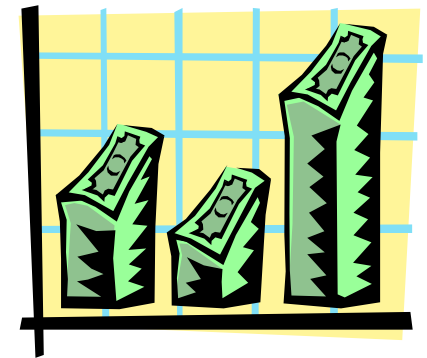
# Designing the Payout and Annuities Phase of Mandatory Funded Pension Systems

Challenges , Experiences and Lessons in  
Central and Eastern European Countries  
and Comparative Practices

John Pollner  
January, 2012

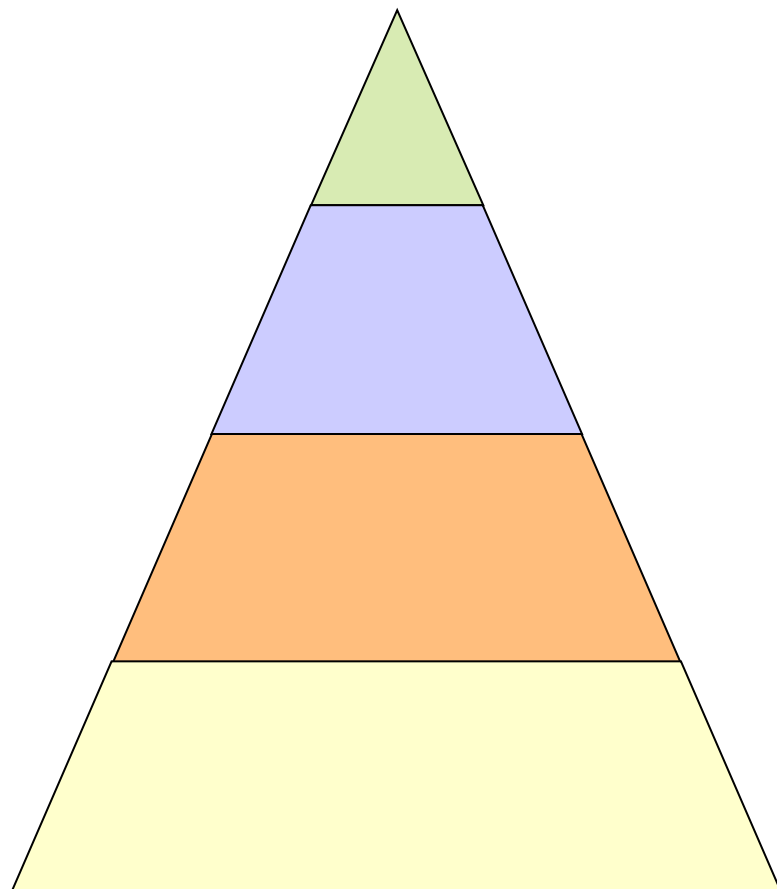
# Objective of the Payout Phase

- ▣ Provision of retirement income is the main objective of pension system, so the payout period should be phased to ensure proper income replacement rates, and complement public sector pillar benefits.
- ▣ Instruments for the payout phase such as annuities need strong institutions and a sound regulatory design as they constitute an actuarial risk-taking operation by the provider.
- ▣ Regulatory framework for mandatory systems should avoid payment of pensions as lump sums (except for extremely small amounts).



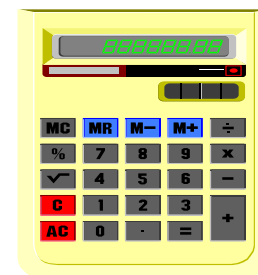
# Types of Payout Instruments

- ▣ **Phased withdrawal**: a pre-programmed way of disbursing retirement funds (fixed amounts for a certain period or as a percentage of the investment balance)
- ▣ **Risk**: **Outliving the life expectation in the mortality table is the main risk of phased withdrawals (i.e., longevity risk).**



# Annuity Instruments

- ▣ The benefit is that annuities cover longevity risk and with a sufficiently large pool of participants, the provider can use an actuarial ‘average’ mortality projection and better cover risks.
- ▣ **The annuity provider assumes the longevity risk.**
- ▣ The cost is that for the above ‘service’ the annuity providers charge fees to cover cost, profit and risk.
- ▣ **Institutional solvency, sound regulation and transparency are needed.**





# Types of Annuities



- ▣ Fixed annuities – a fixed level payment offered for the life of the beneficiary. Easy to compare offers by providers – best price is the highest annuity. Drawback – if not inflation indexed, will erode purchasing power.
- ▣ Inflation indexed annuity – more ideal, but requires a bond market of inflation indexed instruments. Can long-term inflation indexed bonds be developed in the market?

# Variable Annuity Products



- ▣ Escalating Annuities: promise of a predetermined annual increase (e.g.: 2%).
- ▣ Guarantee and profit-sharing (bonus) annuities: Minimum (guaranteed) level promised plus annual profit sharing. More difficult to monitor/regulate and compare 'variable' pricing.
- ▣ Unit-linked annuities: pays variably according to unit-trust/mutual fund investment movements. Protects for life, but full exposure to market risk.

# Some Payout Designs Underway

- ▣ **Estonia:** One of the first CEE countries to design a payout phase – market providers.
- ▣ In Estonia lump sum withdrawals permitted only if invested balances are under 10 times the basic pension. Phased withdrawals permitted when balances are 10-50 times the basic pension (i.e., conversion of annuities with associated costs/fees would erode too much of the value).
- ▣ For annuities, Estonia uses variable “guarantee and bonus” types with at least 50% of profits distributed as well as choice of all other types of annuities.



# Other Variations and Options

- ▣ Term Annuities: are contracts limited to a certain number of years (can apply to any type of annuity). However, exposure is to longevity risk.
- ▣ Deferred Annuities: promises annuity contract pre-agreed before payouts take effect in the retirement period. Provides some security and a larger 'portfolio' to provider, but can be difficult to price and expensive due to time lag.
- ▣ Guaranteed annuities: whether alive or deceased, it pays pensions during the pre-agreed guaranteed period.



# Other Country Choices in Design

- ▣ **Poland** has been considering 90% minimum profit distribution under a variable annuities scheme. Also consideration of a gender reserve equalization fund for inter-company transfers based on differential mortality risks in portfolios (given EU use of unisex tables).
- ▣ **Lithuania** – proposal to use fixed nominal annuities, escalating annuities, or guaranteed period annuities, and electronic quotation system to compare products on-line across annuity providers, more transparently.





# Some Institutional Lessons to Consider going Forward for Future Payout Designs

- ▣ To use or not: Decentralized providers (annuity companies) or use of a centralized system.
- ▣ Decentralized system can give much choice, but if not well regulated can be costly to retirees (and lower payouts).
- ▣ Centralized system (used in Sweden and Denmark) can pool longevity risks more easily and reduce administrative costs and require less capital.



# Lessons on user choice / regulation

- ▣ A centralized option can be designed as an ‘automatic’ default option, as under the investment accumulation phase, and already practiced in some countries.
- ▣ Asset management/investment choice option also can be given under a central annuity option, (as in Sweden). Decentralized asset managers thus only deal with “market risk.”
- ▣ Annuities are an insurance business so highly qualified technically sound independent providers must exist.



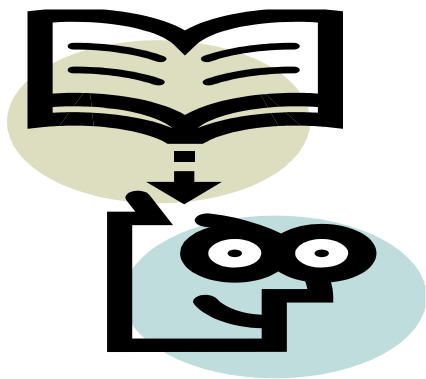
# Other Issues/Lessons/Insights for Countries

- ▣ A market supplier design (insurance co. providers, or pension funds) a requires strong regulation (even stronger) versus investment phase.
- ▣ Are non-annuity phased withdrawals cheaper? Perhaps, but then retiree takes the risks of longevity, market investment risks and inflation. High longevity means funds run out while annuities give lifetime income.
- ▣ One option: phased withdrawals (PWs) provided in combination with annuities. Or PWs sequenced prior to public pension pillar payments.



# Lessons on regulatory recommendations

- If fixed annuities (nominal or real) are offered by the market, the price is comparable but a centralized electronic quotation system might be desirable for beneficiaries to make sound comparisons.
- Strong regulation for technical reserves is needed, re.: mortality estimates, hedging of inflation risks, investment regimes, market risks, FX risks.



- PWs: Limit fees, very conservative investments to preserve value, annual need for recalculation of payments to ensure balance will last the lifetime.

# Lessons on regulatory recommendations

- If variable annuities are used as the instrument, the challenge is comparative pricing, as there is no fixed payment to compare across products. Reserving requirements for the 'guaranteed' level are needed, and ultra transparency and fairness in calculation of 'profit sharing' (bonus) component is needed to ensure fairness.
- Also should the upside or downside of longevity risks (versus market risks) be shared with the retiree or shared/absorbed by the provider?  
This is a key question in the capital adequacy calculation and risks.



# Final Observations: Concluding Lessons

- Offer should be of constrained choices (but not one size fits all either). A centralized option is good for variable annuity risks and it is easier to manage minimum guarantees. Choices, however, can be given for selections of asset portfolio and underlying returns.



- If the system is market based, the choice is broader and a new industry develops. The Government can still offer a 'default' automatic option and must regulate especially on the transparency of benefits calculations..

# Final Observations: Concluding Lessons

- Combinations of products can be allowed (annuities with phased withdrawals, supplemented by public pillar 1 pensions). Limits on choice should be put in place only to protect retirees and ensure they obtain a viable stream of pension income. Asset allocation should be globally diversified in bonds & equities to minimize volatility that can reduce pension portfolio value at time of retirement.



- Important to start designing reform now as it is very complex. Several Central European countries waited until the period when retirements were almost to begin and are now grappling with completing design quickly.



**THE END**

**For questions/comments:**

**[jpollner@worldbank.org](mailto:jpollner@worldbank.org)**