

The decumulation phase: *design considerations*

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Introduction

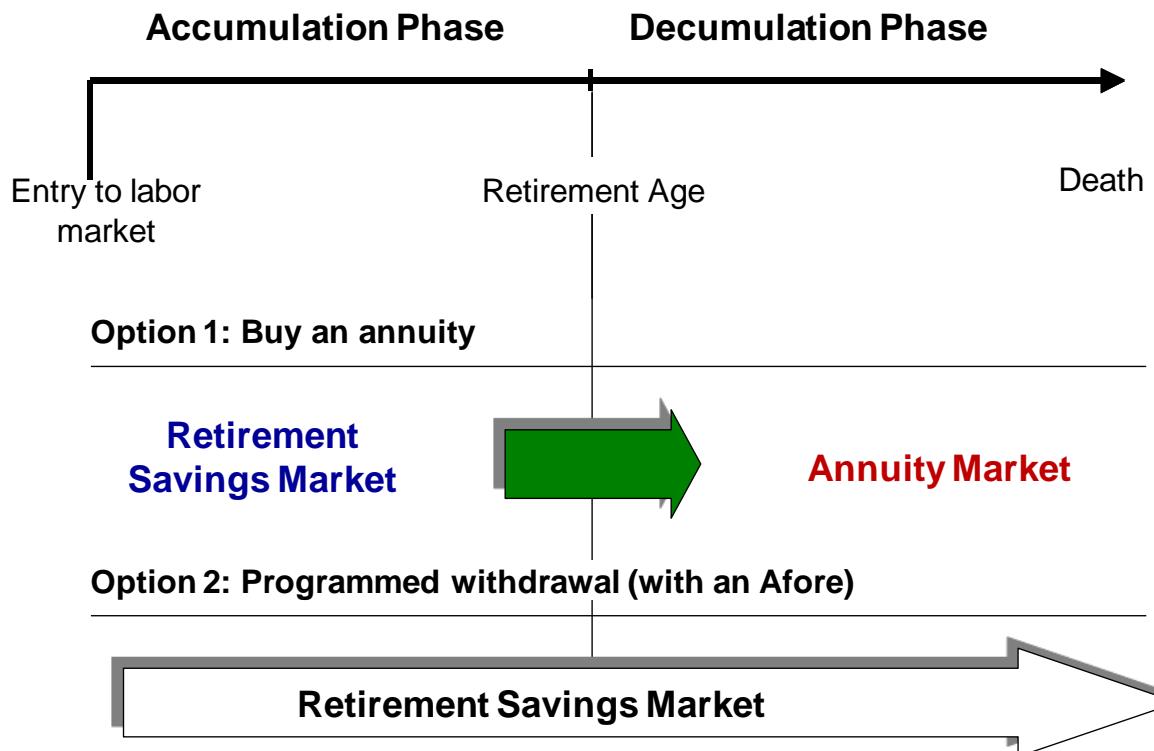
- In recent decades many public pension systems have been reformed in order to provide financial viability to these systems. In Latin America these reforms have represented a transit to defined contribution schemes and individual capitalization.
 - These changes resulted in a redistribution of risks associated with the provision of pensions: from centralized government production to schemes where the individual is expected to play an active role in decisions to maximize their welfare.
 - The redesign of pension systems had meant a significant challenge. The decentralization and segmentation of its functions has shown the complexity of schemes to build sustainable, efficient and able to engender fair and socially acceptable results.
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Introduction

- One common aspect of reforms has been the incorporation of private sector participation:
 - In the accumulation stage, the private sector participates to maximize the return on savings and create products that encourage saving for retirement.
 - In the decumulation phase, the private sector participates to efficiently cover the risks associated with the provision of a pension.
- The two main lines of thought of this presentation are:
 1. Understanding the industrial organization and the characteristics of the pension management markets is essential to anticipate the behavior of its participants and give direction to regulation in order to achieve socially desirable outcomes.
 2. The pension market has been segmented into two industries that have similar economic characteristics. This segmentation could be affecting the pension maximization.

Pension market and life cycle

- There are two stages in the life cycle of a worker: the **accumulation phase**, which corresponds to a productive life, and the **decumulation phase**, which corresponds to the retirement of the workforce. In Mexico the reform of 1997 established certain rules to transit from one stage to another, as summarized in the following scheme:



Retirement Savings Market & Pensions Market: Exchanged good basic economic characteristics

- Despite the separation into two stages, the economic characteristics of both markets reflect similarities.

Characteristics of the exchanged good/service

	Accumulation Stage	Decumulation Stage
Mandatory consumption	Yes	Yes
Description	Defined contribution portfolio management	Defined benefit portfolio management
Classification <ul style="list-style-type: none">▪ Welfare economics▪ Public Finance▪ Private Finance▪ Information economics	<ul style="list-style-type: none">➤ Merit good➤ Quasi-private good➤ Life-cycle good➤ Credence good	<ul style="list-style-type: none">➤ Merit good➤ Quasi-private good➤ Life-cycle good➤ Credence good

Retirement Savings Market & Pensions Market: Consumer basic characteristics

	Accumulation Stage	Decumulation Stage
Risks faced by consumers: <ul style="list-style-type: none">▪ Replacement rate inadequacy risk▪ Longevity risk▪ Market risks▪ Inflation risk▪ Liquidity risk▪ Bankruptcy risk (i.e. afore or annuity provider bankruptcy)	Yes Yes Yes Yes Yes No	Yes Yes Yes Yes Yes Yes
Choice Set <ul style="list-style-type: none">▪ Minimum contribution level▪ Service provider▪ Investments profile▪ Product type	No Yes Yes- limited No	No Yes No Yes

Retirement Savings Market & Pensions Market: Supply basic economic characteristics

	Accumulation Stage	Decumulation Stage
Type of firm/sector	Afore/financial sector	Afore, Annuity Provider/financial sector
Fiduciary duty	To maximize savings for retirement	Efficient annuity provision
Risks faced by firms	<ul style="list-style-type: none"> ▪ Operative risks ▪ Liquidity risks ▪ Investment risks ▪ Longevity risks ▪ Inflation risks 	<ul style="list-style-type: none"> Yes Yes Yes No Yes
Industrial Organization	<ul style="list-style-type: none"> ▪ Economies of scale ▪ Multiplicity of strategic variables ▪ Multimarket contact 	<ul style="list-style-type: none"> Yes Yes Yes

Final Remarks

- The revision of the essential characteristics of the retirement savings and pension markets shows the importance of the industrial organization to design and regulate stages of accumulation and decumulation. Here we highlight four aspects:
 1. In both stages the consumer must demand financial services characterized by its complexity (exchanged products are complex). The design of the decumulation phase requires strong considerations regarding this complexity in order to contain irreversible consumer mistakes, and to avoid information asymmetries.
 2. The consumer's objective is to maximize lifetime consumption (she/he does not distinguish between two arbitrary-set stages). Therefore, it is of the utmost importance to allow consumers to react and adapt its savings profile to the transforming risks faced over their full life cycle.
 3. There is a risk that firms optimize on artificially segmented and dissociated stages and not over the full pensions life cycle. Regulation must anticipate this and act in coordination in both stages.
 4. The characteristics of the product, the supply and the consumers require adequate regulation to solve the problems of information, promote product innovation and bring to market competitive performance.

Annex I: Longevity risk and investment regime

- ❑ The preceding discussion indicates that **the market for retirement savings and pensions market share many essential features** on the supply side, sector, fiduciary duty, risks faced by firms and industrial organization matters.
- ❑ **The exception is the longevity risk**, which under the current design, is not an issue on the radar of the companies during the accumulation stage. Nevertheless, that risk is not "generated" at retirement, but it is with consumer throughout its entire life cycle. Longevity risk becomes relevant and imminent at the time of retirement, but it does not suddenly "surge" out of the decision to retire.
- ❑ **This is reflected in a lack of synchronization between the investment regime during the accumulation stage and the decumulation.** Under, the current design the evolution of the investment regime during the accumulation stage benchmarks retirement age: 65 years. However, the worker does not end his/her "participation" in the financial market via the pension system, but until his death years later.

Annex I: Longevity risk and investment regime

- Therefore, the investment regime could generate "excess coverage" since, close to 65 years (for example) the consumer's investment horizon is not:

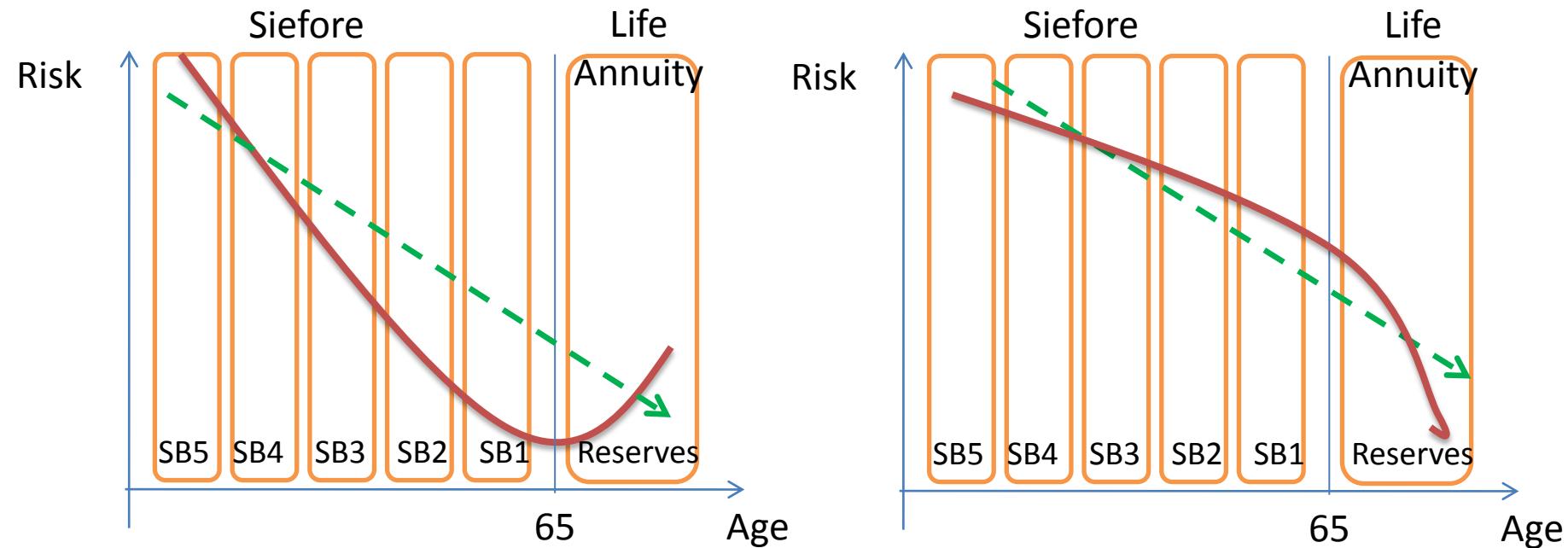
$$65 - \text{Age}_{\text{today}} \text{ years} \dots (1)$$

- but:

$$\text{Life expectancy}_{\text{age today}} - \text{Age}_{\text{today}} \text{ years} \dots (2)$$

- Horizon 2 is actually considered by the annuity provider (in addition to considerations associated with the increased liquidity and the fact that the latter handle "Asset Liability Management")
- It would therefore be desirable a smooth and efficient intertemporal transition from the investment regime of the Afores to that of the annuity providers.
 - The Investment Regime of Afores and Annuity Providers may be more or less risky in certain periods than the system currently used, as shown in the next two graphs.

Annex I: Longevity risk and investment regime



- By separating the accumulation stage of the decumulation stage, optimizing independently the size of savings in the first and the pension in the second, the sequence of portfolios chosen to maximize the welfare of the worker at retirement might not necessarily be the global optimum. (Green Path).