Technical Seminar of the ISSA Technical Commission of Statistical, Actuarial and Financial Studies

Limassol, Cyprus. – 30-31 October 2008

Optimal financing of social security pension schemes

To fund or not to fund?
Is there risk involved in funding?

Jean-Claude Ménard, Chief Actuary,
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REPUBLIC OF CYPRUS
MINISTRY OF LABOUR AND SOCIAL INSURANCE

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Financing Public Pensions

- Primary objective : stabilizing the contribution rate
  - Strengthen the contribution-benefit connection
  - Ensure intergenerational fairness
  - Strengthen fiscal discipline
  - Maintain public confidence
- Secondary objective: minimizing the contribution rate
  - Optimize the funding of a retirement scheme by considering the relation between the rate of return on investments and the rate of increase in wages (implicit rate of return on PayGo schemes).

Risk Retention and Hedging

- Second Tier of the Canadian System: CPP/QPP
  - Partial funding through employee/employer contributions.
  - Steady-state financing goal: stabilize and minimize the contribution rate.
  - Steady-state contribution rate: lowest rate that can be charged that is sufficient to sustain the Plan without further increase
    - A funding level of 25% is sufficient to meet that condition for the CPP
  - All risks faced by the CPP are partially hedged through steady-state financing.
  - Investment and market risks are also hedged through investment diversification.

Financing Public Pensions

- Pure pay-as-you-go basis
  – Contributions equal benefit each year.
  – Cost heavily dependent on the ratio of pensioners to contributors.
  – Aging population will increase cost for future generations.
  – Favourable in high wage growth and low interest environment.
  – Gradual variations in the contribution rate.

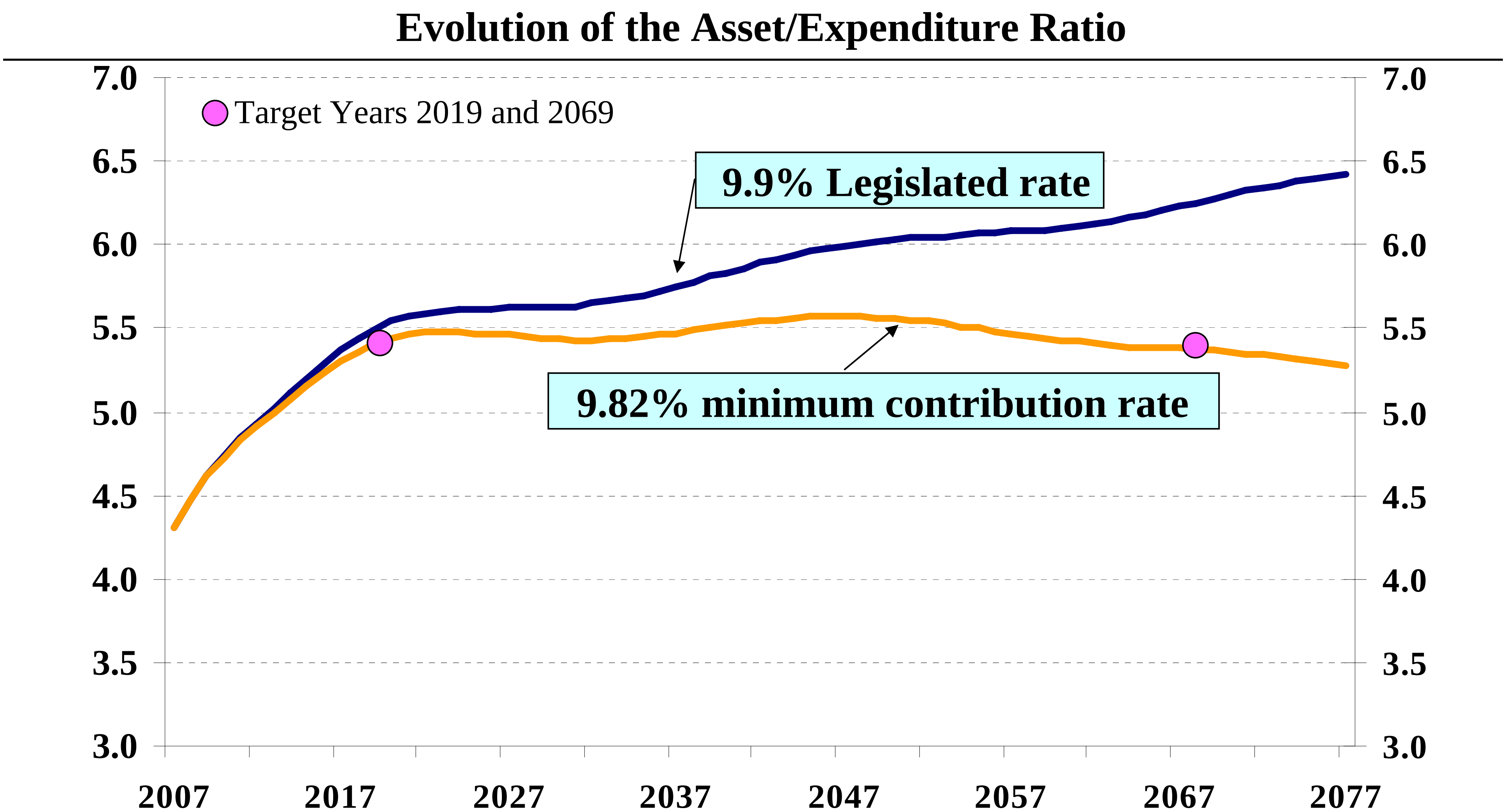
Financing Public Pensions

- Full funding basis
  - Contributions pay for future benefits.
  - Favourable in low wage growth and high interest environment.
  - Fully funded schemes are less affected by the age structure of the population.
  - Rates of return volatility result in more short-term variations in the contribution rate.

Financing Public Pensions

- Partial funding basis
  - Workers pre-fund a portion of their benefits.
  - Favourable in declining wage growth and rising interest rate environment.
  - Aim is to stabilize contribution rate in light of aging population, volatile wage growth and investment returns.
  - Contribution rate falls below PayGo rate.

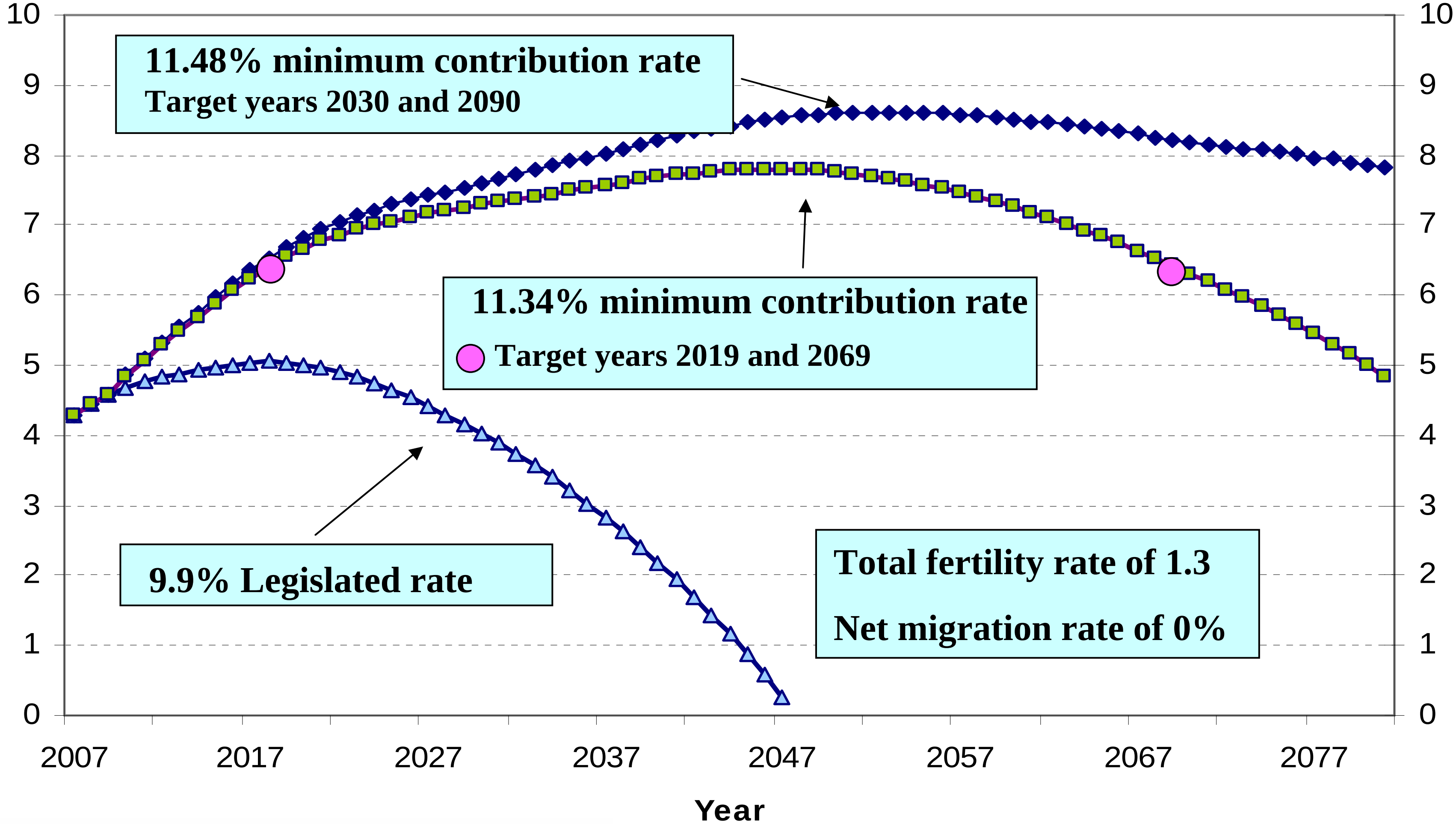
Financing the Canada Pension Plan



Financing the Canada Pension Plan

(assuming South Korea's Current Demography)

Evolution of the Asset/Expenditure Ratio



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βέλτιστη χρηματοδότηση των συνταξιοδοτικών συστημάτων

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Σας ευχαριστώ
Thank you

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