Office of the Superintendent of Financial Institutions Canada
Bureau du surintendant des institutions financières Canada

Office of the Chief Actuary
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International Survey on Self-Adjustment Mechanisms and long-term sustainability of the Canada Pension Plan

Presentation to the International Social Security Association Technical Seminar on Pensions

"Which retirement systems and which reforms for which pension?"

Jean-Claude Ménard, Chief Actuary

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OSFI
BSIF

Canada

Agenda

- Presentation of the results of the international survey on Self-Adjustment Mechanisms for Social Security Systems and Employer Sponsored Pension Plans

- Long-term sustainability of the Canada Pension Plan

Objectives of the survey

- To gain a better understanding of the existing or planned self-adjustment mechanisms
- To share the practices existing around the world with ISSA member organizations
- To raise awareness of the importance of mechanisms in pension systems that help ensure the solvency and the sustainability of such systems.
- Survey is not intended:
  - To seek detailed information
  - To assess efficiency of self-adjustment mechanisms
- Survey was prepared by the Office of the Chief Actuary Canada
  - The survey was sent to 38 countries
  - 26 responses were received

Scope of the survey

- A self-adjustment mechanism is defined in a survey as:
  - a selection of predetermined measures **set by law**
  - to be applied either immediately as required by a set of pre-determined indicators, or on a pre-determined schedule
  - in order to restore the solvency or financial sustainability of pension systems.
- Including self-adjustment mechanisms into laws improves public pensions governance.
- "Ad hoc" adjustments do not meet the above definition, but still are important.
  - Referred to as "temporary"

Structure of the survey

- Adjustment to contribution base
  - Length of contributory period
  - Increase in retirement age
  - Increase in contribution rate
- Adjustment to benefit amount
  - Indexation of benefits in pay
  - Conversion factors for Notional Defined Contributions (NDC) accounts
  - Other adjustments
- Adjustments for pre-funded systems
- Sharing mechanisms between contributors and beneficiaries
- Adjustments for employer provided pension plans

Adjustment to contribution base "Length of contributory period"

- France automatically increases the length of the contributory period necessary to obtain a full benefit:
  - Improvements in life expectancy are divided between contributory period (2/3) and benefit payment period (1/3)
  - Regular reviews starting in 2012
- Czech Republic and Italy have changed qualifying conditions for pensions
  - these are ad hoc or temporary mechanisms

Adjustment to contribution base "Increase in retirement age"

- Denmark indexes retirement age in line with the increases in life expectancy (initial increase to age 67)
  - Review every five years (2015), implementation in 15 years
  - Approval by Parliament is required
- 8 surveyed countries have adopted scheduled legislative increases – temporary mechanisms
  - Australia, Czech Republic, Germany, Italy, Japan, South Korea, UK and USA
  - Variety of schedules
  - Ultimate retirement age is over 65 (except Italy)

Adjustment to contribution base "Increase in contribution rate"

- Japan: temporary contribution rate increases till 2017
- Cyprus: temporary contribution rate increases till 2039
- Germany: provision of increase/decrease in contribution rate if the liquidity reserve is outside a specified range
- Canada - Canada Pension Plan:
  - triennial valuation and review
  - if the minimum contribution rate is more than a legislated rate and
  - if federal and provincial stewards of the CPP cannot agree on a solutions
  - then the law prescribes a gradual increase in contribution rate.

Adjustment to benefit amount "NDC Accounts" and "Other adjustments"

Notional Defined Contributions (NDC)

- 4 surveyed countries (Italy, Norway from 2011, Poland and Sweden) adjust conversion factors for NDC component in their systems to account for life expectancy changes.
  - Italy takes into account employment sector in determining life expectancy

Other adjustments

- 5 surveyed countries (Brazil, Finland, Germany, Japan and Portugal) adjust initial benefit in relation to demographic factors (life expectancy, retirement age, population structure).
- In Sweden, growth rate of NDC accounts is affected by solvency position of the system.

Adjustment to benefit amount "Indexation of benefits in pay"

Focus is on indexation linked to the changes in solvency/sustainability of systems, demographic and economic factors

Canada	• Second part of self-adjustment mechanism • Freeze in indexation is parallel to increase in contribution rate
Denmark	ATP's scheme indexation depends on fund performance
Portugal	• Depends on CPI and GDP growth • More generous toward lower income beneficiaries
Sweden	• Depends on solvency position of the system (balance ratio) • Mechanism allows for catch-up
Japan	• Evolution of number of active workers • Factor approximating increase in life expectancy
Germany	• Evolution of the generalized dependency ratio • Change in contribution rate

Partially and fully funded social security systems

- Fund performance affects the application of self-adjustment mechanism.
- Sweden – the performance of buffer fund is one of triggers of the self-adjustment mechanism
- In Canada, fund performance could trigger the self-adjustment mechanism, but it is not a case presently.
- Denmark (ATP scheme) – a defined contribution plan with minimum guarantees
  - Indexation and additional accounts accumulations are provided if funds are available

Sharing of the adjustment between contributors and beneficiaries

Canada	Simultaneous freeze in indexation and increase in contribution rate
Denmark	ATP's scheme: both indexation and account growth rate depend on fund performance
Portugal	Mechanisms applied to contributors and beneficiaries are not directly related
Sweden	Balance ratio affects both indexation and NDC accounts growth rate
Japan	Both initial pension and post-retirement indexation depend on evolution of number of active workers and changes in mortality
Germany	Both initial pension and post-retirement indexation depend on the generalized dependency ratio. Increase/decrease in contribution rate also affects post-retirement indexation.

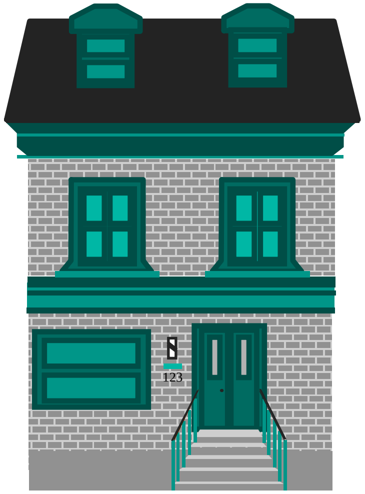
Employer sponsored defined benefit plans

- Self-adjustment mechanisms are not common for employer sponsored pension plans.
- United Kingdom: Public sector pension schemes specify which risks are shared by employer and employees, and how risks are shared.
- Norway: AFT plan is planning to introduce adjustment for life expectancy.
- Canada: Plans with post-retirement indexation linked to pension fund performance.

Conclusions on the results of the survey

- High response rate to the survey.
- Most popular measure – increase in retirement age. In most cases these are temporary mechanisms.
- Trend of adjusting retirement benefits to account for demographic changes.
- Several countries have sophisticated mechanisms.
- Countries are paying attention to sharing of adjustment between contributors and beneficiaries.
- Employer sponsored defined benefit plans rarely have self-adjustment mechanisms included in their design.

Canadian retirement system with mixed funding approaches is well recognized in the world for its capacity to adapt rapidly to changing conditions.



- Pay-as-you-go funding (OAS/GIS: Demogrants)
- Partial funding (CPP/QPP: DB Earnings-Related)
- Full funding (Occupational Pension Plans/RRSP)

The conceptual framework implies a retirement system funded at about 40%.

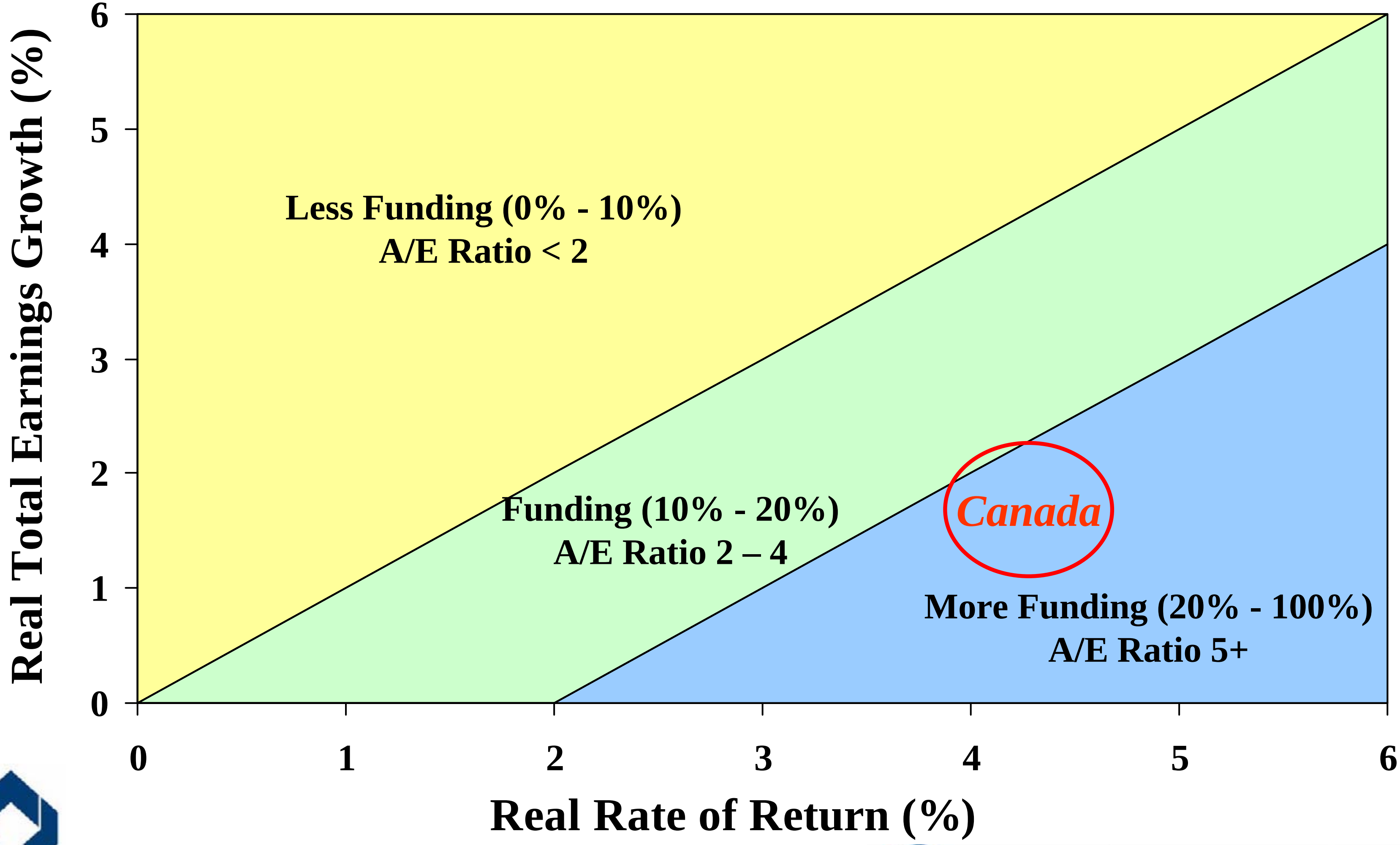
Guiding principle of the 1997 CPP Reform: Contribution rate stability

- The 1997 reform has developed guiding principles for Federal-Provincial decisions on the CPP (October 1996).
- Guiding principle #4 reads as follows:

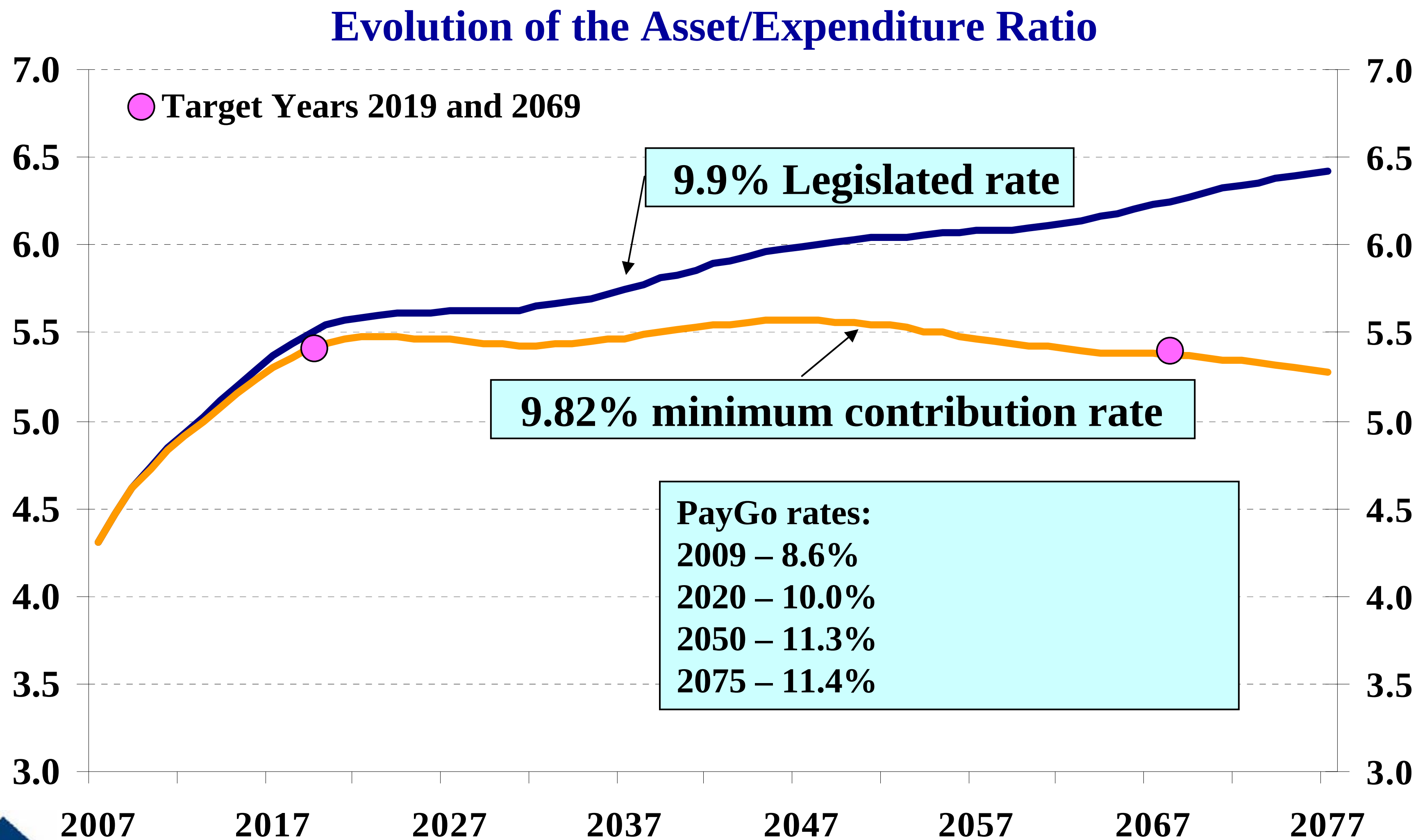
"The CPP must be affordable and sustainable for future generations. This requires fuller funding and a contribution rate no higher than the already legislated future rate of 10.1 per cent"

- At that time the future contribution rate to be applied in 2016 was 10.1% as shown in the 13th actuarial report (Feb. 1992).

Optimal Funding of the CPP



CPP Assets should be equal to 25% of liabilities to stabilize the contribution rate



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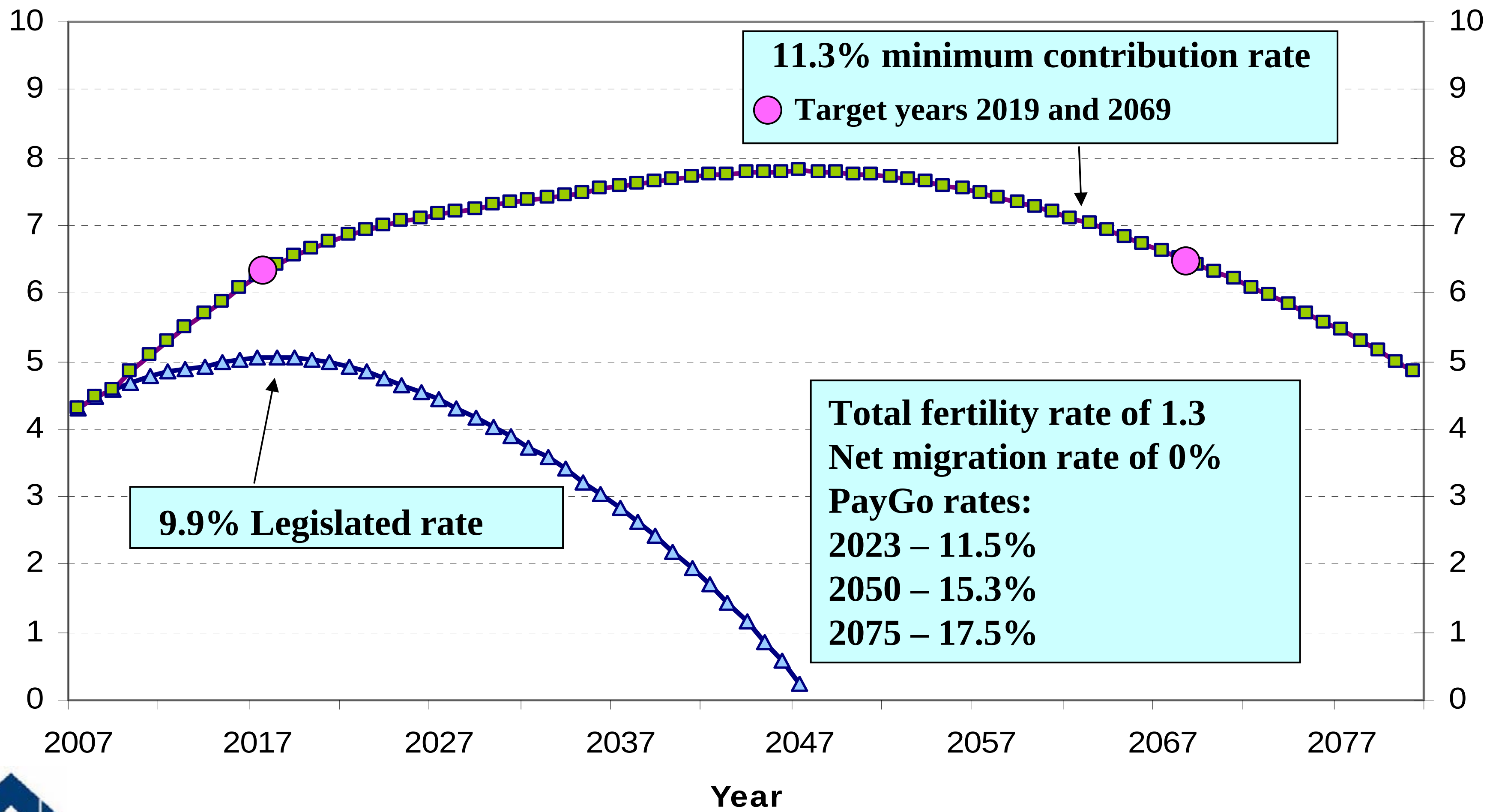
What is the impact of a particular demographic situation on partial funding rate? (assuming South Korea's Current Demography)

Evolution of the Asset/Expenditure Ratio



Financing method should be appropriate to the current and projected environments

- A social insurance scheme's contribution rate is sensitive to changes in the demographic and economic environments.
- Demographic and economic variables impact the rate differently.
- Ways of immunizing a pension system against these fluctuations:
  - Partial funding of the public system
  - A mixed (public-private) system
- Lower funding may be appropriate, especially in a context of high earnings growth and low rates of return, and conversely for higher funding.

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Appendix

OSFI BSIF

October 2009

Canada

Countries/regions which have responded to the survey

Argentina*	Germany	Quebec*
Australia	Greece*	South Africa*
Brazil	Ireland*	South Korea
Canada	Italy	Sweden
Cyprus	Japan	Switzerland*
Czech Republic	New Zealand*	Tunisia*
Denmark	Norway	United Kingdom
Finland	Poland	United States of America
France	Portugal	

* Countries/regions that currently do not possess self-adjustment mechanism

Social Security Systems self-adjustment mechanisms
Brief summary

Country	Adjustment to contribution base		Adjustment to benefits	Sharing mechanism
	Automatic	Temporary		
Australia		X		
Brazil			X	
Canada	X		X	X
Cyprus		X		
Czech Republic		X		
Denmark	X		X	X
Finland			X	
France	X		X (temporary)	
Germany	X	X	X	X
Italy		X	X	
Japan		X	X	X
Norway			X	
Poland			X	
Portugal			X	X
South Korea		X		
Sweden			X	X
UK		X		
USA		X		