International Labour Organization

Actuarial valuation of a social security system

Importance, Governance and Implications

Simon Brimblecombe, Chief Technical Adviser and Head,
ILO Regional Actuarial Services Unit, Bangkok, Thailand

Jakarta, Indonesia, March 2026

International Labour Organization

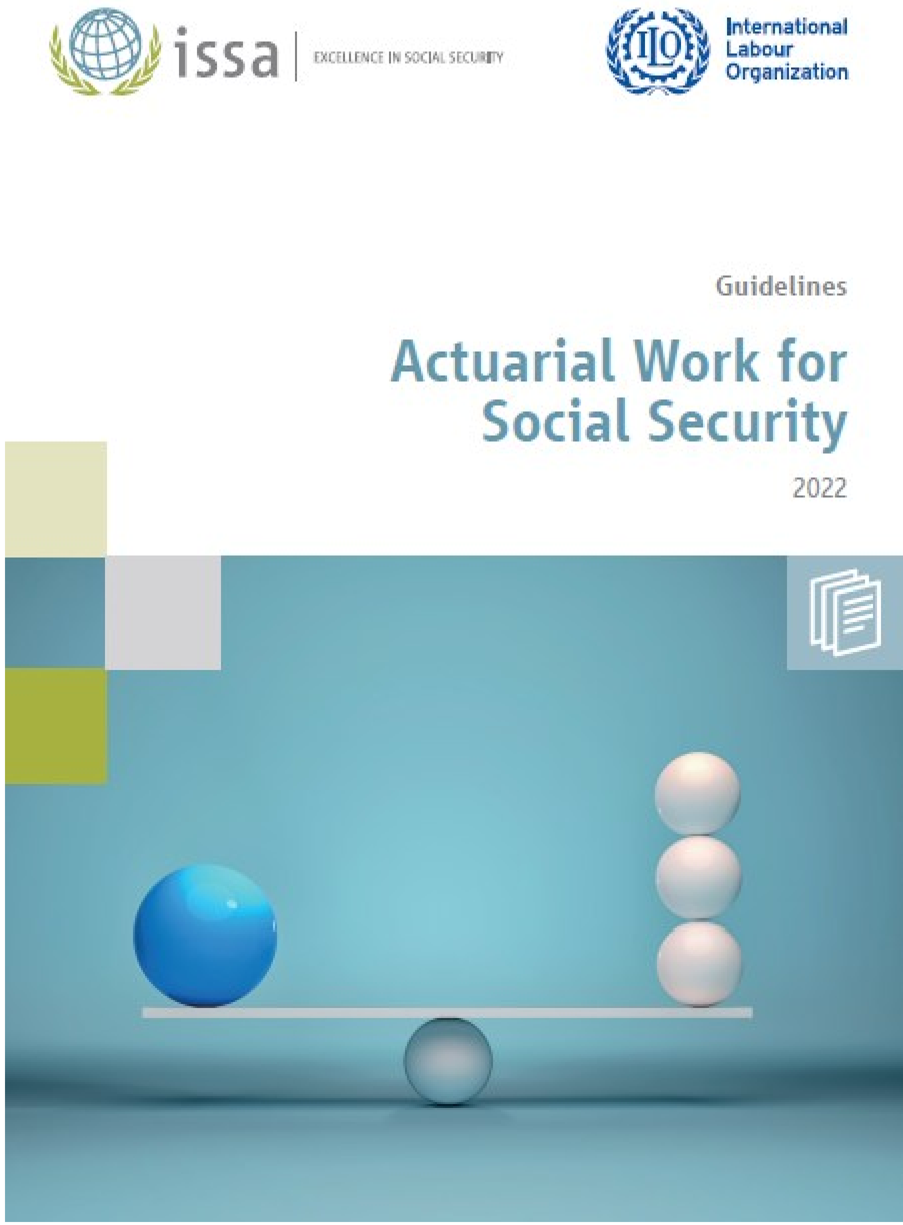
The actuarial valuation is an essential tool

Projection of future cashflows of a social security scheme using appropriate data and assumptions

Needed to assess the current and future financial situation of schemes, to cost new schemes and to assess reforms

The valuation must be carried out regularly* by an actuary and conform to professional standards

Must contain an actuarial opinion signed by a qualified actuary -> evidenced based policy



Frequency of actuarial valuations in Indonesia

Scheme	Legal requirements	Reference
JKK	Article 29: The amount of contribution and benefit for participants will be periodically evaluated every 2 (two) years.	Government Regulation Number 44 of 2015
JKm	Article 36: The amount of contribution and benefit will be periodically evaluated every 2 (two) years.	Government Regulation Number 44 of 2015
JP	Article 28 (4): The amount of contribution as referred to in section (3) should be evaluated at least 3 (three) years by considering the national economy condition and the actuary obligation sufficiency. Explanatory note of the article: Calculation on the actuary obligation sufficiency is done by an independent actuary.	Government Regulation Number 45 of 2015
JHT	Article 16 (2) & 18 (3): The amount of contribution is periodically evaluated at most every 3 (three) years, which is further promulgated in a government regulation.	Government Regulation Number 46 of 2015
JKP	Article 12 (1) The contribution rates and upper limit of wages shall be periodically evaluated every 2 (two) years by taking both the national economic conditions and the calculation of the adequacy of actuarial obligations into account.	Government Regulation Number 37 of 2021

Source: Unofficial translations of Government Regulations

ILO International Labour Organization

What are the key professional requirements underlying the valuation process?

An actuarial valuation is a powerful tool

To assess

- Financial sustainability of a system
- Coverage
- Benefit adequacy *(and distribution of this by gender, income etc)*
- Financing and funding situation
- Equity and distribution of outcomes

To understand

- Present and future financial development of a scheme
- Causes of present or possible future deficits
- Adequacy of benefit levels and system fairness
- Factors influencing the cost of a scheme and its sustainability

Direct link to policy and financing

- ✓ Best practice is to link recommendations in the actuarial valuation to policy and financing reform
- ✓ The actuarial valuation is a neutral expert document signed by qualified actuaries working for a tripartite organisation
- ✓ The report includes a section on compliance with ILO Convention 102
- ✓ Check sustainability and assess responsiveness to shocks, reform options, impacts of policy changes

Policy and financing decisions should be based on the results of the actuarial valuation

Canada and United Kingdom – direct link from actuarial valuation results to reforms

ILO Project Examples – Financed by SSIs

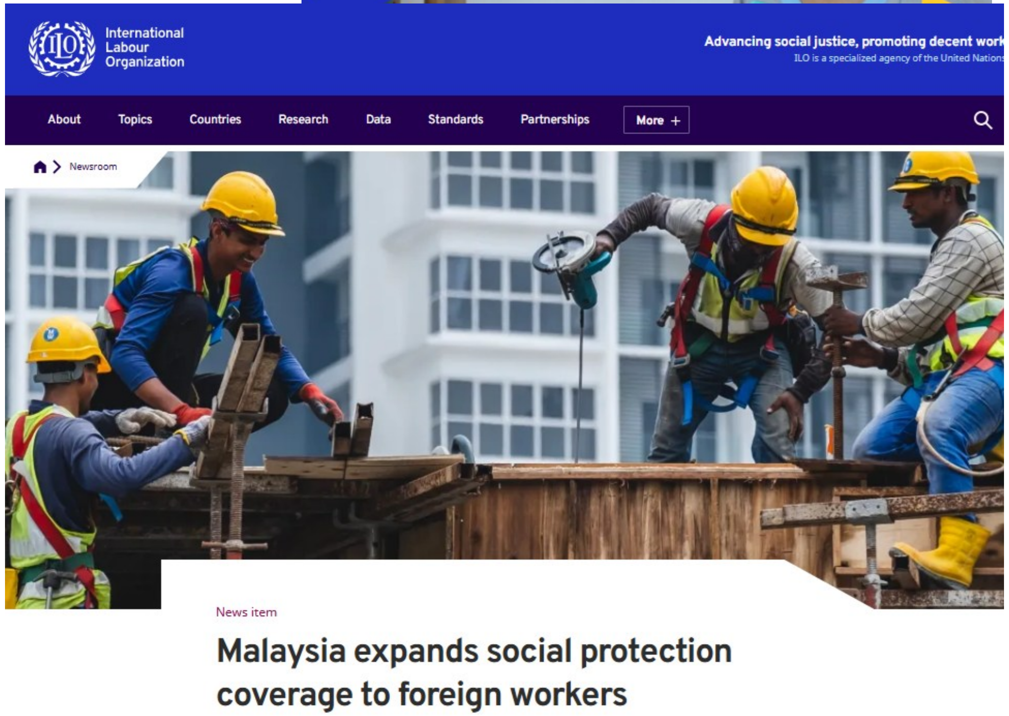
Thailand

Actuarial valuation presented to Board with recommendations -> changes to benefit provision

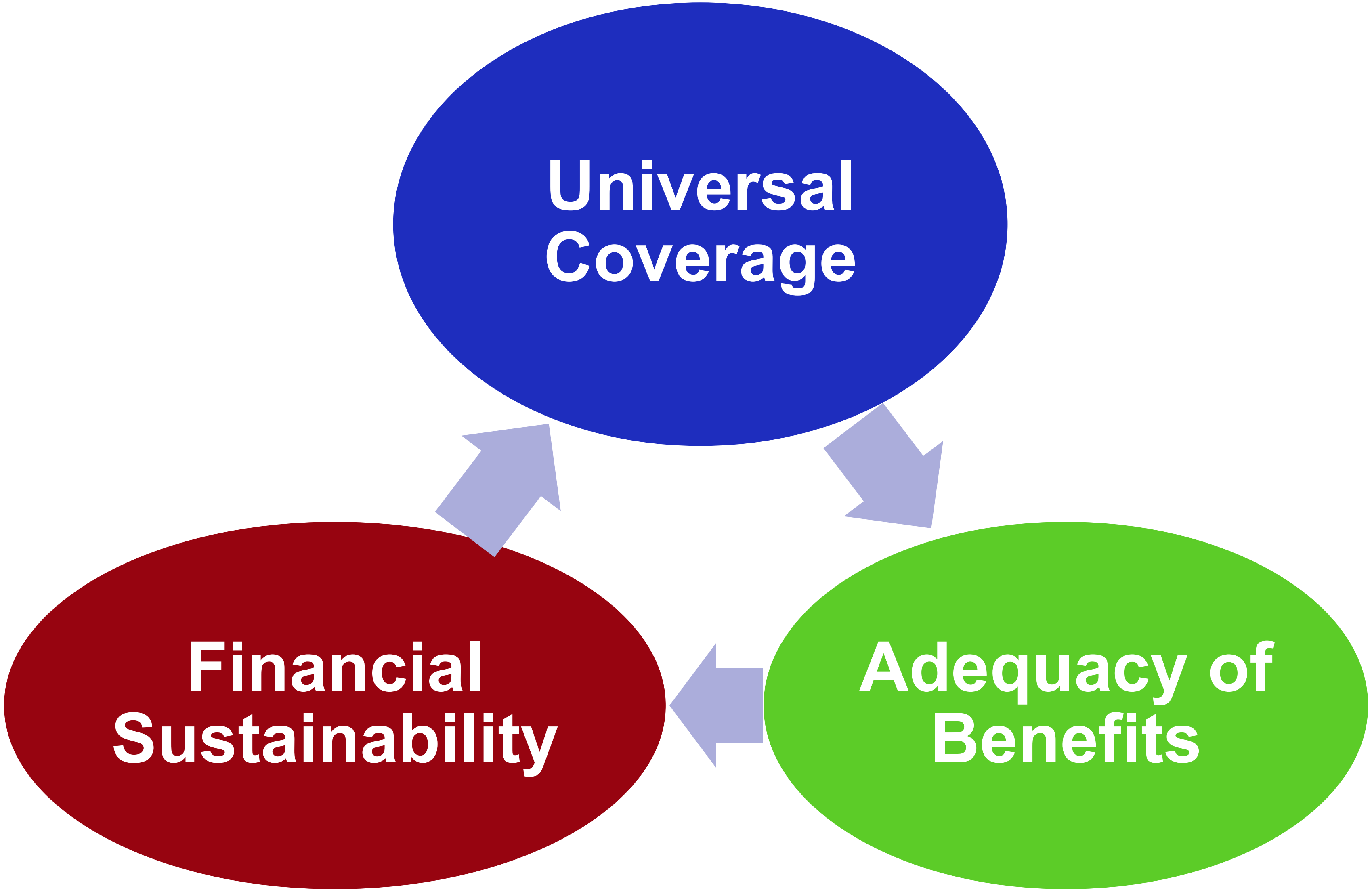
Malaysia

Costed expansion of coverage to non-nationals->

The ILO actuarial valuation of the EI and IS schemes assessed the impact of including foreign workers in the former in 2019 and costed extension of coverage to such workers for the latter. The analysis showed that their inclusion in PERKESO schemes was financially beneficial, given their age, sector and gender profiles.



The actuarial valuation does not just look at sustainability



Financing Policy

What do we mean by it ?

Financing Policy and Strategy

What are the Cost of Benefits

Actuarial valuation, social budgeting etc

Who pays ?

Employer / employee (%, max/min); Investment; Others

Impact of financing

Labour cost, employee pay, macroeconomic, incentives etc

Timeframe of financing

Prudence, fairness, uncertainty, shocks etc (timeframe depends on benefit)

Critical to have an explicit and documented *Financing policy*

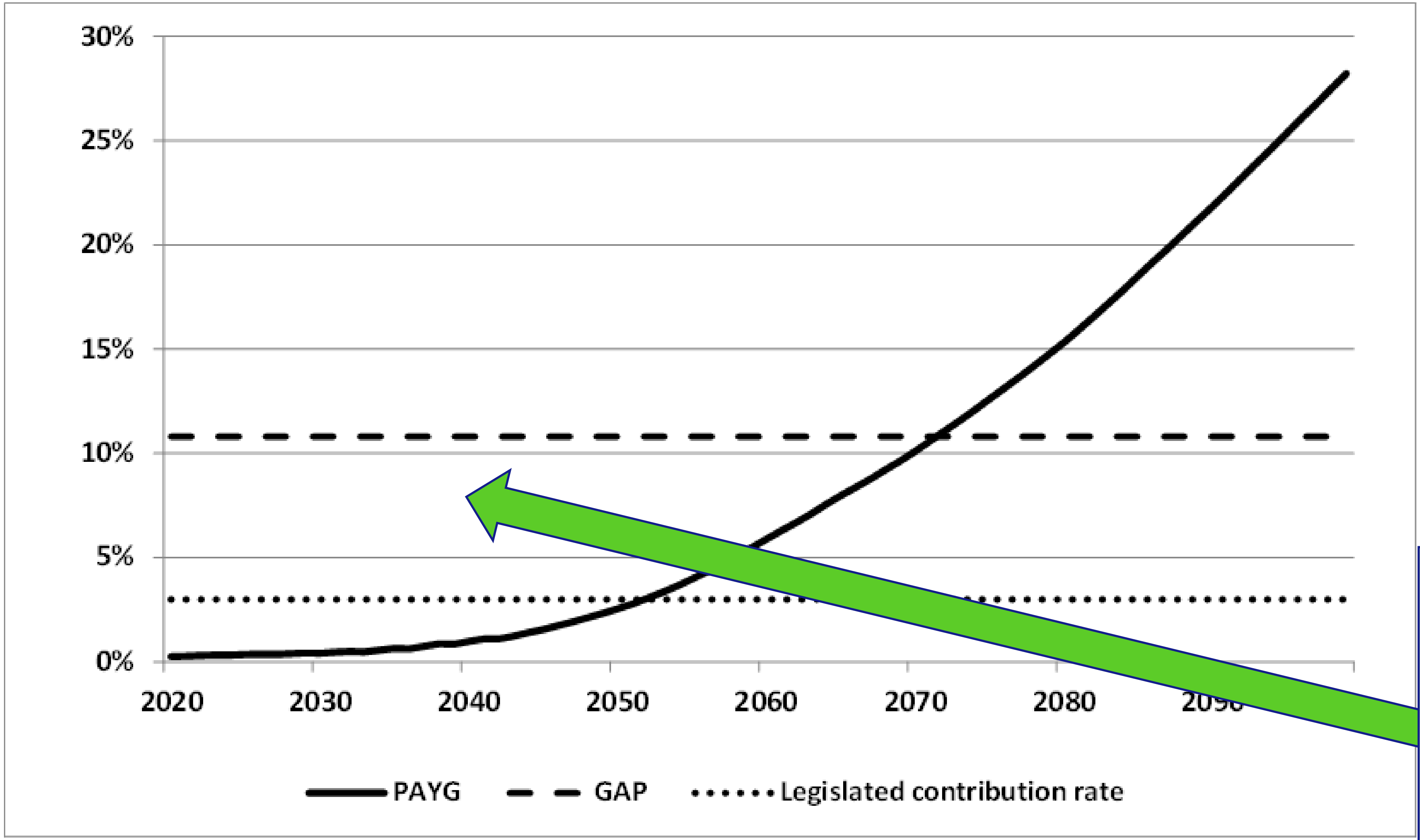
Financing policy is an essential tool to:

- Formalise the long-term funding objectives of the scheme;
- Better understand the risks & advantages of financing options
- Plan that there are sufficient assets to meet promised benefits;
- Improve corporate governance by increasing transparency.
- Ensure equity between stakeholders, members, generations etc

The policy would specify:

- Contribution rates;
- Risks faced by the scheme and how they can be managed;
- Risk tolerance
- Allocation of risks among stakeholders;
- Funding objectives
- Frequency of actuarial valuation, method of actuarial projections
- Funding methods
- Intergenerational equity;

PAYG rates and contribution options
Example of a pension scheme



PAYG rate of the scheme steadily increasing over time.

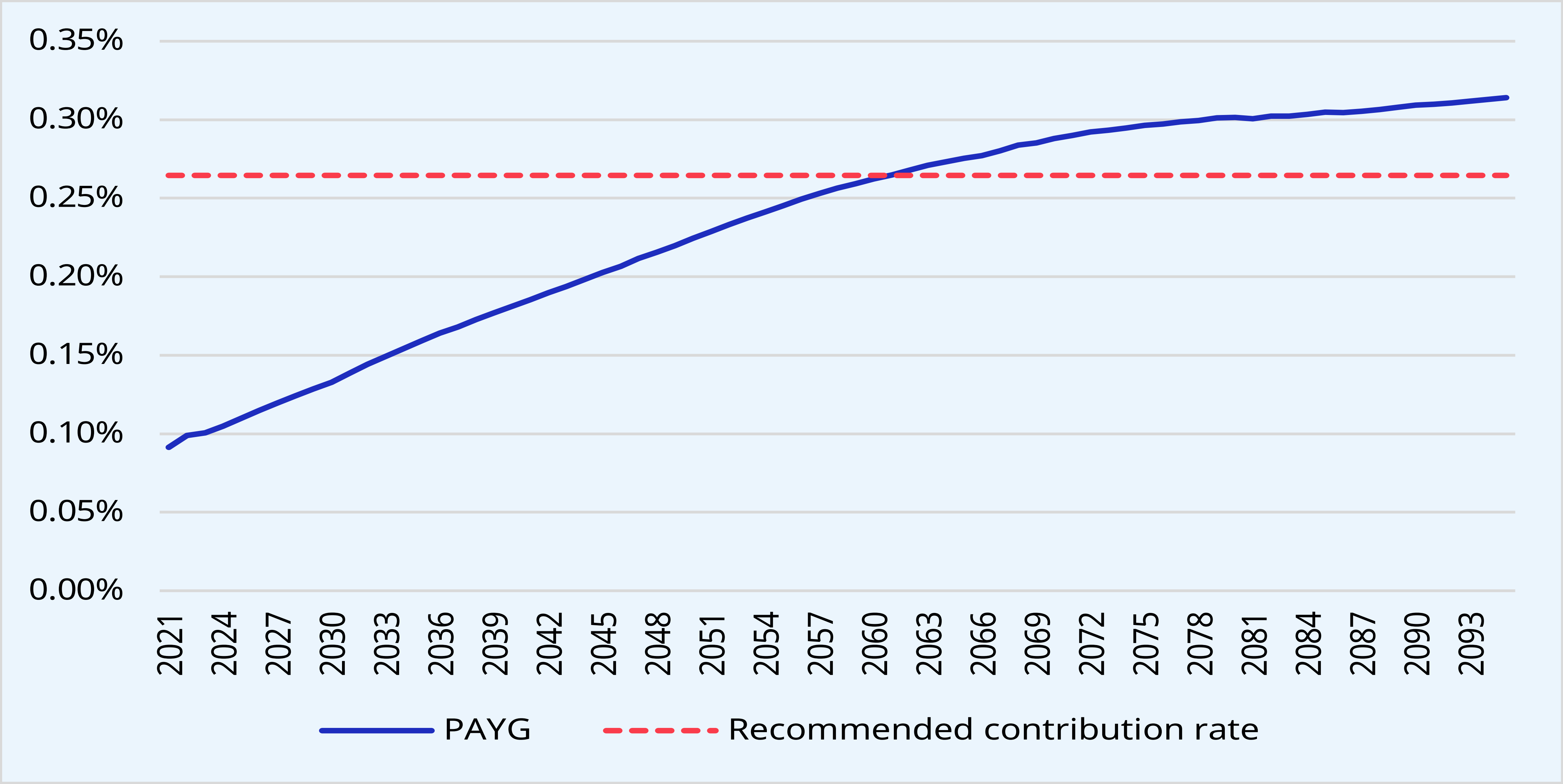
General average premium (GAP): constant contribution rate to finance the scheme over projection period

This graphic shows 'political trap'

If a higher contribution rate is paid than PAYG cost, reserves will be accumulated

These assets will need to be invested in line with good practice

Example: Disability Benefits
What should the Financing Approach be here?



Target reserves

- Commented on (or recommended*) by the actuary as part of the actuarial valuation report
- Need to consider different factors but ensure long term sustainability of the scheme
- Adequate (but not excessive) Reserves are needed for economic recessions and shocks (eg Covid) when
  - payments / claims are higher
  - Contributions lower and
  - Special temporary benefits may be introduced (eg furlough benefits for UI)
- Schemes tend to have target reserves as a multiple of expected monthly or annual benefit payments

Thank you