

# Actuarial Study on the new pension scheme (BPJS Ketenagakerjaan)

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It's not a magic crystal ball



## Scope of the Actuarial Study

- Assess the financial sustainability of the new pension system that has been in place since 1 July 2015

# Income security for old age

## Overview of the current system

### Coverage

- Different schemes for civil servants, army and police
- Very limited coverage for informal economy workers
- Cash transfer targeting the “vulnerable” elderly (part of PKH): very limited coverage
- Majority of the elderly still depends on family and other available support

# Income security for old age

## Overview of the current system

### Benefits

- Labour Law (Severance and service reward pay): lump sum
  - Severance Pay (UP)
  - Reward for Working Time (UPMK)
  - Compensation Fee (UPH)
- Provident Fund for private-sector workers: lump sum
- Pension for civil servants: periodical payments
- New pension scheme for private sector employees

# Labour Law No. 13/2003

UP – 9 months of salary for more than 8 years

UPMK – 10 months of salary for more than 24 years of services

UPH – 15% of the amount of UP and UPMK

Ex: worker >24 years of service

$2 \times UP + 15\% \times (2 \times UP + UPMK)$

$(2 \times 9 + 10) \times 1.15 \times \text{monthly salary}$

= 32.2 X monthly salary

If an employer contributes to a private pension plan total amount is lower (does not includes UP)

# Provident Funds

- Contribution rate
  - 3.7% employee's
  - 2.0% workers
  - Possible to withdraw 30% of the amount accumulated for housing plus 10% for other purposes after 10 years of contribution

On former PT Jamsostek 75% of all the funds were withdraw before reaching retirement age

# Pension

- 15 years of contributions
- Retirement Age: 56 until 2019
  - Increase to 57 in 2019 and then 1 year increment every 3 years
- Formula –  $1\% \times \text{number of years of service} \times \text{average career index salary}$
- Contribution rate: 3% (2% E / 1% W)
- Insurable earnings:
  - Ceiling is 7 million Rp.
  - Adjustable to annual GDP growth
- Maximum Pension – 3.6 million Rp. (adjusted to inflation)
- Minimum Pension – 300 000 Rp per month (adjusted to inflation)

# Income security for old age: Overview of the current system

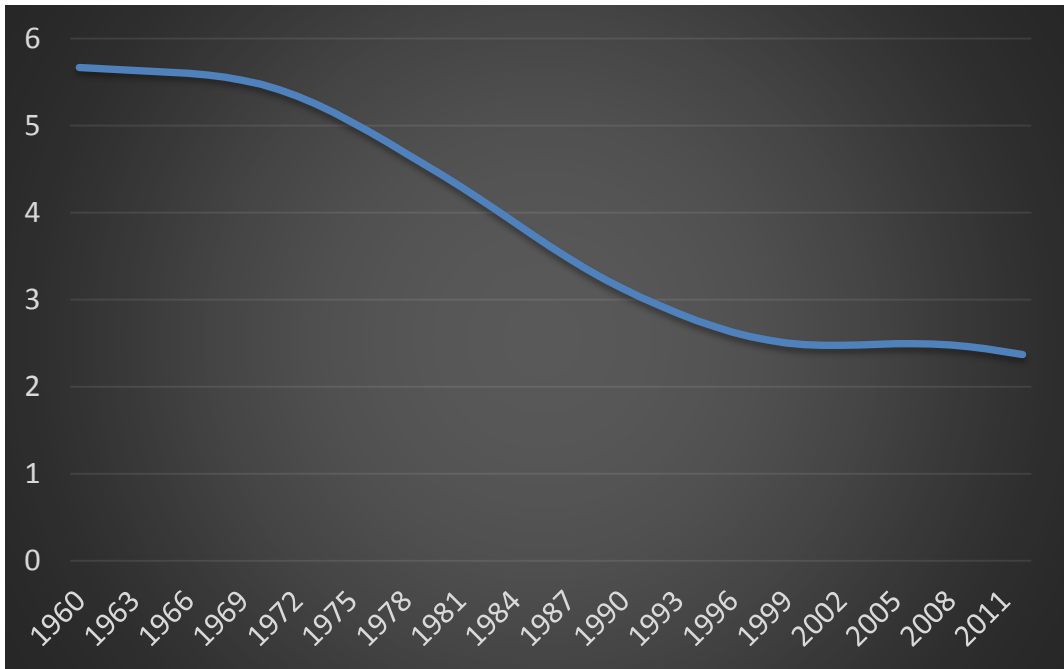
## Finance

- Labour law: employers' direct compensations
- Provident Fund: external, individual accounts
- Pension: external, collective financing (redistribution)



# **(some) Key assumptions used**

# Total Fertility Rate



**Expected to  
decrease to 1.9  
by 2045 and to  
be kept constant**



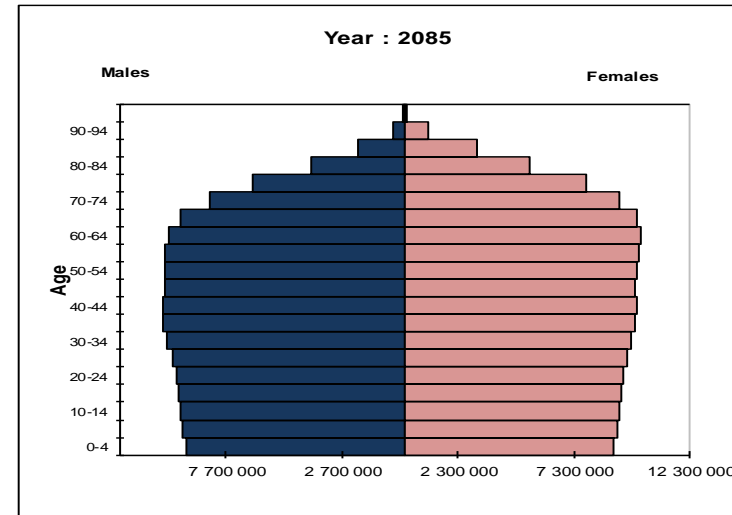
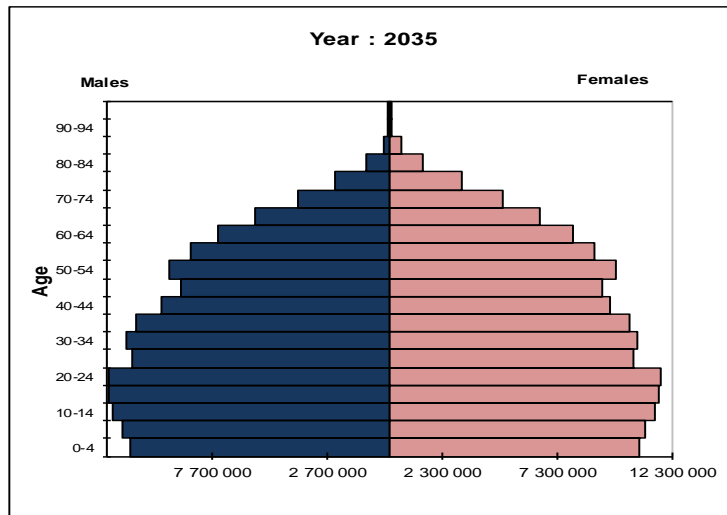
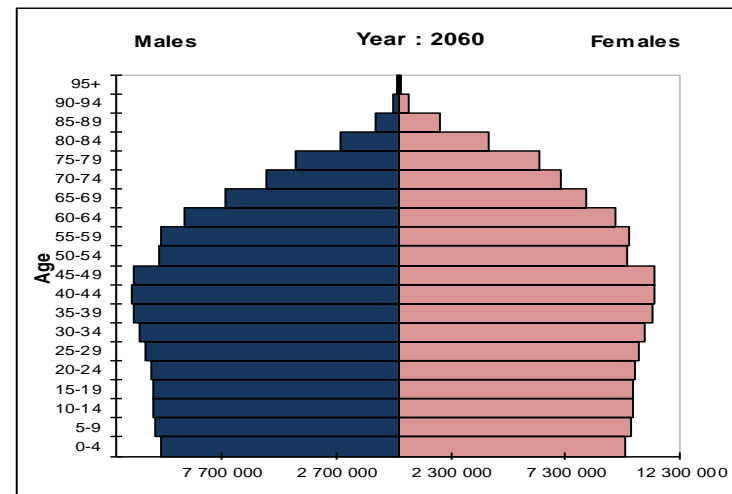
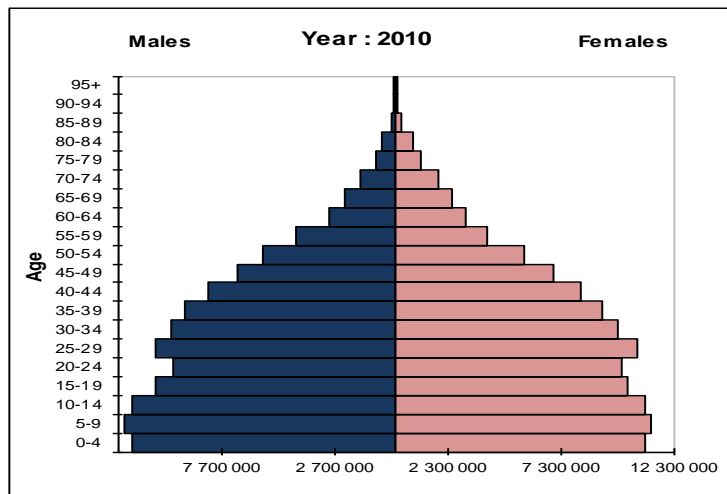
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# Life expectancy at selected ages

	Men			Women		
Year						
	At 0	At 20	At 60	At 0	At 20	At 60
2010	66.4	49.6	15.2	70.5	53.3	17.8
2035	70.1	52.1	16.5	74.9	56.4	19.4
2060	73.6	54.8	18.0	78.4	59.1	21.1
2085	77.6	58.2	20.1	81.4	61.7	22.9

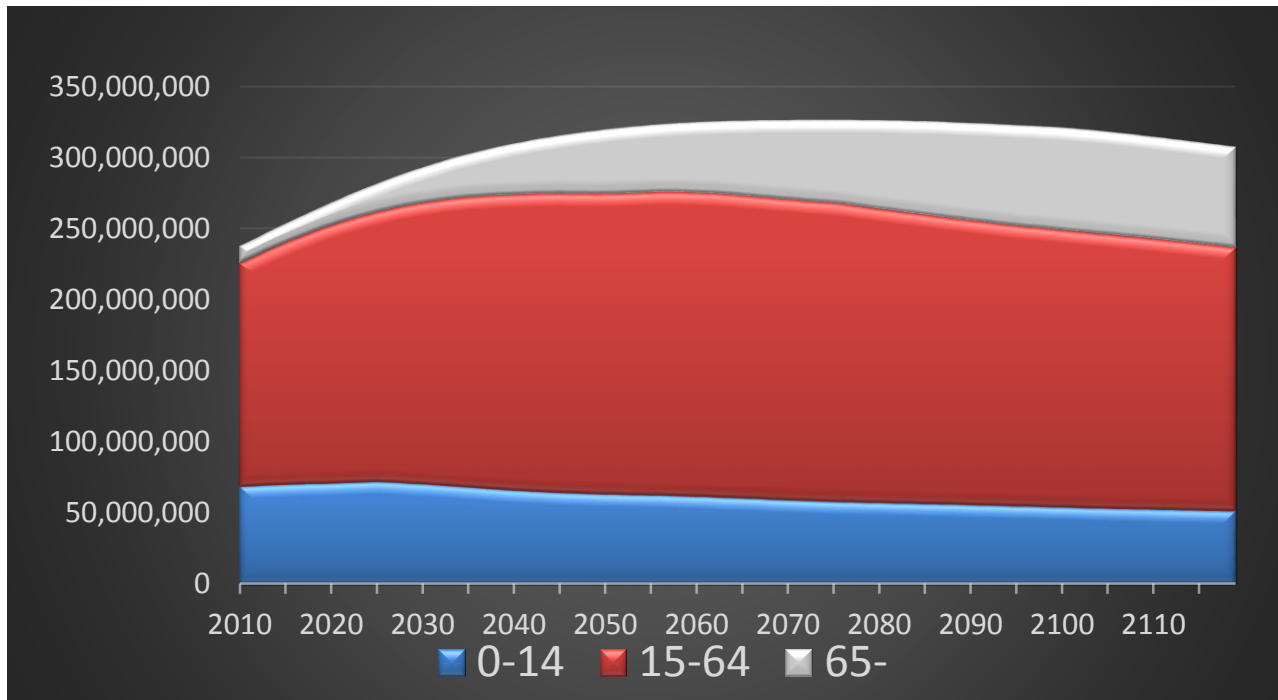


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- Average age is 28.8 years old (2010) - will increase to 42.5 years (2110)
- Total population will increase to 325,952,588 (2073), then will gradually decrease

# Demographic Projections Indonesia



- Dependency Ratio 15-64/65+
  - 2015 – 12.8
  - 2060 – 4.3
  - 2110 – 2.7





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# Proportion of formal-sector workers and self-employed persons

	2004	2005	2006	2007	2008	2009	2010	2011	2012
Proportion of workers in the formal sector	30.3	30.7	31.1	31.0	30.4	30.7	33.1	37.8	39.9
Proportion of workers that are self-employed (WB)	68.1	66.4	66.1	66.0	67.4	66.6	64.6	60.6	N/A

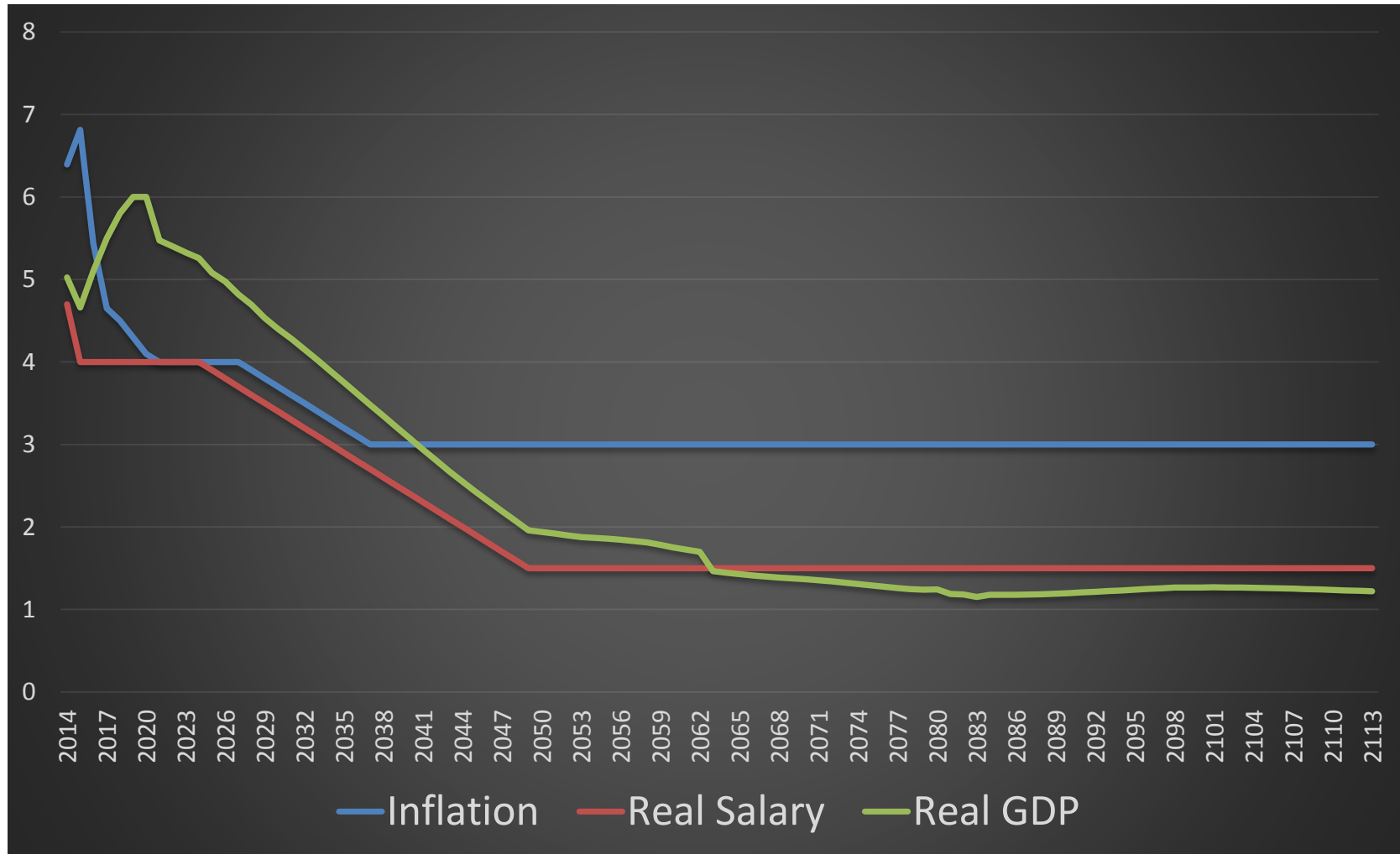
# Labour Market Balance



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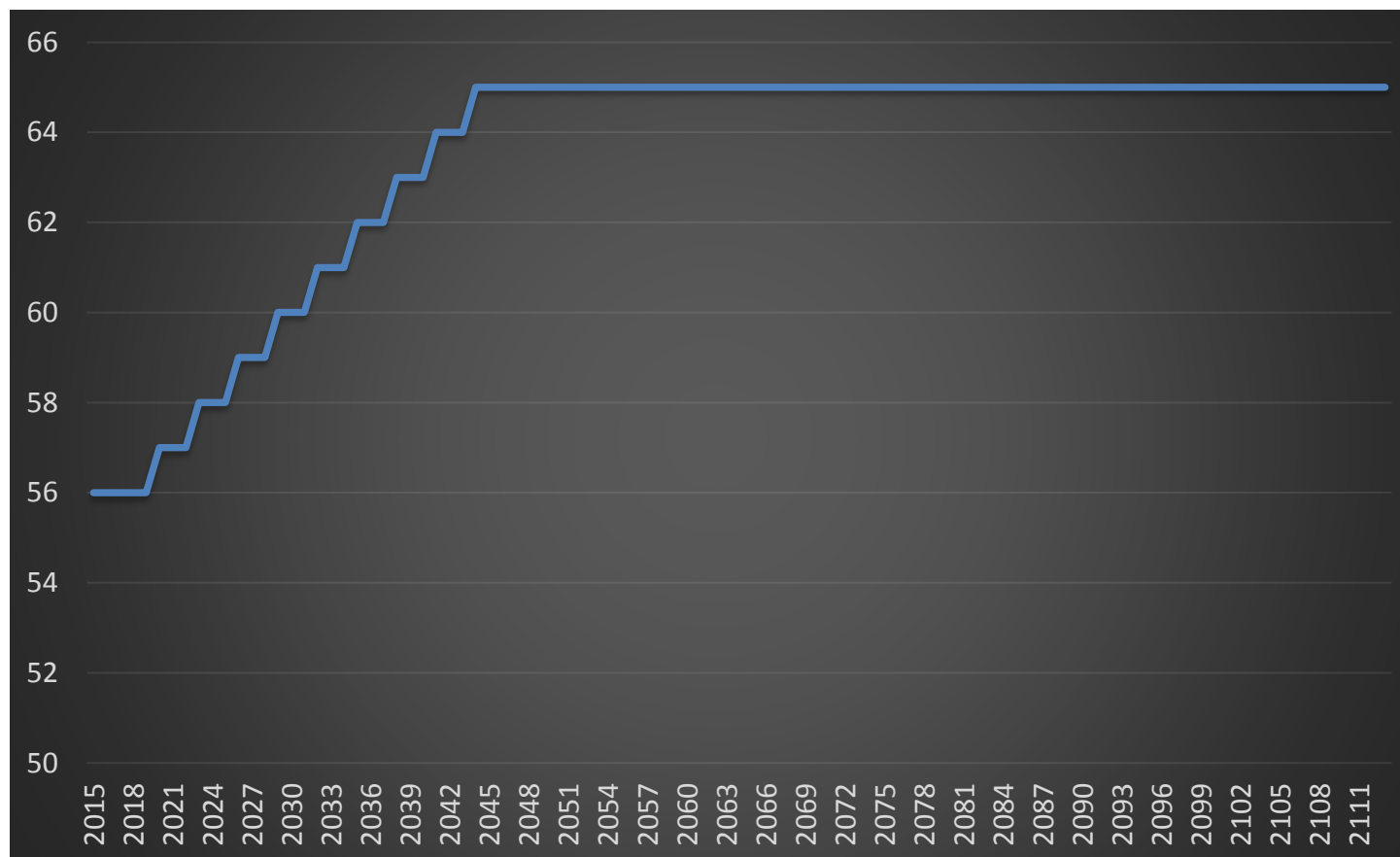
	2013	2063	2113
<b>Population (no. of persons)</b>			
Total	246,951,012	325,135,290	311,871,998
<b>Population aged 15–69 (no. of persons)</b>			
Total	169,668,855	229,573,409	206,808,045
<b>Labour force participation rate (%)</b>			
Males	85	84	83
Females	53	66	65
Total	69	75	74
<b>Unemp. rate (%)</b>	6.3	5.0	4.9
<b>Formal sector (%)</b>	40.4	58.7	58.0

# Inflation, real salary increase and real GDP growth

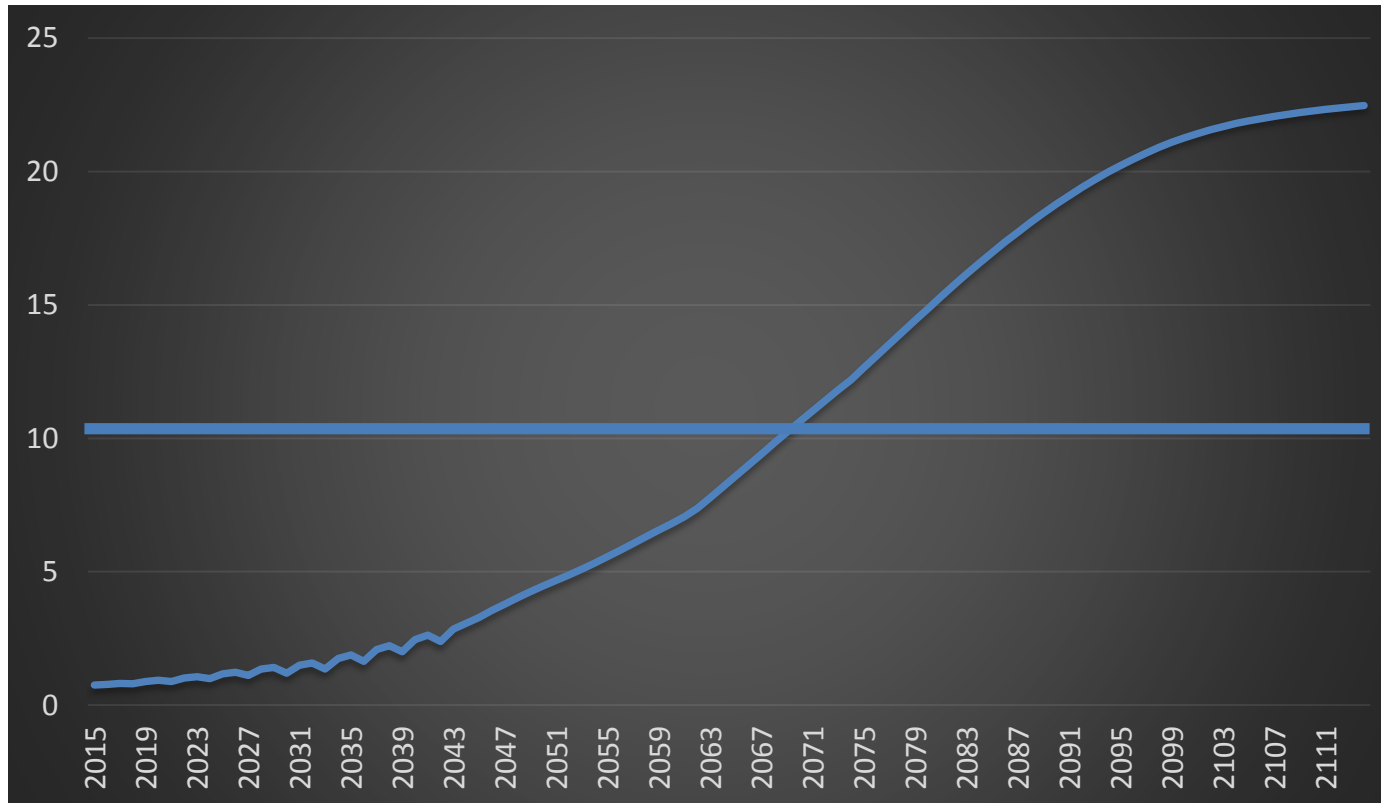




# Schedule of increase in pensionable age



# Projected PAYG rates (in per cent of insurable earnings)



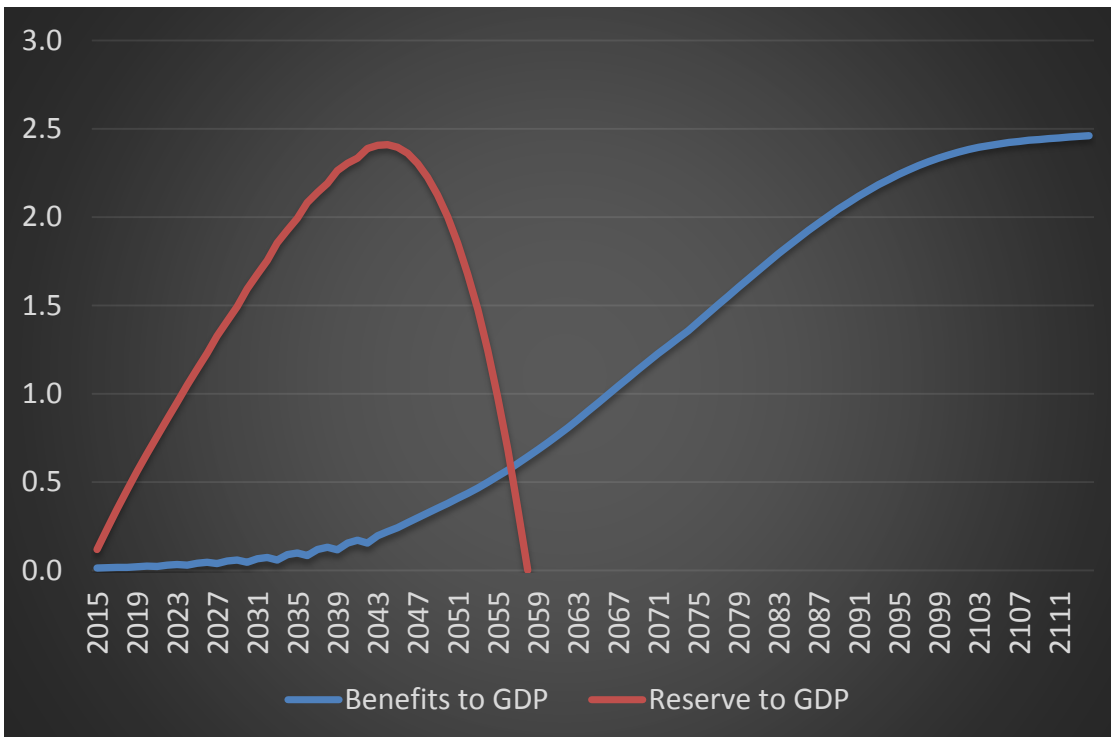
**PAYG – 22.5  
(2015)**

**GAP – 10,2%**

**With a ratio  
reserve/expendi.  
of 5%**

## Projected benefits and reserve in relation to GDP

- Until 2043, annual contributions are sufficient to pay for all annual expenditures
- From 2044 to 2049, annual investment income from the reserve must be partly used to pay for annual expenditures



- From 2050, the reserves will be used to pay for annual expenditures.
- The reserves will be depleted during the year 2058

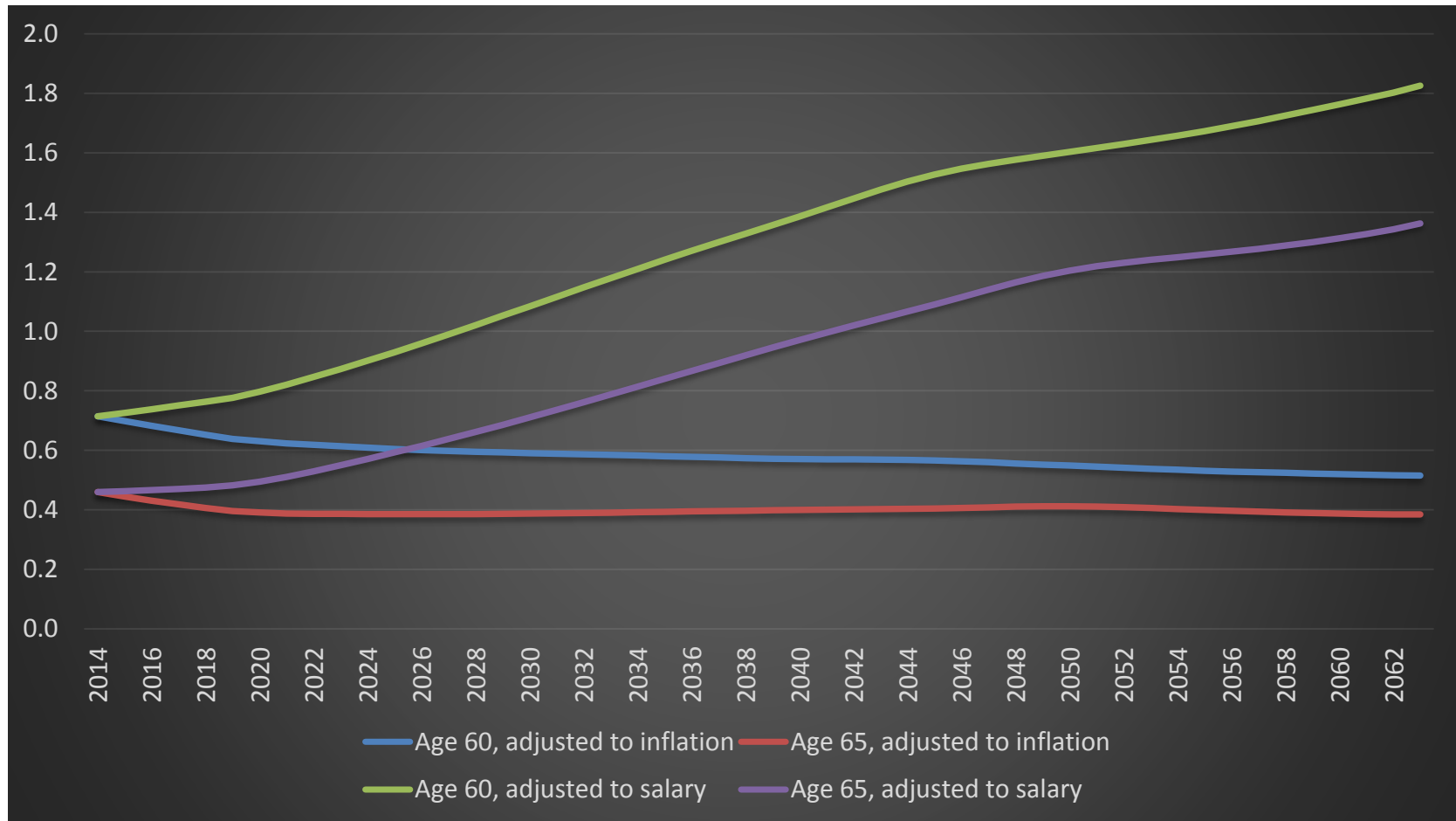


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# MAIN RECOMMENDATIONS

# Introduction of Universal Pension



# Granting past service to initial members near retirement

- Problem identified
  - During 15 years nobody will receive a pension
  - Long time before pensioners will be able to receive 35 per cent of their average insurable earnings
    - Risks the relevance with political implications
- Policy Solution - Providing a certain number of years of service to the initial insured members for calculating benefits

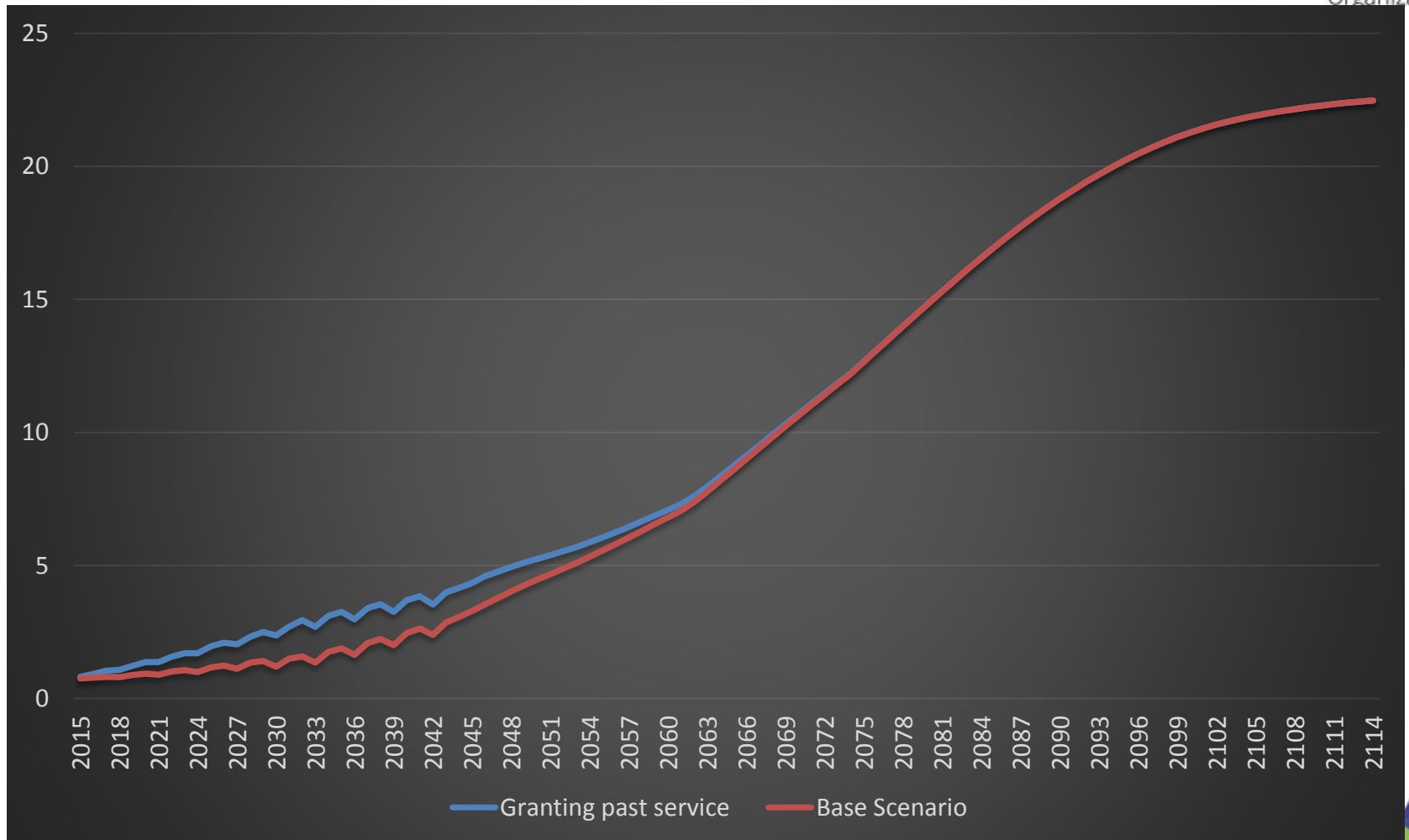
# How could it work?

- Those aged:
  - 56 in 2015 and over would be awarded with 15 years of service;
  - 55 would be granted 14.5 years of service,
  - 54 would be granted 14 years of service, and so on.
  - Recognition of past service can be conditional to having contributed to the scheme for at least a given number of years.



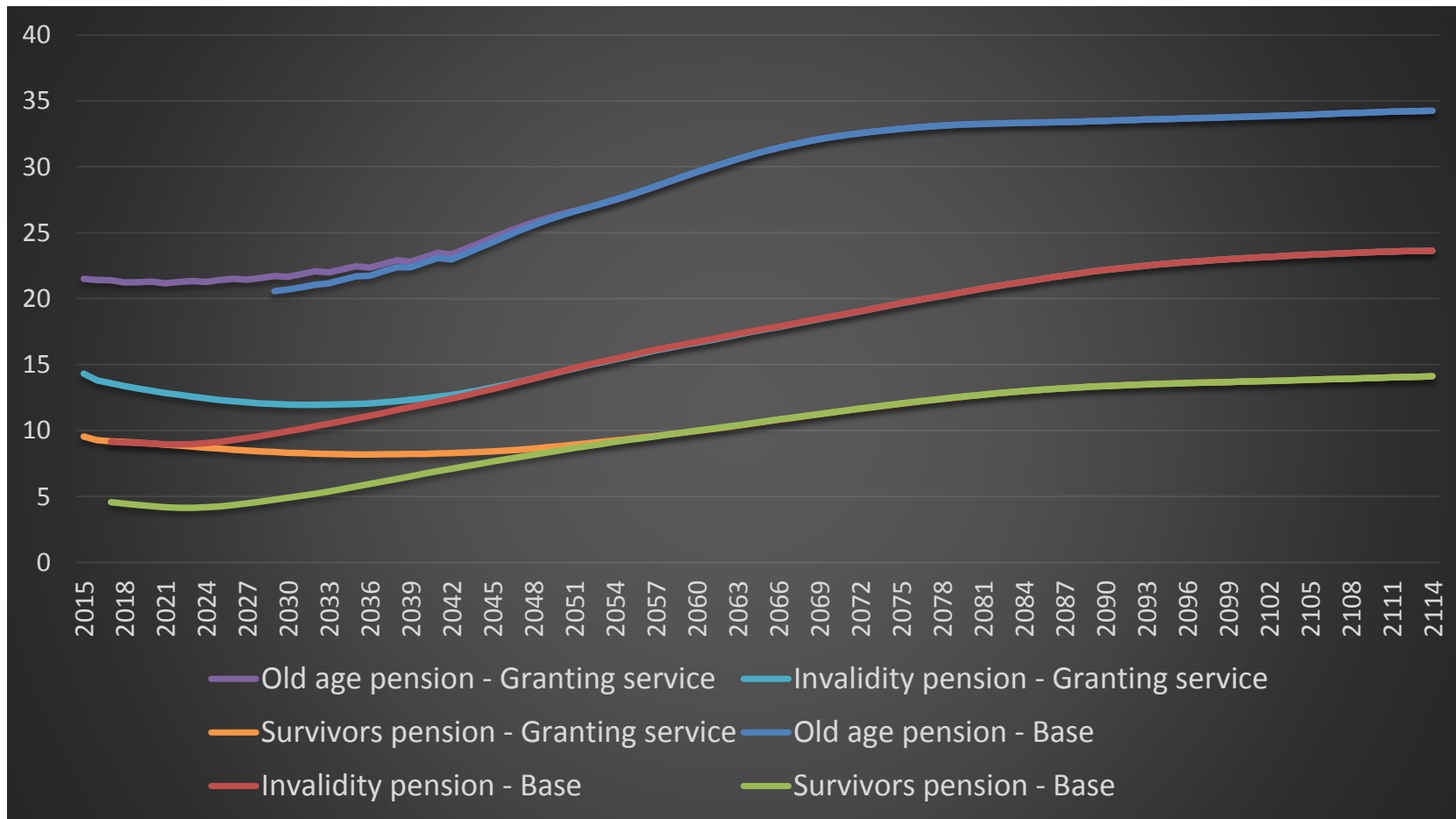
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# Granting past service, PAYG, in per cent





# Granting past service, Replacement ratios by benefit type



# Better alignment with C102 principles

Adequacy

Sustainability

Predictability

# A Old Age Pension that better fits Convention 102

- Replacement rate for 30 years of contribution **must** be at least 40 %
- The current annual accrual rate - 1 %
- **The revision of the accrual rate for the first 30 years of contribution may be considered**
- Annual accrual rate should be at least **1.33%** for the first 30 years

# A survival pension scheme that fits Convention 102

- Replacement rate for 15 years of contribution **must** be at least 40 %
- Currently is only 15%

# Sensitivity analysis: Minimum ILO standards

Scenarios	GAP (%)	PAYG 2115 (%)	Year reserve = 0
Base	10.2	22.5	2058
ILO standards	12.6	27.4	2053

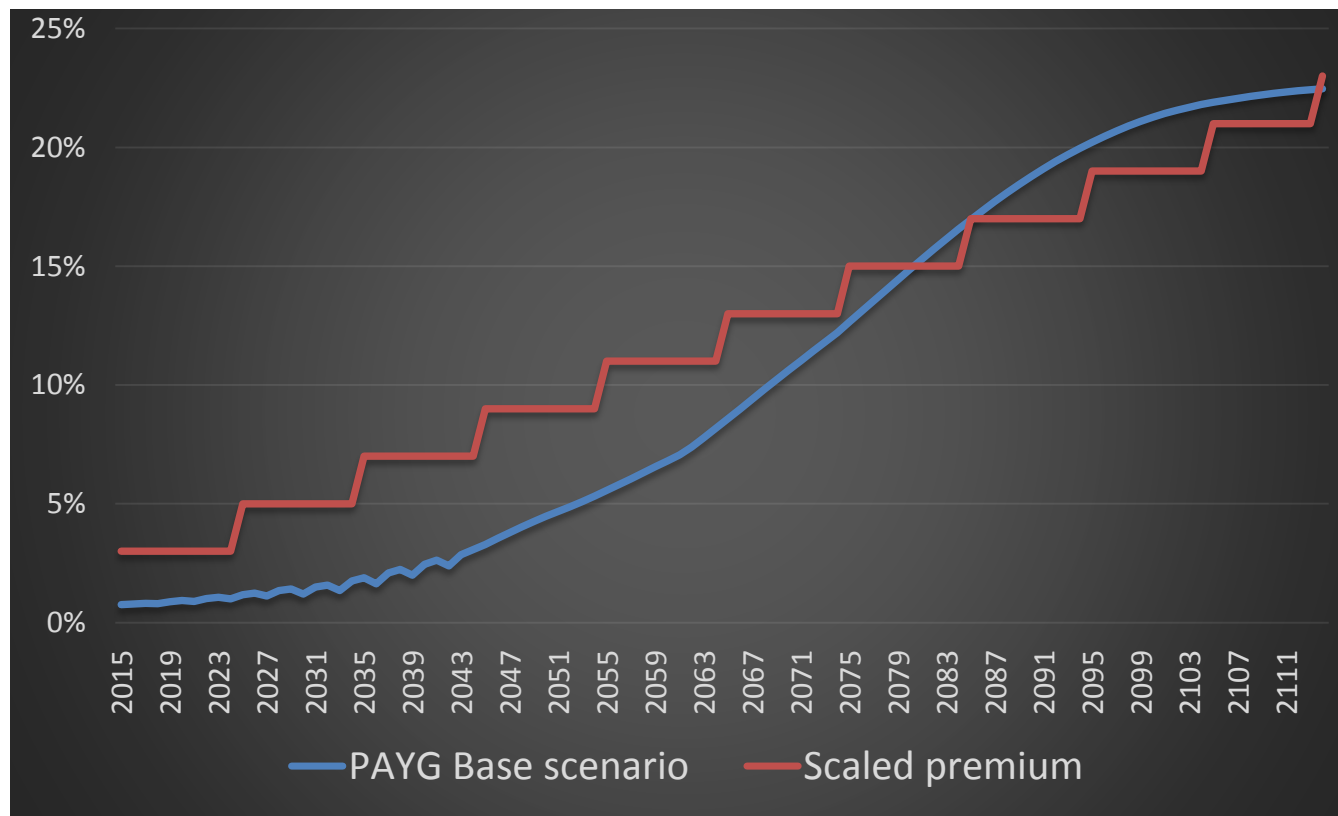
Alternative - reallocate money from other social security scheme, including labour protection programmes – **ensure periodical payments**

Labour Law					
	Real return on assets (%)				
Real salary increase (%)	2	3	4	5	6
2	13	14	16	18	20
3	13	14	16	18	20
4	13	14	16	18	20
5	13	14	16	18	20
6	13	14	16	18	20
Provident Fund					
	Real return on assets (%)				
Real salary increase (%)	2	3	4	5	6
2	8	11	15	19	25
3	7	10	12	16	21
4	6	8	11	14	18
5	6	7	9	12	16
6	5	6	8	11	14
Pension Benefits					
	Real return on assets (%)				
Real salary increase (%)	2	3	4	5	6
2	30	30	30	30	30
3	30	30	30	30	30
4	30	30	30	30	30
5	30	30	30	30	30
6	30	30	30	30	30
Total					
	Real return on assets (%)				
Real salary increase (%)	2	3	4	5	6
2	51	55	61	67	75
3	50	54	59	65	71
4	49	53	57	62	68
5	48	52	56	60	66
6	48	51	55	59	64

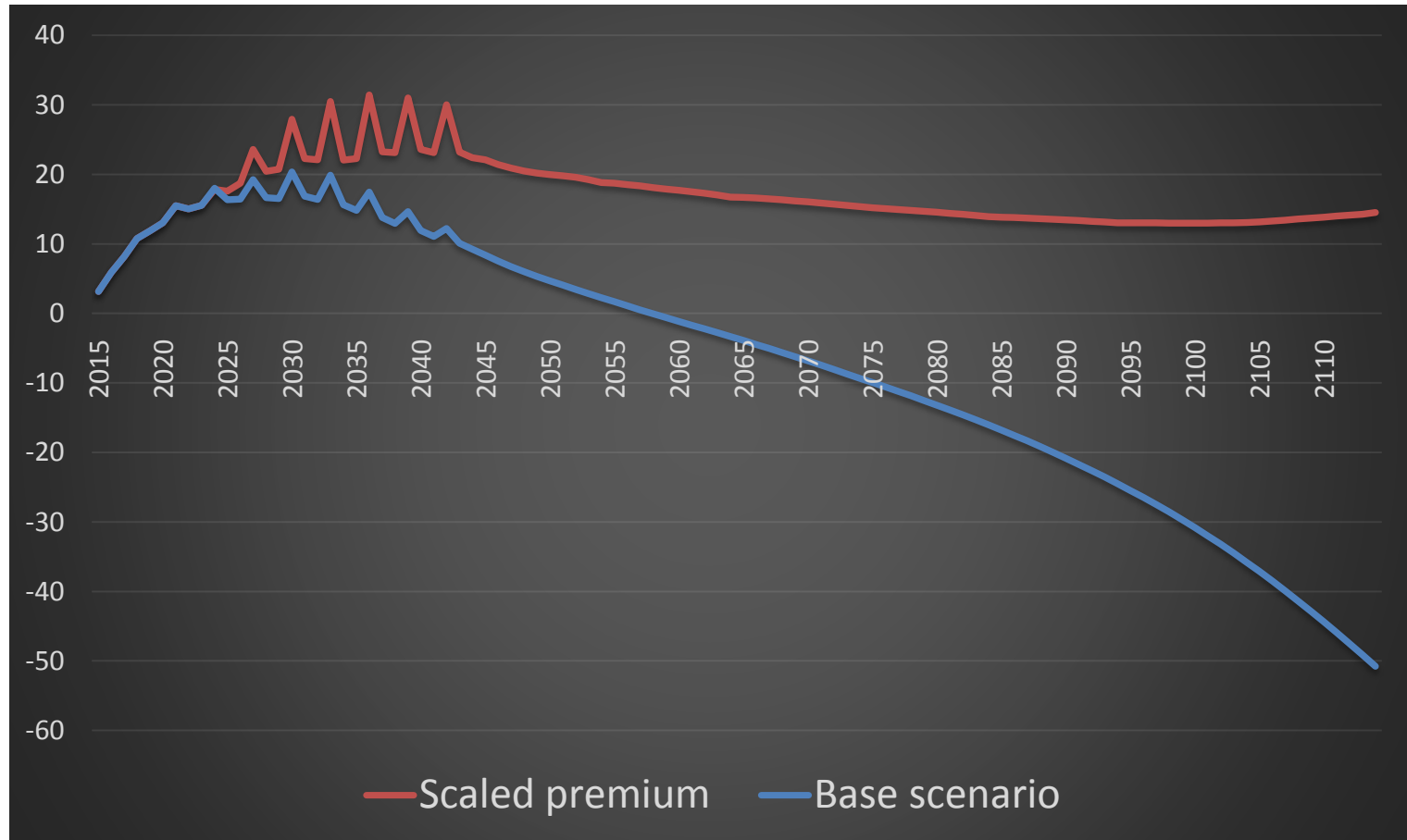
**Estimated income  
replacement level  
for a male,  
retirement age at 56  
with 30 years of  
services**

# Adoption of a scaled premium contribution rate

- PAYG contribution rate (100 years) 22.5%
- GAP – 10.2%
- Increasing the contribution rate by 2 % every 10 years starting in 2025 is shown for considerations



# Evolution of the reserve ratio

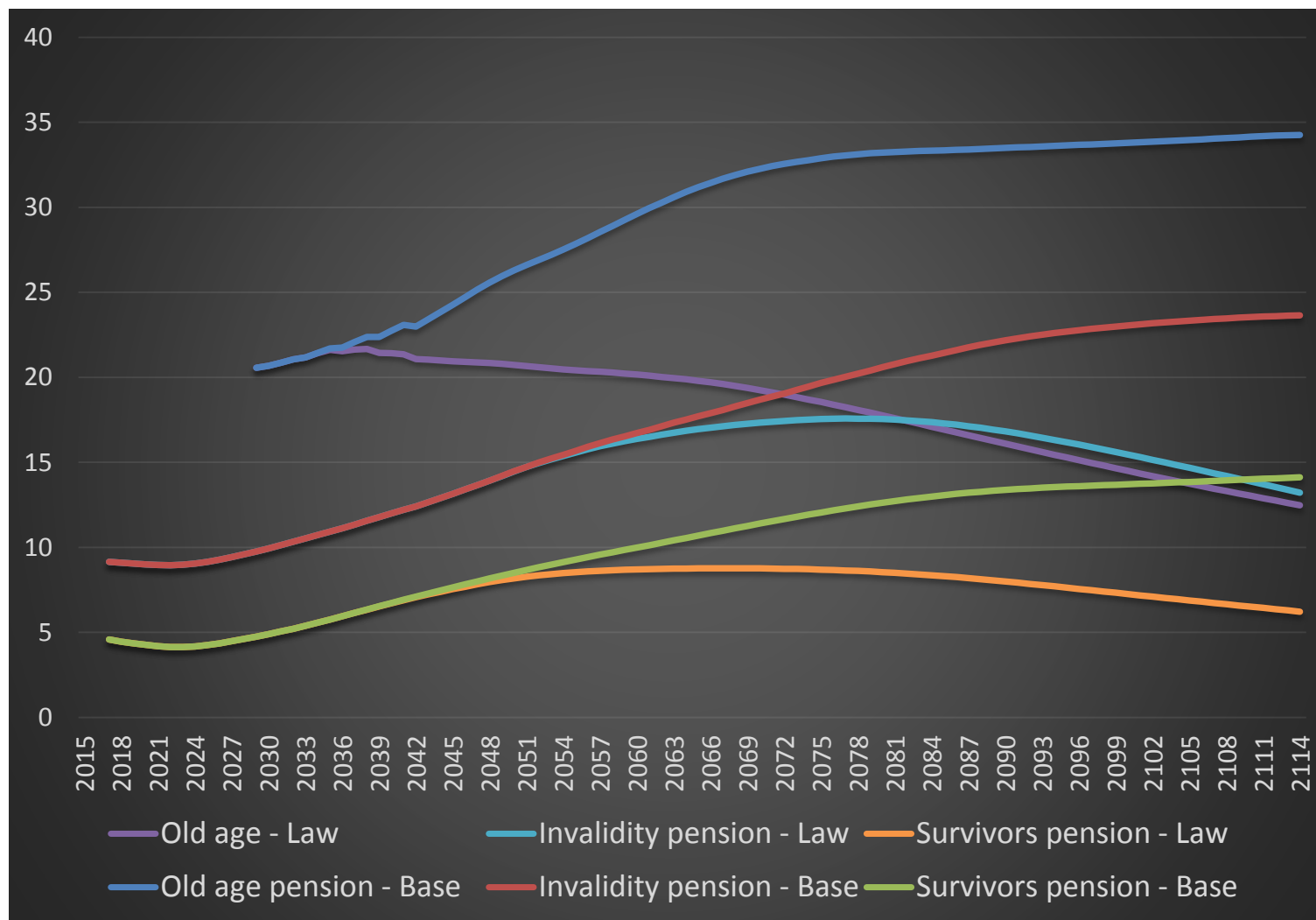




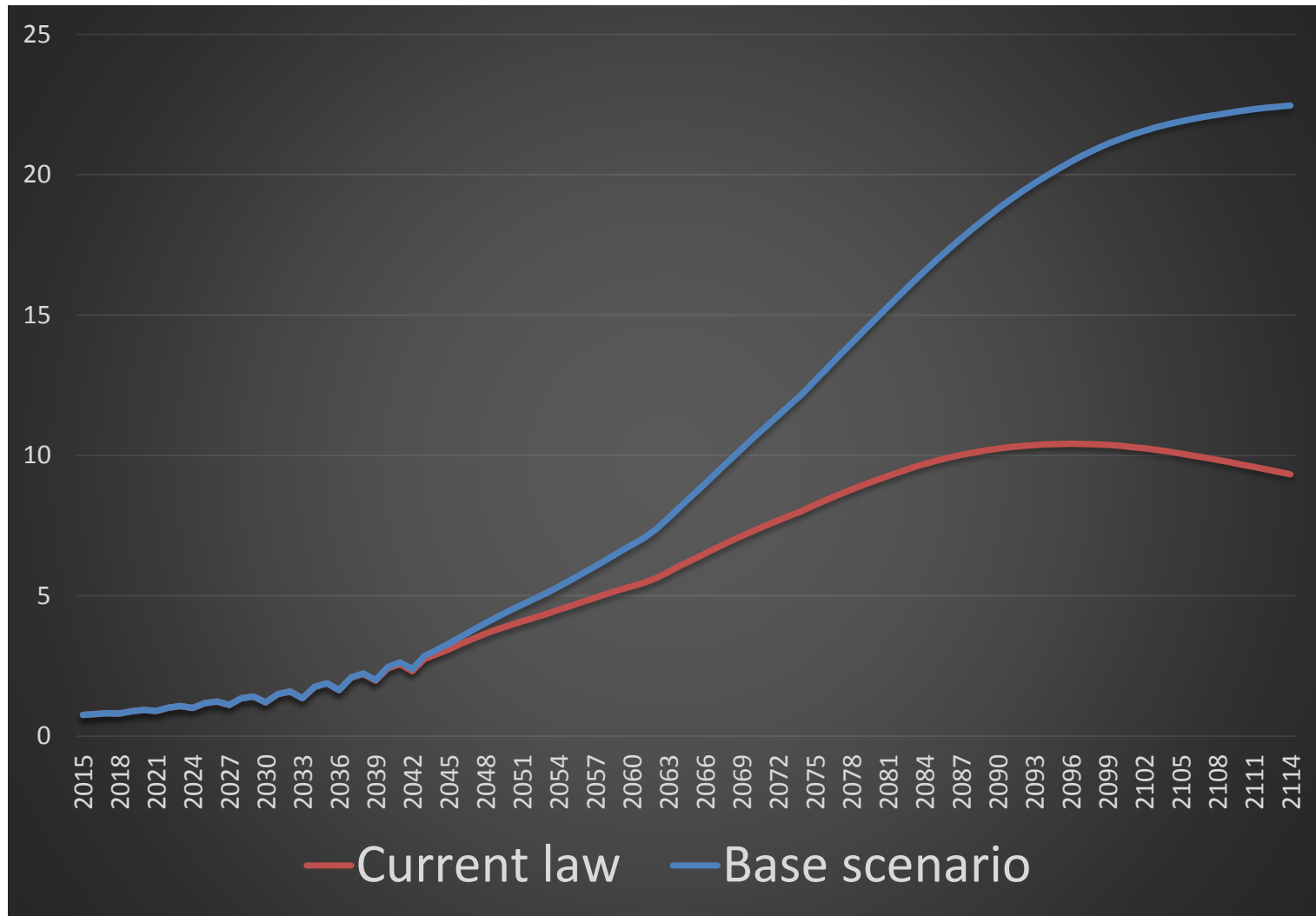
# Indexation of the contribution ceiling and the maximum and minimum pensions

- Average annual wage increases are expected to be higher than inflation
- The indexation of maximum annual pension in line with CPI will result in problems in the long run
  - Gradual share of the scheme replacement rate will go down
  - No incentive to declare
    - The average insurable earnings required in 30 years to obtain the maximum will be 75% lower than the maximum insurable earnings in 2115
- Recommendation: Index Max annual Pension with average wage growth

# Replacement rates current law and base scenario



# Projected PAYG rates, current law and base scenario



# Funding Policy

## In order to:

- Explain the type of funding
- formalize the long-term funding objectives of the scheme, for example defining:
  - The equilibrium period
  - Minimum level of reserves over the long term. This objective is a major driver of increasing the contribution rate;
- better understand the risks and advantages of financing options
- enhance scheme governance by increasing transparency.

# Funding Policy Should include:

- Contribution rates
- Risks faced by the scheme and how these risks can be managed
- Funding objectives (like contribution stability or improving the funding ratios)
- Frequency of actuarial valuation, method of actuarial projection
- Goals related to intergenerational equity

# Long Term Investment Policy

- Well-documented investment policy should be implemented
- Based on risk management principles and international guidelines
- Proper balance between higher investment returns and the long-term stability
- The choice of the financing strategy will affect considerably the level of assets to be held in the fund and the level of assets will affect considerably the future level of contribution rates.

# Funding and Investment Policy

## Important Questions

Maximum level of assets that can be efficiently invested

Amount of assets acceptable to the society

Maximum contribution rate that a society can afford



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**DECENT WORK**

A better world starts here.

# Have a nice reading Thank you

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