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INDONESIA

Report to the Government

Financial assessment of the social security pension schemes administered by BPJS Ketenagakerjaan as of 31 December 2020 and costing of sickness and maternity benefits

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FAST RETAILING

Financial assessment of the social security pension schemes administered by BPJS Ketenagakerjaan as of 31 December 2020 and costing of sickness and maternity benefits

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▶ Abbreviations and acronyms

BPJS	Badan Penyelenggara Jaminan Sosial Ketenagakerjaan (Social Security Agency for Employment)
BPS	Badan Pusat Statistik (Statistics Indonesia)
CPI	Consumer Price Index
DJS	Dewan Jaminan Social (Social Security Fund)
GAP	general average premium
GDP	gross domestic product
IMF	International Monetary Fund
JHT	Jaminan Hari Tua (old-age benefit)
JKK	Jaminan Kecelakaan Kerja (employment injury benefit)
JKM	Jaminan Kematian (death benefit)
JKN	Jaminan Kesehatan Nasional (national health insurance)
JP	Jaminan Pensiun (pension benefit)
NP	National Pension
PAYG	pay-as-you-go
SJSN	Sistem Jaminan Sosial Nasional (National Social Security System)

Currency and exchange rate

1.00 US dollar (US$) = 14,980 Indonesian rupiah (June 2023)

▶ Foreword

On 4 December 2018, the ILO was invited to the National Tripartite Committee (LKS Tripnas), comprised of employer representatives, worker representatives and government officials, to discuss unemployment protection, and specifically a proposed unemployment insurance scheme for Indonesia. It was the first time in recent years that tripartite representatives had discussed unemployment insurance at a formal committee meeting.

As part of the key conclusions of the meeting, the Committee requested the ILO to conduct two studies:

i. A full feasibility study of a proposed unemployment insurance scheme for Indonesia; and

ii. An assessment of the entire social security system to identify overlaps or deficiencies and to identify reform options.

The first request was fulfilled by delivering the technical reports entitled *Actuarial Analysis of a Proposed Unemployment Insurance Scheme in Indonesia*, *Exploring Policy Options for an Employment Insurance Scheme in Indonesia*, *Legal, Financial and Administrative Considerations for an Employment Insurance System in Indonesia* and *International Practices of Income Protection for Unemployed Persons: Implications for Indonesia*, in addition to supporting policy dialogues, workshops and discussions. The Government of Indonesia finally legislated and implemented an unemployment insurance scheme in February 2022.

This report *Financial Assessment of the Social Security Pension Schemes Administered by BPJS Ketenagakerjaan as of 31 December 2020 and Costing of Sickness and Maternity benefits* is one of our main technical products to address the second request above. It analyses existing provision and its future evolution and recommends an effective multi-tier pension system that covers all residents and provides adequate pensions on a sustainable basis. In addition, it proposes and costs the introduction of maternity and sickness benefit schemes with a view to not only providing workers with better protection for life-cycle risks but also to attract them to participate in the social insurance system and to facilitate formalization of the informal economy.

As in neighbouring countries, Indonesia is increasingly facing socioeconomic challenges with regard to an ageing population, formal and informal care, low female labour force participation, economic transformation, formalization, and non-standard forms of employment. I believe that this report provides the Government of Indonesia with concrete visions and tangible and feasible solutions to strengthen and develop an effective social security system for the people of Indonesia.

Michiko Miyamoto

Country Director for Indonesia and Timor-Leste

▶ Acknowledgements

The ILO Country Office for Indonesia and Timor-Leste in Jakarta (ILO-Jakarta) and the ILO Decent Work Technical Support Team for South-East and East Asia in Bangkok (DWT-Bangkok) undertook the present study. This report was prepared by Mr Pierre Plamondon, Senior Actuary, and Ms Doan Trang Phan, Actuarial Modelling Expert. Mr Simon Brimblecombe, Chief Technical Advisor and Head of the Regional Actuarial Services Unit, DWT-Bangkok, reviewed the report and provided technical backstopping and additional inputs. Mr Ippei Tsuruga, Social Protection Programme Manager, ILO-Jakarta, provided the overall supervision and policy inputs along with coordination and assistance by Mr Christianus Panjaitan, National Project Officer, ILO-Jakarta.

The ILO team wishes to extend its gratitude to all the technical specialists, management and administrative staff of the Govenrment of Indonesia, and representatives from workers' and employers' organizations including Mr Arief Dahyan Supriadi (BPJS-TK), Mr Abetnego Tarigan (Executive Office of the President), Mr Adi Budiarso (MOF), Mr Bodro Pambuditomo (Executive Office of the President), Mr Fadjar Dwi Wishnuwardhani (Executive Office of the President), Mr Febrio Kacaribu (MOF), Mr Indra Budi Sumantoro (DJSN), Mr Mickael Bobby Hoelman (DJSN), Mr Muhammad Cholifihani (Bappenas), Mr Pramudya Buntoro (BPJS-TK), Mr Ronald Yusuf (MOF), Mr Subiyanto (DJSN), Mr Untung Riyadi (DJSN), Ms Woro Ariandini (BPJS-TK), Ms Gayatri Waditra (Bappenas), Ms Iene Muliati (DJSN), Ms Indah Anggoro Putri (MOM), Ms Retna Pratiwi (MOM), Ms Roswita Nilakurnia (BPJS-TK), and Ms Sri Moertiningsih Adioetomo (University of Indonesia). Special gratitude is extended to Ms Ida Fauziyah, Minister of Manpower, and Mr Anggoro Eko Cahyo, President Director, BPJS Ketenagakerjaan, for their trust in the ILO in carrying out this financial assessment.

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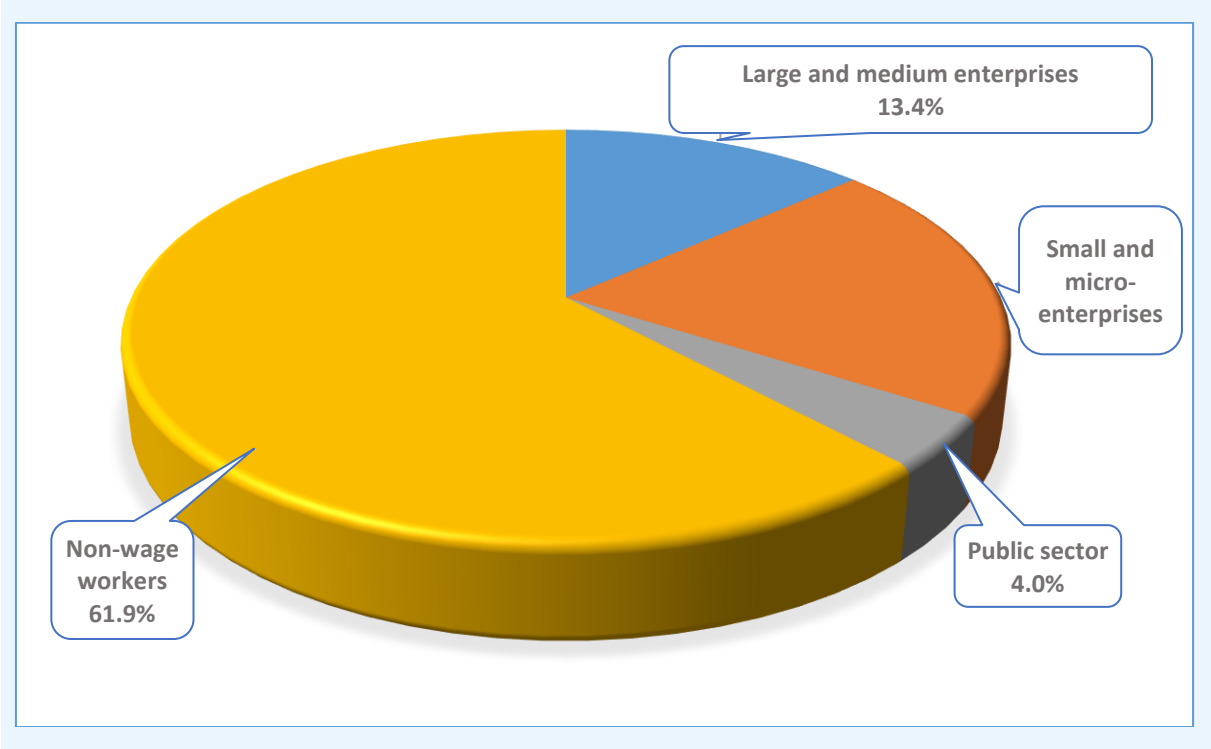
▶ Executive summary

This report presents a financial assessment of Indonesia's pension benefit (Jaminan Pensiun, or JP) scheme. It discusses a series of reform proposals for the JP scheme, but also for the whole Indonesian pension system. Finally, it proposes design and costings for sickness and maternity benefits.

Coverage under the JP scheme

Total employment in Indonesia is estimated at 130.7 million persons in 2020. The distribution of this employment by type of employment and size of enterprise is detailed in figure ES.1.

▶ **Figure ES.1. Distribution of employment in Indonesia**



Source: Estimates based on BPS survey and other information.

The JP insured population (12.5 million in 2020) represents 71 per cent of employees in large and medium enterprises, the other 29 per cent being mainly covered by the special scheme for the construction sector. Hence the target for expanding coverage under the JP scheme lies with the 27 million wage workers in small and micro-enterprises, employees of the public sector (5 million) and all non-wage[1] workers (81 million persons).

Demographic and financial projections for the JP scheme

Contributors and pensioners. For this actuarial assessment, it is assumed that the JP covered population will represent a gradually increasing percentage of wage employment, from 25 per

[1] In this report, the term "non-wage workers" corresponds to the terminology conveyed by BPJS Ketenagakerjaan (Social Security Agency for Employment) to include self-employed persons and workers in the informal economy. It should be noted that many workers in the informal sector will be wage workers but simply undeclared.

cent in 2020 to 70 per cent of in 2100. Considering that under the labour force projections, wage employment will increase over time (from 38.1 per cent of total employment in 2020 to 60 per cent in 2070), the result is that the JP insured population would represent 42 per cent of total employment in 2100.

The JP scheme is very young. Hence the number of beneficiaries will increase significantly over the coming decades. The ratio of contributors to pensioners will decrease from 153.5 in 2021 to 14.3 in 2040, 2.5 in 2070 and 1.5 in 2100. This is the principal factor leading to a substantial increase in the expenditures of the scheme in the future.

Pay-as you-go cost. The pay-as-you-go (PAYG) cost rate (the ratio of total expenditure to total insurable earnings in a year) is very low in 2020 because there are very few pensions in payment and the scheme is not mature. The PAYG cost is projected to reach 28.2 per cent of total insured earnings in 2100. Adjusting maximum insurable earnings in line with real, instead of nominal, GDP growth has the effect of limiting future increases of insurable earnings and drives up the PAYG cost of the scheme in the long term.

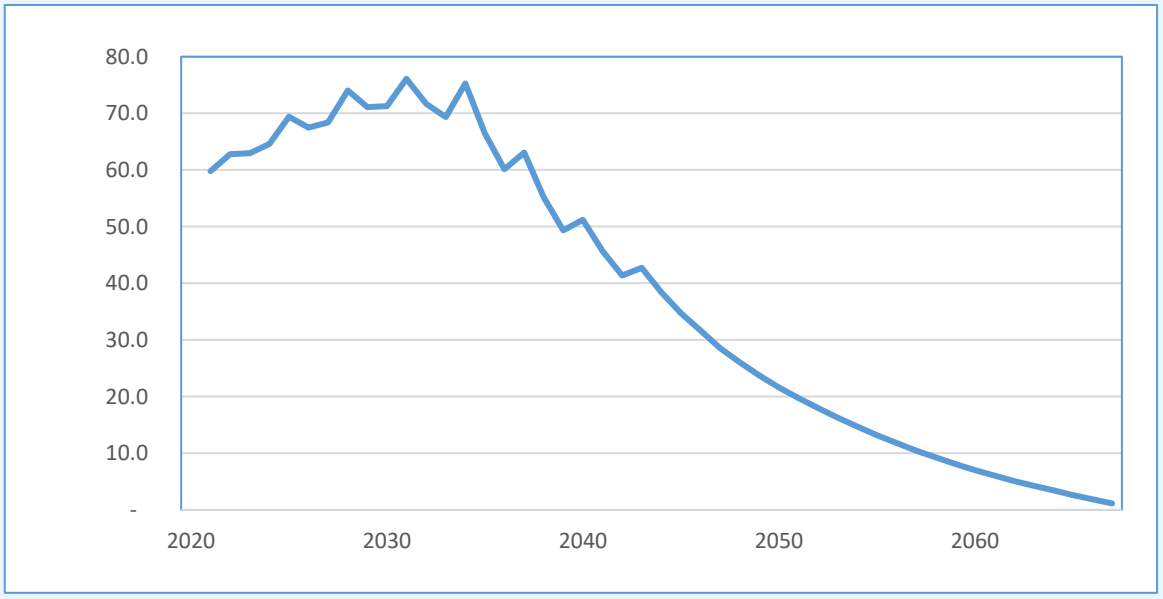
Evolution of reserve funds. In 2053, the JP scheme's expenditures will first exceed its contributions (investment income will have to be used to support expenditures). Expenditures will become larger than the total of contributions plus investment income in 2059, and the reserve will then start to decrease. The reserve is projected to be exhausted in 2069.

Table ES.1. Key dates for the future evolution of JP reserves

	Year
Scheme's expenditure first exceeds contributions (investment income must be used to support expenditures)	2053
Scheme's expenditure first exceeds contributions plus investment income (reserve starts to decrease)	2059
Reserve is exhausted	2069

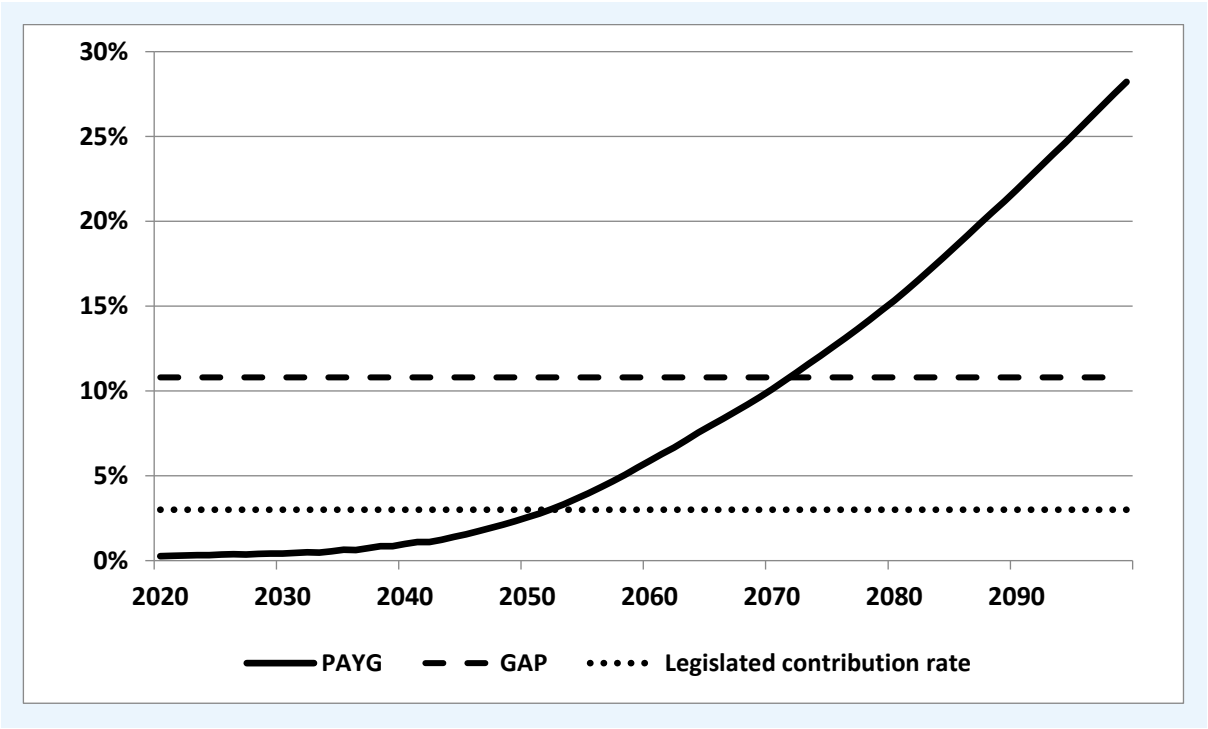
The evolution of the reserve may also be illustrated by the reserve ratio, namely the ratio of the reserve to the annual expenditure. The reserve ratio is equal to 60 in 2021. It is projected to be higher than 50 until 2040 and then starts to decrease until reserve exhaustion in 2069.

▶ **Figure ES.2. Projected reserve ratios (reserve divided by annual expenditures)**



General average premium. The general average premium (GAP) represents the constant contribution rate necessary to finance all of the scheme's expenditures over a certain period. The GAP has been calculated for a period of 100 years (from 2021 to 2120), and it is estimated at 10.8 per cent, which is significantly higher than the present contribution rate of the scheme (3.0 per cent), and even higher than the 8.0 per cent ultimate contribution rate target.

▶ **Figure ES.3. Projected cost rates of the JP scheme, as % of insurable earnings**



Contribution rate increases will be necessary in the future to ensure the long-term financial sustainability of the scheme.

Directions for pension reform

The Indonesian pension system faces a series of challenges, including limited coverage, a low level of defined-benefit pensions, and the absence of basic income for the vulnerable elderly.

A series of parametric measures are needed so that the JP scheme meets the ILO social security standards. Once this is done, a more systemic pension reform may be envisaged, under which the old-age benefit (Jaminan Hari Tua, or JHT) scheme would serve, during a first phase, to complement benefits offered by JP during its maturing process and, in a second phase, re-orient JHT as a voluntary scheme targeting higher-income workers. These reforms of JP and JHT could be complemented by the introduction of a National Pension aimed at supporting the income of all elderly in the country.

Parametric reform of the JP scheme

The following measures are proposed to make the JP scheme more efficient, improve adequacy of benefits and address sustainability, as well as aligning provisions with ILO minimum standards on social security.

- Eliminate the requirement to accumulate a minimum of 15 years of contributions for eligibility to the old-age pension.
- Increase the pension accrual rate from 1.00 to 1.33 per cent per year of contribution.

- Increase the minimum pension to 40 per cent of the average national minimum wage (1,075,090 rupiah in 2021).
- Index the earnings ceiling and the minimum pension in line with the general wage growth.
- Remove the reference to the maximum pension. Maximum pension amounts are determined indirectly through the application of the earnings ceiling.
- Establish minimum survivors' benefits such that the replacement rate of survivors' benefits for a spouse with two children would be at least equal to 40 per cent of the minimum wage after 15 years of service.
- Adopt a financing policy to establish a legal obligation to increase contribution rates in the future once specific cost indicators are revealed by successive actuarial valuations. For example, a contribution rate increasing by 3 per cent every 10 years starting in 2024, reaching a contribution rate of 15 per cent in 2054 and remaining constant thereafter, would be sufficient to maintain a positive reserve for the next 90 years, with the adoption of the parametric reform measures described above.

Structural pension reform

Section 6.2 describes a possible structural reform of the pension system that combines different benefit and financing approaches, thereby diversifying the risks, and meeting different aims. The proposed system would be composed of three elements:

1. a pension for ensuring basic income to the most vulnerable;
2. a reformed JP scheme with expanded coverage becoming the main pillar of the system; and
3. a reformed, voluntary JHT scheme gradually targeted towards higher-income workers.

The proposed measures include:

Basic income for the most vulnerable. Three options are presented:

1. Tax-funded **pension-tested benefit** for all workers (wage and non-wage):
   - The JP mandatory coverage would be expanded to all workers (both wage and non-wage workers).
   - Workers who do not reach a certain level of pension income, due to short careers or low earnings, would receive a minimum benefit from a pension-tested scheme. The minimum pension-tested benefit would be equal to 500,000 rupiah indexed annually with the general wage increase.
   - The JP scheme would be improved to respect the minimum standard set by the ILO Social Security (Minimum Standards) Convention, 1952 (No. 102), namely with an accrual rate of 1.33 per cent per year of contribution and a minimum pension equal to 40 per cent of the minimum wage after 30 years of service.
2. **Social Pension** of a uniform amount paid to all resident elderly, financed by the State:
   - The JP mandatory coverage would be expanded to all wage workers, thus including small and micro enterprises.
   - A flat-rate pension at the level of the national poverty line (500,000 rupiah) would be paid to all persons above a certain age who have a minimum period of residence of ten years in Indonesia. Two options are presented regarding the age of access to the pension. It could be established at 75 initially and gradually decrease from 75 to 65

over a period of 10 years. Or alternatively, the pension could be paid to all persons aged 65 and above, with no transition. It would be entirely financed by the State.

3. Flat-rate **National Pension (NP)** acquired through contributions, and co-financed by workers and by the State:
   - The JP mandatory coverage would be expanded to all workers with a formal employer/employee relationship, thus including small and micro enterprises.
   - The right to a National Pension would be gradually acquired through flat-amount contributions (300,000 rupiah per month, indexed annually in line with the general wage increase). The objective is to cover all workers. In addition, it would be possible for workers to pay NP contributions in the name of family members who are not in the labour force.
   - For a person with 30 years of contribution, the NP would be equal to 1,000,000 rupiah (approximately 40 per cent of the average national minimum wage). This amount would be indexed annually in line with the general wage increase. Half of this benefit would be acquired through members' contributions. The other half would be credited as a state subsidy.
   - The National Pension would be paid from age 65.
   - Transitional measures would guarantee a minimum benefit until people have accumulated the 30 years of contribution required for full benefit. The State would finance this transitional benefit.

New role for the JHT scheme. In the context of future necessary increases of the JP contribution rate, the global contributions to JP and JHT could be reorganized. The JHT contribution rate could eventually be reduced in line with the planned increase of contributions under JP, or it could be possible to specify a minimum JHT contribution rate while allowing individual workers to choose their contribution rate level (between a minimum and a maximum). Ultimately, the JHT scheme could become a **voluntary** tier to top-up pensions offered by the other pillars of the system (National Pension and JP scheme).

Replacement ratios would increase with the structural reform. At the same time, it would be possible to finance the reformed pension system with global contribution rates at reasonable levels.

Sickness benefits

The report presents different scenarios for the introduction of social security sickness benefits.

Coverage would include all wage workers in Indonesia, corresponding to workers covered under JKK/JKM[2] and construction workers. To qualify for benefits, the person should have paid contributions for 12 months in the 18-month period preceding sickness, or 12 months since last payment of sickness benefit (if received in last 18 months).

Required contribution rates for the different combinations of benefit level and duration of payment are shown in table ES.2 below. The relatively low cost of sickness benefits is mainly the result of a short average duration of sickness assumed in the cost assessment.

[2] JKK, or Jaminan Kecelakaan Kerja, is the employment injury benefit, and JKM, or Jaminan Kematian, is the death benefit.

Table ES.2. Suggested contribution rates for the different options of sickness benefits

	Benefit percentage and duration of payment	Contribution rate (% of insured earnings)
Option 1	100% for first 4 months, 75% for subsequent 4 months, 50% for subsequent 4 months (maximum duration: 1 year)	0.65%
Option 2	60% for a maximum of 52 weeks	0.40%
Option 3	60% for a maximum of 26 weeks	0.40%
Option 4	45% for a maximum of 26 weeks	0.30%

Note: While the recommended contribution rate for Options 2 and 3 are the same, Option 2 will have a slightly higher cost than Option 3 due to the small amount of cases that in reality have sickness benefit duration of more than 26 weeks. However, these cases are likely to be negligible in reality (the analysis assumes average sickness benefit duration of 15 days).

Maternity benefits

The report presents different scenarios for the introduction of social security maternity benefits.

Coverage would include all wage workers in Indonesia, corresponding to workers covered under JKK/JKM and construction workers. To qualify for benefits, the person should have paid contributions for 12 months in the 18-month period preceding the maternity leave.

Required contribution rates for the different types of benefits, benefit level and duration of payment are presented in table ES.3.

Table ES.3. Suggested contribution rates for the different options of maternity benefits

	Benefit provisions	Contribution rate (% of insured earnings)
Maternity allowance		
Option 1	100% for a maximum of 13 weeks	0.65%
Option 2	100% for a maximum of 14 weeks	0.70%
Option 3	67% for a maximum of 14 weeks	0.50%
Option 4	45% for a maximum of 14 weeks	0.32%
Option 5	67% for a maximum of 26 weeks	0.87%
Option 6	100% for a maximum of 26 weeks	1.30%
Paternity allowance		
Option 1	100% for a maximum of 1 weeks	0.05%
Option 2	100% for a maximum of 6 weeks	0.25%
Parental allowance		
	45% for a maximum of 4 weeks	0.15%
Birth grant		
	100% of the monthly minimum wage	0.10%

Contribution rates are determined by projecting the scheme's cash flows over a period of ten years to find an average contribution rate guaranteeing the development of a positive reserve over the period (without excessive accumulation). Some contribution rates are rounded.

▶ 1. Introduction

According to the legislation governing Indonesia's pension benefit (Jaminan Pensiun, or JP) and old-age benefit (Jaminan Hari Tua, or JHT), an actuarial analysis of these schemes must be realized every three years.

This actuarial analysis is realized as of 31 December 2020. A previous actuarial study was produced in January 2017 presenting financial projections from the inception of the JP scheme. While trying to ensure consistency between the two actuarial reports, full documentation was not available to perform a detailed reconciliation between the two reports.

This report contains:

- a review of the recent experience of social security schemes;
- a summary of general demographic, labour force and macroeconomic data that will be used for the actuarial assessment;
- demographic and financial projections of the JP scheme;
- simulation of replacement rates offered by the various components of the system;
- possible directions for pension reform; and
- cost estimates for the sickness and maternity schemes.

Appendices to the report include an overview of the Indonesian social security schemes, the methodology of the actuarial valuation, the data and actuarial bases used for the financial assessment, a description of severance benefits under the Law Concerning Manpower (Law No. 13/2003, hereafter referred to as the "Labour Law"), and an overview of international practice concerning maternity benefits.

▶ 2. Review of the experience of the social security schemes

This section presents the evolution of BPJS Ketenagakerjaan[3] membership since 2015, and the evolution of the financial situation of the different social security schemes from 1 January 2017 to 31 December 2020.

2.1. Evolution of BPJS membership

Table 2.1 shows the evolution of BPJS membership since 2015. Construction workers are presented separately because they benefit from specific social security provisions.

Table 2.1. Membership of BPJS Ketenagakerjaan, by type of employment, 201520

Year	Salaried (wage workers)	Construction workers	Self-employed (non-wage workers)	Total
2015	14 042 592	4 946 404	286 065	19 275 061
2016	14 571 791	6 682 219	1 379 072	22 633 082
2017	16 068 453	8 459 410	1 714 169	26 242 032
2018	19 427 150	8 639 900	2 393 022	30 460 072
2019	20 174 472	11 279 754	2 712 031	34 166 257
2020	19 963 696	7 521 392	2 494 994	29 980 082

Source: BPJS Annual Reports. BPJS states that these figures represents the number of contributors on 31 December of each year. From other information available, it appears that the figures represent the number of workers who paid at least one contribution during a given year.

Note: The decrease in the number of members in 2020, especially in the construction sector, appears to have resulted from the COVID-19 pandemic.

In addition to workers appearing in table 2.1, BPJS also counts a certain number of inactive members, which fluctuates significantly over time (20.7 million according to the BPJS 2020 Annual Report, compared to 13.8 million in the database received for this actuarial assessment).

Membership in the different benefit schemes varies according to the size of the employer, as shown in table 2.2.

[3] BPJS Ketenagakerjaan is short for Badan Penyelenggara Jaminan Sosial Ketenagakerjaan (Social Security Agency for Employment). There are two social security agencies in Indonesia, one dealing with employment (BPJS Ketenagakerjaan) and the other with health (BPJS Kesehatan), but throughout this report the abbreviation "BPJS" will exclusively refer to BPJS Ketenagakerjaan.

Table 2.2. Mandatory or voluntary membership requirements for BPJS benefit schemes by employer size

Employer size	Benefit scheme			
	Employment injury (JKK)	Pension (JP)	Old-age (JHT)	Death (JKM)
Large and medium	Mandatory	Mandatory	Mandatory	Mandatory
Small	Mandatory	Voluntary	Mandatory	Mandatory
Micro	Mandatory	Voluntary	Voluntary	Mandatory

Active BPJS members may be further distributed according to the size of the enterprise. The data for 2019 is presented in table 2.3.

Table 2.3. Distribution of BPJS active members by sector, 2019

Sector	Number of active members
Wage workers	
Large enterprises	7 651 450
Medium enterprises	6 289 981
Small enterprises	2 238 819
Micro enterprises	3 994 222
Construction	11 279 754
Non-wage workers[4]	2 712 031

Source: BPJS Annual Report 2019

Table 2.4 presents more detailed information about the participation in each social security scheme since 2015.

[4] The term ”non-wage workers” corresponds to the terminology conveyed by BPJS to include self-employed persons and workers in the informal economy. It should be noted that many workers in the informal sector will be wage workers but simply undeclared.

Table 2.4. Number of active participants in the different social security schemes, 2015–20

Salaried					
Year	JKK	JP	JHT	JKM	Construction workers
2015	14 042 592	6 481 983	13 112 283	14 042 592	4 946 404
2016	14 571 791	9 130 671	13 677 912	14 571 791	6 682 219
2017	16 068 453	10 633 387	14 427 135	16 068 453	8 459 410
2018	19 427 150	11 846 051	15 270 335	19 427 150	8 639 900
2019	20 174 472	12 933 812	16 028 012	20 174 472	11 279 754
2020	19 963 696	12 529 760	N/A	19 963 696	7 521 392
Self-employed					
Year	JKK		JHT	JKM	
2015	286 065		42 503	286 065	
2016	1 379 072		95 167	1 379 072	
2017	1 714 169		143 148	1 714 169	
2018	2 393 022		206 392	2 393 022	
2019	2 712 031		579 174	2 712 031	
2020	2 494 994		n/a	2 494 994	

n/a = not available. Source: BPJS Annual Reports.

2.2. Cash flows of the different social security schemes

Tables 2.5 to 2.8 present the cash flows of the different social security schemes:

- old-age benefit (Jaminan Hari Tua, or JHT);
- employment injury benefit (Jaminan Kecelakaan Kerja, or JKK);
- death benefit (Jaminan Kematian, or JKM); and
- pension benefit (Jaminan Pensiun, or JP).

This includes the accumulation of reserves, for years 2017 to 2020.

Table 2.5. Revenue and expenditure of the JHT scheme, 2017–20 (million rupiah)

	2017	2018	2019	2020
Assets (beginning of year)	214 316 081	248 036 835	274 784 200	312 561 770
Revenue				
Contributions	37 322 310	42 455 110	47 438 165	49 368 693
BPJS contributions	42 225	24 877	33 629	1 273
Investment earnings	23 556 980	10 367 065	20 918 077	16 148 485
Other revenues	35 637	44 932	26 424	11 942
Total	60 957 152	52 891 984	68 416 295	65 530 393
Expenditure				
Benefits	23 235 011	22 330 411	27 080 768	33 101 924
Operational expenses	3 728 248	3 557 073	3 285 190	3 106 939
Investment expenses	291 053	173 898	183 055	118 214
Recovery of receivables	(18 599)	82 428	7 854	59 901
Other expenses	685	809	771	1 069
Total	27 236 398	26 144 619	30 557 638	36 388 047
Assets (end of year)	248 036 835	274 784 200	312 561 770	340 751 090

Source: Annual Reports of BPJS.

Table 2.6. Revenue and expenditure of the JKK scheme, 2017–20 (million rupiah)

	2017	2018	2019	2020
Assets (beginning of year)	18 854 880	23 570 900	28 877 040	35 598 730
Revenue				
Contributions	4 649 778	5 322 848	5 926 428	3 790 755
BPJS contributions	2 639	1 595	1 764	113
Investment earnings	1 859 816	1 626 116	2 688 746	2 600 853
Other revenues	4 562	13 628	3 483	1 439
Total	6 516 795	6 964 187	8 620 421	6 393 160
Expenditure				
Benefits	971 953	1 226 809	1 576 697	1 556 943
Technical reserve expense	354 842	210 810	540 557	(972 507)
Operational expenses	215 140	186 634	291 339	226 369
Investment expenses	257 122	11 451	21 321	8 168
Recovery of receivables	1 408	22 148	809	(18 082)
Other expenses	310	195	233	206
Total	1 800 775	1 658 047	2 430 956	801 097
Assets (end of year)	23 570 900	28 877 040	35 598 730	40 550 540

Source: Annual Reports of BPJS.

Table 2.7. Revenue and expenditure of the JKM scheme, 2017–20 (million rupiah)

	2017	2018	2019	2020
Assets (beginning of year)	6 422 471	8 242 561	10 392 420	13 046 730
Revenue				
Contributions	2 121 361	2 495 533	2 814 030	1 824 749
BPJS contributions	1 056	638	828	53
Investment earnings	600 130	575 954	1 000 244	1 009 086
Other revenues	2 143	5 302	2 140	445
Total	2 724 690	3 077 427	3 817 242	2 834 333
Expenditure				
Benefits	612 140	708 023	862 726	1 346 736
Technical reserve expense	107 551	119 863	401 160	1 343 605
Operational expenses	98 213	87 650	137 934	108 902
Investment expenses	86 578	4 285	10 569	3 584
Recovery of receivables	(51)	7 627	3 649	(7 442)
Other expenses	169	120	131	124
Total	904 600	927 568	1 416 169	2 795 509
Assets (end of year)	8 242 561	10 392 420	13 046 730	14 653 160

Source: Annual Reports of BPJS.

Table 2.8. Revenue and expenditure of the JP scheme, 2017–20 (million rupiah)

	2017	2018	2019	2020
Assets (beginning of year)	11 991 042	25 136 653	39 839 140	58 916 350
Revenue				
Contributions	12 318 953	14 826 293	17 248 873	18 279 571
BPJS contributions	6 862	4 784	7 346	382
Investment earnings	1 912 704	897 047	3 180 584	3 431 913
Other revenues	9 573	6 655	9 146	4 297
Total	14 248 092	15 734 779	20 445 949	21 716 163
Expenditure				
Benefits	375 285	211 562	196 219	439 870
Operational expenses	713 482	777 055	986 617	613 960
Investment expenses	21 565	18 584	25 897	19 961
Recovery of receivables	(8 075)	24 855	9 094	17 270
Other expenses	224	236	362	575
Total	1 102 481	1 032 292	1 218 189	1 091 636
Assets (end of year)	25 136 653	39 839 140	58 916 350	79 437 130

Source: Annual Reports of BPJS.

2.3. Investment policy and rates of return of the funds

2.2.1. Investment policy

According to the BPJS Law[5], BPJS shall manage two kinds of assets: BPJS assets and Social Security Fund (DJS) assets, which must be administered separately. The following analysis concerns Social Security Fund assets.

[5] That is, the Social Security Organizing Agency Law (No. 24/2011).

According to the BPJS Law, there should not be cross-subsidization between the benefit branches (employment injury, death, old-age, and pension), meaning that specific financing and investment policies must be adopted for each branch. An appropriate amount of reserve must be held in the financial statements in accordance with appropriate actuarial and accounting standards.

Table 2.9 shows the distribution of the investment portfolio of the Social Security Fund by type of investment in 2020. The largest part of the fund (74.7 per cent) is invested in bonds.

Table 2.9. Asset composition of the Social Security Fund (DJS), 31 December 2020

Asset class	Proportion
Deposits	10.9%
Stocks	11.9%
Bonds	74.7%
Mutual funds	2.1%
Direct investments	0.0%
Properties	0.4%
Total	**100.0%**

Source: BPJS Annual Report 2020.

2.2.2. Rates of return

The rates of return of the different social security branches, as calculated by the authors of this report,[6] appear in table 2.10. By comparison, the repo rate of the Bank of Indonesia (BI-7day-RR) was between 3.75 and 6.0 per cent from 2017 to 2020. The rates of return of social security funds are comparable to the deposit rates of Indonesian banks.

Table 2.10. Rates of return of the various social security funds, 2017–20

Scheme	Rate of return of the fund			
	2017	2018	2019	2020
JHT	10.7%	4.0%	7.4%	5.1%
JKK	9.2%	6.4%	8.7%	7.1%
JKM	8.5%	6.4%	8.9%	7.6%
JP	10.9%	2.8%	6.7%	5.1%

Source: Annual Reports of BPJS and calculations of the authors.

[6] The rate of return is calculated as (2 X I) / (A + B – I), where I is investment earnings, A is the fund at beginning of the year and B is the fund at the end of the year. These returns slightly differ from those published by BPJS.

▶ 3. General demographic, labour force and macroeconomic framework

This section presents general demographic, labour force and macroeconomic projections for Indonesia.

3.1. Population projection

The determinants of future population changes are fertility, mortality and net migration. Fertility rates determine the number of births; while mortality rates determine how many, and at what ages people are expected to die. Net migration represents the difference between the number of people who permanently enter and leave Indonesia and is the most volatile of the three factors.

The last official population census took place in 2020, where the total resident population of Indonesia was estimated at 270.2 million persons.

3.1.1. Fertility

The total fertility rate (TFR) represents the average number of children each woman of childbearing age would have if she had all her children in a particular year. If there is no migration, a TFR of 2.1 is generally required for a population to replace itself from one generation to the next.[7] Table 3.1 presents the total fertility rate of Indonesian women from 1950 to 2020.

Table 3.1. Total fertility rate of Indonesia, 1950–20

Period	Total fertility rate
1950–1955	5.49
1955–1960	5.67
1960–1965	5.62
1965–1970	5.57
1970–1975	5.30
1975–1980	4.73
1980–1985	4.11
1985–1990	3.40
1990–1995	2.90
1995–2000	2.55
2000–2005	2.53
2005–2010	2.50
2010–2015	2.45
2015–2020	2.32

Source: United Nations World Population Prospects database.

In line with the United Nations World Population Prospects medium variant, it is projected that the TFR of 2.27 estimated for 2020 will gradually decrease over time to a level of 1.78 reached in 2088 and stay constant thereafter.

[7] The additional 0.1 child (above 2.0) compensates for infant mortality.

3.1.2. Mortality

According to United Nations World Population Prospects, life expectancy at birth in 2020 is estimated at 69.5 for males and 74.1 for females. It is anticipated that life expectancy will continue to increase in the future. In line with UN projections, it is projected that life expectancy at birth will gradually increase to 74.3 for males and 78.8 for females in 2050 (see table 3.3).

Life expectancy at advanced ages is a key driver of the cost of old-age pensions. At age 60, life expectancy is estimated at 17.1 years for males and 19.9 years for females in 2020. It is projected that in 2050 life expectancy at age 60 will be 20.1 years for males and 22.9 years for females, an increase of 3 years between 2020 and 2050.

3.1.3. Migration

According to United Nations World Population Prospects, the net number of Indonesian migrants departing the country in recent periods is around 100,000 per year (see table 3.2).

Table 3.2. Net migration in Indonesia, 2000–20

Period	Total net number of migrants (thousand)
2000–2005	- 1 150
2005–2010	- 1 334
2010–2015	- 454
2015–2020	- 495

Source: United Nations World Population Prospects database.

In line with United Nations World Population Prospects medium variant, it is projected that net migration will continue to be negative at around 100,000 persons per year over the next century (that is, emigration will remain greater than immigration).

Table 3.3 summarizes the evolution of the projected key demographic variables from 2020 to 2100.

Table 3.3. Key demographic assumptions, 2020-2100

Year	Total fertility rate	Life expectancy at birth		Net migration (annual)
		Male	Female	
2020	2.27	69.5	74.1	(102 203)
2030	2.10	70.9	76.0	(97 236)
2040	1.98	72.4	77.4	(94 356)
2050	1.89	74.3	78.8	(93 943)
2060	1.84	75.8	80.3	(93 943)
2070	1.81	77.3	81.5	(93 943)
2080	1.80	79.0	82.6	(93 943)
2090	1.78	80.6	83.6	(93 943)
2100	1.78	81.8	84.3	(93 943)

3.1.4. Projected population

Figure 3.1 presents the projected population of Indonesia from 2020 to 2100 separated into three age categories: (1) children (0–14 years); (2) persons who can potentially contribute to the social security schemes (15–59 years); and (3) persons aged 60 and over. The evolution of the relative size of each age group (notably the decrease of the population of children and the increase of the number of persons at pensionable age) illustrates the gradual ageing of the population of Indonesia (see figure 3.1).

▶ **Figure 3.1. Projected population of Indonesia, by age group (2020–2100)**

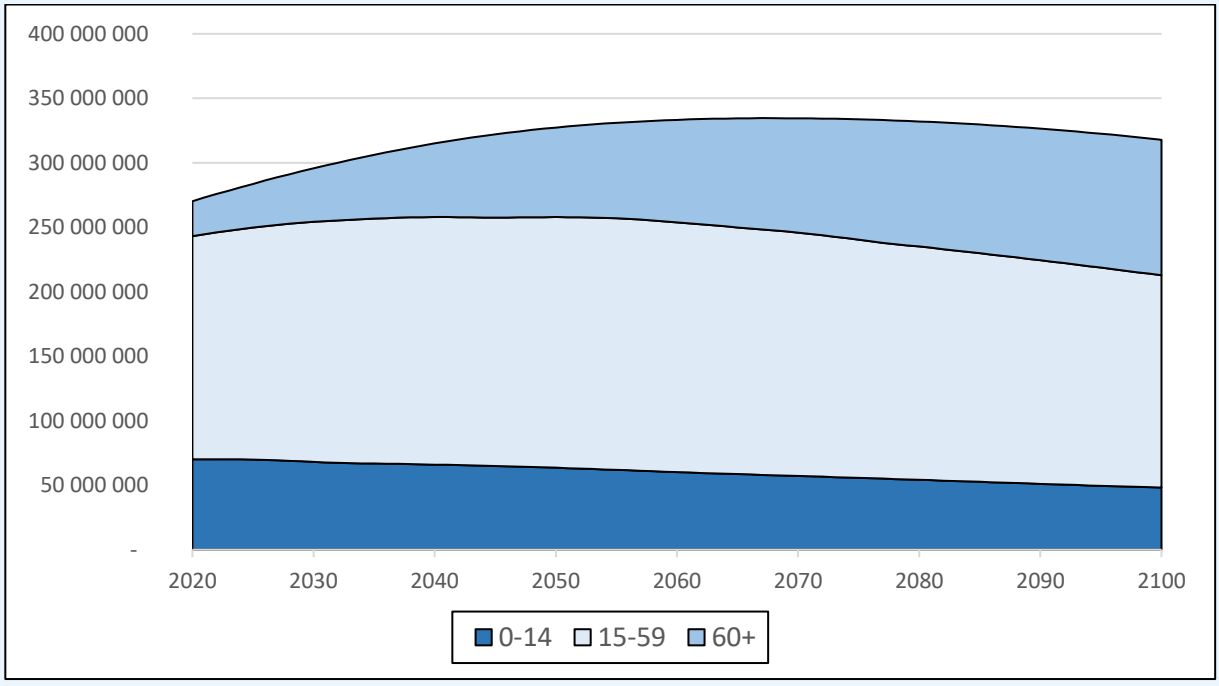


Table 3.4 presents detailed population projections. It is observed that the total population of Indonesia will increase from 270.2 million in 2020 to 333.3 million in 2060, when it will stabilize for a certain period before decreasing at the end of the century. The number of persons at pensionable age (60 and over) will grow from 27.2 million in 2020 to more than 100 million in

2090. The ratio of the number of working-age persons (15–59) to the number of persons aged 60 and above will fall from 6.4 to 1.6 over the next 80 years.

Table 3.4. Projected population of Indonesia, 2020–2100

Year	Age group				Ratio
	0–14	15–59	60+	Total	16–59 / 60+
2020	70 085 467	172 936 172	27 182 278	270 203 917	6.4
2030	68 082 368	186 107 925	41 480 205	295 670 499	4.5
2040	65 967 974	191 964 868	57 104 701	315 037 544	3.4
2050	63 552 612	194 343 211	69 410 620	327 306 443	2.8
2060	60 162 620	193 728 103	79 422 214	333 312 937	2.4
2070	57 141 080	188 736 152	88 644 704	334 521 936	2.1
2080	54 167 894	180 962 223	96 945 950	332 076 066	1.9
2090	51 029 705	173 373 280	102 027 608	326 430 593	1.7
2100	48 124 807	164 695 135	105 101 959	317 921 901	1.6

3.2. Labour force projection

In 2020, the total participation rates (ages 15–69) are estimated at 86.0 per cent for males and 58.7 per cent for females. Unemployment rates are 5.3 per cent for males and 5.2 per cent for females.[8]

For the projection, it is assumed that age-specific labour force participation rates of males will stay constant over time. For females, however, it is supposed that labour force participation will increase over time such that their total participation rate (which presently represents 68 per cent of the male rate) will gradually increase to reach 80 per cent of the total participation rate of males in 2070 and stay constant thereafter (see figure 3.2).

[8] BPS produces labour force data twice a year (in February and in August). The 2020 data represent an average of these two labour force surveys in order to eliminate the effect of seasonality of employment.

▶ Figure 3.2. Projected labour force participation rates (ages 15–69) by gender (2020–2100)

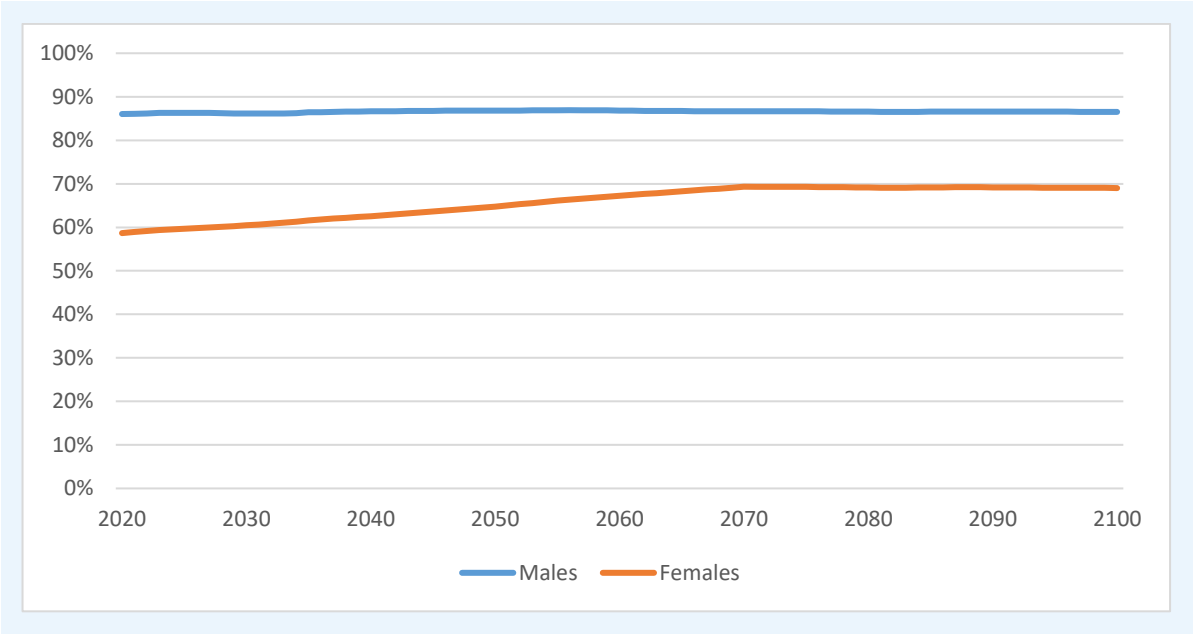


Table 3.5 presents a distribution of Indonesian workers by sector and status (wage versus non-wage), including a distribution of private wage workers by size of enterprise. It shows that wage workers (private and public) represent only 38.1 per cent of total employment. For this report, it is projected that wage employment will gradually increase over time, reaching 60 per cent of total employment in 2070, and will stay constant at that level thereafter.

Table 3.5. Distribution of workers by sector, 2020

Sector	Number of workers	Percentage
Wage workers		
In large and medium enterprises	17 524 626	13.4
In small enterprises	6 440 453	4.9
In micro enterprises	20 560 502	15.7
Public sector	5 277 521	4.0
Non-wage workers	80 918 085	61.9
Total employment	**130 721 188**	**100.0**

Source: Estimates based on BPS survey and other information.

The term ”non-wage workers” corresponds to the terminology conveyed by BPJS to include self-employed persons and workers of the informal economy. It should be noted that many workers in the informal sector will be wage workers but simply undeclared.

The projection of the different components of the labour force, for specific years, is presented in table 3.6.

Table 3.6. Labour market balance, 2020–70 (thousands)

	2020	2030	2040	2050	2060	2070
Total population	270 204	295 670	315 038	327 306	333 313	334 522
Male	136 662	148 946	157 866	163 513	166 424	167 109

Female	133 542	146 724	157 172	163 793	166 889	167 413
Population aged 15–69	190 254	211 321	223 419	228 193	230 370	227 918
Male	96 395	106 913	112 997	115 534	117 014	115 454
Female	93 858	104 408	110 422	112 658	113 357	112 465
Labour force (15–69)	138 003	155 203	166 974	173 280	177 824	178 026
Male	82 937	92 095	97 900	100 300	101 600	100 055
Female	55 066	63 108	69 074	72 980	76 224	77 972
Participation rate	72.5%	73.4%	74.7%	75.9%	77.2%	78.1%
Male	86.0%	86.1%	86.6%	86.8%	86.8%	86.7%
Female	58.7%	60.4%	62.6%	64.8%	67.2%	69.3%
Employed	130 721	147 381	158 884	165 199	169 723	170 102
Male	78 503	87 373	93 088	95 570	96 913	95 530
Female	52 218	60 008	65 796	69 629	72 810	74 572
Unemployed	7 282	7 822	8 090	8 081	8 101	7 925
Male	4 434	4 722	4 812	4 730	4 687	4 525
Female	2 848	3 100	3 278	3 352	3 414	3 399
Unemployment rate	5.3%	5.0%	4.8%	4.7%	4.6%	4.5%
Male	5.3%	5.1%	4.9%	4.7%	4.6%	4.5%
Female	5.2%	4.9%	4.7%	4.6%	4.5%	4.4%

3.3. Macroeconomic framework

After a period of relatively good economic performance, the growth rate of real GDP was negative in 2020 (-2.1 per cent) in the context of the COVID-19 pandemic, but the economy is rapidly recovering. Table 3.7 presents real GDP growth and inflation data for Indonesia for the period 2015–21, with International Monetary Fund (IMF) forecasts for the period 2022–26. The IMF has noted that:

> Indonesia has continued to respond with bold, comprehensive, and well-coordinated policy measures to protect lives and livelihoods from the impact of the COVID-19 pandemic, and to ensure a sustainable and inclusive recovery. While the pandemic, as elsewhere, has led to tragic loss of life and triggered a major economic downturn, the authorities' measures have succeeded in maintaining economic and financial stability. IMF staff project GDP growth at 5.6 percent for 2022 and 6.0 percent in 2023, supported by favourable global commodity prices, easing restrictions on activity, continued policy support, and rising mobility and confidence as the vaccination program expands into more remote areas.[9]

[9] IMF, "Press Release on IMF Staff Completes 2022 Article IV Mission to Indonesia", 26 January 2022.

Table 3.7. GDP and CPI recent data and short-term forecasts, 2015–26

Year	Real GDP growth	CPI increase
2015	4.9%	6.4%
2016	5.0%	3.5%
2017	5.1%	3.8%
2018	5.2%	3.3%
2019	5.0%	2.8%
2020	-2.1%	2.0%
2021	3.3%	1.6%
2022	5.6%	2.8%
2023	6.0%	3.2%
2024	5.6%	3.0%
2025	5.3%	3.0%
2026	5.2%	3.0%

CPI = Consumer Price Index.
Source: IMF, World Economic Outlook Database (October 2021 and January 2022 updates).

3.3.1. Productivity

Based on the IMF's GDP forecasts, it is estimated that the labour productivity increases will be 3 per cent per annum on average for years 2021 and 2022 and will be back to pre-pandemic levels from 2023 to 2026 at levels just above 4 per cent. Thereafter, it is assumed that the productivity of labour will gradually decrease to 1.5 per cent in 2050 and will stay constant thereafter (see table 3.8).

Table 3.8. Projected GDP growth, productivity and total employment (2021–70)

Year	Real GDP growth	Increase in the productivity of workers	Increase of the number of workers
2021	3.3%	3.3%	0.0%
2022	5.6%	2.6%	2.9%
2023	6.0%	4.6%	1.3%
2024	5.6%	4.3%	1.3%
2025	5.3%	4.0%	1.2%
2026	5.2%	4.0%	1.1%
2030	4.6%	3.6%	1.0%
2040	3.1%	2.6%	0.5%
2050	1.8%	1.5%	0.3%
2060	1.7%	1.5%	0.2%
2070	1.4%	1.5%	-0.1%

Source: Until 2026 – IMF, World Economic Outlook Database (October 2021 and January 2022 updates).

3.3.2. Inflation

Inflation has been relatively stable at levels below 4 per cent since 2016. As seen in table 3.9, the IMF is forecasting an inflation rate of 3.0 per cent on average over the period 2022–26. It is assumed that inflation will remain constant at this level of 3.0 per cent for the rest of the projection period.

3.3.3. Wage increase

In the future, the real wage increase is assumed to gradually converge towards the productivity per worker, as it is expected that wages will adjust to efficiency levels over time. Based on assumptions described above concerning inflation and productivity, it is assumed that nominal wage growth will be 4.9 per cent in 2021, 5.5 per cent in 2022, and above 7 per cent from 2023 to 2026. It will then gradually decrease to 4.5 per cent in 2050 and stay constant thereafter (see table 3.9).

Table 3.9. Projected inflation rate and wage growth (2021–70)

Year	Inflation rate	Nominal wage growth	Real wage growth
2021	1.6%	4.9%	3.3%
2022	2.8%	5.5%	2.6%
2023	3.2%	7.9%	4.6%
2024	3.0%	7.3%	4.3%
2025	3.0%	7.1%	4.0%
2026	3.0%	7.1%	4.0%
2030	3.0%	6.7%	3.6%
2040	3.0%	5.6%	2.6%
2050	3.0%	4.5%	1.5%
2060	3.0%	4.5%	1.5%
2070+	3.0%	4.5%	1.5%

Source: Until 2026 – IMF, World Economic Outlook Database (October 2021 and January 2022 updates).

3.3.4. Rate of return of the fund

The social security fund is largely invested in fixed-income securities (as outlined in table 2.9). The rate of return of the fund in recent years was approximately equal to the commercial banks' deposit rate. Over the period 2017–20, the bank's deposit rate in Indonesia was approximately 3 per cent higher than the inflation rate. In short-term, it is expected that this relationship will continue.

For the longer term and given the intention of the BPJS Board to gradually diversify the investment portfolio, it is supposed that the rate of return of the fund will be more aligned with economic growth.

With a view to combine these observations and objectives, it is assumed that from 2022 the rate of return of the fund will be equal to the minimum of: (1) the inflation rate plus 3 per cent; and (2) the general wage growth. For 2021, however, we use the average of the last three years (5.3 per cent) because of distortions caused by COVID-19 on the theoretical economic model. Resulting nominal rates of return appear in table 3.10.

Table 3.10. Projected rate of return of the fund (2021–70)

Year	Projected rate of return of the fund	
	Nominal	Real
2021	5.3%	3.7%
2022	5.5%	2.6%
2023	6.2%	2.9%
2024	6.0%	2.9%
2025	6.0%	2.9%
2026	6.0%	2.9%
2030	6.0%	2.9%
2040	5.6%	2.6%
2050	4.5%	1.5%
2060	4.5%	1.5%
2070 +	4.5%	1.5%

▶ 4. Demographic and financial projections of the JP scheme

This financial assessment deals with the ability of the scheme to meet its future obligations at the time they fall due. This is done under an open-group approach.[10] It is assumed that workers will continue to be insured by the scheme indefinitely, thus paying contributions, accruing benefit entitlements, and later receiving benefits in accordance with the legal provisions of the system. Future contributions and benefits are calculated according to the demographic and economic framework presented in Section 3 above and on the basis of the database and assumptions shown in Appendix 3 below.

The main purpose of the valuation is to find out whether the financing of the scheme is on course, and not to forecast numerically exact values. Due to the long-term nature of the assumptions, absolute figures contain a high degree of uncertainty. Therefore, results should be interpreted carefully. Future actuarial reviews undertaken on a regular basis will make possible a validation of the assumptions in the light the actual experience.

This review deals with the expenditure and revenue of the pension system. It is certain that this proportion will grow significantly in the future due to its current immature status. The pension scheme will become mature only after the youngest of the first generation of contributors have become pensioners, then died and all survivors' pensions paid on their behalf have ceased. This requires that the situation of the system be analysed over a long period (in the present review, projections are presented until 2100). The general methodology of the actuarial review is described in Appendix 2.

4.1. Demographic projections

Table 4.1 presents the demographic projections of the JP scheme for the period 2021 to 2100. According to assumptions concerning the future evolution of the JP covered population (see section A3.1 of Appendix 3), the number of contributors to the scheme will increase by a factor of 3.7 over the period 2021–70, and at a slower pace thereafter due to the projected decrease, in the long term, of the total employed population. On the other hand, the number of beneficiaries will steadily increase during that period and the ratio of contributors to pensioners will decrease from 153.5 in 2021 to 14.3 in 2040, 2.5 in 2070 and 1.5 in 2100. This is one of the main factors leading to a substantial increase of the expenditures of the scheme over future decades.

[10] An open group methodology considers contributions and benefits of current as well as future scheme participants and is considered to be most appropriate for PAYG and partially funded social security schemes.

▶ Figure 4.1. Projected number of JP contributors by gender (2021-2100)

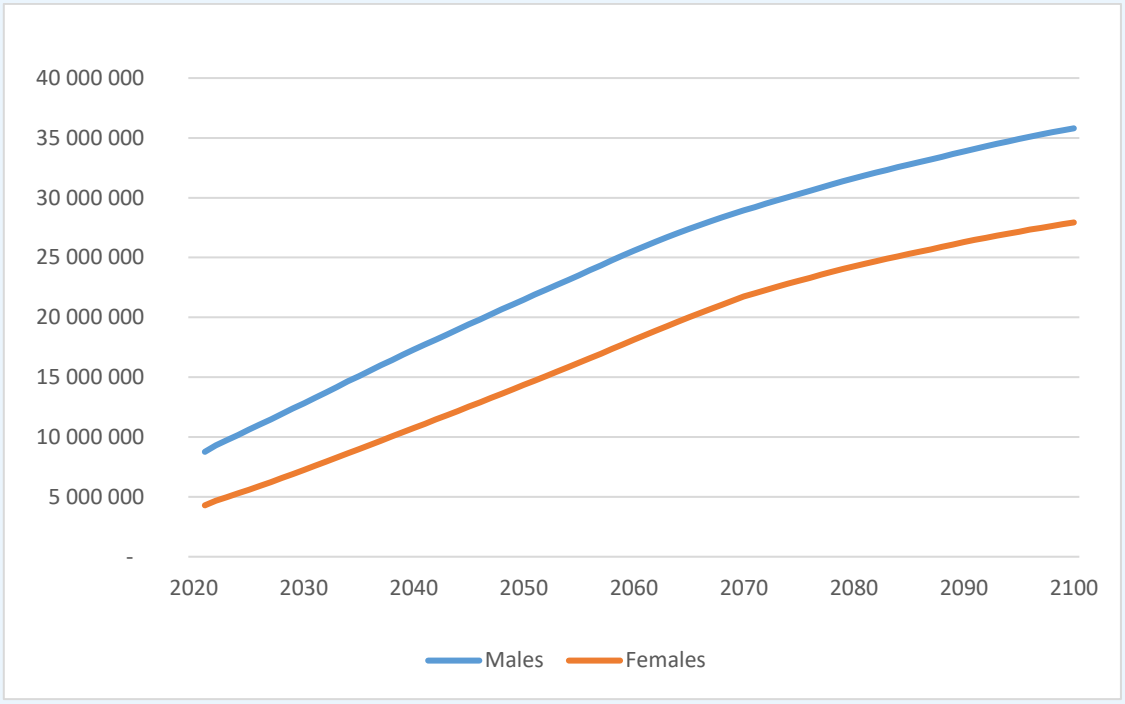


Table 4.1. Projected number of contributors and beneficiaries of the JP scheme (2021–2100)

Year	Number of contributors[1]	Number of beneficiaries					Ratio of contributors to pensioners (excludes lump sums)
		Old-age	Disability	Widow(er)s	Other survivors	Lump sums	
2021	13 978 934	–	23 490	65 371	2 234	87 153	153.5
2022	14 715 725	–	36 606	84 478	2 583	190 069	119.0
2023	15 459 402	–	50 727	104 573	2 926	178 650	97.7
2024	16 209 638	–	65 844	125 857	3 241	41 177	83.2
2025	16 966 425	–	81 909	148 404	3 564	215 033	72.5
2030	20 865 539	21 000	175 770	282 772	5 165	65 509	43.0
2040	28 833 458	851 700	447 965	705 007	7 522	273 830	14.3
2050	36 620 234	3 383 437	848 178	1 464 656	9 046	468 622	6.4
2060	44 469 056	8 345 786	1 276 237	2 793 685	11 147	804 618	3.6
2070	51 241 619	13 785 071	1 688 652	4 779 800	11 583	90 685	2.5
2080	56 348 843	18 806 804	2 132 811	6 783 928	11 867	97 865	2.0
2090	60 566 738	24 166 747	2 616 629	8 259 794	11 648	112 575	1.7
2100	63 418 356	30 024 142	3 048 068	9 214 126	10 991	118 973	1.5

– = nil. [1] Number of insured persons who paid at least one contribution during the year.

4.1.1. Replacement ratios

Apart from being driven by the evolution of the number of beneficiaries, the cost of the JP scheme will also be affected by the average amount of benefits paid to these persons. One indicator of the evolution of pension amounts is the pensions' replacement ratio (the ratio of the average pension to the average wage of active contributors). Table 4.2 presents replacement ratios in selected years for each type of pension. Replacement ratios for old-age are very low initially because the scheme is still new, and the accumulated service of participants is low. But replacement rates increase continuously over the projection period. Replacement ratios do not plateau, even in the long term, because of distortions caused by the indexation of the earnings ceiling (adjusted according to the real wage growth), which limits over time the growth of contributors' earnings (the denominator of the replacement ratio) more than it does the average pension amounts (the numerator of the replacement ratio).

Table 4.2. Projected replacement ratios under the JP scheme (2020–2100)

Year	Old-age	Invalidity	Widow(er)s	Other survivors
2020	–	16.0%	8.9%	8.7%
2030	13.7%	11.8%	5.9%	5.8%
2040	13.6%	12.0%	5.6%	6.0%
2050	17.5%	15.0%	6.4%	7.1%
2060	23.3%	18.5%	7.9%	8.1%
2070	28.8%	22.4%	10.3%	9.0%
2080	35.2%	27.2%	13.8%	10.0%
2090	42.0%	32.7%	18.1%	10.6%
2100	47.8%	37.1%	22.2%	10.8%

– = nil. Note: Average pension as a percentage of the average wage of active contributors

4.2. Financial projections

Table 4.3 presents financial projections for the scheme. The present contribution rate of the scheme is 3.0 per cent. It is envisaged to reassess that rate every three years to gradually reach 8.0 per cent, but since no timetable has been set for this periodical reassessment, projections suppose that the contribution rate will remain at its current level of 3.0 per cent for the whole projection period.

The pay-as-you-go (PAYG) cost rate (the ratio of total expenditure to total insurable earnings in a year) at valuation date is very low because there are very few pensions in payment and the scheme is not mature. The PAYG cost is projected to reach 28.2 per cent in 2100. Adjusting maximum insurable earnings in line with real, instead of nominal, GDP growth has the effect of limiting future increases of insurable earnings and drives up the PAYG cost of the scheme in the long term.

Table 4.3. Projected revenues, expenditures and reserve of the JP scheme, 2021–2100 (ID billions)

	Revenues			Expenditures			Reserve		
Year	Contribution income	Investment income	Total	Benefits	Administrative expenses	Total	Amount (year-end)	Reserve ratio[1]	PAYG rate (%)
2021	19 552	4 651	24 202	383	1 321	1 704	101 935	59.8	0.3%
2022	22 025	6 182	28 207	545	1 494	2 039	128 103	62.8	0.3%
2023	25 017	8 615	33 632	821	1 706	2 528	159 207	63.0	0.3%
2024	28 234	10 212	38 446	1 079	1 933	3 012	194 641	64.6	0.3%
2025	31 708	12 432	44 141	1 221	2 171	3 393	235 389	69.4	0.3%
2030	54 296	28 870	83 166	3 738	3 795	7 533	536 979	71.3	0.4%
2035	87 381	58 181	145 562	9 813	6 287	16 100	1 070 534	66.5	0.6%
2040	131 853	98 297	230 150	27 133	10 065	37 198	1 904 710	51.2	0.8%
2045	188 069	143 263	331 331	71 411	15 894	87 306	3 031 152	34.7	1.4%
2050	254 748	182 963	437 711	172 295	25 081	197 377	4 268 804	21.6	2.3%
2060	419 121	239 760	658 882	702 629	60 965	763 594	5 381 820	7.0	5.5%
2070	614 714	(52 562)	562 152	1 846 080	127 747	1 973 827	(1 905 076)	(1.0)	9.6%
2080	793 923	(1 246 847)	(452 924)	3 677 230	225 758	3 902 988	(30 464 799)	(7.8)	14.7%
2090	956 052	(4 305 517)	(3 349 465)	6 384 341	363 801	6 748 142	(102 699 513)	(15.2)	21.2%
2100	1 126 043	(10 806 028)	(9 679 984)	10 045 044	547 187	10 592 230	(255 192 818)	(24.1)	28.2%

[1] Expressed as the number of times the reserve covers the current year's expenditures. A negative reserve means that the scheme would have to borrow to finance current expenditures (leading to negative investment income, or interest on a loan), or alternatively that the social security institution would have to subsidize the JP scheme from other social security funds. This latter approach is not supported by the ILO, which recommends that each social security branch be autonomous in its financing.

Table 4.4 presents the key dates of the future evolution of JP pension reserves. In 2053, the scheme's expenditures will first exceed contributions. Expenditures will become larger than the total of contributions plus investment income in 2059, and the reserve will then start to decrease. The reserve is projected to be exhausted in 2069.

Table 4.4. Key dates of the future evolution of JP reserves

	Year
Scheme's expenditure first exceeds contributions (investment income must be used to support expenditures)	2053
Scheme's expenditure first exceeds contributions plus investment income (reserve starts to decrease)	2059
Reserve is exhausted	2069

The evolution of the reserve may also be illustrated by the reserve ratio, namely the ratio of the reserve to the annual expenditure. The reserve ratio is equal to 60 in 2021. It is projected to be higher than 50 until 2040, and then starts to decrease gradually until reserve exhaustion in 2069 (see figure 4.2). The volatile aspect of the curve results from periodic, but sudden, legislated retirement age increases until 2043.

▶ **Figure 4.2. Projected reserve ratios (reserve divided by annual expenditures)**

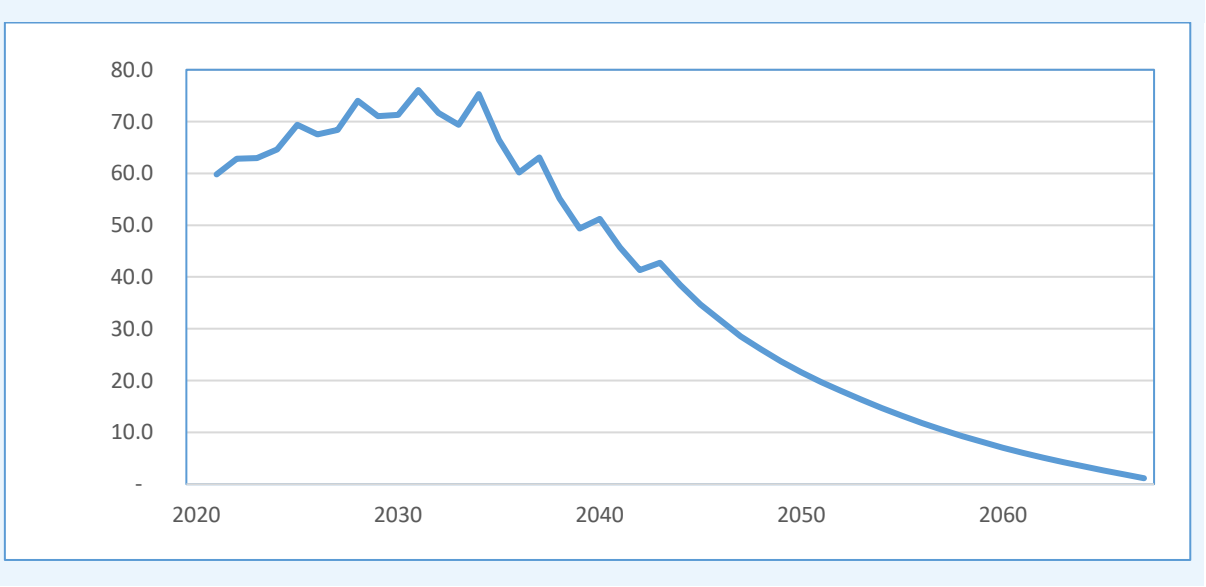
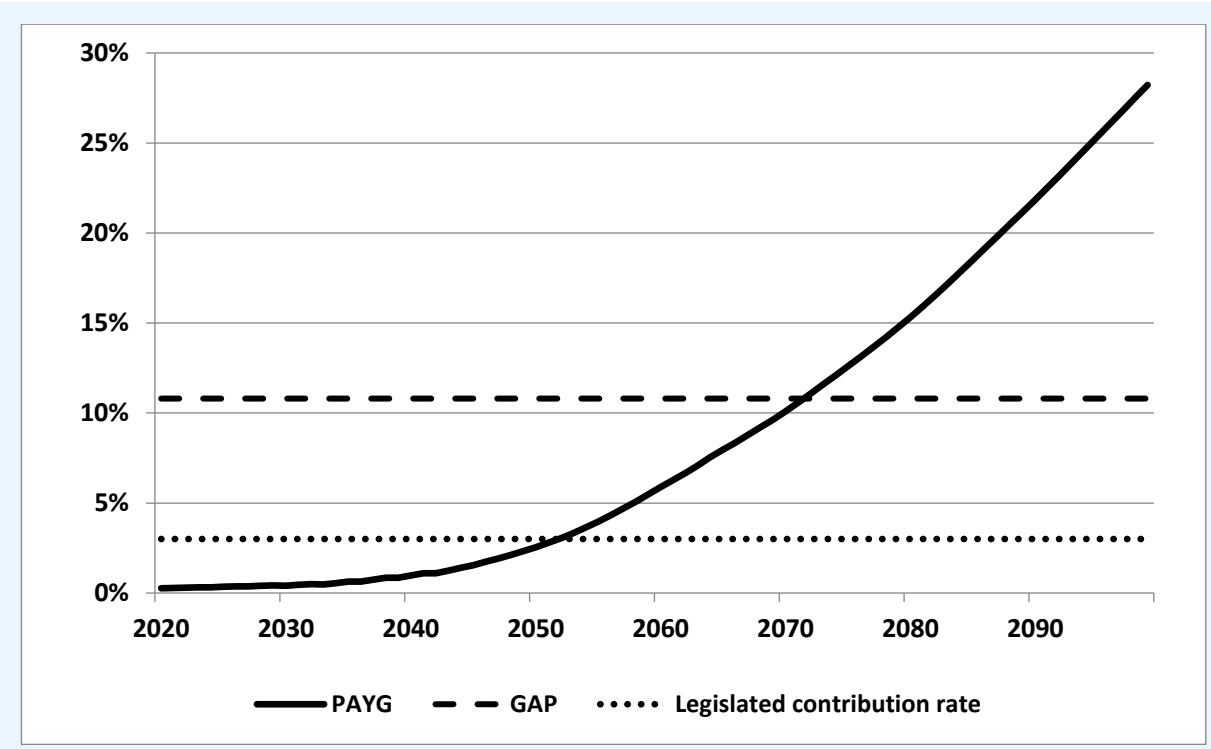


Figure 4.3 compares the pay-as-you-go (PAYG) rate of the JP scheme with the contribution rate and the general average premium (GAP). The general average premium (GAP) represents the constant contribution rate necessary to finance all of the scheme's expenditures over a certain period. It is calculated here for a period of 100 years (from 2021 to 2120). It is estimated at 10.8 per cent, which is significantly higher than the present contribution rate of the scheme (3.0 per cent), and even higher than the 8.0 per cent ultimate contribution rate target.

▶ **Figure 4.3. Projected cost rates of the JP scheme, as percentage of insurable earnings (2021–2100)**



The PAYG rate of the JP scheme is steadily increasing during the projection period. It is projected at 28.2 per cent in 2100. The scheme has not yet reached a state of maturity; the number of pensioners will grow significantly for several decades, and the pension level of new pensioners will increase over time with the accumulation of service by the scheme's contributors.

Contribution rate increases will be necessary to ensure the long-term financial sustainability of the scheme.

4.3. Sensitivity tests

Projections are based on a set of demographic, economic and system-specific assumptions. Actual experience will inevitably differ from projections. This section analyses alternative assumptions regarding:

1. the future evolution of coverage under the scheme;
2. real wage increases;
3. the rate of return of the fund;
4. the mortality assumption; and
5. retirement rates.

The effect of alternative scenarios is illustrated through PAYG rates, the general average premium, and the year of reserve exhaustion.

4.3.1. Coverage

Under the base scenario, JP membership represents an increasing percentage of wage employment (from 25 per cent in 2020 to 70 per cent in 2100). For the sensitivity test, the coverage rate is kept constant at the 2021 level.

Under the sensitivity test, the PAYG rate would increase to 45.6 per cent in 2100, the GAP would increase from 10.8 per cent under the base scenario to 12.7 per cent under the sensitivity test, and the reserve would be exhausted 7 years earlier.

Table 4.5. Sensitivity test on coverage

Scenario	PAYG rate		GAP (100 years)	Year of reserve exhaustion
	2050	2100		
Base scenario (from 25% of wage employment in 2020 to 70% in 2100)	2.3%	28.2%	10.8%	2069
Sensitivity test (constant percentage of wage employment)	4.5%	45.6%	12.7%	2062

4.3.2. Real wage increase (productivity)

The results of the valuation are affected by the assumed long-term productivity, translated into the difference between the assumed future average wage increase and the inflation rate (the real wage increase). Under the base scenario, the annual real wage increase is 1.5 per cent in the long term. The sensitivity test assumes a lower real wage increase at 1.0 percent per year in the long term. Normally, a decrease of the wage growth assumption increases the cost of a social security pension scheme because the effect on contributions is felt in the short term while the effect on benefits is felt in the long term. But in the case of the JP scheme, maximum insured earnings are indexed in line with real GDP growth, which rapidly moves the scheme towards a flat-earnings system where contributions are less affected than benefits by a change in the wage growth assumption. The career-average formula (which normally brings the cost of the scheme downwards under a higher wage growth assumption) does not have the same favourable impact if the salary evolution during the career is flatter. As shown in table 4.6, the PAYG rate and the GAP under the sensitivity test are slightly lower compared to the base scenario.

Table 4.6. Sensitivity test on real wage increase (productivity)

Scenario	PAYG rate		GAP (100 years)	Year of reserve exhaustion
	2050	2100		
Base scenario (1.5%)	2.3%	28.2%	10.8%	2069
Sensitivity test (1.0%)	2.4%	26.7%	10.7%	2069

4.3.3. Rate of return of the fund

Under the base scenario, the nominal rate of return of the fund is around 6 per cent until 2036 and it gradually decreases to 4.5 per cent in the long term (3.0 per cent inflation plus 1.5 per cent real wage growth). Two sensitivity tests are performed by assuming a nominal rate of return of 1.0 per cent higher and 1.0 per cent lower than the base assumption. Results appear in table 4.7.

The PAYG rate is not affected by the rate of return assumption because it represents the annual cost of the scheme in absence of a reserve. With the higher rate of return, the GAP would decrease to 8.5 per cent, and the reserve would be exhausted 3 years later. With the lower rate of return, the GAP would increase to 13.4 per cent, and the reserve would be exhausted 2 years earlier.

Table 4.7. Sensitivity test on rate of return

Scenario	PAYG rate		GAP (100 years)	Year of reserve exhaustion
	2050	2100		
Base scenario (4.5% nominal in the long term)	2.3%	28.2%	10.8%	2069
Sensitivity test (5.5% nominal in the long term)	2.3%	28.2%	8.5%	2072
Sensitivity test (3.5% nominal in the long term)	2.3%	28.2%	13.4%	2067

4.3.4. Mortality of the insured population

Under the base scenario of the valuation, mortality rates of the JP insured population are equal to 70 per cent of the mortality rates of the general population to account for their higher socio-economic status, which normally results in higher life expectancy. A sensitivity test has been performed with the use of 100 per cent of general mortality rates for the JP insured population. Under the sensitivity test, the PAYG rate decreases to 25.7 per cent in 2100 (compared to 28.2 per cent under the base scenario), while the GAP decreases to 9.9 per cent.

Table 4.8. Sensitivity test on mortality of the insured population

Scenario	PAYG rate		GAP (100 years)	Year of reserve exhaustion
	2050	2100		
Base scenario (70% of general mortality rates)	2.3%	28.2%	10.8%	2069
Sensitivity test (100% of general mortality rates)	2.3%	25.7%	9.9%	2070

4.3.5. Retirement behaviour

Under the base scenario of the valuation, it is assumed that the retirement behaviour will not be affected in the future by the planned increase of the legislated retirement age. It is considered that the JP scheme represents only a small part of the whole retirement package available, and for most workers the retirement decision will not be driven by the increase of the pensionable age under JP. In that context, the retirement pattern is kept constant over time. A sensitivity test has been realized with the assumption that effective retirement will follow the planned increase of the legislated retirement age, which will eventually reach age 65 in 2043. Under the sensitivity test, the PAYG rate is 31.2 per cent in 2100 and the GAP reaches 12.3 per cent, compared to 10.8 per cent under the base scenario. The increase of cost under the sensitivity test is mainly due to the fact that the earnings ceiling (which affects contribution income) does not evolve as fast as the reference earnings on which pensions are calculated (the contribution ceiling is indexed in line with *real* GDP growth, while reference earnings for pension calculation reflect earnings of the whole career). By extending the period before retirement, the contribution income of the postponed retirees (on earnings limited by a ceiling that does not increase fast enough) does not compensate for the increase of the pension amount resulting from the extra years of service.

Table 4.9. Sensitivity test on retirement behaviour

Scenario	PAYG rate		GAP (100 years)	Year of reserve exhaustion
	2050	2100		
Base scenario (effective retirement age not affected by the increase of the prescribed retirement age)	2.3%	28.2%	10.8%	2069
Sensitivity test (effective retirement age following the increase of the prescribed retirement age to 65 in 2043)	2.9%	31.2%	12.3%	2065

▶ 5. Simulation of replacement rates from the different components of the system

This section presents estimates of replacement rates resulting from the different sources of income at retirement, considering the defined benefits payable under the JP scheme and the conversion into periodical payments of old-age benefit (JHT) lump sums and severance benefits provided under the Labour Law. The objective is to estimate the potential income replacement rate of the old-age income protection system, and not to verify if the different benefits are satisfying the requirements of the ILO Social Security (Minimum Standards) Convention, 1952 (No. 102), which requires that old-age pensions should be paid in the form of periodical payments throughout the life of the retired, thus excluding lump sum benefits. This exercise could be the basis to envisage a reallocation of resources from lump sum components into periodic benefits under a reformed pension system.

5.1. Assumptions used

For the simulations, it is assumed that:

- The accrual rate of the JP scheme is 1.0 per cent per year.
- The contribution rate of the JHT scheme is 5.7 per cent, except for self-employed persons for whom the contribution rate is 2 per cent.
- Severance benefits payable at retirement under the Labour Law are equivalent to 15 months of salary for a person with 15 years of service and 17 months of salary for a person with 30 years of service (see detailed description in Appendix 5).
- The salary of the individual increases at the general salary growth assumption of 4.5 per cent per year, without considering seniority increases (salary scale). The assumed inflation rate is 3.0 per cent.
- Individuals retire at age 60.
- At retirement, income from the JHT scheme and the Labour Law are converted into a single annuity (at a unisex rate), by dividing the lump sum amount by life annuity factors using the same actuarial assumptions as the base scenario of the valuation.

The simulations are performed for different employment statuses (permanent and fixed-term contracts) and enterprise sizes. It is considered that:

- Benefits of the Labour Law are payable only to workers with permanent contracts.
- Employees of small and micro enterprises do not contribute to JP (participation is voluntary for these groups).
- Employees of micro enterprises do not contribute to JHT (participation is voluntary for this group).
- Self-employed persons can only receive benefits from JHT (they are not eligible for JP and are not subject to the Labour Law[11]).

[11] Tsuruga and Ekaning, Rules and practices of severance pay in Indonesia - the Labour Law Number 13 of 2003, 2020.

5.2. Resulting replacement rates

Tables 5.1 presents the breakdown of income replacement level from each source of retirement income, according to different employment statuses, enterprise size and length of recognized service. Results of the simulations show that:

- The global replacement rate from all sources for a worker under permanent contract working in a large or medium enterprise for 30 years would be higher than the ILO minimum standard of 40 per cent.
- The JP scheme provides the highest earnings replacement rate among all schemes, but is currently available (on a mandatory basis) only for workers in large and medium enterprises.
- The replacement rate of the JHT scheme is 9.2 per cent after 30 years of service.
- The replacement rate provided by the Labour Law provisions is 7.4 per cent after 30 years, but is available only for workers under permanent contracts.

Table 5.1. Replacement rate from each source at retirement, by employment status and length of service (pensions paid from age 60)

Length of service	Employment status				
	Permanent contract in large or medium enterprise	Permanent contract in small enterprise	Permanent contract in micro enterprise	Fixed-term contract in large or medium enterprise	Self-employed voluntarily contributing to JHT
Salary at age 30 in 2023	9 000 000	5 500 000	3 600 000	6 300 000	4 600 000
Labour Law					
15 years	6.6%	6.6%	6.6%	–	n/a
30 years	7.4%	7.4%	7.4%	–	n/a
JHT					
15 years	4.6%	4.6%	–	4.6%	1.6%
30 years	9.2%	9.2%	–	9.2%	3.2%
JP					
15 years	12.2%	–	–	12.2%	n/a
30 years	24.4%	–	–	24.4%	n/a
Total					
15 years	23.4%	11.2%	6.6%	16.8%	1.6%
30 years	41.0%	16.6%	7.4%	33.6%	3.2%

– = nil.
n/a = Not applicable.
Notes:
i. These replacement rates represent the pension amount divided by the last year's salary before retirement.

ii. For JP, past earnings under the career-average formula are indexed with the CPI, which explains the replacement rate below 30 per cent after 30 years of service.

Box 5.1. Examples of old-age benefits resulting from different work profiles

Mr Ahmad: A worker under permanent contract with a continuous career in a large enterprise

- Starts contributing in 2023 at age 30.
- Contributes 30 years and retires at age 60 in 2053.
- Average salary for the period of employment is 9,000,000 rupiah per month.
- Old-age benefits will be 3,691,000 rupiah per month (670,000 from employer, 827,000 from JHT, and 2,194,000 from JP).

Ms Dewi: A worker under permanent contract with a partial career in a large enterprise

- Starts contributing in 2023 at age 30.
- Contributes 15 years and retires at age 60 in 2053.
- Average salary for the period of employment is 9,000,000 rupiah per month.
- Old-age benefits will be 2,102,000 rupiah per month (591,000 from employer, 414,000 from JHT, and 1,097,000 from JP).

Ms Aulia: A worker under permanent contract with a continuous career in a small enterprise

- Starts contributing in 2023 at age 30.
- Contributes 30 years and retires at age 60 in 2053.
- Average salary for the period of employment is 5,500,000 rupiah per month.
- Old-age benefits will be 915,000 rupiah per month (410,000 from employer, and 505,000 from JHT).

Ms Eka: A worker under permanent contract with a partial career in a small enterprise

- Starts contributing in 2023 at age 30.
- Contributes 15 years and retires at age 60 in 2053.
- Average salary for the period of employment is 5,500,000 rupiah per month.
- Old-age benefits will be 614,000 rupiah per month (361,000 from employer, and 253,000 from JHT).

Ms Inaaya: A worker under permanent contract with a continuous career in a micro enterprise

- Starts contributing in 2023 at age 30.
- Contributes 30 years and retires at age 60 in 2053.
- Average salary for the period of employment is 3,600,000 rupiah per month.
- Old-age benefits will be 268,000 rupiah per month from employer.

Ms Fatimah: A worker under permanent contract with a partial career in a micro enterprise

- Starts contributing in 2023 at age 30.
- Contributes 15 years and retires at age 60 in 2053.
- Average salary for the period of employment is 3,600,000 rupiah per month.
- Old-age benefits will be 237,000 rupiah per month from employer.

Mr Arif: A worker under fixed-term contract with a continuous career in a large enterprise

- Starts contributing in 2023 at age 30.
- Contributes 30 years and retires at age 60 in 2053.
- Average salary for the period of employment is 6,300,000 rupiah per month.

- Old-age benefits will be 2,115,000 rupiah per month (579,000 from JHT, and 1,536,000 from JP).

Mr Mega: A worker under fixed-term contract with a partial career in a large enterprise

- Starts contributing in 2023 at age 30.
- Contributes 15 years and retires at age 60 in 2053.
- Average salary for the period of employment is 6,300,000 rupiah per month.
- Old-age benefits will be 1,057,000 rupiah per month (289,000 from JHT, and 768,000 from JP).

Ms Cindy: A self-employed worker with a continuous career as a JHT voluntary contributor

- Starts contributing in 2023 at age 30.
- Contributes for 30 years and retires at age 60 in 2053.
- Average salary for the period of employment is 4,600,000 rupiah per month.
- Old-age benefits will be 423,000 rupiah per month from JHT.

Ms Zahra: A self-employed worker with a partial career as a JHT voluntary contributor

- Starts contributing in 2023 at age 30.
- Contributes 15 years and retires at age 60 in 2053.
- Average salary for the period of employment is 4,600,000 rupiah per month.
- Old-age benefits will be 211,000 rupiah per month from JHT.

Note: Old-age benefits appearing in this box are expressed in constant 2023 rupiah. They result from the application of replacement rates of table 5.1 to the 2021 salary. In other words, it is assumed that the benefits paid at retirement are brought back to 2023 with a discount rate equal to the general wage index.

5.3. Risk management

The JP scheme appears as the best arrangement to face the risks associated with retirement when considering the following:

- **Longevity risk**. If life expectancy increases more than anticipated, the cost of buying an annuity will be higher and the level of income replacement will be lower than the figures appearing in table 5.1. In a defined-contribution scheme, if life expectancy increases over time, pensioners face an increasing risk of outliving their savings. In a defined-benefit pension scheme, on the other hand, the income replacement rate is not affected by an increase in life expectancy, except if it is decided to neutralize the effect of that increase in life expectancy with a gradual decrease of benefits over time.

- **Risks linked to rate of return and interest rates at conversion of lump sum**. The amount accumulated at retirement under JHT depends on the rate of return on contributions. This risk is on the shoulders of the worker. In addition, the pension amount resulting from the conversion of lump sums from JHT and from the severance benefits of the Labour Law depends on the level of interest rates at time of retirement. The level of interest rates does not affect JP pensions.

- **Risk associated with the financial situation of the employer**. Under the Labour Law, employers are fully liable for paying severance benefits and those liabilities should be reflected in their financial statements in accordance with the relevant international accounting standards. Because benefits are to be financed by employers, workers are at risk of not being able to recover the complete amount of severance benefits if the enterprise goes bankrupt. To better protect workers against such situations, it is

recommended that the JP scheme assumes this function, or that well-funded and well-designed private pension plans replace the employers' direct compensation schemes.

Under a defined-benefit scheme like the JP scheme, these risks are supported collectively. Each generation is responsible for the payment of pensions of previous generations. Redistribution takes place not only inside each generation but also between different generations. The key for the sustainability of the scheme is to make sure that the financing rules lead to contribution levels that are bearable by all generations and are fair (or perceived as such).

5.4. Re-allocation of resources between different schemes

The JP scheme provides the highest earnings replacement rate among all schemes, as highlighted in table 5.1 above. In addition, provision is on a defined-benefit basis which provides a certain guarantee and security to current and future retirees. Almost all social security retirement systems provide a majority of their benefits in this form. This is because it facilitates redistribution, diversifies risks, and ensures that longevity and investment risk are managed on the whole by the social security institution which is in the best position to manage it. In addition, such benefit provision responds more closely to the needs of pensioners in retirement (for example, payment of monthly bills). For these reasons, the ILO recommends in its proposals that the focus for future pension provision remains the JP and that this role be strengthened. We believe it is therefore advantageous to reallocate future contributions from the JHT scheme and the Labour Law provisions towards the JP scheme to provide additional benefits under a defined-benefit scheme (including benefits not only for retirement, but also in case of disability and death) that is more aligned with social security standards. Defined-benefit provision also tends to be more efficient than defined-contribution provision. There is also an argument to suggest that people close to the pensionable age use their JHT accumulated funds to purchase JP-recognized service and increase their JP rights during the transition between the current system and a fully implemented reformed system (see Section 6).

▶ 6. Possible directions for pension reform

The Indonesian pension system faces a series of challenges, including limited coverage, the low level of defined-benefit pensions, and the absence of basic income for the vulnerable elderly. To address these issues, it is important to look at the pension system as a whole – that is considering the overall structure of current provisions as well as the parameters of different tiers within the system.

This section first presents a series of parametric measures to adapt the JP scheme so that it will meet ILO social security standards. Once this is done, a more systemic pension reform may be envisaged, under which the JHT scheme would serve, during a first phase, to complement benefits offered by the JP scheme during its maturing process and, in a second phase, re-orient JHT as a voluntary scheme targeting higher-income workers by supplementing provision from a reformed JP scheme. These reforms of JP and JHT could be complemented by the introduction of a universal pension aimed at supporting the income of all elderly in the country.

6.1. Parametric reform of the JP scheme

The following measures are recommended for making the JP scheme more efficient and aligned with ILO minimum standards on social security.

6.1.1. Easing qualifying conditions for the old-age pension

It is suggested to eliminate the requirement to accumulate a minimum of 15 years of contribution for eligibility to the old-age pension, instead requiring only 12 months of contribution to the scheme. Since the pension formula is directly proportional to the period of contribution, we believe that there will be no significant cost increase associated with an immediate eligibility to the pension,[12] but this will give access to pensions, instead of lump sums, to all persons reaching the prescribed retirement age. Given that the length of contributory service is often related to income status, such a change will give many of the poorer members the right to pension income benefits who were previously excluded from this benefit. While it is recommended that members be eligible for the old-age pension with at least 12 months of contributions to the scheme, it is important that after the introduction of such a measure, that compliance measures are put in place to avoid anti-selection against the scheme (that is, people joining and paying the minimum contribution amount required to give them the right to a pension income). In addition, in respect of the related recommendation discussed below on the increase of the minimum pension, the minimum pension should be prorated for persons with less than 15 years of contribution (for example, multiplied by “number of years of contribution divided by 15”).

[12] People will receive a pension instead of a lump sum. The present value of a pension is generally higher than the amount of a lump sum, but the lump sum is paid immediately, while the pension is spread over time. Globally, our calculations show that the net additional cost for the scheme would be minimal, and this additional cost is justified given the benefit to those who would now qualify for a pension. This should be assessed as experience evolves in future actuarial valuations, especially if contribution rates to the scheme do not increase in line with the actuaries’ recommendations. The actuarial model uses assumptions that do not generate cases reaching retirement age with less than 15 years of contribution (continuous flow of new entrants staying in the scheme during their whole career), thus explaining that there is no additional cost calculated for this measure in the long term.

6.1.2. Increasing the pension accrual rate and the minimum pension

To align the JP scheme with ILO Convention No. 102, the pension accrual rate should be increased to 1.33 per cent (instead of 1.00 per cent) of earnings per year of contribution. Convention No. 102 sets out the minimum standard for an old-age pension at 40 per cent of the reference wage after 30 years of contribution.

At the same time, the minimum pension should be increased to 40 per cent of the national minimum wage (1,075,090 rupiah in 2021)[13] for those who have at least 15 years of contribution. This would provide a more relevant minimum pension amount and would be aligned with the increase of the new pension accrual rate.

6.1.3. Reviewing the periodic adjustment of certain parameters

Earnings ceiling. Presently, the earnings ceiling is indexed with the annual increase of *real* GDP. This results in a ceiling increase lagging behind general (nominal) wage increases. This will eventually deprive the scheme from important contribution income and limit the level of pensions. It is suggested to index the maximum insurable salary in line with the average wage increase.

In addition, the nominal amount of the earnings ceiling must meet ILO standards. According to ILO Convention No. 102, the earnings ceiling should cover:

- the average earnings of a skilled manual male employee;
- the earnings of at least 75 per cent of all insured persons; and
- at least 125 per cent of the average earnings of insured persons.

The current earnings ceiling of 9,077,600 rupiah in 2022 meets all these criteria. However, it is important that it is indexed correctly in the future to keep its relevance and continue to satisfy the requirements of ILO Convention 102.

Minimum and maximum pensions. It is recommended to index the minimum pension in line with the general wage growth (instead of the inflation rate) to keep its relevance over time in connection with the earnings of the insured population.

It is suggested to make no specific mention of a maximum pension. The existence of an earnings ceiling (indexed in line with the average salary growth) will indirectly determine maximum pension amounts. Moreover, the pension accrual rate is very low (even with the suggested increase to 1.33 per cent per year); hence there is no justification to limit the amount of the accrued pension of JP members.

6.1.4. Establishing minimum survivors' benefits

According to ILO Convention No. 102, the replacement rate of survivors' benefits for a spouse with two children should be at least equal to 40 per cent after 15 years of service. Under present JP provisions, a survivor is entitled to receive 50 per cent of the old-age or disability pension that the deceased was receiving or entitled to receive. If, for example, the old-age pension is equal to 40 per cent of the salary, then the widows' pension will be equal to only 20 per cent of the salary of the deceased. It is proposed to establish a minimum survivors' pension at 40 per cent of the minimum wage.

[13] According to BPS, minimum wages at the provincial level were varying between 1,765,000 and 4,416,187 rupiah in 2021, with an average national minimum wage of 2,687,724 rupiah. See, BPS, *Statistical Yearbook of Indonesia 2022*, 2022.

6.1.5. Adopting a financing policy

The PAYG rate of the scheme will increase steadily in the future as the scheme will mature. It is thus clear that the contribution rates provided under the law will not be sufficient to finance the JP scheme in the long term.

It is recommended to adopt a financing policy that would establish a legal obligation to increase contribution rates in the future once specific cost indicators are revealed by successive actuarial valuations. The law would set out the principle of financing through contributions and would provide that contribution rates shall be fixed by decree. The implementation decree would specify the timeline and mechanism for the progressive increase of contributions.

For example, a contribution rate increasing by 3 per cent every 10 years starting in 2024, reaching a contribution rate of 15 per cent in 2054 and remaining constant thereafter, would be sufficient to maintain a positive reserve for the next 100 years in the context of the parametric reforms described above.

Table 6.1 shows that the parametric reforms would increase the absolute cost of the scheme, due to the increase of the pension accrual rate, the minimum pension amount, and the adjustment of the scheme's parameters based on wage growth. However, the future adjustment of the earnings ceiling, based on nominal wage growth instead of real GDP growth, would significantly increase future contribution income and reduce the long-term PAYG rates. The reserve duration is significantly longer because of the assumed contribution rate increase required (see recommendations in the Executive Summary).

Table 6.1. Financial implications of parametric reforms

Scenario	PAYG rate		GAP (100 years)	Year of reserve exhaustion
	2050	2100		
Base scenario	**2.3%**	**28.2%**	**10.8%**	**2069**
Earnings ceiling indexed with wage growth (instead of real GDP)	-0.1%	-18.1%	-3.4%	+2 years
Eliminate minimum qualifying period	+0.4%	–	+0.2%	-4 years
Increase minimum pension at 40% of minimum wage, indexed with wage growth	+1.8%	+6.3%	+4.8%	-10 years
Increase pension accrual rate to from 1.00% to 1.33% per year	+0.2%	+2.6%	+1.8%	-1 year
Minimum survivors' benefits	–	+0.1%	+0.1%	–
Increase of the contribution rate	–	–	–	+63 years
All measures combined	**4.6%**	**19.1%**	**14.3%**	**2119**

– = nil.
Note: Changing the order in which the simulation of the different measures is performed in this table would slightly alter the magnitude of the impact of each measure taken individually. "Increase of the contribution rate" refers to increasing by 3 per cent every 10 years starting in 2024, reaching a contribution rate of 15 per cent in 2054 and remaining constant thereafter.

Figure 6.1 shows the future evolution of the reserve ratio considering all measures of the parametric reform, including the increase of the contribution rate. Detailed financial projections for the reformed JP scheme appear in table 6.2. The extended period before reserve exhaustion results from the proposed increase of the contribution rate.

▶ Figure 6.1. Projected reserve ratios (reserve divided by annual expenditures) under parametric reform

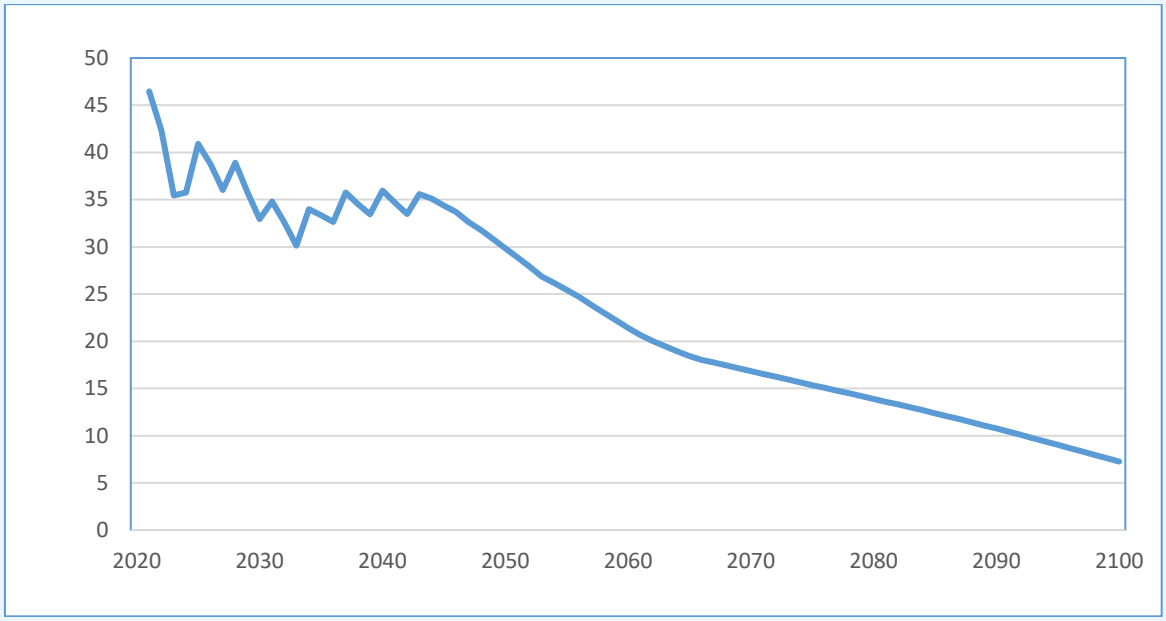


Table 6.2. Projected revenues, expenditures and reserve of the JP scheme, considering all parametric reform measures, 2021–2100 (in billions rupiah)

	Revenues			Expenditures			Reserve		
Year	Contribution income	Investment income	Total	Benefits	Administrative expenses	Total	Amount (year-end)	Reserve ratio[1]	PAYG rate (%)
2021	19 552	4 638	24 190	840	1 343	2 183	101 444	46.5	0.3
2022	22 025	6 129	28 154	1 453	1 537	2 989	126 609	42.4	0.4
2023	25 126	8 469	33 595	2 599	1 797	4 396	155 808	35.4	0.5
2024	56 864	10 760	67 624	3 999	2 083	6 082	217 350	35.7	0.6
2025	64 061	14 628	78 689	4 710	2 357	7 066	288 973	40.9	0.7
2030	111 837	43 402	155 239	20 100	4 673	24 772	815 782	32.9	1.3
2035	276 560	101 461	378 021	48 981	8 448	57 429	1 914 976	33.3	1.9
2040	430 429	208 777	639 206	99 889	14 260	114 149	4 103 893	36.0	2.4
2045	849 239	362 002	1 211 241	204 536	23 767	228 303	7 844 651	34.4	3.2
2050	1 200 348	578 284	1 778 632	421 599	39 821	461 420	13 774 089	29.9	4.6
2060	2 836 103	1 469 049	4 305 152	1 510 708	108 818	1 619 526	34 657 200	21.4	8.6
2070	5 142 206	2 924 757	8 066 963	3 811 358	247 697	4 059 055	68 322 786	16.8	11.8
2080	8 860 652	5 023 950	13 884 602	7 908 328	489 833	8 398 161	116 653 528	13.9	14.2
2090	14 827 584	7 638 153	22 465 738	15 470 084	924 795	16 394 879	176 206 252	10.7	16.6
2100	24 409 520	9 875 696	34 285 215	29 385 362	1 706 572	31 091 935	225 470 939	7.3	19.1

[1] Expressed as the number of times the reserve covers current year's expenditures.

6.2. Structural pension reform

This section sets out possible reform options for the Indonesian pension system as starting points for discussion. They include both structural and parametric reforms and are based on a multi-tier approach that the ILO believes is the most appropriate approach going forward. Not only does this combine different benefit and financing approaches, thereby diversifying the risks and meeting different aims, it also builds on existing vehicles already in place.

A retirement system needs to meet defined objectives on coverage, adequacy of benefits and sustainability. The recommendations below reflect these three objectives, although there will always be trade-offs when designing a system for the future.

6.2.1. Challenges

The Indonesian pension system faces a series of challenges.

Limited scope of the JP scheme. Workers in small and micro enterprises can participate only on a voluntary basis, and those classified as "non-wage workers" are not allowed to participate in the JP scheme. International experience shows that voluntary participation does not significantly help extend coverage. In addition, the participation of women is low and must be seriously encouraged.

No pooling of risks under the JHT scheme. JHT is a savings scheme. People accumulate funds during their career and receive the accumulated funds at retirement in the form of a lump sum. There is no pooling of risks under JHT. The risks of longevity (living longer than savings) and inflation (gradual loss of purchasing power during old age) fall on the shoulders of the individuals. There is also a gender inequality aspect, as women live on average longer than men.

Low level of benefits. Benefits arising from the system are low for those without a full career. The low benefit level of the JP scheme, combined with the possibility to withdraw accumulated contributions from the JHT during one's career, result in inadequate benefits at retirement.

Absence of basic old-age income for the most vulnerable. Workers not belonging to the groups legally covered under JP and JHT (those defined as "non-wage workers" and persons in the inactive population) do not have access to basic income at old age.

6.2.2. Possible designs of a reformed pension system

The proposed system would be composed of: (1) a pension for ensuring basic income to the most vulnerable; (2) a reformed JP scheme with extended coverage becoming the main pillar of the system; and (3) a reformed voluntary JHT scheme gradually targeted at higher-income workers.

Option 1 – Tax-funded pension-tested benefit with JP extended to all workers (that is, "wage" and "non-wage" workers)

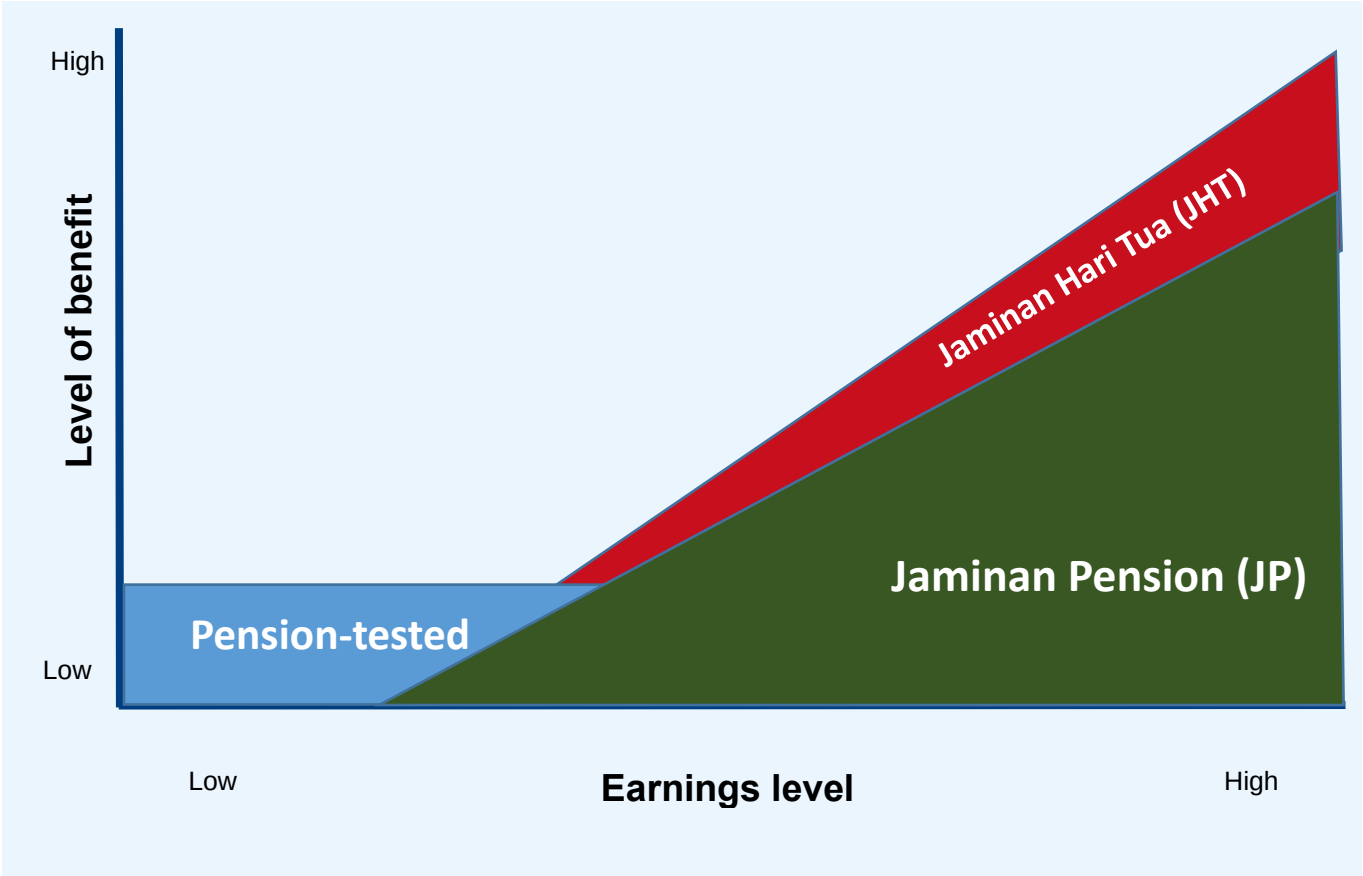
Under Option 1, the JP mandatory coverage would be expanded to all workers (both wage and non-wage workers). Non-wage workers would pay both the workers' and employers' contributions (another alternative is that a full or partial subsidy could be envisaged). Since non-wage workers would also be covered, appropriate compliance measures would be required to ensure that workers in an employer/employee relationship are declared by their employer and that these employers contribute to the JP scheme.

The JP accrual rate would be increased to 1.33 per cent per year and the minimum pension would become 40 per cent of the minimum wage. The JP scheme would then guarantee the Convention No. 102 minimum standard, as suggested under the parametric reform in section 6.1 above.

A pension-tested benefit of 500,000 rupiah per month indexed with the general wage increase (equivalent to the poverty line)[14] would be guaranteed to all persons aged 65 and above who are not eligible for a JP pension. This minimum guarantee would also be paid to those receiving less than 500,000 rupiah from the JP scheme because of short careers or low earnings.[15] The cost of the minimum guarantee would be financed by the State. People would have to register with BPJS to receive the pension-tested benefit.

The JHT scheme would become voluntary for all with the aim to provide additional retirement benefits in addition to those provided under the mandatory tiers. Figure 6.2 shows a broad representation of how the different benefit provision tiers are likely to complement each other under such a structure in respect of an individual's earnings level.

▶ **Figure 6.2. Design of the pension system under Option 1**



▶ Cost of the minimum pension to be financed by the State

Table 6.3 presents the annual expenditures on the pension-tested minimum benefit to be financed by the State in the context of Option 1. The cost is decreasing in the long-term as newly covered groups of wage and non-wage workers acquire rights under JP. It should be noted that increased compliance efforts will lead to reduced costs under the pension-tested benefit as a

[14] According to BPS, the national poverty line was 502,730 rupiah in urban areas and 464,474 rupiah in rural areas in 2021. See, BPS, *Statistical Yearbook of Indonesia 2022*, 2022.

[15] According to the parametric reform described in section 6.1, the full amount of the minimum pension of JP (40 per cent of the minimum wage) is granted only to persons who have at least 15 years of contribution. For those with less than 15 years of contribution, the minimum pension is prorated.

greater number of workers (such as those in the informal sector with employers) will be covered under the mandatory JP scheme.

Table 6.3. Projected beneficiaries and annual expenditures of the pension-tested benefit financed by the State – Option 1

Year	Number of beneficiaries	Annual expenditures on minimum benefit to be financed by the State (benefit indexed in line with general wage growth)	
		Million rupiah	% of GDP
2023	19 621 249	117 727 497	0.60%
2024	20 624 809	132 822 615	0.62%
2025	21 657 376	149 409 954	0.65%
2030	26 915 970	259 071 238	0.76%
2040	37 293 637	647 411 949	0.98%
2050	42 958 984	1 213 891 770	1.09%
2060	30 220 163	1 326 848 365	0.74%
2070	–	–	–

Table 6.4. Pros and cons of Option 1

Advantages	Issues/drawbacks
Expansion of JP coverage. Coverage under JP is extended to the whole labour force (wage and non-wage workers). People must register with BPJS to receive the pension-tested benefit, making it therefore favourable to the expansion of JP coverage.	**Difficulty in implementing full coverage**. The extension of JP coverage to non-wage workers may be difficult to implement, with the result that a proportion of the elderly population will not receive the basic pension-tested benefit. Establishing a realistic action plan for expanding coverage is a challenge.
Gradually decreasing cost for the State. Very low cost in the long term for the State as people (wage and non-wage workers) acquire rights under JP.	**Disincentive for non-wage workers to contribute to JP**. Non-wage workers must pay the employer and employee contributions to JP, and hence they could contribute for a few years only to just get the 500,000 rupiah minimum benefit. An alternative is a tapered pension-tested benefit – for example, for every 3 rupiah earned in JP pension, the pensioner would lose 1 or 2 rupiah of this benefit. This would ensure that there is still an incentive to contribute, but that the cost would be limited. In the first example, the individual would be 67 rupiah better-off for each 100 rupiah of JP pension, and in the second example, they would be 33 rupiah better-off.

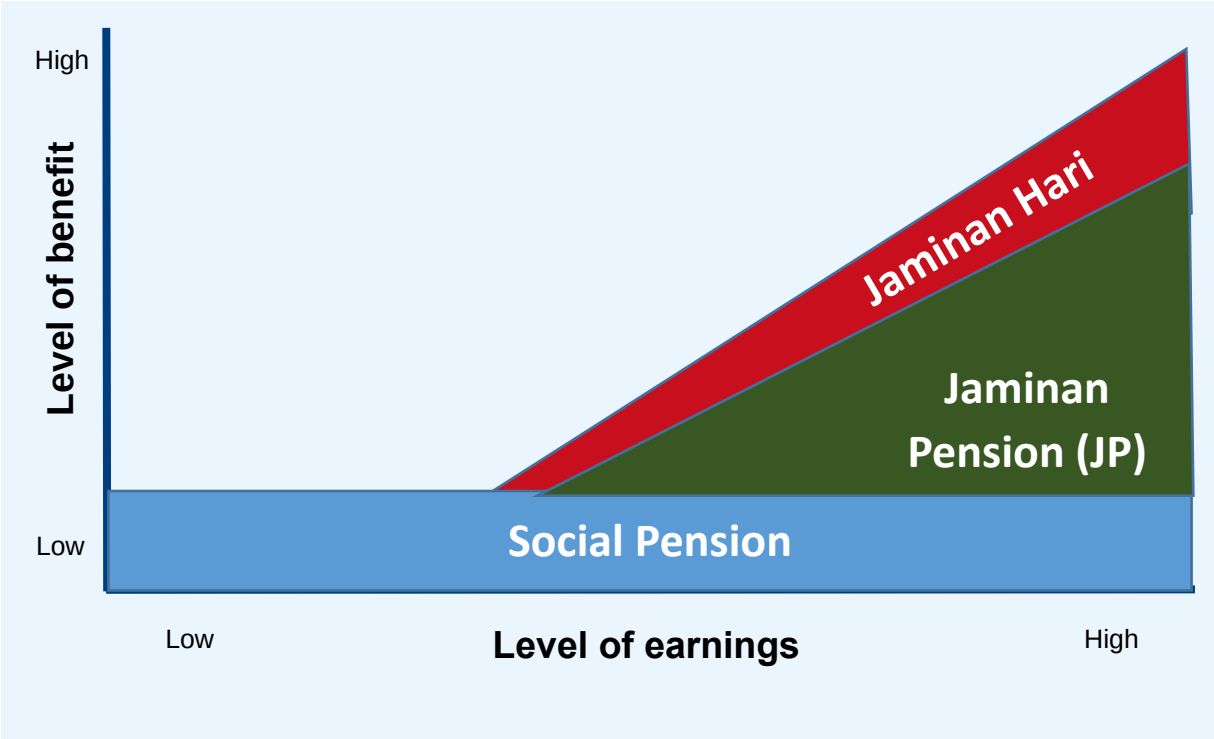
Option 2 – Universal Social Pension for all residents + JP for all wage workers

Under Option 2, a Social Pension would be introduced to guarantee a minimum standard of living to all residents above a certain age. This would address the disincentive elements of Option 1.

The JP mandatory coverage would be expanded to all wage workers, thus including small and micro enterprises. By increasing the JP accrual rate to 1.33 per cent per year, the JP scheme would then guarantee the Convention No. 102 minimum standard.

The JHT scheme would become voluntary for all. Figure 6.3 shows a broad representation of how the different benefit provision tiers are likely to complement each other under Option 2, and how matters change in line with an individual's earnings level.

▶ **Figure 6.3. Design of the pension system under Option 2**



▶ Description and cost of the Social Pension

- The Social Pension would be fully financed by the State.
- The flat-rate pension would be paid to all persons above a certain age who have a minimum period of residence of ten years in Indonesia a (a longer period of residence requirements can, of course, be imposed).
- Initially (in 2023) it would be paid to all persons above age 75. The age of access to the pension would gradually decrease from 75 to 65 over a period of ten years. Such a transition period would not only reduce the immediate cost of such a measure but is also consistent with an approach to provide longevity risk cover. Many pensioners at present may retire with a lump sum that may be used up after 10 or 15 years, and the payment of an income from age 75 may complement the current benefits received. However, ideally, if the finances existed, a pension payable from age 65 would clearly have a greater impact in reducing poverty and responding to population needs.
- The amount of the Social Pension would be established at the level of the poverty line (500,000 rupiah per month). For the annual adjustment of that amount, two scenarios are

presented: (1) indexing in line with the Consumer Price Index (CPI); or (2) indexing in line with the general wage growth.

– The Social Pension would be paid independently of participation in the JP scheme. Every contribution to JP would therefore provide extra benefits to participating workers (see box 6.1).

Table 6.5 presents the Social Pension expenditures to be financed by the State. It presents different scenarios of pensionable ages (starting at 75 or 65) and pension indexation (based on inflation or wage growth). With a pensionable age starting at 75 and benefits indexed in line with CPI increase, the cost of the Social Pension is estimated at 35,759 billion rupiah (0.18 per cent of GDP) in the first year of application. This cost is projected to increase over time as a percentage of GDP because of the projected increase in the elderly population and the gradual decrease of the age of eligibility from 75 to 65. The cost is however stable at 0.6 per cent of GDP in the long term because the natural increase in the population of beneficiaries is compensated by the fact that the pension amount would be indexed at a rate (CPI increase) lower than the nominal GDP growth.

If the pensionable age is established at 65 from the implementation date, then the cost is stable as a percentage of GDP in the scenario of CPI indexation, while reaching 1.69 per cent of GDP in the scenario of wage indexation. Until 2030, the cost of this option is not so different from the pension-tested benefit of Option 1 because JP pensions are very low in the short term.

Table 6.5. Projected beneficiaries and annual expenditures of the Social Pension, all financed by the State – Option 2

Pensionable age gradually decreasing from 75 to 65						
			Benefit indexed with CPI		Benefit indexed with wage growth	
Year	Pensionable age	Number of beneficiaries	Annual expenditures (million rupiah)	Annual expenditures (% of GDP)	Annual expenditures (million rupiah)	Annual expenditures (% of GDP)
2023	75	5 959 848	35 759 088	0.18%	35 759 088	0.18%
2024	74	7 135 051	44 075 333	0.21%	45 949 325	0.22%
2025	73	8 542 813	54 332 363	0.24%	58 935 178	0.26%
2026	72	10 228 474	66 979 567	0.27%	75 577 238	0.30%
2027	71	12 256 790	82 638 429	0.31%	96 900 084	0.36%
2028	70	14 642 528	101 647 147	0.35%	123 734 561	0.42%
2029	69	17 324 161	123 824 091	0.39%	156 320 005	0.50%
2030	68	20 275 652	149 211 249	0.44%	195 156 929	0.57%
...	...	...	...	...	...	...
2040	65	40 116 707	419 948 896	0.60%	696 420 032	1.05%
2050	65	52 308 269	722 492 584	0.62%	1 478 074 455	1.32%
2060	65	59 665 205	1 100 408 081	0.59%	2 619 664 220	1.47%
2070	65	68 644 175	1 690 205 990	0.58%	4 683 027 441	1.69%
Pensionable age at 65 from the start						
			Benefit indexed with CPI		Benefit indexed with wage growth	
Year	Pensionable age	Number of beneficiaries	Annual expenditures (million rupiah)	Annual expenditures (% of GDP)	Annual expenditures (million rupiah)	Annual expenditures (% of GDP)
2023	65	19 622 695	117 736 169	0.60%	117 736 169	0.60%
2024	65	20 626 436	127 415 639	0.60%	132 833 090	0.62%
2025	65	21 659 269	137 753 136	0.60%	149 423 016	0.65%
2026	65	22 722 138	148 792 385	0.59%	167 891 761	0.67%
2027	65	23 809 086	160 526 980	0.59%	188 230 562	0.70%
2028	65	24 923 337	173 015 618	0.59%	210 611 042	0.72%
2029	65	26 070 950	186 341 586	0.59%	235 244 350	0.75%
2030	65	27 254 558	200 569 959	0.59%	262 330 203	0.77%
...	...	...	...	...	...	...
2040	65	40 116 707	395 266 611	0.60%	696 420 032	1.05%
2050	65	52 308 269	690 038 467	0.62%	1 478 074 455	1.32%
2060	65	59 665 205	1 053 809 712	0.59%	2 619 664 220	1.47%
2070	65	68 644 175	1 623 240 420	0.58%	4 683 027 441	1.69%

Box 6.1. Advantages of a universal pension compared to a means-tested targeted programme

In general, the total benefit amounts paid under targeted programmes are less than the overall benefits paid under universal programmes. This is due to a smaller number of beneficiaries in targeted programmes, resulting in limited coverage rates. However, the administration cost of a targeted programme is substantially higher than a universal programme as a result of the cost for targeting beneficiaries. Targeted programmes often suffer from lock-in problems: beneficiaries have an incentive to remain in the programme and this can jeopardize economic behaviour, leading to distorting disincentives. In general, the targeting mechanism should be capable of distinguishing between individuals or households that are "unable" versus those who are "unwilling". Targeting procedures tend to incur more operational costs as they become more sophisticated.

From a political and social perspective, universal programmes are more widely supported since beneficiaries are not only the poor and vulnerable, but also middle-income households. Universal programmes tend to be enshrined in legislation, whereas targeted programmes are often of an ad hoc nature, rendering these programmes vulnerable for any economic downturns and budget constraints. Beneficiaries of a universal programme also suffer less from stigma than those in targeted programmes.

It is important that the design of a programme takes into consideration the national context. In case most of the elderly are already protected by financially stable and sustainable social insurance programmes and the programmes provide adequate protection to scheme members, targeted social assistance programme can benefit from limited administration costs.

In case of substantial numbers of elderly being out of coverage, legalized and institutionalized universal programmes are better capable to weather both economic downturns (by maintaining consumption by the elderly) as well as changes in the political landscape. When the main objective is to build a strong programme contributing to social cohesion, social justice and the trust of people, the choice is to design a universal programme.

Table 6.6. Pros and cons of Option 2

Advantages	Issues / drawbacks
Simplicity. Easy to administer and to communicate.	**No sense of ownership by the population**. Since there is no payment of contributions by individuals, people do not feel involved in the financing of the Social Pension.
Ensures minimum income at old age. Benefit at level of poverty line for all the elderly.	**No impact on JP coverage**. If BPJS is not involved in the management of the Social Pension, there will be no beneficial effect on JP membership.
Improvement of benefit adequacy for wage workers. The sum of JP and the Social Pension would provide a good replacement ratio at retirement for wage workers.	**Equity issue**. A small percentage of Indonesian workers actually pay income tax. This raises different issues concerning the need for income redistribution in Indonesia and the efficiency of the tax system. The financing of pensions for the whole elderly population through the government general revenue will require a thorough fiscal space analysis.
Incentive to contribute to JP. Given the assurance that the universal pension will be	**Cost will be higher than Option 1**

paid, people can build on that, knowing that each contribution to JP will increase their income at old age. It will therefore not discourage people from affiliating to JP and support coverage efforts.	

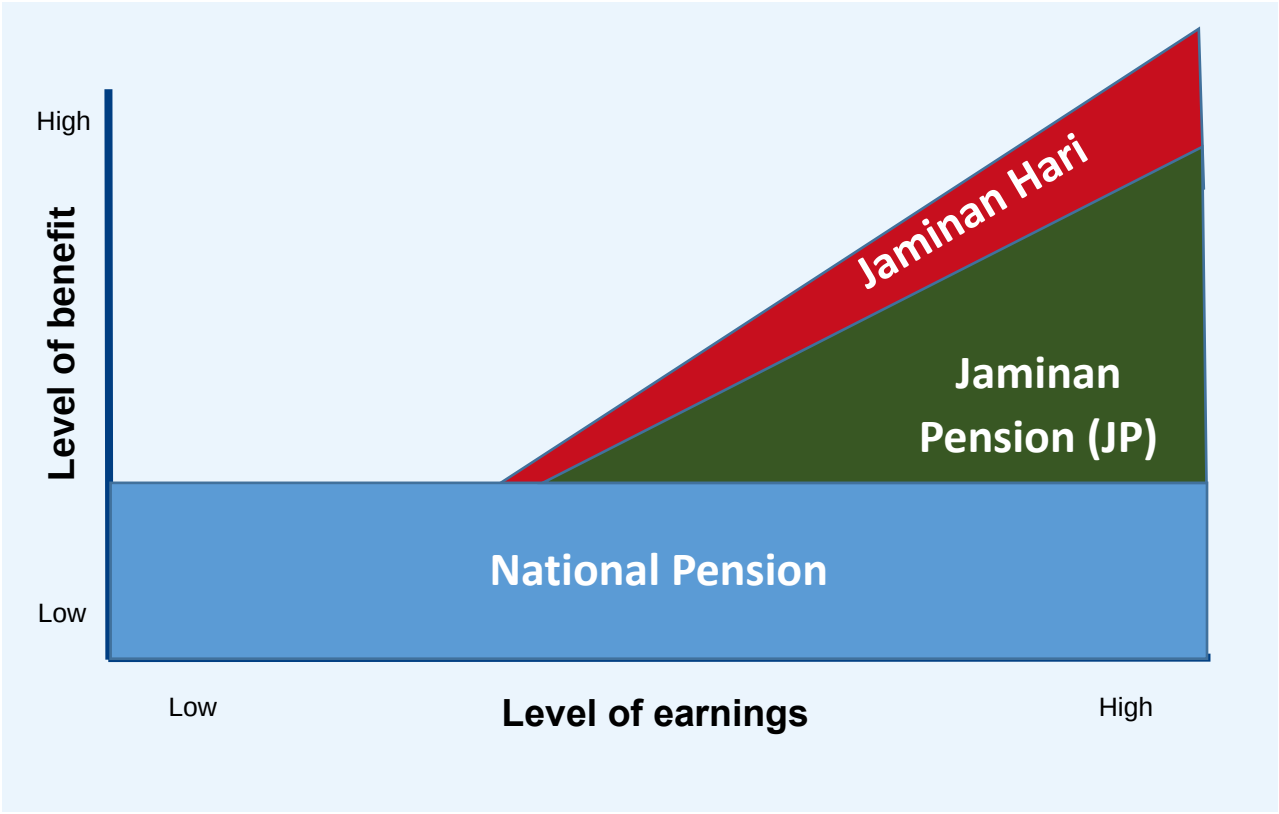
Option 3 – National Pension for all residents + JP for all wage workers

Under Option 3, a National Pension would be established. It would be mandatory for all persons of working age to pay flat-amount contributions to gradually build up the right to a flat-rate benefit. Contribution exemption would be possible for unemployed or low-income earners.

The JP mandatory coverage would be expanded to all wage workers, thus including small and micro enterprises, and also those in the informal sector with an employer. The accrual rate of JP would remain at 1.0 per cent per year, since the sum of JP and the National Pension would guarantee the Convention No. 102 minimum standard to all residents.

The JHT scheme would become voluntary for all. Figure 6.4 shows a broad representation of how the different benefit provision tiers are likely to complement each other under Option 3, and how the pension amount changes in line with an individual's earnings level.

▶ **Figure 6.4. Design of the pension system under Option 3**



▶ Description and cost of the National Pension

– The National Pension (NP) would be gradually acquired through flat-amount contributions (300,000 rupiah per month, indexed annually in line with the general wage increase). The

objective is to cover all residents on a mandatory basis. It would be possible for workers to pay NP contributions in the name of family members who are not in the labour force.

- The National Pension would be paid from age 65.
- For a person with 30 years of contribution, the NP would be equal to 1,000,000 rupiah (approximately 40 per cent of the average national minimum wage). This amount would be indexed annually in line with the general wage increase. Half of this benefit would be acquired through members' contributions. The other half would be credited as a state subsidy.
- A person may ask BPJS for a contribution exemption if that person cannot afford to pay the contribution for a certain period (criteria to be determined). In that case, BPJS will credit only the State's portion for that period. This means that a person who has never contributed to the National Pension would still be entitled to 500,000 rupiah at age 65 (this amount being indexed annually in line with the general wage increase).
- Transitional measures would guarantee a minimum benefit until people have accumulated the 30 years of contribution required for full benefit. The State would finance this transitional benefit (see table 6.7).

Table 6.7. Illustration of transitional credits under the National Pension

Year	Worker's credit (from contributions)	State's regular credit	Transitional credit	Total pension paid
2023	–	–	**500 000**	500 000
2024	16 666	16 667	**483 333**	516 667
2025	33 333	33 333	**466 667**	533 333
2026	50 000	50 000	**450 000**	550 000
2027	66 667	66 667	**433 333**	566 667
…	…	…	…	…
2053	500 000	500 000	–	1 000 000

– = nil.

The introduction of the National Pension would encourage people to register with BPJS (people will need to register to BPJS to receive the state credit for the National Pension), hence contributing to an expansion of JP coverage.

Since the NP is based on contributions, and some people may die before retirement or shortly after becoming pensioners, it could be envisaged to add survivors' benefits to the package. However, we may consider that the surviving spouse will normally be registered for the NP, will receive a NP pension of his/her own right (even without paying any contribution) and will even benefit from the transitional benefit. Hence there is less need for survivors' benefits under the National Pension.

The portion of the annual expenditures of the National Pension financed by the State are presented in table 6.8, separated into those expenditures associated with regular credits and those associated with transitional measures. It is assumed, in this simulation, that 10 per cent of workers would request a contribution exemption each year. However, it is important that a sensitivity analysis be undertaken on this parameter, as it will significantly influence the outcomes in the future.

Table 6.8. Projected beneficiaries and annual expenditures of the National Pension financed by the State – Option 3

Year	Number of beneficiaries	Portion of NP annual expenditures supported by the State associated with regular credits			State expenditures associated with transitional measures	
		Million rupiah	% of GDP		Million rupiah	% of GDP
2023	19 622 695	–	–		117 736 169	0.60%
2024	20 626 436	434 264	0.00%		132 398 826	0.62%
2025	21 659 269	1 415 212	0.01%		148 007 804	0.64%
2026	22 722 138	3 073 664	0.01%		164 818 096	0.66%
2027	23 809 086	5 554 640	0.02%		182 675 922	0.67%
2028	24 923 337	9 026 646	0.03%		201 584 396	0.69%
2029	26 070 950	13 686 757	0.04%		221 557 593	0.70%
2030	27 254 558	19 754 305	0.06%		242 575 898	0.71%
2040	40 116 707	216 171 182	0.33%		480 248 850	0.73%
2050	52 308 269	885 216 010	0.79%		592 858 444	0.53%
2060	59 665 205	2 209 955 344	1.24%		409 708 876	0.23%
2070	68 644 175	4 502 030 129	1.62%		180 997 313	0.07%

– = nil. Note: It is assumed here that 10 per cent of members request a contribution exemption each year. But this has no additional effect on State's expenditures since the pension credits financed by the State are granted anyway.

Table 6.9. Pros and cons of Option 3

Advantages	Issues / drawbacks
Expansion of JP coverage. People must register with BPJS for the National Pension, hence resulting in a positive impact on JP coverage.	**Complex administration**. More difficult to administer because of contribution exemptions and contributions paid on behalf of family members outside the labour force.
Equity and empowerment of the population. The National Pension is financed through contributions, thus carrying a sense of equity and people's involvement in the financing of that measure.	**Higher contribution level**. The global contributions required from members is higher than under Options 1 and 2.
Improvement of benefit adequacy. The total of JP and the National Pension would provide adequate benefit levels for all categories of workers.	

6.2.3. Expanded scope for JP

In addition to applying the parametric reform measures described in section 6.1, coverage under JP should be expanded. Under Option 1, JP coverage would include wage and non-wage workers (including the self-employed). Options 2 and 3 expand JP coverage to all wage workers, thus including small and micro-enterprises. The JP scheme would become the main pillar of the pension system with its improved benefits and expanded coverage.

The parametric reform described in section 6.1 provides for an increase of the JP accrual rate from 1.00 to 1.33 per cent per year of contribution. However, if the National Pension is introduced (Option 3), the JP accrual rate could remain at 1.00 per cent per year, given that the global pension provided by the sum of JP and the National Pension would now meet ILO minimum standards. Under Option 3, the minimum pension could be eliminated under JP given the role now played by the National Pension.

Since the JP scheme is new and not mature, it will take several years before full benefits will be payable under the scheme. To accelerate the process of full support to be offered by JP, it could be envisaged to allow JHT members to use their accumulated savings under JHT to "purchase" years of service for improving their JP pension.

For the self-employed who, by definition, have no employer contribution, other alternative financing options should be considered. It is important that such workers are included in the system and if a pension-tested approach to the provision of National Pension were to be introduced, then contribution support for the self-employed could be a cost-efficient approach. In addition, the reality of the labour market in Indonesia is that individuals may have different employment statuses throughout their careers: spending some years as self-employed and others as salaried. This reality is not always reflected in the design of pension systems. A mandatory approach for all workers, whether they have an employer–employee relationship or not, typically increases coverage and promotes adequacy of benefits as well as reducing unfair competition between employers.

6.2.4. New role for JHT

The JHT scheme is a form of defined-contribution scheme with some guarantee on the rate of return declared (that is, a provident fund). One of the main weaknesses of JHT is the fact that people reaching retirement receive a lump sum as settlement of their JHT rights, which may then be spent rapidly, with medium- and long-term impacts on their income during old age. To reduce these negative impacts, it is suggested to offer individuals, at retirement, to convert their accumulated savings into programmed withdrawals or into life annuities, under favourable conditions to encourage conversion instead of receiving a lump sum. One challenge of such an approach is that with relatively small account balances, the level of income offered is not attractive, especially in a relatively low interest rate environment.

In the context of future necessary increases of the JP contribution rate, the global contributions to JP and JHT could be reorganized. The JHT contribution rate could eventually be reduced in line with the planned increase of contributions under JP, or it could be possible to specify a minimum JHT contribution rate while allowing individual workers to choose their contribution rate level (between a minimum and a maximum). Ultimately, the JHT scheme could become a *voluntary* tier to top-up pensions offered by the other pillars of the system (National Pension and JP scheme).

Modifications to JHT could evolve over time. In the short term, JHT needs to maintain its important role because JP is young and not able to fully support workers reaching retirement. But over time, JHT could be gradually transformed into a voluntary supplemental portion of the pension system targeted at higher-income individuals. The role of a defined-contribution scheme as part of a multi-tier system as envisaged above is consistent with the approach taken in a number of other countries.

6.2.5. Replacement rates resulting from the different components under reform

Tables 6.10, 6.11 and 6.12 present estimated replacement rates offered by the system under the three reform options and assumed scenario. It is assumed that the reform of the pension system

has been implemented for a sufficiently long period, so that the National Pension has reached maturity (under Option 3). In addition, it is assumed that mandatory contributions to the JHT scheme are reduced to facilitate contributions to the other components of the system. Finally, the simulation presents the situation of the JP scheme once the gradual increase of the pensionable age has been completed. More precisely:

- The JHT mandatory contribution rate is reduced to 2.0 per cent (instead of 5.7 per cent). It would be possible for people to contribute above that level, but this is not considered in the simulation. For contributions at a higher rate, a simple pro-rating of the projected benefits below can be undertaken (for example, if the person pays contributions at a rate of 4 per cent, the benefit amounts under JHT below can be doubled in the tables).
- The person paid contributions for the National Pension (Option 3) over the period considered (15 or 30 years) and has thus receives benefits of the NP based on these contributions.
- The pensionable age of the JP scheme has reached 65. The accrual rate under JP is increased to 1.33 per cent per year under Options 1 and 2 but remains at 1.00 per cent per year under Option 3.
- The provisions of the Labour Law remain the same as presently.

As observed in tables 6.10 to 6.12, the global replacement rates under reform would increase compared to the current situation. The last portion of these tables show the global replacement rate excluding the severance benefits paid under the Labour Law in order to isolate the income at old age resulting from the pension system itself.

Under Option 3, replacement rates for workers in small and micro enterprises reach very high levels, but this is justified for persons at lower earnings levels (near the minimum wage).

Table 6.10. Replacement rate from each source at retirement, by employment status and length of service (pensions paid from age 65) – Option 1

Length of service	Employment status				
	Permanent contract in large or medium enterprise	Permanent contract in small enterprise	Permanent contract in micro enterprise	Fixed-term contract in large or medium enterprise	Self-employed voluntarily contributing to JHT
Salary at age 30 in 2023	9 000 000	5 500 000	3 600 000	6 300 000	4 600 000
Labour Law					
15 years	9.7%	9.7%	9.7%	–	n/a
30 years	11.0%	11.0%	11.0%	–	n/a
JHT (contribution rate reduced to 2%)					
15 years	2.4%	2.4%	–	2.4%	1.6%
30 years	4.8%	4.8%	–	4.8%	3.2%
JP (1.33% accrual rate)*					
15 years	16.3%	16.3%	16.3%	16.3%	16.3%
30 years	32.5%	32.5%	32.5%	32.5%	32.5%
Total					
15 years	28.3%	28.3%	26.0%	18.6%	17.9%
30 years	48.3%	48.3%	43.5%	37.3%	35.7%
Total (without Labour Law)					
15 years	18.6%	18.6%	16.3%	18.6%	17.9%
30 years	37.3%	37.3%	32.5%	37.3%	35.7%

– = nil.

– = Not applicable.

* The replacement rate of the JP pension is lower than 1.33 per cent multiplied by the number of years of contribution because replacement rates are calculated based on the final-year salary (for consistency with the other schemes), and not on the average revalorized career earnings.

Table 6.11. Replacement rate from each source at retirement, by employment status and length of service (pensions paid from age 65) – Option 2

Length of service	Employment status				
	Permanent contract in large or medium enterprise	Permanent contract in small enterprise	Permanent contract in micro enterprise	Fixed-term contract in large or medium enterprise	Self-employed voluntarily contributing to JHT
Salary at age 30 in 2023	9 000 000	5 500 000	3 600 000	6 300 000	4 600 000
Labour Law					
15 years	9.7%	9.7%	9.7%	–	n/a
30 years	11.0%	11.0%	11.0%	–	n/a
JHT (contribution rate reduced to 2%)					
15 years	2.4%	2.4%	–	2.4%	2.4%
30 years	4.8%	4.8%	–	4.8%	4.8%
JP (1.33% accrual rate)*					
15 years	16.3%	16.3%	16.3%	16.3%	–
30 years	32.5%	32.5%	32.5%	32.5%	–
Social Pension					
15 years	5.0%	8.2%	12.5%	7.1%	9.8%
30 years	5.0%	8.2%	12.5%	7.1%	9.8%
Total					
15 years	33.3%	36.5%	38.4%	25.8%	12.2%
30 years	53.3%	56.4%	56.0%	44.4%	14.5%
Total (without Labour Law)					
15 years	23.6%	26.8%	28.7%	25.8%	12.2%
30 years	42.3%	45.4%	45.0%	44.4%	14.5%

– = nil.

– = Not applicable.

* The replacement rate of the JP pension is lower than 1.33 per cent multiplied by the number of years of contribution because replacement rates are calculated here based on the final-year salary (for consistency with the other schemes), and not on the average revalorized career earnings.

Table 6.12. Replacement rate from each source at retirement, by employment status and length of service (pensions paid from age 65) – Option 3

Length of service	Employment status				
	Permanent contract in large or medium enterprise	Permanent contract in small enterprise	Permanent contract in micro enterprise	Fixed-term contract in large or medium enterprise	Self-employed voluntarily contributing to JHT
Salary at age 30 in 2023	9 000 000	5 500 000	3 600 000	6 300 000	4 600 000
Labour Law					
15 years	9.7%	9.7%	9.7%	–	n/a
30 years	11.0%	11.0%	11.0%	–	n/a
JHT (contribution rate reduced to 2%)					
15 years	2.4%	2.4%	–	2.4%	2.4%
30 years	4.8%	4.8%	–	4.8%	4.8%
JP (1% accrual rate)*					
15 years	12.2%	12.2%	12.2%	12.2%	–
30 years	24.4%	24.4%	24.4%	24.4%	–
National Pension (IDN 1,000,000 after 30 years)					
15 years	9.1%	14.8%	22.6%	12.9%	17.7%
30 years	18.1%	29.6%	45.3%	25.9%	35.4%
Total					
15 years	33.3%	39.1%	44.5%	27.5%	20.1%
30 years	58.3%	69.8%	80.7%	55.0%	40.2%
Total (without Labour Law)					
15 years	23.6%	29.4%	34.8%	27.5%	20.1%
30 years	47.3%	58.8%	69.7%	55.0%	40.2%

– = nil.

– = Not applicable.

* The replacement rate of the JP pension is lower than 1.0 per cent multiplied by the number of years of contribution because replacement rates are calculated here based on the final-year salary (for consistency with the other schemes), and not on the average revalorized career earnings.

6.2.6. Contribution rates under reform

Tables 6.13, 6.14 and 6.15 compare contribution rates before and after the proposed reform options.

Options 1 and 2 consider the increase of the pension accrual rate of JP to 1.33 per cent per year. In that context, we retain the contribution rate schedule suggested under the parametric reform described in section 6.1. Under Option 3, even if the JP accrual rate remains at 1.00 per cent, we

consider the stated intention to increase the contribution rate every three years to eventually reach 8.0 per cent.[16]

It is assumed that the mandatory contribution rate of the JHT scheme is reduced to 2.0 per cent under the reform. The reduction of the JHT contribution rate from 5.7 to 2.0 per cent is used in part to finance the National Pension under Option 3.

The contribution rate associated with the National Pension (Option 3) is calculated as the flat-rate NP contribution (300,000 rupiah per month in 2023) divided by the average earnings of JP members. The cost of severance benefits (Labour Law) supported by employers is not considered in the tables.

For the overall cost, the government cost of financing part of the benefits should also be considered.

Table 6.13. Comparison of contribution rates before and after reform (Option 1)

	Present system				Reformed system		
Year	JP	JHT	Total		JP	JHT	Total
2025	3.0%	5.7%	8.7%		6.0%	2.0%	8.0%
2030	5.0%	5.7%	10.7%		6.0%	2.0%	8.0%
2035	7.0%	5.7%	12.7%		9.0%	2.0%	11.0%
2040	8.0%	5.7%	13.7%		9.0%	2.0%	11.0%
2045	8.0%	5.7%	13.7%		12.0%	2.0%	14.0%
2050	8.0%	5.7%	13.7%		12.0%	2.0%	14.0%

Table 6.14. Comparison of contribution rates before and after reform (Option 2)

	Present system				Reformed system		
Year	JP	JHT	Total		JP	JHT	Total
2025	3.0%	5.7%	8.7%		6.0%	2.0%	8.0%
2030	5.0%	5.7%	10.7%		6.0%	2.0%	8.0%
2035	7.0%	5.7%	12.7%		9.0%	2.0%	11.0%
2040	8.0%	5.7%	13.7%		9.0%	2.0%	11.0%
2045	8.0%	5.7%	13.7%		12.0%	2.0%	14.0%
2050	8.0%	5.7%	13.7%		12.0%	2.0%	14.0%

[16] It is supposed here that the JP contribution rate increases to 4 per cent in 2026, 5 per cent in 2029, 6 per cent in 2032, 7 percent in 2035 and 8 per cent from 2038 onwards.

Table 6.15. Comparison of contribution rates before and after reform – Option 3

	Present system				Reformed system			
Year	JP	JHT	Total		JP	JHT	NP*	Total
2025	3.0%	5.7%	8.7%		3.0%	2.0%	6.3%	11.3%
2030	5.0%	5.7%	10.7%		5.0%	2.0%	6.2%	13.2%
2035	7.0%	5.7%	12.7%		7.0%	2.0%	6.2%	15.2%
2040	8.0%	5.7%	13.7%		8.0%	2.0%	6.1%	16.1%
2045	8.0%	5.7%	13.7%		8.0%	2.0%	6.1%	16.1%
2050	8.0%	5.7%	13.7%		8.0%	2.0%	6.1%	16.1%

* For the worker earning the average wage.

▶ 7. Sickness benefits

This section presents the possible design and cost assessment of sickness benefits adapted to the situation of Indonesia.

7.1. Present provisions concerning sickness benefits in Indonesia

Under Article 93(2) of Law No. 13 of 2003 (the Labour Law), employers are liable for the payment of their employees' wages in case of sickness. The amount of wage payable is as follows:

- For the first four months, workers are entitled to receive 100 per cent of their wages.
- For the second four months, workers are entitled to receive 75 per cent of their wages.
- For the third four months, workers are entitled to receive 50 per cent of their wages.
- For subsequent month thereafter, workers are entitled to receive 25 per cent of their wages.

This law further prohibits dismissals during sick leave so long as the incapacity for work does not exceed 12 months.

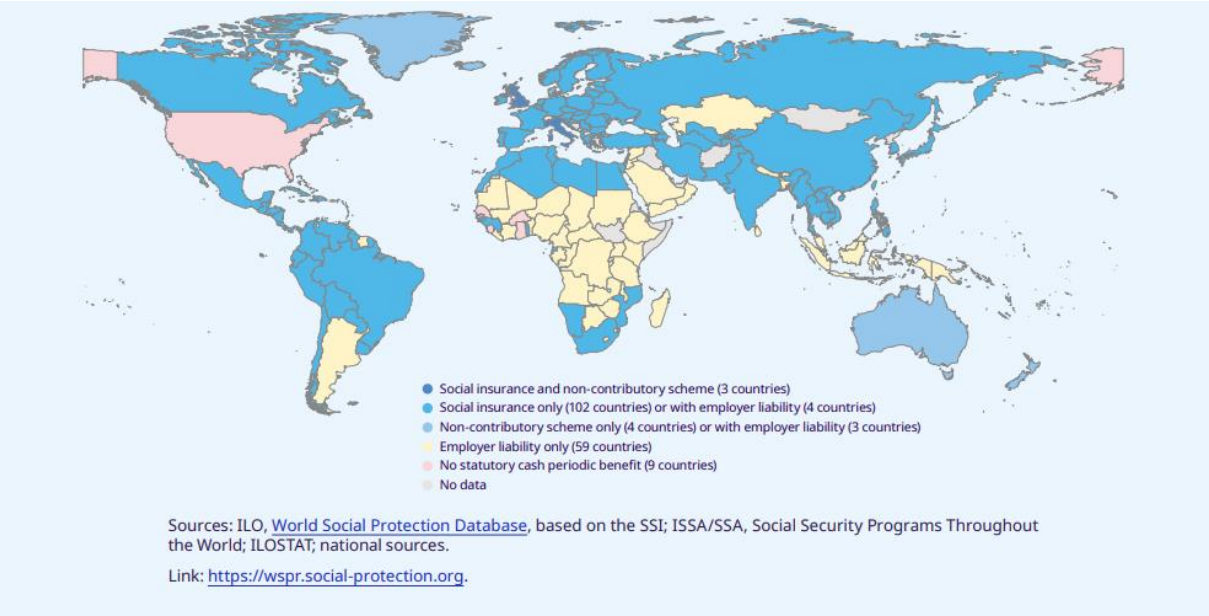
7.2. Overview of sickness protection around the world

The COVID-19 crisis demonstrated the importance of income security during ill health, including quarantine. Sickness benefits are crucial for prevention and physical recovery and to address health-related poverty. Currently, only a third of the world's working-age population have their income protected by law in case of sickness. This coverage is not always adequate, as benefit level, duration and eligibility criteria (such as waiting periods) may create gaps in protection.

Many countries have opted to provide paid sick leave fully or partially through employer liability rather that sickness benefits, which creates additional coverage gaps. Sole reliance on employer liability tends to exclude some categories of workers and create discrimination against workers with chronic conditions. Also, it may have adverse labour market impacts, lead to unfair competition and is not appropriate in case of public health crises, as the COVID-19 pandemic has illustrated.[17]

[17] ILO, World Social Protection Report 2020–22: Social Protection at the Crossroads – In Pursuit of a Better Future, 2021.

▶ **Figure 7.1. Sickness protection (cash benefits) anchored in law, 2020**



7.3. Options for Indonesia

7.3.1. Coverage

It is suggested that the sickness scheme covers all wage workers in Indonesia, corresponding to workers covered under JKK/JKM and construction workers.

7.3.2. Qualifying conditions

Persons would be eligible for sickness benefits if they paid contributions for 12 months in the last 18 months, or 12 months since the last payment of sickness benefit, if sickness benefits were received in the last 18 months.

7.3.3. Amount of benefit

Sickness benefits should be designed to replace a portion of lost income for a limited period. In deciding on the benefit structure, consideration must be given to the benefit rate and to the wages to be used as the basis for calculating the benefit. While the level of benefits should be sufficient to allow the recipient to maintain a certain standard of living, it should not be excessive in order to maintain an incentive to return to work.

Benefit rate. The ILO Convention No. 102 requires that sickness benefits shall not be less than 45 per cent of previous earnings, in the case of a standard beneficiary (a man with a wife and two children). The ILO Medical Care and Sickness Benefits Convention, 1969 (No. 130), recommends a replacement rate of 60 per cent. These two benefit levels are simulated in section 7.4 below, in addition to the benefit level presently paid in case of sick leave under the Labour Law (100 per cent for four months, 75 per cent for the subsequent four months, and 50 per cent thereafter).

Reference earnings. To ensure that the sickness benefit bears a close relationship to the claimant's earnings, insurable wages in a period just preceding sickness should be used as the basis for determining the weekly benefit amount. A six-month period would be a reasonable period over which to average insurable wages to reflect the recent earnings level and, at the same time, to avoid penalizing workers with a few weeks of low wages immediately preceding sickness.

Minimum benefit. The sickness benefit, in addition to replacing previous earnings, should provide sufficient income to face basic expenses during sickness. When benefit levels are calculated as a percentage of past earnings, the existence of a guaranteed minimum level is essential for low-income workers.

The minimum amount of the monthly sickness benefit could be established at 60 per cent of the minimum wage (median of provincial minimum wages).

7.3.4. Duration of payment

Waiting period. A waiting period before benefits commence should also be included. This waiting period avoids having persons who are sick for very short periods and claiming for only a few days. Therefore, it serves mainly to reduce the cost of administration. ILO Convention No. 102 states that a waiting period of three days may be introduced. A waiting period of three days is thus recommended for Indonesia. The employer will remain responsible for paying the first three days of sick leave.

Maximum duration. According to ILO Convention No. 102, the maximum duration of sickness benefits may be established at 26 weeks. ILO Convention No. 130 specifies a maximum duration of 52 weeks. These two payment durations are simulated in section 7.4.

7.3.5. Other considerations

Periods of sickness benefits should be recognized as credited service under the JP scheme.

7.4. Demographic and financial projections

It is supposed that the scheme would enter into force on 1 January 2023. The actuarial bases and assumptions used for the cost assessment are described in Appendix 4. Given that the average duration of sickness for persons collecting benefits is assumed to be 15 days, the cost of the different options is not affected by the maximum duration of payment. Only the benefit percentage affects costs.

As shown in table 7.1, the projected number of beneficiaries is 1.5 million in 2023, but it increases rapidly thereafter as a result of the increase of the insured population. The number of beneficiaries is projected to reach 2.4 million in 2035.

Table 7.1. Projected number of sickness beneficiaries by gender (2023–35)

Year	Number of beneficiaries		
	Males	Females	Total
2023	974 012	497 763	1 471 775
2024	1 017 295	528 848	1 546 143
2025	1 060 837	560 330	1 621 167
2026	1 104 626	592 220	1 696 846
2027	1 148 644	624 539	1 773 183
2028	1 192 941	657 331	1 850 272
2029	1 237 573	690 647	1 928 220
2030	1 282 569	724 504	2 007 074
2031	1 327 899	758 859	2 086 758
2032	1 373 467	793 626	2 167 093
2033	1 419 118	828 693	2 247 812
2034	1 464 653	863 918	2 328 571
2035	1 509 816	899 104	2 408 921

Following the discussion of section 7.3, four combinations of benefit percentage and maximum duration of payment are analysed here. The suggested contribution rates for the different options of sickness benefits appear in table 7.2.

Table 7.2. Suggested contribution rates for the different sickness benefits options

	Benefit percentage and duration of payment	Contribution rate (% of insured earnings)
Option 1	100% for first 4 months, 75% for subsequent 4 months, 50% for subsequent 4 months (maximum duration: 1 year)	0.65%
Option 2	60% for a maximum of 52 weeks	0.40%
Option 3	60% for a maximum of 26 weeks	0.40%
Option 4	45% for a maximum of 26 weeks	0.30%

Note: While the recommended contribution rate for Options 2 and 3 are the same, Option 2 will have a slightly higher cost than Option 3 due to the small amount of cases that in reality have sickness benefit duration of more than 26 weeks. However, these cases are likely to be negligible in reality (the analysis assumes average sickness benefit duration of 15 days).

The most appropriate funding method for such a benefit is pay-as-you-go (PAYG). Under this approach, the scheme's revenue for a given year should be just sufficient to meet the current year's expenditures. The social security institution should, however, establish a sickness contingency reserve. A small reserve should be set aside to cover costs should expenditure temporarily exceed income. A reserve equal to six months of the scheme's expenditure would be sufficient to leave time for an adjustment of the contribution rate in case of unfavourable experience. Some variation of the reserve below or above that level may be tolerated before considering a modification of the contribution rate.

An actuary should review the contribution rate at three-year intervals so that rate revisions can be recommended to avoid either overfunding or depletion of reserves. Such scheduled actuarial

reviews should not, however, preclude rate changes from taking place between reviews, should they become necessary.

It is worldwide practice for social security contributions relating to sickness benefits to be shared between employers and workers. Besides international experience, one also has to consider existing national legislation when determining the distribution of the contribution rate between the different actors under the scheme. Article 71 of Convention No. 102 stipulates that the employees should not contribute more than 50 per cent of the overall costs for social insurance. Furthermore, Article 71 of Convention No. 102 lays down that the State has the general responsibility for both the proper administration of the scheme and the provision of benefits.

Tables 7.3 to 7.6 present detailed financial projections for the different options.

Table 7.3. Sickness benefits: Option 1, contribution rate 0.65% – Projected revenues, expenditures and reserve, 2023–35 (billions rupiah)

	Revenues			Expenditures			Reserve		
Year	Contribution income	Investment income	Total	Benefits	Administrative expenses	Total	Amount (year-end)	Reserve ratio[1]	PAYG rate (%)
2023	5 420	–	5 420	5 164	258	5 422	-2	0.0	0.65
2024	6 117	–	6 117	5 821	291	6 112	4	0.0	0.65
2025	6 870	1	6 871	6 530	327	6 857	18	0.0	0.65
2026	7 692	2	7 694	7 306	365	7 671	41	0.0	0.65
2027	8 588	3	8 591	8 150	408	8 558	74	0.0	0.65
2028	9 563	6	9 568	9 069	453	9 523	119	0.0	0.65
2029	10 618	9	10 627	10 065	503	10 568	178	0.0	0.65
2030	11 764	12	11 777	11 145	557	11 702	252	0.0	0.65
2031	13 003	17	13 020	12 312	616	12 928	345	0.0	0.65
2032	14 338	23	14 361	13 569	678	14 247	458	0.0	0.65
2033	15 770	30	15 800	14 917	746	15 663	595	0.0	0.65
2034	17 302	39	17 341	16 359	818	17 177	760	0.0	0.65
2035	18 932	50	18 982	17 891	895	18 786	956	0.1	0.64

– = nil. [1] Expressed as the number of times the reserve covers current year's expenditures.

Table 7.4. Sickness benefits: Option 2, contribution rate 0.40% – Projected revenues, expenditures and reserve, 2023–35 (billions rupiah)

	Revenues			Expenditures			Reserve		
Year	Contribution income	Investment income	Total	Benefits	Administrative expenses	Total	Amount (year-end)	Reserve ratio[1]	PAYG rate (%)
2023	3 336	3	3 338	3 098	155	3 253	85	0.0	0.39
2024	3 765	8	3 772	3 492	175	3 667	190	0.1	0.39
2025	4 228	15	4 242	3 918	196	4 114	319	0.1	0.39
2026	4 734	23	4 756	4 383	219	4 603	473	0.1	0.39
2027	5 285	33	5 317	4 890	245	5 135	655	0.1	0.39
2028	5 885	44	5 929	5 442	272	5 714	870	0.2	0.39
2029	6 534	58	6 592	6 039	302	6 341	1 121	0.2	0.39
2030	7 239	73	7 313	6 687	334	7 021	1 412	0.2	0.39
2031	8 002	91	8 093	7 387	369	7 757	1 749	0.2	0.39
2032	8 823	112	8 935	8 141	407	8 548	2 136	0.2	0.39
2033	9 705	136	9 841	8 950	448	9 398	2 579	0.3	0.39
2034	10 648	164	10 811	9 815	491	10 306	3 084	0.3	0.39
2035	11 651	195	11 846	10 735	537	11 272	3 658	0.3	0.39

[1] Expressed as the number of times the reserve covers current year's expenditures.

Table 7.5. Sickness benefits: Option 3, contribution rate 0.40% – Projected revenues, expenditures and reserve, 2023–35 (billions rupiah)

	Revenues			Expenditures			Reserve		
Year	Contribution income	Investment income	Total	Benefits	Administrative expenses	Total	Amount (year-end)	Reserve ratio[1]	PAYG rate (%)
2023	3 336	3	3 338	3 098	155	3 253	85	0.0	0.39
2024	3 765	8	3 772	3 492	175	3 667	190	0.1	0.39
2025	4 228	15	4 242	3 918	196	4 114	319	0.1	0.39
2026	4 734	23	4 756	4 383	219	4 603	473	0.1	0.39
2027	5 285	33	5 317	4 890	245	5 135	655	0.1	0.39
2028	5 885	44	5 929	5 442	272	5 714	870	0.2	0.39
2029	6 534	58	6 592	6 039	302	6 341	1 121	0.2	0.39
2030	7 239	73	7 313	6 687	334	7 021	1 412	0.2	0.39
2031	8 002	91	8 093	7 387	369	7 757	1 749	0.2	0.39
2032	8 823	112	8 935	8 141	407	8 548	2 136	0.2	0.39
2033	9 705	136	9 841	8 950	448	9 398	2 579	0.3	0.39
2034	10 648	164	10 811	9 815	491	10 306	3 084	0.3	0.39
2035	11 651	195	11 846	10 735	537	11 272	3 658	0.3	0.39

[1] Expressed as the number of times the reserve covers current year's expenditures.

Table 7.6. Sickness benefits: Option 4, contribution rate 0.30% – Projected revenues, expenditures and reserve, 2023–35 (billions rupiah)

	Revenues			Expenditures			Reserve		
Year	Contribution income	Investment income	Total	Benefits	Administrative expenses	Total	Amount (year-end)	Reserve ratio[1]	PAYG rate (%)
2023	2 502	2	2 504	2 324	116	2 440	64	0.0	0.29
2024	2 823	6	2 829	2 619	131	2 750	143	0.1	0.29
2025	3 171	11	3 182	2 939	147	3 086	239	0.1	0.29
2026	3 550	17	3 567	3 288	164	3 452	354	0.1	0.29
2027	3 964	24	3 988	3 668	183	3 851	491	0.1	0.29
2028	4 413	33	4 447	4 081	204	4 285	653	0.2	0.29
2029	4 901	43	4 944	4 529	226	4 756	841	0.2	0.29
2030	5 430	55	5 485	5 015	251	5 266	1 059	0.2	0.29
2031	6 002	69	6 070	5 541	277	5 818	1 312	0.2	0.29
2032	6 617	84	6 702	6 106	305	6 411	1 602	0.2	0.29
2033	7 278	102	7 381	6 713	336	7 048	1 934	0.3	0.29
2034	7 986	123	8 108	7 361	368	7 730	2 313	0.3	0.29
2035	8 738	146	8 884	8 051	403	8 454	2 744	0.3	0.29

[1] Expressed as the number of times the reserve covers current year's expenditures.

▶ 8. Maternity benefits

This section outlines policy considerations and a cost assessment for a maternity benefit scheme adapted to the situation of Indonesia.

8.1. Present provisions concerning maternity benefits in Indonesia

Healthcare during maternity and delivery is provided under the national health insurance (Jaminan Kesehatan Nasional, or JKN) scheme. However, cash maternity benefits are not included in the scope of application of the Law on the National Social Security System (Law No. 40/2004). As such, this benefit is not provided through a contributory or tax-financed social security scheme, but in the framework of an employer liability system.

The legal framework concerning maternity leave is laid down by the Labour Law, which requires employers to pay the employee's monthly salary for three months, 1.5 months before birth, and 1.5 months afterward. The labour legislation does not stipulate a minimum period of employment required for entitlement to maternity leave.

In addition, the following leaves are provided under the Labour Law:

- Miscarriage leave (art. 82(2)): A female worker/labourer who has a miscarriage is entitled to a period of rest of 1.5 months or a period of rest as stated in the medical statement issued by the obstetrician or midwife who treats her.
- Paternity leave (art. 93(4)e): If a worker/labourer is absent from work because his wife gives birth to a baby or his wife suffers a miscarriage, he shall be entitled to receive a payment for two days' work during the absence.

A recent draft legislation (December 2021) aims at extending to six months the duration of the maternity leave under the Labour Law.

There are several limitations of relying on employer liability systems for the provision of social security. Systems where employers are individually liable for covering the direct costs of benefits might result in discriminatory practices against certain groups. In particular, the cost of maternity leave might affect the employment prospects of female workers. Likewise, compliance with individual employer liability schemes is often problematic, particularly in developing countries, where employers often do not pay the wage replacement and legislation is often not enforced.

8.2. Overview of maternity protection around the world

In 2021, almost all of the 185 countries surveyed by the ILO have adopted statutory provisions for maternity leave in their legislation.[18] The findings show that there are variations regarding adherence to the requirements of the ILO Maternity Protection Convention, 2000 (No. 183), across countries and across groups of women workers, depending on where they work.

ILO standards mandate a minimum maternity leave period of 14 weeks and recommend increasing it to at least 18 weeks to ensure an adequate rest and recovery time for the mother. In 2021, the duration of maternity leave is at least 14 weeks in 120 countries. In addition, 52 countries meet or exceed the ILO 18-week standard, with 3 in 10 potential mothers globally living in these

[18] Addati, Umberto and Emanuela, Care at work: Investing in care leave and services for a more gender equal world of work, 2022.

countries. Since 2011, 23 new countries have met or exceeded the ILO 14-week standard, pointing to the inspirational role of international labour standards even in countries that have not ratified the ILO Maternity Protection Conventions. However, in 64 countries the duration of maternity leave is still below 14 weeks. This leaves 3 in 10 of potential mothers across the world without entitlements to sufficient time off to rest and recover from childbirth and care for their new-born child.

The amount of maternity leave cash benefits should be adequate to keep the mother and her child healthy and out of poverty and hardship, especially women in the informal economy. ILO standards require the amount of cash benefits to be at least two-thirds (67 per cent) of the woman's previous earnings and recommend increasing it to 100 per cent, when possible. Across the world in 2021, the average duration of maternity leave paid at a rate of at least 67 per cent of previous earnings was 18.0 weeks. This represents an increase of 3.5 weeks since 2011. Globally, 123 countries offer fully paid maternity leave, with 9 in 10 potential mothers living in these countries. Since 2011, 10 countries have increased the amount of maternity leave cash benefits. However, in 13 countries maternity leave cash benefits remain below two-thirds of previous earnings; while in 3 countries maternity leave is still unpaid or not provided.

Maternity protection is a public good and a collective responsibility. ILO standards require that employers should not be individually liable for the direct cost of maternity leave and these cash benefits shall be provided through compulsory social insurance or public funds or non-contributory social assistance to women who do not qualify for benefits out of social insurance. This is especially the case for workers in the informal economy or self-employed women. In 2021, more than two-thirds of potential mothers live in countries where maternity leave cash benefits are funded through social protection. However, 2 in 10 potential mothers remain at risk of inadequate protection and discrimination; since in 45 countries the law still requires full payment of maternity leave by employers. Since 2011, only 8 countries have moved away from employer liability schemes to social security or mixed schemes.

8.3. Options for Indonesia

8.3.1. Coverage

It is suggested that the maternity scheme covers all wage workers in Indonesia, corresponding to workers covered under JKK/JKM and construction workers.

8.3.2. Qualifying conditions

Most countries that have maternity cash benefits schemes in place have introduced at least some specific qualifying conditions for entitlement to benefits, in order to preclude abuse of the scheme. As further indicated, where insurance schemes are concerned, such qualifying periods are usually linked to periods of employment or contributions.

Variations in the length of qualifying periods are allowed under Article 51 of Convention No. 102, as long as such length may be justified as necessary to preclude abuse. Article 6 of Convention No 183 requires that conditions to qualify for cash benefits must be set in such a way that they can be met by a large majority of women in the country concerned.

For Indonesia, it is suggested that persons would be eligible for maternity/paternity benefits if they paid contributions for 12 months in the 18-month period preceding the maternity leave. This qualifying period should be reviewed periodically to ensure that it is not longer than necessary to preclude abuse and that it does not deprive women of the rights to which they were entitled under the current Labour Law.

It should be considered, as a minimum condition for entitlement to cash benefits, that women be required to provide a medical certificate stating the expected date of childbirth. In addition, as the contingency of maternity covers suspension of earnings due to pregnancy and confinement and their consequences, it should be considered to require the suspension of work by the woman concerned, to avoid that she receives cash benefits for leave in addition to her salary. Such a requirement prevents the woman from resuming work before the completion of the statutory leave period, which would be desirable for both the mother's health and the child's well-being.

8.3.3. Maternity allowance

The maternity allowance should be designed to replace a portion of lost income for a limited period. In deciding on the benefit structure, consideration must be given to the benefit rate and to the wages to be used as the basis for calculating the benefit.

Benefit rate. ILO Convention No. 102 requires that the maternity benefit shall be not less than 45 per cent of previous earnings. On the other hand, ILO Convention No. 183 suggests a benefit rate of 67 per cent. The Labour Law provides for the payment of full salary by the employer during the maternity leave. These three benefit levels are simulated below.

Reference earnings. To ensure that the maternity allowance bears a close relationship to the claimant's earnings, insurable wages in a period just preceding the maternity leave should be used as the basis for determining the monthly benefit amount. A six-month period would be a reasonable period over which to average insurable wages to reflect the recent earnings level and, at the same time, to avoid penalizing workers with a few weeks of low wages immediately preceding their maternity leave.

Minimum benefit. A minimum benefit could be introduced to cover cases where wages in the reference period are extremely low. The maternity allowance, in addition to replacing previous earnings, should provide sufficient income to face basic expenses during the period of maternity leave. The minimum amount of the monthly maternity benefit should be related to the percentage replacement rate of the maternity benefit, at 45, 67 or 100 per cent of the minimum wage, depending on the option retained.

Duration of payment. ILO Conventions Nos 102 and 183 respectively provide for a minimum paid maternity leave period of 12 and 14 weeks. Under the Labour Law, the salary is paid during the maternity leave for a period of three months (six months according to the draft legislation presently before the Parliament).

Three different payment durations are thus simulated below: 13 weeks (in line with the Labour Law), 14 weeks (in line with Convention No. 183) and 26 weeks (in line with the draft legislation modifying the Labour Law).

Miscarriage. In case of miscarriage under the Labour Law, the full salary is paid to the woman for a period of 1.5 month. A similar benefit should be paid under the proposed maternity benefit scheme.

Minimum post-natal leave. It is recommended to include, within the maternity leave period, a compulsory leave period of six weeks after the birth of the child, during which return to work may not be allowed, to avoid that under-pressure women resume work to the detriment of their health and that of their child. Regarding the remaining compulsory period, it should be left to the pregnant woman to decide when to take it. In general, it would be expected that the woman would start the maternity leave period at least two weeks before the expected date of the childbirth.

Prolonged leave for medical reasons. Article 52 of Convention No. 102 prescribes that, where a longer period of abstention from work is required or authorized by national laws or regulations, the paid leave period may not be limited to a period less than such longer period. In addition, Article 5 of Convention No. 183 stipulates that on production of a medical certificate, leave shall

be provided before or after the maternity leave period in case of illness, complications or risks of complications arising out of pregnancy or childbirth. The nature and maximum duration of such leave may be specified in accordance with national law and practice. Most countries authorize a prolonged period of paid leave in case of illness, complications or risk of complications arising out of pregnancy or childbirth and its consequences, which is often granted under sickness benefits schemes.

In cases where the woman is eligible for both sickness and prolonged maternity leave for medical reasons, maternity benefits should be prioritized and the persons should not receive both benefits for the same period.

Prolonged leave for multiple births. Some countries grant a prolonged maternity leave in case of multiple births. Although the relevant ILO Conventions do not require the granting of such an additional leave period, Paragraph 1(2) of Recommendation No. 191 suggests that provision for the extension of the leave period should be made in the event of multiple births.

8.3.4. Paternity allowance

Current international labour standards do not yet explicitly regulate paternity leave provisions. However, the 2009 International Labour Conference has recognized that paternity leave can help working fathers to be more involved in childcare, thus contributing to defeating long-standing gender stereotypes.

A paternity allowance of one week is recommended for Indonesia. The benefit rate would 100 per cent of the father's salary. The paternity allowance would be paid at a time chosen by the father during the maternity leave of the mother.

8.3.5. Parental allowance

In addition to maternity leave, access to other kinds of family leave for the care of newborn and young children is important for a worker's ability to reconcile work and family life – such as parental leave. Parental leave tends to be a longer period of leave to care for the child beyond maternity and paternity leave and is typically available to one or both of the parents, with some countries now making available non-transferable portions of parental leave to each parent. Adoption leave provides time for parents to care for their adopted children.

While there is not yet a dedicated ILO Convention on parental leave, the Workers with Family Responsibilities Recommendation, 1981 (No. 165), and the Maternity Protection Recommendation, 2000 (No. 191), both contain provisions on parental leave. According to these Recommendations, a period of parental leave should be available to either parent after maternity leave without relinquishing employment, and with parents' employment rights being protected. The duration and conditions of this leave period, as well as the payment and other aspects, such as the use and distribution of parental leave between the parents, are not set by the Recommendations but should be determined at the national level.[19]

An important element in the design of parental leave entitlements is whether the provisions are shared entitlements or non-transferable entitlements between parents. Under shared entitlements, either the mother or the father has the right to take parental leave and the parents determine the allocation of leave themselves. Under the individual rights' approach, the parental leave attributed to each parent cannot be transferred to the other parent, so that fathers who do not use their "quota" lose it.[20]

[19] ILO, Care at Work: Investing in Care Leave and Services for a More Gender Equal World of Work, 2022.

[20] ILO, *Maternity and Paternity at Work: Law and Practice Across the World*, 2014.

8.3.6. Birth grant

A birth grant would be paid for each birth to persons who satisfy the contribution requirement for the maternity allowance. It would also be paid to insured men if there is a birth in the family and the mother is not insured. It would be payable for each birth in case of multiple births. It would be possible to link the payment of the birth grant to a medical follow-up during pregnancy. The amount of the grant could be set at 100 per cent of the monthly minimum wage.

8.3.6. Other considerations

Other elements should also be considered in the reflection concerning maternity benefits:

- Periods of maternity benefits should be recognized as credited service under the JP scheme.
- The Labour Law should protect employment during the 52 weeks after the beginning of the maternity leave.

8.4. Demographic and financial projections

To calculate the costs of maternity cash benefits, several factors need to be considered. These include:

- **The average number of qualifying births per covered woman.** This is linked to general fertility rates in the country. However, the fertility pattern of insured women may be different from the fertility pattern of the general population.
- **The proportion of women in the covered population (covered employees).** The costs of maternity leave are spread across both women and men workers, and hence the lower the proportion of women of child-bearing age in the paid workforce, the lower the comparative cost.
- **The ratio of the earnings of women qualifying for maternity leave to average earnings.** In most countries, women on average still earn less than men, and this effect may be reinforced if women taking maternity leave are younger and more junior in pay status than female workers as a whole. Whatever other problems this disparity creates, it has the technical effect of lowering the cost of maternity cash benefits.
- **The replacement ratio.** The cost of the scheme increases with the percentage of insurable wage/earnings replaced by the maternity cash benefits for the women concerned.
- **The period of paid maternity leave.** The cost is proportional to the duration of paid maternity leave.
- The proportion of insured males who are married and the probability that the wife is insured. In cases where a portion of parental benefits may be paid to fathers.
- **Administrative costs also affect the level of overall costs of paid maternity leave.** In countries where social security systems are in place, maternity protection schemes are usually part of these systems, and thus, are administered by the national social security institution. This tends to reduce the incremental administrative costs, as these institutions already have in place the mechanisms for the registration of employers and insured persons, for the collection of contributions, and for the payment of benefits. Therefore, additional administrative costs for administering maternity cash benefits schemes mainly relate to the payment of staff responsible for the processing of claims and to information campaigns. Some small costs arise also through the separate accounting of contributions and benefits and the establishment and maintenance of the appropriate database.

The actuarial bases and assumption used for the cost assessment are described in Appendix 4.

It is supposed that the scheme would enter into force on 1 January 2023. The projected number of mothers receiving the allowance is around 400,000 per year in the early years. This number is increasing over time as a result of the projected increase of the population of insured women, but is also constrained by the projected decrease of the total fertility rate. The projected number of female beneficiaries reaches 527,587 in 2035 (see table 8.1).

Table 8.1. Projected number of Maternity beneficiaries, 2023-2035

	Number of beneficiaries		
Year	Maternity allowance (insured mothers)	Paternity allowance (insured fathers)	Parental leave and birth grant (insured mothers and uninsured mothers with insured men)
2023	391 992	444 819	764 383
2024	407 684	466 458	793 763
2025	422 220	486 936	820 997
2026	436 253	506 595	847 141
2027	449 373	524 641	871 215
2028	461 436	540 546	892 777
2029	472 838	554 876	912 714
2030	483 296	566 951	930 219
2031	493 425	577 825	946 665
2032	502 959	587 159	961 480
2033	511 848	594 794	974 515
2034	520 029	601 014	985 932
2035	527 587	606 249	996 090

The contribution rates necessary to finance maternity benefits (maternity allowance, paternity allowance, parental allowance, and birth grant) according to the different options described in section 8.3 would be as appearing in table 8.2.

Table 8.2. Suggested contribution rates for the different maternity benefits options

	Benefit provisions	Contribution rate (% of insured earnings)
Maternity allowance		
Option 1	100% for a maximum of 13 weeks	0.65%
Option 2	100% for a maximum of 14 weeks	0.70%
Option 3	67% for a maximum of 14 weeks	0.50%
Option 4	45% for a maximum of 14 weeks	0.32%
Option 5	67% for a maximum of 26 weeks	0.87%
Option 6	100% for a maximum of 26 weeks	1.30%
Paternity allowance		
Option 1	100% for a maximum of 1 week	0.05%
Option 2	100% for a maximum of 6 weeks	0.25% [1]
Parental allowance		
	45% for a maximum of 4 weeks	0.15%
Birth grant		
	100% of the monthly minimum wage	0.10% [2]

1. For this option, it is assumed that fathers will claim only 80 per cent of the maximum period on average, or 4.8 weeks.

2. The cost of the birth grant (expressed as a percentage of insured earnings) will increase over time if the amount of the grant is adjusted annually in line with the general wage growth; the benefit amount (minimum wage) would increase at the same pace as the general wage growth, while the annual increase of total insured earnings is limited to the real GDP growth.

Note: Contribution rates are determined by projecting the scheme's cash flows over a period of ten years to find an average contribution rate guaranteeing the development of a positive reserve over the period (without excessive accumulation). Some contribution rates are rounded.

Tables 8.3 to 8.8 present financial projections regarding the maternity allowance under the six options. It shows that the contribution rates proposed in table 8.2 are those required to generate positive reserves as soon as possible in the early years of existence of the scheme. However, it should be possible to reduce these contribution rates at a later stage when the expenditures of the scheme as a percentage of total insured earnings (the PAYG rate, shown in the last column of the tables) will gradually decrease. The PAYG rate will decrease over time because: (1) fertility rates are projected to decrease over time; and (2) the average age of the insured population will increase over time (relatively more contributors at ages where fertility is lower).

The most appropriate funding method for such a benefit is pay-as-you-go (PAYG). Under this approach, the scheme's revenue for a given year should be just sufficient to meet current year's expenditures. The social security institution should, however, establish a maternity contingency reserve. A small reserve should be set aside to cover costs should expenditure temporarily exceed income. A reserve equal to six months of the scheme's expenditure would be sufficient to leave time for an adjustment of the contribution rate in case of unfavorable experience. Some variation of the reserve below or above that level may be tolerated before considering a modification of the contribution rate.

An actuary should review the contribution rate at three-year intervals so that rate revisions can be recommended to avoid either overfunding or depletion of reserves. Such scheduled actuarial reviews should not, however, preclude rate changes from taking place between reviews, should they become necessary.

It is worldwide practice for social security contributions relating to maternity benefits to be shared between employers and workers. Besides international experience, one also has to consider existing national legislation when determining the distribution of the contribution rate between the different actors under the scheme. Article 71 of Convention No. 102 stipulates that the employees should not contribute more than 50 per cent of the overall costs for social insurance. Furthermore, Article 71 of Convention No. 102 lays down that the State has the general responsibility for both the proper administration of the scheme and the provision of benefits.

Table 8.3. Maternity allowance: Option 1, contribution rate 0.65% – Projected revenues, expenditures and reserve, 2023–35 (billions rupiah)

	Revenues			Expenditures			Reserve		
Year	Contribution income	Investment income	Total	Benefits	Administrative expenses	Total	Amount (year-end)	Reserve ratio[1]	PAYG rate (%)
2023	5 420	-6	5 414	5 365	268	5 633	-219	0.0	0.68
2024	6 117	-18	6 099	5 995	300	6 295	-415	-0.1	0.67
2025	6 870	-28	6 842	6 651	333	6 984	-556	-0.1	0.66
2026	7 692	-34	7 658	7 353	368	7 721	-619	-0.1	0.65
2027	8 588	-34	8 553	8 094	405	8 498	-564	-0.1	0.64
2028	9 563	-26	9 536	8 869	443	9 313	-340	0.0	0.63
2029	10 618	-7	10 611	9 685	484	10 169	102	0.0	0.62
2030	11 764	27	11 791	10 537	527	11 063	829	0.1	0.61
2031	13 003	79	13 082	11 437	572	12 008	1 903	0.2	0.60
2032	14 338	153	14 490	12 378	619	12 997	3 396	0.3	0.59
2033	15 770	254	16 024	13 359	668	14 027	5 393	0.4	0.58
2034	17 302	386	17 688	14 377	719	15 096	7 985	0.5	0.57
2035	18 932	556	19 489	15 433	772	16 204	11 269	0.7	0.56

[1] Expressed as the number of times the reserve covers current year's expenditures. A negative reserve means that the scheme would have to borrow to finance current expenditures (leading to negative investment income, or interest on a loan contracted), or alternatively that the social security institution would have to subsidize the JP scheme from other social security funds.

Table 8.4. Maternity allowance: Option 2, contribution rate 0.70% – Projected revenues, expenditures and reserve, 2023–35 (billions rupiah)

	Revenues			Expenditures			Reserve		
Year	Contribution income	Investment income	Total	Benefits	Administrative expenses	Total	Amount (year-end)	Reserve ratio[1]	PAYG rate (%)
2023	5 837	-7	5 830	5 778	289	6 066	-236	0.0	0.73
2024	6 588	-20	6 568	6 456	323	6 779	-447	-0.1	0.72
2025	7 399	-30	7 368	7 163	358	7 521	-599	-0.1	0.71
2026	8 284	-37	8 247	7 919	396	8 315	-666	-0.1	0.70
2027	9 248	-37	9 211	8 716	436	9 152	-607	-0.1	0.69
2028	10 298	-28	10 270	9 551	478	10 029	-366	0.0	0.68
2029	11 435	-8	11 427	10 430	521	10 951	110	0.0	0.67
2030	12 669	29	12 698	11 347	567	11 914	893	0.1	0.66
2031	14 004	85	14 088	12 316	616	12 932	2 049	0.2	0.65
2032	15 440	165	15 605	13 330	667	13 997	3 657	0.3	0.63
2033	16 983	273	17 256	14 386	719	15 106	5 808	0.4	0.62
2034	18 633	416	19 049	15 483	774	16 257	8 600	0.5	0.61
2035	20 389	599	20 988	16 620	831	17 451	12 136	0.7	0.60

[1] Expressed as the number of times the reserve covers current year's expenditures. A negative reserve means that the scheme would have to borrow to finance current expenditures (leading to negative investment income, or interest on a loan), or alternatively that the social security institution would have to subsidize the JP scheme from other social security funds.

Table 8.5. Maternity allowance: Option 3, contribution rate 0.50% – Projected revenues, expenditures and reserve, 2023–35 (billions rupiah)

	Revenues			Expenditures			Reserve		
Year	Contribution income	Investment income	Total	Benefits	Administrative expenses	Total	Amount (year-end)	Reserve ratio[1]	PAYG rate (%)
2023	4 169	3	4 173	3 871	194	4 064	108	0.0	0.49
2024	4 706	11	4 717	4 325	216	4 542	283	0.1	0.48
2025	5 285	24	5 309	4 799	240	5 039	553	0.1	0.48
2026	5 917	43	5 960	5 305	265	5 571	943	0.2	0.47
2027	6 606	70	6 676	5 840	292	6 132	1 487	0.2	0.46
2028	7 356	107	7 463	6 399	320	6 719	2 230	0.3	0.46
2029	8 168	157	8 325	6 988	349	7 337	3 218	0.4	0.45
2030	9 049	223	9 272	7 602	380	7 983	4 508	0.6	0.44
2031	10 003	308	10 310	8 252	413	8 664	6 154	0.7	0.43
2032	11 029	415	11 444	8 931	447	9 378	8 220	0.9	0.43
2033	12 131	549	12 680	9 639	482	10 121	10 779	1.1	0.42
2034	13 309	713	14 023	10 374	519	10 892	13 909	1.3	0.41
2035	14 563	913	15 477	11 135	557	11 692	17 694	1.5	0.40

[1] Expressed as the number of times the reserve covers current year's expenditures. A negative reserve means that the scheme would have to borrow to finance current expenditures (leading to negative investment income, or interest on a loan), or alternatively that the social security institution would have to subsidize the JP scheme from other social security funds.

Table 8.6. Maternity allowance: Option 4, contribution rate 0.32% – Projected revenues, expenditures and reserve, 2023–35 (billions rupiah)

	Revenues			Expenditures			Reserve		
Year	Contribution income	Investment income	Total	Benefits	Administrative expenses	Total	Amount (year-end)	Reserve ratio[1]	PAYG rate (%)
2023	2 668	-2	2 667	2 600	130	2 730	-63	0.0	0.33
2024	3 012	-5	3 007	2 905	145	3 050	-107	0.0	0.32
2025	3 382	-6	3 376	3 223	161	3 384	-116	0.0	0.32
2026	3 787	-6	3 781	3 563	178	3 742	-76	0.0	0.32
2027	4 228	-1	4 226	3 922	196	4 118	32	0.0	0.31
2028	4 708	8	4 715	4 298	215	4 513	235	0.1	0.31
2029	5 227	23	5 250	4 693	235	4 928	557	0.1	0.30
2030	5 792	46	5 837	5 106	255	5 361	1 032	0.2	0.30
2031	6 402	79	6 480	5 542	277	5 819	1 693	0.3	0.29
2032	7 058	123	7 182	5 999	300	6 299	2 576	0.4	0.29
2033	7 764	182	7 946	6 474	324	6 798	3 724	0.5	0.28
2034	8 518	257	8 775	6 967	348	7 316	5 184	0.7	0.27
2035	9 321	352	9 673	7 479	374	7 853	7 004	0.9	0.27

[1] Expressed as the number of times the reserve covers current year's expenditures. A negative reserve means that the scheme would have to borrow to finance current expenditures (leading to negative investment income, or interest on a loan), or alternatively that the social security institution would have to subsidize the JP scheme from other social security funds.

Table 8.7. Maternity allowance: Option 5, contribution rate 0.87% – Projected revenues, expenditures and reserve, 2023–35 (billions rupiah)

	Revenues			Expenditures			Reserve		
Year	Contribution income	Investment income	Total	Benefits	Administrative expenses	Total	Amount (year-end)	Reserve ratio[1]	PAYG rate (%)
2023	7 255	-9	7 246	7 189	359	7 548	-302	0.0	0.91
2024	8 188	-25	8 163	8 033	402	8 435	-574	-0.1	0.90
2025	9 195	-39	9 156	8 912	446	9 358	-776	-0.1	0.89
2026	10 296	-48	10 248	9 853	493	10 346	-874	-0.1	0.87
2027	11 494	-49	11 445	10 846	542	11 388	-816	-0.1	0.86
2028	12 799	-39	12 760	11 885	594	12 479	-536	0.0	0.85
2029	14 212	-15	14 197	12 978	649	13 627	35	0.0	0.83
2030	15 746	29	15 775	14 119	706	14 825	985	0.1	0.82
2031	17 404	97	17 502	15 325	766	16 091	2 396	0.1	0.80
2032	19 190	195	19 385	16 587	829	17 416	4 365	0.3	0.79
2033	21 107	328	21 435	17 901	895	18 796	7 004	0.4	0.77
2034	23 158	503	23 662	19 265	963	20 228	10 438	0.5	0.76
2035	25 340	729	26 069	20 680	1 034	21 714	14 793	0.7	0.75

[1] Expressed as the number of times the reserve covers current year's expenditures. A negative reserve means that the scheme would have to borrow to finance current expenditures (leading to negative investment income, or interest on a loan), or alternatively that the social security institution would have to subsidize the JP scheme from other social security funds.

Table 8.8. Maternity allowance: Option 6, contribution rate 1.30% – Projected revenues, expenditures and reserve, 2023–35 (billions rupiah)

	Revenues			Expenditures			Reserve		
Year	Contribution income	Investment income	Total	Benefits	Administrative expenses	Total	Amount (year-end)	Reserve ratio[1]	PAYG rate (%)
2023	7 255	-122	7 133	10 730	536	11 266	-4 134	-0.4	1.35
2024	8 188	-375	7 813	11 990	599	12 589	-8 910	-0.7	1.34
2025	9 195	-671	8 524	13 302	665	13 967	-14 353	-1.0	1.32
2026	10 296	-1 007	9 289	14 706	735	15 441	-20 505	-1.3	1.30
2027	11 494	-1 384	10 110	16 188	809	16 997	-27 391	-1.6	1.29
2028	12 799	-1 804	10 996	17 738	887	18 625	-35 021	-1.9	1.27
2029	14 212	-2 267	11 945	19 370	968	20 338	-43 415	-2.1	1.25
2030	15 746	-2 775	12 971	21 073	1 054	22 127	-52 570	-2.4	1.22
2031	17 404	-3 327	14 077	22 873	1 144	24 017	-62 510	-2.6	1.20
2032	19 190	-3 925	15 265	24 756	1 238	25 994	-73 239	-2.8	1.18
2033	21 107	-4 569	16 538	26 718	1 336	28 054	-84 755	-3.0	1.16
2034	23 158	-5 258	17 900	28 754	1 438	30 192	-97 046	-3.2	1.13
2035	25 340	-5 992	19 349	30 866	1 543	32 409	-110 106	-3.4	1.11

[1] Expressed as the number of times the reserve covers current year's expenditures. A negative reserve means that the scheme would have to borrow to finance current expenditures (leading to negative investment income, or interest on a loan), or alternatively that the social security institution would have to subsidize the JP scheme from other social security funds.

▶ Actuarial opinion

This report was prepared as requested under article 28(4) of Government Regulation No. 44 of 2015. In our opinion,

- the data on which this report is based are sufficient and reliable;
- the assumptions used are, individually and in aggregate, reasonable and appropriate; and
- the methodology employed is appropriate and consistent with accepted actuarial practice.

Based on the results of this actuarial analysis, we hereby certify that the JP scheme is not financially sustainable over the period covered by the projections in this report. This means that in considering applicable financing rules and the future demographic and economic environment in which it will operate, the current assets of the scheme, together with future contributions, will not be sufficient to pay all future benefits and administrative and operational expenses over the period covered by the projections in this report.

This report has been prepared, and our opinions given, in accordance with internationally accepted actuarial practice as provided by the *International Standard of Actuarial Practice 2: Financial Analysis of Social Security Programs*.

15 June 2023

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DWT for East and South-East Asia and the Pacific

▶ Appendix 1. Overview of the social security system

This appendix presents a general overview of the key coverage, contribution and benefit provisions of social security law.

A1.1. History and structure of the social security system

The Law on the National Social Security System (Law No. 40/2004) lays down the general framework for the establishment of a comprehensive and coordinated social security system based on the principles of humanity, equality and social justice. As formulated in the law, the healthcare programme targets the whole population. The other four schemes provide employment injury benefits (JKK), old-age pension (JP), old-age lump sum benefits (JHT), and death benefits (JKM), and they aim to cover prescribed classes of employees, mainly wage workers. The implementation of this law followed a progressive approach, based on the economic capacity of the population.

The Social Security Organizing Agency Law (Law No. 24/2011), on the other hand, outlines the institutional architecture that shall be established to enable the progressive extension of coverage under the National Social Security System (SJSN)[21]. Law No. 24/2011 provides for the establishment of two national social security administering bodies: BPJS Kesehatan responsible for managing the healthcare programme (Jaminan Kesehatan National, or JKN), and BPJS Ketenagakerjaan entrusted with the administration of the four contributory schemes mentioned above.

A1.2. Situation before Law No. 40/2004

Before the implementation of Law No. 40/2004 and Law No. 24/2011, civil servants, members of the military and the police were the only groups entitled to periodic benefits in the form of old-age, disability, and survivor's pensions. PT Taspen and PT Asabri manage these defined benefit schemes, respectively.[22] PT Askes administered the national medical care programme for public sector employees and their families until 2014, when the National Health Insurance Programme (JKN) was implemented.

Private sector workers were covered by a social insurance healthcare programme and fully funded schemes that provided mostly lump sum benefits in the event of old age, disability and survivorship. PT Jamsostek managed the schemes available for private sector employees from 1992 to 2015. PT Jamsostek's programme was composed of four schemes: medical care services, old-age savings, employment injury insurance, and death benefits.

Registration in PT Jamsostek's programme was mandatory for companies employing ten persons or more, or whose monthly total payroll was at least 1 billion rupiah. Self-employed persons could join voluntarily.

Since the introduction of the PT Jamsostek programme in 1992, the provision of social security benefits for private sector employees and those considered as non-wage workers was mostly limited to lump sum benefits, and a few periodic benefits in case of permanent disability or death of the breadwinner, which were payable for up to 24 months.

[21] SJSN is the Indonesian abbreviation for Sistem Jaminan Sosial Nasional.

[22] PT Taspen still manages a separate pension scheme for civil servants and government employees who are not civil servants. Members of the national police, armed forces, and employees of the Minister of Defence are covered by a special system administered by PT Asabri.

Although most of the features of the old-age savings plan and death insurance schemes have not changed significantly over the last two decades, the administration of these social security programmes was substantially transformed with the implementation of Law No. 24/2011. The state-owned insurance company PT Jamsostek was transformed into a non-profit public entity in 2015 – BPJS Ketenagakerjaan.

A1.2.1. Old-age benefits (lump sum)

Law No. 40/2004 kept the old-age benefits programme (JHT) as a mandatory fully funded savings mechanism providing some income protection in old age, invalidity and survivorship.

Participation in the JHT scheme is mandatory for wage earners working for non-state enterprises and non-wage earners (self-employed), including foreign nationals who have worked in Indonesia for at least six months. Registration of salaried employees working in large, medium and small enterprises started in July 2015, as stipulated by Presidential Regulation No. 109. Enrolment of non-salaried workers, including non-contractual workers and self-employed persons, was also scheduled for 2015. Currently, only salaried employees of micro enterprises, and daily workers, temporary contractual workers, and seasonal workers in the construction sector are excluded from the personal scope of the JHT scheme.

Public sector employees also participate in a provident funds administered by PT Taspen and PT Asabri. Therefore, the parameters applicable to these schemes, including contribution rates, qualifying conditions and benefits, are outlined by separate regulations.

Considering that the provident fund has been part of the social security landscape in Indonesia since 1992 and that the JHT scheme's legal coverage is broader than that of the pension scheme (JP), it is understandable that its effective coverage is slightly higher.

The JHT scheme provides lump sum benefits corresponding to the total contributions made to the provident fund plus accrued interest in case programme participants reach the retirement age, are diagnosed with a permanent total disability, or die. If a fund member dies before receiving the JHT benefit, the account balance is paid to his or her eligible inheritors, including a widow, widower, or the deceased's children. In the absence of spouse and children, the benefit is payable in order of priority to blood-related grandparents and grandchildren, birth siblings, parents-in-law, or anyone appointed as legal heir in the deceased's will.

Although the JHT scheme is meant to provide some income support in case of old age, disability or death of the breadwinner, the implementing regulations of the scheme allow for partial withdrawals before the materialization of these risks. Fund members who have participated in the programme for at least ten years can withdraw up to 30 per cent of their account balance for purchasing housing and up to 10 per cent for miscellaneous expenses. Fund members can make use of each of these partial withdrawals only once during their participation in the scheme.

Government Regulation No. 60 of 2015 stipulates that JHT benefits must be paid to participants upon reaching the retirement age. However, a subsequent revision of the programme rules made by the Minister of Manpower Regulation No. 19 of 2015 expanded the definition of "reaching the retirement age" to include ceasing employment as a reason for entitlement. This regulation specifies that fund members can also access their accumulated savings in case of termination of employment, resignation or permanently leaving the country.

The amendments mentioned above might result in a significant number of programme participants accessing their old-age savings before they reach retirement age, especially because under the current rules, up to 100 per cent of the account balance can be withdrawn after one month of unemployment. The increasing flexibility regarding partial and early withdrawals may further limit the JHT scheme's potential to provide some income support in old-age, permanent disability or death of the breadwinner.

Salaried workers employed in small-sized enterprises and non-salaried workers (self-employed) are covered by the JHT scheme but excluded from the pension insurance programme (JP) introduced in 2015. Currently, both schemes (JHT and JP) exclude daily, occasional and temporary workers in construction services.

A1.2.2. Death benefits

Law No. 40/2004 also kept a life insurance scheme previously managed by PT Jamsostek. Before the implementation of Law No. 40/2004 and Law No. 24/2011, this scheme covered wage earners working for companies with ten employees or more, or with a total monthly payroll of 1 billion rupiah. This plan provided a lump sum benefit, a funeral grant, and a monthly benefit payable for up to 24 months to the survivors of programme participants who died of non-work-related causes.

As previously mentioned, Law No. 24/2011 entrusted the administration of the new social security system (SJSN) to state-owned, non-profit social security institutions. Therefore, the administration of the death benefit scheme (JKM) was transferred from PT Jamsostek to BPJS Ketenagakerjaan in 2015. The programme has undergone other relevant modifications:

- The scope of application of the scheme was modified to include all salaried employees and non-salaried workers, including foreign nationals who have worked in Indonesia for at least six months. Public sector employees and members of the armed forces are covered through separate JKM programmes administered by PT Taspen and PT Asabri[23].
- The contribution rate for wage workers remained unchanged at 0.3 per cent of the employee's monthly salary, borne solely by the employers. Non-wage earners participants pay a monthly flat-rate premium of 6,800 rupiah.
- The benefit amounts payable to the participant's survivors under the JKM scheme were increased by Government Regulation No. 82 of 2019. These include a lump sum compensation of 20,000,000 rupiah, a periodical benefit of 500,000 rupiah payable for 24 months, or as a lump sum of 12,000,000 rupiah, and a funeral grant of 10,000,000 rupiah.
- The reformed JKM scheme included a children's scholarship as of 2015. Programme participants must have contributed to the JKM programme for at least three years for entitlement. This benefit is provided to a maximum of two of the deceased's children until they reach age 23, get married, or start working. The following flat-rate amounts for the yearly scholarships are payable:
    - kindergarten to elementary school: 1.5 million rupiah per year per child (for a maximum education period of eight years);
    - middle school or equivalent level: 2 million rupiah per year per child (for a maximum education period of three years);
    - high school or equivalent level: 3 million rupiah per year per child (for a maximum education period of three years);
    - higher education or training: 12 million rupiah per year per child (for a maximum education period of five years.

  Under the current rules, an eligible child can receive the scholarship for a maximum of 19 years.

[23] The implementing regulations of the JKM scheme for civil servants, which is administered by PT Taspen, are provided by Government Regulation No. 70 of 2015, as amended by Government Regulation No. 66 of 2017. The implementing framework for the programme covering members of the armed forces is laid down by Government Regulation No. 102 of 2015.

Enrolment in the JKM scheme administered by BPJS Ketenagakerjaan started in 2015, upon the adoption of Government Regulation No. 44. According to Presidential Regulation No. 109, all employed persons, including public sector employees; wage earners in large, medium, small and micro-enterprises; seasonal and daily workers in the construction sector; and non-salaried workers are mandatorily covered by this scheme.

A1.3. New schemes introduced by Law No. 40/2004

Law No. 40/2004 on the SJSN aims to ensure the right to social protection to the whole population through the progressive extension of coverage of its five schemes. These include the provision of medical care and the guarantee of income security in case of employment injury, old age, invalidity and death of the breadwinner. One of the main breakthroughs of this law is the introduction of a pension system for wage workers.

With the implementation of Law No. 40/2004 and Law No. 24/2011, the following social insurance schemes were introduced:

- The health insurance scheme (JKN) rolled-out in 2014 offers a comprehensive basic benefit package covering health promotion, preventive and curative treatment, rehabilitation, pharmaceuticals, and medical devices (article 22 of Law No. 40/2004). This scheme has two components. The first is a contributory one that mandatorily covers public and private sector employees, including civil servants and members of the armed forces and the police, non-salaried workers or self-employed persons, and non-workers with contributory capacity (such as, investors, employers and pensioners). These categories of protected persons and their families contribute in the manner prescribed by the implementing regulations. The second component covers poor and near-poor persons, persons with disabilities, and the unemployed, and is financed through contributions subsidized by the Government.
- The employment injury benefit scheme (JKK) provides in-kind (medical care) and cash benefits in case of temporary incapacity to work, permanent disability or death as a result of a work-related injury or occupational disease. This scheme was introduced in 2015 and covers salaried workers in the private sector[24], including foreign nationals who have worked in Indonesia for at least six months and non-salaried workers (self-employed and other non-wage earners).
- The pension insurance scheme (JP) was also introduced in 2015, and provides periodic benefits in case of old age, permanent total disability, and survivorship to wage workers. This new programme is organized under defined benefit principles and is financed through contributions paid jointly by workers and employers. Law No. 40/2004 prescribes that the employers shall gradually register their employees in the JP scheme in accordance with the implementing regulations. In this regard, Presidential Regulation No. 109 of 2013 scheduled the registration of salaried-workers employed in large- and medium-sized enterprises for July 2015. The timeframes for extending coverage to workers in small and micro enterprises are not outlined in this regulation.

While Law No. 40/2004 outlines the underlying principles and general characteristics of the new SJSN, Law No. 24/2011 provides the institutional framework for the implementation of the system. This latter law mandated the creation of two non-profit social security administering bodies to

[24] Civil servants and members of the armed forces are covered by Employment Injury Insurance (JKK) managed by PT Taspen and PT Asabri. Since these separate schemes were partially reformed based on Law No. 40/2004, their type and level of benefits are similar to those of the general programme administered by BPJS Ketenagakerjaan.

manage the SJNS at the national level. BPJS Kesehatan administers the National Health Insurance Programme (JKN) since it started operations in 2014, and BPJS Ketenagakerjaan has administered the JHT, JKK, JKM and JP schemes since 2015.

Law No. 40/2004 prescribes that participation in the recently established SJSN shall be progressive, taking into consideration the economic capacity of the population. Presidential Regulation No. 109 of 2013 sets the schedule for the gradual registration in the different social security schemes administered by BPJS Ketenagakerjaan. In particular, this regulation stipulates two phases for the incorporation of civil servants into the SJSN. The initial stage was scheduled for 2015 and encompassed the enrolment of public sector employees into the JKK, JHT and JKM benefits. The second stage shall take place in 2029 and includes the registration of these categories of workers into the JP scheme. In the meantime, coverage is still provided under separate programmes managed by PT Taspen and PT Asabri.

A1.4. Coverage rules

While Law No. 40/2004 intends to compulsorily cover all the population of Indonesia, coverage will be gradually expanded by considering the contributory capacity of the population. During the transition phase, while JKK, JKM and JHT benefits are mandatory for all wage and non-wage workers, JP benefits are mandatory only for wage workers in enterprises of a certain size. The phasing rules established by Presidential Regulation No. 109 of 2013 are indicated in table A1.1. The Presidential Regulation stipulates that all wage workers will be covered by the JP scheme by 2029. Civil servants, military and police workers will remain in their current plan until 2029 and will join the new scheme thereafter.

Table A1.1. Coverage phasing-in for the different benefits

	Phase I (Starting July 2015)	Phase II
Wage workers		
Large enterprise	JKK, JP, JHT, JKM	
Medium enterprise	JKK, JP, JHT, JKM	
Small enterprise	JKK, JHT, JKM	JP
Micro enterprise	JKK, JKM	JP, JHT
Non-wage workers		
Employers	JKK, JHT, JKM	JP
Workers	JKK, JKM	JP, JHT

JKK = employment injury benefit; JP = old-age pension; JHT = old-age benefit; JKM = death benefit

A1.5. Provisions regarding old age, disability and death benefits

Benefits at old age, disability or death are provided under two schemes: JHT provides lump sum benefits, and JP provides pensions.

A1.5.1. Old-age benefit (JHT)

PT Jamsostek was a provident fund providing benefits in case of old age, disability or death. These benefits continue to be paid under the new scheme run by BPJS Ketenagakerjaan. While some modifications have been made, the contribution rate is unchanged. Government Regulation No. 46/2015 has been used as reference. Later, a new regulation (PP No. 60/2015) modified the

conditions upon which workers can withdraw their contributions to the fund. Regulation No.2 of 2022 removes the possibility to withdraw from the account in cases other than old age, disability or death. Table A1.2 present a comparison of the old and new provisions of the JHT scheme.

Table A1.2. Comparison of provisions of the old and new JHT systems

Provisions	Old system	New system
Covered population	All employees working for an employer having 10 employees or more or with total monthly salary of 1 million rupiah or more	All employees, including expatriates, who have been working for more than 6 months. In the transition phase, JHT should not apply to employees working for an employer having less than 5 employees.
Contribution rate	Employer: 3.7% Employee: 2.0% Self-employed: 2.0%	No change
Withdrawals	Possible to withdraw the value of the account if someone: – Leaves employment and is unemployed for at least one month (should have contributed for at least 5 years) – Leaves and is now covered by civil servant plan – Leaves Indonesia	Until 2021, possibility to withdraw 30% of the amount accumulated in the individual account for housing, plus 10% for other miscellaneous purposes after 10 years of contribution. Minister of Manpower Regulation No.2 of 2022 removes the possibility to withdraw from the account in cases other than old age, disability, or death. New amendments adopted in May 2022 reintroduced the possibility to withdraw.
Survivors' benefit	Payment of the account (contributions + interest) to the heirs	No change
Disability benefit	Payment of the account (contributions + interest) in case of permanent disability	No change
Old-age benefit	Payment of the account (contributions + interest) at age 56 or above	No change

The Law No. 40/2004 has extended the coverage to all employees working in enterprises with five and more employees. Wage and non-wage self-employed workers are included.

The maximum contribution rate for the self-employed is, however, the same as that for salaried workers, namely, 2 per cent of the income. This means that, all other things being equal, they will receive at retirement a lump sum payment that represents 35 per cent (namely 2 per cent divided by 5.7 per cent) of that for salaried workers.

Another important difference between the old and new system is withdrawal from the account. As per Government Regulation No.46/2015, withdrawals are only allowed for housing, with a maximum withdrawal of 30 per cent of the individual account value, and to a limited extent of 10 per cent of the individual account value for miscellaneous purposes. In the old system, nearly all the money in the accounts was withdrawn before retirement. However, in the Regulation, the members would have the right to withdraw a maximum of 40 per cent, namely 30 per cent plus

10 per cent, of the account during the contributory period. This change would result in a better retirement lump sum from the JHT provident fund compared to the old system. However, the change did not last long, and the withdrawal condition was revised in Government Regulation No. 60/2015. Under this new regulation, workers can now withdraw 100 per cent of the accumulated amount (workers and employers' contributions) upon retirement, permanent total disability, death, resignation, employment termination or when permanently leaving the country.

A1.5.2. Pension benefits (JP)

Permanent disability pensions, survivors' pensions and retirement pensions are provided by the new pension scheme. Table A1.3 describes the main provisions of the pension scheme.

Table A1.3. Main provisions of the JP scheme, as per Regulation No. 45/2015

Provisions	Description
Covered population	Wage workers in medium- or large-scale enterprises
Eligibility conditions for the pension	Old age: 15 years of contributions Disability: 15 years of contributions or having contributed at a density of 80% and incident causing permanent total disability occurs after a membership of at least 1 month. Contribution density rate is the ratio of the number of months of contribution divided by the total period of membership. Survivors: 15 years of contributions or having contributed at a density of 80% and a member dies after a membership of at least 1 year
Retirement age	56 until 2018, increasing to 57 in 2019 and by 1 year every three years up to a maximum of 65 years No early retirement possible
Pension formula	1% x number of years of service x average career indexed salary (Career salaries indexed with inflation)
Lump sum payment	For persons not qualifying for old-age, disability or survivor's pension: reimbursement of contributions plus interest
Disability pension	For total and permanent disability 100% of old-age pension
Widow's pension	50% of old-age or disability pension the deceased received or was entitled to receive
Orphan's pension	Payable if there is no widow Amount for each child: – 50% of old-age or disability pension the deceased received or was entitled to receive – 50% of widow's pension if the widow dies or remarries Payable to a maximum of two children Payable until the child dies, marries, works or reaches the age of 23
Parent's pension	Payable to the parent of a participant who dies before retirement, is not married, and has no children 20% of old age or disability pension the deceased received or was entitled to receive Limited to 1 parent Pension ends when the parent dies
Contribution rate	Employer: 2% Worker: 1% To be reassessed at least every three years and gradually increasing to 8% (no precise schedule is indicated)
Maximum monthly salary (ceiling)	Highest monthly wage used as a basis to calculate the pension benefit for 2015 is 7 million rupiah. Adjusted to annual GDP growth rate of the previous year. Monthly wage (basic salary and fixed allowance/benefit) is used as a basis for the calculation of contributions. The ceiling refers to the same wage.

Maximum annual pension	3.6 million rupiah per month, adjusted annually based on the inflation rate (CPI) of the previous year
Minimum monthly pension	300,000 rupiah per month, adjusted annually based on the inflation rate (CPI) of the previous year.
Adjustment of pensions in payment	100% of inflation (CPI)

▶ Appendix 2. Methodology of the actuarial analysis

This actuarial assessment makes use of the comprehensive methodology developed by the ILO for reviewing the long-term actuarial and financial status of national pension schemes. These modelling tools (the ILO's pension model) include population, economic, labour force, wage and long-term benefits models.

The actuarial valuation starts with a projection of the future demographic and economic environment of Indonesia. Next, projection factors and assumptions specifically related to the scheme are determined and used in combination with the demographic/economic framework.

A2.1. Modelling the demographic and economic environment

Use of the ILO actuarial projection model requires the development of demographic and economic assumptions related to the general population, economic growth, labour market and the increase and distribution of wages. Other economic assumptions relate to the future rate of return on investments, the indexation of benefits and the adjustment of parameters such as the maximum insurable earnings and the future level of flat-rate benefits. The assumptions are selected to reflect long-term trends rather than giving undue weight to recent experience.

General population

The general population is projected starting with the most current data on the general population, and applying appropriate mortality, fertility and migration assumptions.

Economic growth

The increase of labour productivity, wage share of GDP and inflation rates are exogenous inputs to the economic model. Long-term GDP growth is the result of assumptions on the future evolution of the labour force, employment rate in the labour force and labour productivity.

Labour force, employment and insured population

The projection of the labour force, that is, the number of persons available for work, is obtained by applying assumed labour force participation rates to the projected number of persons in the general population. Employment rates are assumed for the future and unemployment is calculated as the difference between labour force and employment.

Wages

Based on an allocation of total GDP to capital income and to labour income, a starting average wage is calculated by dividing total wages in the GDP by the total number of employed persons.

In the medium term, real wage development is checked against growth of labour productivity. In some labour market situations, wages might grow at a pace faster or slower than productivity. However, due to the long-term perspective of the present review, the real wage increase is assumed to gradually converge with the real increase of labour productivity. It is expected that wages will adjust to efficiency levels over time.

Wage distribution assumptions are also needed to simulate the possible impact of the social protection system on the distribution of income, for example, through minimum and maximum pension provisions. Assumptions are established on the differentiation of wages by age and gender, as well as on the dispersion of wages between income groups.

A2.2. Modelling the financial development of the scheme

The selection of projection assumptions considers the recent experience of the scheme to the extent that this information is available. The assumptions are selected to reflect long-term trends rather than giving undue weight to recent experience. Projections are performed separately for each gender.

Purpose of pension projections

The purpose of the pension model is twofold. First, it is used to assess the financial viability of pension schemes. This refers to the measure of the long-term balance between income and expenditure of the individual scheme. In case of an imbalance, a revision of the contribution rate, the benefit structure or the asset allocation is recommended. Second, the model may be used to examine the financial impact of different reform options, thus assisting policymakers in the design of benefit and financing provisions. More specifically, the pension model is used to develop long-term projections of expenditure and insurable earnings under the scheme, for the purpose of:

- assessing the options to build up a contingency or technical reserve;
- proposing schedules of contribution rates consistent with the funding and the investment objectives; and
- testing how the system reacts to changing economic and demographic conditions.

Pension data and assumptions

Pension projections require the demographic and macroeconomic frame already described and, in addition, a set of assumptions specific to the scheme.

The database at the valuation date includes the insured population, the distribution of insurable wages among contributors, the distribution of past credited service and pensions in payment. Data are disaggregated by age and gender.

Scheme-specific assumptions such as disability incidence rates and the distribution of retirements by age are determined with reference to the scheme's provisions and the historical experience particular to the scheme.

The projection of the annual investment income requires information on existing assets on the valuation date. A rate of return assumption is formulated on the basis of the nature of the scheme's assets, the past performance of the fund, the scheme's investment policy and assumptions on future economic growth and wage development.

Insured population

The insured population projection is derived from the labour force and employment projections. The model assumes movement of participants between the groups of active and inactive insured persons. This movement is simulated by comparing projected active insured persons for two successive years and for each age/gender cell. If the number of persons decreases by more than the number of persons dying or becoming disabled during the year (for ages at which retirement is not possible), then the difference is considered to represent new inactive persons. In the reverse case, it is presumed that formerly inactive persons re-integrate back into the active insured population.

Pension projection approach

Pension projections are performed following a year-by-year cohort methodology. The existing population is aged and gradually replaced by the successive cohorts of participants on an annual basis according to the demographic and coverage assumptions. The projection of insurable earnings and benefit expenditures are then performed according to the economic assumptions and the scheme's provisions.

Pensions are long-term benefits. Hence, the financial obligations that a society accepts when adopting financing provisions and benefit provisions for them are also of a long-term nature. Participation in a pension scheme extends over the whole adult life, either as a contributor or a beneficiary, that is, up to 70 years for someone entering the scheme at the age of 16, retiring at the age of 65 and dying in the following years. During their working years, contributors gradually build entitlement to pensions that will be paid even after their death to their survivors. The objective of pension projections is not to forecast the exact development of income and expenditure of the scheme, but to check its financial viability. This entails evaluating the scheme with regard to the relative balance between future revenue and expenditure.

A2.3. Detailed description of the model

For more information, a technical guide detailing all the methodological concepts underlying the ILO's pension model is made available at: https://www.social-protection.org/gimi/RessourcePDF.action?id=55195

▶ Appendix 3. Data and actuarial bases for the JP scheme

In addition to the general demographic and economic assumptions presented in this report, financial projections of the Indonesian pension system require a database specific to the scheme (characteristics of insured persons and pensions in payment) and appropriate actuarial assumptions.

Data concerning the JP active insured persons and pensioners were received from BPJS Ketenagakerjaan.

A3.1. Contributors and insured earnings

A3.1.1. Number of insured persons and average earnings

In 2020, the number of active contributors to the JP scheme was 12,529,760. This represents the number of persons who paid at least one contribution during the year. The small number of cases appearing at ages 60 and above in the database were combined with the age group 55–59.

Average insured earnings were 4,192,594 for males and 3,918,746 for females in 2020. Information suggests that there may exist under-declaration of earnings for social security purposes by certain employers. However, no precise data was provided to that effect, hence the actuarial assessment was based on the available data. As long as contributions and benefits are based on the same earnings, this does not have significant impacts on the financial equilibrium of the scheme, except to the extent that the minimum pension is generous in relation with average insured earnings.

Data on active contributors and average earnings appear in table A3.1.

Table A3.1. Active contributors and average insured earnings, by age and gender, 2020

Age	Male		Female	
	Number *	Average monthly earnings	Number *	Average monthly earnings
15–19	114 085	3 479 174	155 378	3 059 547
20–24	1 135 407	3 552 541	912 817	3 412 105
25–29	1 736 755	3 904 871	949 416	3 885 378
30–34	1 553 426	4 193 407	669 583	4 113 496
35–39	1 325 893	4 326 621	532 673	4 080 593
40–44	1 049 448	4 463 374	402 281	4 245 704
45–49	804 553	4 656 967	258 111	4 445 375
50–54	573 636	4 854 160	152 127	4 668 780
55–59	166 526	4 742 495	37 645	4 701 890
Total	**8 459 729**	**4 192 594**	**4 070 031**	**3 918 746**

* Number of workers who paid at least one contribution during the year
Source: BPJS Ketenagakerjaan.

The JP scheme also counts a certain number of inactive insured persons who have stopped paying contributions but did not claim any benefit. They appear in table A3.2. Inactive insured persons above age 56 were excluded from the financial assessment.

Table A3.2. Inactive insured persons as of 31 December 2020, by age and gender

Age	Male	Female
15–19	56 619	82 489
20–24	1 498 243	1 495 537
25–29	2 284 385	1 687 092
30–34	1 678 016	863 783
35–39	1 192 587	518 516
40–44	836 034	319 130
45–49	530 503	163 431
50–54	354 768	86 758
55–56	140 995	31 213
Total	**8 572 150**	**5 247 949**

A3.1.2. Salary scale

The salary scale is derived from the observed earnings profile of active contributors. Table A3.3 presents the salary scale for each gender.

Table A3.3. Salary scale (ratio of salary at a given age to salary at age 15), by gender

Age	Male	Female
15	1.00	1.00
20	1.09	1.06
25	1.22	1.23
30	1.31	1.34
35	1.38	1.39
40	1.43	1.40
45	1.49	1.44
50	1.55	1.53
55	1.56	1.58
60	1.56	1.58
65	1.56	1.58

A3.1.3. Density of contribution

Density of contributions represents the proportion of the year during which contributions are paid by the average contributor. They are used to estimate the amounts of contributions paid in every year. Average density factors by age and gender appear in table A3.4. They reflect the experience of 2020.

Density factors appearing in table A3.4 are also used to estimate the percentage of insured persons at young ages who do not meet the criteria of "80 per cent average career density" for

eligibility to disability or survivors' benefits (when they do not meet the minimum criteria of 15 years of contributions).

Table A3.4. Density of contributions, by age and gender

Age	Male	Female
15	0.47	0.42
20	0.85	0.83
25	0.94	0.92
30	0.96	0.96
35	0.97	0.98
40	0.98	0.99
45	0.99	1.00
50	1.00	1.00
55	1.00	1.00
60	1.00	1.00

A3.1.4. Projected growth of the insured population

The JP insured population (12.5 million in 2020) represents 25 per cent of total wage employment (49.8 million). The legal coverage under the JP scheme is planned to extend in the future in a phased manner, as per table A3.5.

Table A3.5. Planned phased extension of JP scheme to different workers

Type of worker	Phase/year
Wage workers	
Large enterprise	Phase I (July 2015)
Medium enterprise	Phase I (July 2015)
Small enterprise	Phase II
Micro enterprise	Phase II
Non-wage workers	Phase II
Public sector	2030

In that context, it is assumed that the covered population will increase in the future such that it will represent a gradually increasing percentage of wage workers, from 25 per cent in 2020 to 70 per cent in 2100 (for both genders).

Considering that under the labour force framework of section 3.2 above, it is also projected that wage workers will increase over time (from 38.1 per cent of total employment in 2020 to 60 per cent in 2070), with the result that the JP insured population will represent 42 per cent of total employment in 2100 (see table A3.6).

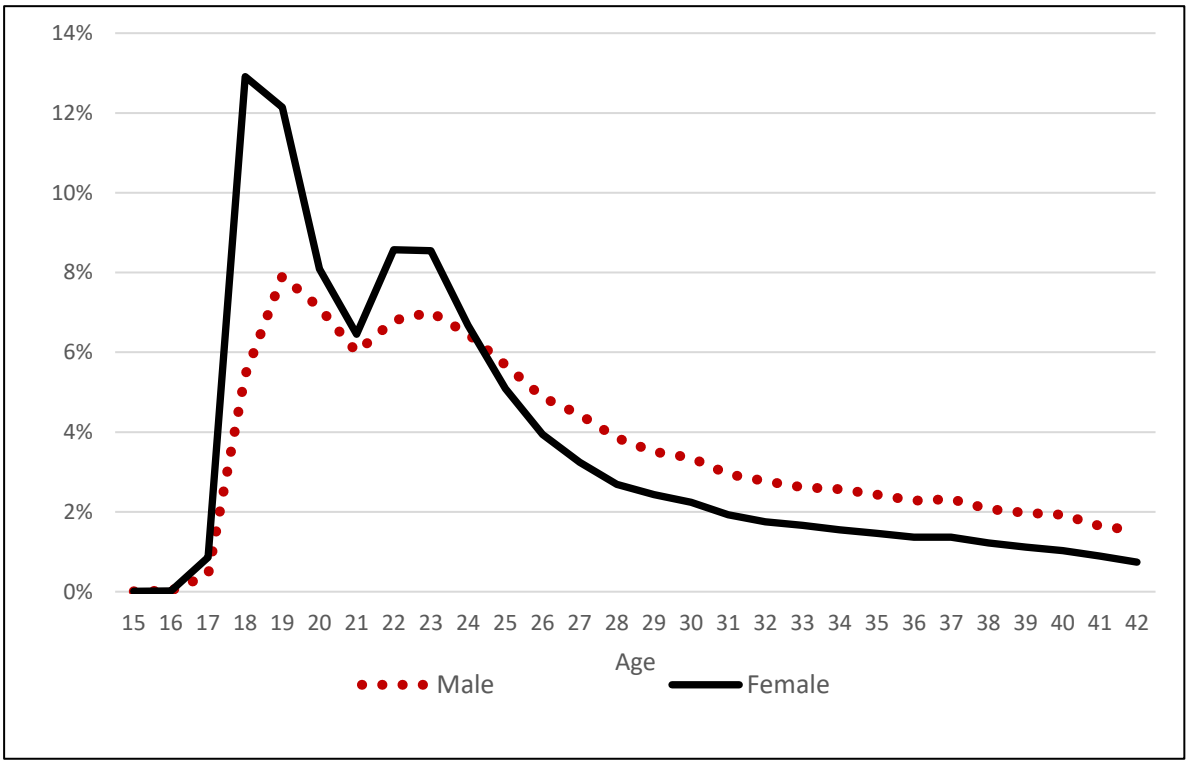
Table A3.6. Projected coverage rates under the JP scheme

Year	JP coverage as % of total employment		JP coverage as % of wage workers	
	Male	Female	Male	Female
2020	10.8%	7.8%	28.3%	20.5%
2030	14.7%	12.1%	34.6%	28.4%
2040	18.6%	16.3%	39.7%	34.9%
2050	22.5%	20.6%	43.9%	40.2%
2060	26.4%	24.9%	47.4%	44.8%
2070	30.3%	29.2%	50.5%	48.6%
2080	34.2%	33.4%	57.0%	55.7%
2090	38.1%	37.7%	63.5%	62.9%
2100	42.0%	42.0%	70.0%	70.0%

A3.1.5. Distribution of new entrants

Figure A3.1 illustrates the age distribution of new entrants in the scheme. Even if data include new entrants at higher ages, it is assumed, for the financial assessment, that new entrants will be concentrated before age 43 to allow them to accumulate a minimum of 15 years of contribution before retirement.

▶ **Figure A3.1. Age distribution of new entrants**



A3.1.6. Accrued past credits

Table A3.7 shows the average accumulated service of present JP active members as of December 2020. The JP scheme was introduced in 2015; this explains why past service cannot exceed six

years. Inactive insured persons at the valuation date are assumed to have accumulated, on average, one year less than active insured persons.

Table A3.7. Average accumulated past service as of December 2020, by age and gender

Age	Male	Female
15	1.07	1.00
20	1.63	1.76
25	2.65	2.71
30	3.49	3.73
35	3.75	3.98
40	3.90	4.17
45	4.08	4.28
50	4.26	4.44
55	4.11	4.30
60	6.00	6.00

A3.2. Demographic assumptions related to the scheme

A3.2.1. Mortality of insured persons

Mortality rates of the active insured population are assumed to be lower than the mortality rates of the general population. This is observed in many countries: persons contributing to a pension scheme normally have a higher socio-economic status, which leads to lower mortality. For this actuarial analysis, it is assumed that mortality rates of the insured population are equal to 70 per cent of the mortality rates of the general population. This translates into an increase of life expectancy of approximately 3 years at age 60. Mortality rates are assumed to decline continuously over the projection period (sample mortality rates are presented in table A3.8).

This mortality pattern is also used to project survivors' benefits payable at the death of insured persons or pensioners.

For invalidity pensioners, mortality rates are set equal to 5 times the mortality rates of the general population at age 20, decreasing linearly to 3 times at age 60, and staying at that level for ages above 60.

Table A3.8. Mortality rates, by age and gender, in 2020 and 2050

	Male		Female	
Age	2020	2050	2020	2050
0	0.02486	0.01784	0.01474	0.00672
5	0.00123	0.00154	0.00073	0.00051
10	0.00057	0.00055	0.00050	0.00050
15	0.00089	0.00075	0.00057	0.00050
20	0.00117	0.00085	0.00078	0.00058
25	0.00110	0.00051	0.00094	0.00076
30	0.00115	0.00050	0.00115	0.00088
35	0.00199	0.00113	0.00157	0.00105
40	0.00328	0.00481	0.00224	0.00147
45	0.00458	0.00528	0.00328	0.00214
50	0.00610	0.00209	0.00484	0.00314
55	0.00978	0.00200	0.00704	0.00463
60	0.01743	0.00943	0.01025	0.00678
65	0.02881	0.02153	0.01648	0.01058
70	0.04417	0.03401	0.02809	0.01792
75	0.06413	0.04578	0.04758	0.03228
80	0.09407	0.06569	0.07872	0.05680
85	0.14480	0.10154	0.13280	0.09816
90	0.22497	0.15577	0.22056	0.16130
95	0.30503	0.21094	0.30849	0.22565
100	0.38204	0.26677	0.39258	0.28991

A3.2.2. Disability incidence rates

In the absence of sufficient experience on the incidence of disability under the JP scheme, incidence rates are based on the experience of the Malaysian scheme, which appears to recognize disability, for pension purposes, under conditions similar to those of the JP scheme. Invalidity incidence rates are assumed to remain constant for the whole projection period (see table A3.9).

Table A3.9. Disability incidence rates, by age and gender

Age	Male	Female
25	0.000090	0.000054
30	0.000235	0.000194
35	0.000549	0.000492
40	0.001062	0.000956
45	0.002009	0.001881
50	0.003962	0.003705
55	0.006980	0.006618

A3.2.3. Retirement rates

Under the JP scheme, the old-age pension is payable only if the person has paid 15 years of contribution to the scheme. Given the short period elapsed since the entry into force of the scheme, people presently reaching the retirement age receive lump sums instead of pensions. Retirement rates were derived from the experience of the scheme regarding lump sum payments paid at or after the age of eligibility to the old-age pension. Presently, it is observed that many persons claim their old-age lump sum (JHT) as soon as they are eligible for benefits.

The pension eligibility age was 56 until 2018, increasing to 57 in 2019 and it will increase by one year every three years up to a maximum of 65 years, which will be reached in 2043. Despite this planned increase of the pensionable age, the JP scheme represents only a small part of the whole package available at retirement, and for most workers the retirement decision is not driven by the increase of the pensionable age under JP. Regulations were adopted in recent years to increase the pensionable age of the public sector to age 58 with no equivalent measure in the private sector. In general, collective agreements mention a pensionable age of 55 with the possibility to extend employment for an additional period of three years.

In that context, the retirement rates appearing in table A3.10 are assumed to remain constant in the future.

Table A3.10. Retirement rates, by age and gender

Age	Male	Female
57	0.7823	0.7085
58	0.3945	0.3625
59	0.0855	0.0566
60	0.0383	0.0254
61	1.0000	1.0000

The actuarial model considers the fact that the pensionable age under JP will increase over time, hence many people will leave the labour force before accessing the JP pension (according to the retirement rates of table A3.10). The actuarial model maintains these people as inactive during the period between their effective retirement and the JP pension starting date.

A3.2.4. Family statistics

Family statistics are necessary for the projection of survivors' benefits. Assumptions must be established on the probability of having an eligible spouse at death, the average age of the spouse, the average number of children (and other survivors) possibly eligible for a benefit, and the average age of the children (and other survivors). It is also necessary to determine survival rates for children and other beneficiaries.

Probabilities to have an eligible spouse are based on the limited experience of the scheme concerning new pensions paid in 2020, with adjustments based on the Malaysian experience.

The average number of children is very low because the survivor's pension may be paid to a child only if there is no spouse.

Family statistics are presented in table A3.11.

Table A3.11. Family statistics

Age	Male contributor				Female contributor			
	Probability of having an eligible spouse	Average age of spouse	Average number of eligible children	Average age of children	Probability of having an eligible spouse	Average age of spouse	Average number of eligible children	Average age of children
20	0.06	33	0.000	0	0.47	17	0.000	0
25	0.26	28	0.004	0	0.63	23	0.004	0
30	0.65	30	0.018	4	0.86	28	0.018	4
35	0.99	33	0.031	9	0.92	33	0.031	9
40	1.07	38	0.043	14	0.89	37	0.043	14
45	1.04	42	0.037	19	0.84	41	0.037	19
50	1.02	47	0.012	22	0.72	46	0.012	22
55	1.01	51	0.000	22	0.36	51	0.000	22
60	1.01	56	0.000	22	0.16	56	0.000	22
65	1.00	61	0.000	22	0.15	61	0.000	22
70	1.00	66	0.000	22	0.15	66	0.000	22
75	1.00	71	0.000	22	0.15	71	0.000	22
80	1.00	76	0.000	22	0.15	76	0.000	22
85	1.00	81	0.000	22	0.15	81	0.000	22
90	1.00	86	0.000	22	0.15	86	0.000	22

A3.3. Other assumptions

A3.3.1. Indexation of pensions in payment and the scheme's parameters

It is assumed that pensions in payment are indexed annually in line with CPI increases.

In accordance with the law:

- the minimum and maximum pension amounts are indexed annually in line with CPI increases; and
- maximum insurable earnings are adjusted annually in line with real GDP growth (determined according to the general macroeconomic framework of this report).

A3.3.2. Administrative expenses

It is projected that administrative expenses will be equal to 0.2 per cent of total insured earnings plus 4.7 per cent of benefit expenditures. Since the JP scheme is new, these percentages were determined based on the recent experience of the JHT scheme, considering that the JHT scheme has already reached a certain maturity level that is more appropriate for projecting long-term costs under JP.

A3.4. Pensions in payment at valuation date

The age and gender distribution of pensions in payment in December 2020 is presented in table A3.12 (for males) and table A3.13 (for females). There are currently no old-age pensions in payment because of the short period since the implementation of the scheme and the minimum contribution requirement of 15 years for eligibility.

Table A3.12. Pension in payment in December 2020 (males)

	Invalidity		Widows		Orphans and parents	
Age	Number	Average pension	Number	Average pension	Number	Average pension
0–4	–	–	–	–	46	350 765
5–9	–	–	–	–	133	358 611
10–14	–	–	–	–	190	365 266
15–19	–	–	5	350 700	268	366 829
20–24	–	–	211	365 861	94	379 420
25–29	–	–	1 014	362 457	–	–
30–34	3	467 793	1 933	372 003	–	–
35–39	3	639 820	3 083	381 641	7	350 700
40–44	1	423 790	4 635	396 495	26	350 761
45–49	1	381 770	5 725	403 079	157	350 788
50–54	4	513 618	4 540	414 036	319	350 925
55–59	1	350 700	1 343	419 436	452	350 829
60–64	–	–	157	396 622	416	350 852
65–69	–	–	16	402 857	277	350 954
70–74	–	–	6	359 270	113	350 854
75–79	–	–	3	350 700	70	350 768
80–84	–	–	1	352 280	22	351 620
85–89	–	–	–	–	3	350 700
90–94	–	–	–	–	2	350 700
95–99	–	–	–	–	1	350 700

Table A3.13. Pension in payment in December 2020 (females)

Age	Invalidity		Widowers		Orphans and parents	
	Number	Average pension	Number	Average pension	Number	Average pension
0–4	–	–	–	–	42	350 738
5–9	–	–	–	–	119	361 301
10–14	–	–	–	–	174	366 519
15–19	–	–	–	–	248	369 007
20–24	–	–	21	363 518	115	400 174
25–29	–	–	167	350 902	–	–
30–34	1	844 700	310	360 673	–	–
35–39	–	–	458	367 514	12	350 700
40–44	–	–	587	369 350	99	350 716
45–49	–	–	584	377 952	246	350 756
50–54	1	651 410	593	386 714	396	350 835
55–59	–	–	438	394 264	426	350 900
60–64	–	–	168	381 234	363	350 882
65–69	–	–	42	381 149	225	350 812
70–74	–	–	7	416 593	121	350 790
75–79	–	–	–	–	67	350 794
80–84	–	–	–	–	39	351 103
85–89	–	–	–	–	5	350 700
90–94	–	–	–	–	4	350 700
95–99	–	–	–	–	–	–

▶ Appendix 4. Actuarial bases for the costing of sickness and maternity benefits

This appendix describes the actuarial bases used for the costing of sickness and maternity benefits.

A4.1. Sickness benefits

The projected number of beneficiaries of sickness benefits is determined from the application of sickness incidence rates to the JP insured population. The sickness incidence rates were established at 10 per cent of the insured population for both males and females based on the following data on outpatient consultations obtained from the BPS publication *Women and Men in Indonesia 2021*[25] (table A4.1).

Table A4.1. Sickness incidence rates by gender

	Males	Females
Health complaints during the last month (in % of population)		
National	26.15%	28.32%
Urban	28.91%	30.58%
Rural	22.43%	25.43%
Outpatient consultations (in % of health complaints)		
National	39.92%	40.97%
Urban	43.75%	42.33%
Rural	33.24%	38.88%
Outpatient consultations (in % of population)		
National	**10.44%**	**11.60%**
Urban	12.65%	12.94%
Rural	7.46%	9.89%

The average duration of benefit payment is assumed to be 15 days for both genders.

Average earnings of sickness beneficiaries are assumed equal to those of the JP insured persons. Contribution income considers the density of contributions (see table A3.4 of Appendix 3).

Administrative expenses are set at 5 per cent of total benefit expenditures, based on the experience of neighbouring countries, and considering that the contribution collection function will benefit from economies of scale if the scheme is administered by the same institution as the other social security branches.

A4.2. Maternity benefits

The projected number of beneficiaries of maternity benefits is determined from the application of the fertility rates of the Indonesian general population to the JP insured women. The average

[25] This study covers the period of COVID-19 pandemic (survey in 2021 and 2020 census data). This could affect the number of outpatient consultations. However, the *Statistical Yearbook of Indonesia 2021* does not indicate an increase of health complaints in 2020 compared to previous years (see table 4.2.6).

insured earnings of maternity beneficiaries are assumed equal to the average earnings of JP insured persons. These fertility rates and average earnings are used to determine the annual expenditures on maternity benefits. Contribution income considers the density of contributions (see table A3.4 of Appendix 3).

Administrative expenses are estimated at 5 per cent of total benefit expenditures, based on the experience of neighbouring countries, and considering that the contribution collection function will benefit from economies of scale if the scheme is administered by the same institution as the other social security branches.

Table A4.2. Number of births and average insured salaries associated with each insured group (2021)

From	Number of births	Average salary
All insured mothers	**349 025**	**4 004 425**
All insured fathers	**394 640**	**4 411 226**
with insured spouse	55 813	4 377 702
without insured spouse	338 826	4 416 748
Insured mothers without insured spouse	293 212	4 004 425

The average duration of benefit payment is determined separately for the mother and the father, according to the specific provisions of each option. More specifically:

- The maternity allowance is paid in relation with all births associated with insured women (349,025 in 2021).
- The paternity allowance is paid in relation with all births associated with insured men (394,640 in 2021).
- The birth grant is paid in relation with births associated with insured women and births associated with insured men married to uninsured women (349,025 + 338,826, in 2021).

It is considered that both parents use the maximum duration allowed by the scheme, except for the option of the paternity allowance providing for a maximum payment duration of 6 weeks, where it is assumed that fathers will claim the benefit for 80 per cent of the maximum period on average, or 4.8 weeks.

The number of births giving rise to benefits take into account the probability of having a spouse, as determined for the valuation of the JP scheme (see table A3.11 of Appendix 3). It is further assumed that the husband is four years older than his wife.

▶ Appendix 5. Severance benefits under the Labour Law

The Labour Law provides for the following benefits to be received by an employee at termination of employment:

- severance pay (Uang Pesangon, or UP);
- reward for working time (Uang Penghargaan Masa Kerja, or UPMK).

The benefit amount is calculated according to the monthly wage and the number of years of service. The UP and UPMK are based on the number of years of service as per table A5.1.

Table A5.1. Benefit calculation for UP and UPMK based on number of years of service

Type of benefit	No. of years of service	Months of compensation
Severance pay (UP)	< 1	1
	1–2	2
	2–3	3
	3–4	4
	4–5	5
	5–6	6
	6–7	7
	7–8	8
	> 8	9
Reward for working time (UPMK)	3–6	2
	6–9	3
	9–12	4
	12–15	5
	15–18	6
	18–21	7
	>21	8

▶ Appendix 6. International practice concerning maternity benefits

A6.1. Coverage

Most maternity protection schemes globally are financed through social insurance contributions (see, for example, Algeria, Argentina, Barbados, Plurinational State of Bolivia, Chile, Cyprus, Egypt, France, Greece, Italy, Lithuania, Luxembourg, Mexico, Morocco, Namibia, Peru, Philippines, Portugal, Spain, Tunisia and Türkiye), and form part of the statutory national social security system established in the country concerned. Maternity cash benefits schemes often cover the same categories of workers as the other schemes forming part of the statutory national social security system. In general, they provide compulsory coverage for all employees or certain categories of employees in the formal economy.

Some countries also cover self-employed workers mandatorily in the statutory maternity benefits scheme (for example, Belize, Cyprus and Portugal), and others cover those workers only on a voluntary basis (for example, Mexico). However, statutory social insurance systems may also exclude some categories of workers from coverage and consequently, those categories of workers do not benefit from the maternity benefits scheme. A large number of countries, for example, exclude civil servants from the statutory scheme, but cover them through a special scheme (for example, Japan, Mexico, Morocco, the Philippines, Tunisia and Uruguay). In many countries, domestic workers (for example, Argentina, Greece, the Philippines and the Bolivarian Republic of Venezuela), agricultural workers (for example, Plurinational State of Bolivia, Egypt and Sudan) and casual workers (for example, Panama) are excluded from the statutory scheme due to obstacles arising out of their registration and the collection of contributions. There are also some countries where only employees of enterprises with more than a specified number of employees are covered, or where coverage is restricted only to certain industries or geographic areas.

In some countries, maternity benefits schemes are financed out of general revenues (taxes) and coverage is extended to all those women residents whose income or whose family's income is below certain established income or means (for example, New Zealand).

ILO Conventions

Article 48 (a–b) of Convention No. 102 provides that either:

- All women workers belonging to prescribed classes of employees, which classes constitute at least 50 per cent of all employees, are covered by the maternity protection scheme in the country concerned, or
- All women workers in prescribed classes of the economically population, which classes constitute not less than 20 per cent of all residents, are covered in case of maternity.

Article 2 of Convention No. 183, in contrast, requires maternity protection coverage to be extended to all employed women, including those in atypical forms of dependent work. However, under certain conditions, countries may exclude wholly or partly limited categories of workers from the scope of the Convention when its application to them would raise special problems of a substantial nature.

ILO Resolutions

ILO Member States adopted in 1985 a resolution requesting that priority consideration should be given to women, as appropriate to national circumstances, to the gradual extension of maternity protection in all sectors of activity and enterprises of all sizes, including women who are casual, temporary, part-time, subcontract and home-based workers as well as self-employed and family workers (Resolution on equal opportunities and equal treatment for men and women in employment, adopted by the International Labour Conference at its 71st Session, 1985).

Furthermore, ILO Member States adopted in 2004 a resolution calling on all governments and social partners to, among other objectives, provide all employed women with access to maternity protection (Resolution concerning the promotion of gender equality, pay equity and maternity protection, adopted by the International Labour Conference at its 92nd Session, 2004).

A6.2. Qualifying conditions

Nearly all countries that have maternity cash benefits schemes in place introduce at least some specific qualifying conditions for the entitlement to maternity cash benefit. In social insurance schemes, such qualifying conditions are usually linked to periods of employment or contributions, while in schemes financed out of general revenues qualifying conditions are sometimes linked to periods of residency. Most countries regard such qualifying conditions as necessary to make the scheme financially sustainable and to prevent abuse. Therefore, they want to ensure that all beneficiaries make a minimum contribution to the scheme before they are entitled to the benefit. Allowing immediate entitlement to benefit without any qualifying conditions may allow people to destabilize the scheme by affiliating to it only in case of pregnancy.

In Egypt, for example, a woman claiming cash maternity benefit must have paid contributions for the last 10 months before the expected date of childbirth; while in Morocco, a woman needs 54 days of contributions during the 10 months preceding the expected childbirth. In Cyprus, a woman must be insured for at least 26 weeks before the starting date of the maternity cash benefit. Entitlement to cash maternity benefit in Greece requires that a woman have worked for at least 200 days in insured employment during the last two years before the expected date of childbirth. In Peru, however, it is sufficient for a woman to have been in insured employment at the time the child was conceived. Italy requires only that the woman has an employment contract of at least three months; while Viet Nam does not require any qualifying conditions apart from insurance coverage.

ILO Conventions

Article 51 of Convention No. 102 allows the setting of a qualifying period which, however, must not be longer than such period which is considered by the national authorities as necessary to preclude abuse. In this regard, a qualifying period of up to one year of contributions or employment would be in accordance with the requirements of the Convention.

Article 6 of Convention No. 183 requires that the conditions set to qualify for cash maternity benefit should be such that they can be satisfied by a large majority of the women to whom the Convention applies.

A6.3. Entitlement conditions

Beside prescribed qualifying conditions, many countries require compliance with further conditions for the entitlement to cash maternity benefits, as summarized below:

- Nearly all countries over the world require as a condition for entitlement to cash benefit a medical certificate that lays down the expected date of the birth.
- In most countries worldwide, the claimant must stop paid employment for the period during which cash maternity benefit is claimed, consistent with international standards. In cases where a woman voluntarily returns earlier to paid work, the payment of cash benefits ceases as of the date at which work is resumed.
- In some countries, contrary to international standards, the number of times a woman can claim cash maternity benefits is limited and sometimes leave is granted only once during a certain period. The former is the case in Egypt, where a worker may not obtain cash maternity benefits more than three times throughout the period of employment, and in Barbados, where women cannot take maternity leave more than three times while working for the same employer. In the Philippines, the entitlement to cash maternity benefit is limited to a maximum of four deliveries.

ILO Conventions

According to Article 47 of Convention No. 102, the contingency of maternity benefit covers suspension of earnings due to pregnancy and confinement and their consequences. This means that the benefit may not be paid if the woman concerned is in receipt of her salary or wage. Neither Convention No. 102 nor Convention No. 183 prohibit that a woman returns to work before the termination of the statutory leave period (12 weeks under Convention No. 102 and 14 weeks under Convention No. 183), as long as the compulsory post-natal leave period (6 weeks under Convention No. 183) is respected. However, it is strongly recommended for the health of the mother that she completes the full period of statutory maternity leave. The ILO Committee of Experts on the Application of Conventions and Recommendations (CEACR) has also considered that maternity protection Conventions do not authorize limitations to the right to maternity protection based, for example, on the number of children.

A6.4. Periods of compulsory maternity leave

Most countries that have maternity protection schemes in place provide maternity cash benefits for a leave period of at least 12 to 14 weeks. Although there are many variations regarding the duration of the compulsory leave period and how it is distributed before and after childbirth. It is most common to provide for a six-week compulsory leave after childbirth to protect women from being pressured to return to work, which could be detrimental to her health and that of the child.

In addition, national legislation often provides for different unexpected circumstances that can extend the duration of maternity leave, such as multiple births, illness or birth which occurs earlier or later than the expected date. Some countries also provide for a reduced maternity leave period in case of adoption of a child. Predominant characteristics of maternity leave provisions worldwide can be summarized as follows:

- Honduras, Mexico and Uruguay, for example, provide for a paid maternity leave period of 12 weeks, as prescribed by Convention No. 102, with six weeks before and six weeks after the expected date of childbirth.
- An increasing number of countries have moved up to a leave period of 14 weeks, as set out in Convention No. 183 (for example, Algeria, Belize and Morocco). Several countries provide for even longer periods of leave: Cyprus, France, Italy and Türkiye provide for a leave period of 16 weeks; Viet Nam provides for a paid maternity leave period of 120 days; Lithuania a period of 18 weeks; and some countries in Europe provide more than 20 weeks of paid maternity leave, for example, the Russian Federation provides 22 weeks; Hungary provides 24 weeks; Czechia, Denmark and Slovakia provide 28 weeks; Croatia provides 31 weeks; Portugal provides 34 weeks; Norway provides up to 42 weeks; and Sweden provides up to 55 weeks.
- Some countries have introduced a tiered approach to maternity leave. An initial period may be paid, and then a second part unpaid. Greece provides paid maternity leave for 17 weeks, but thereafter unpaid leave for up to 3.5 months for each parent.
- Several ILO Member States provide for an extension of the prenatal leave period if the child is born after the expected date (for example, Barbados and Uruguay), while others extend the postnatal leave if the birth occurs before the due date (for example, Nicaragua). Some countries provide for extended prenatal and postnatal leave (for example, the Bolivarian Republic of Venezuela) in the case of a longer or shorter pregnancy than was foreseen.
- Some countries also provide for additional leave in case of illness or complications, although the length varies significantly. In some countries, the length is not specified in the national legislation (for example, Plurinational State of Bolivia, Chile and the Dominican Republic), while in some countries the duration is set explicitly, for example, in Barbados, where an employee is entitled to an additional six weeks of leave for illness arising from the birth, and in Senegal, where women workers may take three weeks of leave on medical grounds arising from pregnancy and confinement.
- In addition, some ILO Member States have special provisions in case of multiple births: for example, Belgium, where maternity is extended by two weeks before the birth, and Nicaragua, where extension is provided by two weeks after birth.
- Some developed countries also extend maternity leave to cases of adoption of children (for example, France) and some (for example, Italy and France) also provide for a period of paid parental leave for either parent. In some other countries, a specified small portion of the maternity leave is reserved for the father, which is usually attributed to the father at the end of the mother's total maternity leave entitlement (for example, Norway and Poland).

ILO Conventions

Article 52 of Convention No. 102 prescribes a paid maternity leave period of at least 12 weeks (Article 52); while Convention No. 183 lays down a period of at least 14 weeks of paid maternity leave (Article 4), which must include a compulsory leave period of six weeks after the birth of the child.

Furthermore, Article 52 of Convention No. 102 prescribes that if a longer period of abstention from work is required or authorized by national laws or regulations, the paid leave period may not be limited to a period less than such longer period. And Article 5 of Convention No. 183 stipulates that on production of a medical certificate, leave shall be provided before or after the maternity leave period in the case of illness, complications or risk of complications arising out of pregnancy or childbirth. The nature and the maximum duration of such leave may be specified in accordance with national law and practice.

A6.5. Level of paid maternity leave benefits

Maternity cash benefits provided during maternity leave are intended to replace a portion of the income lost due to the interruption of the woman's professional activity. Cash benefits give substance to the right to leave and, as a general rule, the duration of cash benefits coincides with the length of leave, although this is not always the case. There is a fairly wide degree of divergence in the level of maternity cash benefits. In many countries, the cash benefit is linked to the insurable wage of woman workers, with the insurable wage being usually the wage upon which social security contributions have been paid for a specified period. The insurable wage can be either the full usual wage or a portion of the usual wage, which is determined as liable for insurance contributions. The benefit paid can be either as the full insurable wage or a proportion of it.

- A number of countries, particularly in Europe provide for 100 per cent of the covered salary. Examples include Austria, Belarus, Croatia, Denmark, Estonia, France, Latvia, Luxembourg, Norway, Poland, Portugal, Spain, and the Russian Federation. Outside Europe, 100 per cent is also paid in Algeria, Argentina, Barbados, Brazil, Guatemala, Mexico, Morocco, Panama, Peru, Uruguay and Viet Nam, among others. However, in some countries there are ceilings on the insurable earnings and/or ceilings on the maximum amount of benefits with the consequence that the benefit, even if it represents 100 per cent of the former earnings, it is capped at a specified level, so that very high-income earners receive a benefit that is less than 100 per cent of their former earnings. A maximum on the benefit paid can be found, for example, in Belgium, Cyprus, Czechia, Denmark, Egypt, France, Greece, Ireland, Honduras, Luxembourg, Mexico, Morocco, Peru, Slovakia, Sweden and Tunisia.
- In some other countries a proportion of the usual wage or the insurable wage is paid. In Bulgaria the cash benefit amounts to 90 per cent of the former wage; while in Belize, Italy and Sweden it amounts to 80 per cent; and in Cyprus and Egypt to 75 per cent. In Hungary and Ireland, the benefit is 70 per cent of the former wage; whereas in Honduras, Tunisia and Türkiye it is 66 per cent; and in Finland, 65 per cent. In Japan, it amounts to 60 per cent and in Costa Rica and Greece to 50 per cent. In the Caribbean countries, most replacement ratios range from 60 per cent (as in Trinidad and Tobago) to 70 per cent (as in Guyana).
- In a few countries, cash benefits are set at staggered rates: in Belgium the payment is set at 82 per cent of the covered wage for the first 4 weeks of leave, and thereafter at 72 per cent. Grenada pays a benefit of 100 per cent of the former wage for the first two months of leave, but 60 per cent for the last month.

- Many countries have set a minimum benefit, for example, Finland, Grenada, Ireland, Mexico, Portugal and the United Kingdom.
- In some countries, the benefit is a flat-rate benefit set at a certain amount, for example, in Jamaica where the maternity cash benefit is set at the minimum wage.

ILO Conventions

According to Article 65 of Convention No. 102, the minimum maternity cash benefits have to amount to at least 45 per cent of the former wage, when the benefit is linked to former wages/earnings, while they have to amount to at least 45 per cent of the wage of an unskilled worker, when the benefits represent a flat amount (Article 66 of Convention No. 102).

According to Article 6 of Convention No. 183, maternity cash benefits shall be at a level which ensures that the woman can maintain herself and her child in proper conditions of health and with a suitable standard of living. Where, under national law or practice, cash benefits paid with respect to maternity leave are based on previous wages/earnings, the amount of such benefits shall not be less than two-thirds of the woman's previous wage/earnings or of such of those wage/earnings as are taken into account for the purpose of computing benefits.

Regarding the issue of insurable wage, the up-to-date ILO Conventions on maternity protection do not specifically define the covered wage to which the minimum proportion applies.

A6.6. Frequency of payment

Most maternity cash benefits schemes worldwide provide for a benefit payment mechanism following the same frequency of payment as salaries and wages. Generally, such benefit payment is made on a monthly basis. In some countries, however, the cash benefit for maternity leave is paid in the form of a lump sum. This can have the undesirable effect of allowing women to return to work before the end of the maternity leave period and therefore to receive their salary in addition to the maternity cash benefit. In the ILO's view, this practice undermines the health principles underlying maternity leave and contributes to public perceptions that maternity leave is not really so necessary or important.

ILO Conventions

Article 50 of Convention No. 102 prescribes that the maternity cash benefit should consist of a periodic payment. However, the precise periodicity of the payment is not stipulated in the Convention, and is thus left to countries to provide for it according to national legislation and practice.

Convention No. 183 is silent on this issue.

A6.7. Who pays

There are different payment arrangements for funding maternity cash benefits, which usually reflect the funding arrangements applying to the national social security systems in the countries concerned. In practice, the costs may be borne by employers, the insured persons, and/or by the government, either through social security contributions or through general tax revenues. Within this context, it should be noted that, in cases where schemes are financed by insurance contributions, those contributions are usually funded by both employers and workers of both sexes and without distinction as to age. This funding mechanism applies also to maternity cash benefits schemes and is a direct expression of the principle of solidarity between sexes and between age groups.

The predominant funding mechanisms of maternity cash benefits schemes can be summarized as follows:

- Shared contributions between employers and employees to jointly fund maternity insurance are the most common pattern in the great majority of countries, both developed and developing, for example, in Algeria, Belize, Cyprus, Greece, France, Lithuania, Morocco and Tunisia. In many of these countries, the contributions for maternity cash benefits are included in the contributions covering health and/or sickness insurance, for example, in Egypt, Italy, Japan, Lithuania, Mexico, Morocco, Peru and the Russian Federation, or are included in the overall contributions covering all social insurance branches of a national social security scheme, for example, in Cyprus, France, Philippines and Tunisia.
- In many countries, the government shares some of the costs with the employers and employees. In Belize, France and Lithuania, for example, the government provides subsidies to cover any deficit; while in the Philippines and Tunisia, the government is held responsible for the payment of the administrative costs. In other countries, the government contributes to the scheme by providing a global amount, for example, in Cyprus, Greece and Japan.
- Tripartite funding of maternity insurance schemes through contributions paid by employers, employees and the government are very rare but can be found in certain countries, for example, in Honduras, Mexico and Thailand.
- Maternity insurance schemes exclusively funded by employers' contributions are also rare, but can still be found in countries such as Italy, Peru, the Russian Federation and Türkiye.
- In a small number of countries, the government funds the costs for paid maternity leave out of taxation. This pattern of financing can be found in Uruguay and New Zealand, for example.
- In a number of countries, maternity benefits provided by a public welfare system are used to supplement those funded by social insurance. They may be granted to workers who have no right to social insurance or may be added to social insurance benefits to extend protection. This is the case in, among others, Austria, Denmark Finland, France, Germany, Luxembourg, Netherlands, Norway, Poland and Sweden.

ILO Conventions

According to Article 71 of Convention No. 102, the cost of the benefits and the cost of the administration of such benefits shall be borne collectively by way of insurance contributions or taxation or both in a manner which avoids hardship to persons of few means and takes into account the economic situation of the Member State and of the classes of persons protected. It further prescribes that the total of the insurance contributions born by the employees protected shall not exceed 50 per cent of the total of the financial resources allocated to the protection of employees and their wives and children.

In this respect, Article 6(8) of Convention No. 183 lays down that, in order to protect the situation of women in the labour market, maternity benefits shall be provided through compulsory social insurance or public funds, or in a manner determined by national law and practice. It also stipulates that an employer shall not be individually liable for the direct cost of any such monetary benefit to a woman employed by him or her without that employer's specific agreement except where:

- such is provided for in national law or practice in a Member State prior to the date of adoption of this Convention by the International Labour Conference; or
- it is subsequently agreed at the national level by the government and the representative organizations of employers and workers.

In addition, Paragraph 4 of Recommendation No. 191 advocates that contributions should be based on the total number of employees.

A6.8. Institutional arrangement

In many countries where well established social security systems are in place, maternity benefit schemes usually form one part of the system that includes other branches of social security as well, such as pensions and short-term benefits. In most of these countries, the social security system is administered by an autonomous social security organization, which is governed by a tripartite board of directors comprising representatives of relevant ministries and headed by the Minister of Labour or the Minister of Social Affairs. The organization is responsible for administering the different social security schemes, which includes the collection of contributions from employers and employees, the processing of claims and the payment of benefits. In addition, it is often responsible for administering the different funds and for investing the assets. Within the social security system, maternity protection schemes are usually merged with other schemes for administrative convenience, often, however, with separate accountings for each scheme. Three patterns tend to predominate:

- In some countries, maternity cash benefits schemes are part of a wider social insurance system that also characteristically covers retirement, invalidity and survivors' pensions; sickness and employment injury benefits; and healthcare costs. This pattern can be found, for example, in Algeria, Belize, Cyprus, the Russian Federation and the Philippines.
- In many countries, maternity medical care, maternity cash benefits and sickness benefits (and sometimes also work injury benefits) are part of one scheme, as it is the case in Egypt, Honduras, Japan, Morocco, Peru and Tunisia.
- In a third group of countries, maternity cash benefits are administered in conjunction with cash sickness benefits and/or employment injury benefits; while maternity medical costs are coved by the separate public or national health system. Greece, Lithuania, Mexico, Uruguay and Viet Nam, among others, belong to this group of countries.

There are also some countries, where maternity cash benefits are funded from general taxation. In these countries, the maternity scheme is usually administered by the Inland Revenue Department, as is the case, for example, in New Zealand.

ILO Conventions

Article 72 of Convention No. 102 requires a tripartite administration of the scheme, if it is not entrusted to a specific government department or to a legislature.

Convention No. 183 does not determine a specific mode for the administration of the scheme. However, social partners need to be consulted for matters such as:

- the periodic review of the scheme;
- the exclusion of certain limited categories of workers for the scope of the Convention;
- the determination of types of work prejudicial to the health of the mother and child or where there is significant risk; and
- authorizing the individual liability of employers for the direct cost of monetary benefits.