Evolving social security in South Africa: An actuarial perspective

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ABSTRACT
This paper sets out South Africa's current social security benefits using the Tiers of the International Labour Organization pension's model. The analysis considers the benefits available under various adverse life circumstances. This highlights key reform considerations, some of which are under discussion while others are not yet fully explored. Two areas of policy reform considered in detail are the introduction of a Basic Income Grant (BIG) and improving retirement outcomes. Despite clear overlap, these issues have mostly been considered separately. Universalisation of grants, including the Old Age Grant, could improve retirement outcomes by eliminating the poverty trap and encouraging preservation of occupational retirement savings, as well as appearing more fiscally fair. Despite stakeholder consensus, phasing out means-testing has not yet happened. BIG became a serious policy issue when the COVID-19 pandemic struck in 2020. Most now agree on BIG being necessary, however the details are still debated. The benefit level is a major issue, particularly given that the existing "temporary" grant has become a *de facto* BIG over the last almost three years. Research shows that a BIG will likely have positive labour market effects but making it conditional on participation in labour activation programmes may be unnecessarily exclusionary. There remains debate about the economic impact of the redistributive effects of BIG and its financing. There is little appetite to increase government debt or to re-allocate the existing national budget, given existing constraints. Therefore, focus has been on how to provide

funding by changing the tax system which poses political challenges. The difficulty in modelling BIG's long-term costs hinders discussions. Similarly, the idea of a National Social Security Fund to improve retirement outcomes has broad support, but there is no consensus on the details. Some in government prefer a partially-funded Defined Benefit approach whereas others argue that a funded Defined Contribution approach would provide more security, greater economic growth and more affordable contributions. Including informal sector workers in a suitable scheme structure with fair incentives is also keenly debated. Actuaries want to be viewed as impartial, trusted partners but can be perceived as purely business focused. They can play an important role by contributing to inter-disciplinary research groups and helping decision-makers understand the implications of different courses of action. The authors are striving to contribute meaningfully while being seen as professional, capable, respectful, curious and pragmatic.

KEYWORDS
Social security, retirement reform, National Social Security Fund, basic income

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1 INTRODUCTION

1.1 An overview of the social security system in the Republic of South Africa (RSA)

1.1.1 Hagen-Zanker & Babajanian (2012, p.1) define social security as "publicly mandated policies and programmes to address risk and vulnerability among poor and near-poor households". The assessment criteria for such systems include "affordability, sustainability, equity, predictability and robustness" as well as adequacy (Govender et al., 2007). The components of a social security system can be described with different models, such as the various World Bank models and the International Labour Organization (ILO) model (Cichon, 2004). The model used in this paper is set out in Table 1, together with the RSA elements.

1.1.2 Tier 1 is significant and falls under the Department of Social Development (DSD) although the South African Social Security Agency (SASSA) pays the grants. SASSA estimates that 30.6% of the general population is paid one or more grants, including the COVID-19 Social Relief of Distress (SRD) grant.[1] More detail on the grants is provided in Appendix A.

1.1.3 Tier 2 coverage is difficult to estimate given participation tends to be measured at employer level as opposed to covered employees, based on author investigations. Unlike Tier 1, there are several government departments involved, but the

1 SASSA October 2022 statistical report

Department of Employment and Labour (DOEL) is involved in the benefits applicable to most workers. Explanation of the various Tier 2 benefits is given in Appendix B.

Table 1 Benefit tiers

Tier	What it is	Nature of participation	System elements in RSA
1	Social assistance	Mandatory, non-contributory	Old Age Grant (OAG) Child Support Grant (CSG) Disability Grant (DG) Care Dependency Grant (CDG) Grant-in-Aid (GIA) Social Relief of Distress Grant (SRD) War Veterans Grant (WVG) Foster Child Grant (FCG) COVID-19 SRD
2	Basic earnings-related protection or social insurance	Mandatory, contributory	Compensation for Occupational Injuries and Diseases Act (COIDA) benefits Occupational Diseases in Mines and Works Act (ODIMWA) benefits Road Accident Fund (RAF) Unemployment Insurance Fund (UIF)
3	Supplementary earnings-related protection	Mandatory or voluntary, contributory	Occupational arrangements for retirement, death and disability benefits
4	Discretionary arrangements	Voluntary, contributory	Private arrangements for retirement and risk benefits

1.2 Brief background to RSA

1.2.1 DEMOGRAPHY

The 2022 population estimate by Statistics South Africa (StatsSA) was 60.6 million people, of which 51.5% are female.[2] RSA currently has large working-age and youth populations relative to the very young and the very old[3] and the population is ageing because of rising life expectancy and falling fertility rates (Carswell et al., 2020).

1.2.2 ECONOMY, POVERTY AND INEQUALITY

1.2.2.1 RSA is a middle-income, emerging economy.[4] After strong real Gross Domestic Product (GDP) growth per capita from 2002 to 2008, growth stalled and the economy began to shrink in 2019, as shown in Figure 1. If per capita GDP is considered, consistent shrinkage began as early as 2014.

2 StatsSA. Midyear Population Estimate 2022
3 CIA World Factbook, Available at: https://www.cia.gov/the-world-factbook/countries/south-africa/ (Accessed 14 September 2022)
4 Ibid.
5 GDP PPP data: World Bank Data Bank. Population: StatSA mid-year population estimates

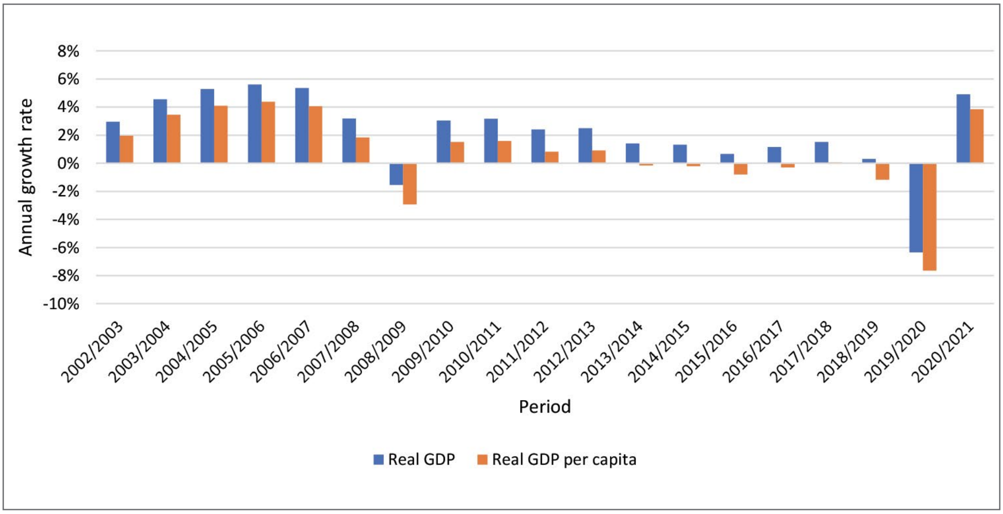

FIGURE 1 RSA GDP on a purchasing power parity basis (total and per capita)[5]

1.2.2.2 Unemployment is high at 35.3% and 46.2% on the official and expanded definitions of unemployment respectively.[6] Unemployment is highest among younger people; the expanded unemployment rate declines from 77.0% for people aged 15 to 24, to 22.1% for people aged 55 to 64.[7] There are approximately 3.7 people employed in the formal sector for every job in the informal sector.[8] Both labour force participation rates and employment rates are lower for women as shown in Figure 2.

1.2.2.3 Income and wealth distribution are very uneven with an estimated post-tax Gini coefficient of 65 (Van den Heever et al., 2021). Although about 10.6 million people – representing about 56% of the economically active population aged 15 to 64 – are registered for tax, only 6.9 million were estimated to be above the Personal Income Tax (PIT) threshold in 2021.[9] Since 2012, poverty is defined relative to three lines described by StatsSA (2022) as:

— **Food Poverty Line (FPL):** the amount of money required by one individual to provide the minimum required daily energy intake.
— **Lower Bound Poverty Line (LBPL):** FPL plus an amount for non-food items based on expenditure of households with total expenditure equal to the FPL.
— **Upper Bound Poverty Line (UBPL):** FPL plus an amount for non-food items based on expenditure of households with food expenditure equal to the FPL.

6 StatsSA Quarterly Labour Force Survey Q4 2022.
7 Ibid.
8 Ibid.
9 Donaldson, A (2021). Analysis: Here's how big South Africa's pension gap is. *News24*, 20 September 2021. Available at: https://www.news24.com/fin24/opinion/analysis-heres-how-big-south-africas-pension-gap-is-20210920 (Accessed 24 September 2022)

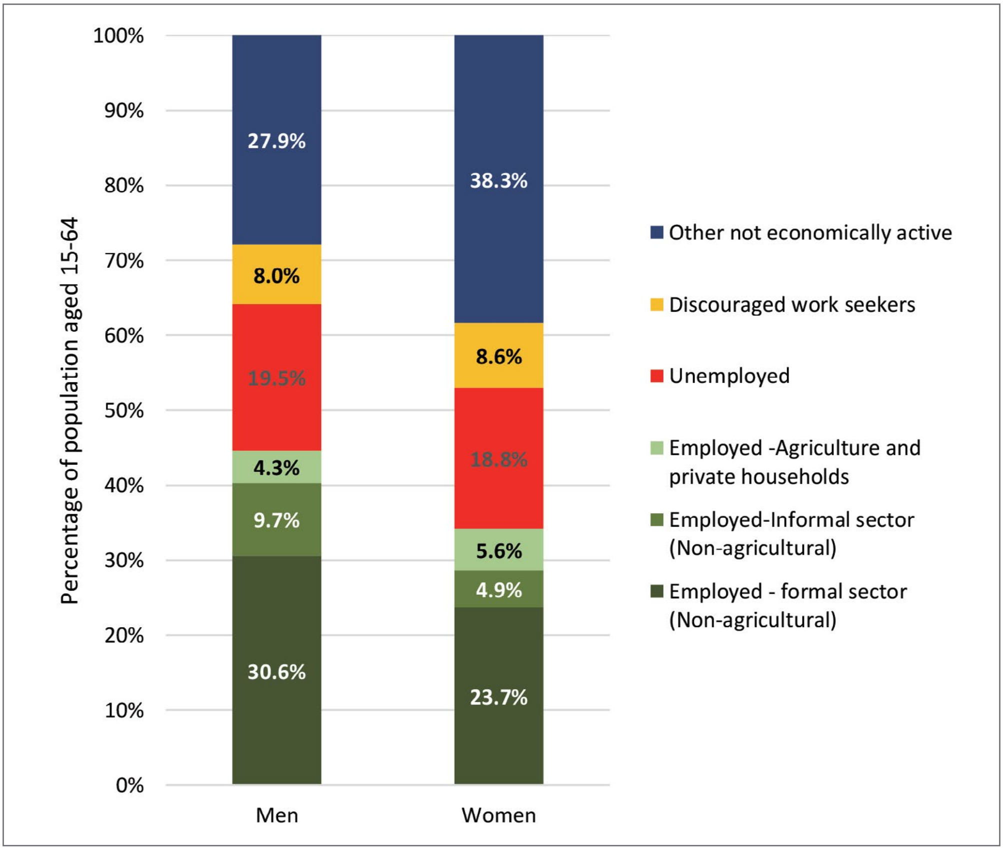

FIGURE 2 Breakdown of total population aged 15–64 by employment status (Source: StatsSA Quarterly Labour Force Survey Q4 2022)

1.2.2.4 The poverty lines are adjusted annually for inflation, with periodic rebasing (StatsSA, 2022). The nominal monthly amounts of these poverty lines are shown relative to various grants, the minimum wage, the PIT threshold and USD1 per day in Figure 3.

1.2.2.5 Despite the relatively low levels of the poverty lines, without temporary COVID-19 relief, 41.8% of households live in poverty by the broadest definition (Van den Heever et al., 2021). This is illustrated in Figure 4; where the relatively small PIT base is notable.

1.2.3 PIT[10]

1.2.3.1 A basic understanding of the PIT system is necessary to understand the social security reform financing challenges. PIT is administered by the South African Revenue Service (SARS). An individual would first calculate their total income, then allow

10 SARS Pocket Guide 2023

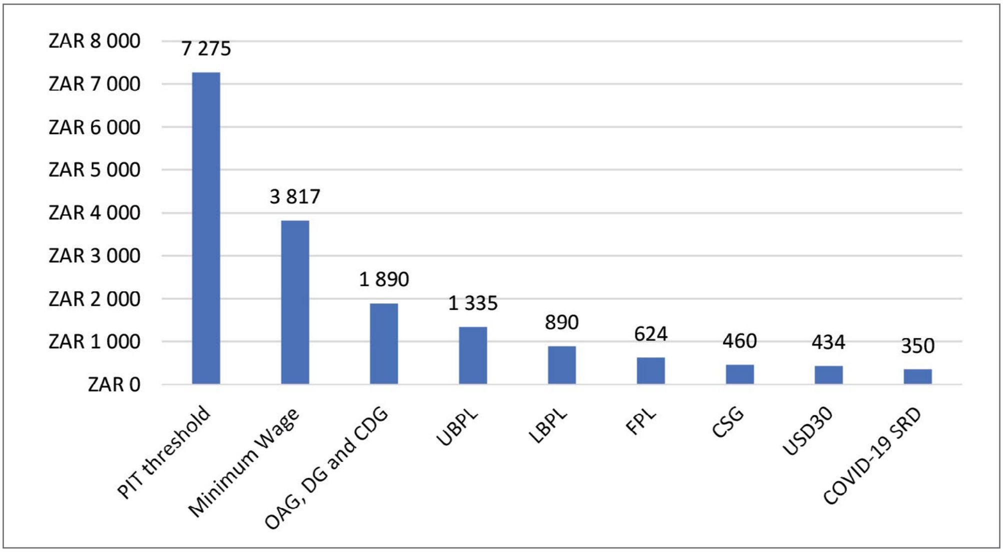

Figure 3 Relative levels of 2021 RSA poverty lines (monthly values)

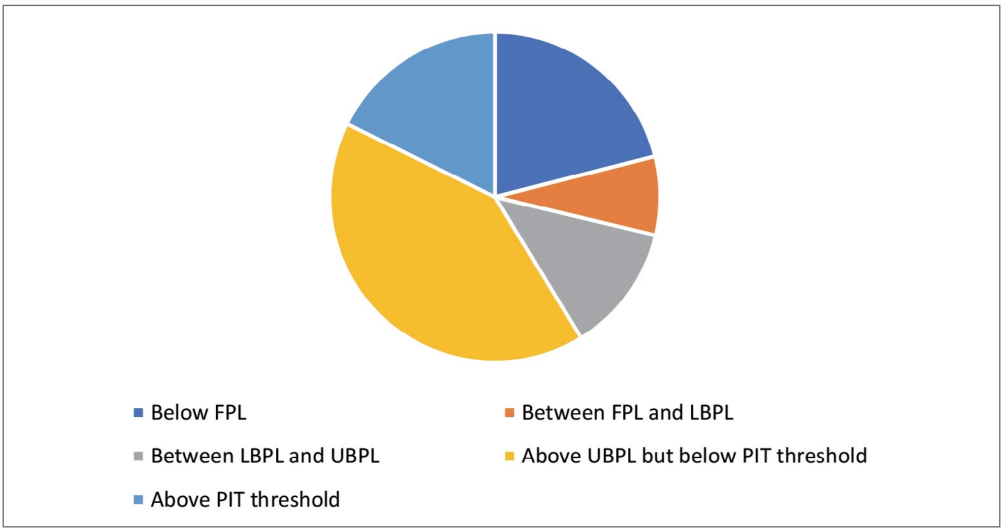

Figure 4 Poverty profile of households (Source: Van den Heever et al. (2021)

for various tax deductions on their income before calculating the tax owing. The tax bill is then reduced by the applicable rebates and any allowable tax credits. There are three age-related tax rebates which determine the tax thresholds:

— A primary rebate applicable to all taxpayers;
— A secondary rebate, added to the primary rebate, for taxpayers over 65; and
— A tertiary rebate, added to the above rebates, for taxpayers over 75.

1.2.3.2 There are several tax deductions, but the most relevant is that contributions to Tier 3 and 4 retirement vehicles are tax deductible up to 27.5% of taxable earnings subject to an overall annual limit. Investment returns on Tier 3 and 4 retirement savings are also exempt from income and capital gains tax. However, proceeds from Tier 3 and 4 retirement funds are taxed. Income benefits from retirement funds are taxed according to the same tax tables as salary income and special tax tables apply to lump sum benefits payable on withdrawal and retirement, with retirements attracting a larger tax-free portion. Hence for Tiers 3 and 4, retirement funds are broadly exempt-exempt-taxed. However, for a Tier 3 scheme to attract this preferential tax treatment it must be mandatory for all eligible members.

1.3 Reform and consensus

The first critical analysis of the social security system, including the private sector, was performed by the Taylor Commission (Taylor et al., 2002). They recommended various reforms, some of which have been implemented whilst others are still under discussion. The National Economic Development and Labour Council (NEDLAC), which is mandated to consider all legislation affecting labour, social and economic policy before it is tabled in parliament,[11] is pivotal in reform discussions. The main stakeholders represented at NEDLAC are Business, Community, Labour and Government[12] and the aim is for them to reach consensus.[13]

1.4 Aims of the paper

This paper aims to describe the current social security system in RSA and note where an actuarial perspective can progress the ongoing debates around social security reform of Tiers 1 and 2 specifically. The following research questions are addressed:

— What social security benefits are available in RSA for various life events?
— What challenges exist within the current RSA social security framework?
— What actuarial issues are involved with universalising key grants?
— What actuarial issues stem from initiating a Basic Income Grant (BIG)?
— What key actuarial issues are involved with the introduction of Tier 2 retirement savings?
— What possible areas for actuarial involvement are there?

1.5 Scope

This paper focusses on the proposed reforms to Tiers 1 and 2 of the RSA social security system. There are other reform proposals that affect Tiers 3 and 4, but these are

11 NEDLAC Protocols. https://nedlac.org.za/wp-content/uploads/2020/11/Nedlac-Protocols.pdf (Accessed 26 April 2023)
12 See for example, https://nedlac.org.za/executive-council/ (Accessed 26 April 2023)
13 NEDLAC Protocols, supra

not dealt with in this paper. However, for the reader to understand the implications of the reforms to Tiers 1 and 2, the Tier 3 and 4 benefits are mentioned. Interested readers may wish to explore other proposed reforms including:

- A new institutional social security model under one government department;
- The strengthening of governance in Tier 3 and 4 retirement funds;
- Auto-enrolment of employees in Tier 3 retirement funds;
- The introduction of a uniform disability definition across the Tiers; and
- The introduction of compulsory preservation on withdrawal of a portion of Tier 3 and 4 retirement savings (the so-called 'two-pots' system).

1.6 Plan of development

The social security system from an individual's perspective is analysed in Section 2. The analysis then shifts to specific reform proposals in RSA, the rationale for them and the issues involved that are of particular interest to actuaries. The proposals covered are the universalisation of key grants, the introduction of a BIG and the introduction of a Tier 2 retirement benefit in Sections 3, 4 and 5 respectively. As actuaries, we want to make a meaningful contribution. Section 6 sets out how values and skills honed by the profession can contribute towards these discussions.

2. THE CURRENT SOCIAL SECURITY SYSTEM FROM AN INDIVIDUAL'S PERSPECTIVE

2.1 Overview

This section considers the various adverse situations individuals may find themselves in and the benefits available to meet these needs within the current system.

2.2 Being unable to generate an income through work

2.2.1 DUE TO OLD AGE

2.2.1.1 The OAG is the Tier 1 retirement benefit and is paid from age 60 with an additional benefit payable from age 75. The Inter-Departmental Task Team on Social Security and Retirement Reform (IDTT) (2012) highlights that there is no formal increase policy for these benefits, which keeps these Pay-As-You-Go (PAYG) benefits affordable but provides limited security to recipients. The OAG is paid to 68.2% of age-eligible people, with an additional 13.7% of people over age 60 accessing other grants.[14] Access to the OAG is restricted by means-tests on assets and income where the income means-test reduces the OAG paid by 40c for every rand of income[15] which is close to the maximum marginal

14 SASSA October 2022 statistical report, supra

15 Government Notice R511. Regulations relating to the application to and payment of social assistance and the requirements or conditions in respect of eligibility for social assistance. *Government Gazette 39978*, 6 May 2016

tax rate of 45%.[16] Although the means-test has been criticised for its complexity (see for example IDTT, 2012), it does automatically integrate the other Tiers with the Tier 1 benefits and targets the poor.

2.2.1.2 RSA does not have Tier 2 or mandatory, contributory retirement arrangements as defined in Table 1. Unemployment benefits could be claimed by someone unable to work due to age, but these are for a limited time, can be depleted for other reasons, and were never intended to be retirement benefits.

2.2.1.3 Tier 3 retirement vehicles are voluntary from an employer's perspective, but, as discussed in Section 1.2.3, not from an employee's perspective. Employers typically contribute to a Tier 3 pension or provident fund but may also contribute to a privately-owned retirement annuity fund – a Tier 4 vehicle – on the employees' behalf. An estimated 6.85 million people registered with SARS under the age of 65 have one or more Tier 3 or 4 retirement fund memberships.[17] This is about 17% of the adult population aged 15–60[18] and 42.7% of the employed population registered with SARS.[19] However, coverage differs significantly by employment type and sector. It is estimated that 2.4% of those employed domestically and in agriculture, 58.1% of remaining formal workers and 13.5% of informal workers are saving for retirement in Tier 3 and 4 funds.[20] Formal sector coverage is high by international standards (DSD, 2021b). The assets accumulated in these fully funded Tier 3 and 4 arrangements are substantial and were estimated at approximately ZAR4.3 trillion on 31 December 2020,[21] which was about 77.5% of the national GDP for that year.[22] SARS data suggest the average contribution to Tier 3 and 4 retirement funds is 12.1% of taxable earnings[23] and the distribution by income is shown in Figure 5.

2.2.1.4 The retirement outcomes from Tiers 3 and 4 are contested. Income replacement ratios (RRs) at retirement are estimated at 24% by DSD (2021b), but this is an underestimate as there is currently no way to assess an individual's total savings for retirement across multiple Tiers and products within each Tier. It is generally agreed that poor outcomes from Tier 3 are primarily due to leakage from the system as members of Tier 3 funds can take their full accumulated retirement savings in cash when withdrawing from the pension or provident fund (National Treasury, 2021; DSD, 2021b). However, there are other fund-dependent issues that may contribute to poor outcomes, particularly in a Defined Contribution (DC) environment, including excessive costs, poor investment outcomes (DSD, 2021b) and poor governance (National Treasury, 2021).

16 SARS Pocket Guide 2023
17 Donaldson, A (2021), supra
18 Own calculation based on coverage of 6.85 million and an adult population from StatsSA Quarterly Labour Force Survey, Q2 2022
19 Donaldson, A (2021), supra
20 Ibid.
21 Financial Sector Conduct Authority Annual Report 2020/2021
22 StatsSA (2021) P0441– Report 04-04-04 – Benchmarked and rebased estimates of GDP
23 Donaldson, A (2021), supra
24 Ibid.

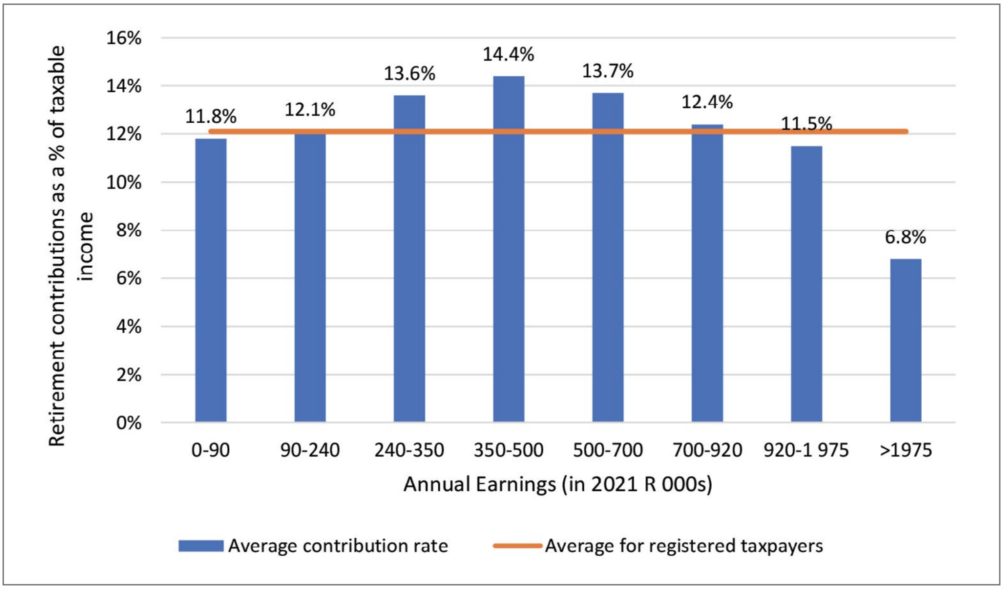

FIGURE 5 Contributions to retirement funding[24]

2.2.1.5 The retirement benefit system raises several reform considerations, the first of which is coverage. About a third of the age-eligible population do not receive the OAG due to means-testing, but about a third of non-OAG-recipients over the age of 60 qualify for other grants.[25] This highlights the coverage gap created by the means-test. The lack of a low-margin group retirement arrangement available to all the employed, including the self-employed and informally employed, is viewed as a serious limitation.

2.2.1.6 A second issue is the concept of a retirement age, especially considering an ageing population. As set out in Appendix A, the OAG eligibility age is 60, but the benefit is not directly linked to employment status. On Tier 3, the Normal Retirement Age (NRA) is set in the SARS-approved fund rules for each fund and statutory pensions actuaries report that these typically vary between ages 55 and 65. On Tier 4, the retirement age is from age 55 onwards.[26] As set out in Section 1.2.3, the secondary rebate applies from age 60 and the tertiary rebate from age 75. There are thus mixed messages throughout the system as to what an appropriate retirement age is. Early retirement is prevalent on Tier 3. One very large administrator of DC funds puts the average NRA at 63.8, but the average actual retirement age on the same funds is 61.9.[27] Another administrator found that only 1.1% of their umbrella fund members were over NRA.[28] It is unclear what motivates these

25 SASSA October 2022 statistical report, supra
26 Income Tax Act, Act 58 of 1962
27 Alexander Forbes Member Insights 2021
28 Old Mutual Corporate Consultants. South Africans Saving for Retirement: Insights from analysis of umbrella fund members.

exits prior to NRA and hence what the implications are for setting appropriate retirement ages in the benefits system. In terms of extending retirement age, it is notable that the OAG eligibility age for men of 65 was gradually reduced to age 60 via the Social Assistance Amendment Act.[29] There is some evidence of employers increasing NRAs on Tier 3, but actual retirement ages lag.[30]

2.2.1.7 The third issue is measurement. The additional OAG benefit of ZAR20 paid to people over 75 has no known objective nor is there measurement of what this additional spend achieves. As already mentioned, it is extremely difficult to assess outcomes from Tiers 3 and 4. Also, the values of the tax expenditure subsidies (TES) associated with Tiers 3 and 4 described in Section 1.2.3 are not measured[31] apart from the contribution subsidy which is estimated at ZAR79 billion p.a. (Van den Heever et al., 2021). This analysis is complicated by the fact that tax is deferred in an exempt-exempt-tax system and hence the tax revenue on retirement fund proceeds requires consideration. The lack of a cost-benefit analysis complicates discussion as to whether the TES money could be better applied at the level of Tiers 1 and 2 and hence the future role of Tiers 3 and 4.

2.2.2 DUE TO DISABILITY AND SICKNESS

2.2.2.1 Disability benefits are naturally complex, and this increases exponentially when considering multiple benefits across multiple Tiers as shown in Table 2.

2.2.2.2 It is difficult to compare disability coverage even at Tier 1 and 2 level due to difficulties locating up-to-date information, poor quality COIDA claims data,[32] differing claims run-off patterns, the effects of lockdown and different benefit structures. However, the following statistics give a sense of the differing coverage scales: there were just over 1 052 000 DG recipients in October 2022[33] which can be compared to around 16 000 accepted UIF disability claims for the year ended 31 March 2020 which is in contrast to around 8 000 ODIMWA claims finalised in the 2019/2020 financial year.[34]

2.2.2.3 Five major reform issues stem from the complexity of the system. The first issue arises due to the possibility of multiple benefits arising from a single event. For example, a person with reduced income from a work-based accident may have cover on UIF, COIDA, Tier 3 and Tier 4. If this accident were a road traffic accident, they may also submit a claim to RAF. Different disability definitions and assessment criteria may create uncertainty as to whether the individual would qualify for a certain incapacity benefit. Different benefit designs, caps and payment periods further obfuscate the expected

29 Act 6 of 2008
30 Alexander Forbes Member Insights 2021
31 Personal correspondence with Alex van den Heever of the IDTT
32 Compensation Fund Annual Report 2019–2020, noted by the Auditor-General. Data from the devolved insurers is much more reliable, but not representative.
33 SASSA October 2022 statistical report
34 Compensation Commissioner for Occupational Diseases in Mines and Works (March 2022). Annual Performance Plan for the 2022/2023 Financial Year

Table 2 Disability benefits by Tier

Tier	Benefit name	Eligibility	Benefit description
1	DG	Aged 18–59 on incapacity as diagnosed by a doctor subject to a means-test	Monthly flat-rate income. Deferred period of 6 months. No maximum number of payments.
2	COIDA[35]	Persons with occupationally-acquired disabilities where the employer is COIDA-registered. Roles like uniformed police and defence force are excluded.	Income disability benefit for a maximum of two years with a lump sum benefit for permanent disability. The deferred period is 3 days. Benefit is based on capped earnings.
	ODIMWA[36]	Employees at mines or works with specific occupational lung diseases have their claims dealt with under ODIMWA instead of COIDA. Tuberculosis claims are limited to within 12 months of leaving service.	Income benefits available only for tuberculosis and paid for a maximum of 6 months. A lump sum benefit is provided for all other conditions. Benefit is based on capped earnings.
	RAF[37]	Loss of earnings or potential loss of future earnings arising from an injury acquired in a motor vehicle accident on an RSA road.	Lump sum for both the past and future loss with the loss subject to an annual cap.
	UIF[38]	Loss of earnings due to illness or injury for members of the UIF. Most workers are compelled to join the fund.	Income benefit where the duration depends on accumulated credits with a maximum payment of 12 months of benefits per 4-year cycle. Benefit is based on capped earnings.
3	Occupational disability cover	Offered at the employer's discretion. Disability definition chosen by the employer can be functional or occupational	Monthly income or lump sum depending on the product chosen. Deferred periods vary widely and can be up to 24 months.
4	Discretionary arrangements	The insurer may impose exclusions.	

benefits. Consequently, the moral hazard that can arise from excessive levels of insurance is very difficult to manage. There are no official regulations in RSA limiting RRs on disability income benefits, although insurers typically apply their own limits and guidelines.[39] There are no reliable data to gauge abuse of the system which insurers suggest is happening, especially at lower income levels.[40] If the total disability benefit is excessive, it is not clear which is the last layer of cover which would be reduced for other benefits. Tier 3 and Tier 4 providers agree that they operate after COIDA, ODIMWA and UIF,[41] but RAF, which pays

35 Act 93 of 2003
36 Act 78 of 1973
37 Act 56 of 1996
38 Act 63 of 2001
39 Personal correspondence with Reinier van Gijsen: Head of pricing at Sanlam Group Risk
40 Personal correspondence with Reinier van Gijsen and Uvarshi Ramjee: Head of claims at Old Mutual Group Assurance
41 Personal correspondence with Reinier van Gijsen, supra

a lump sum on Tier 2, always operates last,[42] even after the Tier 1 DG. If a person has a private Tier 4 policy and a group policy on Tier 3, it is very unclear how these are meant to integrate.[43] In addition, there are no formal mechanisms for reporting disability benefits across providers.

2.2.2.4 Secondly, there are gaps where a person does not receive any benefit due to:

— The deferred period, where paid sick leave may run out before a benefit starts;
— A lump-sum benefit being paid which the recipient outlives;
— Different benefit triggers and qualifying conditions; or
— The maximum number of payments being reached.

2.2.2.5 A third challenge arises because Tier 2 benefits differ greatly in terms of design and benefit levels. For example, COIDA, ODIMWA and UIF all pay temporary disability benefits. However, given the benefit caps, floors and levels, the RRs achieved vary greatly between the three benefit types as shown in Figure 6. To illustrate the point, as at November 2022, a worker with average earnings would have an RR of 75% under COIDA, but just under 26% under UIF. A mineworker with average earnings for that industry would have RRs of 75% RR from COIDA, 11% from ODIMWA and 24% from UIF. In contrast, RAF only pays a lump sum benefit, based on the actual loss; an even more generous benefit.

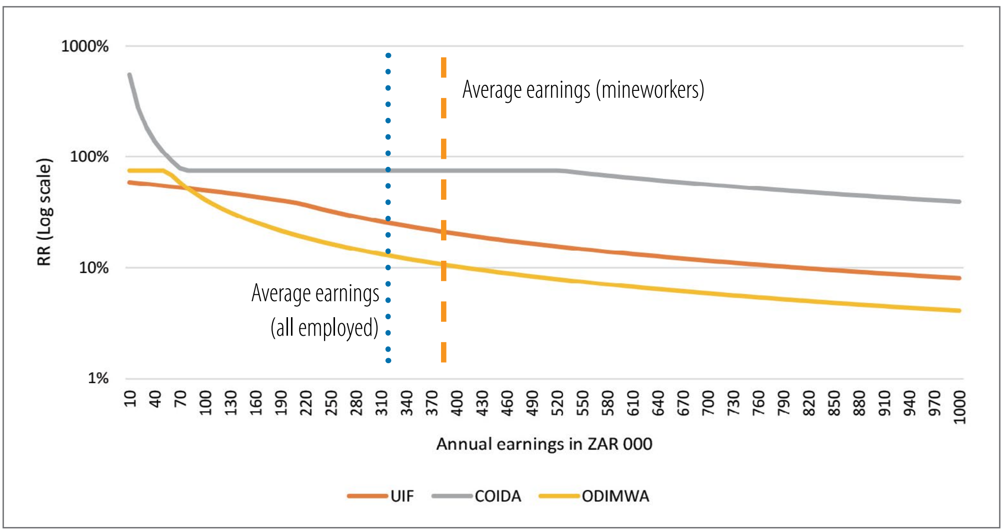

FIGURE 6 RRs of Tier 2 disability income benefits as at 31 December 2022[44]

42 RAF Act
43 Personal correspondence with Reinier van Gijsen, supra
44 Average annual earnings (as at November 2022) sourced from StatsSA Quarterly Employment Survey P0277, December 2022.

2.2.2.6 The result is a Tier that is very difficult to navigate, where most people should rely on the UIF which pays a relatively poor benefit for a relatively short length of time and has unusually low claim rates. Persons with injuries that fit the RAF, COIDA or ODIMWA criteria can possibly obtain these benefits; however, qualifying can be relatively arbitrary. For example, the distinction between workers with the same occupationally acquired lung disease based on where they worked is well documented, see for example Adams et al. (2013) and Ehrlich (2012). The disparities between benefits under COIDA and ODIMWA are difficult to justify and were identified as inequitable in 2002 (Taylor et al., 2002), but no progress has been made to align the benefits under a single piece of legislation.

2.2.2.7 Fourthly, shortfalls in cover may arise due to the difficulties associated in assessing gaps, overlaps and different benefit levels. No “top-up” product is available that enables someone with a stricter disability definition to buy cover for a more lenient definition, at the same RR. According to True South Actuaries and Consultants (TSAC, 2019), households require an RR of 78% on disability. Ignoring any deferred period, the poorest 20% of households had more than sufficient disability cover in 2018 (TSAC, 2019). However, in other households in the same year the RRs, excluding Tier 2 entitlements, averaged 44% to 69% (TSAC, 2019). Given the complexity of the Tier 2 benefits, it is difficult to ascertain how much the picture would change if these were included. These coverage gaps may be understated given that unpaid work, typically done by women, is not considered insurable.

2.2.2.8 A final issue to consider is how effective the system is at ensuring people with disabilities are integrated into the workplace as much as possible. How disability benefits are reduced for other income influences the incentive to return to work. The DG is reduced by 40c for every rand earned via the means-test. For Tiers 2, 3 and 4, disability income benefits are tax-exempt while wage earnings are taxed. Thus, across the Tiers, partial return to work is not incentivised. Insurers do strive to encourage people to return to work as this would hopefully be in the interests of all parties, however this is a challenging goal. There is also the risk of conflicting advice and duplicated efforts by Tier 2 and 3 benefit providers trying to assist return to work.

2.2.3 DUE TO A LACK OF EMPLOYMENT OPPORTUNITIES

2.2.3.1 A variety of public employment services and voluntary labour activation programmes are available to alleviate unemployment (DSD, 2021b). Examples include Training of the Unemployed that provides training to unemployed UIF beneficiaries and unemployed youth, even if they are not UIF members (DSD, 2021b). Participants must be officially registered and must avail themselves to artisan training provided by an employer, who is then obliged to absorb the person into a job (DSD, 2021b). The Vocational Bursary Programme provided by COIDA similarly targets people receiving a disability income benefit from COIDA, their families, unemployed people with disabilities and unemployed youth. There are also several initiatives run by non-governmental organisations. Despite these initiatives, unemployment is at 46.2% on the expanded definition as discussed in Section 1.2.2.

2.2.3.2 Grants alleviate some of the financial distress caused by unemployment, but there is no universal unemployment benefit on Tier 1. However, the COVID-19 SRD grant is paid to individuals aged 18 to 59 who are unemployed and not in receipt of a social grant, a UIF benefit or National Student Financial Aid Scheme benefit. The unemployment need not be pandemic-related and so this is effectively an unemployment benefit for workers without UIF benefits. The grant was initially introduced in April 2020 as a temporary measure to help South African citizens deal with the economic hardships created by COVID-19 and the lockdown.[45] The grant was initially payable for six months from May 2020 to October 2020.[46] By November 2020, there were over six million COVID-19 SRD grants in payment and approximately 68% of recipients were male due to the strict means-test and the large percentage of unemployed women receiving the CSG (DSD, 2021a). The means-test criteria have been adjusted a few times to deal with this imbalance.[47] By 2023, 7.5 million people were receiving the COVID-19 SRD monthly[48] and the grant continues until at least 31 March 2024.[49] The grant was stopped in April 2021, but was reinstated in August 2021 due to public demand.[50] Van den Heever et al. (2021) estimate that because of it the percentage of the population living below the FPL is reduced from 21.1% to 16.5%.

2.2.3.3 On Tier 2, the UIF provides an unemployment benefit for up to 12 months and the Temporary Employer/employee Relief Scheme (TERS) provides relief in cases of employer distress. The TERS benefits have been subject to significant fraud, in part due to poor articulation with private insurance-like business continuity cover.[51] UIF coverage, and hence effectiveness, is difficult to determine. While RSA tracks overall unemployment rates, it does not track the total number of people who become unemployed in any given period. However, the UIF unemployment benefits paid to 854 639 people in the

45 President Cyril Ramaphosa (21 April 2020). Additional Coronavirus COVID-19 economic and social relief measures. Available at: https://www.gov.za/speeches/ president-cyril-ramaphosa-additional-coronavirus-covid-19-economic-and-social-relief (Accessed 14 September 2022)

46 Ibid.

47 Government Notice R2381. Social Assistance Act (2004): Amendment of regulations relating to COVID-19 Social Relief of Distress issued in terms of Section 32, read with Section 13 of the Social Assistance Act, 2004(Act no 13 of 2004), as amended. *Government Gazette 46726*, 18 August 2022

48 https://ewn.co.za/2023/02/15/sassa-receives-over-13-million-r350-srd-grant-applications-in-jan-parly-hears (Accessed 14 September 2022)

49 2023 Budget Speech, Minister of Finance Enoch Godongwana, 23 February 2023

50 Minister Lindiwe Zulu (4 August 2021). Re-introduction of special COVID-19 SRD grant. Available at: https://www.gov.za/speeches/minister-lindiwe-zulu-re-introduction-special-covid-19-srd-grant-4-aug-2021-0000 (Accessed 14 September 2022)

51 DOEL. Available at: https://www.labour.gov.za/uif-commences-payment-of-unrest-support-relief-scheme-by-disbursing-r6-4-million-to-workers (Accessed 14 September 2022)

year to 31 March 2020[52] can be compared to the estimated unemployed population of approximately 6 635 500 people over the same period.[53] This suggests that about 13% of the unemployed, excluding discouraged jobseekers, are receiving UIF benefits.

2.2.3.4 There are no Tier 3 or 4 unemployment insurance benefits apart from disability cover discussed in Section 2.2.2. People can use accumulated savings, including withdrawal benefits from Tier 3 retirement funds for unemployment arising for other reasons.

2.2.3.5 Unemployment issues are complex, but the following observations may assist in future reforms. Firstly, the UIF alone is insufficient. It explicitly excludes certain classes of workers and is only available to the previously employed (DSD, 2021b). Where the UIF is responsible for contribution collection, compliance is poor resulting in coverage gaps. There is a lack of accessible data on covered employees for UIF, despite a concerted search by the authors. Transparent, accurate and accessible statistics can assist in understanding the UIF's coverage and hence effectiveness. Secondly, labour activation programmes alone cannot solve the unemployment problem. Thirdly, TERS benefits are paid to avoid or delay retrenchments, but it is unclear if there are any statistics measuring the effectiveness of this programme.

2.2.4 DUE TO CARING RESPONSIBILITIES

2.2.4.1 Young children, the disabled and the elderly may require a carer, who may be a paid employee. A family member could undertake this role for no fee, but at an opportunity cost if they forego work.

2.2.4.2 The two applicable grants offered under Tier 1 are the GIA and CDG. The GIA is designed to assist with this need for OAG, DG and WVG recipients only.[54] There is no means-test on the GIA as the means-test on the OAG, DG and WVG should apply. The GIA is equivalent to about 21 hours of care per month at the current minimum wage[55] and is thus merely a subsidy towards care costs. The CDG is paid to households where there is a disabled child and is equal in value to the DG, with the same disability definition, but has a much less stringent means-test.[56] So, it is not guaranteed that a child receiving a CDG will receive a DG in adulthood and hence be eligible for the GIA. Continuing the theme of caring for the disabled, COIDA provides a constant attendant allowance for work-related disability. This has a minimum value of about 106 hours of care per month at the minimum wage with no clear maximum benefit.[57] The RAF can provide a benefit paying for the reasonable costs of a carer or domestic worker.

52 UIF Annual Report 2019–2020
53 StatsSA Quarterly Labour Force Survey, Q1 2020
54 Social Assistance Act, Act 13 of 2004
55 Own calculations based on a minimum wage of R21.69 per hour and a GIA of R460 a month from https://www.gov.za/services/social-benefits/grant-aid (Accessed 26 April 2023)
56 Government Notice R511, supra
57 Own calculations based on a minimum wage of R21.69 per hour

2.2.4.3 Carer benefits related to infants are provided on Tier 2 by the UIF. A birthing parent may claim a maternity benefit. This benefit has a 66% RR for the first eight months before dropping to 20% for another four months. In cases of adoption or surrogacy, one parent may claim a benefit at the same level as the maternity benefit, but for only 10 weeks. A parent not receiving a maternity, adoption or surrogacy benefit may claim a parental benefit which is paid at a RR of 66% for a maximum of 10 days.[58] Employers may provide additional benefits.

2.2.4.4 In all other cases, the carer costs would need to be met from other income. Due to anti-selection issues, carer insurance products are typically only provided for old-age care. Long-term care insurance is not a common product class in RSA, so there is little coverage available on Tiers 3 and 4.

2.3 Income insecurity

Tier 1 benefits, the SRD, CSG and FCG, can support households with income insecurity arising from other causes. The SRD can be paid to households waiting for other grants to be paid or facing emergencies. It is a short-term benefit and does not address the needs of households with chronic income insecurity. The SRD is the only grant that can also be paid in kind, for example as food parcels.[59] This resolves access problems that may occur in disaster-affected communities, but about 68% of SRD benefits are taken in cash.[60] The CSG is a means-tested benefit available to households with children under the age of 18. The FCG is currently the only grant where a means-test is not applied and the FCG is significantly higher than the CSG although both are paid in respect of children the same age.

2.4 Unexpected funeral costs

2.4.1 On Tier 1, municipalities may provide a funeral where the family of the deceased cannot be traced or cannot afford the burial. In special cases, the provincial government may provide a benefit.

2.4.2 On Tier 2, the RAF may provide a funeral benefit for a person killed in a vehicle accident based on costs incurred. For the employed, COIDA will provide a funeral benefit for work-related deaths of covered individuals, subject to a maximum.

2.4.3 Employers typically offer funeral cover on Tier 3, and cover may be included for the spouse and other family members of the deceased.

2.4.4 There is a large Tier 4 funeral cover market where cover may be for the policyholder, as well as immediate or extended family. Funeral cover may be stand-alone or may be "free" cover bundled with another product like a loyalty card. However, there is significant underreporting of claims on such free cover.

58 UIF Act, Act 53 of 2001, as amended
59 SASSA Statistical Report, March 2021
60 SASSA Statistical Report, March 2021 – own calculation based on Table 51 of that report.

2.5 Loss of household income arising from a death

2.5.1 BEFORE RETIREMENT

2.5.1.1 From Tier 1, the SRD can be made available to households experiencing financial distress following the death of a breadwinner.

2.5.1.2 Pre-retirement Tier 2 death benefits from RAF, COIDA and the UIF only consider employment income. The benefits are all capped, but the COIDA cap was more than twice the UIF cap as at 31 December 2022. The RAF benefit is paid as a lump sum to the deceased's legal and factual dependants and takes future earning potential into account. COIDA may apply if the death is work-related and pays a two-part benefit: a lump sum and a pension benefit payable to a spouse or child. The UIF death benefit is the undiscounted lump sum value of the unemployment benefit the deceased would have received if they had become unemployed. It is only paid where there is a spouse or minor children. Only 15 337 UIF death claims were received in 2019/2020[61] which is surprisingly low. The variations in dependant definitions are noteworthy ODIMWA does not have a true death benefit but will pay a posthumous permanent disability benefit.

2.5.1.3 Death benefits for workers on Tier 3 are widely available. The death benefits may be offered directly by the employer (unapproved benefits) or by a retirement fund (approved benefits). Unapproved benefits are paid to nominated beneficiaries and are typically processed quickly. These benefits mainly take the form of a lump sum benefit although pension benefits are possible. Approved benefits may consist of an insured death benefit, a return of pension fund savings or a combination of the two. Most DC retirement funds offer lump sum death benefits while Defined Benefit (DB) funds could offer a lump sum or a pension benefit. Trustees are legally responsible to allocate lump sum benefits to dependants. Dependants include both legal and factual dependants, which could include step-children or illegitimate children, for example. The accompanying processes are expensive and time-consuming with considerable delays to processing of benefits. A balance needs to be found between providing death benefits to the deceased's dependants and the time taken and expense incurred in doing so.

2.5.1.4 Tier 4 life cover benefits are paid directly to nominated beneficiaries. Considering Tiers 1, 3 and 4, most young people have a significant insurance gap as shown in Figure 7 (TSAC, 2019). Insurance needs typically decrease with age and ignoring the needs of dependants in retirement, there appears to be considerable over-provision for older ages (TSAC, 2019). Tier 2 benefits were excluded from the analysis as they are only paid in specific circumstances as set out in Appendix B.

2.5.2 AFTER RETIREMENT

An SRD grant is the only Tier 1 benefit payable on a death after retirement. Tier 2 benefits are not available after retirement. The retirement death benefits on Tiers 3 and 4

61 UIF Annual Report 2019/2020

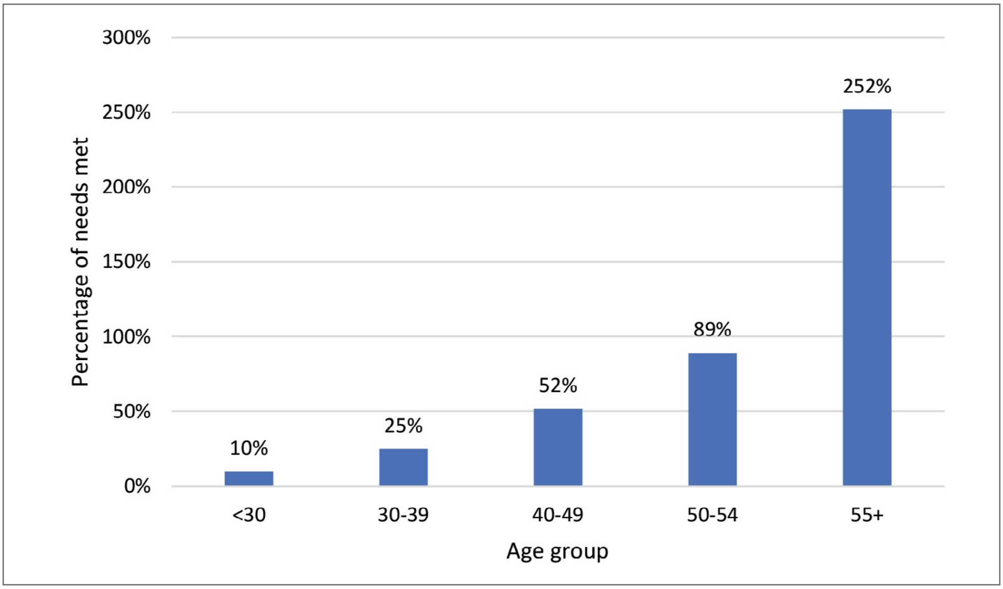

FIGURE 7 Percentage of death needs met by Tiers 1, 3 and 4 by age (Source: TSAC, 2019)

can be divided into life insurance cover and death benefits associated with a particular annuity product. In terms of annuity products, any remaining living annuity capital is transferred to the nominated beneficiaries. Life annuity products may offer death benefits in the form of a guaranteed minimum pension payment period or a spouse's reversionary pension. Tier 4 life cover is not linked to an employer and may continue post-retirement.

2.6 Implications

2.6.1.1 RSA social security benefits are payable from different government entities and private providers. The benefit structures are overly complicated, making it difficult for individuals to understand and claim. Individuals may spend time trying to claim benefits for which they do not qualify or conversely miss benefits to which they are entitled. Individuals may receive assistance from an employer or charitable organisation such as the Black Sash to claim the benefits but the most vulnerable may not have easy access to such help.

2.6.1.2 A more coordinated, streamlined approach could be more transparent, cheaper to administer and easier to understand. While a single government department for providing social security was proposed (DSD, 2021b), improved governance in the existing social security system is a pre-condition for Business (NEDLAC, 2021). While this proposal remains under discussion, the following three sections deal with three other proposals which address shortcomings of the current system: the universalisation of key grants, the introduction of a BIG and the introduction of Tier 2 retirement savings.

3. UNIVERSALISATION OF KEY GRANTS

3.1 Rationale

The Taylor Commission explored making key grants universal (Taylor et al., 2002). Over time, discussions have focussed more narrowly on making the OAG universal with the aim of eliminating the poverty trap and encouraging preservation of occupational retirement savings (DSD, 2007; 2008; IDTT, 2012). DSD (2021b) suggests that a universal OAG might be more fiscally fair as about 3.1 million people aged 60 and older receive the OAG and about 400 000 people receive the secondary and tertiary rebates described in Section 1.2.3 but about 1 million people aged 60 and over receive nothing from the fiscus for retirement.

3.2 Specific proposals and consensus

3.2.1 The 2013 Budget Review proposed that the means-test for the OAG should be phased out by 2016, funded by reductions to the secondary and tertiary tax rebates described in Section 1.2.3 (NEDLAC, 2021). NEDLAC stakeholders unanimously supported scrapping the means-test for the OAG, with the only concerns being around the precise costs and timelines (NEDLAC, 2021). Addressing these concerns, DSD (2021b) presented three options for the universalisation of the OAG, namely:

— **Option 1:** universalisation of the OAG at age 60.
— **Option 2:** universalisation of the OAG at age 65 with a simplified means-test between ages 60 and 65.
— **Option 3:** universalisation of OAG at age 75 with a simplified means-test between ages 60 and 75.

In all three options, the secondary and tertiary rebates would be removed. DSD (2021b) stated stakeholders most preferred Option 2. The simplified means-test involved scrapping the asset test, raising the threshold for the income means-test and eliminating part payment of the OAG so it is either paid in full or not at all.

3.2.2 The asset means-test was still applied in 2023. In terms of the income means-test, it was proposed to gradually raise the income means-test to the PIT threshold at age 65 and exclude annuity income from the definition of income for the test (DSD, 2021b). By April 2023, the income means-test level was at ZAR96 840 per person p.a.[62] relative to the PIT threshold of ZAR95 750 at age 60 and ZAR148 217 at age 65[63] due to the effect of the secondary rebate. Amendments to the Social Assistance Act would be required to remove the proportionate benefit payments, redefine income for means-testing purposes and achieve an increase in the means-test income level without increases to the OAG. Removing proportionate benefits is unlikely to be material given that the proportion

62 As at 1 April 2023, own calculation
63 As at 1 April 2023, SARS 2023 Pocket Guide

of benefits paid is close to 100% (Carswell et al., 2001). No consensus was reached on universalising the CSG or DG (NEDLAC, 2021).

3.3 Critique

3.3.1 Despite stakeholder consensus, phasing out the means-test on the OAG has not progressed much since 2013. Removing means-testing would extend the OAG from 3.1 million to up to 4.5 million people. Community stakeholders have argued that expenses could be reduced significantly by removing the means-test (NEDLAC, 2021), but expenses are less than 5% of the total net-of-expense benefit spend (National Treasury, 2019). The implication is that money must be found either by reallocation of government budgets or growing revenue by decreasing tax expenditure. High-level calculations around Option 2 suggest that it cannot be self-funding for two reasons: (1) per person the value of the OAG is about twice the value of the combined value of the secondary and tertiary rebates; and (2) the number of additional recipients for the OAG is more than triple the number of people receiving these tax rebates. DSD (2021b) alluded to this by suggesting that the TES on Tier 3 and 4 retirement savings could also be reduced to fund Option 2.

3.3.2 Removing the means-test on the OAG was the easiest to justify of the key grants, due to the TES for a similar group. The tax system makes no specific allowance for children and has limited deductibility of disability-related costs. Government intends to broaden the access to grants as a precursor to increasing the grant amounts to align with poverty measures (DSD, 2021b), but this goal is a long way off.

4 INTRODUCTION OF A BIG

4.1 Rationale

4.1.1 The Taylor Commission recommended investigating the feasibility of a BIG, in the context of the Tier 1 entitlements, to increase grant coverage (Taylor et al., 2002). Two decades on, the rationale for such a benefit remains. Without the COVID-19 SRD, households without a child, elderly person or disabled person currently do not receive a Tier 1 benefit despite pervasive unemployment and low wages (Van den Heever et al., 2021). The demographic profile of households, as described in Van den Heever et al. (2021), by household income decile is shown in Figure 8.

4.1.2 The poorest households, decile 1, tend to be small and 62% have only one person. Only 30% of these households have access to any grants and if they do, this grant tends to be the CSG. There are no persons over the age of 60 in these households. The means-tests are not an impediment to these households and thus universalising existing key grants will not improve outcomes for these households. In decile 2, 37.5% of households have employment earnings and this increases to 79.8% in decile 5, but decile 2 to 5 households have relatively high numbers of children implying that earnings in the household are spread thinly. As a result, 80% of households in deciles 2 and 3 have grant income. This drops to 75% in decile 4 and 70% in deciles 5 and 6.

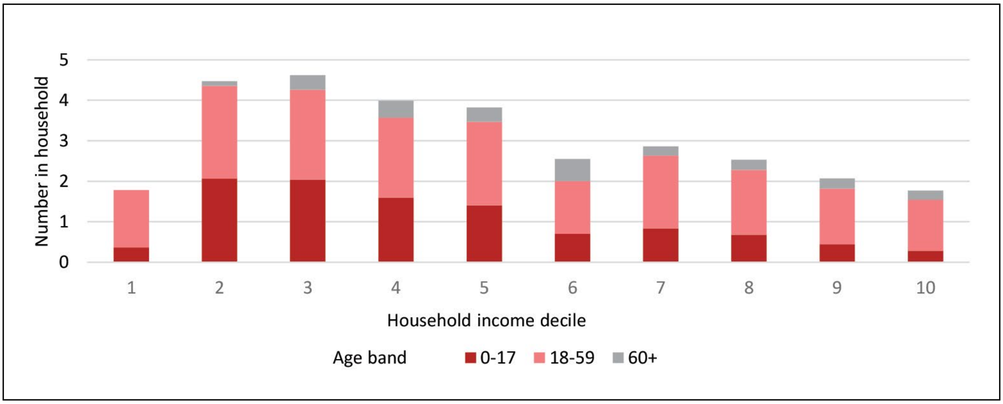

FIGURE 8 Households structure per income decile (Source: Van den Heever et al., 2021)

4.2 NEDLAC expert report and discussions at NEDLAC

4.2.1 NEDLAC based their discussions on Deloitte & Touché (2021), which defined the BIG as a payment to individuals aged 18 to 59 under various scenarios as shown in Table 3. A social accounting matrix model and the 2019 mid-year population estimate were used.

4.2.2 There are four main limitations to the work not discussed in Deloitte & Touché (2021). Firstly, the projection period was from 2019/2020 to 2024/2025. The short projection period may be problematic given the ageing population in RSA.

4.2.3 Secondly, a multiplier model was constructed using data from 2015 to estimate the economic effects of introducing a BIG, but the size of the multipliers was unclear. From the literature in the report, it was clear the authors did not expect redistribution to have a significant positive effect on growth. A clear understanding of the sensitivity of the results to this interim model output was critical.

TABLE 3 Scenarios used in Deloitte & Touché (2021)

Assumptions and inputs	Scenarios modelled
Universal vs targeted	Universal Paid only to the unemployed Paid to people below the LBPL Paid to people below the UBPL Paid to youth aged 18 to 21 Paid to youth aged 18 to 24
Economic growth	Base case (best estimate) High road (optimistic)
Benefit level	COVID-19 SRD grant LBPL UBPL

4.2.4 Thirdly, the economic assumptions and unemployment rate reflected the impact of COVID-19. However, the number of individuals below each poverty threshold was based on the data that predated the pandemic. Thus, the costs of a BIG targeted at people below the LBPL and UBPL may be understated.

4.2.5 The fourth and perhaps biggest issue was that the analysis used individual income without reference to household size. Deloitte & Touché (2021) motivated the use of individual-level modelling by stating that the current RSA means-tests, which do not take account of household size, discriminate against larger households. However, this choice did not make sense considering the means-test threshold of the FPL, LBPL and UBPL all take household size into account. For these reasons, the results of Deloitte & Touché (2021) need to be interpreted with caution.

4.2.6 Stakeholders agree that a version of a BIG should be included in the social security system, but there are contested areas as outlined in NEDLAC (2021):

— **Timelines and progress:** Community emphasised that social security is a constitutional right and progressive realisation within available resources was an imperative while Labour wanted clear timelines around the BIG.
— **The specifics of the design and labour market effects:** Business wanted further discussion on the design including the relationship to labour participation and the existing grants while Labour was adamant that the BIG must be universal. Community, on the other hand, had clear views that the initial benefit level should be the FPL and over time this would progress to the UBPL.
— **Financing:** Business stated that exactly how the BIG would be financed requires a holistic discussion of the budget and balance sheet of government including the contingent liabilities.
— **Governance:** Labour expressed concerns around funds not reaching intended beneficiaries. Community suggested a system for monitoring and evaluating the BIG to address this.

4.3 The two DSD expert panel reports

4.3.1 After the release of NEDLAC (2021), an expert panel appointed by DSD working under the supervision of the ILO released their first report, Van den Heever et al. (2021). The grant solution considered was for individuals aged 18 to 59 paid as a complement to the existing grant system, except for the COVID-19 SRD which it would replace. The various scenarios used in Van den Heever et al. (2021) are shown in Table 4.

4.3.2 While Deloitte & Touché (2021) investigated whether a BIG was feasible at all, Van den Heever et al. (2021) considered how a BIG could be designed and introduced so that it was feasible, given their conclusion that a BIG was necessary to address poverty and inequality and no other intervention could provide the same relief. The difference in scope and focus is important when comparing the two reports.

Table 4 Scenarios used in Van den Heever et al. (2021)

Assumptions and inputs	Scenarios modelled
Universal vs targeted	Universal Means-test of ZAR 0 (but disregarding CSG income) Means-test equivalent to that used for the CSG Means-test set at the PIT threshold Benefit paid from 18–24 and 55–59 only
CSG	CSG level unchanged CSG raised to FPL
Benefit level	COVID-19 SRD grant FPL LBPL UBPL

4.3.3 Van den Heever et al. (2021) was written after Deloitte & Touché (2021) and was thus based on more recent data. Because these models work at such scale, slight deviations between actual and expected can result in significant cost differences. This can be illustrated by Table 5 which shows the projected cost of a universal BIG at the UBPL in the two reports. The Deloitte & Touché (2021) figures are for the financial year 2021/2022 and the Van den Heever et al. (2021) amounts are in 2021 rands, but the cost estimate in the former is 9% higher than in the latter. The sensitivity of the modelling results to the data used in parameterising the models must be borne in mind when interpreting the results.

4.3.4 In terms of the model technicalities, Van den Heever et al. (2021) used a computable general equilibrium model which is a type of social accounting matrix model as used by Deloitte & Touché (2021).

Table 5 Comparison of universal BIG paid at UBPL

	Deloitte & Touché (2021)	Van den Heever et al. (2021)
Beneficiaries (millions)	34.7	32.7
Cost (ZAR billions)	553.6	509
Cost per beneficiary per month as a percentage of 2021 UBPL	102.%	99.8%

4.3.5 In terms of the multiplier effects, Van den Heever et al. (2021) integrated their computable general equilibrium model with a microsimulation model to capture both the direct and indirect effects of the reform. The microsimulation model which considered tax, income and poverty effects was based on the fifth wave of the National

Income Dynamics Study, which took place in 2017 (Van den Heever et al., 2021). However, the weights used were adjusted based on the 2020 mid-year population estimates and the 2020 fourth quarter Labour Force Survey. Thus, some attempt was made to adjust income estimates for the effects of COVID-19 on households (Van den Heever et al., 2021). Hence, the approach adopted in Van den Heever et al. (2021) was both more sophisticated and used more up-to-date parameters than Deloitte & Touché (2021).

4.3.6 In December 2022, a second expert panel report, Van den Heever et al. (2022), was released. The scope of this report was to consider:

— The short- and medium-term financing of the BIG;
— The financing and effects of an institutionalised COVID-19 SRD; and
— Targeted wage subsidies for four low-earning sectors, namely domestic workers, elementary workers, operators, and skilled agricultural workers.

Given that Van den Heever et al. (2021) recommended that the first phase of introducing the BIG would involve formalising the COVID-19 SRD, there was considerable overlap between the first two items.

4.4 NEDLAC (2021) concerns and the two DSD expert panel reports

It is interesting to consider how the two expert panel reports addressed the stakeholder concerns raised at NEDLAC that were detailed in Section 4.2.

4.4.1 SPECIFICS OF DESIGN, TIMELINES AND PROGRESS

4.4.1.1 Van den Heever et al. (2021) proposed an implementation path shown with costings in Table 6. The starting point for the BIG is the COVID-19 SRD with a zero means-test. This grant would be formalised at which point the means-test could be raised to the FPL based on household per capita income. Thereafter, benefit would be raised to the FPL and the means-test adjusted upward to that currently used for the CSG, which would include more caregivers in the BIG. A final means-test would then be the PIT threshold with a grant value equal to the UBPL. It would then be possible to remove the means-test altogether via adjustments to PIT rates.

4.4.1.2 Van den Heever et al. (2021) noted the means-tested scenarios were equivalent to a universal system with recoveries made by the PIT system. A universal grant had several advantages including lowering administration costs and avoiding poverty traps and errors of exclusion but this was not seen as a feasible short-, or medium-term goal without changes to the PIT system (Van den Heever et al., 2021).

4.4.1.3 SASSA's inability to do means-testing at scale, as observed when the COVID-19 SRD was introduced, was recognised as a limiting factor to a phased introduction (Van den Heever et al., 2021). The cost of improving this capability was not included in Table 6.

Table 6 Cost of suggested implementation path (Van den Heever et al., 2021)

	Counter-factual	Status quo	Phase 1	Phase 2	Phase 3
	Without COVID-19 SRD	COVID-19 SRD with zero means-test (excluding CSG)	COVID-19 SRD with FPL means-test adjusted for marital status	BIG at FPL with CSG means-test	BIG at UBPL with a PIT means-test
Beneficiaries (m)	0	13.4	16.6	25.4	27.5
Monthly benefit (2021 ZAR)	0	350	350	624[64]	1 33564
Means-test threshold (2021 income p.a. in ZAR)	N/A	0 (excluding CSG)	7 488[64]	55 200[64]	87 300[65]
Annualised cost in billions (2021 ZAR)	0	56.2	69.4	181	429
Gini coefficient	0.65	0.63	Not modelled	0.60	0.55
% Population below FPL	21.2%	16.5%	Not modelled	10.6%	0.1%
% Population below LBPL	33.5%	29.5%	Not modelled	21.1%	5.6%
% Population below UBPL	48.9%	46.7%	Not modelled	40.2%	28.1%

4.4.2 LABOUR MARKET EFFECTS

There are concerns about the BIG having negative labour market effects, but Van den Heever et al. (2021) note that the current Tier 1 benefits improve labour participation, particularly among women. BIG pilots in other countries found reduced unemployment and other positive labour market effects, such as the ability to negotiate for higher wages, which suggested that the BIG is necessary for poorer households to engage in labour activation (Van den Heever et al., 2021). Van den Heever et al. (2021) noted that a BIG conditional on labour activation programme participation may be socially desirable and may improve programme take-up. However, there may not be enough schemes and the poorest households may struggle the most to find and attend them (Van den Heever et al., 2021). This is consistent with arguments in IDTT (2012) that conditional grants are administratively expensive and may exclude those who really need them. Van den Heever et al. (2021) noted there was no institutional framework to make the BIG conditional in this way and there is a lack of clarity around RSA's labour activation programmes. Van den Heever et al. (2022) tested the effects of a wage subsidy as opposed to a BIG, but estimated this to be less effective at improving inequality for the same spend.

64 Poverty lines taken from StatsSA (2021). National Poverty Lines. Statistical Release P0310.1, 9 September 2021
65 SARS Budget Tax Guide 2021, PIT threshold for persons under 65

4.4.3 INTEGRATION WITH BROADER SOCIAL SECURITY

Van den Heever et al. (2021) did consider the integration of the BIG with existing social assistance. They concluded that ultimately, the BIG should integrate both with the UIF and labour activation programmes, but the exact nature of that articulation would need to be determined at a later stage.

4.4.4 FINANCING

4.4.4.1 Van den Heever et al. (2021) considered the budget and rejected the idea of reallocating expenditure from other areas, as was suggested by business at NEDLAC, or reducing the public sector wage bill as has previously been proposed by National Treasury. Unlike Deloitte & Touché (2021), Van den Heever et al. (2021) felt that limited debt financing for the initial entry-level BIG could be tolerated, but this was never a preferred strategy and was dropped in Van den Heever et al. (2022). The discussion around government's contingent liabilities in Van den Heever et al. (2021) was short and identified that some government-owned entities, such as the electricity provider ESKOM, could not be allowed to fail.

4.4.4.2 PIT, VAT and Corporate Income Tax financing were explored; however, VAT-financing was found to dampen some of the redistributive effects of the BIG and adjustments to the PIT for the top three household income deciles were preferred (Van den Heever et al., 2022). PIT options such as tax restructuring, bracket creep and improved efficiency of tax collections were also proposed (Van den Heever et al., 2022), which are consistent with a phased introduction of benefits.

4.4.4.3 Van den Heever et al. (2021) agree that economic growth is necessary for the long-term sustainability of the BIG but the redistributive effects of the BIG should assist with this in the long-term.

4.4.5 GOVERNANCE, MONITORING AND EVALUATION

Van den Heever et al. (2021) gave detailed input to address these concerns.

4.5 Critique

While Van den Heever et al. (2021; 2022) have addressed several of NEDLAC's concerns, cost and financing are likely to remain as stumbling blocks. The 9% variation in cost in the two 2021 expert reports, set out in Table 5, based on a one-year projection period for a relatively simple scenario, emphasises the difficulty in making even short-term predictions. A full evaluation of the models and data is likely to be required to understand the differences between them and the reliability of the output in various situations should be explored. If PIT funding is preferred, accurate modelling of taxpayers becomes very important. A noted limitation of van den Heever et al. (2021) was that wealthier taxpayers were under-represented and hence estimates of revenues raised through adjustments to PIT, particularly at the higher tax brackets, would be under-estimated.

5. INTRODUCTION OF TIER 2 RETIREMENT SAVINGS

5.1 Overview

This section considers the introduction of a mandatory contributory government-administered retirement fund, or National Social Security Fund (NSSF). The current proposals stem from DSD (2007) and went through several iterations before a base-case design was proposed in IDTT (2012). This design is summarised in Section 5.2. An IDTT report "dated 2012" was presented to NEDLAC only in 2016 (NEDLAC, 2021). NEDLAC (2021) noted the following initial concerns with the proposals: the actuarial sustainability of the NSSF, the impact of the NSSF on savings and capital markets and the coverage of informal workers. Expert reports were commissioned on all three topics and these reports are summarised in sections 5.3, 5.4 and 5.5. Discussions on the proposals and reports were then held at NEDLAC and NEDLAC's position in 2021 is summarised in Section 5.6. A critical commentary of the current proposals and stumbling blocks is given in Section 5.7.

5.2 NSSF proposals as per IDTT (2012)

IDTT (2012) proposed a DB design with death, disability and retirement benefits and contributions collected by SARS. It was recognised that the chronically unemployed may need access to savings but no specific "emergency access" benefit was proposed. The rest of this section summarises the design details.

5.2.1 ELIGIBILITY AND INSURED EARNINGS

5.2.1.1 The NSSF would be mandatory for all those earning above an agreed threshold, such as ZAR13 000 in 2012 terms. This was a departure from suggestions to limit eligibility to those above the PIT threshold, as was proposed in DSD (2007), or those in formal employment, as was proposed in DSD (2008). Extending eligibility to lower-income earners and those in the informal sector was acknowledged to create complications with contribution collection as not every NSSF member would be registered with SARS. A direct wage subsidy of an unspecified design was proposed to make the scheme more affordable.

5.2.1.2 For both benefits and calculation purposes, insured earnings were measured from the first rand up to the UIF threshold, as periodically updated by the DOEL.

5.2.2 RETIREMENT AGE, BENEFIT FORM AND LEVEL

5.2.2.1 The proposed NSSF retirement age was 65 with the OAG qualification age to remain at 60. It was implied that the retirement benefit would be an annuity from the NSSF, with no option to take part of the pension as a lump sum.

5.2.2.2 The targeted benefit was a 40% RR for workers earning ZAR75 000 p.a. in 2012 terms after 30 years including the Tier 1 OAG. This implied an accrual rate of 0.73% p.a. using the March 2012 grant value or 0.69% using the April 2012 grant value. Lower earners would have higher RRs than the target and vice versa. Retirement benefits were based on career-average earnings revalued with wage inflation.

5.2.3 DISABILITY BENEFITS

This was to be a disability income benefit to allow for continued membership of the NSSF with retirement benefit accrual and death benefit eligibility during incapacity. The earnings during disability would be the earnings as at the date of disability revalued for wage inflation. There is neither a mention of a contribution reduction during the period of disability nor a deferred period before the benefit commences.

5.2.4 DEATH BENEFITS

It was proposed that the NSSF death benefit was to be in two parts: an unspecified level of flat-rate funeral benefit and a survivor benefit. The latter was an annuity benefit available to a spouse for an unspecified, but limited, number of years and children until aged 18, or later if the child was in full-time education. The value of the annuity would depend on earnings at date of death and the number of dependants.

5.2.5 CONTRIBUTIONS AND FINANCING

The NSSF was to be PAYG, with a minimum reserve requirement of 25% and automatic stabilisers to keep the fund sustainable. Contributions were 12% of salary, including a 2% UIF contribution. IDTT (2012) found the proposed design to be sustainable using this financing strategy although no model specifications or results were reported and no expense assumption was mentioned.

5.3 ACTUARIAL SUSTAINABILITY REPORT

5.3.1 CONTEXT

IDTT (2012) represented the culmination of at least five years of discussions, but many design elements of the NSSF were still not clearly defined and the affordability and sustainability of the proposed design were unclear. NEDLAC thus commissioned an expert report on actuarial sustainability, ILO (2021).

5.3.2 DESIGNS CONSIDERED, BASIS AND INTEGRATION IN ILO (2021)

5.3.2.1 The ILO (2021) design was based on the design discussed in Section 5.2, the outcome of "some discussions held in Pretoria" and some input from the DSD.[66] The differences in design between IDTT (2012) and ILO (2021) are set out in Appendix C. Critically, the effective accrual rate had risen from approximately 0.7% p.a. to 1.09% p.a. In addition, the covered population was now all formal workers with no earnings threshold and the NSSF earnings ceiling was approximately 55% higher in real

66 Design of the new National Social Security Fund in South Africa, July 2020, author unknown

terms. The assumptions adopted by the ILO are generally justifiable and are set out in Appendix D.

5.3.2.2 Like IDTT (2012), the ILO (2021) design required either a universal OAG, a parallel proposal detailed in section 3, or the OAG means-test to exclude NSSF money. The integration of the NSSF with the other Tiers was clearer if incomplete. In terms of Tier 2, the funeral benefit paid by the NSSF would then invalidate any other funeral claim on Tier 2, namely RAF and COIDA funeral benefits, but it was unclear how the death and disability benefits were to integrate. In terms of Tier 3, these funds, both public and private sector, would become supplemental to the NSSF, meaning they could only take contributions on earnings above the covered earnings level as well as contributions on NSSF covered earnings in excess of 10%. Coverage in Tier 3 funds was to be expanded through auto-enrolment, but an individual could opt out if they desired. It was unclear how this would improve coverage given that employees may not opt out of an employer fund under the current system. Any Tier 4 benefits would be supplemental.

5.3.3 RESULTS

5.3.3.1 ILO (2021) found that the base design used in their modelling was not sustainable, as shown in Figure 9. It is important to remember that the cost of the scheme does not change with the financing method and so the proposed benefit structure is clearly not affordable on a 10% contribution rate. This means that either benefits will need to be reduced or higher contributions tolerated. Alternative financing methods that change the pattern of contributions may be more palatable but will not change the overall cost.

5.3.3.2 To improve sustainability, ILO (2021) considered introducing waiting

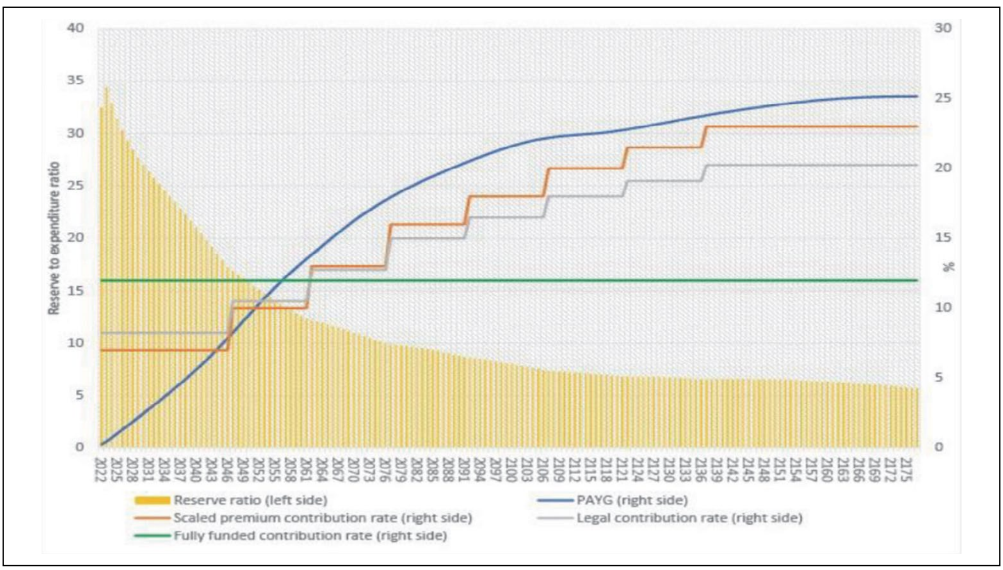

FIGURE 9 NSSF funding level and contribution rates (Source: ILO, 2021)

periods on disability and survivor pensions, an automatically increasing retirement age and a lower rate of revalorisation on earnings for the purposes of calculating career-average earnings. The automatic adjustment to retirement age would involve an increase of one month per year for a maximum increase of six months (ILO, 2021). This would be triggered four years after StatsSA confirmed a one-year increase in residual life expectancy at 65 (ILO, 2021). The results of the sensitivity testing are shown in Table 7. Other options were explored but increased the cost.

5.3.4 CRITIQUE

5.3.4.1 The design complied with ILO Convention 102[67] which posed several challenges, likely to alienate business, such as:

— The benefits were more generous which made the scheme more expensive;
— A greater share of savings were diverted away from Tier 3; and
— It included more low-income earners who are more likely to need wage subsidies to afford the contributions, even at initial levels.

Table 7 Sensitivity testing of contribution rates to various designs in ILO (2021)

Option	Contribution rate on given financing method			
	Full funding	PAYG as at		
		2046	2071	2171
Base scenario: No waiting periods. Retirement age fixed at 65. 100% of salary inflation for revalorisation.	12.0%	7.8%	16.5%	25.1%
Automatic increases to retirement age. No waiting periods. 100% of salary inflation for revalorisation.	11.8%	7.8%	16.5%	24.5%
5-year waiting period. Retirement age fixed at 65. 100% of salary inflation for revalorisation.	11.3%	7.0%	16.0%	24.3%
90% of salary inflation for revalorisation. Retirement age fixed at 65. No waiting periods.	11.0%	7.5%	15.1%	22.6%

5.3.4.2 In isolation, and possibly even together, the cost-saving scenarios proposed did little to alleviate the cost increases in partially-funded and unfunded scenarios. The adjustment to the retirement age was small and slow, presumably assuming that there would be strong opposition to larger increases. However, evidence from other African countries suggests that such changes are feasible,[68] and more scenarios could be tested here. Adding a waiting period results in less favourable terms in Tier 2 than what exist in the Tier 3 group market where many NSSF members would have previously had cover.

67 Ibid.
68 Personal correspondence with Tawanda Chituku, Laura Llewellyn-Jones and Bernard Yen, 9 January 2023

This is likely to be unpopular with all NEDLAC stakeholders. The lower revalorisation rate is effective at reducing cost because it effectively reduces the accrual rate for early years of service. This is less transparent and complies with the letter, but not the spirit, of ILO Convention 102. Any further exploration of this idea would need careful analysis given high rates of manual labour where workers are more productive in their youth and high rates of youth unemployment.

5.3.4.3 It was questionable to broaden eligibility to include lower-income earners who may not need Tier 2 coverage if their full income-replacement needs are met by Tier 1. Their inclusion also raises the contribution rate as a percentage of insured earnings which makes the scheme less palatable.

5.3.4.4 There were also three technical points to consider. The first relates to clarification of disability benefits. It is unclear in ILO (2021) what earnings would be used for the periods of disability. It is possible that the age pension would be based on the revalued earnings during periods of active service.[69] The report was also silent on whether contributions towards death cover and retirement savings would continue during periods of disability or be waived. It was the intention of the IDTT (2012) that, in cases where another Tier 2 disability benefit could be paid, the NSSF and DG benefits would be paid first, and any top-up would be paid by the other Tier 2 fund. ILO (2021) was silent on this issue, but possibly intended that, for work-related disability claims, the NSSF disability benefit and DG would not be paid at all and COIDA or ODIMWA benefits would be paid directly from the appropriate fund to encourage workplace safety.[70]

5.3.4.5 Secondly, ILO (2021) set out explicit early and late retirement factors. Apart from an error in the report, adjustments for early and late retirement are typically targeted to be actuarially neutral and hence change over time. Typically, funds allow for these factors to be updated regularly and it is extremely unusual for them to be fixed.

5.3.4.6 The third point relates to the salary scale which did not allow for earnings to decline before retirement. This is a relatively common pattern, especially among lower-income earners who may experience physical decline before retirement.

5.3.4.7 The key learning from ILO (2021) is that RSA cannot afford a benefit design consistent with ILO Convention 102. This is true irrespective of whether a DB or DC structure is used. For the NSSF to meet its aim of adequate, affordable, sustainable benefits to a broad spectrum of the population, other pragmatic designs should be considered.

5.4 Report on impact on savings and investment

5.4.1 OVERVIEW

Deloitte & Touché (2019) considered the impact of the NSSF on overall savings levels, investment in RSA equity and bonds and existing Tier 3 retirement funds.

69 Design of the new National Social Security Fund in South Africa, supra
70 Ibid.

5.4.2 EFFECT ON OVERALL SAVINGS LEVELS ACCORDING TO DELOITTE & TOUCHÉ (2019)

Provided the NSSF retirement funding contribution rate was above 6% of insured earnings, savings levels were expected to increase. To avoid a sharp contraction in consumption for groups who had not previously been saving, payment of the contributions on behalf of low-income earners, termed a wage subsidy, was required. The cost of the wage subsidy depended critically on the target group and contribution rate. For example, for a 10% NSSF contribution rate, a wage subsidy to everyone earning below the PIT threshold would cost 2.5 times more than a wage subsidy only to those not previously covered in Tier 3 and 4.

5.4.3 EFFECT ON INVESTMENTS ACCORDING TO DELOITTE & TOUCHÉ (2019)

5.4.3.1 It was assumed the NSSF would use a partially-funded model with a minimum reserve of 5%. A PAYG basis would be used for benefits initially with parallel accumulation of funds for future benefits. The diversion of funds away from the fully-funded Tier 3 was found to reduce overall investment levels sharply. The effect of partial funding on economic growth was noted to be unclear, but it was suggested that full funding would reduce the cost of capital.

5.4.3.2 To explore the effect on bond and equity markets, two possible NSSF investment strategies were considered: the asset allocation of RSA Tier 3 retirement funds on 31 December 2019 and an 80% allocation to domestic bonds with the remaining assets invested as per the first scenario. However, in both cases all contributions were assumed to be invested which contradicts the partial-funding proposed.

5.4.4 EFFECT ON TIER 3 RETIREMENT FUNDS ACCORDING TO DELOITTE & TOUCHÉ (2019)

Allowing for partial crowding out, a 10% NSSF contribution rate would reduce contributions to existing Tier 3 funds by 50%. This would increase to 66% at a 15% contribution rate. In the most extreme scenario, Tier 3 fund membership could reduce by 60% from 2020 to 2025.

5.4.5 CRITIQUE

5.4.5.1 The impact on savings and investments of introducing a new Tier is notoriously hard to model, requiring numerous scenarios to account for varying public reactions. Given that the design proposed in ILO (2021) was unsustainable, much of the additional work done here seems spurious.

5.4.5.2 The analysis in Deloitte & Touché (2019) suggested a dramatic reduction in the size of Tier 3, which would result in Business strongly opposing the NSSF. The effect on the Tier 3 funds would depend critically on the contribution rate, eligible population and insured earnings for NSSF. While the contribution rate seems settled at 10%, the other two factors are still debated and have bearing on the cost of the NSSF, which as discussed in 5.3 needs to be reduced. However, even at less generous benefit levels, special consideration for existing providers and transition arrangements for members in Tier 3 funds may be required.

5.4.5.3 The financing model for the NSSF is still undecided and it is curious that Deloitte & Touché (2019) used a 5% funding level as opposed to the 25% used by ILO (2021). A fully-funded Tier 2 would be considered unrealistic for a DB fund that would be liable to pay benefits immediately. A pure PAYG is equally unviable as a small working fund would be necessary. The size of the minimum reserve reflects where the financing strategy sits on the continuum between these extremes. The Deloitte & Touché (2019) report suggests that a 5% minimum reserve level on a rather generous benefit structure would reduce overall investment levels. This would suggest that a higher minimum reserve is required, particularly if the benefits are made less generous. The investment strategy can only really be explored once a more affordable benefit design is found, and target funding level decided.

5.5 Report on coverage of informal workers

5.5.1 OVERVIEW

Informal workers have poor coverage on Tiers 3 and 4, as discussed in Section 2.2.1, and rely on the Tier 1 OAG in retirement. There are divergent views on their inclusion in Tier 2: IDDT (2012) suggested a Tier 2 arrangement for informal workers parallel to the NSSF, but Deloitte & Touché (2021) modelled informal workers earning above PIT joining the NSSF. TSAC (2020) was the official report to NEDLAC on this issue.

5.5.2 DEFINITION OF INFORMAL WORKERS AS PER TSAC (2020)

Informal workers were defined based on the nature of their employment arrangements, which are typically non-compliant with employment law. For example, informal workers may not have written employment contracts or be registered for PIT. Informal workers would thus include carers in the home. It was noted that a person may switch between formal and informal working arrangements over their career or may have formal and informal work simultaneously, making it difficult to estimate the size of the target population for any informal worker fund. The distribution of the 3.9 million informal workers by gender and sector is shown in Table 8, with noteworthy differences in sector participation by gender. Earnings for RSA informal workers tend be highly volatile and data thereon is difficult to find and based on self-reporting. However, based on available data, many informal workers have low earnings.

5.5.3 THE NEED FOR TIER 2 COVERAGE OF INFORMAL WORKERS AS PER TSAC (2020)

Failure to provide a Tier 2 solution appropriate to informal workers, or failure to provide formal and informal workers with equivalent retirement saving incentives, may be regarded as unconstitutional. The authors concluded that a scheme run parallel to the NSSF on Tier 2, governed by the same legislative framework, and with shared administration and governance structures, was preferable to a Tier 3 arrangement. One reason for this was that portability between the funds for formal and informal employment would be easier.

Table 8 Informal workers by sex and sector in 2017 (TSAC, 2020)

Sectors	Male	Female	Total
Trade	344 996	713 723	1 058 719
Households	409 653	614 866	1 024 519
Construction	394 077	57 335	451 412
Manufacturing	269 688	29 984	299 672
Community	73 017	219 188	292 205
Agriculture	263 050	13 854	276 904
Transport	211 881	4 327	216 208
Finance	81 551	81 603	163 154
Mining	116 034	1 173	117 207
Total	**2 163 947**	**1 736 053**	**3 900 000**

5.5.4 TSAC (2020) RECOMMENDED DESIGN

5.5.4.1 A smoothed DC Tier 2 arrangement with risk benefits was proposed, with a retirement age equal to the eligibility age for the OAG. One approach to enrolling all eligible workers was to roll the benefits out sector-by-sector as was done to extend UIF coverage to domestic workers. A full discussion of the design considerations is given in Appendix E but the salient points are summarised in this section.

5.5.4.2 Contributions would be ad-hoc in terms of timing and amount, save for a minimum contribution for administration expense purposes. Contributions would be collected from members and the government, with no employer contribution.

5.5.4.3 The government contribution would match the member contribution, subject to an upper limit. This would provide the incentive for participation for informal workers who, by definition, may not be registered for PIT. The exact formula for this subsidy was not yet settled and this would affect the cost; however, it was proposed that the TES on Tier 3 and 4 retirement fund contributions be changed to fund it.

5.5.4.4 In addition to the government contribution, government would also pay the regular administration costs and hence the entire contribution received would be used for benefits purposes. Retirement benefits would be funded by 80% of the contribution with the balance funding death and disability, or risk, benefits. The cost of risk benefits would be regularly reviewed against tolerance levels.

5.5.4.5 Retirement contributions by members and the government would be paid to member and subsidy accounts respectively. The member account comprises an accessible account and a frozen account. By default, the member contribution is equally split between the accessible and frozen account, but the member could increase the allocation to the frozen account. Members could make two withdrawals a year from the accessible account subject to certain rules while all other accounts would be preserved.

5.5.4.6 The subsidy and frozen accounts would use a smoothed bonus investment strategy. The accessible account might require a lower-volatility investment strategy.

5.5.4.7 At retirement, the subsidy and frozen accounts must be converted into an annuity provided by the Tier 2 arrangement. The accessible account may be taken as a lump sum or converted to an annuity, either at retirement or a later date. Rules were suggested to prevent the fund from having to pay very small income benefits.

5.5.4.8 On death, the full value of the member account would be refunded to cover funeral expenses. Small survivor benefits would be payable as annuities to a spouse and children, based on contributions made over the three years preceding death.

5.5.4.9 Disability income benefits were payable on total and permanent disability until death or scheme retirement age and were based on total contributions within the three years preceding disability. Contributions of 10% of the disability benefit would go to the member account during the period of disability.

5.5.5 CRITIQUE

5.5.5.1 TSAC (2020) concluded that a separate Tier 2 fund for informal workers was necessary and provided a detailed possible scheme design. However, the OAG alone provides RRs above 40% for most informal workers, except for miners and male community workers as shown in Table 9. The introduction of the BIG is likely to boost RRs further.

TABLE 9 April 2017 OAG as percentage of 2017 average monthly earning in TSAC (2020) (own calculation)

	Male	**Female**	**Total**
Mining	37.5%	37.6%	37.6%
Transport	40.6%	40.8%	40.8%
Community	36.0%	44.4%	44.4%
Finance	41.1%	47.0%	47.0%
Manufacturing	48.4%	49.6%	49.6%
Construction	64.4%	66.5%	66.5%
Trade	59.0%	71.0%	71.0%
Agriculture	88.5%	89.6%	89.6%
Households	115.1%	135.6%	135.6%
Total	**59.5%**	**68.6%**	**68.6%**

5.5.5.2 Further discussion around eligibility criteria for informal workers is required, particularly if this fund is compulsory. For such a discussion to be meaningful, further investigation into the earnings patterns of informal workers, including an analysis of the mix of formal and informal earnings for each person, will be required. Relative to other sub-Saharan African countries, data suggest that the RSA has a small informal sector with low earnings relative to the formal sector. While possibly true, it could also reflect an element of under-reporting of both participation and earnings in the informal sector.

5.5.5.3 A significant challenge with any compulsory informal sector fund is enforcement. Rolling out the informal worker scheme by sector may have merit, despite the initial loss of economies of scale. Certain sectors are easier to monitor than others due to UIF coverage or strong trade union involvement as seen in the household and mining sectors respectively. However, while a large proportion of informal workers are in households, Table 9 suggests they are the group in least need of extended coverage and the degree of UIF compliance is uncertain.

5.5.5.4 The smoothed bonus investment strategy proposed for the frozen and subsidy accounts was curious given the compulsory preservation on these accounts and that they are required to be converted into an annuity on retirement. However, it is noted that smoothed returns may improve confidence in the system and that no guarantees are suggested which would reduce capital charges. However, smoothed bonus strategies raise issues of intergenerational equity and there would need to be steps taken to limit any build-up of investment surplus in the fund. A more appropriate strategy may be to adopt a matched strategy to the assets underlying the annuity, at least in the run up to retirement. It may be cheaper to simply apply this strategy to all invested monies irrespective of age given the flexibility around retirement and the need to minimise administration costs.

5.5.5.5 TSAC (2020) made it clear that the return-of-fund benefit on death would exclude the subsidy account. While retaining this does help reduce the cost of the risk benefits, it also means that people who die before retirement, who are likely to be poorer, effectively forfeit any contribution subsidy. This may not be regarded as fair and a scenario where the return-of-fund benefit includes the subsidy account would need to be modelled. The operational issues around this benefit would also need to be carefully considered, as the beneficiary is unclear. It may be greater than what is required for the funeral, in which case direct payment to the funeral home may be inappropriate. However, there are significant operational difficulties and risks with identifying a family member to whom the benefit should be paid.

5.5.5.6 A further issue is that while portability between the DC informal fund and DB NSSF is important, TSAC (2020) noted that more work is needed in this area.

5.5.5.7 TSAC (2020) proposed that members of the informal earnings fund would be allowed to contribute to the member account after fund retirement age. However, such an arrangement is likely to add unnecessary complexity for two reasons. Firstly, to keep risk benefit costs low, risk cover typically ceases at retirement age. Allowing contributions after this age means that contributions for members would be allocated differently based on age which is administratively complex. Members may also not understand their loss of risk benefits despite their continued contributions, leading to disappointment. Similarly, the subsidies will presumably stop at retirement, creating scope for errors and unmet expectations. Secondly, rules regarding transfers between the various accounts and minimum benefit levels would need to be carefully amended to allow for flexibility in the late retirement scenario. It would probably be simpler to direct all contributions made after the fund retirement age directly to the accessible account, but then what purpose would the fund serve? It may be cheaper and better for the member to have a zero-fee bank account.

5.6 NEDLAC's position in 2021

5.6.1 OVERVIEW OF NEDLAC

Based on the three expert reports, stakeholders at NEDLAC broadly agreed to the NSSF, and contribution subsidies for low-income formal and informal workers, while Sections 5.6.2 to 5.6.6 set out the areas of conflict (NEDLAC, 2021).

5.6.2 THE GREEN PAPER AND STAKEHOLDER ENGAGEMENT

While the NEDLAC (2021) report was still being finalised, DSD put forward a green paper, DSD (2021b), to clarify an NSSF design. This was criticised in NEDLAC (2021) for failing to take NEDLAC discussions into account and the proposals were hastily withdrawn.

5.6.3 WHO IS COVERED AND IN HOW MANY FUNDS?

5.6.3.1 There was no consensus as to whether there were to be one or two Tier 2 retirement arrangements. Business felt that it was important that the NSSF itself cater for the flexibility required by atypical workers who may work in the formal or informal sector as, in their opinion, this would reflect the future world of work. Labour also wanted a single fund for formal and informal workers, with no opt-out to improve social solidarity. Community did not express a preference but wanted protection for informal workers. Both Business and Community felt that inadequate attention had been paid to women in the design.

5.6.3.2 Business proposed that the NSSF should focus primarily on workers earning above the minimum wage, with the inclusion of informal workers earning below this level secondary. Business attributed the NSSF's high contribution rate to the high earnings ceiling and proposed it be revised down to, at most, the PIT threshold.

5.6.4 INCENTIVES, CROSS-SUBSIDIES AND REDISTRIBUTION DEBATES IN NEDLAC

5.6.4.1 Community suggested differentiated incentives based on earnings levels. For low-income earners, a subsidy that does not require any contribution and is broadly in line with tax incentives,[71] would be used with matching used at higher income levels.

71 https://atotaxrates.info/superannuation/low-income-superannuation-contribution-lisc/#:~:text=The%20LISC%20benefit%20is%20designed,to%20a%20maximum%20of%20%24500 (Accessed 9 January 2023)

5.6.4.2 Business would not accept a reduction in the current tax incentives on Tier 3 to fund the incentives on Tier 2. On a related note, Business wanted clarity on redistribution policy objectives which would influence both the incentives and scheme design.

5.6.5 AFFORDABILITY, SUSTAINABILITY AND TIER 3

There was no consensus on what an affordable contribution rate would be for the NSSF. Business noted that the ILO (2021) NSSF design was not sustainable and may render Tier 3 funds unsustainable too. Business was concerned that the transitional arrangements and integration of Tier 2 and 3 arrangements were vague.

5.6.6 FINANCING

Business opposed PAYG financing on sustainability grounds and the negative impact on capital formation and demanded the NSSF be fully funded.

5.6.7 CRITIQUE

By the end of 2022, there was almost no consensus between the various stakeholders as to what the NSSF should look like, with several unresolved issues at both the macro- and micro-levels. The positions at NEDLAC reflect strong vested interests and there are two areas where Business's arguments should be discussed further. Firstly, their insistence on a fully-funded system, which is based on a report that considered a 5% funding level – lower than anything else considered in the technical work. DSD (2007) and Deloitte & Touché (2019) make the point that the relative economic merits of fully- and partially-funded systems are highly debatable and any positive impacts associated with full funding are contingent on several other factors, like whether the economy is open or closed. Secondly, their arguments around the cost of the NSSF confuse pace of funding with cost and the target benefit with the eligibility criteria. These inconsistencies perhaps require further consideration. Tensions at the forum were heightened by the premature release of the green paper.

5.7 Actuarial perspectives on Tier 2

With the deadlock between stakeholders on the current options, some actuarial perspectives may provide a way forward.

5.7.1 ONE FUND OR TWO?

5.7.1.1 A single fund for both formal and informal workers presents a conundrum: DB designs are more appropriate for those with regular earnings, but DC is the only really feasible option for those with low and volatile earnings. Given that DC funds are by definition fully-funded, the proposal of a single fund would automatically give Business their wish for a fully-funded system. However, launching the NSSF with such a design may frustrate other policy objectives without careful design choices.

5.7.1.2 Firstly, redistribution is more difficult to achieve in a DC setting where accounts are individual, but it is not impossible. For example, the subsidies could be inversely proportional to income. Another example would be to differentiate the investment returns earned based on total income – with lower earners receiving more of the investment return than higher-income earners. However, this may be practically difficult to achieve for workers where income information is unavailable or self-reported, and total fund credit may need to be used as a proxy. It is arguable that the NSSF is then closer to a Notional Defined Contribution (NDC) arrangement than a pure DC fund. NDC funds were not considered in TSAC (2020) and have the practical advantage of not having to be fully funded which is more realistic for a Tier 2 arrangement, but, based on historic comments, Business is likely to resist this.

5.7.1.3 The second issue is that of social solidarity. A flexible arrangement with contributions made on an "as-and-when" basis, which is necessary for informal workers, is arguably not mandatory. Essentially, the degree of participation is left up to the worker and higher earners with access to Tier 3 and 4 arrangements may not find the Tier 2 contribution subsidies sufficiently enticing to contribute fully. This weakens redistribution and the principles of social solidarity. One potential solution could be to make the scheme mandatory with earnings-based contributions for all UIF contributors and voluntary with "as-and-when" contributions for everyone else. This has the advantage that most UIF contributions are already made through SARS. However, this still poses administrative problems for atypical formally-employed workers with multiple employers who are unable to aggregate earnings for the purposes of applying the earnings floors and ceilings. This is an existing problem with the UIF where a person with two employers may pay a double contribution.

5.7.1.4 A related issue is that one person may switch between formal and informal work throughout their career or even have both types of work at the same time. The system needs to be both convenient for the workers and avoid a worker claiming more than their share of incentives across the schemes.

5.7.2 INCENTIVES, CROSS-SUBSIDIES AND REDISTRIBUTION

5.7.2.1 The expense cross-subsidies require careful consideration as administration costs are highest as a proportion of the smallest accounts.

5.7.2.2 Stakeholders agree that a contribution subsidy is the most suitable incentive for the NSSF and lower earners should get the most generous incentives. However, they do not agree what form the subsidy will take or what the upper limit will be, particularly if very low earners participate. Whether government money is better spent on improving outcomes for the poorest whose RRs exceed 40% or those with slightly higher incomes, but lower RRs depends on government's objectives. The most logical solution to funding these incentives is by adjustment to the TES for Tier 3 and 4 retirement funding arrangements. Only Business insists that these are preserved, with the literature and other stakeholders pointing to the high cost and inherent inequity in the system. Interestingly, in recent years these subsidies have been increased and not decreased, pointing to differing opinions within government. If the TES is reduced, care needs to be taken that the same money is not earmarked for other purposes, like the universalisation of key grants as discussed in Section 3.2.

5.7.3 AFFORDABILITY AND ADEQUACY

5.7.3.1 Any discussion around adequacy is hampered by the confusion around who this scheme would cover and hence what can be afforded. This is complicated by the fact that an introduction of a BIG has not been considered in any of the modelling. It is suggested, given the structure proposed in Section 5.7.1, that an affordable level of contributions for UIF contributors is estimated. Both matching and a direct payment of a government contribution without corresponding member contribution could be considered as incentives.

5.7.3.2 Business attributed the high contribution rates to the earnings ceiling. However, it would be more accurate to characterise the problem in terms of the accrual rate implied by the level of lifetime earnings at which a 40% RR over Tiers 1 and 2 is targeted after 30 years. According to IDTT (2012), a 0.7% accrual rate was affordable, but according to ILO (2021) a 1.09% accrual rate was not. It would be useful to see the accrual rates in Table 10 modelled.

Table 10 NSSF accrual rates to model in future work

Accrual rate	Lifetime earnings p.a. that will achieve a 40% RR after 30 years together with Tier 1	Source
0.70%	ZAR75 000 in 2012 terms	IDTT(2012)
0.49%	ZAR90 000 in 2021 terms	DSD (2021b)
0.47%	PIT threshold as at 1 April 2021	NEDLAC (2021)
0.30%	ZAR72 000 as at 1 April 2020	NEDLAC (2021)

5.7.3.3 Integration of the Tier 1 and Tier 2 benefits would be simplified if the insured earnings and the OAG escalated at the same time and rate which would result in a stable accrual rate. This may be a useful assumption for future work.

5.7.4 AFFORDABILITY AND SUSTAINABILITY

5.7.4.1 ILO (2021) referenced a 10% contribution rate towards the NSSF as a departure point; however, there are clear problems with it.

5.7.4.2 Firstly, it is lower than total current contributions to bargaining council and other funds which were stated to be 12.9% and 15.8% respectively in IDTT (2012).

Introducing the NSSF is meant to increase total savings, but it is unlikely Tier 3 funds will be viable for contribution rates of less than 6% of salary.

5.7.4.3 Secondly, TSAC (2019) estimated adequate disability and survivor benefits on death would cost at least 4.6% and 2.6% of salary (not insured earnings) respectively. A 10% contribution rate leaves little scope for retirement savings if adequate risk benefits, including funeral benefits, are provided too.

5.7.4.4 Thirdly, it is unclear how the automatic stabilisers in the NSSF should work and there has been little technical work on this apart from a brief description of the adjustment to the retirement age in ILO (2021). If longevity is expected to increase over time, the NSSF, or its members, will come under financial pressure irrespective of whether a DB or DC design is used unless another change is made. ILO (2021) only considered a slow, partial raising of the retirement age. While raising the Tier 2 retirement age is likely to be unpopular both with members and employers, rapid increases in contribution rates may be more so. In fact, experience from Rwanda, Mauritius and Ethiopia[72] suggests that raising the Tier 2 retirement age in Africa is politically feasible. Falling fertility rates will also impact dependency ratios and automatic balancing mechanisms with respect to falling national fertility rates should also be considered.

5.7.4.5 Fourthly, if the NSSF is partially funded, the contribution rate is expected to rise over time even if experience is as expected and so it is misleading to refer to the contribution rate as if it were flat.

5.7.5 ADMINISTRATION AND EXPENSES

5.7.5.1 There is consensus at NEDLAC that SARS can collect contributions for the NSSF, but as discussed in Section 5.7.1, this lends itself to an insured earning ceiling based on the UIF where SARS has a proven track record. Providing accurate, accessible and low-cost contribution collection for non-UIF workers is more difficult. TSAC (2020) put forward several possibilities including mobile money applications, QR codes, direct deposits at ATMs and partnerships. Further work is required to evaluate these mechanisms.

5.7.5.2 Administration of the fund or funds was also not discussed in detail despite significant operational risks involved. There are numerous options including the state-run administrator of the Tier 3 civil servants' fund, private sector administrators or even banks to administer an "as-and-when" arrangement.

5.7.5.3 TSAC (2020) suggested that the contribution subsidy should be calculated at the end of each month, based on the contributions for that month, but this creates technical issues. In a DC arrangement, the timing of the receipt affects the benefit directly. Given the possible flexibility in an "as-and-when" contribution arrangement, the amount of the subsidy could differ significantly every month resulting in payment delays. In an NDC arrangement, returns could be credited to accrued subsidies with any delay reflected

72 Personal correspondence with Tawanda Chituku, Laura Llewellyn-Jones and Bernard Yen, supra

in the declared bonus rate. Alternatively, the subsidies could be paid with a one-month delay in a DC structure.

5.7.5.4 The operational issues around the NSSF are yet to be decided so costs are unclear, however these are likely to be critical in a DC or NDC arrangement.

5.7.5.5 Investment fees in fully-funded Tier 3 arrangements have been criticised as too high relative to returns. Addressing this, as well as the transparency of cost reporting, will be vital to the efficiency of the NSSF, particularly at higher funding levels.

5.7.5.6 Administration costs were estimated by ILO (2021) to be about 0.25% of insured earnings, which, based on a 10% contribution rate, is equivalent to 2.5% of total contributions. TSAC (2020) used administration costs of R300 per person p.a. which was equivalent to 6.4% of total contributions in 2020. This is already at a high level; however, as the fund grew these expenses rose to 6.9% of contributions in 2024. This is the opposite of what one might expect to happen as economies of scale develop. It is probable that this pattern emerged because of assumptions made about charge recalculation in modelling whereas the scheme may just divide total costs by number of members each year. However, irrespective of modelling problems, the administration costs for the "as-and-when" arrangement are significantly higher than on the DB arrangement and the value-for-money of the design must be considered.

5.7.5.7 Other expenses associated with running the fund have never been discussed, but could include governance costs, audit costs and actuarial costs. It is unclear what these costs are estimated to be and who will bear them. In the UK, a total cap on all fees of 0.75%[73] of assets p.a. is applied in certain instances and similar cap arrangements could be considered.

5.7.5.8 An aspect of cost that also has not been discussed is that associated with the annuity. These costs, including regular certificate of existence checks and actuarial valuations, can be significant. While allowing small amounts to be commuted may reduce costs, they may also frustrate the aims of the Tier 2 fund.

5.7.6 FINANCING AND CAPITAL REQUIREMENTS

5.7.6.1 As discussed in Paragraph 5.6.7, the rationale put forward by Business for a fully-funded system is difficult to defend even though there are valid reasons for preferring a funded system, such as benefit security, improved accountability and a more sustainable pace of funding. A reasoned discussion around the financing strategy and the acceptable degree of funding is required. It is noteworthy that the minimum funding requirement on the civil servant Tier 3 fund is 90%, whereas all other Tier 3 funds are required to be fully-funded suggesting that stakeholders have accepted a less than fully-funded position in government-sponsored funds previously. Even if a fully-funded DC or NDC system

73 https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1045257/charge-cap-guidance.pdf (Accessed 14 April 2023)

were adopted, the funding rate is likely to be less than 100% due to delays in processing the contribution subsidies.

5.7.6.2 In an occupational DB fund, the employer acting as guarantor means that if experience is adverse the employer will fund the deficit. However, in a national fund with automatic balancing mechanisms it is unclear what the full extent of government's financial commitment is.

5.7.6.3 Even if a DC design is adopted, the in-fund annuity benefits mean the fund may bear significant insurance risk. While the NSSF holding the same level of capital as an insurer may mean that annuitants have benefits no less secure than in the private insurance sector, it represents a significant opportunity cost to the fund. It is also unclear if government would provide the capital or equivalent surety. Despite the considerable risks introduced by the government writing annuities, this risk has received little attention to date. Capital considerations also apply if investment smoothing is adopted as proposed by TSAC (2020). There may also be considerable capital outlay if the government must provide the administration.

5.7.7 RETIREMENT BENEFITS

There are three unresolved issues around the spouse's reversion benefit on the retirement annuity, which only applies to spouses and excludes other partnerships. The first is that under RSA law it is possible to have more than one legal spouse. Presumably such a reversion would be split equally between the surviving spouses, but clarity is desirable. Secondly, it is not clear whether the spouse's annuity would be offered on a named-spouse or any-spouse basis. The former requires paperwork at the time of taking out the annuity. Making the spouse's reversion on a named-spouse basis may have the added advantage of clear communication around limits to cross-subsidies which reduces the exposure of the fund to anti-selection. There needs to be careful consideration around the balance between social solidarity and fairness when designing the spouse's reversion and these discussions are not yet advanced. A third issue relates to the opting-out of the spouse's reversion if unmarried. Given that it is possible to take an annuity later from the accessible account, presumably proof of marital status would be required at each date an annuity is taken. However, proving one is unmarried is much more difficult than proving one is married because not all legally valid marriages are officially recorded by the government.

5.7.8 FUNERAL BENEFITS

TSAC (2020) found that an insured funeral benefit would be unaffordable for an "as-and-when" scheme, but DSD (2021b) felt so strongly about this benefit that they proposed it be provided on Tier 1 as well. If it is to be provided, the value of the benefit and its integration with existing Tier 2 arrangements must be considered. This means any benefit cost within the NSSF needs to be weighed against benefit savings in other Tier 2 arrangements.

5.7.9 WAITING PERIODS ON RISK BENEFITS

In the SARS-administered scheme, ILO (2021) suggested a waiting period on survivor and disability benefits. No such waiting period was proposed by TSAC (2020) for these benefits in the "as-and-when" arrangement and such a difference may be difficult to justify.

5.7.10 SURVIVORS' PENSIONS

5.7.10.1 Despite careful specification around the survivors' pension, more clarity is required regarding eligibility, the level of the benefit and to whom the benefit is payable.

5.7.10.2 The eligibility issue relates to death cover during the deferred period of the disability benefit in the SARS-administered part of the NSSF. In a Tier 3 scheme, cover is maintained via sick pay. How would this work in the NSSF if sick leave is exhausted? This issue is catered for in the "as-and-when" scheme.

5.7.10.3 The level of the benefits is unclear in certain instances such as the calculation of the benefit if the member dies within three years of joining the "as-and-when" fund. In other cases, the death benefit in the SARS-administered part of the scheme seems unnecessarily penal, for example by not using revalued salary for death benefits and using earnings as at date of disability for a person who dies while disabled.

5.7.10.4 The most difficult aspect of the survivors' pension is survivor identification. In the NSSF dependants are limited to legal spouses and children whereas the distribution of Tier 3 lump sum death benefits includes factual dependants who may not have legal status. The narrower definition would reduce benefit costs, but could lead to unmet expectations and would require careful communication.

5.7.10.5 In early designs there was a maximum payment period to widowed spouses; however in ILO (2021) this was replaced by the provision that the benefit would stop on remarriage. This is inconsistent with practice on the RAF where a widowed spouse's dependency does not automatically cease on their remarriage. Such an inconsistency across Tier 2 may be difficult to justify. In addition, stopping the benefit on remarriage may create perverse incentives by discouraging people from formalising their relationship by marriage which may bring other legal benefits. It is suggested that the maximum payment period for the spouses' pension is reintroduced. This should be delinked from the child's benefit as the spouse may not be the parent of the children.

5.7.10.6 In terms of child pensions, procedures around establishing a paternal relationship with a child may be required and the additional costs involved require careful consideration.

5.7.10.7 Neither IDTT (2012) nor ILO (2021) made provision for pensions to continue for life in the case of disabled children who are legally dependent for life. It is assumed that this is an oversight, but correcting this will add a level of administrative complexity.

5.7.10.8 There is then the issue of splitting the benefit between the survivors. All current design proposals fail to take account of the fact that it is possible to have more than one legal spouse under RSA law and these spouses are usually treated equally. The proposal to limit the number of children the benefit is payable to is flawed, as if there are more than four children, how will it be decided which children get the benefit? In that case, a pragmatic solution would be to use the shares or stirpes approach which is well established in RSA law. In this case, each child gets one share and if there is more than one spouse, they are assigned one share each. If there is only one spouse that spouse receives two shares. The total death benefit is then split in proportion to the shares. Should one of the survivors fall away, for example because the child is too old or the spouse has passed away, their benefit is shared between the remaining survivors in proportion to their shares. Such contingent benefits, although more equitable, are more administratively complex and costly.

5.7.11 DISABILITY BENEFITS

The integration of disability benefits requires careful consideration to avoid over-provision, particularly if a person contributes to both the SARS-administered section of the NSSF and the "as-and-when" portion. One way of integrating these benefits may be to apply the minimum benefit level to the pensions received from both parts of the scheme. In all versions of the NSSF, the means-test on the DG must be removed but this has received little attention at NEDLAC.

5.7.12 TRANSITIONAL ARRANGEMENTS AND MEMBER CONSIDERATIONS

5.7.12.1 It would take 30 years, given the current design, for the first cohort to emerge with full benefits from the NSSF. It is unclear how the existing Tier 3 schemes, including the Tier 3 civil servants' fund, will co-ordinate with the NSSF. Voluntary top-up structures in the private sector to increase savings and improve member outcomes are important, provided the market is competitive.

5.7.12.2 So far there has been no analysis on the impact of the NSSF on member retirement outcomes. Part of the challenge is the inability to assess outcomes at an individual level across Tiers and products as discussed in Section 2.2.1. However, given that Tier 2 schemes are by nature redistributive and social solidarity has been highlighted as important to Labour, considering the characteristics of the "winners" and "losers" from this change should be feasible.

5.7.13 THE REVALORISATION RATE

StatsSA has an official wage index, but this is for non-agricultural workers. This is potentially problematic for use as a revalorisation rate on the SARS-administered scheme as not all agricultural workers are informal workers. The acceptability of a negative revalorisation rate needs to be considered.

6 THE ACTUARY AS TRUSTED ADVISOR IN SOCIAL SECURITY WORK

6.1 The professional advisor

6.1.1 The current social security environment poses numerous challenges. There is consensus that the social security system needs review but the details on what is needed and how to achieve and fund it remain contentious. Measures once implemented, even if only intended as temporary, are difficult to change. This was clearly demonstrated by the fact that government had to reinstate the COVID-19 SRD after it had lapsed, as described in Section 2.2.3. In the eyes of many, RSA has a *de facto* BIG that would be politically difficult to stop.

6.1.2 It is thus necessary to ensure that changes are made considering the long-term risks, the management of which is a key actuarial skill. A multi-disciplined approach to exploring complex issues, as was done by the IDTT, and collaboration among stakeholders are critical in this context. Actuaries have experience with this approach through the retirement funds industry where certain reforms have been successfully implemented to improve outcomes mainly for Tiers 3 and Tier 4. These reforms have been phased in over decades, including the alignment of tax incentives and annuitisation across different fund structures. Compulsory preservation on withdrawal, mentioned in Paragraph 1.5, is in the pipeline. The reform process has been slow but open to stakeholder engagement in the development and with clear enforcement responsibilities.

6.1.3 As actuaries, we need to be clear about who we are representing when discussing the evolving social security system and particularly the proposed NSSF. We need to reconcile the requirement to act in the public interest with our professional obligation to our employers. There is value in actuaries from different professional and personal backgrounds collaborating and engaging policymakers collectively on these issues as they require a diversity of perspectives and span various disciplines, including pensions, life insurance, and investments. Members of the actuarial profession have found it difficult to build a reputation with government for fairness and impartiality if they work for corporates, irrespective of their professional values or views.

6.2 The capable advisor

COVID-19 and international unrest have highlighted the fallibility of modelling for the long-term. Actuaries know that all models are wrong, but some are useful. The same may not be clear to all stakeholders. Reconciling output from various models is a key actuarial skill together with understanding the importance of sensitivity-testing of the output to key assumptions. Given the work done so far, actuaries can add significant value in this area.

6.3 The respectful advisor

Poverty is multi-dimensional, encompassing not only income, but other factors such as access to social services (Govender et al., 2007). As with most countries, there is a need for continued, widespread stakeholder agreement on an appropriate split of social spending that is aligned with the best interest of society when considered together with the local economic and social context. Enabling necessary conversations on the inter-linked, complex topics of poverty, inequality and employment will be challenging and require the actuary to be aware of their limitations and the fact they are part of a much larger team. An indication of the size of this challenge is that there are 501 documents – encompassing legislation, policy and strategy – aimed at implementing the National Development Plan alone.[74] In addition, political considerations play an important part in social protection decision-making (Cherrier et al., 2013) and funding, and this is not typically part of the actuarial skillset.

6.4 The curious advisor

There is more research to be done in this field and further work includes:

- The continued suitability of the UIF threshold which is meant to represent the wages of male and female skilled manual workers but is far lower than the reference earnings as per ILO Convention 102;
- The private sector's role and the potential for public-private partnerships in social security reforms;
- Understanding the evolving standpoints of various stakeholders at NEDLAC as well as a comprehensive history of social security in South Africa;
- An understanding of the demographics, work patterns and income levels of atypical and informal workers; and
- A more general examination of the affordability of social security spend at a household level.

6.5 The pragmatic advisor

6.5.1 Social security reforms require concerted management and governance. Responsible parties need to be identified and timelines for implementation need to be set and monitored. If this is not done, agreed-upon policies may go unimplemented; the removal of the means-test for the OAG is a case in point. A central government department for social security has been proposed. Policy implementation may improve if such a department is distinct from the original decision-makers and fulfils an oversight function.

6.5.2 Although the retirement reforms mentioned in 6.1 have by no means addressed all the issues in retirement provision, these initiatives raise the question of whether reforms are best achieved via creating new structures or by evolving and building on existing ones, or both.

74 Plagerson, S (2021). South African policies go some way to tackling poverty and inequality. But more is needed. The Conversation. Available at: https://theconversation.com/south-african-policies-go-some-way-to-tackling-poverty-and-inequality-but-more-is-needed-151696 (Accessed 19 January 2023)

6.5.3 It is likely that any implementation of significant changes to the current social security system will be phased in. A practical first step could be the initiation of pilot projects. These could provide valuable information on the impact of various measures on communities and the economy, as well as aid more in-depth modelling of expected outcomes before policies have been legislated and widely implemented. It could also be a useful testing ground for integrating the existing and new social security elements.

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APPENDIX A

An overview of the Tier 1 benefits in RSA

All Tier 1 benefits are overseen by the DSD and all grants are governed by the Social Assistance Act. The SRD grant is payable to any group not in receipt of other grants who is in urgent need of assistance in cash or kind. The benefits are discretionary, paid for a maximum of six months and the financial circumstances of the recipients are taken into account. The other grants are much less flexible and are set out in Table 11.

TABLE 11 Summary of the permanent grants

Grant	Intended recipients	Means-test		Benefit as a % of minimum wage[75]	Number of beneficiaries as at October 2022[76]
		Asset test	Income Test		
OAG	Men and women over age 60	Yes. Pass/Fail	Yes. Partial benefits	46.5%	3 847 404
OAG top-up	OAG recipients over the age of 75	As per OAG	As per OAG	0.5%	1 169 478
DG	Individuals aged 18 to 59 certified by a doctor as having a disability	Yes. Pass/Fail	Yes. Partial benefits	46.5%	1 052 390
CDG	Primary caregivers of children under 18 who require permanent care due to a physical or mental disability	No.	Yes. Pass/Fail	46.5%	156 846
FCG	Court-appointed foster parents of children under 18	No.	No.	23.9%	329 572
CSG	Primary caregivers of children under 18 not in receipt of a CDG or FCG	No.	Yes. Pass/Fail	10.7%	13 206 017
Top-up CSG	CSG recipients where the child is a double orphan	As per CSG	As per CSG	5.4%	21 861
WVG	Men and women over age 60 who have fought in the Second World War or the Korean War	Yes. Pass/Fail	Yes. Partial benefits	46.9%	19
GIA	OAG, DG or WVG recipients in need of full-time care	As per underlying grant	As per underlying grant	10.7%	312 330
COVID-19 SRD	Individuals aged 18–59	No.	Yes. Pass/Fail	7.8%	Estimated at 7 500 000[77]

75 Calculated using the grant values as at 1 April 2023 and the national minimum wage effective 1 March 2023. The national minimum wage is an hourly rate while grants are paid monthly and the monthly minimum wage was calculated assuming 8 hours of work a day and 22 days of work per month

76 SASSA October 2022 statistical report

77 https://ewn.co.za/2023/02/15/sassa-receives-over-13-million-r350-srd-grant-applications-in-jan-parly-hears (Accessed 26 April 2023)

APPENDIX B
An overview of the Tier 2 benefits in RSA

Benefit	Circumstances under which the benefit applies	Government department	Notes
COIDA	Benefits are paid on occupational injury and death. Medical costs and carer costs can also be paid. Benefits are a mix of income and lump sums.	DOEL	Benefits can either be paid from a central compensation fund or two devolved insurers.
ODIMWA	For certain occupational lung diseases, mineworkers must claim their disability and medical cost benefits from ODIMWA instead of COIDA. ODIMWA does not provide a death benefit, but can pay the disability benefit posthumously. Benefits are a mix of income benefits and lump sums.	Department of Health	These benefits are difficult to claim with long delays, governance problems, poor data and poor incentives for co-operation from the mines.
RAF	Injury or death resulting from a motor vehicle accident on a South African road. Medical costs are payable in both cases. For injuries, a loss of earnings benefit and compensation for pain and suffering may be provided. For death, a benefit to survivors for loss of support and a funeral benefit may be paid. All benefits are paid as a lump sum.	Department of Transport	A significant liability on government's balance sheet.
UIF	Provides an income on loss of income due to unemployment, parental leave, sickness and disability. Provides a lump sum benefit equal to the total unemployment benefit on death.	Benefits: DOEL Contributions: National Treasury	Contributions from employers and employees.

APPENDIX C
Differences between IDTT (2012) and ILO (2021)

C.1 DIFFERENCE IN COVERED POPULATION

IDTT (2012) excluded people earning below an agreed threshold as their needs would be fully met by Tier 1. ILO (2021) had no such lower limit. ILO (2021) explicitly limited membership to formally-employed persons between 16 and 69 whereas IDTT (2012) allowed for informal sector membership.

C.2 DIFFERENCE IN INSURABLE EARNINGS DEFINITION

C.2.1 ILO (2021) clarified that the UIF earnings definition would be used; namely, basic salary plus allowances and bonuses, but excluding commission.

C.2.2 A key difference was the maximum level of insurable earnings. IDTT (2012) had recommended that this be set at the UIF threshold which they defined as consistent with the earnings of a skilled manual worker. ILO Convention 102[78] states that the cap should cover at least one of the following:

— The earnings of a *male* skilled manual worker (emphasis added)
— The earnings of at least 75% of the insured population
— 125% of the average earnings of the insured population

These amounts were estimated as ZAR24 312, ZAR22 870 and ZAR23 420 per month respectively in 2018 terms.[79] As a result, ILO (2021) used a monthly earnings cap of ZAR23 000, equivalent to ZAR276 000 p.a. It was recommended that this figure be adjusted annually by wage inflation.[80]

C.2.3 ILO (2021) modelled two scenarios: no minimum insurable earnings level and minimum earnings of ZAR20 000 per year in 2018 terms for contribution purposes only. In the latter case, benefits continued to accrue from the first rand. The contribution floor reduces the required wage subsidy without changing eligibility criteria as money from the poorest workers is not taken. Significant wage subsidies and complex eligibility criteria may otherwise cause labour market distortions.[81]

C.3 INTRODUCTION OF AN EXPENSE PARAMETER

ILO (2021) had an explicit expense allocation of 0.25% of insurable earnings.

78 Design of the new National Social Security Fund in South Africa, supra
79 Ibid.
80 Ibid.
81 Ibid.

C.4 RETIREMENT BENEFIT FORMULA AND PENSION INCREASES

C.4.1 For both IDTT (2012) and ILO (2021) career average earnings revalued with wage inflation would be used in the retirement benefit calculation with no minimum contribution period. ILO (2021) suggested a lump sum instead of an annuity for very small benefits.[82]

C.4.2 The objective in ILO (2021) was to provide an RR of 40% including Tier 1 after 30 years of service for someone at the earnings ceiling, that is R276 000 in 2018 terms. This was in line with ILO Convention 102[83] if the OAG was made universal. The IDTT (2012) had the same replacement target for a person earning R75 000 in 2012 terms. This wage level had no meaning ascribed to it in IDTT (2012), but DSD (2008) had used the same figure as an earnings ceiling for the DB section of the NSSF because it represented 2.5 times the average annual wage at the time.

C.4.3 The change in benefit target increased the accrual rate from approximately 0.7% to 1.09% p.a. without a change to the proposed initial contribution rate. Using the UIF ceiling would have implied an annual accrual rate of 0.96%.[84]

C.4.4 IDTT (2012) appears to have used wage-inflation to adjust the pensions in payment while ILO (2021) used a lower price-inflation adjustment.

C.5 EARLY AND LATE RETIREMENT ADJUSTMENTS

For both IDTT (2012) and ILO (2021), NRA was 65. ILO (2021) clarified that early retirement would be allowed from age 60 and late retirement up to age 70. ILO (2021) explicitly stated the early retirement penalty as 0.6% p.m. or 6% p.a. [*sic*] and gave the late retirement bonus as 0.7% p.m. or 8.4% p.a. Clearly, one of the figures given for the early retirement penalty is incorrect if the penalties are simple, as is usually the case.

C.6 INTRODUCTION OF A WAITING PERIOD FOR RISK BENEFITS

IDTT (2012) stressed that for social solidarity and risk-sharing reasons, there should be no waiting period on risk benefit eligibility. ILO (2021) however ran a scenario with a waiting period that would apply to all disability and death-in-service benefits. It was argued that introducing a waiting period would be consistent with insurance principles.[85] No waiting period would apply for death benefits paid to members in receipt of age or disability pensions.

82 Ibid.
83 Ibid.
84 Own calculation
85 Ibid.

C.7 EXPLICIT DISABILITY DEFINITION

ILO (2021) used the DG disability definition as it was like that used on the Tier 3 fund for civil servants. The deferred period was 6 months.[86] Disability benefits would cease on death, retirement or return to work (ILO, 2021).

C.8 DISABILITY PENSION FORMULA AND INCREASES

C.8.1 IDTT (2012) and ILO (2021) both provided for a disability income benefit. While IDTT (2012) proposed a benefit that did not vary with service, ILO (2021) proposed the disability benefit be defined in terms of a 1.09% p.a. accrual rate subject to a minimum benefit of 32.7%, which effectively meant a flat RR for the first 30 years of contributions. Together with the DG, and based on 2018 figures, this would provide someone earning at the earnings ceiling an RR of 40% within the first 30 years of service. Age and disability pension benefits are consistent with this formula.

C.8.2 ILO (2021) suggested price-inflation-linked increases consistent with the age pension.

C.9 EXPLICIT SURVIVOR PENSION FORMULA

C.9.1 For active members, IDTT (2012) opposed a benefit that accrued with contributions on social solidarity grounds. ILO (2021) proposed the full pension be based on an accrual rate of 1.09% of last insurable earnings subject to a minimum RR of 40%. The minimum benefit would thus apply for the first 36.7 years of service, making this essentially a flat rate benefit consistent with ILO Convention 102.

C.9.2 IDTT (2012) had proposed that people with larger families should have larger benefits. ILO (2021) suggested that the full benefit be paid in the case of three or more dependents and a 75% or 50% benefit be paid in the case of two or one dependant respectively. The design meets the objective in IDTT (2012) while capping the cost.

C.10 SURVIVOR PENSION PAYMENT DURATION

The treatment of pensions to dependent children are similar under both IDTT (2012) and ILO (2021) with the latter also allowing for the benefit stopping on the child's marriage, upon which the child becomes an adult under RSA law. However, the treatment of spousal pensions is quite different. IDTT (2012) proposed the spousal pension is only payable for a limited period to allow the widowed person time to increase their earnings. ILO (2021) allowed the pension to be paid until the earliest of either the spouse's death or their remarriage. On balance, the ILO (2021) is likely to give a more generous benefit.

86 Ibid.

APPENDIX D

Assumptions in ILO (2021)

ILO (2021) was based on data from 2018. The impact of COVID-19 on the scheme was explicitly considered, but the authors assumed that by 2022 the economic and demographic effects of COVID-19 would be over. It was assumed the NSSF would be implemented in 2022 and projections were made until 2100.

D.1 DEMOGRAPHIC ASSUMPTIONS

D.1.1 In terms of demographics, ILO (2021) critically evaluates a variety of sources. The total fertility rate is expected to decline reasonably uniformly from 2.3 to 1.85 children per woman over the projection period.

D.1.2 Residual life expectancy at 60 had been stable over a 20-year period at 15 and 19 years for males and females respectively. This trend was expected to hold for the next 20 to 30 years before increasing to 18.3 and 22.9 years in 2100 for males and females respectively. Life expectancy at birth was expected to improve more uniformly with significant improvements in mortality before the age of 60. General life expectancy was projected to improve from 61.1 to 72.2 years and from 67.5 to 79.5 years for males and females respectively over the projection period. It was assumed that net in-migration would remain large and positive for the first 30 years and then stop, which was acknowledged to be prudent.

D.1.3 The combined effect of these demographic assumptions is that from 2070 both the population as a whole and the working population would start to contract. The old-age dependency ratio was expected to increase steadily. The number of working-age persons who support one elderly person aged 65 and over fell from 10.9 in 2018 to 3.2 in 2100.

D.1.4 Family composition which would influence death and reversionary retirement benefits were based on the general population adjusted to reflect the membership of the Tier 3 civil servants' fund. Income-related disability rates were estimated from DG and the Tier 3 civil servants' fund which had similar disability definitions.

D.1.5 The contributor mortality rates were based on rates in group life schemes adjusted for earnings and occupational risk class. The pensioner mortality rates were based on an Actuarial Society of South Africa insured-lives pensioner mortality study and the data from the Tier 3 civil servants' fund.

D.1.6 The mortality rates of disability claimants were based on an adjustment to the contributor mortality tables by applying a percentage reduction based on age and gender to the residual life expectancy at age of disability.

D.1.7 The average retirement age is expected to decline from 63.8 to 62.9 and 63.6 to 62.85 for males and females respectively between 2022 and 2100, as people accrue full service under the NSSF.

D.2 ECONOMIC ASSUMPTIONS

D.2.1 The labour force participation rate for males aged 15–69 increased from 62.2% to 64.7% between 2011 and 2018 while the rate for females increased from 47.7% to 51.4% over the same period. In the first 20 years of the projection, the participation rates for males are expected to increase by 3% to 67.7% with the female participation rate increasing by 8.5% to 59.9%. The labour participation rate is assumed to be stable thereafter.

D.2.2 The projected unemployment rate increased over the first few years to peak at 30% in 2024, remaining relatively stable until 2040 when it would decline to around 13.3% in 2100 due to population ageing and a shrinking workforce.

D.2.3 The annual real wage growth and labour productivity were assumed to be 1.1% over the projection period (ILO, 2021). Inflation was assumed to be 4.5% which is the inflation-targeting band midpoint.

D.2.4 Low-income earners have more periods of unemployment and hence have a lower contribution density, or average number of contributions per year. Contribution density was modelled for low-income, medium-income and high-income earners separately using data from the Tier 3 civil servants' scheme and UIF. The contribution density assumptions by age, gender and income ranged from 4.2 contributions p.a. for low-income earners aged 15 to 19 and 11.1 contributions p.a. for high-earning females aged 50 to 54.

D.2.5 The net real rate of return on investments was assumed to be 3.5% p.a.

D.3 SIMPLIFYING ASSUMPTIONS

D.3.1 For the death benefit it was assumed that the child's benefit was 25% of earnings which would be paid to a maximum of two children and for simplicity it was assumed that the benefit would go to the youngest two children in the family. A pension of 28% of earnings was actually modelled to take account of double orphans although it is not clear how this relates to the benefit design.

D.3.2 For the retirement pension benefit, a single mortality rate was adopted irrespective of income; however a loading was added to the pensions in payment in addition to the regular inflationary increase to account for the fact that higher-income earners tend to have lighter mortality and hence the average pension for a cohort is likely to increase over time.

APPENDIX E

TSAC (2020) Informal worker benefit fund design

E.1 SCHEME STRUCTURE

E.1.1 TSAC (2020) considered four possible benefit designs:

— a final salary DB scheme,
— a career average DB scheme mirroring the NSSF design,
— a simple DC scheme with no risk benefits, and
— a smoothed DC scheme with risk benefits.

E.1.2 It was difficult to evaluate these design options, but a smoothed DC arrangement with risk benefits was recommended. The DB arrangements were rejected as impractical given the volatility of self-reported informal worker earnings, the risk to government as the sponsor and cross-subsidies from lower-income higher-mortality lives to higher-income lower-mortality lives.

E.2 CONTRIBUTIONS AND INCENTIVES

E.2.1 Contributions would be ad-hoc in terms of timing and amount, with a regularly revised minimum contribution for administration expense purposes, initially set at ZAR50.

E.2.2 Tax-based incentives were rejected as regressive and not applicable for many informal workers and a matching strategy with an upper limit was proposed instead. For example, the government could match the contribution rand-for-rand on the first 12.5% of the OAG value and then 50c to the rand on the income slice between 12.5% and 37.5% of the OAG value, subject to a maximum of 25% of the OAG value. The subsidy would be calculated at the end of each month based on the contributions made during that month to prevent members deliberately making numerous small payments to maximise their subsidy. The report stated that the fairest way to fund this subsidy was to reduce the TES on contributions to Tier 3 and 4 retirement funds by reducing the annual cap. However, elsewhere in the same report a more comprehensive reform to saving for retirement across the Tiers was recommended, replacing the current marginal tax rate system with a credit-based system.

E.2.3 The member contribution is split evenly between the accessible and frozen accounts by default, but the member could increase the allocation to the frozen account, subject to change after a minimum of one year.

E.2.4 The cost of risk benefits would be regularly reviewed and if less than 15% or more than 25% of total contributions, the level would be adjusted accordingly.

E.3 ANNUITIES

Annuity rates are unisex, linked to price-inflation, subject to a five-year minimum payment period, with a 50% spouse's reversion which unmarried members may opt out of.

Annuity rates are guaranteed for a period of one year and published six months in advance. If the resultant annuity is less than 25% of the OAG, the full value of the subsidy and frozen accounts are transferred to the accessible account where it can be taken as a lump sum.

E.4 DEATH BENEFITS

E.4.1 No insured funeral benefit was proposed, but the full value of the member account would be paid as a funeral benefit.

E.4.2 A spouse's pension would be payable to the surviving spouse for two years. The monthly spouse's pension in the first year would be equal to 1/18th of total contributions, including any government subsidy, made over the last three years. This is adjusted for price inflation in the second year and reverts to any child dependents should the spouse die during the two-year period. The monthly child benefit per child is 1/36th of total contributions made over the last three years, to a maximum of four children. Benefits are paid for a maximum of two years or until the child's 18th birthday.

E.4.3 If the monthly income for a survivor is less than 25% of the OAG value, it may be commuted to a lump sum.

E.5 DISABILITY BENEFITS

E.5.1 Disability benefits were payable only on total and permanent disability. The monthly income benefit depended on total contributions within the last three years preceding disability, including any government subsidy, where the initial monthly benefit was 1/18th of this total. The disability benefit also had a contribution waiver benefit of 10% of the disability benefit with no floor. Benefits would be payable until retirement and adjusted annually for price inflation.

E.5.2 If the monthly disability benefit was less than 25% of the OAG value at the time, the benefit could be paid quarterly – unless a quarterly benefit was still less than 25% of the OAG value, in which case the disability income benefit could be converted to a lump sum. The waiver benefit would fall away in this case, but it was unclear whether it would be included in the lump sum or not.

E.6 Early access benefits

E.6.1 Annually members would be allowed two withdrawals from the member accessible account. There should be clear rules as to when access would be permitted. The withdrawal benefit may be reduced by appropriate administrative charges.

E.6.2 The frozen account would be preserved until retirement or earlier death; and the subsidy account until retirement and is forfeited on earlier death.