ILO/TF/South Africa/R.4

Report

Pensions in the comprehensive social security framework

Recent regulatory changes, an approved funds framework and the design of a tier-3 pension default fund

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ILO Cataloguing in Publication Data

ISBN: 978-92-2-031561-3 (print)
978-92-2-031562-0 (web PDF)

ILO publications and digital products can be obtained through major booksellers and digital distribution platforms, or ordered directly from ilo@turpin-distribution.com. For more information, visit our website: www.ilo.org/publns or contact ilopubs@ilo.org.

Printed in Switzerland

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This report discusses the proposal to form an auto-enrolment based, private third tier as part of a new overall pension system in South Africa. The report focusses on tier-3 regulation in general and on the design of the tier-3 default fund to be provided by the proposed National Social Security Fund (NSSF) in particular. This default fund is referred to as NSSF-Default.

The overall system is to combine the existing first tier old-age grant, a new second tier earnings-related public DB-scheme (NSSF) and a third tier – the sum of existing occupational arrangements and new auto-enrolment based, employer provided savings arrangements with the default arrangement being the NSSF-Default. The third tier will be focussed mainly on the pension coverage of income above the level covered by the first and the second tier. While all three elements are crucial to the improvement of pension coverage and pension adequacy, they serve different objectives, they share and address risks in different ways and their exposure to different risks vary. Public and private pensions are complementary.

The contribution of private pensions to social security depends first and foremost on their coverage, contribution rate, contribution density and preservation. Therefore, the assignation of a prominent role in the overall pension system to private pensions should be accompanied by policies ensuring high coverage and high contribution density across the target group. It should e noted that good pension policy – public and private arrangements alike – needs the support of e.g. labour market policies and policies supporting the formalisation of the economy.

Looking to the proposed third tier, the analysis in this report gives rise to a set of recommendations for tier-3 regulation in general and for the design of the NSSF-Default in particular. These recommendations are fitted to the overall tier-3 perspective as it has been set out, and they draw on international experiences and peer examples.

Looking to the overall tier-3 agenda:

- As the third tier coverage is to be strengthened through auto-enrolment based arrangements, measures to support participation should be considered.

- In order to safeguard the contribution of private arrangements to social security in old age, there is a need to ensure alignment between the second and the third tier, by stipulating the same pension age in the two tiers and by abolishing pre-retirement withdrawals in the second tier and by abolishing – or tightly limiting – pre-retirement withdrawals from the third tier.

Looking to the design of the NSSF-Default key recommendations are as follows:

- Adopt a lifecycle design on the investment side based on a building block approach taking account of the fact that risk appetite varies by age – i.e. adopt a lifecycle approach.

- Consider adopting a risk-based lifecycle glide path – an investment policy focused on maintaining an age-related risk level – rather than an approach with an age-related fixed asset allocation. The objective is to allow efficient risk management and generic adaptation to changes in risk patterns in the financial market.

- Avoid a complete separation of the savings phase and the pay-out phase and let the lifecycle glide path continue into retirement – i.e. with risk reduction continuing into retirement. The objective is to allow more risk-taking on the investment side after retirement in order to achieve a better long-term return.

- Consider alternatives to the use of traditional guaranteed annuities and avoid locking into a low long-term interest rate at retirement. The key alternatives are variable annuities or a combination of a variable instalment payment and a life-long annuity kicking in at high age.

- Provide annuities and other retirement products through a centralized pension insurance operation handled by the NSSF in order to ensure fair and cost-effective delivery.

- Consider allowing NSSF-Default participants – and other tier-3 DC-savings participants – to shift their savings to the NSSF at age and acquire a life-long supplementary benefit.

- Consider adopting an approach without return guarantees in the savings phase and without benefit guarantees in the pay-out phase. This strategy should be coupled with strengthened fiduciary responsibilities, strong prudential requirements and strong and stringent prudential supervision. The reason for this is the fact that guarantees are typically costly with little real value for the individual.

Looking to tier-3 regulation more broadly key recommendations are as follows:

- Ensure a simple fee structure. At its simplest an adequate fee structure could have a percentage fee levied on assets financing asset management and a capped fee levied on assets (or contributions) financing administration. The former will rule out perverse redistribution in favour of high-income participants, the latter will keep admin costs proportional while avoiding excessive admin fees.

- Limit the use of transaction-based fees by stipulating that transaction-based fees must reflect the actual transaction costs.

- Ensure that elements of individual free choice on the pension product side are simple and easy to manage, and that the provision of individual choice options does not become a cost driver.

- Ensure that free choice of provider can be based on a rational evaluation of comparable key figures and that fee structures do not create barriers to mobility.

- Ensure transparency, accountability and comparability by ensuring strong disclosure requirements and by devising key figures to be published and to be reported to a common neutral information service.

A clearinghouse model may be considered – either in full or as a source of inspiration. Under such a model, the clearinghouse acts as a custodian and gatekeeper for the third tier on behalf of the participants. Under such a model, the fund managers are required to sign up as tier-3 providers with the clearinghouse, comply with design requirements and other criteria set out by law and operate under the terms set and overviewed by the clearinghouse. Such a model can strengthen the representation of participants interests and support market discipline while inviting the strong participation of private pension funds.

While the formation of a third tier remains relevant and important, the effects of recent changes to private pension regulation should be considered. Improvements of private pension regulation are important in their own right. However, better private pension regulation alone cannot ensure high coverage in a voluntary, occupational pensions framework. Also, better private pension regulation alone cannot ensure access to simple yet attractive arrangements accessible for low-income sectors and small enterprises just as they may not ensure vehicles relevant to low- and mid-income workers and workers with patchy contribution records. Hence, better private pension regulation is not a substitute for a third tier.

Recent regulatory changes reduce the need for an approved funds framework. Hence, they seek to strengthen business standards, good governance, fiduciary responsibilities etc. and as such the need for a separate approved funds framework for the third tier may no longer be pressing. This is a good thing, as it may be undesirable to apply a separate regulatory regime for tier-3 pension funds. In effect, the objective of a separate approved funds framework for the third tier can be adequately served within standard pension fund regulation by applying a set of additional criteria as regards design, investments or other aspects for tier-3 funds and under the presumption of adequate and stringent prudential supervision.

The proposed tier-3 applies an auto-enrolment approach and it defines its target group as those with income above the level covered by the NSSF. All employers are to provide access to an occupational arrangement, while the individual can choose not to participate, decide an individual contribution rate and/or shift from the employer provided arrangement to the NSSF-Default. This combination can lead to significant administrative and compliance challenges as regards the identification of workers to be auto-enrolled, the actual enrolment process, the affiliation of new participants, contribution collection and compliance control. These challenges are most effectively addressed through the application of a clearinghouse. While this aspect falls outside the scope of this project, it is indeed in need of further research. Policies to support participation for workers below or only slightly above the threshold may include targeted contribution subsidies for low income earners and other special incentives.

Further on a general note, there is a great need to ensure better data on private pensions. This is an important prerequisite for evidence-based policy development and evaluation and for deeper analysis into the contribution of private pensions to social security. The necessary individual level data may actually exist – with the tax authorities, the pension funds and/or the regulator – but it is not systematically made available to policy evaluation, research and statistics.

Abbreviations and acronyms

AFF	approved funds framework
ASU	Actuarial Services Unit of the ILO
CPI	Consumer Price Index
DB	defined benefit
DC	defined contribution
EIU	*Economist* Intelligence Unit
FSEES	Formal Sector Employment and Earnings Survey
GAP	general average premium
GDP	gross domestic product
GEPF	Government Employees Pension Fund
IAA	International Actuarial Association
IDTT	Inter-Department Taskforce Team
ILFS	Integrated Labour Force Survey
IMF	International Monetary Fund
ILO	International Labour Organization/Office
LISC	low-income superannuation contribution
NEDLAC	National Economic Development and Labour Council
NSSF	National Social Security Fund
OECD	Organisation for Economic Co-operation and Development
USD	United States dollar

1. Introduction

This report reviews the proposal for a tier-3 pension arrangement in South Africa. The report provides recommendations for tier-3 regulation in general and the design of its default fund in particular. The formation of a third tier is part of an ambitious comprehensive social security reform. Under this overall reform agenda, the objective is to consolidate and strengthen social security and improve access, coverage, administrative efficiency, delivery and transparency.

The comprehensive social security reform has many elements. Among other things the proposed reform will strengthen pension coverage by establishing a new national social security fund (NSSF) responsible for managing a new basic, public DB-arrangement (NSSF), and it will strengthen pension adequacy further by introducing an auto-enrolment based third tier. According to the proposal, the NSSF will provide the default fund (NSSF-Default) of the new third tier framework. In order to enhance the quality of third tier offerings more broadly, the reform proposal includes the proposal to introduce a separate approved funds framework – i.e. a regulatory standard applied to tier-3 providers and products. Changes to pension regulation adopted after the Comprehensive Social Security report was submitted in 2011 broadly align with the criteria set out in the proposed approved funds framework.

The report is structured as follows:

- *Section 2* provides a brief presentation of the tier-3 elements of the proposed comprehensive social security reform and it reviews the background and objectives for the proposals. As part of this effort the section reviews the current private pension coverage. The section also reviews a range of recent regulatory changes, and it discusses how they may affect the tier-3 agenda as it was originally set out – i.e. around 2011–12.

- *Section 3* discusses the objectives and design of the tier-3 default fund, and it identifies and discusses key starting points for the process.

- *Section 4* discusses the design of the tier-3 arrangement by referring to the identified starting points and to relevant peer examples and experiences.

- *Section 5* discusses how a clearinghouse approach can strengthen the overall effect and performance of a third tier.

- *Section 6* relates the analysis to the overall comprehensive social security agenda, and it summarizes key recommendations emanating from the analysis.

- *Annexes A to D* describe relevant international peer examples while *Annex E* describes the OECD roadmap for the good design of defined contribution pension plans.

2. Background and policy objectives

This section summarizes the comprehensive social security agenda as it is set out by the Inter-Departmental Task Team (DSD 2018) [1] with a particular view to its private pension elements. It briefly describes the current contribution of private pensions to welfare in old age. It goes on to briefly describe a range of recent changes to private pension regulation, and finally it discusses how these changes affect the tier-3 agenda.

Key observations in this section

- Private pension coverage in South Africa is low – especially in the private sector, in low income industries and with small enterprises.
- The role of private pensions is further reduced by low contribution density and low preservation.
- Strong critique of the private pension sector has led to significant regulatory reforms in recent years.
- The reforms do not reduce the need for a third tier, but they do make the need for a particular approved funds framework redundant or less pressing.
- Tier-3 funds can be covered by standard private pension regulation with a set of special requirements added, thereby avoiding the formation of a separate tier-3 regime.

South Africa has embarked on efforts to significantly strengthen its social security system. Efforts to do so have been under way for more than two decades and in this course multiple analytical input and political debates have matured the agenda. Particularly important contributions are the 2002 Taylor report (DSD, 2002), the 2012 Inter-Department Taskforce Team (IDTT) report on comprehensive social security (DSD, 2018) and a series of reports issued by the National Treasury in 2012–13. [2] The 2012 IDTT-report provides the template for the current deliberations. This report was endorsed by cabinet in 2016, and it was then submitted to Nedlac for consultation. As part of its considerations, Nedlac issued a set of first comments in September 2018 and in light of these comments the IDTT document is currently being updated. [3]

2.1. Tier-2 and -3 in the comprehensive social security agenda

South Africa does not have a public pension system covering the entire workforce. The IDTT identified this aspect as “the most notable gap in the South African social security system”. [4] Responding to this particular challenge the IDTT proposed the formation of a national social security fund (NSSF) with the view of providing an earnings-related, public DB-arrangement.

[1] The document – originally from 2012 – is expected to be further updated. The version referred to in this report is identified as “Post-Nedlac Refinement v1, 8 September 2018” (DSD, 2018).

[2] See:

- National Treasury, 2012e: Strengthening retirement savings; National Treasury, Pretoria;
- National Treasury, 2012f: Improving tax incentives for retirement savings. National Treasury, Pretoria; and
- National Treasury, 2013b: Charges in South African retirement funds. National Treasury, Pretoria.

[3] DSD, 2018: Comprehensive social security in South Africa – Discussion document. DSD, Pretoria (Post-Nedlac Refinement v1, 8 September 2018).

[4] DSD, 2018, p. 4.

The objective for the proposed new overall pension system is to ensure a minimum replacement rate of 40 per cent for full career workers. However, the NSSF will only cover income above a ceiling – of R 178,000 is indicated – and workers with earnings above this level will not meet this target through the NSSF alone. Hence, higher-income earners will need to build supplementary savings to achieve an adequate retirement income. [5] Therefore – and as a complement to the NSSF – a new tier-3 arrangement is proposed. The third tier will be auto-enrolment based, private arrangements. Most existing occupational arrangements can qualify as third tier arrangements. An approved funds framework (AFF) for funds managing tier-3 savings is proposed to ensure adequate quality in third tier offerings. Hence, the proposal is to create a special framework for pension funds operating tax-incentivised supplementary savings – e.g. tier-3 savings. The approved funds framework will establish standards relating to disclosure, investment strategy, risk management, administration and governance. [6]

The auto-enrolment offers choice options to employers as well as the individual employee. The overall objective is to encourage workers to make supplementary pensions and insurance contributions. All employers will be obliged to enrol their employees in the company's occupational scheme or another suitable arrangement. Hence, participation in this arrangement comes on top of the proposed mandatory NSSF. The employee can choose not to join. Employees who do join may be permitted to choose their level of contribution. Employees will also be allowed to opt-out of the scheme designated by the employer and join the default fund operated by NSSF should they deem it more suitable (DSD, 2018, p. 39). The NSSF-default will also cater to workers whose employer does not offer an occupational scheme or another suitable arrangement.

The default fund will be operated by NSSF (NSSF-Default). As such, NSSF-Default will enter into direct competition with private funds. The NSSF-Default will not be underwritten by the state. [7]

Different types of pension arrangements – i.e. public and private – can serve different objectives. They can share and address risks in different ways just as their exposure to different risks vary. Public pensions are well placed to address a broad range of basic income needs, poverty alleviation and redistribution because they can mitigate and allocate risk, address uncertainty and redistribute in ways that are not readily available to private systems. Also, they can cater to income-replacement needs up to one or another level. Private pensions on the other hand are well placed to smooth income over the lifecycle while their capacity to share risk is more limited. Private pensions can only address risks that are insurable, while policy driven objectives may be outside their scope. Private pensions are complementary to public pensions. South Africa shares this basic condition with all other countries.

The combination of a strong second tier and a strong third tier is essential in this context. In fact, the formation of a universal basic public pension system is the most important element in any strategy to close the pension gap, and therefore IDTT viewed the formation of the NSSF as the key element in the overall South African reform agenda (IDTT, 2009a). Complementing this new second tier public DB-system a strong third tier is essential to improving pension coverage and pension adequacy and to the distribution of responsibilities between public and private spheres.

[5] DSD, 2018 (n3), p. 31.

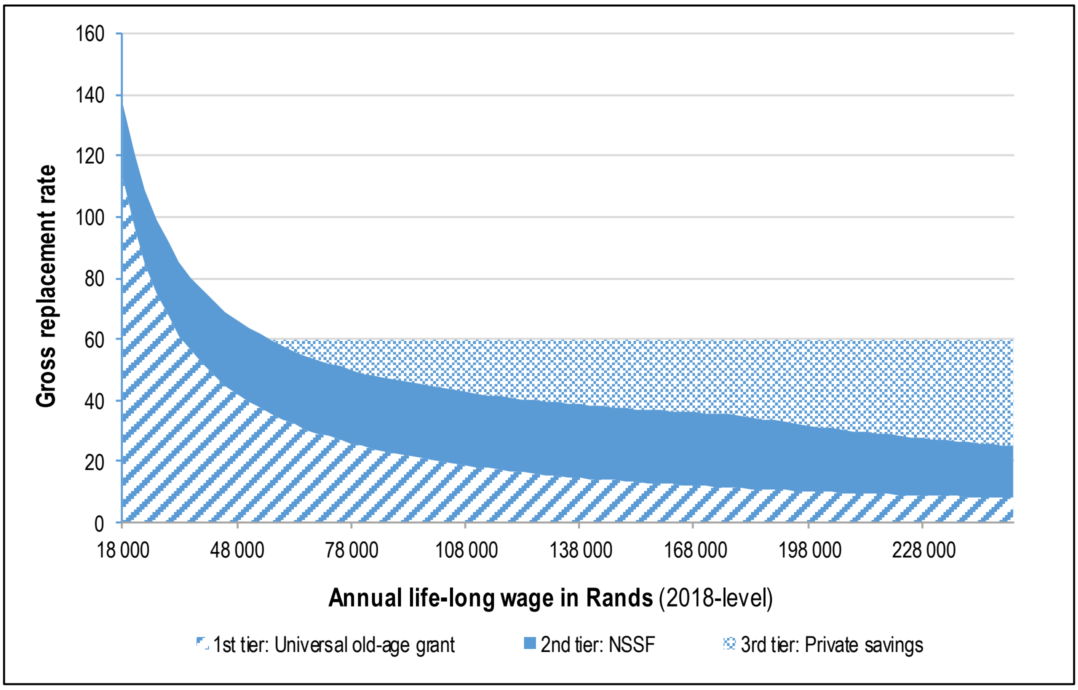
[6] DSD, 2018 (n3), pp. 39–40.

[7] Ibid.

The different elements of the tier-3 proposal have different roles. High private pension coverage for the target group as such is essential to ensuring pension adequacy in the new overall pension system. The proposed auto-enrolment based platform serves to encourage workers to make supplementary pensions and insurance contributions and increase private pension coverage. The proposal for a tier-3 default fund operated by the NSSF is to protect participants who are not satisfied with the option offered by the employer, while the adoption of an approved funds framework is to ensure value for money for all tier-3 participants.

The importance of the different elements varies by income. While the first and the second tier will be vital for low- and mid-income groups, private tier-3 benefits may dominate for higher income groups. This is illustrated in figure 1 below.

Figure 1. Gross replacement rate and income composition in the proposed new pension system



Source: Own calculations based on DSD, 2018.

The figure illustrates the theoretical situation in the first year of retirement (vertical axis) for a full career worker with a specific stable life-long wage level expressed in todays Rands (horizontal axis).

2.2. Private pensions and their current contribution to social security

Over the years private occupational and voluntary schemes have been established to fill – or help fill – the pension gap for particular groups. Hence, South Africa has a sizeable private pensions industry managing total assets of around R 4,146 Bio. (year-end 2016); 58 per cent of this capital was held in privately managed pension funds (46 per cent) and underwritten funds (12 per cent), [8] while the remaining 42 per cent were held in the

[8] An underwritten fund is a fund enrolled in an insurance arrangement with an insurance company. Underwritten funds are exempted from among other requirements to appoint an auditor and a valuator and from annual audits and valuations.

dominant public sector pension fund GEPF and a few other much smaller public sector funds. A very small portion was held by foreign funds (FSCA data and FSCA, 2017a).

The number of pension funds [9] in South Africa is very high and the vast majority of funds are small. There are some 5,140 privately managed pension funds and underwritten funds out of which some 1,650 funds are active and receive new contributions (by year-end 2016). The 100 largest funds hold 75 per cent of the total accrued pension savings, and the largest 25 funds hold 50 per cent (FSCA data and FSCA, 2017a).

Scale matters greatly in private pensions. Absence of scale can have significant negative effects on costs, management capacity and performance. The vast majority privately managed pension funds and underwritten funds are not likely to have the scale to be managed efficiently. This aspect is illustrated for example by the fact that 43 per cent of the funds fail to meet the very basic requirement of submitting their financial statement on time (FSCA, 2017).

There are some 16.6 Mio. registered pension fund contracts (year-end 2016); [10] 89 per cent of these contracts – 14.8 Mio. – are in privately managed pension funds and underwritten funds, while the rest are in public sector funds (FSCA, 2017a). A total of 11.1 Mio. contracts – of which 9.7 Mio. are in privately managed pension funds and underwritten funds – received contribution payments in 2016.

A large fraction of the contracts is related to participants with so-called unclaimed benefits. I.e. the participant has earned rights in a pension fund, is no longer paying contributions, has not claimed a pre-retirement pay-out and has not claimed benefits. Referring to privately managed pension funds and underwritten funds, table 1 indicates that no less than 30 per cent of all contracts are in this group. While the number is high the average account balance in these contracts is low. A recent internal FSCA project found that only some 2 per cent of total assets relate to unclaimed benefits (FSCA, 2017b).

Table 1. Contracts in privately managed pension funds and underwritten funds 2016 and 2015

	2016	2015
Contributing members	9 721 236	9 785 800
Deferred benefit members	56 732	256 380
Pensioner in receipt of regular payments	458 234	336 410
Dependants and nominees	157 686	166 981
Persons entitled to unclaimed benefits	4 407 693	4 084 491
Total	**14 801 581**	**14 630 062**

Note: The numbers cover contracts. The number of individual participants is lower as participants may be in more than one fund.
Source: FSCA, 2017a.

The large number of contracts with unclaimed benefits is a critical challenge. There are many reasons as to why participants end up as participants with unclaimed benefits. However, tracking the participants and paying the benefits due remain the responsibility of the pension fund and its board of directors. The numbers indicate a poor track record in this respect. This aspect is critical, as the rights of a large group of participants are not adequately

[9] In this context the term “pension funds” refer to pension funds, provident funds and retirement annuity funds.

[10] The actual number of participants is lower as individuals may be participants in more than one fund.

served and as it weakens the role of private pensions and erodes its credibility (FSCA, 2017b).

Private pension coverage is not high. The STATS SA labour force survey from Q3 2018 indicate that some 45 per cent of the employed workers report that pension contributions are being paid on their behalf, [11] but it does not provide further detail on the accrued savings or other. Private pension coverage varies according to income, sector and degree of unionisation and it is skewed towards higher income segments with stable labour market careers in the formal sector. To the extent lower income workers are covered, this is mainly facilitated through provident funds rather than pension funds. [12]

Actual private pension coverage is difficult to assess. As noted above, 11.1 Mio. contracts received contribution in 2016. Some participants will have paid contributions to more than one contract and hence, there will be a – potentially substantial – element of double counting involved, when moving from the number of contracts to the number of actual participants. The available data does not allow this issue to be solved. For comparison the 15–64-year-old population was 36,9 Mio., the work force 21.3 Mio., and the employed work force stood at 16.6 Mio. in Q4-2016. [13]

Regular pension benefit payments were made under 950,000 contracts in 2016. A little less than half – 458.000 – of these contracts were in privately managed pension funds and underwritten funds. The number of contracts from which a retirement related lump sum was paid in 2016 is not available.

Total benefit payments from private pension funds amounted to R 326 Bio. in 2016. 18 per cent of total benefit payments are pension benefits, while another 38 per cent are lump sum payments related to retirement or disability – i.e. 44 per cent of all payments from pension funds are pre-retirement withdrawals not related to retirement or to disability. There are some differences between public and private sector funds in this respect. Hence, the total fraction of benefit payments related to retirement or disability is more or less the same, while the fraction paid as regular pension benefits is substantially higher in public sector pension funds – 36 per cent as opposed to 11 per cent. [14]

Eleven per cent of all benefit payments from privately managed pension funds and underwritten funds are pension benefits and another 44 per cent are lump sums related to retirement or disability. This is indicated in table 2 below. The numbers indicate that around 40 per cent of all payments are pre-retirement withdrawals. This also indicates a low level of preservation for workers terminating their job. The strong preference for lump sum payments and the high pre-retirement payment rate and low preservation – partly due to the use of retirement savings for precautionary ends for the working age population – reduces the role of private pensions substantially.

[11] Statistics South Africa, 2018, table 3.8.

[12] DSD, 2018 (n3), pp. 26–27.

[13] Statistics South Africa, 2018.

[14] FSCA, 2017: Registrar of Pension Funds Annual Report 2016. Pretoria, FSCA.

Table 2. Payments from privately managed pension funds and underwritten funds 2016 and 2015

	2016	2015
Pensions	25 312	24 668
Lump sum payments	202 909	172 575
– On retirement or death	101 439	86 118
– Resignations and terminations	88 520	74 414
– Other	12 950	12 043
Total	**228 221**	**197 243**

Source: FSCA, 2017a.

As noted above, pension benefits or disability benefits are paid under some 950,000 contracts. A little more than half of these payments are from non-public sector arrangements. The average payment per contract were approximately R 60,000 – 27 per cent higher for contracts with a public sector fund. There are no data available allowing a thorough analysis of private pension coverage among the elderly and the importance of private pensions benefits to their financial well-being in old-age. However, it is safe to conclude that the coverage is low, and that the benefits for the majority of recipients are low as well. For comparison the number of 60+ and 65+ South Africans in 2017 were estimated at 4.6 Mio. and 3 Mio., respectively. In other words, private pensions only reach out to a small minority of older people and their contribution to social security old-age is small and selective.

Private pension coverage, contribution density and preservation are low. A 2009 assessment found that, some 6.2 million formal sector workers are not covered by private pension arrangements. [15] Other research has concluded: “Currently, only an estimated 6 per cent of South Africans are able to maintain their lifestyle and replace their income fully at retirement”. [16] Related research found that further to low and skewed coverage, the potential of private pensions is reduced by short labour careers, low contribution density, weak preservation and portability and widespread early withdrawals (National Treasury, 2012c-d).

Pension adequacy in South Africa is low – even among private pension participants. Recent research even found pension adequacy among private pension participants to be deteriorating. Hence, the proportion of members thought to be able to maintain their standard of living in retirement is on the decrease. Currently it is estimated at just 19 per cent of participants in stand-alone funds and only 14 per cent of members in umbrella funds (institutions providing pension management to a large number of small pension funds). The contribution rates applied are highly variable and they are on the decrease. The average employer contribution is estimated at 9.9 per cent of salary in 2017 while the average employee contribution rate stands at 5.7 per cent of salary. Both numbers have decreased in recent years; 13 per cent of all funds indicate that members are able to choose their own contribution rate. [17]

The data coverage on private pensions and their contribution to social security is weak. The ad hoc nature of the cited research is a signal of this aspect. Apart from the basic observation that private pension coverage and density is low, the fact is that little is known about the contribution of private pensions to social security and its development in this

[15] IDTT, 2009: Annexure C: Governance and benefit protection in approved funds. IDTT, Pretoria.

[16] National Treasury, 2014a: Budget update on retirement reforms. National Treasury, Pretoria.

[17] Sanlam, 2018: Benchmark survey, 2018. Sanlam, Johannesburg.

respect. Hence, there is no data available allowing a strong analysis of the contribution of private pensions to social security in old-age and little is known about, for example the coverage of private pension benefits among the elderly and their effects on income distribution.

The weak data availability has repercussions for policy and policy design. Hence, the platform for evidence-based policy development and evaluation is not strong. Improved data availability and improved room for research and evaluation is essential going forward – not only to policy formation but also to private pension market development.

2.3. Recent private pension reform efforts

The assessment of the private pensions industry has been rather critical. The critique has targeted parts of the industry and it has touched on a wide range of issues – for example, lack of transparency, slow case handling, high and in-transparent fees and costs, weak and insufficient governance and poor adherence to fiduciary responsibility. Further, the framework appears complex with many different types of fund arrangements.

The number of funds has come down in recent years. Even so, the number of active funds as well as the number of small funds remain high as indicated above (see for example National Treasury, 2006 and 2013b) and there are clear signs of significant inefficiencies with many of the funds. Scale matters in private pensions and while a high number of funds – particularly small funds – incurs higher costs it does not in itself ensure efficient competition. A smaller number of more capable and transparent institutions with scale is to be preferred. This process however, should not lead to the formation of de facto monopolies.

Private pensions have important roles to play and remains an important element in the overall pension system. Therefore, it is important to address the critique and ensure that the industry adequately and prudently serves its role and that private pensions meet key standards on issues such as good governance, transparency, management, design and costs. While stronger private pensions do not make the need for a strong public pension system any smaller, it strengthens the ability of private pensions to serve its role and it strengthens the robustness of the overall pension system.

The 2012 Budget Review condensed the critique voiced in public debates. Hence, the review made the observation that “too few South Africans receive an adequate income in retirement. Many are unable to put enough money aside for their future or do not have access to appropriate savings vehicles”. Further, the 2012 budget review pointed to four concerns. [18]

Inadequate lifetime savings: Many households maintain unsustainable consumption levels, and do not save enough to provide for economic shocks and post-retirement needs.

Low levels of preservation and portability: Workers often withdraw their retirement savings when they change jobs rather than moving their accumulated funds to a new employer or preservation fund.

High fees and charges: Pension, provident and retirement annuity funds impose fees and administrative charges on their participants’ savings. In some cases, these fees are excessive and substantially reduce the value of participant benefits.

Low levels of annuitization: At retirement, participants of provident funds seldom convert the lump sum they receive into an annuity. As a result, they risk outliving their

[18] National Treasury, 2012a: Budget Review, 2012. National Treasury, Pretoria, p. 80.

savings. Annuities, which pay a guaranteed monthly income until death, are the best way of mitigating this risk, but certain products incur high up-front costs or management fees, and do not offer value for money to workers who do not expect to live long after retirement.

The 2012 Budget Review set out a reform agenda for private pension regulation. Hence, while reiterating governments' commitment to pursue the creation of a mandatory, social insurance based public pension scheme – the NSSF – it set out a reform agenda addressing the principal concerns listed above. This effort was followed up by five technical discussion papers focusing on these issues in 2012 and 2013. [19] Upon consultation, the process led to a range of reform proposals targeting the retirement funds industry. The reforms were summarized under six headlines: [20]

– reducing the costs of retirement products;

– reforming the annuities market;

– requiring preservation and portability;

– a uniform approach to the tax treatment of retirement fund contributions;

– improving fund governance and the role of trustees;

– tax incentives to promote retirement and other investment products.

2.4. Recent changes to private pension regulation

Most of the private pension reforms announced in 2012–13 have since been adopted, while some are on their way. Most of these changes is implemented through Regulations 37-39 issued in accordance with section 36 the Pension Fund Act 24 of 1956. Section 36 of the Act provides a rather broad right for the Minister of Finance to issue complementary regulations as needed.

Regulation 37 specifies that DC savings arrangements to which "members belong as a condition of employment, must offer one or more default investment portfolios" and the regulation stipulates the obligation of the board to "ensure, and be able to demonstrate to the Registrar on request, that default investment portfolio(s) are appropriate for the members who will be automatically enrolled into them". The regulation also defines a few broadly defined standards that such arrangements must comply with. Investments options in a default investment portfolio can include both active and passive investments (Ministry of Finance, 2017, Regulation 37.1-2).

[19] See:

– National Treasury, 2012c: Enabling a better income in retirement. National Treasury, Pretoria;
– National Treasury, 2012d: Preservation, portability and governance for retirement funds. National Treasury, Pretoria;
– National Treasury 2012e: Strengthening retirement savings. National Treasury, Pretoria;
– National Treasury 2012f: Improving tax incentives for retirement savings. National Treasury, Pretoria;
– National Treasury 2013b: Charges in South African retirement funds. National Treasury, Pretoria.

[20] Quoted from National Treasury 2012b: Strengthening retirement savings – An overview of proposals announced in the 2012 Budget. National Treasury, Pretoria.

Regulation 38 specifies that workers, who are "enrolled into a pension or provident fund as a condition of employment, the rules of that fund must provide for members who leave the service of a participating employer before retirement to become paid-up members". The regulation seeks to protect paid-up members by stipulating equal treatment as regards investments and by abolishing any form of discrimination through costs or charges and by strengthening savings mobility. Participants are still able to withdraw their retirement savings when they leave the service of an employer or preserve their funds with another fund or insurance policy. Participants wishing to withdraw or transfer their retirement savings should be given access to a retirement benefits counsellor (Ministry of Finance, 2017, Regulation 38).

Regulation 39 specifies that "pension, pension preservation and retirement annuity funds must establish an annuity strategy", and it extends a similar obligation to provident funds where participants can choose an annuity. Further, the board must "ensure, and be able to demonstrate [… that…] The proposed annuity or annuities as per the annuity strategy are appropriate and suitable for the specific classes of members who will be enrolled into them". Further, the regulation seeks to protect participants by stipulating that "fees and charges [must be] reasonable and competitive" and that "their impact on members' benefits are disclosed", and it must be well communicated to participants, and be reviewed regularly. [21]

Further to the annuity regulation in regulation 39, recent changes to the income tax legislation adjusts the requirements for mandatory annuitization. Hence, amendments increase the accumulated savings threshold for annuitization from R 75,000 to R 247,500 while maintaining the requirement that participants with savings above the threshold must spend at least 2/3 of these savings to purchase an annuity – either a guaranteed lifelong annuity or a living annuity. Also, the tax treatment of pension contributions across different types of pension funds have been harmonized on the contribution side and annuitization requirements will be aligned by 2021.

Recent changes to the pension fund act seek to strengthen governance. The regulatory changes which came by way of the Financial Services Laws General Amendment Act [22] stipulate among other things that a pension fund must be registered with the supervisory authority before taking up its business. Further, they stipulate the fiduciary duty of the board of directors towards fund and participants, and ensure "that the interests of members in terms of the rules of the fund and the provisions of this Act are protected at all times", [23] and they stipulate that board members "must attain skills and training as prescribed by the Registrar, within 6 months after taking up office". [24] The changes protect board members from joint and several liability, if they act independently, honestly and exercise their fiduciary obligations. [25]

[21] Regulation 39.1-2 of *Government Gazette* No. 41064. Further regulation complementing Regulation 39 by addressing the pay-out profile of so-called living annuities are currently under consultation (deadline mid-January 2019). A living annuity is a variable annuity – in essence an investment product – where the annuity holder assumes all risk. In return the participant escapes being locked into low return safe assets throughout retirement and retains some ability to vary payments and access capital underway.

[22] No. 45, 2013.

[23] Section 7C.a of the Financial Services Laws General Amendment Act.

[24] Section 7A.a of the Financial Services Laws General Amendment Act.

[25] Section 7F of Financial Services Laws General Amendment Act.

The private pension regulation reforms address identified challenges in the private pension set-up. As such the overall effort supports the development of stronger private pension sector and it strengthens the ability of the private pension industry to contribute to social security in South Africa. Using the six headlines defined by the National Treasury in 2012, the key efforts of the past 4-6 years and their expected longer-term effects are summarized in table 3 below.

The changes are recent and therefore their full effects are still unknown. It should be noted, that efforts typically affect new savings and leave existing savings untouched. While this approach may reflect political as well as legal concerns, it also prolongs the time to effect for the reforms.

Table 3. Key private pension reform objectives, related initiatives and their expected long-term effects

Reform objectives (National Treasury 2012c)	**Reform vehicles**	**Expected effects**
Reducing the costs of retirement products	Regulations 37 and 39	Requirements to have a default approach for the savings phase and to adopt an annuity strategy impose stronger requirements on fees and costs and on disclosure to the participant and the board of directors.
Reforming the annuities market	Regulation 39 Taxation Laws Amendment Act No. 31	Requirements for pension, pension preservation and retirement annuity funds to have an annuity strategy may lead to better and less expensive annuity products.
Requiring preservation and portability	Regulation 38	Requirement to offer preservation and to apply equal treatment and non-discrimination standards along with advice requirements may strengthen preservation and reduce early pay-outs.
A uniform approach to the tax treatment of retirement fund contributions	Taxation Lays Amendment Act No. 31	The tax treatment of pension contributions has been harmonized across the different types of pension funds. Annuitization requirements will be aligned by 2021.
Improving fund governance and the role of trustees	Financial Services Laws General Amendment Act No. 45 of 2013	A formal fiduciary responsibility and the clarification of board responsibility on particular aspects may improve governance.
Tay incentives to promote retirement and other investment products	Taxation Laws Amendment Act No. 31	Harmonization of tax rules increases transparency and the ability to overview and compare options may strengthen the promotion of private pensions. An increase of the allowed tax free lump sum at retirement from R 315,000 to R 500,000 goes against the annuity agenda, but it creates stronger incentives for participation.

Source: National Treasury 2012b and relevant regulations and amendment acts.

2.5. Changes to private pension regulation and the tier-3 agenda

The private pensions agenda set out by the National Treasury in 2012 seeks to strengthen private pension regulation and improve standards and products. The analyses and evidence leading up to this effort are compelling and addressing the identified challenges is relevant in its own right. As such the initiatives taken are important, and they touch on many different aspects.

The tier-3 proposal is partly shaped in view of the shortcomings and issues outlined above. Key aspects in this respect concern private pension coverage, preservation and mobility, value for money, costs and charges, governance and transparency. Some of these aspects are addressed through the recent private pension reforms. Therefore, it is relevant to consider how the recent reform efforts can be expected to affect the key drivers behind the tier-3 agenda.

The contribution of private pensions to overall social security rests on some fundamental preconditions. Hence among other things, private pension coverage must be high, contribution rates must match objectives, contribution density must be high, contribution leakage must be low and across the industry scheme and product designs must align with overall retirement policy objectives. If these conditions are not met, private pensions cannot contribute effectively to overall pension policy objectives. Some of these issues reside outside the pension system and must be addressed through other policy efforts – particularly labour market policies, social security for the working age generations and policies supporting the formalisation of the economy.

Design is important to outreach. Hence, a classic issue in pension policy is how to ensure that private pensions are attractive for workers with low – and often unstable – income, and how to ensure that they reach out to low income sectors and small enterprises? This issue is particularly important in the context of the South African economy as it is marked by great diversity in labour market affiliation and perspectives and by great material as well as immaterial inequality.

2.5.1. The reforms will have limited effect on coverage

Private pension coverage is low in South Africa – especially in the private sector. The current approach is based on a voluntary model, where employers can decide to offer an occupational pension scheme or where such schemes can be set up by collective agreement. However, voluntary models are generally not efficient in ensuring high coverage (OECD, 2014, ch. 4), and typically they do not reach out to lower income sectors of the labour market and smaller enterprises.

The recent regulatory reforms cannot be expected to increase private pension coverage significantly. On the one hand the changes may make the choice to provide an occupational arrangement more appealing to some employers. However, occupational arrangements will remain voluntary, and there is no indication that the changes alone will improve the accessibility of private pensions in lower income sectors and for smaller enterprises.

The tier-3 proposal has the potential to significantly increase private pension coverage in the longer term – even in an auto-enrolment based regime.

2.5.2. The reforms will improve preservation, while contribution leakage is likely to persist

Up until now, early withdrawals and weak preservation has hampered the potential of private pensions as part of overall social security in South Africa. The savings culture has given priority to individual choice and pre-retirement access to pension capital over the underlying retirement objective.

The tax regulation seeks to disincentivise early-withdrawals by imposing an indirect penalty on early withdrawals. Hence, the tax treatment of payments from pension funds applies a twinned set of tax rates as regards lump sum payments. Lump sum retirement payments up to R 500,000 are tax exempt. If a lump sum is taken out as an early withdrawal before the retirement age (55 years) the threshold for tax-free payments is only R 25,000.

The tax rates for lump sum payments above the thresholds are shown in table 4. The very high rate of early withdrawals seems to indicate that the disincentive is weak [26] and/or poorly understood.

Table 4. Tax rules for lump sum payments from pension funds
Annuity payments are subject to standard income tax

Before retirement		At or after retirement	
Bracket (Rands)	**Tax rate**	**Bracket** (Rands)	**Tax rate**
0 – 25 000	0%	0 – 500 000	0%
25 001 – 660 000	18% of income above 25 000	500 001 – 700 000	18% of income above 500 000
660 001 – 990 000	114 300 + 27% of income above 660 000	700 001 – 1 050 000	36 000 + 27% of income above 700 000
990 001 and above	203 400 + 36% of income above 990 000	1 050 001 and above	130 500 + 36% of income above 1 050 000
Source: SARS.			

Reforms do not limit early withdrawals as such. Regulation 38 seeks to change the pattern by stipulating access to preservation, equal treatment and by improving the ability to transfer savings to another pension fund. Further, the regulation seeks to counter the cultural aspect of the present practise by stipulating that funds must provide access to benefit counselling for paid-up members wishing to make early withdrawals.

Early withdrawals are likely to be prevalent even in the longer term. The new regulation marks an important step in terms of improving access to and the terms for preservation, but it does not abolish or limit early withdrawals, and therefore it cannot be expected to effectively reverse the current practise.

- The third tier may be subject to tighter preservation rules and rules limiting early withdrawals, thereby increasing private pension density for the participants.

2.5.3. The reforms seek to strengthen annuity provision, but the lump sum culture is likely to persist

Lump sum payments are allowed under the private pension regulation. Upon retirement pension fund participants can withdraw one third of their savings in the fund as a lump sum. The remaining 2/3 must be transferred to a lifelong annuity or a life-annuity. Life-annuities dominate the South African annuity market even though they are inefficient in providing longer term income security for the individual. If the accrued capital is less than R 247,500 the full amount can be taken out as a lump sum, and retirement lump sums up to R 500,000 are tax free. In both cases the requirement to give priority to life-long support is weak or absent. These rules do not apply to provident fund participants, and many provident fund members can take out the full amount as a lump sum.

The reforms require all pension funds to have and offer a default annuity strategy. The reforms can improve access to adequate annuity products and improve the quality of products. This line of reform is expected to be continued through the adoption of similar rules for provident funds.

[26] Many other countries – e.g. Denmark and Sweden – apply penalty taxes on early withdrawals substantially above the standard income tax rate.

Even so, lump sum payments are likely to persist as a dominant form of retirement payments. Firstly, the reason for this is the cultural element – i.e. the need to annuitize may not be widely understood and trust in annuity providers may not be strong. Secondly, the tax rules – see table 4 – provide a strong incentive to take out a lump sum by making payments up to a certain threshold tax free.

- A mandatory tier-3 may apply stricter rules to annuitization.

2.5.4. The reforms are likely to reduce fees and charges – but issues remain

Costs in some segments of the South African private pensions industry are high. Further, the applied fees and charges are often complex and not transparent. [27] The law on pension funds does not regulate fees and charges as such. However, the new regulations – regulations 37 and 39 in particular – seeks to address this issue. This is done among other things by stipulating that funds must offer a suitable default option and annuity strategy, that fees and charges must be addressed as part of the default design, that default strategies must be reasonably priced, that loyalty bonuses and complex fee structures are abolished and that all fees and charges – direct as well as indirect – should be disclosed to the board of directors and be appropriately disclosed to participants.

The regulation signals a strengthened focus on fees and charges, and it can create a pressure for lower fees and charges and simpler fee structures. However, this pressure may be weakened as there is no requirement to publish this information and as competitors and participants may not be able to compare costs, fees and charges between different providers and funds. This may be a matter of some concern as transparency is a key factor for competition and market pressures in complex markets such as pensions. It should be noted, that many countries have adopted substantially stricter regulations to this effect.

Further, it should be noted that fees and costs are different. Fees are the charges facing the participant, while cost are the true production cost – the former is not necessarily closely linked with the latter. Stronger regulations on fees does not necessarily entail stronger pressure for lower costs. For example, some funds may reorganise their business with the view of shifting direct costs to indirect costs just as the pressure for lower fees can have unintended effects on asset management. [28]

- A mandatory tier-3 may be subject to tighter rules on costs, fees and charges and it may require public disclosure of data with the view of allowing comparison.

2.5.5. The reforms may reduce the need for an approved funds framework

The IDTT proposal includes a proposal to introduce an approved funds framework for pension funds operating tax-incentivised supplementary savings. As mentioned above, the approved funds framework should establish standards relating to disclosure, investment strategy, risk management, administration and governance (DSD 2018, p. 39-40). From a political perspective it may be particularly important to address these issues effectively as regards mandatory tier-3 arrangements because the arrangement is to be defined by law as a separate part of the overall pension system. However, from a regulatory perspective addressing these elements adequately and maintain high standards in these fields is essential

[27] Some crude information on the current situation can be derived from Sanlam 2018.

[28] For a discussion on these issues see National Treasury 2013b.

for any private type of pension arrangement. In fact, it is not desirable to have a duplicated regulatory regime.

The recent changes to regulation address most of the issues listed as approved funds framework elements. Therefore, the choice may be whether to have a particular approved funds framework or whether to keep tier-3 funds under the general framework and define specific additional requirements for tier-3 funds. The latter may be preferable, because it avoids the creation of a separate tier-3 regulatory regime and aligns with the general principle of applying the same regulation and same rules to financial institutions undertaking similar risks.

- A mandatory tier-3 may be under the general regulatory framework while simultaneously being subject to specific rules on e.g. costs, fees, design, products, management and disclosure.

2.5.6. The second and third tiers fundamentally change the configuration of the pension system

The formation of the NSSF and the introduction of an auto-enrolment based third tier will change the configuration of pensions in South Africa. The NSSF will cover earnings up to a certain threshold, while the third tier will – first and foremost – cover earnings above this NSSF-ceiling. The combination of these elements will fundamentally change the configuration of pensions in South Africa, and private pensions will need to be reformatted to attain a complementary role. This exercise will require a lengthy transition period.

The NSSF will introduce a contribution rate for all of 10 per cent [29] of wages up to the NSSF ceiling. The great benefit of the introduction of the NSSF is strengthened pension coverage and pension adequacy in the longer term. That being said, it should be noted, that the formation of the NSSF will also affect the private pension market and the role of private pensions in the longer term. Even if the NSSF contribution is introduced gradually, the NSSF is likely to crowd out private pensions for lower income workers and for income below the ceiling. The auto-enrolment nature of the third tier and possible targeted contribution subsidies may pull in the opposite direction and support broader tier 3 coverage. In sum however, the process will reformat the role of private pensions, affect the private pensions market and affect the demand for private pensions. The effects will only unfold gradually, and they are necessary aspects of the formation of an adequate pension system with a much broadened out-reach.

[29] The number is tentative and subject to ongoing actuarial evaluation.

3. Tier-3 starting points and objectives

This section starts out by identifying a number of basic starting points and political, socio-economic as well as technical conditions for a South African third tier. Based on this exercise the section moves on to identify key objectives for the tier-3 default fund and how these objectives can be served through its design.

Key observations in this section

- The contribution of private pensions to social security essentially depends first and foremost on coverage, contribution rate, contribution density and preservation.
- Good pension policy starts at the labour market.
- Mandatory and quasi-mandatory participation provide high participation rates
- Auto-enrolment is a second-best solution with regulatory options available to strengthen coverage and participation.
- DC-arrangements leave all risks with the individual and accentuates close reconsideration of fiduciary responsibility.
- Good default design makes the default fund a relevant choice even for those who consider making an own choice.
- Free choice options can be important, but it can be a strong cost driver, and it is not necessarily a strong driver of competition.
- Key drivers for competition are openness, transparency and disclosure.

The new third tier is an integral part of the envisaged future overall pension system. It serves to broaden private pension accessibility and coverage in general and to complement the envisaged new public pension system and strengthen pension adequacy. Some indications for the design of the third tier and the design of its default fund has been set out by the IDTT, [30] while other aspects follow implicitly from indicated priorities.

3.1. Coverage, labour market participation and contribution density

The tier-3 proposal seeks to increase coverage by assuming an auto-enrolment approach. Measured on its efficiency in ensuring high participation, this approach is a second-best solution. All countries displaying high private pension coverage have adopted a mandatory approach – e.g. Australia, Sweden (mandatory savings) and Chile – or a quasi-mandatory approach – e.g. Denmark, Netherlands and Sweden (occupational pensions). The latter model requires very strong social models with very high collective agreement coverage.

Experience from among other the UK indicates that an auto-enrolment approach can provide substantially higher participation rates than can a traditional voluntary approach. The difference between the two is the configuration of the choice option. In a voluntary arrangement the individual can choose to participate, conversely – in an auto-enrolment system – participation is default with the possibility to opt out. Auto-enrolment can lead to substantially higher participation rates – albeit still significantly lower than seen in mandatory and quasi-mandatory systems. Experiences from auto-enrolment based systems show that additional regulatory elements can support coverage further by inviting the participant to consider an opt-out decision. For example, regulations can stipulate that the

[30] DSD, 2018 (n3).

opt-out option only refers to future contributions, they can apply a time-frame – e.g. by specifying a relatively narrow window of 3 months after the payment of the first contribution for opting out – they can require the individual to confirm the decision to opt-out after e.g. 2 weeks and they can re-enrol opt-outs at given intervals.

Private DC-pensions are based on paid contributions – i.e. only paid contributions count and all paid contributions count. It follows that such arrangements reach out first and foremost to individuals with a stable working career in the formal labour market. It should be noted that South Africa has a highly diverse labour market, high unemployment and a labour force with a rather low labour market participation and substantial segments employed in the informal sector.

The consequences of this aspect are many. First and foremost, it underlines the importance of the other elements of the overall pension system – the old-age grant and the proposed public system – as these elements are likely to provide the lions' share of pension income for the vast majority of South Africans and have a broader outreach. Secondly, it means that the social security effects of a third tier arrangement will only materialize and mature over time. Thirdly, it underlines the basic condition that good pension policy starts at the labour market. Hence, the effects of policy steps to strengthen the role of private pensions will depend strongly on policy steps and developments in other areas – particularly in labour market policy.

3.2. Contribution rate and affordability

The envisaged role of the private third tier pensions must be prudently reflected in the contribution rate. The relationship is simple as private pension output is closely linked to contribution input. Therefore, it is essential that the contribution rate as well as the assumptions applied in assessing the adequate contribution rate and when providing benefit forecasts are prudent and realistic.

Failure to meet these requirements can have serious negative effects. Setting contribution rates too low or adopting overly optimistic return assumptions will lead to disappointments as regards the resulting benefits, which in turn will have negative effects on popular support. Several middle-income countries share this experience. One such example is Chile, where lower return rates have reduced benefit output and weakened popular support for its private pension arrangements and led to popular protests. [31]

The third tier proposal does not mention an envisaged default contribution rate. However, some indication of the ambition level is given by the vision that the sum of tier-1, -2 and -3 should provide a replacement rate around 40 per cent for mid-income workers. It follows that a contribution rate of at least 10 per cent is needed on income not covered by the first and the second tier. The benefit potential of a given contribution rate depends not only on capital market returns but also on the pension age and the expected longevity at retirement – i.e. the duration of retirement.

The calculation must be made in context for South Africa based on its data and policy ambitions. Hence, a universal rule of thumb does not exist as such. As a point of reference, the replacement rate that can be provided to a full-career, mid-income worker in Scandinavian countries based on a contribution rate of 1 per cent of the full gross wage is in the 2.5–3 per cent range. The number has decreased substantially over the past 2–3 decades due to increasing longevity and decreasing interest rates.

[31] See e.g. Chile today on 29 October 2018.

The introduction of a third tier alongside the new NSSF will affect individuals' take-home pay. It may not be possible to have a sufficiently high contribution rate from day one as it may put households under financial pressure and lead to popular distrust.

One strategy to address this issue is to phase the contribution rate in over a number of years. This approach can allow for real wage increases despite the introduction of new contributions. For example, a number of new quasi-mandatory occupational schemes were introduced in Denmark from 1989 and onwards. These schemes started out with a contribution rate of 0.9 per cent adding small increments in each of the following years before arriving at the current rates – 12–15 per cent of salary – after 10–15 years.

The introduction of a third tier will have macro-economic effects. Being outside the scope of this report, even this aspect points to the importance of a carefully balanced implementation strategy. This aspect of the comprehensive social security reform proposal still needs to be analysed in detail.

3.3. The third tier default fund will be a DC-arrangement

Existing pension funds meeting the criteria specified under the proposed approved funds framework can be tier-3 funds. Public sector occupational funds are DB-arrangements, while the lion's share of private sector arrangements are DC-arrangements. All existing arrangements without exceptions must be reformatted to match the new multi-pillar structure – i.e. private pension funds including funds the public sector must be reformatted and take account of the new NSSF. Also, a clear set of criteria must be defined for funds wishing to be able to operate as tier-3 funds. While being outside the scope of this project, it should be noted that a transition arrangement for this process will be needed.

The tier-3 default fund will be based on DC-principles. The basic mechanics in a DC-fund is that contributions are paid by/for each individual into an individual account. The accrued contributions are invested, and the yields are distributed to the different individual accounts relative to their capital-input. DC-schemes are based on a "What-You-Pay-Is-What-You-Get"-principle, and the individual has individual ownership rights to the account. The implication is, that redistribution between different groups of participants – e.g. inter-generational transfers – is ruled out.

While redistribution between different groups of participants is ruled out, DC-funds can still accommodate redistribution and they can facilitate risk sharing. However, redistribution elements will then be exogenous as redistribution inside a DC-fund runs counter to its structuring principles. Hence, redistribution in relation to DC-arrangements must take place on the contribution side through direct or indirect – e.g. via tax rules – contribution subsidies. As described in the annex A, B and C, Australia, Chile and Mexico all have such arrangements in place. Other examples are the proposed subsidy for low income participants in the South African third tier and proportional tax-concessions as applied in e.g. Croatia.

Risk sharing in DC-arrangements can be facilitated through collective insurance overlays. This can for example take the form of disability insurance and survivors' insurance financed from a deduction from the contributions or from an annual fee from the accounts and it can take the form of compulsory annuitization on group insurance terms. For example, such an arrangement is mandatory in the Chilean AFP system while partly voluntary options are provided under the Swedish mandatory and quasi-mandatory occupational arrangements just as they form an integral part of all Danish quasi-mandatory occupational arrangements.

DC-arrangements allocate all risk to the individual participant. Unlike DB-funds, DC-funds do not have sponsors, and there is no sponsor of last resort to be called upon if results are disappointing. All risk – investment risk, longevity risk, operational risk etc. – are with the individual participant. Often this aspect is interpreted as a DB/DC-contrast – i.e. the security of a DB-scheme or a guarantee-based DC-insurance scheme versus the volatility and insecurity of a DC-arrangement exposing the individual to the full battery of risks.

However, the relevance of the traditional DB-DC dichotomy has diminished in recent decades as regards private pensions. Hence, practically no new non-public sector occupational DB-schemes have been set up in the past 3-4 decades, multiple non-public sector occupational DB-schemes have been closed to new entrants or they have been closed altogether and they have been replaced by DC-arrangements. Yet others – especially in the Netherlands – have been restructured by adopting automatic stabilizers and external conditionalities, thereby shifting risks to the participants. In sum, DC-arrangements are becoming the dominant form of private pensions arrangements globally and to the extent private occupational DB-funds are maintained, they are gradually taking on DC-like characteristics. [32]

3.4. Fiduciary responsibility in a mandatory DC-arrangement

The allocation of risk to the individual affects fiduciary responsibility. While all risks are with the individual, research shows that individuals are generally ill equipped to deal with these risks. Furthermore, while a non-insurance DC-arrangement does not issue hard promises, it does generate soft expectations. Taken together these aspects mean, that the board of directors and the management team must ensure that management as well as design are aligned with participant expectations and that the fund manages risks prudently, rationally and systematically in the best interest of the fund as well as its individual participants. [33] When called upon to do so they should be able and prepared to explain how adopted practices align with the participants' best interests. [34]

The individualization of risk has implications for the investment set-up. Hence, the set-up must reflect the fact that the individualization of risk leads to a diversification of risk appetite across the collective of participants. For example, a strategy driven by the objective to yield "the best long-term risk-adjusted return" will not be applicable. It will generally be too risky for older participants, while it is too risk averse for younger participants. The strategy must pay attention to the fact that for older participants, the "long-term" is a rather close and absolute point in time. One answer to this challenge – as will be discussed in greater detail below is the adoption of a lifecycle approach.

3.5. Default design

Financial education and understanding are generally not strong. This is the case in South Africa just as it is the case in all other countries. There is ample research-based evidence to this effect. Most participants will find private pensions and long-term savings issues difficult and they will not be able to handle issues rationally – or they will not be able to convince themselves that their choices are rational. Hence, products are complex,

[32] Beier Sørensen, O., 2018: *Tjänstepensionerne i det svenske pensionssystem. Forsikring & Pension: København.*

[33] This is a somewhat tighter definition of the fiduciary responsibility than the definition applied in via the Financial Services Laws General Amendment Act no. 45, 2013 because it includes scheme design and business conduct.

[34] This aspect has only recently been reinforced through the adoption of Regulation 37.

dynamics are difficult to understand, market developments are difficult to assess and there is a significant time-dissociation of contribution input and benefit output. These are only some among many elements adding to this complexity.

Experience from countries with individual choice in their mandatory or quasi-mandatory pension arrangements show that the vast majority of participants will not make an own choice. This is the experience from all other countries with mandatory tier-3 arrangements – e.g. Australia, Chile, Croatia, Mexico and Sweden. This aspect marks an important starting point for the design of the approved funds framework as well as the default fund. Hence, the approved funds framework must ensure that all approved funds provide a simple and attractive low-cost default offer. Similarly, the NSSF-default must be designed with the objective of being a relevant and attractive rational choice option for all participants.

Some countries devise low risk funds as the default option. Croatia, Lithuania, Slovenia and Sweden belong or belonged to this group. This practise is typically motivated by the fact that participation is mandatory and reluctance to unduly expose these individuals to risks. On the other hand, the model may be said to fail to address the fiduciary responsibility towards the participants and neglect the implications of low financial literacy. Some countries – e.g. Sweden and Croatia – have since reformed their approach based on the actual low own choice turn-out and shifted to a more rational and attractive default design. [35]

The South African tier-3 proposal follows this latter approach and assumes that the tier-3 default fund will be a choice option among many others. Hence, according to the proposal participants are free to leave the default fund and join a private alternative just as they are free to move in the opposite direction. [36]

3.6. Free choice

Free choice of provider can be an important aspect – even if it is not utilized. Hence, the assurance, that it is possible "to vote with the feet" and shift to another pension provider, if outcome is disappointing, can have value to the individual participant. Hence, the relevance of free choice of provider and fund cannot be assessed based on the actual use of the choice option alone.

Free choice of provider is often assumed to drive market competition to the benefit of the participants. However, this will not happen automatically, and regulation is needed to ensure that free choice generates a form of competition likely to the benefit participants. This objective accentuates a host of different regulatory aspects and raises strong regulatory requirements. Among such issues are charges and fees, marketing and promotion and transparency and communication to mention but a few:

- Weak regulation on fees and charges – e.g. allowing very complex and opaque fee structures and high exit fees as is the case in South Africa – can have strong redistributive effects, and it can suspend competition by creating strong lock-in effects.

- Weak regulation on marketing and promotion can create a situation where competition is provider-driven rather than driven by consumer interest. Provider driven markets may involve conflicts of interests that may be hard to detect and supervise, as agents

[35] One such example is the Swedish default fund AP7. Originally, it was to adopt a rather risk-averse investment strategy and once the individual participant had left the default fund it was not possible to move back.

[36] DSD, 2018 (n3), pp. 39-40.

may be compelled to promote products paying better commissions rather than products that bring value for money to the participant.

- Weak regulation on information may leave participants without an opportunity to assess offers and compare them to available alternatives. In the absence of common standards and common key figures presented via a neutral channel, free choice may not strengthen consumers.

Indeed, free consumer choice of provider may not be strong driver of competition in pension markets. Experience from many countries indicates that financial insight, consumer attention, overview and competence are simply too weak to create a powerful consumer-pressure. Looking to countries with efficient pensions industries – e.g. Australia, Denmark, Netherlands and Sweden – the key driver of competition is not free choice but rather the combination of strong frameworks and rules on disclosure and transparency and – in the Danish, Dutch and Swedish cases – a collective approach to individual pensions.

Aligning free choice and participant protection is a key challenge in mandatory arrangements with free choice of provider. Arguably, the mandatory approach raises the bar on this aspect as workers are required – or strongly pressured – to participate. On the one hand it may be important to allow participants to benefit from the innovative capacity of the market, on the other hand it is important to strengthen the position of the participants and ensure adequate consumer protection and a strong foundation for their choices.

Other elements of free choice relate to the pensions and savings products. Such elements can include the right to choose between different retirement products, the priority given to particular insurance elements, investment profiles, etc. Free choice may allow pension providers to position themselves differently in the market. Some may focus on the having the most choice-options, others may focus on the best services and advice while others may focus on having the lowest costs.

However, free choice on the product side can be a strong cost driver, and it may not be equally important to all participants. On the one hand, such elements can be important to the individual as needs, the household situation, the overall financial situation etc. may differ. On the other hand, free choice can be a strong cost driver as individualization can undermine economies of scale – especially if the choice options are complex and require face-to-face consultation, advice, recurring review or other. Also, it should be noted that the relevance of choice options may vary across income.

Looking at the pension system as a whole, a key question is where choice options on the product side should reside? Should choice options be available in the public as well as in the private elements, and considering the private elements alone should they be the same in the third and the fourth tier? There are strong public policy arguments to be made for a relatively restrictive approach to free choice on the product side in the third tier.

3.7. Tier-3 design choices can incur challenges

Design choices can lead to administrative difficulties and it can affect administrative costs quite dramatically. This is also the case for the proposed South African third tier. The issue is very important as a large fraction of the target group are likely to pay relatively low contributions and accrue relatively low overall savings. If this is the case, the cost tolerance of the participants are generally low. This aspect only strengthens the need to focus on costs and simplicity.

The tier-3 proposal applies an auto-enrolment approach, and it defines its target group as those with income above the NSSF-ceiling. Viewed in the context of the South African wage distribution, this threshold is relatively high. [37] This combination can lead to significant administrative and compliance challenges as regards the identification of workers to be auto-enrolled, the actual enrolment process, the affiliation of new participants, contribution collection and compliance control. Policies to support participation for workers below or only slightly above the threshold may include targeted contribution subsidies for low income earners. While these aspects – including the level of the threshold – fall outside the scope of this report, they are in need of further research.

A key motivation to introduce a third tier is to broaden and strengthen the role of private pensions overall. Key measures to this end, is to require a high level of alignment of tier-3 arrangements with overall retirement and pension policy objectives through regulation of e.g the minimum pay-out age, mandatory preservation, tight rules for pre-retirement withdrawals and strong disincentives for pre-retirement withdrawals and lump sum payments. However, while such measures are necessary to strengthen the role of private pensions in the overall pension system, they can also be construed as incurring lower flexibility as compared to alternative savings vehicles. Therefore, tier-3 savings may enjoy special incentive arrangements or other in order to compensate for the flexibility effects of a tighter framework.

[37] SARS, 2018.

4. The design of a strong tier-3 default fund

This section discusses the design of default fund in the envisaged South African third tier. This discussion draws on the discussion of starting points and objectives set out in the previous section as well as international peer examples and experiences and acknowledged standards in the field.

Key observations in this section

- NSSF-Default must be a simple, efficient, low-cost DC-arrangement.
- It should apply a risk-based life-cycle approach and it should integrate the savings- and the pay-out phase.
- Guarantee elements should be considered in view of their costs and values and in view of the guarantees provided by other system elements.
- Alternatives to the traditional lifelong annuity should be considered in view of interest rate aspects and in view of longevity variations.
- Market based annuity provision is not efficient.
- Transparency is essential to consumer trust and to competition.
- Regulation on fees and charges should be strengthened.
- NSSF-Default must be managed and reported upon separately and cross-subsidization must be avoided.

Private pension schemes are funded from the contributions paid during the active work life and the returns to investment earned in the course of the savings phase. The arrangement implies that the contributions are invested, with the view of earning an investment return. However, investments come with a risk, and in a DC-arrangement this risk is with the individual. In essence, the investment return is a risk premium – without risk, no return.

Risk is a key aspect of private pensions and in DC-arrangements three risk aspects are particularly important at a structural level. Firstly, the individuals' tolerance for market risk diminishes by age as retirement approaches because the time available to recoup losses becomes shorter. The investment strategy should reflect this aspect. Secondly and thirdly, when and if individuals annuitize their retirement savings, they are doubly exposed to market risks – the market rates of the day will decide the amount available to purchase an annuity or some other retirement product, while the long-term safe interest rate at the time of retirement will decide the cost of an annuity. Therefore, the way in which the savings phase is structured and the way in which the transition between the two phases is structured affect the way in which these risks are manifested.

The formation of a third tier is to increase private pension coverage among low- to mid-income groups in particular. This starting point defines particular design objectives for the tier-3 default fund. Assuming that many of the existing occupational schemes will retain their existing coverage – the default fund must be designed with the particular view of filling this gap and cater to low- to mid-income workers and workers with less stable formal labour careers. Further, the tier-3 savings will presumably be the largest capital reserve in retirement for many participants. Therefore the third tier – and the NSSF-Default in particular – must be designed and positioned to be low cost, simple, effective in its investment approach, balanced in its risk management, and it must set a benchmark on aspects such as costs and transparency. Also, the third tier must be designed to fit a generalized retirement objective rather than tending to detailed requests for individual choice. From these starting points, this section discusses a range of key NSSF-Default design issues.

4.1. Lifecycle approach

In a DC-arrangement risk-tolerance varies by age. Younger participants with long investment careers in front of them have greater opportunity to take investment risk and recoup losses if need be. A good default design should take substantial but managed investment risk. In doing so it should take account of participant age in order to have higher return prospects during the savings phase up until a given age and then gradually reduce this risk moving forward towards – or indeed beyond – the retirement age. This so-called lifecycle approach is recommended by, among others, the OECD. [38]

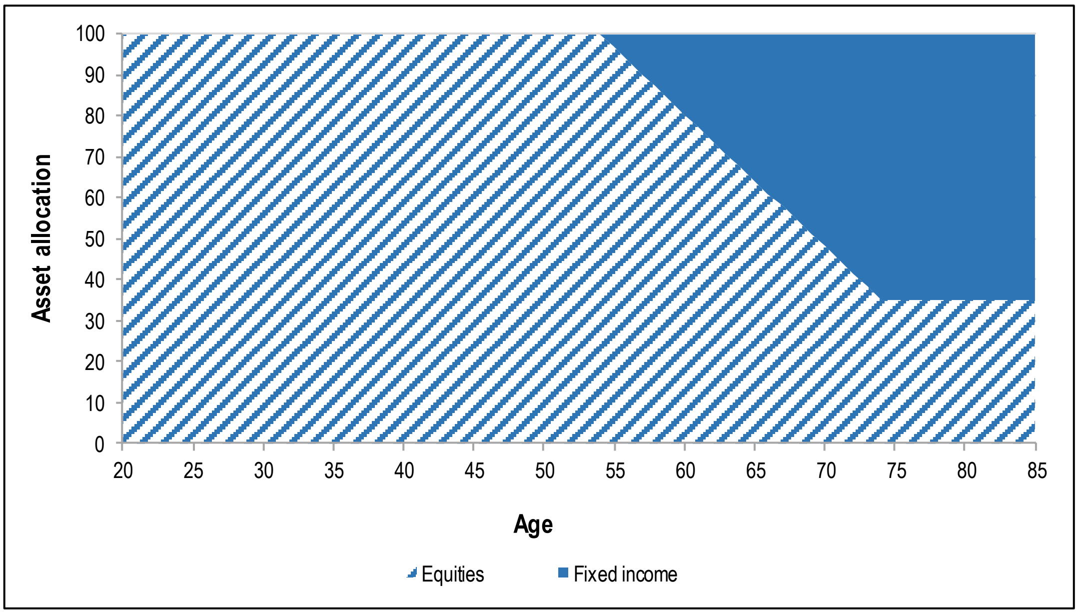
There are many examples of lifecycle approaches around the world. A common approach in some countries with individualized systems is to operate separate funds for separate cohorts – e.g. the so-called target date approach. The asset allocation is focused on a particular pay-out time-frame or date and the asset allocation is gradually shifted in order to lower investment risk as that point in time approaches. Providers of target date funds often offer parallel products adapted to different risk perceptions or other variation in consumer preferences. This approach may be unnecessarily costly because it requires separate fund structures for separate cohorts and because it supports choice options that may not be broadly relevant in a default approach.

A more cost-effective and flexible approach is to apply an age-related allocation to different funds. This approach can be visualized as a model consisting of “building blocks” focused on different asset classes and with different risk connotations. Each of the building-blocks consists of a well-diversified portfolio of investments in particular asset classes. The desired overall asset allocation and risk characteristics are then achieved through combining the different building blocks.

An age-related glide path is provided by way of changing the distribution between the different building blocks as the participant ages. The investment risk level of the individuals’ savings will gradually be reduced through small adjustments to the combination of building blocks in order to lower aggregate risk in a structured manner. The default fund of the Swedish Premium Pension – the AP7-fund – applies a relatively simple version of such an approach through combining an equity fund and a fixed income fund (see figure 2 below).

[38] OECD, 2012: The OECD roadmap for the good design of defined contribution pension plans. OECD Working Party on Private Pensions, OECD, Paris.

Figure 2. The lifecycle glide path in the Swedish tier-3 default fund AP7



Source: AP7, 2018.

The building-block approach can be further refined by adopting a risk-based approach. The model described in figure 2 has an asset-based glide path – i.e. it specifies a particular fixed asset allocation for a given age. While this approach will reduce risks by age it does not adapt readily to changes in overall risk patterns. In order to address this issue, the glide path may be guided by risk factors rather than prescribed asset-allocation specifications. A risk-based glide-path requires that the building blocks are designed to represent specific types of risk.

The model can – and probably should – be further refined by having more building blocks. This will facilitate a more detailed current monitoring and adjustment of the overall risk profile in view of observed market trends and developments. Such a model may be better at protecting the individual participant from sudden chocks because it enables measured shifts in the age-related asset allocation based on risk considerations and risk observations.

The building blocks should not overlap, and their profiles should provide a workable risk exposure framework. Each building block will typically be specialized in one or more particular type of assets – e.g. domestic equity, other African equity, European equity, US equity, and fixed income portfolios with a more or less detailed distribution between different types of fixed income assets. There are many ways in which the asset profiles of the building blocks can be defined. The starting point however is not the asset classes as such but rather their contribution to the overall risk pattern.

The design of the glide path and the building blocks is the responsibility of the board of directors. Each building block is essentially an investment fund with a particular investment profile and strategy. The design of these strategies, and the design of the information, data and research framework necessary to identify the risks, measure and monitor their development and interaction is a key responsibility for the board of directors. Also, the board of directors must set out a clear framework under which the investment team can act and respond if markets change.

The building block model is particularly well suited for a default fund because it allows a collective approach to individual investments. The building blocks are collective investment funds serving as reference portfolios for the participants' savings. The total capital of the entire group of participants can be invested collectively. The building block funds will have only one client – the collective of all participants – as there is no need to formally buy units in the individual building blocks on behalf of each individual. Their age, the definition of the glide path and the actual value of the different building block funds will decide their individual account value.

Building blocks should be managed cost-effectively. A traditional distinction as regards Investment strategies is between active and passive strategies. The former involves asset picking and a constant search for the more attractive opportunities with the objective of "beating the market". The latter is more long term and applies index portfolios or another partly automatized approach. Active investment strategies are costly, and there is little to support that such strategies systematically generate better returns. A risk-based glide path approach may combine mainly passive investment strategies with active risk management where proper analysis of risk/return prospects and cost/return prospects speak clearly in favour of such an approach.

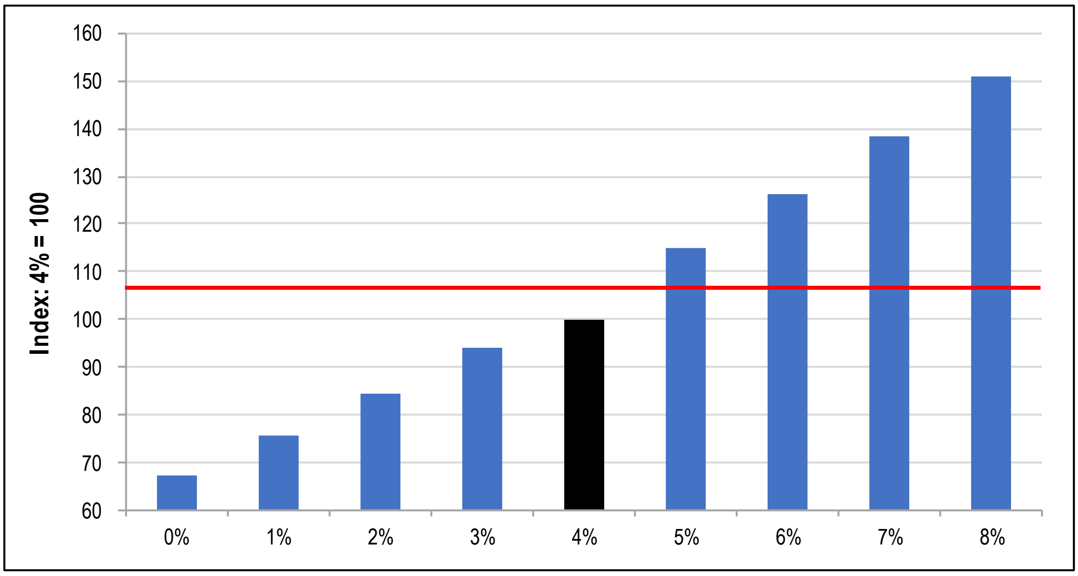
4.2. Integration of the savings and the pay-out phase

Many DC-arrangements separate the savings phase and the pay-out phase. Hence, the individual accumulates savings until retirement, and then the account is capitalized, and the funds are used to buy an annuity – often from a different provider. Typically – e.g. the Chilean AFP system – the approach requires the individual to capitalize the individual account at once and annuitize at once at retirement.

A significant downside of this approach is that it exposes the individual to the two market risks mentioned above. Firstly, the capital available will depend on the market situation at the day of retirement, and market fluctuations can affect pension outcome significantly. On rare – but yet occurring – occasions, such effects can be dramatic, and they can materialize over a rather short period of time.

The risk is that the individual has to capitalize the full individual account even though rates are highly unfavourable. Similarly – and secondly – the market situation at retirement has great impact on the benefit that can be bought for a given capital. The reason for this is that annuities are issued with reference to a safe long-term interest rate, and the lower the rate, the larger the amount of capital needed to buy a particular stream of income. This relationship is shown in figure 3 below. The figure shows how the long-term interest at the time of retirement decides the resulting benefit that can be bought for a particular capital. In a low interest rate scenario, a particular annuity stream requires a higher capital input. The differences are significant – especially if private pensions provide a significant portion of the overall retirement income.

Figure 3. First-year annuity benefit and assumed long-term interest rate



Assumption: A particular sum is used to buy a lifelong, inflation indexed annuity assuming an inflation rate of 4 per cent.

The figure shows the benefit in the first-year as a function of the assumed long-term interest rate. The higher the rate, the higher the benefit – and vice versa. Source: Own calculations 2018.

The model has further implications for overall outcome. Hence, by annuitizing fully at retirement, the individual locks into a low risk portfolio designed to protect the pay-ability of the life-long annuity. This means that the individual will have a very low risk level even as a young pensioner even though the investment horizon may still be quite long. This aspect is particularly important in times marked by very low risk-free interest rates. Indeed, the question to be asked may be whether the traditional guaranteed annuity is the most attractive option available if real interest rates are low? [39]

Figure 4. Market yield on 10-year South African government bonds

Source: Tradingeconomic.com, 2019.

[39] Even large socio-economic differences in longevity can affect the answer to this question.

The South African government bond rates are relatively high, reflecting rather low ratings. For example, figure 4 shows how the rate on 10-year government bonds have come down from very high levels in the 90'ies to the current level oscillating in the 8–10 per cent band. International ratings indicate the assessment that the investment risk related to South African government bonds is substantial. Ratings only just accept South African government bonds as investment-grade. At the same time inflation is relatively high – 4.5 per cent in 2017 and even higher in the preceding 6 years – and opportunities to hedge currency risks are limited. The consequence is that the interest rate issue related to annuitization discussed above is relevant and important even in the context of the South African economy.

An alternative is to integrate the two phases and allow the life cycle glide path to continue well into retirement. One way to do this is to integrate annuity provision with the business of the pension funds in order to allow a smoothed transition between the two phases. In this case the options on the product side would include the use of variable annuities where the annual payment is linked to the investment result or the use of a combination of an instalment payment with a life-long annuity kicking in at a higher age. Examples of such approaches are found e.g. in the Swedish mandatory Premium Pension and in some quasi-mandatory pension schemes in Denmark and Sweden. Both alternatives are more or less similar to options open to South African pension funds in the design of their annuity strategy (Regulation 39, section 2–5).

4.3. The application of guarantees

The question of whether or not the savings phase and the pay-out phase should be separated accentuates questions around the application of guarantees. Guarantees in the savings phase are often politically motivated as an assurance to participants that they will – as a minimum – e.g. "have their money back". Guarantees in the pay-out phase serve to ensure benefit stability and protect the individual against benefit fluctuations. However, while guarantees may be politically important, their real importance and value may be limited.

4.3.1. Return guarantees in the savings phase

For pension funds operators, a guarantee means that it must meet one or another return target, and as such it represents a risk. The design of the guarantee decides its importance as a risk. For example, a guaranteed annual fixed-rate of return is more difficult to honour than a relative peer-related guarantee established over several years. However, even a moderate return guarantee constitutes a risk for the pension fund, and it must be addressed as such through less risk-taking and through the building of guarantee reserves. Hence, any guarantee comes at a cost.

For pension fund participants, a guarantee implies a higher level of certainty. However, the design of the return guarantee also decides its value to the participants. The more ambitious and generous the guarantee the greater the liability for the pension fund, and the more expensive the guarantee. A less ambitious guarantee may be designed as an ultimate measure not likely ever to be activated – or only rarely so. In some cases – e.g. Chile – the design of the guarantee may stimulate herding among market participants thereby reducing the value of the guarantee and the chance that the guarantee will ever become activated.

Overall, the case for a return guarantee in the savings phase may not be strong. The combination of little if any positive value to the participants and less risk-taking on the investment side, means that a return guarantee constitutes a cost to the participant that may not be adequately rewarded. Therefore, it may be difficult to motivate its existence.

Strong prudential rules and the application of a well-crafted lifecycle glide path can reduce the need for a return guarantee. A risk-based glide path may be designed to provide a relatively stable stream of dividend, and it can offer significant protection to the participant in bear markets at the expense of slightly lower gains in bull markets. Hence the vulnerability of pension portfolios can be reduced in two ways: (1) The building block model will incur a stronger focus on stable returns and on balancing risk exposures; and (2) within this framework the lifecycle glide path will decrease investment risk with age.

4.3.2. Guarantees in the pay-out phase

Annuity products speak to the objective of providing lifelong income security in old-age. Annuities share longevity risk among the participants, and provided that longevity forecasts are adequate and well documented and provided that longevity is relatively homogeneous across the membership, it is a fair insurance-driven redistribution.

Some deviations from this general axiom may be accepted. This is particularly relevant as regards gender equality. Women live longer than men, and in order to ensure equal benefit accruals many countries – e.g. the EU – have mandated the use of unisex mortality tables in annuity provision. [40] In essence, such policies involve a politically endorsed systematic redistribution from men to women.

Standard annuities are guaranteed insurance products based on a set of assumptions. The key parameters underlying the annuity promise are the interest rate assumptions and the longevity assumptions. Both elements raise challenges.

The first set of challenges are related to financial markets and economic development. Hence, the combined effects of decreasing and continuously low real interest rates – and consequently low real bond yields – and significant equity market volatility can be significant as discussed above.

The second set of challenges relate to longevity and longevity modelling. Longevity is increasing but typically the models applied in longevity forecasting are not adequate. In fact, standard longevity period-modelling systematically underestimates the rate of change of increasing longevity, at worst generating unanticipated deficits in reserves. Confronted with this challenge and in the absence of a benevolent external sponsor – e.g. the state – pension fund operators must respond by restructuring and adapting their business models. In terms of regulation the need is for the development of a stronger and more accurate longevity model based on cohort-modelling principles.

South Africa may have further – and somewhat sensitive – challenges as regards longevity assumptions. The reason for this is first and foremost the fact that South Africa is characterized by very high inequality. This inequality is transmitted into significant ethnic and socio-economic differences in health and longevity. For example, table 5 shows how life expectancy varies quite dramatically between different racial groups, and it shows how HIV/AIDS has led to dramatic decreases in life expectancy over the past decades.

[40] It should be noted, that longevity is not shared between insurance pools. Hence, differences can be significant e.g. between schemes predominantly covering men vis á vis schemes predominantly covering women.

Table 5. Life expectancy at birth by race 2000–2020

	African	Couloured	Indian	White
2000	58.4	66.2	70.9	74.0
2020	47.8	59.8	67.3	71.3
2040	51.6	62.2	69.2	71.7

Source: IFR, Stellenbosch University. South African Institute for Race Relations, South Africa Survey, 2013.

Stark systematic differences in longevity raise policy challenges. On the one hand, neglecting such differences when increasing coverage may lead to unintended redistribution and – in an environment of market-based annuity provision – it may lead to moral hazard issues. On the other hand, addressing such differences requires advanced data-based micro-tariffing, access to extensive, stable and detailed individual level data and it accentuates difficult principle questions around the desirable level of micro-tariffing in social security.

Increasing longevity, low real interest rates on low risk investments and volatile markets make the guaranteed, insurance-based annuity an increasingly costly product. The common trend across countries with advanced insurance models and across different technical set-ups is to lower or completely remove guarantees and shift more risk to the individual in order to allow more risk-taking on the investment side. Examples of this count among other the Danish ATP scheme as well as Danish quasi-mandatory occupational schemes, Swedish quasi-mandatory occupational schemes and Dutch – albeit on a DB-platform – quasi-mandatory occupational schemes. The common denominator is that under the present financial circumstances and with increasing longevity continuously surpassing the projections of even "state-of the-art" projection models, traditional guaranteed insurance-based annuities may not be an optimal retirement product – either for the participant or the provider. [41]

Shifting more risk to the individual enhances the opportunity of annuity providers to – prudently – adopt a return seeking investment strategy. It decreases the capital requirements, thereby increasing the risk capacity of the annuity provider. This increases the prospects of higher returns and higher benefits overall – albeit at a higher risk.

4.3.3. The need for guarantees in the third tier in context

The need for guarantees in the third tier should also be evaluated in the wider context of the overall pension system. Hence, it may be considered, that the third tier is part of the envisaged overall pension system and complements the proposed second tier public pension. Typically – as is also expected to be the case in South Africa – first and second tier pensions have relatively strong guarantee elements as part of their design. However, the stronger the guarantees in the first and the second tier, the less acute the need for guarantees in the third tier.

Also, the need for a guarantee in the third tier should be seen in the light of the overall design of the arrangement. Hence, strong prudential rules together with the introduction of a lifecycle approach to investment management even within the pay-out phase can reduce the need for formal guarantees.

[41] There will nevertheless still be a need for the insurer to maintain a buffer to cover both fluctuations in longevity and possible underestimation.

A variable annuity provision model can include measures for lowering benefit fluctuations from year to year. One way of doing this is to keep an individual equalization reserve of for example 10 per cent with the view of modifying benefit fluctuations and with the view of pursuing an indicative indexation strategy. Note that applying this option may imply a slight backloading of the benefit stream.

Shifting more risk to the individual must be accompanied by strong prudential rules, strong risk management and clear and monitored fiduciary responsibility. As part of its fiduciary responsibility the board of directors of the default fund should have the obligation to be able – at all times – to demonstrate and document the appropriateness of the adopted strategies and their alignment with the better interest of the participants. It should be noted, that the move away from hard guaranties is not a move from to “no guarantees” – rather it is a move towards “soft guarantees” with good expected (but not guaranteed) outcomes.

4.4. Annuities and other retirement products

The tier-3 proposal assumes annuity provision to be market based. The underlying presumption is that private annuity providers will compete in this market and thereby provide annuities with least cost and attractive choices for individual annuitants.

However, international experience suggests that there is little possibility to develop an effective and transparent market for annuities. In countries with developed funded pension schemes and developed financial markets, the creation of annuities is a standard step between the savings and pay-out phase of funded pension schemes. However, there is essentially no country – Chile being a possible but not entirely convincing exception – applying an institutional separation of the savings phase and the pay-out phase where there is a real effective annuity market – i.e. a market where several annuity providers offer the same annuity product at different costs. South Africa cannot be expected to be different, and therefore South Africa may wish to consider alternative approaches for its third tier.

There are a number of reasons as to why a market-based provision of annuities is inefficient. Hence, annuity products are very similar and competition between annuity providers would essentially be based on differences as regards their assumptions about longevity, costs and future returns, with the more generous providers taking higher risks – or being better bolstered. Further, while it may be possible to estimate the life-expectancy of the entire pool of South Africans as they reach the pension age, the provider in a market-based set-up will by definition have no additional information regarding the particular group of participants attracted to the particular scheme. Therefore, the provider will have to address this uncertainty through the pricing of annuities.

The business of insurance is evaluating individual risks. The pension providers’ risk derives from uncertainty about the longevity of participants and future financial market returns. Hence, at the aggregate level competition would be based on competing views on these two factors. However, differences in projections of life expectancy and assessment of financial market outlook should be small, as all providers operate in the same market and have access to the same information. Therefore, annuity prices are likely to converge towards a mean for all market providers of annuities. This indicates significant economies of scale to be exploited. The fragmentation of the market reduces the opportunities to realize these economies of scale.

Further, a wide range of secondary challenges should be considered. Among other it should be noted, that the attractiveness of an annuity product does not only depend on the parameters applied when defining it. Numerous aspects related to the financial strength and surplus policy of the annuity provider can have substantial influence on financial outcomes, and thereby participant benefits and their future indexation.

Therefore, South Africa may wish to consider an alternative approach to annuity provision for participants in the third tier default fund. Two options are readily available. The first option is to integrate annuity provision with the business of the pension funds operating in tier-3. This option would resonate well with the recommendation set out above to: (1) let the lifecycle glide path stretch beyond the retirement age; and (2) move to variable annuities or combine instalment payments and lifelong variable annuities. The second option is a variant of the first option as it leaves the capital in the pension fund account while it allocates the provision of annuities to a single national provider. Such an approach is applied in the Swedish third tier Premium Pension scheme (see annex D).

Centralized annuity provision comes with important advantages and some downsides. Hence, on the one hand, centralized annuity provision ensures equal treatment and it counters risks of adverse selection and moral hazard. On the other hand, it may be difficult to take account of the fact that longevity varies across the population along ethnic and socio-economic lines. Combining instalment payments and lifelong variable annuities kicking in at a higher age has the potential to reduce unintended redistribution stemming from social differences in longevity.

While the key tier-3 product should be a retirement income stream, exemptions may be important. For example, it may be important – as is already applied for pension funds – to have a threshold below which savings can be paid as a lump sum. The reason for this is that small savings will turn into very small benefits and that this situation may undermine relevance for the participants. However, this threshold should remain relatively low. When considering such exemptions, it may be relevant to apply a common threshold covering all pension savings in tier-3 and -4 (personal individual savings-based pension arrangements).

In sum, a strategy based on centralized provision of annuities and other retirement products is needed. This business should be conducted by the NSSF. One option is to follow the approach of the Swedish PPM and offer a choice between a variable and a guaranteed life-long annuity at age. Another aspect of this option is that it allows workers to convert their savings into a NSSF supplementary life-long retirement benefit. This option could even be extended to tier-3 DC savings participants in other tier-3 funds. In any case, the market-based annuity provision assumed by the IDTT is not recommendable.

4.5. Aligning the tiers

The overall pension system and each of its elements should support overall policy objectives. Hence, the pension system should incentivize longer work lives, and the duration of work lives should increase when longevity increases. South Africa has a very young population, but even in South Africa longevity is increasing – especially as regards the formal labour market work force. If longevity increases while the pension age remains the same, DB-pensions will become increasingly expensive thereby putting sustainability under pressure. The same processes will lead DC pensions – all else equal – to fall and bring pension adequacy under pressure. Also, regulation should ensure that the third tier becomes a pension scheme rather than merely a forced savings arrangement. The key policy measures relate to the pension age, the lowest possible pay-out age, access to the capital before retirement and preservation.

Looking to the third tier as such, access to third tier savings before retirement should be abolished or – as a minimum – be severely restricted. The experience from the existing occupational schemes shows how pension adequacy is undermined by widespread early withdrawals. Regulation 38 seeks to counter this challenge by improving the conditions for preservation. However, there may be sound arguments to tighten rules further and only allow pre-retirement payments in narrowly defined situations.

By the same token it is essential to ensure fair and full preservation on equal terms for third tier savings. The experience from the existing occupational schemes shows how pension adequacy has been undermined by weak preservation rules. Regulation 38 seeks to counter this challenge by improving the conditions for preservation as it prescribes that dormant accounts are treated equally with active accounts. Further, it may be relevant to stipulate that participants can have one tier-3 account only and to stipulate an obligation for pension funds holding dormant accounts to invite dormant account holders to merge dormant accounts with their active account if possible. To the extent dormant accounts exist, regulation should seek to ensure adequate preservation and equal treatment.

4.6. Fees and charges

Historically the regulation on fees and charges as such has been very limited. In many cases this has created a situation marked by complex fee structures that very difficult to understand, overlook and assess – e.g. a combination of asset-based fees, fees on contributions, fixed fees, entry and exit fees and other transaction-based fees [42] makes it virtually impossible for the participant to assess costs and other effects of the fee structure.

The use of transaction-based fees raises challenges. It may be desirable not to share participant generated costs across the membership, just as it may be important to distinguish between infrastructure costs and transaction costs and ensure that transaction-based fees prudently reflect the true transaction cost.

Particular attention should be paid to the indirect effects of fee structures. For example, the combination of different types of fees can redistribute the financing of costs and it can be utilised strategically to e.g. attract high net-worth participants. Another example is the fact that the use of exit-fees can reduce free choice and effectively bar the individual participant from moving between providers.

Fees and costs are not the same. Hence, in a market-based system, there is no requirement that fees should cover costs or be limited to cost recovery. Further, significant costs may be indirect and as such they are not disclosed. This may relate for example to asset management costs incurred in underlying funds.

Further some costs may be impossible to justify as they do not benefit the fund and its participants. Examples of this include excessively high board member fees and remuneration out of line with individual competence and responsibility. Also, examples of fee structures fuelling conflicts of interests exists – e.g. board members being paid by meeting leading the board to have a very high number of board meetings – way beyond the standard number of 6-8 meetings per year.

These aspects were identified as a key challenge in the 2012 budget review. Later the issues were researched and reported upon in a report from the National Treasury. [43] As a response, the Regulations 37-39 introduce a range of requirements and qualifications related to costs and fees. For example, it is required that “Default investment portfolios are reasonably priced and competitive”, that “Investment fees and charges […] may not differ on the basis of whether members are paid-up members or are still in the service of the participating employer” and that “Annuities have reasonable and competitive fees and

[42] I.e. fees related to activities spurred by individual choice – e.g. surrender, pre-retirement payments, pension payments, shifts from one fund to another with the same provider, etc.

[43] National Treasury 2012a: Budget Review 2012. National Treasury: Pretoria and National Treasury 2013b: Charges in South African retirement funds. National Treasury: Pretoria.

charges". It should be noted, that the requirements set out in the regulations are worded in relatively broad terms, that they leave substantial latitude for the providers in setting their fees and that the effects of the new regulations are likely to depend strongly on their supervision. Even so – considering the starting point – the new regulation marks a strengthened approach.

The tier-3 arrangements should be subject to tighter regulation in this field. Objectives may be to ensure low costs, ensure that only reasonable costs are incurred, ensure that fee structures are simple and comparable, further ensure equal treatment, and to ensure that fee structures do not create lock-in effects and become a hindrance to mobility. At its simplest an adequate fee structure could have a percentage fee levied on assets financing asset management costs and a capped fee levied on assets to finance administration. The former will rule out perverse redistribution in favour of high-income participants, the latter will keep admin costs proportional to savings while avoiding excessive admin fees.

Further, the use of transaction-based fees should be limited. Hence, it may be stipulated that transaction fees must reflect the actual cost of the transaction. Particularly on exit fees, it may be considered to abolish exit fees for accounts held by the pension fund for more than e.g. 3 years and it may be required that the exit fee is tapered off proportional to the duration of the account with the pension fund. The NSSF-Default may set an example by applying the simplest possible fee structure.

Some countries apply a cap on asset management fees – however, such a measure should not be mistaken for a silver bullet. While the measure may seem straight forward, it may not inspire discipline the way, it is intended to. The key reason for this is first and foremost the fact that fees and costs are not the same. Therefore, a cap on asset management fees may lead to changes in the organisation of the investment process rather than actual cost savings, and to the extent savings are made, they do not necessarily benefit the participants. Policies may even incur redistribution in favour of participants with high savings.

4.7. Reporting and communication

Measures by which communication and overview can be strengthened should be considered. The reason for this is the simple fact that the vast majority of participants find pension products difficult to understand and the fact that products are very difficult to compare.

One option in this respect is to develop a common framework of well-defined key-figures to be presented by all tier-3 providers. Such key-figures could cover for example net-return after costs and tax over 1, 3 and 5 years, investment costs per participant in Rands and as a percentage of assets, administration costs per participant in Rands and as a percentage of assets, first year benefit divided by available capital for a 65-year commencing pension payment, expected first year benefit – nominal as well as in current prices – and expected 10th, 20th and 30th year benefit including 25th and 75th percentile.

Further it may be relevant to adopt a common set of assumptions for all pension providers. Such common assumptions should then relate to financial assumptions – inflation, future bond rates and future equity rates – and it could include a common mortality benchmark. Denmark is a leading international example in this respect.

Also, it may be relevant to develop a neutral web-based platform where the different choice options can be compared. One role of such figures is to inform participants, but more importantly their role is to inform the public and other pension providers. Transparency is a key prerequisite for competition in a market for complex financial products such as private pensions.

4.8. NSSF-Default vis a vis private funds

The NSSF-Default belongs to its participants, and as such it should be a not-for-profit entity. The NSSF-Default will be competing with private alternatives and as such it will be subject to close scrutiny – especially as regards potential cross-subsidization from its co-existence with the NSSF. While it may benefit from economies of scale – as assumed by the IDTT [44] – it is important to ensure that this does not lead to unequal competition.

The NSSF-Default must be accounted for independently and adequately. This means, that it must meet all relevant standards applied to private providers and pension funds as regards accounting and reporting. Similarly, it must be subject to the same supervision.

[44] DSD, 2018 (n3), p. 39.

5. Alternative: A clearinghouse approach

This section introduces an alternative framework for the third tier. The approach is based on experience from the Swedish occupational pensions (not to be mistaken for its mandatory Premium Pension scheme). The core element is to apply a clearinghouse function as a custodian and gatekeeper on behalf of the participants.

> **Key observations in this section**
>
> - A clearinghouse model ensures strong custodianship on behalf of the participants.
> - It activates the potential bargaining power of the collective of participants across the many different providers and schemes.
> - It maintains a close and strong stakeholder/participant-control with the offerings of the providers.
> - The model adopted by the Swedish occupational pensions is particularly interesting for South Africa.

The tier-3 design discussed above follows a simple design. Workers must be offered enrolment in a fund offered by the employer. If they do not opt-out or choose to shift to the NSSF-default, they are affiliated with the default fund offered by the employer (DSD, 2018, pp. 39-40).

Free choice will not be efficient if it is not properly structured. In order to make an informed choice, individuals should be ensured value for money, attractive conditions and they should be able to compare available options in a structured manner.

Further, the combination of auto-enrolment, individual ability to choose contribution rate and free choice of provider in the third tier will make contribution collection complex. It is assumed that employers will calculate, withhold and pay contributions due. In the foreseen set up employer X will have to keep track of whether or not employee A is enrolled, which fund she has joined and which contribution rate she has chosen. Compliance control will be equally complex.

An alternative approach addressing both issues is to adopt a model offering individual choice under the custodianship of a clearinghouse. The model defines tier-3 as a separate business area – as is intended in the South African case – to which only funds provided by licenced providers and meeting specific standards and subject to the oversight of the clearinghouse are granted access. The key difference as compared to the IDTT approach is that the employer is not involved in the provision of pension arrangements. The choice of fund is entirely with the individual. Individuals who do not – or do not want to – make an own choice are affiliated with the default fund. A clearinghouse model has important advantages. Firstly, it centralizes the task of keeping track of workers' choices thereby simplifying contribution collection as well as compliance control. Secondly, the model speaks to the existing pensions industry by allowing commercial, private funds to offer their services in the third tier. Thirdly, it maintains a close and strong stakeholder/participant-control with the offerings of these providers. Fourthly, the model supports market discipline by allowing – and requiring – the clearinghouse to set the conditions for funds to participate and to define the product and conduct standards to be met. Thereby, the model strengthens attention to the better interest of the participant and activates the bargaining power of the collective of participants. Fifthly, it supports market discipline by requiring tier-3 providers to take out a license with the clearinghouse and by authorizing the clearinghouse to revoke such a license if the fund does not comply with the defined standards.

Sweden is home to two different clearinghouse models. Both have been developed over the past 25 years and both with the view of offering a structured way to align free choice and participant protection. The models relate to the Swedish mandatory savings arrangement and to its quasi-mandatory occupational pension schemes respectively. The latter model is particularly interesting in the South African context (see box 1 below).

Box 1
Collective approaches to private pensions as adopted in the Swedish quasi-mandatory occupational fourth tier

The Quasi-Mandatory occupational fourth tier

Four major collective agreements cover some 90 per cent of the Swedish labour market. The collective agreements include agreements on occupational pension schemes. They specify a broad framework – the contribution rate, types of benefits to be offered, focus on low cost etc. The execution of the agreement is then left to a clearinghouse designated by the social partners.

Fund managers wishing to offer products under the pension agreement sign up to do so with the clearinghouse. They are required by contract to comply with all relevant rules and law, and to operate in line with the conditions defined by the clearinghouse – including rules on issues such as products, investment offers, fees, costs, communication, information and transparency.

The fourth tier clearinghouses:

- collect and forward contributions;
- execute fund switches, update account records and home pages on a daily basis;
- facilitate and operate the choice platform and information site;
- provide standardized information on fund portfolio composition, yields and fees, and makes it available to the general public;
- assign pension funds to the choice platform either through minimum requirements or through tender;
- specify, evaluate and update requirements and terms for pension funds available on the choice platfor;
- oversee pension funds available on the choice platform;
- provide individual information on pensions and on choice.

The social partners:

- “own” the collective agreement;
- sit on the advisory board and the board of directors for the clearinghouse;
- can decide to shift their agreement to another clearinghouse, should they be dissatisfied.

Four different multi-employer collective agreements cover some 90 per cent of the Swedish labour market. Each of these collective agreements includes a separate pension agreement. The pension agreement specifies the right and obligation of the individual to participate, the right and obligation of the employer to calculate, withhold and pay contributions, the (minimum) contribution rate and it specifies key criteria for the pension arrangement itself. Subject to these requirements, it further stipulates that the individual has free choice of provider. It then allocates the responsibility for facilitating the agreement and its choice options to a clearinghouse. [45]

The clearinghouse acts as an intermediary between the participant and the providers. The clearinghouse facilitates a common choice platform and it defines and supervises the cost, product and performance requirements to be met by the funds available on the platform. Also, the clearinghouse defines communication and information standards for the participating funds in order to ensure comparability and transparency. Fund-access is based either on meeting minimum standards or on tender. The clearinghouse keeps track of the

[45] Each agreement has its own clearinghouse and one agreement even allows competition in this field and has two.

individual participants' choices, forwards collected contributions and undertakes a significant part of current policy information.

The clearinghouse model has moved beyond the simple task of facilitating free choice. The clearinghouses in the Swedish occupational pensions sector were set up in order to facilitate new elements of free choice agreed upon in collective agreements. In principle, their key role could be defined simply and purely as that of keeping track of choices and funnel collected contributions. However, the model has been developed to undertake a broader custodianship and activate and apply the bargaining power of the collectives of participants. The results of this process are significant as it has led to substantially lower fees, simpler fee structures, products cost-effectively tailored to broad participant needs and clearer communication and information. In fact, the market driver in the Swedish occupational pensions sector in the past 20 years have been the transparency and stronger participant focus generated by the custodianship of the clearinghouses rather than the free consumer choice, they were created to facilitate. [46]

It is relevant to consider the Swedish occupational pensions clearinghouse model – or a variant thereof – in relation to the South African third tier. The reason for this is first and foremost its ability to strengthen the representation of participants interests and its ability to activate the bargaining power of a large group of individuals enrolled in the same arrangement and its ability to focus on broader participant needs. Also, the model may support market discipline while inviting the strong participation of private commercial pension funds.

If adopted, the clearing house will be a gate keeper for access to the tier-3 market. In this capacity it will authorize funds based among other things on the regulatory requirements, and it will set out – and continuously develop – the conditions and standards to be met by pension providers and funds in the third tier.

In the event a clearinghouse for the South African third tier is formed, it should be an independent institution. The institutional framework must ensure that a strong focus on participants' interests remain the uncontested key objective, and it should unconditionally seek to strengthen transparency and openness. One option is to create an independent public institution with private industry representation – as one of the stakeholders – on the board of directors.

[46] Beier Sørensen, O., 2018: Tjänstepensionerne i det svenske pensionssystem. Forsikring & Pension: København.

6. Key recommendations in summary

This final section explains how the analysis and observations of this report informs considerations for a tier-3 arrangement as part of the overall comprehensive social security agenda. It also summarizes key recommendations emanating from the analysis.

The formation of a national pension system is a key element in the comprehensive social security agenda. The system is to combine the existing first tier old-age grant, a new second tier – i.e. an earnings-related public DB-scheme (NSSF) – and a third tier – the sum of existing occupational arrangements and new auto-enrolment based, employer provided savings arrangements with the default arrangement being the NSSF-Default. While all three elements are crucial to pension coverage and pension adequacy, they serve different objectives, they share and address risks in different ways and their exposure to different risks vary. Public pensions are well placed to address a broad range of basic income needs, poverty alleviation and income replacement up to one or another limit. Also, they can mitigate and allocate risk in ways that are not available to private systems. Private pensions on the other hand are well placed to smooth income over the lifecycle and offer additional income replacement while their capacity to share risk is limited to insurable risks only. Private pensions are complementary to public pensions.

The contribution of private pensions to social security depends first and foremost on their coverage, contribution rate, contribution density and preservation. Therefore, the assignation of a prominent role in the overall pension system to private pensions should be accompanied by policies ensuring high coverage and high contribution density across the target group. It should be noted that good pension policy – public and private arrangements alike – needs the support of e.g. labour market policies and policies supporting the formalisation of the economy.

Looking to the proposed third tier, the analysis in this report gives rise to a set of recommendations. These concern tier-3 regulation in general and the design of the NSSF-Default in particular. These recommendations are fitted to the overall tier-3 perspective as it has been set out, and they draw on international experiences and peer examples.

Looking to the overall tier-3 agenda:

- As third tier coverage is to be strengthened through auto-enrolment based arrangements, measures to support participation should be considered.
- In order to safeguard the contribution of private arrangements to social security in old age, there is a need to ensure alignment between the second and the third tier, by stipulating the same pension age in the two tiers and by abolishing pre-retirement withdrawals in the second tier and by abolishing – or tightly limiting – pre-retirement withdrawals from the third tier.

Looking to the design of the NSSF-Default key recommendations are as follows:

- Adopt a lifecycle design on the investment side based on a building block approach taking account of the fact that risk appetite varies by age – i.e. adopt a lifecycle approach.
- Consider adopting a risk-based lifecycle glide path – an investment policy focused on maintaining an age related risk level – rather than an approach with an age-related fixed asset allocation. The objective is to allow efficient risk management and generic adaptation to changes in risk patterns in the financial market.

- Avoid a complete separation of the savings phase and the pay-out phase and let the lifecycle glide path continue into retirement – i.e. with risk reduction continuing into retirement. The objective is to allow more risk-taking on the investment side after retirement in order to achieve a better long-term return.

- Consider alternatives to the use of traditional guaranteed annuities and avoid locking into a low long-term interest rate at retirement. The key alternatives are variable annuities or a combination of a variable instalment payment and a life-long annuity kicking in at high age.

- Provide annuities and other retirement products through a centralized pension insurance operation handled by the NSSF in order to ensure fair and cost-effective delivery.

- Consider allowing NSSF-Default participants – and other tier-3 DC-savings participants – to shift their savings to the NSSF at age and acquire a life-long supplementary benefit.

- Consider adopting an approach without return guarantees in the savings phase and without benefit guarantees in the pay-out phase. This strategy should be coupled with strengthened fiduciary responsibilities, strong prudential requirements and strong and stringent prudential supervision. The reason for this is the fact that guarantees are typically costly with little real value for the individual.

Looking to tier-3 regulation more broadly key recommendations are as follows:

- Ensure a simple fee structure. At its simplest an adequate fee structure could have a percentage fee levied on assets financing asset management and a capped fee levied on assets (or contributions) financing administration. The former will rule out perverse redistribution in favour of high-income participants, the latter will keep admin costs proportional while avoiding excessive admin fees.

- Limit the use of transaction-based fees by stipulating that transaction-based fees must reflect the actual transaction costs.

- Ensure that elements of individual free choice on the pension product side are simple and easy to manage, and that the provision of individual choice options does not become a cost driver.

- Ensure that free choice of provider can be based on a rational evaluation of comparable key figures and that fee structures do not create barriers to mobility.

- Ensure transparency, accountability and comparability by ensuring strong disclosure requirements and by devising key figures to be published and to be reported to a common neutral information service.

A clearinghouse model may be considered. Under such a model, the clearinghouse acts as a custodian and gatekeeper for the third tier on behalf of the participants. Under such a model, the fund managers are required to sign up as tier-3 providers with the clearinghouse, comply with design requirements and other criteria set out by law and operate under the terms set and overviewed by the clearinghouse. Such a model can strengthen the representation of participants interests and support market discipline while inviting the strong participation of private pension funds.

While the formation of a third tier remains relevant and important, the effects of recent changes to private pension regulation should be considered. Improvements of private pension regulation are important in their own right. However, better private pension regulation alone cannot ensure high coverage in a voluntary, occupational pensions framework. Also, better private pension regulation alone cannot ensure access to simple yet attractive arrangements accessible for low-income sectors and small enterprises just as they may not ensure vehicles relevant to low- and mid-income workers and workers with patchy contribution records. Hence, better private pension regulation is not a substitute for a third tier.

Recent regulatory changes reduce the need for an approved funds framework. Hence, they seek to strengthen business standards, good governance, fiduciary responsibilities etc. and as such the need for a separate approved funds framework for the third tier may no longer be pressing. This is a good thing, as it may be undesirable to apply a separate regulatory regime for tier-3 pension funds. In effect the objective of a separate approved funds framework for the third tier can be adequately served within standard pension fund regulation by applying a set of additional criteria as regards design, investments or other aspects for tier-3 funds and under the presumption of adequate and stringent prudential supervision. The proposed tier-3 applies an auto-enrolment approach and it defines its target group as those with income above the level covered by the NSSF. All employers are to provide access to an occupational arrangement, while the individual can choose not to participate, decide an individual contribution rate and/or shift from the employer provided arrangement to the NSSF-Default. This combination can lead to significant administrative and compliance challenges as regards the identification of workers to be auto-enrolled, the actual enrolment process, the affiliation of new participants, contribution collection and compliance control. These challenges are most effectively addressed through the application of a clearinghouse. While this aspect falls outside the scope of this project, it is indeed in need of further research. Policies to support participation for workers below or only slightly above the threshold may include targeted contribution subsidies for low income earners and other special incentives.

Further on a general note, there is a great need to ensure better data on private pensions. This is an important prerequisite for evidence-based policy development and evaluation and for deeper analysis into the contribution of private pensions to social security. The necessary individual level data may actually exist – with the tax authorities, the pension funds and/or the regulator – but it is not systematically made available to policy evaluation, research and statistics.

References

AP7, 2018: *Årsredovisning 2017*. AP7, Stockholm (Annual report – in Swedish only).

ASFA, 2017: *The Chilean pension tender model*. ASFA, Sydney.

Beier Sørensen, O., 2018: Tjänstepensionerne i det svenske pensionssystem. Forsikring & Pension: København (In Danish only).

Chant West Final Report – December 2014.

DSD, 2018: Comprehensive social security in South Africa – Discussion document. DSD, Pretoria (Post-Nedlac Refinement v1, 8 September 2018).

—, 2002: Transforming the present – Protecting the future. Taylor Commission. DSD, Pretoria.

FSCA, 2017: *Registrar of Pension Funds Annual Report 2016*. Pretoria, FSCA.

—, 2018: Unclaimed benefits. FSCA, Pretoria (internal Power Point project presentation).

ICPM, 2018: *Summary of the Chilean pension system*. ICPM, Toronto.

IDTT, 2009: Annexure C: Governance and benefit protection in approved funds. IDTT, Pretoria.

—, 2009b: Strategic reform of retirement, survivor and disability benefits. IDTT, Pretoria.

Júaregui, S.B., 2010: *The Chilean pension system*. Superintendence of Pensions, Santiago.

Ministry of Finance, 2017: Amendments to the regulations issued in terms of section 36 of the pension fund act, 1956 (Act 24 of 1956). *National Gazette* No. 41034, p.157 ff., Pretoria.

National Treasury, 2014a: *Budget update on retirement reforms*. National Treasury, Pretoria.

—, 2014b: *Statement on the Impact of the Proposed Retirement Reforms*. National Treasury, Pretoria.

—, 2013a: *2013 Retirement reform proposals for further consultation*. National Treasury, Pretoria.

—, 2013b: *Charges in South African retirement funds*. National Treasury, Pretoria.

—, 2012a: *Budget Review 2012*. National Treasury, Pretoria.

—, 2012b: *Strengthening retirement savings – An overview of proposals announced in the 2012 Budget*. National Treasury, Pretoria.

—, 2012c: *Enabling a better income in retirement*. National Treasury, Pretoria.

—, 2012d: *Preservation, portability and governance for retirement funds*. National Treasury, Pretoria.

—, 2012e: *Strengthening retirement savings*. National Treasury, Pretoria.

—, 2012f: *Improving tax incentives for retirement savings*. National Treasury, Pretoria.

—, 2006: *Contractual savings in the life-insurance industry*. National Treasury, Pretoria.

OECD, 2017: *Pensions at a Glance 2017*. Paris, OECD.

—, 2016a: *OECD core principles of private pension regulation*. OECD Working Party on Private Pensions, OECD, Paris.

—, 2016b: *OECD reviews of pension systems*: Mexico. OECD, Paris.

—, 2015: *Pensions at a Glance 2015*. Paris, OECD.

—, 2012: *The OECD roadmap for the good design of defined contribution pension plans*. OECD Working Party on Private Pensions, OECD, Paris.

Pensionsmyndigheten, 2018: *Pensionsstatistik – Premie Pensionen*. Pensionsmyndigheten, Stockholm.

Rocha, R., Vittas, D. & Rudolph, H., 2011: *Annuities and other retirement products*. World Bank, Washington, DC.

Sanlam, 2018: *Benchmark survey 2018*. Sanlam, Johannesburg.

STAT SA, 2018: *Quarterly labour force survey – Q3-2018*. STATS SA, Pretoria.

—, 2017: *Mid-year population estimates 2017*. STATS SA, Pretoria.

Annexe A. The Australian MySuper default approach

Australia has a mandatory, private DC-arrangement known as the superannuation guarantee. The superannuation system is a mandatory individual accounts-based DC-arrangement. The private superannuation arrangements complement the public, non-contributory, income-tested, state-funded Age Pension.

Participation is mandatory. The contribution rate is currently 9.5 per cent. The government has announced that the superannuation guarantee rate will increase by 0.5 percentage points each year from July 2021 until it reaches 12 per cent by 1 July 2025. The objective is among other things to strengthen adequacy in face of increasing longevity. The individual participant has different options to pay additional individual contributions.

The contribution is paid by the employer into the employee's superannuation fund. Employers need not contribute for workers earning less than AUD 450 a month, and they need not pay contributions on employees' wages above a ceiling – AUD 54,030 per quarter of the financial year 2018–19.

Two forms of targeted subsidies exist. Firstly, government provides a low-income superannuation contribution (LISC) of up to AUD 500 annually for eligible individuals on adjusted taxable incomes of up to AUD 37,000. Secondly, government provides a matching contribution – 50 per cent capped at AUD 500 per year – to low to mid-income earners who make personal after-tax contributions to their superannuation fund. Contributors with incomes less than AUD 37,697 in 2018–19 are eligible for the full co-contribution. For each dollar of income earned above AUD 37,697, the maximum co-contribution is reduced by 3.333 cents.

Total superannuation assets stood at AUD 1,600 bio. at year-end 2017 (app. USD 1,127 bio. matching some 126 per cent of GDP. The number of superannuation funds is very high, as superannuation funds may be operated by employers, industry associations and financial service companies or even by individuals themselves. The 10 largest funds hold some 57 per cent of total superannuation assets. [1]

Consistent with the experience from other countries, the vast majority of Australians do not make an own fund choice, and hence they are default participants. Rather than having a particular default fund, Australia has devised a set of particular standards known as the MySuper standards, that all default arrangements must meet. The MySuper-regulation responded to significant public critique, it was adopted in 2011 and implemented in 2013. The objective is to ensure a default system characterized by low cost and simple products.

Under the MySuper standards, a MySuper product must meet a set of product standards:

(1) MySuper products are required to have a single investment option with the application of lifecycle investment approaches allowed.

(2) MySuper products can charge a limited range of fees, and the calculation of transaction-based fees are limited to cost recovery. Five fee types are allowed: (i) an administration fee; (ii) an investment fee (including a performance-based fee); (iii) buy and sell spreads (limited to cost recovery); (iv) exit fee (limited to cost recovery); and (v) a switching fee (limited to cost recovery). In addition, funds may apply fees for specific participant-initiated costs – e.g. account splitting in relation to divorce.

(3) MySuper products must offer a standard, default level of life and total and permanent disability insurance. Participants must be able to opt-out of the insurance or increase or decrease their insurance cover without having to leave the MySuper product.

Further, the MySuper reforms reinforced the fiduciary duty of trustees. Among other things, reforms introduced a specific duty for trustees to deliver value for money as measured by long-term net returns, and to actively consider whether the fund has sufficient scale. Also, reforms have introduced restrictions on how advice is provided and paid for in order to counter conflicts of interests, and it has stressed the obligation of advisors to always act in the best interest of the individual.

[1] APRA statistics, 2018.

In several different ways, MySuper reforms seek to increase transparency. Hence, comparable data on long-term net returns and other fund data are collected and published by the supervisory authority APRA, the Australian Securities and Investment Commission (ASIC) has launched a web-service seeking to guide participants and prudential standards have been strengthened.

Compared to many other countries, Australia has limited regulation as regards the pay-out phase. Hence, participants can withdraw the accumulated capital as a lump sum or as an income stream as they wish. Currently, most people choose to take some or all of their benefits as a lump sum. [2]

[2] OECD, 2015, p. 207, and World Bank, 2011, p. 145ff.

Annexe B. The Chilean AFP default arrangement

Chile has a mandatory DC individual accounts arrangement known as the AFP system. The AFP pension arrangement tops up a rather modest, partly income-tested, public benefit known as the Solidarity Pension. [3] Participation is mandatory with a minimum contribution rate of 10 per cent paid on salaries up to app. 7.9 times average wage. [4] The individual participant can decide to pay a higher contribution. Participation is voluntary for self-employed persons.

On top of the pension contribution, individuals pay a separate administration fee and a social risk insurance premium – i.e. disability and survivors' coverage. These two fees are around 1.5 and 1.3 per cent respectively.

A state funded top-up contribution subsidy is provided for younger workers aged 18–25. The subsidy equals 50 per cent of the contribution paid on the minimum wage, and it is paid during the individuals' first 24 months of contributing to an AFP account.

Compensatory contributions are paid on maternity leave benefits and sickness leave benefits related to the illness of infants. Chile also provides a special pension voucher per child to the mother.

Private pension savings increase replacement rates, and the estimated technical net-replacement rate for a full career average wage worker is around 40 per cent (OECD, 2017, p. 107). However, there is no data available allowing a thorough analysis of the actual realized replacement rates. [5] Many workers are outside the system or they accrue very small savings. Disappointment over the results of the pension system and very low pensions in general – 90 per cent have less than USD 233 per month – have led to substantial public protests in recent years. [6]

Six different Pension Fund Administrators (AFP) manage the total accrued pension capital of app. USD 175 bio. – matching app. 70 per cent of GDP. Each AFP offers five funds varying by investment strategy (see table B.1). The funds apply the same investment strategy for all participants regardless of age and other aspects. By default – that is if they do not make an own choice – the participants are shifted to less riskier funds as they age. Further, the most risk-oriented funds – category A – are not available to participants aged 55+ for men and 50+ for women.

Table B.1. Fund categories in the Chilean AFP system

	Equity allocation (%)	Accessible	Default
A	40-80	Men below 56 years Women below 51 years	
B	25-60	All	Men and women aged below 36 years
C	15-40	All	Men aged 36-55 Women aged 36-50
D	5-20	All	Men older than 55 Women older than 50
E	0-5	All	

Source: Superintendence of Pensions.

[3] A separate Old-Age Basic Solidarity Pension is available for older people with no pension savings.

[4] Current reform proposals include proposals for a significant increase of the employee pension contribution by 4 per cent and the introduction of an employer contribution of another 4 per cent (Chile today, 29 October 2018).

[5] World Bank, 2011, p. 318

[6] See for example Chile today, 29 October 2018.

AFP funds operate subject to a minimum yield requirement. The minimum yield is defined on the basis of the average yield of all AFPs for each fund category. The yield band is broader for the A and B fund categories. Every month, AFPs must ensure that the annualized real yield during the preceding 36 months, for each of the Pension Funds under management, is no less than the lower of the following values: [7]

1. The average real annualized yield over the previous 36 months of all Funds of the same type, minus four percentage points for Type A and B Funds and two percentage points for Type C, D and E Funds.
2. The average real annualized yield over the previous 36 months of all Funds of the same type, minus the absolute value of 50 per cent of that yield.

The guarantee is financed from a guarantee reserve. If the AFP cannot finance the minimum yield, the state makes up the difference and proceeds to liquidate the administrator.

A participant who do not make an own choice of AFP will be assigned to the default provider, where he/she will join a B-, C- or D-fund depending on his/her age (see table B.1). The default provider is appointed based on a public tender focusing on fees. Hence, all new participants in a given year are assigned to this particular provider, if they do not make an own choice to the opposite. [8]

The Chilean AFP system offers 4 different retirement product options. The participant can take out a life annuity with an insurance company, take out a programmed withdrawal with the AFP, combine a deferred annuity and withdrawals from the AFP account and finally the participant can combine a life annuity with a phased withdrawal. [9]

1. Life annuities are provided by life-insurance companies. They offer constant, lifetime monthly allowance in real terms. The participants AFP account is capitalised and transferred to the insurer. The insurer assumes the longevity risk as well as all financial risks under this option.
2. Programmed withdrawals allow the participant to maintain the individual AFP account in fund categories C, D or E. The portion of the mandatory balance exceeding 70 per cent of the average taxable wage of the last 10 years and greater than 150 per cent of the minimum pension, can be placed in fund categories A and B. The monthly payment is readjusted every year. Under this option, the retirees assume the longevity risk and financial risk, while the AFP manages investments.
3. Deferred life annuities are provided by life-insurance companies. They ensure a fixed benefit payment to commence at a particular point in time after retirement. The corresponding capital is transferred from the AFP account to the insurer at retirement. During the time leading up to time when the deferred annuity commences the participant receives monthly payments from the individual AFP account. Hence, the individual assumes the financial risk for the remaining balance in the AFP while the insurance company assumes the longevity risk.
4. Combining a life annuity and a programmed withdrawal – i.e. options 1 and 2 – is possible for participant with an AFP balance sufficient to purchase a life annuity greater or equal to the Solidarity Pension. The remaining capital is kept in the AFP account.

Chile stipulates a minimum level of annuitization, and spouses must buy joint annuities or annuities with a fixed-term guaranteed payment to the survivor (World Bank 2011, p. 318). Prior to the purchase of retirement products an amount is withheld from the individual account to cover funeral expenses (OECD, 2015, p. 229).

[7] Júaregui, S.B., 2010: The Chilean pension system. Superintendence of Pensions, Santiago, pp. 59–60.

[8] The Chilean tender-based approach is subject to severe reservations. E.g. an analysis conducted by the Australian Association of Superannuation Funds (ASFA) found that the tender process risks a “race to the bottom” among AFPs to reduce fees at the expense of investment returns and member services (ASFA, 2017).

[9] ICPM, 2018: *Summary of the Chilean pension system*. ICPM, Toronto. See also Júaregui, S.B., 2010: *The Chilean pension system. Superintendence of Pensions*, Santiago, pp. 38–39.

AFPs are free to set the administration fees they charge participants. This fee must be a fixed percentage of salary, and the fee must be the same for all participants. This practise means that i) only participants paying contributions pay administration fees, and ii) that investment costs are not paid proportional to savings. The administration fee covers administration costs, distribution costs and the cost of the internal investment team. The fee level has come down substantially over the past decades to its present level of around 1.5 per cent. [10]

The fee does not include the investment fees charged by external fund manager – mainly related to foreign investments – amounting on average to around 0.26 per cent of total assets. The Superintendence of Pensions has imposed controls on the level of fees paid to external managers, and the AFPs must disclose their fees for each type of investments on a monthly basis. [11]

In order to win the tender process in 2014 and become the default provide the AFP PlanVital reduced its fees from 2.44 to 0.6 per cent. The sustainability of this practise has been called into question, as the required growth of the number of participants and the contribution base are unlikely to be realized. [12]

[10] Ibid.

[11] Chant West Final Report, Dec. 2014.

[12] *Op. cit*.

Annexe C. The Mexican SAR default arrangement

Mexico has a mandatory, private DC-arrangement known as the SAR. The SAR is split into two different systems – one for private sector workers under the IMSS and one for public sector workers under the ISSSTE. Participation in the SAR is mandatory for all formal sector workers except workers covered by one of the many special schemes covering employees with e.g. state-owned companies, the armed forces, local authorities, regional authorities, central government, teachers and the courts. The special schemes are mainly DB and typically the rights are non-portable (OECD, 2016b, p. 29 ff). Participation in the SAR is voluntary for self-employed persons.

Basic poverty protection is addressed through a rather low means-tested minimum pension known at the 65+ scheme. Also, government provides a minimum pension guarantee for SAR-participants reaching the retirement age and while meeting a minimum contribution record only have accrued low savings.

The total contribution rate is 6.5 per cent of earnings. The participant pays 1.125 per cent, employers contribute 5.150 per cent and the government contributes the remaining 0.225 per cent. Employers pay an additional 5 per cent contribution into an individual housing account – known as the INFONAVIT. Savings in this account are transferred to the individual pension account when it is not used. Contributions are paid on income up to 25 times the minimum wage.

Government supports the savings effort of low-income workers through a top-up, targeted contribution paid to the individual accounts of low-income earners. This contribution is known as the cuota social or social fee. The subsidy raises the aggregate contribution rate for low income workers – e.g. the "real rate" is 13.61 per cent for workers earning below minimum wage.

Workers are required to have an individual retirement account in an AFORE (pension fund operating company) of their choice. [13] Participants can shift to a different AFORE once every year, provided they have been with the current AFORE for at least one year.

Workers who do not make an own choice of AFORE are assigned to one of the AFOREs that have generated the highest returns in a predetermined period. The accounts are assigned once a year. If an account remains in the assigned AFORE for 2 years, the regulator – CONSAR – will reassign the account to the AFORE with the best performance. These participants are referred to as "assigned workers".

Eleven different AFOREs manage the total accrued SAR pension capital of app. USD 170 bio. – matching app. 15.1 per cent of GDP. The asset management of the AFORE is sectioned into different funds known as SIEFORE. Currently, an AFORE must have four different SIEFORE for the management of mandatory SAR savings. Additional SIEFOREs can be offered for voluntary savings and occupational schemes.

The four basic SIEFOREs (SB1-4) are age related. Hence participants' savings are shifted between the four SIEFOREs by age – participants are in SB4 up until age 36, in SB3 from age 37 to 45, in SB2 from age 46 to 59 and in SB4 from age 60. This model provides a crude lifecycle approach by reducing investment risk by age. Participants can choose to allocate their savings to a more conservative fund than the one assigned by default, while they cannot move in the opposite direction.

The SIEFORE regulation defines a rather detailed framework for their investment. The factors cover market and liquidity risk, issuer and counterparty risk, asset class limits and conflicts of interest. The regime reduces the maximum VaR, and it reduces the allowed exposure towards more risky assets when moving from SB4 towards SB1.

At retirement participants can choose between a life-long annuity and a phased withdrawal. Life annuities are provided by insurance companies, meaning that the individual account with the AFORE is capitalized and transferred to the insurer. Phased withdrawals are provided by the individual AFORE and the capital remains in the individual account.

The state guarantees a minimum payment for workers meeting specific age and contribution record criteria.

[13] Public sector workers are offered the choice between an AFORE managed by the ISSSTE and any other AFORE.

Annexe D. The Swedish third tier default fund – AP7

The Premium Pension forms the third tier of the Swedish 5-tier pension system. Its role is largely parallel to the role envisaged for the proposed statutory DC savings arrangement in South Africa.

The Premium Pension system is based on a wholesale approach. Hence, participants pay contributions at a rate 2.5 per cent of income subject to social security contributions (up to app. 140 per cent of average wage). Contributions are collected and funnelled through the national Pensions Authority acting as a clearinghouse.

Participants can make an own choice of fund(s) via a web-based choice platform. Funds can be available on the platform if they comply with a range of conditions defined and overseen by the clearinghouse. These conditions concern among other: costs, charges, performance and fund information, documentation and reporting.

Allocation of the total Premium Pension reserves of SEK 1.137 bio. (year-end 2017, equivalent: USD 127 bio. matching app. 23 per cent of GDP) [14] to the more than 800 affiliated funds is managed by the Pensions Authority. Allocation is made proportional to the aggregate choices made by the 5.9 Mio. participants (non-retirees) in the Premium Pension system. Hence the individual fund only has one client in the Premium Pension system – the Pensions Authority – and it does not know its "real end-clients", the individual participants.

AP7 is the default fund of the Premium Pension, and participants not making an own choice are assigned to AP7. AP7 is an independent institution set up by law and operating under an arms-length principle. It is operated based on a strategy set out by the Board of Directors within the general regulatory framework. The institution reports annually to Government and Parliament on its business, but it does not and cannot take instructions or directions from Government or Parliament.

AP7 has two building blocks – an equity fund and a fixed income fund – and combines the two in a lifecycle-based default product. All participants are 100 per cent in the equity fund up until age 55. From age 56 to age 75 the allocation is shifted gradually and linearly to a 2/3 allocation to the fixed income fund and 1/3 to the equity fund.

Total assets under management in AP7 at year-end 2017 stood at SEK 430 bio. (USD 48 bio.) covering some 3.7 Mio. participants. AP7 has a dominant role in the Premium Pension system. In terms of participants it is 13 times bigger than the second-most popular fund. Measured in terms of capital the number is 16. AP7 dominance is expected to increase, as the propensity among new entrants to make an own choice seems to be on the decrease. The AP7 default has performed substantially better than the majority of private alternatives and the average of private alternatives. AP7 even offers three competing choice options under the Premium Pension – even these are combinations of the two basic building blocks.

Annuitization at retirement is mandatory with two different options offered to the participant – fund insurance and traditional insurance respectively:

1. *The fund insurance option* is a variable annuity. The accrued capital stays in the individual account and it continues to be invested as requested by the individual – or along the lifecycle approach adopted by the default arrangement. The benefit to be paid out is calculated as the accrued capital divided by a division-factor. The division-factor is set by the National Pensions Authority based on a life-expectancy forecast, an assumed interest rate and expected management costs. The benefit is calculated for a full year and paid out as monthly payments. The calculation is repeated every year.
2. *The traditional insurance option* is a guaranteed nominal life-long annuity provided by the national Pension Authority as the single annuity provider. The annuity is with profits meaning that its indexation will depend on investment performance. If the participant chooses the traditional insurance option, the premium pension account will be capitalized and transferred to and managed by the Pension Authority.

[14] Pension savings held in second tier buffer funds, third tier quasi-mandatory occupational pensions and fourth tier individual personal pension savings match another 99 per cent of GDP.

Total administration costs in the Premium Pension system has two components – the asset management costs incurred with the funds and the administration costs incurred with the Pension Authority managing the choice platform and annuity provision.

Costs in the funds available under the Premium Pension are subject to sharp regulation and follows a set of thresholds where the maximum allowed fees differ by asset class and decrease as assets under management increase. Hence, funds are offered at one fee-level under the Premium Pension and at very different levels – often double the fee charged under the Premium Pension – as retail funds. [15]

The fee collected by AP7 is 0.09 per cent of assets in the equity fund (0.12 per cent if indirect costs – e.g. fees paid to external managers – are included) and 0.04 per cent in the fixed income fund. The fees paid by the individual participant depends on the allocation to the two building blocks – and hence on age.

Costs with the Pensions Authority are financed from a fee levied on the individual accounts. The fee is set at 0.12 per cent of assets with a cap of SEK 125 – app. USD 14. The cap means that the average fee is 0.08 per cent of assets.

[15] Beier Sørensen, O., 2018: Tjänstepensionerne i det svenske pensionssystem. Forsikring & Pension: København.

Appendix E. The OECD roadmap

The OECD has issued a so-called roadmap for the good design of defined contribution pension plans. The roadmap provides a set of 10 simple criteria to be applied in the design of defined contribution schemes. The messages of the OECD roadmap are broadly consistent with the recommendations and observations presented in this report. However, there are some important differences.

First and foremost the OECD framework assumes a complete separation of the savings phase and the pay-out phase, it does not question the feasibility of mandatory annuitization in the current situation, it proposes annuity provision to be market based, and it does not address risk issues during the savings phase other than through a life-cycle approach. The need to address these aspects systematically remains a key message in this report.