Report 4

Impact of the NSSF on Savings and Investments

Author: ***Costing conducted by the Actuarial & Analytical Solutions (A&AS) Team at Deloitte and Touché South Africa***

November 2019

REPORT 4: IMPACT OF THE NATIONAL SOCIAL SECURITY FUND ON SAVINGS AND INVESTMENTS

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ABBREVIATIONS AND ACRONYMS

FSCA	Financial Sector Conduct Authority
GEPF	Government Employees Pension Fund
ILO	International Labour Organisation
JMCA	Jacques Malan Consultants and Actuaries
NSP	New Solidarity Pillar
NSSF	National Social Security Fund
OAG	Old Age Grant
OECD	Organisation for Economic Co-operation Development
PAYG	Pay-As-You-Go
QLFS	Quarterly Labour Force Survey
SARB	South African Reserve Bank
SARS	South African Revenue Service
StatsSA	Statistics South Africa
UIF	Unemployment Insurance Fund

EXECUTIVE SUMMARY

Background

The aim of this report is to assess the potential impact of the National Social Security Fund (NSSF) on savings and investment markets. These impacts include:

- Changes in the flow of funds between households, financial intermediaries and government;
- Changes in consumption, saving and investment behaviour of households and firms;
- Changes in the financing of business investment and in capital market flows; and
- Existing retirement funds.

The existing retirement funding structure in South Africa for formally employed individuals, consists of a tax-incentivised pension sector with accumulated assets of approximately R 4 trillion across approximately 5 300 approved retirement funds. In addition, the State provides Old Age Grants (OAG) to those deemed to need such a grant. Despite the current tax-incentivised retirement funding structure, more than two-thirds of South Africans reach retirement age without a funded pension benefit due to the lack of provisions and/or insufficient savings during their working lives and therefore rely on the OAG. This however, is due to South Africa's high unemployment rate. Although contributory savings and insurance assists in providing basic income protection for some South Africans, access to appropriate retirement provisions for low-income earners remains limited due to high administration costs and minimum contribution constraints.

The NSSF will be a defined-benefit social security fund in the form of a centrally managed public fund that aims to provide adequate retirement and risk benefit provision for the working population of South Africa.

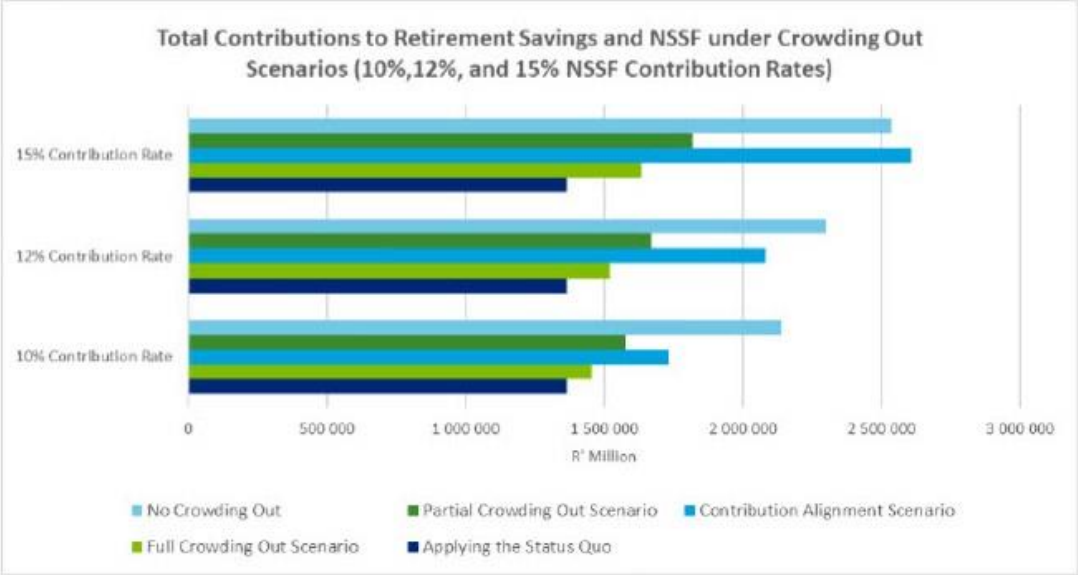
Changes in the Flow of Funds Between Households, Financial Intermediaries and Government

Various scenarios have been considered with respect to how retirement savings[48] may change under Implementing the NSSF due to the impact of crowding out (Full Crowding Out). Contributions may reduce by less than the amount of NSSF contributions payable by the individual if they are high-income earners (Partial Crowding Out). Employers may align contribution rates in occupational funds to NSSF contributions rates (Contribution Alignment Scenario)

Under the various crowding out scenarios, the total of contributions towards the NSSF and retirement savings is either greater or less than contributions towards retirement savings with no implementation of the NSSF. As illustrated below, unless those individuals who are high earners who are currently covered in respect of retirements savings significantly reduce their contributions to retirement (which will be limited by the quasi-mandatory nature of Pillar 3), the implementation of the NSSF is not likely to reduce ongoing contributions to retirement savings. It is noted that this analysis excludes the impact of the NSSF Supplementary Fund that contributions to the NSSF and retirement savings reflected in the graph above are net of administration fees.

[48] Retirement savings includes approved pension, provident and retirement annuity funds and hence forms part of Pillar 3 of South Africa's proposed social security system.

Figure i: Total Contributions to Retirement Savings and NSSF under Crowding Out Scenarios (10%, 12% and 15% NSSF Contribution Rates)



The corresponding change in the total of projected retirement savings and the NSSF as at 31 December 2025 under the various scenarios assuming contribution rates of 10%, 12%, 15% and 6% (retirement benefits only) respectively to the NSSF and allowing for the alternative investment strategies for the NSSF are set out below. This allows for differing investment strategies in respect of the NSSF, namely, investment in line with Regulation 28 and a conservative investment strategy (80% allocation to South African bonds).

Table i: Change in Projected Retirement Savings and NSSF as at 31 December 2025 under Crowding Out Scenarios (10%, 12%, 15% and 6% NSSF contribution rates, Formal Employment, Regulation 28 Investment Strategy)

R' Million	10% Contribution Rate	12% Contribution Rate	15% Contribution Rate	6% Contribution Rate
Full Crowding Out Scenario	160 541	257 824	422 296	-213 591
Contribution Alignment Scenario	534 900	1 008 389	1 718 623	160 769
Partial Crowding Out Scenario	295 416	419 674	624 608	-78 716
No Crowding Out	934 955	1 134 312	1 433 348	560 824
Applying the Status Quo	-	-	-	-

Table ii: Change in Projected Retirement Savings and NSSF as at 31 December 2025 under Crowding Out Scenarios (10%, 12%, 15% and 6% NSSF contribution rates NSSF contribution rates, Formal Employment, Conservative Investment Strategy)

R' Million	10% Contribution Rate	12% Contribution Rate	15% Contribution Rate	6% Contribution Rate
Full Crowding Out Scenario	160 541	257 824	422 296	-213 591
Contribution Alignment Scenario	534 900	1 008 389	1 718 623	160 769
Partial Crowding Out Scenario	295 416	419 674	624 608	-78 716
No Crowding Out	934 955	1 134 312	1 433 348	560 824
Applying the Status Quo	-	-	-	-

Allowing for the participation of informally employed individuals, the change in projected retirement savings and NSSF as at 31 December 2025 is set out below:

Table iii: Change in Projected Retirement Savings and NSSF as at 31 December 2025 under Crowding Out Scenarios (10%, 12%, 15% and 6% NSSF contribution rates, Formal Employment and Informal Employment, Regulation 28 Investment Strategy)

R' Million	10% Contribution Rate	12% Contribution Rate	15% Contribution Rate	6% Contribution Rate
Full Crowding Out Scenario	336 194	470 780	691 205	-107 578
Contribution Alignment Scenario	710 554	1 221 345	1 987 532	266 782
Partial Crowding Out Scenario	471 069	632 630	893 517	27 297
No Crowding Out	1 110 609	1 347 268	1 702 257	666 837
Applying the Status Quo	-	-	-	-

Table iv: Change in Projected Retirement Savings and NSSF as at 31 December 2025 under Crowding Out Scenarios (10%, 12%, 15% and 6% NSSF contribution rates, Formal Employment

R' Million	10% Contribution Rate	12% Contribution Rate	15% Contribution Rate	6% Contribution Rate
Full Crowding Out Scenario	310 499	439 690	652 024	-122 895
Contribution Alignment Scenario	684 858	1 190 256	1 948 352	251 465
Partial Crowding Out Scenario	445 374	601 540	854 337	11 981
No Crowding Out	1 084 913	1 316 179	1 663 077	651 520
Applying the Status Quo	-	-	-	-

Allowing for the NSSF earnings ceiling to be set equal to the current Unemployment Insurance (UIF) earnings limit, the change in projected retirement savings and NSSF as at 31 December 2025 is set out below:

Table v: Change in Projected Retirement Savings and NSSF as at 31 December 2025 under Crowding Out Scenarios (10%, 12%, 15% and 6% NSSF contribution rates, NSSF earnings ceiling equal to UIF earnings limit, Formal Employment, Regulation 28 Investment Strategy)

R' Million	10% Contribution Rate	12% Contribution Rate	15% Contribution Rate	6% Contribution Rate
Full Crowding Out Scenario	165 123	233 725	349 016	-115 430
Contribution Alignment Scenario	587 097	1 067 919	1 789 151	306 545
Partial Crowding Out Scenario	246 381	331 235	470 903	-34 171
No Crowding Out	700 015	849 277	1 073 170	419 463
Applying the Status Quo	-	-	-	-

Table vi: Change in Projected Retirement Savings and NSSF as at 31 December 2025 under Crowding Out Scenarios (10%, 12%, 15% and 6% NSSF contribution rates, NSSF earnings ceiling equal to UIF earnings limit, Formal Employment, Conservative Investment Strategy)

R' Million	10% Contribution Rate	12% Contribution Rate	15% Contribution Rate	6% Contribution Rate
Full Crowding Out Scenario	148 929	214 130	324 318	-125 069
Contribution Alignment Scenario	570 904	1 048 324	1 764 454	296 905
Partial Crowding Out Scenario	230 187	311 640	446 206	-43 811
No Crowding Out	683 821	829 682	1 048 473	409 823
Applying the Status Quo	-	-	-	-

The total of accumulated retirement savings and the NSSF as at 31 December 2025, is lowest under the Full Crowding Out for all scenarios considered considering NSSF contributions as at rate of 10%, 12 %, 15% and 6% (retirement benefits only). In line with the change in total contributions towards the NSSF and retirement savings, allowing for the participation of the informally employed, increases the projected accumulation of the NSSF and retirement savings to a greater extent that setting the NSSF earnings ceiling equal to the UIF earnings limit.

Based on the projected accumulation of retirement savings under the various scenarios, accumulated retirement savings and the NSSF is not expected decrease over the period considered with the exception of a NSSF contribution rate of 6% towards retirement benefits. However over the long term, the segregation of funding for retirement benefits in the NSSF, increases the sustainability of the NSSF over the long term (discussed below).

It is noted that where the level of savings and investments attributed to the retirement system after implementation of the NSSF, compared to Applying the Status Quo, is expected to increase over the period considered, any increase in savings channelled to the retirement system may be offset by decreases in individuals 'discretionary savings.

Funds channelled through financial intermediaries are therefore not expected to reduce given the implementation of the NSSF. However, the underlying asset allocation will differ dependent on the investment strategy of the NSSF. In particular, based on the projected asset allocation of funds in 2025, allowing for no implementation of the NSSF, investment in government bonds in projected to reach R 1 697 billion assuming investment in line in asset allocations as at 31 December 2019. Allowing for the implementation of the NSSF with an investment strategy in line with Regulation 28, investment in government bonds is projected to reach R 1 943 billion and investment in South African Equities R 3 575 billion under the Full Crowding Out Scenario allowing for NSSF contributions of 15%. Allowing for the implementation of the NSSF with a conservative investment strategy, investment in government bonds is projected to reach R 2 421 billion and investment in South African Equities R 3 275 billion under the Full Crowding Out Scenario allowing for NSSF contributions of 15%.

Allowing for alternative crowding out scenarios will increase investment in South African equities and bonds further. If the informally employed participate in the NSSF and the NSSF earnings ceiling is set equal to the UIF earnings limit, projected accumulation of the NSSF and retirement savings is increased further. The resulting investment in South African equities and bonds will therefore increase.

Considering longer term projections, the present value of savings and investments attributed to the retirement system under Implementing the NSSF is maximised allowing for a 15% contribution rate or a 6% contribution rate to retirement benefits only.

Table vii: Present Value of the Total of Accumulated Retirement Savings and the NSSF under Implementing the NSSF compared to Applying the Status Quo under Crowding Out Scenarios (10%, 12%, 15% and 6% NSSF contribution rates, Formal Employment, Conservative Investment Strategy)

R' Million	Applying the Status Quo	Full Crowding Out Scenario	Contribution Alignment Scenario	Partial Crowding Out Scenario
10% Contribution Rate	142 785 822	141 370 721	158 621 279	149 055 202
12% Contribution Rate	142 785 822	163 730 643	198 654 311	172 952 016
15% Contribution Rate	142 785 822	224 413 917	284 537 071	235 940 611
6% Contribution Rate	142 785 822	214 296 115	231 546 673	221 980 597

Table viii: Present Value of the Total of Accumulated Retirement Savings and the NSSF under Implementing the NSSF compared to Applying the Status Quo under Crowding Out Scenarios (10%, 12%, 15% and 6% NSSF contribution rates, Formal Employment and Informal Employment, Conservative Investment Strategy)

R' Million	Applying the Status Quo	Full Crowding Out Scenario	Contribution Alignment Scenario	Partial Crowding Out Scenario
10% Contribution Rate	142 785 822	197 185 797	214 436 355	204 870 278
12% Contribution Rate	142 785 822	191 451 613	226 375 281	200 672 986
15% Contribution Rate	142 785 822	184 160 516	244 283 669	195 687 209
6% Contribution Rate	142 785 822	249 550 164	266 800 722	257 234 645

Table ix: Present Value of the Total of Accumulated Retirement Savings and the NSSF under Implementing the NSSF compared to Applying the Status Quo under Crowding Out Scenarios (10%, 12%, 15% and 6% NSSF contribution rates, NSSF earnings ceiling equal to UIF earnings limit, Conservative Investment Strategy)

R' Million	Applying the Status Quo	Full Crowding Out Scenario	Contribution Alignment Scenario	Partial Crowding Out Scenario
10% Contribution Rate	142 785 822	145 963 263	165 905 196	150 592 945
12% Contribution Rate	142 785 822	163 950 348	203 557 665	169 505 966
15% Contribution Rate	142 785 822	213 476 995	281 858 272	220 421 518

Compared to Applying the Status Quo, the level of savings and investments attributed to the retirement system after implementation of the NSSF is expected to increase initially under all scenarios with the exception of a NSSF contribution rate of 6% towards retirement benefits only, where there is projected to be an insignificant decrease over the first ten years after implementation of the NSSF. The level of savings and investments then reaches a peak under the various scenarios and falls below 100% for under all scenarios with the exception of the Contribution Alignment scenario at a NSSF contribution rate of 15% allowing for participation of the formally and informally employed.

The impact of a higher NSSF contribution rate, 12% or 15% compared to 10% of earnings up to the NSSF earnings ceiling, is to increase the level to which accumulated funds build up as a result of higher funding for a fix set of benefits at higher NSSF contribution levels, allowing for larger accumulation of the NSSF before funds are depleted and the NSSF is assumed to move into a pay-as-you-go basis.

The impact of segregating funding for retirement benefits in the NSSF, allowing for a 6% contribution rate, increases the sustainability of the NSSF and hence, while it does not reach the maximum levels of savings and investment

demonstrated under the other contribution rate scenarios, it minimises the drop in the level savings and investment over the 100 period.

The level of NSSF contributions therefore impacts on the level of savings and investments attributed to the retirement system over the period considered. This is as a result of higher funding for a fix set of benefits at higher NSSF contribution levels, allowing for larger accumulation of the NSSF before funds are depleted and the NSSF is assumed to move into a pay-as-you-go basis.

It is noted that the underlying investment strategy will influence the underlying asset allocation will differ dependent on the investment strategy of the NSSF. Investments under the NSSF may favour debt markets and public sector funding (conservative investment strategy) resulting in reduced level of investment for other asset classes even where the overall level of savings after implementation is expected to increase. This may increase the cost of capital for the private sector or increase the cost of equity compared to debt. Increases to the cost of capital for private sector will reduce the demand for investment or change the relative attractiveness of equity versus debt.

Changes in Consumption, Saving and Investment Behaviour of Households and Firms

Under the Full Crowding Out Scenario, full displacement of contributions due to the NSSF will result in no change in consumption for those covered individuals where current effective contributions rates are higher than the NSSF contribution rate. Where effective contribution rates are lower than the NSSF contribution rate, reduced consumption will be required in respect of these individuals if borrowing is note increased to maintain consumption levels. Therefore, the impact on consumption and borrowing is dependent on the NSSF contribution rate. The table below sets out the reduction in possible consumption resulting from the implementation of the NSSF (assuming no increase in borrowing). This is based on an assumption that employers will meet approximately 60% of the increase in contributions based on an analysis of IRP5 data for the 2017 and 2018 tax years.

Table x: Full Crowding Out Scenario: Reduction in Consumption by Households Covered in Respect of Retirement Savings on NSSF Implementation (10%, 12% and 15% NSSF contribution rates)

R' million	2020	2021	2022	2023	2024
10% Contribution Rate	8 743	9 152	9 569	10 112	10 696
12% Contribution Rate	14 384	15 075	15 786	16 703	17 673
15% Contribution Rate	24 556	25 550	26 599	28 012	29 516

It is noted that in respect of these individuals it has been assumed that any increases in the absolute value of contributions payable will be met by the individual and not their employer. As per the table above, the reduction in consumption is linked to the level of NSSF contributions. It is noted that the impact of reduced consumption will be more significant for low-income earners, particularly, if a NSSF contribution rate of 15% is implemented. This can be mitigated by transitioning in the requirement for contributions to the NSSF.

Approximately half of formally employed individuals are not covered in respect of retirement savings. The implementation of the NSSF will result in a reduction in consumption for these individuals if borrowing is not increased to maintain consumption levels resulting from the requirement to pay contributions to the NSSF on earnings to the earnings ceiling, if earning above the NSSF earnings floor. The table below sets out the reduction in consumption resulting from the implementation of the NSSF.

Table xi: Reduction in Consumption by Households not Covered in Respect of Retirement Savings on NSSF Implementation (10%, 12% and 15% NSSF contribution rates)

R' million	2020	2021	2022	2023	2024
10% Contribution Rate	27 157	28 314	28 908	29 820	30 760
12% Contribution Rate	32 587	33 977	34 690	35 785	36 911
15% Contribution Rate	40 734	42 472	43 362	44 731	46 139

Given the low coverage rates in respect of retirement savings based on formal employment for low-income earners, the impact of consumption will be most significantly felt by these individuals, given their ability to borrow is limited compared to high-income earners. It is noted that the average earnings of these individuals is R 45 000 in 2021 terms. Half of the contributions due to the NSSF will be met by employers, therefore firms will face increased employment expenditure in line with the figures set out in the table above. This will impact low-income earners more significantly and employment levels. It is therefore proposed that wage subsidies could be implemented to minimise disruptions to the demand of supply of labour associated with the introduction of mandatory contributions.

The tables below set out the expected contribution subsidy resulting from the implementation of the NSSF. This has been calculated based on a full subsidy of contributions for those individuals 'earnings less than the legislated minimum wage[49] and the SARS tax threshold for comparison purposes.

Table xii: Contribution Subsidy for Individuals Earnings less than the Minimum Wage and not Covered in Respect of Retirement Savings on NSSF Implementation (10%, 12% and 15% NSSF contribution rates)

R' million	2020	2021	2022	2023	2024
10% Contribution Rate	7 828	8 192	8 653	9 236	9 858
12% Contribution Rate	9 394	9 830	10 384	11 084	11 830
15% Contribution Rate	11 742	12 287	12 980	13 854	14 788

Table xiii: Contribution Subsidy for Individuals Earnings less than the SARS Tax Threshold and not Covered in Respect of Retirement Savings on NSSF Implementation (10%, 12% and 15% NSSF contribution rates)

R' million	2020	2021	2022	2023	2024
10% Contribution Rate	20 280	21 409	22 616	24 139	25 106
12% Contribution Rate	24 335	25 691	27 139	28 967	30 127
15% Contribution Rate	30 419	32 113	33 924	36 209	37 659

Changes in the Financing of Business Investment and in Capital Market Flows

The extent to which the NSSF can support the State's ability to fund new business and infrastructure development will depend on the investment strategy that the Board of Trustees decides on.

Given reduced sentiment towards South Africa, any reduced demand for South Africa government bonds can be mitigated to some extent by the increased funds available through implementation of the NSSF over the period to 2025, particularly in relation to a conservative investment strategy for the NSSF.

Considering the long-term projections presented in Section **3.6.2**, the overall level of savings and investments attributed to retirement savings under Implementation of the NSSF is expected to surpass the overall level of savings and investments attributed to retirement savings under Applying the Status Quo over at least the next 30 years, with the exception of a NSSF contribution rate of 6% towards retirement benefits only, where there is projected to be an insignificant decrease over the first ten years after implementation of the NSSF. After reaching a maximum level, depending on crowding out scenario and NSSF contribution level, the overall level of savings and investments attributed to retirement savings under Implementation of the NSSF reduces. Under all the scenarios except for the Contribution Alignment Scenario at a NSSF contribution rate of 15%, the level of savings and investment reduces to less than the overall level of savings and investments attributed to retirement savings under Applying the Status Quo after 30 years. This can be mitigated by increasing NSSF contribution rates at pre-defined milestones over the period considered to maintain a minimum level of the NSSF.

[49] Employment and Labour on new National Minimum Wage rate | South African Government (www.gov.za)

Impact on Existing Retirement Funds

The following number of formally employed individuals are expected to be covered in terms of retirement savings over the period 2020 to 2025 allowing for Implementation of the NSSF and the various crowding out scenarios. Coverage has been calculated as the proportion of the formally employed who contribute to retirement savings. It therefore does not allow for individuals who belong to more than one retirement savings vehicle.

Table xiv: Covered Formally Employed Individuals from 2020 to 2024 (Base Scenario)

	2020	2021	2022	2023	2024	2025
Full Crowding Out Scenario (10% NSSF Contribution Rate)	5 065 593	5 157 948	5 171 101	5 177 906	5 238 540	5 299 883
Full Crowding Out Scenario (12% NSSF Contribution Rate)	5 065 593	2 448 425	2 466 436	2 488 137	2 538 508	2 602 656
Full Crowding Out Scenario (15% NSSF Contribution Rate)	5 065 593	2 264 970	2 277 717	2 293 517	2 320 374	2 347 549
Contribution Alignment Scenario	5 065 593	2 743 990	2 901 607	2 909 218	2 946 534	2 981 176
Partial Crowding Out Scenario(10% NSSF Contribution Rate)	5 065 593	2 448 425	2 466 436	2 488 137	2 538 508	2 602 656
Partial Crowding Out Scenario (12% NSSF Contribution Rate)	5 065 593	2 264 974	2 277 722	2 293 520	2 320 377	2 347 549
Partial Crowding Out Scenario(15% NSSF Contribution Rate)	5 065 593	1 648 468	1 652 672	1 752 543	1 823 804	1 911 498

Over the short-term, the impact on accumulated retirement savings as at 31 December 2025, is highest under the Full Crowding Out Scenario (15% NSSF contribution rate) given this scenario results in the most significant reduction in contributions to retirement savings.

Table xv: Change in Retirement Savings as at 31 December 2025 under Crowding Out Scenarios (10%, 12% and 15% NSSF contribution rates)

R' Million	10% Contribution Rate	12% Contribution Rate	15% Contribution Rate
Full Crowding Out Scenario	- 774 415	- 876 488	- 1 011 052
Contribution Alignment Scenario	- 400 055	- 125 923	285 275
Partial Crowding Out Scenario	- 639 540	- 714 638	- 808 740
No Crowding Out			

Allowing for a NSSF earnings ceiling equal to the UIF earnings limit, the corresponding change in retirement savings as at 31 December 2025 under the various scenarios assuming contribution rates of 10%, 12% and 15% respectively to the NSSF is set out below:

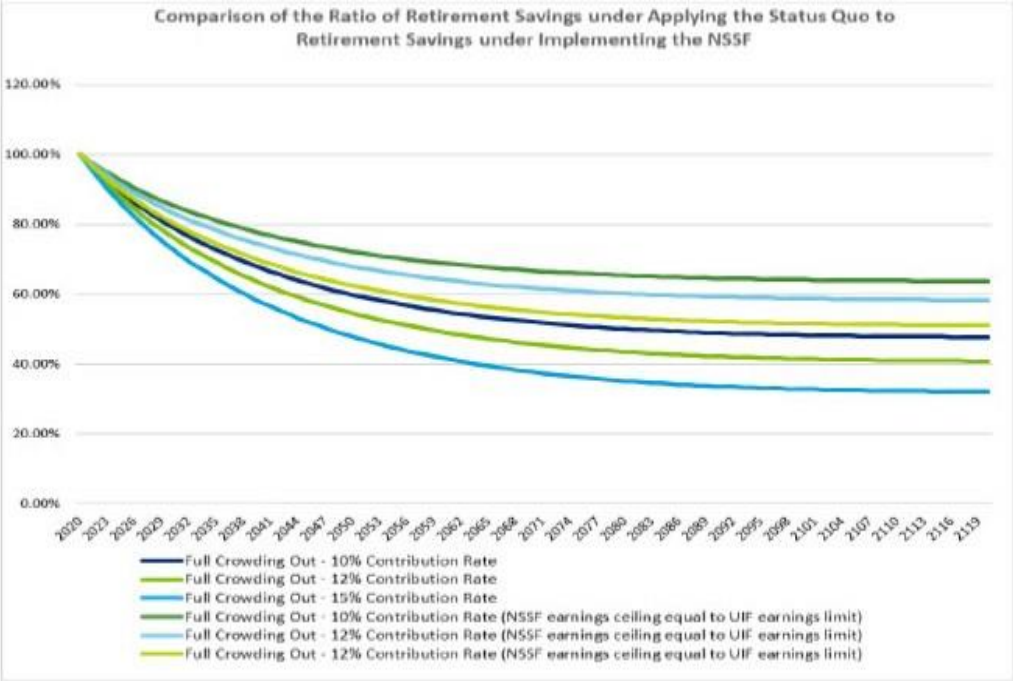
Table xvi: Change in Retirement Savings as at 31 December 2025 under Crowding Out Scenarios (10%, 12% and 15% NSSF contribution rates, NSSF earnings ceiling equal to UIF earnings limit)

R' Million	10% Contribution Rate	12% Contribution Rate	15% Contribution Rate
Full Crowding Out Scenario	-534 892	-615 552	-724 154
Contribution Alignment Scenario	-112 918	218 642	715 981
Partial Crowding Out Scenario	-453 634	-518 042	-602 267
No Crowding Out	-	-	-

As noted above, reducing the NSSF earnings ceiling to the current UIF limit reduces the extent to which contributions to retirement savings are crowded out under the various crowding out scenarios hence increases projected retirement savings for all scenarios relative to an NSSF earnings ceiling of R 276 000 in 2018 terms.

Over the long term, the implementation of the NSSF will reduce the accumulation of retirement savings compared to under Applying the Status Quo. The ratio of accumulated retirement savings under Implementing the NSSF to under Applying the Status Quo has been projected over a 100-year period assuming a NSSF contribution rate of 10%, 12% and 15% respectively. This projection has been done under the Full Crowding Out Scenario.

Figure ii: Comparison of the Ratio of Retirement Savings under Applying the Status Quo to Retirement Savings under Implementing the NSSF (10%, 12% and 15% NSSF Contribution Rates)



The reduction in the ratio of accumulated retirement savings under Implementing the NSSF to under Applying the Status Quo is significant over the first 34 years, after which the reduction slows until equilibrium is reached at 48% of accumulated retirement savings under Applying the Status Quo assuming NSSF contributions of 10%, 41% of accumulated retirement savings under Applying the Status Quo assuming NSSF contributions of 12% and 32% of accumulated retirement savings under Applying the Status Quo assuming NSSF contributions of 15%.

If the NSSF earnings ceiling is set equal to the current UIF earnings limit, equilibrium is reached at 64% of accumulated retirement savings under Applying the Status Quo assuming NSSF contributions of 10%, 58% of accumulated retirement savings under Applying the Status Quo assuming NSSF contributions of 12% and 51% of accumulated retirement savings under Applying the Status Quo assuming NSSF contributions of 15%.

1. INTRODUCTION TO THE RESEARCH ON THE IMPACT OF THE NSSF ON THE SAVINGS AND INVESTMENTS MARKET

1.1. Background and Introduction

"Everyone has the right to have access to: (c) social security, including, if they are unable to support themselves and their dependents, appropriate social assistance."
- The Constitution Section 27 (1) (c)

The South African Constitution states, in Section 27 (1) (c), that the Government is mandated to provide support to those who are unable to support themselves. In addition, as Section 28 (2) of the Constitution states, the Government should take reasonable legislative and other measures, within its available resources, to achieve the progressive realisation of this right. One of the challenges in respect of social security and assistance facing the country's working population is access to appropriate and adequate retirement benefits, with which the planned implementation of the National Social Security Fund (NSSF or the Fund) will seek to address.

The existing retirement funding structure in South Africa for formally employed individuals, consists of a tax-incentivised pension sector with accumulated assets of approximately R 4 trillion across approximately 5 300 approved retirement funds. In addition, the State provides Old Age Grants to those deemed to need such a grant. Despite the current tax-incentivised retirement funding structure, more than two-thirds of South Africans reach retirement age without a funded pension benefit due to the lack of provisions and/or insufficient savings during their working lives and therefore rely on the Old Age Grant. Although contributory savings and insurance assists in providing basic income protection for some South Africans, access to appropriate retirement provisions for low-income earners remain limited due to high administration costs and minimum contribution constraints.

The National Social Security Fund (NSSF) will be a defined-benefit social security fund in the form of a centrally managed public fund that aims to provide adequate retirement and risk benefit provision for the working population of South Africa.

A broader risk pool across the entire workforce will be promoted by the centralisation of the fund. The centralisation of the fund is expected to reduce administrative costs due to the reduction in the complexity of the funds (by standardizing the benefits for all contributors) and the emergence of economies of scale. The NSSF will also aim to be inclusive by ensuring a minimum level of protection and offer risk benefits to all contributors from the outset for all participants, which will foster social solidarity among both low income and high-income earners of the country.

In order to ensure a minimum level of protection immediately for all participants, it is proposed that the NSSF will operate on a partially funded basis on a Pay-As-You-Go (PAYG) component as well as an accumulation of contributions to meet future requirements. The Fund may therefore be subject to a 5% minimum long-term reserve requirement and will have mandatory employer and employee contributions at the NSSF contribution rate (either 10%, 12% or 15% of earnings up to the NSSF earnings ceiling for those individuals earning above the NSSF earnings floor). The NSSF default fund will compete with current retirement funds on supplementary contributions above the NSSF contribution rate by encouraging consumers, including those who are not covered by retirement savings on implementation of the NSSF, to allocate these supplementary contributions to the NSSF through tax and other incentives.

The implementation of the NSSF will have an impact on household consumer saving and investment behaviour towards retirement savings. These impacts may be dependent on the age and income of the consumer and on the suitability of the NSSF as a substitute for the current retirement system. If it is a good substitute (i.e. benefits for NSSF are at least equal to the benefits of the current retirement system for the same contribution rate), then the implementation of the NSSF is expected not to have a substantial impact on overall consumer savings in that overall levels of consumer savings will largely be unchanged as contributions payable to the NSSF will be matched by an equal reduction in contributions to retirement savings. This will only be possible to the extent that changes to occupational schemes, for example, the closing down of occupational schemes where the majority of members earn in line with the NSSF earnings ceiling or the design of occupational schemes allow this, for example, flexibility in choice of contribution rates to occupational funds. A further impact may result from existing retirement fund members wanting to encash benefits prior to the introduction of the NSSF, as has been observed in response to proposed changes to rights to access retirement benefits, for example, the annuitisation of provident funds

If it is perceived not to be a good substitute, then the implementation of the NSSF is expected to have a significant impact on household consumer savings and investment behaviour – overall consumer savings may increase in that contributions payable to the NSSF will not be matched by an equal reduction in contributions to retirement savings.

Other factors that need to be considered are the individual's borrowing constraints and retirement age. Borrowing constraints may limit current workers' responses to the NSSF as any requirement to contribute to the NSSF if the individual is not covered in respect of retirement savings at the implementation of the NSSF will result in reduced discretionary savings or reduced consumption impacting on their welfare.

The impact on overall household saving rates may reduce should employees believe that the NSSF will provide sufficient income in retirement and adequate risk benefits and therefore do not make supplementary contributions. This risk is multiplied due to the financial illiteracy that many South Africans currently face. Low-income earners, previously not covered will be protected by a contribution subsidy so as to ensure their inclusion in the NSSF.

The impact on the State's ability to fund new business and infrastructure development will depend on the investment strategy that the Board of Trustees of the NSSF wants the fund to undertake. If the NSSF's Board of Trustees follows conventional retirement fund strategies, it would mean that the contributor's contributions are invested in, generally, the same assets that they were invested in through their old retirement funds, the only change would be the financial intermediary facilitating those investments. However, if the NSSF's Board of Trustees plan to implement their own investment strategies, they may see it viable to use the contributions to fund the country's infrastructure development and invest in local new businesses in an effort to grow the economy. This may be restricted to some extent by regulators. Investment in local infrastructure development and new business will not necessarily increase local investments but rather will shift the asset allocation of the local investment arena. The shift in asset allocation will have a secondary effect on foreign investment in the country as assets will be priced differently due to their change in demand and supply.

The NSSF will significantly impact existing retirement funds in relation to the size of funds under management and whether they remain viable in operating for example, funds that target lower-income employees who may find it challenging to make any further contributions above the mandatory NSSF contribution. These lower-income employees are likely to benefit from the NSSF given reduced expenses due to economies of scale and possibly better benefits. Occupational and voluntary funds will compete for an individual's retirement investment above the NSSF contribution threshold. These funds will need to adapt their contribution and benefit structures to account for the loss of the contributions redirected towards the NSSF. Current schemes will be assessed with respect to contributions and benefits and schemes that do not meet the required standards will be expected to either merge with other funds, or close with members transferred to the NSSF.

1.2. Purpose of the Report

The aim of this report is to assess the potential impact of the NSSF on savings and investment markets. These impacts include:

- Changes in the flow of funds between households, financial intermediaries and government;
- Changes in consumption, saving and investment behaviour of households and firms;
- Changes in the financing of business investment and in capital market flows; and
- Existing retirement funds.

1.3. Sources of Data and Information

The project made use of data obtained from tabled budget information (2020 Budget Statement, 2020 Supplementary Budget Statement[50] from National Treasury, the South African Revenue Service (SARS) Individual Panel Data, various Statistics South Africa (StatsSA) reports (including underlying data), Financial Sector Conduct Authority (FSCA) and South African Reserve Bank (SARB) reports. Aside from the above-mentioned data sources, a variety of documents and reports were utilised in the qualitative analysis as set out in the annexures below.

[50] Economic forecasts relating to the 2020 Supplementary Budget Review was also sourced from the following International Monetary Fund document: https://www.imf.org/en/Publications/CR/Issues/2020/07/28/South-Africa-Request-for-Purchase-Under-the-Rapid-Financing-Instrument-Press-Release-Staff-49612

Table 1: Data Sources

Data/Information	Source
2020 Budget Review 2020 Supplementary Budget Review	National Treasury
SARS Individual Panel and IRP 5 Data	National Treasury (SA-TIED)
Quarterly Labour Force Survey (Q1, 2020)Mid-year population estimates (2019)	StatsSA (www.statssa.gov.za)
Registrar of Pension Funds Annual ReportsCollective Annual Schemes Annual Reports Life Insurers Annual Returns	FSCA
National Financial Accounts (Q1, 2020)	Reserve Bank

1.4. Limitations of the Study

Projections set out in this report are estimates only. The projections are highly dependent on the data used and various assumptions adopted. Projections should therefore be treated with caution.

2. POTENTIAL IMPACT OF THE NATIONAL SOCIAL SECURITY FUND

2.1. Background: South Africa's Retirement Funding System

The discussion document, "Comprehensive Social Security in South Africa", prepared by the Inter-Departmental Task Team (IDTT) on Social Security and Retirement Reform published in March 2012 proposed the following social security system be introduced in South Africa in respect of retirement savings:

- **Pillar 1** comprises the Old Age Grant (OAG) (also known as the Old Persons Grant). This is the main source of income for a majority of South Africans over the age of 60 years, many of which have many years of formal and informal employment under their belt. This grant system is considered to be well administered despite difficulties that arise through the application of means-testing.
- **Pillar 2** will comprise of the National Social Security Fund (NSSF).
- **Pillar 3** will comprise various pension and provident funds arrangements that are usually linked to the formal employment sector (occupational funds). In addition, voluntary retirement savings can be made through retirement annuities. It is further proposed that Pillar 3 will include a NSSF Supplementary Fund that will compete with pension and provident funds arrangements and voluntary retirement annuities for contribution allocations to Pillar 3. Both occupational funds and voluntary retirement annuities are subject to a common regulatory and tax regime. The important features of the current system in South Africa, are that occupational funds linked to employers are primarily defined benefit in nature in the public sector and defined contribution in nature in the private sector. In respect of existing defined benefit funds, these are funded and independently administered. It is noted that replacement rates in the retirement industry are considered too low to provide adequate income replacement at retirement, thereby reducing retirees' standard of living with the possibility of falling into poverty. The lack of compulsory preservation is seen as a key driver behind inadequate replacement ratios. It is noted that this analysis excludes alternative retirement saving mechanisms such as property and discretionary savings.

5.3. Pillar 3

In the last decade the pension industry has grown significantly in South Africa. As per the FSCA Annual Report 2017, the total size of the assets held in the pension industry has increased from R 1 128 billion in 2008 to R 4 262 billion in 2017. The number of active members increased from 8 824 386 in 2008 to 11 245 322 in 2017, representing a 27.4% increase over this period. This is largely a result of the commencement of the inclusion of statutory funds such as the Government Employees Pension Fund (GEPF) in the FSCA annual reporting. Excluding underwritten funds, the number of active members increased from 5 826 901 in 2008 to 7 641 458 in 2017, representing a 31.1% increase over this period. It is noted that there is likely some double counting as some active members belong to more than one retirement fund.

During the same period, there was a 14.7% increase in the South African population and a 10.9% increase in the total number of employed people. This suggests that population and/or employment growth during the period were not the main drivers for the increase in the number of members in the pension industry, indicating that it is possible that more employed individuals accessed retirement savings and/or more employed individuals held two or more retirement savings products.

The total number of retirement funds dropped significantly from 11 701 in 2008 to 5 158 in 2017. This was due to the cancellation of mainly underwritten funds and a few privately administered funds in 2012; the majority of these funds were small with assets below R20 million which had ceased to operate, transferred to umbrella funds, or had not informed the Registrar they were terminating. This is in line with the stated objective of the FSCA which is to reduce the number of funds.

As per StatsSA Quarterly Labour Force Survey (QLFS), as a percentage of the total employed population, there has been a decrease in the proportion of formal employees without a retirement fund from 53.2% in 2008 to 49.8% in 2019. In 2019, the proportion of men and women without a retirement fund who were employed was 48.3% and 51.7%, respectively. This has decreased for males and increased for females when compared to 2008 statistics where the male and female percentages were 54.3% and 45.7%, respectively.

2.2. Impact: Existing Retirement Funds

The NSSF can be expected to significantly impact existing retirement funds as follows:

- Occupational and voluntary funds may suffer a significant loss of membership given the loss of the contributions redirected towards the NSSF;
- Occupational and voluntary funds will compete for an individual's retirement savings above the NSSF contribution level and on earnings above the NSSF earnings ceiling;
- Smaller schemes will experience larger per unit cost and therefore may form umbrella funds (multi-employer funds) to reduce costs;
- Existing pension and provident funds will need to adapt their contribution and benefit structures to take account of the new mandatory social security arrangement; and
- Current schemes will be assessed with respect to contributions and benefits and schemes that do not meet the required standards will be forced to close and members transferred to the NSSF.

The new environment will be particularly challenging for voluntary funds that target lower-income employees, who may find further contributions above the mandatory NSSF contributions challenging, or those with contribution rates that are not significantly above the mandatory level as set out below.

Research undertaken on behalf of the National Treasury by Jacques Malan Consultants and Actuaries (JMCA, 2011) investigated the impact of the proposed framework of the NSSF on bargaining councils and trade union funds. This research was presented in the paper: "Evaluation of the Impact of the Establishment of the National Social Security Fund and the Design of Benefits on Bargaining Council and Trade Union Funds".

The impact of the new framework for the NSSF was as follows at the time of the research (2011):

- The 1.4 million membership of the considered funds is to be distributed as follows:
  - 2% no longer participate in any fund;
  - 80% only participate in the NSSF; and
  - 18% participate in the NSSF and a top-up fund.

- The total contributions of R 8 billion per annum in 2012/2013 will be distributed as follows:
  - 17% will be lost due to reduced contributions at low income levels;
  - 67% will flow into the NSSF; and
  - 16% will flow into top-up funds.

Therefore, if the considered funds become "accredited top-up funds", they could retain around 250 000 members of the 1.4 million membership and R1.3 billion per annum in contributions of the R 8 billion per annum. Some funds are expected to close, while those that remain open will experience higher operating costs per member.

2.3. Impact: Adequacy

Fultz and Hirose (2019) researched the reforms enacted in Central and Eastern Europe from 1998 to 2007. The majority of the reforms were in favour of mandating employees to save for retirement in privately-managed individual accounts, while public systems played a limited role. They found that in many instances, pensioners had failed to adequately plan for retirement and thus required government to step in and provide full public pensions.

In 2008, Chilé introduced comprehensive pension reform through the New Solidarity Pillar (NSP). This is akin to South Africa's Pillar 1 which comprises the Old Age Grant. The NSP intended to prevent poverty amongst retirees who had saved insufficiently throughout their careers. This Pillar introduced a guaranteed basic pension to the poorest 60% of the population, irrespective of their historical pension contributions. The NSP programme provides old-age and disability subsidies financed by general revenues. Research on household behaviour showed an improvement in household welfare as a result of a number of factors: higher expenditure on basic consumption including health care (e.g. an increase of US$13 in annual expenditures on food and US$16 on medicine), improved leisure time resulting from reduced hours worked (a reduction of 1.6 hours per week) and enriched self-reported health. (Behrman *et al*. (2011) cited in Fajnzylber (2019).

In a study on pension reform from 1994 to 2017, Geri *et al*. (2019) found that although coverage increased, inequity increased with individual capitalisation from 1994 amongst both among the economically active and inactive population. While coverage for the economically active did not improve significantly with the return of a PAYG system, which was re-established in 2008 following a 14-year period of individual capitalisation, this was found to be as a result of the pro-educated bias among the economically active population.

The Estonia experience presents an example of reform that resembles the intended reform in South Africa. Vork and Piirits (2019) describe the shift in Estonia away from a defined benefit scheme to a multi-Pillared one with a PAYG element, as well as contribution-based insurance and a funded pension scheme. The results found that in an economic climate of high inequality of earnings, high long-term and structural unemployment rates (such as South Africa), the introduction of a link between contributions and future benefits raised income inequality. It is noted that the NSSF will be a career-indexed pension plan hence there will be an explicit link between earnings, contributions and benefits.

The overview of these examples of pension reform suggest that public pension systems provide better adequacy in the provision of pension benefits where there is no link between contributions and future benefits, particularly for low-income earners, resulting from cross subsidy that arises between high-income and low-income earners. The opposite is true where there is a link between benefits and contributions, with high-income earners achieving better adequacy. This is a particularly relevant for South Africa given our high inequality of earnings, high long-term and structural unemployment rates. The experience in South with respect private arrangements (occupational funds and voluntary retirement annuities) resulting in low coverage in relation to the full working age population and low replacement rates is in line with international experience. Therefore, the introduction of the NSSF will increase coverage and adequacy of retirement benefits for all formal employees through compulsory preservation.

2.4. Impact: Coverage

Auto-enrolment will be introduced in Pillar 3 of the revised South African retirement funding system. This entails employees automatically 'opting-in' to the system, which would then create an estimated pool the size of the formally employed sector in Pillar 3. The potential impact of this in South Africa is still unknown. As Hanekom stated[51], "*If the Government were to introduce auto-enrolment, how would the lower end of the market be served? As was the case in the UK, the small end of the market cannot be served cost effectively by the current providers in terms of current legislation. We therefore also have market failure in this sector and will have to establish a special fund. Thus far, every indication has been that such a fund will be a state-controlled fund.*"

In the United Kingdom, auto-enrolment into the National Employment Savings Trust was introduced in 2012 to improve retirement savings as a result of employers not having their own pension schemes. This was particular evident for low-income employees. The state therefore established a fund that could provide a pension offering at an affordable fee for low-income employees. Cribb and Emmerson (2019) found that employers who were obliged to implement automatic enrolment in the United Kingdom led to large increases in the pension participation rates

[51] https://www.fanews.co.za/article/company-news-results/1/sanlam/1055/pension-fund-auto-enrolment-how-will-it-affect-us-in-south-africa/20803

(a 36% increase) and in the total contributions to workplace pensions (a 1.05% increase in contribution rates). They found that the main reason for the increase in contribution rates was employers enrolling their employees into pension schemes with employer contributions well above the minimum contributions mandated by the government. The effect on pension saving was consequently increased due to the substantial spill-over effects of the policy. They further found that the pension participation rates of employees who were not obliged to be automatically enrolled increased by 18% on average, thereby more than doubling the pension participation rate among this group.

Peksevim and Akgiray (2019), in a comparison of pension systems in selected Organisation for Economic Co-operation Development (OECD) countries (Sweden, the Netherlands, Australia, Chile, Mexico, the United Kingdom, New Zealand and Italy) found the following:

- Mandatory private pension arrangements have the highest coverage rates compared to automatic enrolment and voluntary pension systems.
- In all countries, which apply compulsory pension arrangements, the coverage rates are above 70% (except in Mexico), whereas in the countries that formed part of the study who adopted automatic enrolment systems, the coverage rates range from 20% to 75%.
- The lowest pension plan participation rates is most evident in voluntary pension systems among the OECD countries considered.

This comparison was undertaken to inform policy considerations for the Turkish pension system. It was found that low coverage resulting (32.5%) from auto-enrolment had arisen largely due to the unaffordability of contribution.

With respect to automatic enrolment systems, coverage rates do increase, although the impact of such does vary. The experience of Turkey may likely apply at the lower- and middle-income earners level in South Africa.

2.5. Impact: Labour Market

According to National Treasury (2004), "*South Africa has a high rate of unemployment, a large informal sector, and many working-age individuals who have period of unemployment scattered throughout their working lives*". Under the current proposed system, pension contributions would be defined by formal employment. The primary risk is that employees may be disincentivised from seeking formal employment as this would result in a higher income bracket resulting in the introduction of, or increase to, their contributions to the NSSF, which would result in a reduction in net income. It is proposed that government will subsidise the contributions of low-income employees to minimise disruptions to the demand of supply of labour associated with the introduction of mandatory contributions. However, it is expected that some disruption will occur at the ceiling at which the subsidisation of contributions will cease. This could be mitigated to an extent by a scaling down the level of subsidisation over a pre-defined earnings range. Based on the analysis set out in Section 4.1.3, individuals covered in respect of retirement savings, contribute at a minimum of 11% of earnings across genders on an age group and earnings group basis. Therefore, disruption will occur at NSSF contribution rates of 12% and 15% and for those who are not covered in respect of retirement savings, ranging from approximately 80% at the NSSF earnings floor to 20% at the NSSF earnings ceiling.

As per Fajnzylber (2019), as a result of the NSP introduced in Chilé, research on household behaviour showed an improvement in household welfare as a result of improved leisure time resulting from reduced hours worked (a reduction of 1.6 hours per week). As a result of the reduced hours, labour market participation rates fell (Behrman *et al*. (2011)). Wong (2016), cited in Fajnzylber (2019), analysed the shift in the labour market between the formal and uncovered sector by exploiting the differential impact of the Chilean pension system reform on the relative attractiveness of formal and uncovered sector jobs for different subgroups of the population. The first sub-group included those individuals who expected an increase in their marginal tax rate on pension contributions due to existing pension rights at reform while the second sub-group included individuals who faced a drop in their implicit marginal tax rate due to no pension rights at reform. Results show that the first subgroup is, on average, about 2.9% less likely to work in the formal sector after the reform and that the second subgroup is found to be about 8% more likely to work in the formal sector after the reform. Fajnzylber (2019) concluded that the empirical results of Chile are consistent with theoretical predictions in terms of labour market behaviour, but the estimated impacts are relatively small. However, this may not be the case with South Africa given our structural high unemployment.

2.6. Impact: Consumer Behaviour

The overall impact of consumer behaviour specifically relating to consumption, savings, investment and insurance, depends on the balance of the different responses by different groups of employees to these different components.

Given the introduction of mandatory contributions to the NSSF, consumers might respond by reducing their savings (defined as Pillar 3 savings) so that the overall value of the contributions is at a level which has little effect on capital accumulation. The extent of the reduction of their Pillar 3 savings will be limited to some extent by the quasi-mandatory nature of Pillar 3 savings, the response of employers in relation to integration of the NSSF into occupational scheme design and the resulting coverage rates that arise. It is noted that with respect to bargaining council funds, the decision-making processes in collective bargaining will not necessarily reflect consumer choice considerations.

With respect to voluntary retirement annuities, individuals are fully in control of their retirement savings levels hence this form of Pillar 3 savings will be fully impacted upon by consumer behaviour. These individuals are most likely to be high-income earners.

Shifting contributions from occupational funds to the NSSF may lead employees, where this is made possible by employers closing occupational funds or flexibility in contribution rates to occupational funds, to save less, the resulting impact on Pillar 3 savings and insurance pool (and hence, capital accumulation) could be negative if the reduction in voluntary savings is greater than mandatory contributions to the NSSF. On the other hand, employees may be required to continue to Pillar 3 saving at levels prior to the implementation of the NSSF, so that capital accumulation increases. Indeed, employees who are not covered with respect to retirement savings and have borrowing ability may sustain their zero private savings in the face of accounts financed by additional mandatory contributions. Therefore, the impact on savings be anything from negative to largely positive depending on the ability of employees to implement desired behaviour which will depend on whether retirement savings occurs through voluntary retirement annuities or occupational funds and the resulting impact of the NSSF on occupational funds.

Consumer behaviour will also depend on any potential changes to the tax treatment of Pillar 3 savings and the tax treatment of NSSF contributions. Any differential tax treatment will impact on the relative attractiveness of contributions to NSSF versus Pillar 3 savings. For example, if contributions to the NSSF receive relatively better tax treatment, this will increase in the relative attractiveness of contributions to the NSSF compared to retirement savings. This may result in the diversion of contributions to retirement savings to the NSSF through supplementary contributions. This may be limited in line with the discussion above.

Various studies have measured the net effect of the change in private savings following the introduction of mandatory contributions to social security. An example of such a study was conducted by Lehmann-Hasemeyer and Streb (2017). Their investigation was based on a regression analysis of the German social security system of the 19th century. The authors analysed savings through bank deposits at a county (provincial) level and found that crowding out of private savings did in fact occur. It was also suggested that the crowding out of savings was linked to the confidence in the social security system (or lack thereof), which is often correlated with the length of existence of these systems. It is noted that there are risks to using data as old as this, as savings behaviour changes across generations (Koloba, 2018).

The impact on retirement savings depends on the relative rate of crowding out which dictates whether forcing saving on households through a NSSF reduces the absolute amount of overall savings that will take place. Alessie, Angelini and Santed (2013) provide a recent examination of this effect. Using survey data on job and wage histories of respondents known as the SHARELIFE (Survey of Health, Ageing and Retirement in Europe) in 13 European countries, the authors implemented a lifecycle regression model to understand the displacement effect. They found that a €1 increase in pension wealth is associated with a 47% decline in private wealth or savings, although it is noted that full displacement may be achieved using other types of econometric modelling. However, the authors highlight that caution must be exercised when gathering pension fund data. Gale (1998) stated that "*pension wealth data are of generally poor quality; all methods of calculating pension wealth in defined benefit plans are likely to create measurement error*".

Vaillancourt *et al*. (2015) studied the experience in Canada in relation to the expansion of the compulsory government pensions system. The research was carried out within the context of the proposed expansion of the Canada Pension Plan. The evidence from 1986 to 2008 found that increases in compulsory pension contributions were followed by decreases in the rate of private savings among households. Further, they found a 1% increase in

the rate of compulsory contribution resulted in a 0.895% fall in the private savings rate. This suggests a net positive effect – households did not totally offset their reduction in private saving, thereby increasing overall saving.

Attanasio, Meghir, and Otero (2011), cited in Fajnzylber (2019), estimated the impact of the Chile pension reform on the relationship between pension wealth/accrual rate. It is estimated that the reform increased self-financed pension wealth as well as the resulting final pension at retirement. They also concluded that the pension improvement for women was higher than that of men, significantly reducing gender inequalities.

The changes in retirement savings will likely be dependent on the age, wealth and education level of the consumer and on the suitability of the NSSF as a substitute for the current retirement system. If it is a good substitute (i.e. benefits for NSSF are equal to the benefits of the current retirement system for the same contribution rate), then the implementation of the NSSF is expected to not have a substantial impact on savings. If it is not a good substitute, which may be the case for the NSSF due to the inclusivity of the income protection benefit to contributors of the fund implying cross-subsidies by and across contributors, then the implementation of the NSSF could be expected to have an impact on household consumer savings and investment behaviour. This however will be limited to some extent by the quasi-mandatory nature of Pillar 3 savings, the response of employers in relation to integration of the NSSF into occupational scheme design and the resulting coverage rates that arise

This is demonstrated by Lachowska and Myck (2015). The change in pension wealth introduced by Poland's 1999 pension reform was studied to estimate the effect public pensions have on household saving. The impact of the pension's reform was to decrease the value of public pensions. They found that public pensions crowd out private saving by 0.24% for each 1% contribution to public pensions. For middle-aged cohorts, the crowding out of private saving was equal to 0.54% for each 1% contribution to public pensions. The crowding-out effect of private savings for younger cohorts equalled to 0.30% for 1% contribution to public pensions. When the analysis included age and level of education of households, it was noted that this effect was strongest for highly educated households and older households – up to complete crowding out. For these groups of households, they found that public pension and private saving were close to perfect substitutes. For the young and less-educated cohorts, the crowd-out was less than one-for-one. The reasons for this was attributed to information asymmetry and the level of financial literacy.

Kang and Lim (2006) estimated the effect of the public pension system on private savings in Korea and whether this was affected by disposable income (represented by household balance sheets). Various types of household status were analysed over a five-year period, including households with a consistent balance sheet surplus and households with a consistent balance sheet deficit and households with a combination of a surplus or deficit on their balance sheets over the period considered. They concluded that the crowding-out effect in constant surplus households is larger than in constant deficit households. In addition, households with a surplus or deficit showed a lot bigger crowding-out effect than do either of the former two cases. This means that those whose income earnings are unstable decrease their current savings and then expend them, implying that the magnitude of the crowding-out effect depends on the stability of income.

2.7. Impact: Economic Growth

Under the proposed NSSF model, mandatory saving will be split into a Pay-As-You-Go (PAYG) element and accumulation of contributions element to meet future requirements. This is in order to ensure a minimum level of protection immediately for all participants. It is proposed that the NSSF be subject to a 5% minimum long-term reserve requirement. While the proposed design suggests that the stock of savings and hence investment may decline initially as the PAYG system is used to fund immediate benefit payments, the NSSF will be mandatory and would include additional participants not currently covered in the retirement industry, therefore allowing for the possibility of increasing contributions relative to current contributions to retirement savings (up to the NSSF earnings ceiling). In practice, this will depend on the relative value of contributions versus actual benefits.

Feldstein (1981) was one of the first to comment on the impact of the introduction of a PAYG system. He found that introducing a PAYG system raised aggregate consumption and discouraged private saving. There is limited research on the impact on investment of moving toward an unfunded social security system, such as the PAYG described in the NSSF. Much of the literature, such as Pogue and Scontz (1977) finds that social security may reduce the level of overall saving. Barr and Diamond (2002) review behavioural aspects of the link between contributions and savings from an economic theory perspective. They discuss the conditions for when funding increases savings. They highlight that funding does not increase saving if the mandatory pension saving is offset by a decline in saving of voluntary pensions. They further conclude that the relationships do not always hold, and

must be examined on a case-by-case basis. To form an opinion in the South African context, this relationship would first need to be tested empirically, and compared internationally to find countries with similar experiences.

From a developing policy perspective, Aggarwal *et al* (2006) investigated a movement away from an unfunded PAYG system in countries such as Venezuela, Bulgaria and Argentina. The results suggested that countries that implemented a defined-contribution reform did not have significantly higher savings rates after the reform. However, critically, they find that the cross-sectional analysis of a panel of countries exhibited lower savings when a PAYG system implemented. Further, Ortiz *et al* (2018) conclude that 60% of countries that had reversed the privatisation of public mandatory pensions due to the evidence of accumulated evidence of negative social and economic impacts such as increased gender and income inequality, increased fiscal pressures and higher administration and other costs.

When analysing the impact of savings on investment through the introduction of a social security system it is important to understand the links between aggregate saving and economic growth. Sothan (2014)5 linked savings to growth and investment, stating that higher savings result in higher capital accumulation and increased investment and, thus, increased economic growth. Conversely it has been noted that low savings result in lower capital accumulation and lower investment and, thus, in lower economic growth, ultimately exacerbating unemployment (StatsSA, 2013; National Planning Commission, 2011; National Treasury, 2016a; 2016b).

Increased investment leads to increased fixed capital formation, and the deepening of capital markets. Bijlsma *et al*. (2018) identify two factors that affect the economic landscape. The first is that pension savings may lead to deeper and more efficient capital markets by increasing the level of funds available to capital markets. This is backed by research from Wurgler (2000), which states that combining an increase in the pool of savings with efficient capital markets increases investment domestically. Secondly, higher levels of pension saving may affect the financial system in favour of institutional investors. These investors traditionally adopt a long-term maturity view, which has been found to improve governance and firm efficiency. Vittas (1996) corroborates this effect, as the experience of Chile showed that funded pension schemes lead to a significant impact in capital market development as a result of long-run financial savings. Vittas also suggests that the resilience of Chile's financial system played a role in buffering the system against the volatility of emerging markets during 1995. It is noted that South Africa already has deep capital markets, thereby implying that further development of its market is minimal as suggested by the above research.

Davis and Hu (2008) investigate the link between pension assets and economic growth over 38 OECD and emerging market economies over a 40-year period from 1960 to 2002. Their results suggest a positive relationship between pension assets and economic growth, with a consistently larger growth impact for emerging market economies. They also find that South Africa could expect a 0.14% increase in economic growth as a result of a 1% increase in pension assets. However, the results are not necessarily conclusive on this matter, as Zandberg and Spierijk (2010) found no correlation between funding of pensions and economic growth in both an OECD and non-OECD sample for the period 2001 to 2008. The authors explain the three potential benefits of a higher degree of a funded pension system as: capital market development through a higher pool of savings; a higher aggregate savings rate; and the reduction in labour market distortions as funded pension systems allocate labour more efficiently towards labour supply decisions than unfunded systems. However, controlling for capital market returns of pension funds and demographic factors (size of ageing population), they found no evidence of a relationship between pre-funded pensions and economic growth.

Bijlsma *et al*. (2018) attempted to clarify these contradictory conclusions. They elaborate on the positive correlation between a stronger pension system and faster economic growth through the deepening of capital markets, which in turn stimulates growth. However, they make a number of clarifying warnings on attempting to study this direct linkage. Cross-country models typically suffer from endogeneity and causality problems that blur the relationship. Instead, the authors use industry or firm dependence on external finance as the linkage with deepening capital markets to justify accelerated economic growth. They find that increasing pension funds as a fraction of GDP by 40% could increase growth for the sector by approximately 0.24%.

2.8. Impact: Cost of Capital

The literature on consumer behaviour set out above has illustrated that introducing a mandatory social security system may result in partial or total crowding out of private savings, or may increase overall savings. Furthermore, under the proposed NSSF model, the introduction of a PAYG element may decrease the overall level of savings compared to the current system. It also creates an implicit national debt to future generations. The net impact will be an increase or decrease in savings and consequently capital accumulations, which according to supply and

demand relationships as per traditional economic theory, results in an increase or decrease in the cost of capital. Transition arrangements with respect to the NSSF can be structured so that the overall level of savings increases. However, increased saving results in lower consumption. Household consumption is the single largest contributor to South Africa's GDP on the expenditure side.[52] Therefore any requirement to contribute to the NSSF, particularly for those individuals who do not contribute to retirement savings, may reduce aggregate demand and economic activity. Over the long term, however, if a higher saving rate materialises, as in line with economic theory this will generally lead to higher levels of economic output through the provision of funding to businesses for investment. The overall level of investment in an economy is one of the primary determinants of long-term economic growth.

Dadam and Viegi (2018) suggest that increased supply of savings reduces the cost of capital and promotes investment.[53] The authors attribute the rapid economic growth period of 1965 to 1990 in East Asian countries as a result of forced saving that brought down the cost of capital. It is important to differentiate here, however, that forced saving in the East Asian example is regarded as increasing the pool of funds that could be used for productive investing. This was combined with capital controls, which kept interest rates low and forced domestic capital to remain within the economic system, which resulted in rapid growth in the sectors of agricultural, manufacturing and services industries. It was found that a lot of the success of the East Asian "miracle" was a combination of extensive intervention in financial markets, as well as efficient allocation of capital within the economy (Stiglitz, 1996).

In an open and small economy such as South Africa, free capital flows can lead to significant capital outflows from the economy. However, this is limited in respect of retirement savings whereby Regulation 28 limits the extent to which these funds can be invested offshore. This depresses the multiplier impact of accumulated savings in the economy. Lower levels of savings will lead to slower capital accumulation. As a result, investment declines and GDP growth is potentially slower. Despite this, free capital flows are also a positive enabler for growth. A deep and fluid financial system holds attraction to foreign investors. Efficient systems create trust and are able to weather financial or economic crises more smoothly than inefficient systems. The ultimate outcome of this is that raising capital is easier, and the cost of capital is lower.

As cited by Moleko (2019), Walker and Lefort (2002) investigated pension fund reform and its impact on capital market development in emerging market economies. The results show that pension funds reduce the cost of capital. Walker and Lefort (2002) and Hu (2012) argue that the long-term investments required by pension fund managers lowers the liquidity premium. This, combined with the long-term outlook of pension funds, lowers the equity risk premium, all leading to a reduction in the average cost of capital.

Further distinctions must be made with regards to the impact of savings on the cost of capital in respect to the ability to invest locally or in foreign assets. Feldstein and Bacchetta (1989) suggest that adding domestic saving to a world pool of investment might negate any relationship between domestic savings and domestic investment. Damdam and Viegi (2018) concur with this, stating that "South African firms do not have a problem of financing investment: they just don't want to invest at home." The RCS Report for 2019 shows outbound investment may be four times higher than foreign inflows. Furthermore, the demand for domestic investment assets remained depressed since 2016. Therefore, differentiation must be made in the modelling as to the demand for domestic versus foreign assets.

Therefore, given the links between increased savings and the cost of capital, a resulting decrease in aggregate saving may increase the cost of capital. However, decreases in domestic savings however may crowd-in foreign savings if there is sufficient demand for South African assets.

There may also be differing impact on the cost of capital for the private and public sector. This will depend on the investment strategy of the NSSF and how this impacts the supply of savings for investment in the various asset classes underlying the NSSF and accumulated retirement savings. Investments under the NSSF may favour debt markets and public sector funding resulting in reduced level of investment for other asset classes even where the overall level of savings after implementation is expected to increase. This may increase the cost of capital for the private sector or increase the cost of equity compared to debt. Increases to the cost of capital for private sector will reduce the demand for investment or change the relative attractiveness of equity versus debt.

Furthermore, the impact on the State's ability to fund new business and infrastructure development will depend on the investment strategy of the NSSF. If the investment strategy is in line with Regulation 28, it would mean that the members' contributions are invested in the various asset classes in roughly the same proportion underlying

[52] https://www.idc.co.za/wp-content/uploads/2019/07/IDC-RI-publication-Economic-Overview-external-21-June-2019.pdf
[53] https://hsf.org.za/publications/focus/focus-82-the-economy/4-viegi-and-dadam.pdf

retirement savings. The only change would be the financial intermediary facilitating those investments assuming no change to the level of savings. However, if investments under the NSSF favour debt markets and public sector funding, this may be used to fund new business and infrastructure development.

3. ASSESSMENT OF THE POTENTIAL IMPACT OF A NATIONAL SOCIAL SECURITY FUND

Institutional sectors in the South African economy (household, general government, foreign sector, financial intermediaries and corporate business enterprises) with surplus funds seek appropriate investments, while those with deficit positions require suitable funding.

Retirement and discretionary savings by households provide a source of funds to financial intermediaries including collective investment schemes, life insurers and retirement funds who channel funds to other institutional sectors in need of funding through various financial assets, such as loans, shares and fixed-interest securities. The flow of funds through financial intermediaries therefore plays a pivotal part of providing funding to other institutional sectors in need of funding through various financial assets. These inter-sectoral flows of funds are reflected in South Africa's National Financial Accounts.

With respect to 2019, South Africa's National Financial Accounts show that the foreign sector's net lending position was R153 billion which mirrored a domestic shortfall of the same amount. The general government sector recorded an all-time high net borrowing position of R248 billion. General government sourced funding from financial intermediaries, non-financial business enterprises and the foreign sector to finance this shortfall.

Financial intermediaries include banks, insurers, retirement funds and the Public Investment Corporation, which invests assets on behalf of public sector funds such as the Government Employees Pension Fund. These financial intermediaries increased their holdings of government bonds by R 102 billion.

Households had sourced R163 billion from non-financial business enterprises and, in turn, financial intermediaries obtained funds of R150 billion from households, reflecting a net borrowing position of R10 billion. This is line with trends with respect to household savings in South Africa with household savings rates being close to zero. Private non-financial business enterprises accounted for the largest proportion of gross saving in 2019 (56.2%).

3.1. Methodology and Assumptions

In order to assess the potential impact of the NSSF in South Africa, the flow of funds in relation to retirement savings and the investment thereof in South Africa was projected as follows:

- Net inflow of funds to retirement savings made by or on behalf of individuals
- Accumulation of retirement savings held by financial intermediaries.

This was done on two bases, namely Applying the Status Quo whereby no NSSF is introduced and Implementing the NSSF.

3.1.1. Methodology

3.1.1.1. Applying the Status Quo

Under Applying the Status Quo, contributions to retirement savings, including risk benefits, by the formally employed were modelled based on a gender, age and earnings group basis using effective contribution rates (contributions to retirement savings as a percentage of earnings) to approved retirement funds calculated from

Individual Panel and IRP5 data for the tax years 2017 and 2018.[54] By definition, these effective contribution rates include premiums for approved risk benefits and administration expenses. This approach assumes an average contribution rate for each gender, age and earnings group.

[54] Earnings have been defined in line with Kerr (2020) as the sum of source codes 3601, 3605, 3606, 3607, 3615, 3616, 3703, 3707, 3717, 3718, 3801, 3802, 3808, 3810, 3813, 3814, 3815, 3816, 3820 and 3821. Contributions to retirement savings have been taken as the sum of source codes 4001, 4003, 4006 and 4472.

These were projected forward by linking the number of contributors to formal employment estimates, allowing for proportion of those in formal employment deemed to contribute to or have contributions made on behalf of them to retirement savings over the projection period in line with assumed earnings inflation. Contributions were limited to the maximum contribution limit set by SARS that attracts tax relief from 2020.

It is noted that contributions to retirement annuities made in an individual's personal capacity are not reflected in IRP 5 data. The following table sets out total contributions to retirement savings as per IRP 5 data for tax years 2017 and 218 compared to reported contributions by the FSCA for 2016 and 2017:

Table 2: Comparison of Total Contributions to Retirement Savings as per IRP5 data and FSCA Annual Reports

	2017 Tax Year/2018 Calendar Year(R'million)	2018 Tax Year/2018 Calendar Year(R'million)
IRP5 Data: Total Contributions to Retirement Savings	228 695	239 602
FSCA Annual Reports: Total Contributions to Retirement Savings	205 794	215 297
Difference	22 901	24 305
% Difference	10%	10%

The difference of approximately 10% over period considered is attributed to retirement annuities made in an individual's personal capacity. It is noted that this may also be the result of the calculation of deemed per person contributions in relation to the Government Employees Pension Fund. The IRP5 data is therefore considered representative of contribution flows to occupational funds as well as employer related retirement annuities given that all employers must issue an IRP5 for employees unless they earn less than R 2 000 per annum. Appropriate allowance has been made for the impact of these contributions in projections assuming contributions in line with the effective contribution rates calculated above. It is noted that in respect of defined benefit members, contributions recorded in IRP5 data are deemed contributions and hence not necessarily actual contributions.

Retirement savings were accumulated as follows:

- Projected contributions to retirement savings as described above.
- Benefit payments covering payments on death, disability, resignation, retirement, retrenchment and termination from retirement savings were projected based on expected changes in formal employment estimates allowing for proportion of those in formal employment deemed to contribute to or have contributions made on behalf of them to retirement savings.
- Administration and other expenses (including reinsurance premiums) were projected forward by calculating a percentage of pensionable earnings based on historical data (2016 to 2019) and projecting this forward based on the projected pensionable earnings as described above.
- Investment return was estimated by applying expected returns to the various asset classes held by retirement funds with asset classes being based on the split of asset classes being held by retirement funds as at 31 December 2019. Allowance has been made for investment management fees by calculating these fees as a percentage of retirement savings assets based on historical data (2016 to 2019) and projecting the reduction in investment return by applying this percentage to retirement savings assets.

3.1.1.2. Implementing the NSSF

Under Implementing the NSSF (Pillar 2), retirement savings were projected as follows:

- Contributions to the NSSF were modelled on an age group and earnings category basis, based the number of individuals in formal employment and their earnings as per IRP5 data for the tax year 2017 and 2018. Effective contribution rates in each category were calculated by allowing for contributions to the NSSF up to an earnings ceiling (R 276 000 in 2018 terms). Contributions were projected by allowing for the estimated number of individuals in formal employment earning above the earnings floor (R 20 000 in 2018 terms) over the projection period, applying the NSSF effective contribution rates and projecting earnings in line with

assumed earnings inflation. It is noted that in the first year of implementation, formally employed individuals within one year of retirement are assumed not to join the NSSF.

- Contributions to retirement savings were modelled as under Applying the Status Quo and deducting NSSF contributions to those in formal employment who are were contributing to retirement savings under this scenario. A number of scenarios were considered as to how these net contributions may change due to changed savings behaviour as well as how retirement funds may be affected as discussed in Section **3.1** above. Administration and other expenses (including reinsurance premiums) were projected forward under Implementing the NSSF through the impact on pensionable earnings as per the methodology for accumulating retirement savings.

The following is noted with respect to Implementing the NSSF (Pillar 2):

- All formally employees will join the NSSF subject to earning above the NSSF earnings floor. This includes both private and public sector employees.
- All accrued retirement savings rights will not be affected by the NSSF transition, that is, they will remain within Pillar 3.

Various scenarios were considered with respect to contribution rates to the NSSF, namely 10%, 12% and 15% of earnings up to the earnings ceiling for those formally employed individuals' earnings more than the NSSF earnings floor. Given the concerns regarding the sustainability of the NSSF allowing for risk benefits, the impact of segregating funding for retirement benefits in the NSSF, allowing for a 6% contribution rate, is considered. A separate 4% contribution rate is assumed to cover risk benefits, the accumulation of which has not been allowed for the various projections. Alternatives have been considered in relation to the NSSF earnings ceiling to which the contribution rates apply. Currently, the NSSF earnings ceiling is proposed to be R 276 000 in 2018 terms. As an alternative, a NSSF earnings ceiling equal to the current UIF earnings limit has been modelled (currently R178 464 per annum).

The scenarios considered allow for how contributions to retirement savings, for those covered by retirement savings at implementation of the NSSF, above the contribution level required by the NSSF may change. If the consumer considers it is a good substitute (i.e. benefits for NSSF are equal to the benefits of the current retirement system for the same contribution rate), then the implementation of the NSSF is expected to not have a substantial impact on savings and vice versa. Research suggests that partial crowding out, if allowed, should be expected as was the case in Canada, Poland and Korea as discussed in Section **2.6**. Full crowding out may occur at older ages and higher education levels if benefits are viewed as a perfect substitute. It is evident that the response may vary across the formally employed population, with the total response across this population dictating the extent of the crowding out. The extent of the reduction of their Pillar 3 savings will be limited to some extent by the quasi-mandatory nature of Pillar 3 savings, the response of employers in relation to integration of the NSSF into occupational scheme design and the resulting coverage rates that arise

It is noted that crowding out may also occur if employers alter the design of their retirement funds to align to the design of the NSSF. For example, it can be considered likely that employers will reduce contribution rates where these are higher than those to the NSSF.

The following scenarios have therefore been allowed for:

- **Full Crowding Out Scenario**: This allows for the full displacement of retirement savings of those formally employed individuals currently covered in respect of retirement savings of contributions of 10%, 12% or 15% of earnings up to the NSSF earnings ceiling.
- **Contribution Alignment Scenario**: This allows for the alignment of contribution rates under Pillar 3 for occupational funds and voluntary retirement annuities to the NSSF contribution rate (10%, 12% or 15% of earnings).
- **Partial Crowding Out Scenario**: This allows for the partial displacement of retirement savings of those formally employed individuals currently covered in respect of retirement savings of contributions of 10%, 12% or 15% of earnings up to the NSSF earnings ceiling. Covered individuals are expected to allow for a partial crowding of 50% of contributions to the NSSF at higher income levels with full crowding-out at lower income levels (below the NSSF earnings limit).

It is noted that with respect to the event of no crowding out the accumulation of retirement savings is equal to that under the Applying the Status Quo. This is considered a theoretical outcome given that no crowding out will not be possible for low-income earners.

The impact of the informally employed participating in the NSSF has been considered. Those individuals in the informal sector, earning above the SARS tax threshold (R83 100 in the 2020/21 tax year), have been identified as possible participating the NSSF. Data as per StatsSA General Household Survey 2018 has been used to determine the proportion of the informally employed that earn in excess of the SARS tax threshold for modelling purposes.

The NSSF will compete with current retirement funds on supplementary contributions above the mandatory contributions, up to the NSSF earnings ceiling, by encouraging consumers to allocate these supplementary contributions to the NSSF Supplementary Fund through tax and other incentives. For purposes of this comparison, the scenarios considered only allow for the impact of consumer behaviour for those currently covered in respect of retirement savings and assuming they will not shift their contributions in excess of the mandatory NSSF contributions of earnings up to the NSSF earnings ceiling to the NSSF. Further, informally employed individuals have not been included in the analysis.

As discussed, approximately half of the formally employed population are currently not covered. Further contributions to the NSSF Supplementary Fund may arise if these individuals, particularly those who earn above the NSSF earnings ceiling, opt to contribute to the NSSF Supplementary Fund on earnings above the NSSF earnings ceiling. Various scenarios are presented in this respect allowing for participation rates of 30%, 65% and 100% for individuals earning above the NSSF earnings ceiling who are not covered in respect of retirement savings at Implementation of the NSSF. This in line with research set out in Section **2.4** which indicates a range of coverage outcomes. Based on the experience in Turkey, this implies a minimum participation rate of approximately 30%.

The following table illustrates the flow of contributions for an individual's earnings above the NSSF earnings floor, who are covered in respect of retirement savings or not covered in respect of retirement savings (15% NSSF contribution rate):

Table 3: Comparison of Flow of Contributions for Individuals Earnings above the NSSF Earnings Floor who are Covered/Not Covered In Respect of Retirement Savings

	Earnings level	NSSF Contributions	NSSF Supplementary Contributions	Contributions to Occupational Funds and Retirement Annuities
Not Covered in Respect of Retirement Savings	0 - NSSF Earnings Ceiling	15%	0%	Not covered
	> NSSF Earnings Ceiling	0%	15%	
Covered in Respect of Retirement Savings	0 - NSSF Earnings Ceiling	15%	Covered	Full Crowding Out: Effective contribution rate multiplied by earnings less NSSF Contributions Partial Crowding Out: Effective contribution rate multiplied by earnings less NSSF Contributions multiplied by partial crowding out factor Contribution Alignment: NSSF contribution rate multiplied by earnings above the NSSF Earnings Ceiling
	> NSSF Earnings Ceiling	0%	Covered	

The accumulation of the NSSF (Pillar 1) is projected as follows:

- Contributions to the NSSF were projected as described above.
- Benefit payments were projected in line with the benefit structure set out in the table below.
- Administration and other expenses were assumed to be 0.25% of pensionable earnings defined as earnings to the NSSF earnings ceiling.
- Investment return was estimated by applying expected returns to the various asset classes held under the assumed investment strategy of the NSSF. The assumed investment strategy includes two scenarios, namely, investment in line with Regulation 28 of the Pensions Fund Act No.24 of 1956 reflecting the asset distribution underlying accumulated retirement savings as at 31 December 2019 and a conservative investment strategy allowing for 80% of assets invested in South African bonds with the remaining 20%

invested in the remaining assets classes in the same proportion underlying accumulated retirement savings as at 31 December 2019. Allowance for investment management fees has been made in line with Applying the Status Quo.

The following benefit structure has been confirmed for the NSSF:

Table 4: NSSF Benefit Structure

Benefit Design Item	Description
Fund Type	Career-indexed pension plan
Normal Retirement Age	65
Earnings Limit	R 276 000 in 2018 terms (Alternative: UIF Earnings Limit, R 178 464 in 2020 terms)
Earnings Floor	R 20 000 in 2018 terms
Increases to Earnings Limit	CPI
Increases to Earnings Floor	CPI
Contribution Rate	10%/12%/15% of earnings between the NSSF earnings floor and earnings ceiling
Normal Retirement Benefit	1.09% x pension earnings per year of service
Survivor Benefits	% of normal retirement benefit is paid to dependents, 50% for one dependent, 75%for two dependents and 100% for three of more dependents
Disability Benefit	32.7% x pensionable earnings (immediate vesting)
Death Benefit	40.0% x pensionable earnings (immediate vesting)
Funeral Benefit	R 20 000 in 2018 terms
Phased-in implementation	All formally employed individuals who are aged 64 and younger to join the NSSF at implementation.

Retirement savings were accumulated as under Applying the Status Quo allowing for the various scenarios with respect to how retirement savings may change under Implementing the NSSF. A long-term projection has been carried out projecting the level of savings and investment attributed to the retirement system under Implementing the NSSF compared to under Applying the Status Quo over a 100-year period in line with the methodology outlined above.

3.1.2. Assumptions

The following economic assumptions were applied over the projection period 2020 to 2025.

Table 5: Economic Assumptions

	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25
Real GDP Growth	0.2%	-7.2%	2.6%	1.5%	1.5%	2.1%
Unemployment Rate	28.7%	36.4%	36.1%	36.6%	37.1%	37.2%
CPI	4.1%	3.0%	3.9%	4.3%	4.5%	4.5%
Real Earnings Inflation	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%

The number of formally and informally employed individuals has been based on employment estimates as per the StatsSA Quarterly Labour Force Survey for Quarters 1 to 4, 2019. The proportion of the population who remain employed has been projected based on GDP growth assumptions and its impact on the unemployment rate. The ratio of formally employed to employed in 2019 (68.7%) is assumed to remain the same, that is, any employment gains or losses over the projection period are borne by the formally and informally employed in relation to their

share of total employment in 2019. It is further assumed that there is no shift in employment type (formal and informal) as a result of the implementation of the NSSF as discussed in Section **2.5**.

The following expected real returns were applied to accumulated retirement savings over the five-year projection period:

Table 6: Expected Real Returns on Assets

Asset Class	Real Return
International Bonds	-1.0%
International Cash	-1.0%
International Commodities	5.0%
International Equities	5.0%
International Other	5.0%
International Real Estate	6.0%
SA Bonds	4.0%
SA Cash	2.0%
SA Commodities	7.0%
SA Equities	7.0%
SA Other	7.0%
SA Real Estate	6.0%

Returns for international asset classes are expressed in dollar terms. Any depreciation of the rand to the dollar over the five-year period will increase returns.

Demographic assumptions applied to the projection of benefit payments from the NSSF are in line with those used in the International Labour Organisation's (ILO) NSSF projections as present in their report "South Africa Data and Scheme-Specific Assumptions_2020-07-25".

In respect of the long-term projections, the assumptions used have been aligned to those used by the ILO in their NSSF projections as present in their reports "South Africa Data and Scheme-Specific Assumptions_2020-07-25" and "Présentation_Design+Actuarial Valuation + Funding_2020-07-30".

These include a real return of 3.5% net of investment fees in relation to a conservative investment strategy for the NSSF and real salary growth of 1.1%. A real return of 5.0% net of investment fees has been assumed for the accumulation of retirement savings in Pillar 3.

3.2. Projection of Retirement Savings under Applying the Status Quo

3.2.1. Analysis of Individuals Contributing to Retirement Savings

Based on Individual Panel and IRP5 data for the tax year 2017 and 2018, 53% of formally employed males are covered through formal retirement arrangements while 46% of formally employed females are covered. This is in line with coverage rates for the formally employed reported by StatsSA as discussed in Section **2.1**.

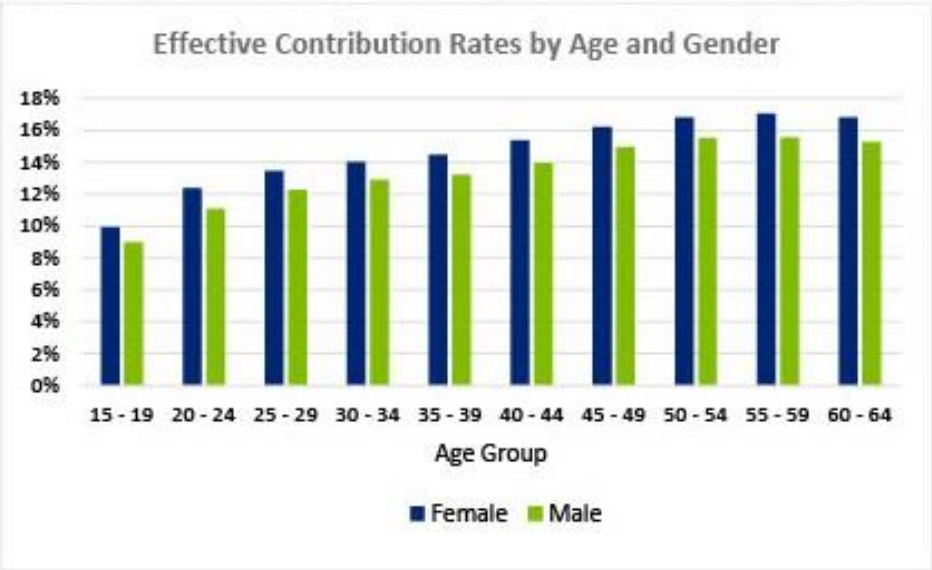
Analysis of coverage rates based on age and gender shows increasing coverage with age for both genders. However, coverage is particularly low at ages less than 35, with the maximum coverage rate being 69% for males aged 55 to 59. Coverage rates for males are consistently higher than coverage rates for females, with the difference increasing with age.

Figure 1: Comparison of Coverage Rate by Age and Gender

It is noted that the above coverage rates should be considered bearing in mind that close to full coverage occurs in the public sector. The resulting coverage rates for private sector employees is therefore lower than presented in the graph above.

With respect to effective contributions[55], these rates increase with age, with females consistently contributing more the males over all age groups considered. This may reflect more conservative views in relation to retirement saving by females. This may also be driven by knowledge that females, on average, need to save more to retirement than males given longer life expectancy.

Figure 2: Comparison of Effective Contribution Rates by Age and Gender

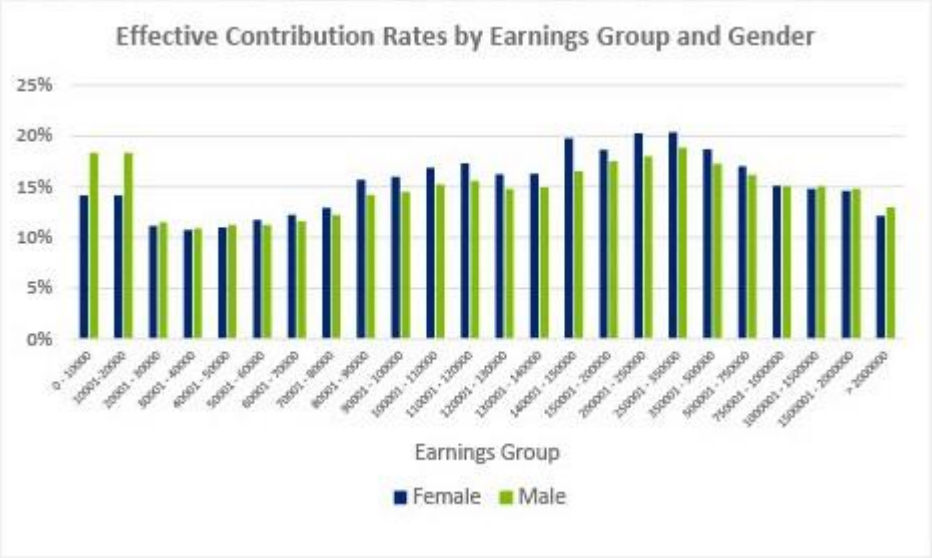


The graph below sets out coverage rates by earnings group and gender. Analysis of coverage rates based on age and gender shows increasing coverage with age for both genders. Coverage of males is higher at across all earnings groups with the exception of the earnings groups between R 200 000 and R 1 000 000 per annum.

[55] Effective contribution rates have been calculated based on earnings defined as the sum of source codes 3601 and 3607.

Figure 3: Comparison of Coverage Rates by Earnings and Gender

Figure 4: Comparison of Effective Contribution Rates by Earnings and Gender



As can be seen in the graphs above coverage rates and effective contribution rates show a strong correlation with earnings level. This is in line with the rationale for the NSSF that although contributory savings and insurance assists in providing basic income protection for some South Africans, access to appropriate retirement provisions for low-income earners remains limited due to high administration costs and minimum contribution constraints. It is noted that with respect to effective contribution rates, these rates increase to a maximum at earnings band R 2 500 001 to R 3 000 000, after which they reduce as income increase. This is likely a result of the limit on tax exempt contributions to retirement savings (currently R 350 000 per annum).

With respect to the high effective contribution rates within the earnings groups to R 20 000 per annum, it is believed that this represents evidence of increasing retirement savings relative to earnings in order to reduce an individual's tax liability and should therefore not be taken as representative of actual effective contribution rates for those earning less than R 20 000 per annum.

3.2.2. Accumulation of Retirement Savings from 2017 to 2019

The following number of formally employed individuals are estimated to be covered in terms of retirement savings over the period 2017 to 2019. It is noted that these coverage rates reflect whether an individual is covered in respect of retirement savings and does not reflect the number of occupational funds or retirement annuities a formally employed individual may belong to.

Table 7: Covered Formally Employed Individuals from 2017 to 2019

Gender	2017	2018	2019
Females	2 372 583	2 387 194	2 377 934
Males	3 370 377	3 370 987	3 336 798
Total	**5 742 960**	**5 758 181**	**5 714 732**

The table below sets out the accumulation of retirement savings in South Africa over the period 2017 to 2019. This has been sourced from FSCA data relating to pension, provident and annuity funds that fall under the Pension Funds Act as well as SARB national financial accounts quarterly reporting which includes both official funds (funds administered by the Department of Finance, Transnet, Telkom and the Post Office which are not subject to regulation and supervision in terms of the Pension Funds Act) and privately administered funds.

Table 8: Accumulation of Retirement Savings from 2017 to 2019

R' million	2017	2018	2019
Opening Balance	**4 083 996**	**4 509 445**	**4 350 270**
Contributions	239 602	258 508	272 105
Benefit Payments[1]	-289 274	-296 422	-313 370
Administration and otherexpenses[2]	-24 004	-26 319	-29 181
Investment Return	499 125	-94 943	315 090
Closing Balance	**4 509 445**	**4 350 270**	**4 594 914**

Notes:
1. Benefit payments include payments made on death, disability, withdrawal and retrenchment as well as lump sum payments made on retirement. Benefit payments are net re-insurance proceeds.
2. Administration and other expenses include re-insurance premiums.

The overall asset allocation split as at 31 December 2019 is as follows:

Table 9: Asset Allocation Split as at 31 December 2019

R' million	31 Dec 2025	
International Bonds	86 972	1.9%
International Cash	45 659	1.0%
International Commodities	2 281	0.0%
International Equities	578 600	12.6%
International Other	19 287	0.4%
International Real Estate	20 876	0.5%
SA Bonds	1 249 000	27.2%
SA Cash	293 637	6.4%

R' million	31 Dec 2025	
International Bonds	86 972	1.9%
International Cash	45 659	1.0%
International Commodities	2 281	0.0%
International Equities	578 600	12.6%
SA Commodities	12 569	0.3%
SA Equities	1 952 524	42.5%
SA Other	62 739	1.4%
SA Real Estate	270 772	5.9%
Total	**6 778 320**	**100.0%**

3.2.3. Projection of the Accumulation of Retirement Savings from 2020 to 2025

The following number of formally employed individuals are expected to be covered in terms of retirement savings over the period 2020 to 2025. It is noted that these coverage rates reflect whether an individual is covered in respect of retirement savings and does not reflect the number of occupational funds or retirement annuities a formally employed individual may belong to.

Table 10: Covered Formally Employed Individuals from 2020 to 2025

Gender	2020	2021	2022	2023	2024	2025
Females	2 107 823	2 146 252	2 151 725	2 154 557	2 179 787	2 205 312
Males	2 957 770	3 011 696	3 019 375	3 023 349	3 058 753	3 094 571
Total	**5 065 593**	**5 157 948**	**5 171 101**	**5 177 906**	**5 238 540**	**5 299 883**

The table below sets out the projected accumulation of retirement savings in South Africa over the period 2020 to 2025 in line with the methodology and assumptions set out above.

Table 11: Accumulation of Retirement Savings from 2020 to 2025

R' million	2020	2021	2022	2023	2024	2025
Opening Balance	4 594 914	4 802 921	5 125 492	5 484 922	5 880 320	6 311 993
Contributions	251 942	271 325	288 795	307 595	331 028	356 253
Benefit Payments[1]	-379 114	-344 973	-373 901	-400 614	-425 081	-456 286
Administration and otherexpenses[2]	-26 318	-28 343	-30 168	-32 132	-34 580	-37 215
Investment Return	361 497	424 563	474 704	520 549	560 306	603 575
Closing Balance	**4 802 921**	**5 125 492**	**5 484 922**	**5 880 320**	**6 311 993**	**6 778 320**

Notes:
1. Benefit payments include payments made on death, disability, withdrawal and retrenchment as well as lump sum payments made on retirement. Benefit payments are net re-insurance proceeds.
2. Administration and other expenses include re-insurance premiums

The projected overall asset allocation split as at 31 December 2025 is as follows:

Table 12: Retirement Asset Allocation Split as at 31 December 2025

R' million	31 Dec 2025	
International Bonds	86 970	1.3%
International Cash	45 658	0.7%
International Commodities	3 289	0.0%
International Equities	834 152	12.3%
International Other	27 806	0.4%
International Real Estate	31 906	0.5%
SA Bonds	1 697 298	25.0%
SA Cash	353 774	5.2%
SA Commodities	20 352	0.3%
SA Equities	3 161 673	46.6%
SA Other	101 592	1.5%
SA Real Estate	413 849	6.1%
Total	**6 778 320**	**100.0%**

3.3. Projection of Retirement and Discretionary Savings under Implementing the NSSF

3.3.1. Projection of the NSSF (Pillar 2) over the period from 2020 to 2025

The following number of formally employed individuals are expected to be covered in relation to the NSSF over the period 2020 to 2025, assuming implementation in 2021.

Table 13: Covered Formally Employed Individuals from 2020 to 2025 (NSSF)

Gender	2020	2021	2022	2023	2024	2025
Females	n/a	4 131 084	4 141 618	4 147 069	4 195 631	4 244 762
Males	n/a	5 521 941	5 536 022	5 543 308	5 608 220	5 673 892
Total	n/a	**9 653 024**	**9 677 639**	**9 690 376**	**9 803 850**	**9 918 654**

The implementation of the NSSF will extend coverage to all formally employed individuals in respect of Pillar 2, approximately doubling coverage.

The tables below set out the projected accumulation of the NSSF in South Africa over the period 2020 to 2025 in line with the methodology and assumptions set out above assuming a contribution rate of 10% to the NSSF allowing for differing investment strategies. Further, a scenario allowing for a 6% contribution rate to the NSSF allowing for the funding of retirement benefits only is considered (allowing for differing investment strategies). This accumulation assumes no supplementary contributions by covered individuals.

Table 14: Accumulation of the NSSF from 2020 to 2025 (10% contribution rate, Regulation 28 Investment Strategy)

R' million	2020	2021	2022	2023	2024	2025
Opening Balance	-	-	145 218	308 472	492 473	700 494
Contributions	-	142 521	149 686	157 320	167 064	177 403
Benefit Payments	-	-133	-3 087	-6 030	-9 438	-13 368
Administration and other expenses	-	-3 563	-3 742	-3 933	-4 177	-4 435
Investment Return	-	6 392	20 398	36 643	54 571	74 862
Closing Balance	**-**	**145 218**	**308 472**	**492 473**	**700 494**	**934 955**

Table 15: Accumulation of the NSSF from 2020 to 2025 (10% contribution rate, Conservative Investment Strategy)

R' million	2020	2021	2022	2023	2024	2025
Opening Balance	-	-	144 558	305 688	485 763	687 660
Contributions	-	142 521	149 686	157 320	167 064	177 403
Benefit Payments	-	-133	-3 087	-6 030	-9 438	-13 368
Administration and other expenses	-	-3 563	-3 742	-3 933	-4 177	-4 435
Investment Return	-	5 733	18 273	32 718	48 447	66 074
Closing Balance	**-**	**144 558**	**305 688**	**485 763**	**687 660**	**913 334**

Table 16: Accumulation of the NSSF from 2020 to 2025 (6% retirement contribution rate, Regulation 28 Investment Strategy)

R' million	2020	2021	2022	2023	2024	2025
Opening Balance	-	-	85 584	182 622	292 976	418 570
Contributions	-	85 513	89 812	94 392	100 239	106 442
Benefit Payments	-	-133	-1 091	-1 865	-3 017	-4 585
Administration and other expenses	-	-3 563	-3 742	-3 933	-4 177	-4 435
Investment Return	-	3 767	12 059	21 760	32 550	44 832
Closing Balance	**-**	**85 584**	**182 622**	**292 976**	**418 570**	**560 824**

Table 17: Accumulation of the NSSF from 2020 to 2025 (6% contribution rate, Conservative Investment Strategy)

R' million	2020	2021	2022	2023	2024	2025
Opening Balance	-	-	85 195	180 977	289 001	410 946
Contributions	-	85 513	89 812	94 392	100 239	106 442
Benefit Payments	-	-133	-1 091	-1 865	-3 017	-4 585
Administration and other expenses	-	-3 563	-3 742	-3 933	-4 177	-4 435
Investment Return	-	3 379	10 803	19 430	28 900	39 576
Closing Balance	**-**	**85 195**	**180 977**	**289 001**	**410 946**	**547 944**

The projected overall asset allocation split as at 31 December 2025 is as follows:

Table 18: NSSF Asset Allocation Split as at 31 December 2025

R' million	31 Dec 2025							
	10% Contribution Rate				6% Retirement Contribution Rate			
	Regulation 28 Investment Strategy		Conservative Investment Strategy		Regulation 28 Investment Strategy		Conservative Investment Strategy	
International Bonds	15 188	1.6%	4 172	0.5%	9 120	1.6%	2 505	0.5%
International Cash	7 973	0.9%	2 190	0.2%	4 788	0.9%	1 315	0.2%
International Commodities	460	0.0%	126	0.0%	276	0.0%	76	0.0%
International Equities	116 747	12.5%	32 066	3.5%	70 034	12.5%	19 235	3.5%
International Other	3 892	0.4%	1 069	0.1%	2 335	0.4%	641	0.1%
International Real Estate	4 314	0.5%	1 185	0.1%	2 588	0.5%	711	0.1%
SA Bonds	246 039	26.3%	724 118	79.3%	147 618	26.3%	434 453	79.3%
SA Cash	55 126	5.9%	15 141	1.7%	33 085	5.9%	9 087	1.7%
SA Commodities	2 661	0.3%	731	0.1%	1 596	0.3%	438	0.1%
SA Equities	413 312	44.2%	113 520	12.4%	247 856	44.2%	68 076	12.4%
SA Other	13 281	1.4%	3 648	0.4%	7 964	1.4%	2 187	0.4%
SA Real Estate	55 961	6.0%	15 370	1.7%	33 564	6.0%	9 219	1.7%
Total	**934 955**	**100.0%**	**913 334**	**100.0%**	**560 824**	**100.0%**	**547 944**	**100.0%**

The investment strategy of the NSSF will have a significant impact on asset allocation. If a conservative

investment strategy is adopted, the majority of assets will be invested in South Africa bonds, representing R 724.1 million as at 31 December 2025. If the basis for the operation allows for the segregation of risk benefits from retirement benefits, with a contribution rate of 6% towards retirement benefits, investment in South African bonds is projected at R 434.5 billion as at 31 December 2025 under a conservative investment strategy.

A comparison of contributions payable to the NSSF over the period from 2021 to 2025 assuming contribution rates of 10%, 12% and 15% respectively to the NSSF as well as a 6% NSSF contribution rate to retirement benefits, is set out in the table below:

Table 19: Comparison of Contributions Payable to the NSSF (10%, 12%, 15% and 6% contribution rates)

R' million	2021	2022	2023	2024	2025
10% Contribution Rate	142 521	149 686	157 320	167 064	177 403
12% Contribution Rate	171 025	179 623	188 785	200 477	212 884
15% Contribution Rate	213 782	224 529	235 981	250 597	266 104
6% Contribution Rate	85 513	89 812	94 392	100 239	106 442

The resulting increase in accumulated funds resulting from increasing the NSSF contribution rate from 10% to 12% and 15% respectively is set out below:

Figure 5: Comparison of the Accumulation of the NSSF (10%, 12% and 15% NSSF contribution rates, Regulation 28 Investment Strategy)

Allowing for an investment strategy in line with Regulation 28, accumulated NSSF assets as at 31 December 2025 increase from R 935.0 billion to R 1 134.3 billion if the contribution rate increases from 10% to 12%. If the contribution rate is 15%, NSSF assets are projected to equal R 1 433.3 billion. Similarly, allowing for a conservative investment strategy in accumulated NSSF assets as at 31 December 2025 increase from R 913.3 billion to R 1 108.1 billion if the contribution rate increases from 10% to 12%. If the contribution rate is 15%, NSSF assets are projected to equal R 1 400.3 billion.

3.3.2. Impact on NSSF (Pillar 2) allowing for Alternative NSSF Earnings Ceilings

A comparison of contributions payable to the NSSF, resulting from a NSSF earnings ceiling in line with the UIF earnings limit (currently R 14 872 per month), over the period from 2021 to 2025 assuming contribution rates of 10%, 12% and 15% respectively to the NSSF as well as a 6% NSSF contribution rate to retirement benefits is set out in the table below:

Table 20: Comparison of Contributions Payable to the NSSF (10%, 12% and 15% contribution rate and 6% retirement contribution rate)

R' Million	2021	2022	2023	2024	2025
10% Contribution Rate	119 966	125 782	131 969	139 897	148 296
12% Contribution Rate	143 959	150 938	158 362	167 876	177 955
15% Contribution Rate	179 948	188 673	197 953	209 845	222 444
6% Contribution Rate	71 979	75 469	79 181	83 938	88 977

The corresponding change in the NSSF as at 31 December 2025, assuming contribution rates of 10%, 12% and 15% respectively to the NSSF as well as a 6% NSSF contribution rate to retirement benefits is set out below:

Table 21: Change in NSSF as at 31 December 2025 (10%, 12% and 15% NSSF contribution rates and 6% retirement contribution rate)

R' Million	Regulation 28 Investment Strategy	Conservative Investment Strategy
10% Contribution Rate	-150 637	-147 176
12% Contribution Rate	-182 745	-178 557
15% Contribution Rate	-230 906	-225 629
6% Contribution Rate	-90 560	-88 493

The projected decrease in the accumulation of the NSSF is approximately 16% across the scenarios considered above.

3.3.3. Impact on NSSF (Pillar 2) allowing for Participation of Informal Employment

Allowing for participation of informally employed individuals in the NSSF, assumed to be those earning above the tax threshold, will result in the following number of additional individuals who are expected to be covered in relation to the NSSF over the period 2020 to 2025, assuming implementation in 2021.

Table 22: Covered Informally Employed Individuals from 2020 to 2025 (NSSF)

Gender	2020	2021	2022	2023	2024	2025
Females	n/a	178 651	179 106	179 342	181 442	183 567
Males	n/a	435 565	436 676	437 251	442 371	447 551
Total	**n/a**	**614 216**	**615 782**	**616 593**	**623 813**	**631 118**

A comparison of additional contributions payable to the NSSF, resulting from the participation of informally employed individuals, over the period from 2021 to 2025 assuming contribution rates of 10%, 12% and 15% respectively to the NSSF as well as a 6% NSSF contribution rate to retirement benefits is set out in the table below:

Table 23: Comparison of Additional Contributions Payable to the NSSF (10%, 12% and 15% contribution rate and 6% retirement contribution rate)

R' million	2021	2022	2023	2024	2025
10% Contribution Rate	26 959	28 158	29 427	31 066	32 802
12% Contribution Rate	32 351	33 790	35 313	37 280	39 362
15% Contribution Rate	40 438	42 237	44 141	46 600	49 203
6% Contribution Rate	26 959	28 158	29 427	31 066	32 802

The corresponding change in the NSSF as at 31 December 2025 resulting from the participation of informally employed individuals, assuming contribution rates of 10%, 12% and 15% respectively to the NSSF as well as a 6% NSSF contribution rate to retirement benefits is set out below:

Table 24: Change in NSSF as at 31 December 2025 (10%, 12% and 15% NSSF contribution rates and 6% retirement contribution rate)

R' Million	Regulation 28 Investment Strategy	Conservative Investment Strategy
10% Contribution Rate	175 653	171 579
12% Contribution Rate	212 956	208 028
15% Contribution Rate	268 909	262 701
6% Contribution Rate	106 013	103 577

3.3.4. Supplementary Contributions to the NSSF

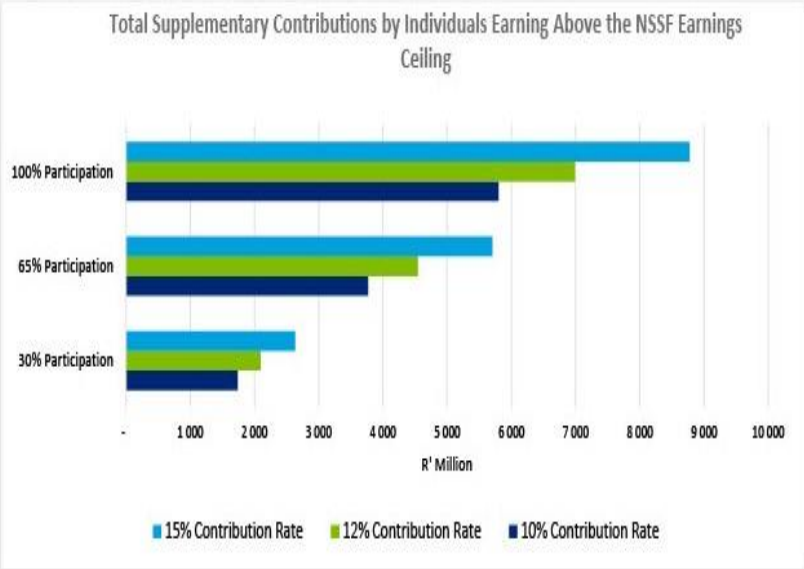
Allowing for participation of individuals who earn above the NSSF earnings ceiling, not covered by retirement savings on introduction of the NSSF, will result in the following number of additional individuals who could participate in Pillar 3 over the period 2020 to 2025, assuming implementation in 2021.

Table 25: Number of Formally Employed Individuals who are eligible to Participate in NSSF (Pillar 3) from 2020 to 2025

	2020	2021	2022	2023	2024	2025
Total	**n/a**	**122 464**	**122 776**	**122 938**	**124 377**	**125 834**

Various scenarios have been considered with respect to possible supplementary contributions to the NSSF for individuals who earn above the NSSF earnings ceiling, not covered by retirement savings on introduction of the NSSF. A comparison of the total supplementary contributions to the NSSF over the period 2021 to 2025 by these individuals allowing for participation rates of 30%, 65% and 100%, assuming contribution rates of 10%, 12% and 15% respectively to the NSSF is set out below:

Figure 6: Comparison of Total Supplementary Contributions to the NSSF by Individuals Earnings



It is noted that the supplementary contributions to the NSSF reflected in the graph above are net of administration fees. If 100% of individuals who earn above the NSSF earnings ceiling make supplementary contributions to the NSSF, these supplementary contributions will amount to R 5.8 billion assuming a NSSF contribution rate of 10%. These contributions will increase to R 8.8 billion assuming a NSSF contribution rate of 15%. Allowing for a 65% participation rate, total supplementary contributions amount to R 3.8 billion (10% NSSF contribution rate) increasing to R 5.7 billion (15% NSSF contribution rate). Similarly, allowing for a 30% participation rate, total supplementary contributions amount to R 1.7 billion (10% NSSF contribution rate) increasing to R 2.6 billion (15% NSSF contribution rate).

3.4. Analysis of the Projected Impact of the NSSF on existing Retirement Funds.

3.4.1. Projection of the Accumulation of Retirement Savings from 2020 to 2025 allowing for Implementation of the NSSF

Various scenarios have been considered with respect to how retirement savings may change under Implementing the NSSF.

It is noted that the scenario with respect to the 10% contribution rate to the NSSF is representative of the combined NSSF contribution rate of 10% allowing for risk benefit and a separate NSSF contribution rate of 6% to retirement benefits and 4% to risk benefits.

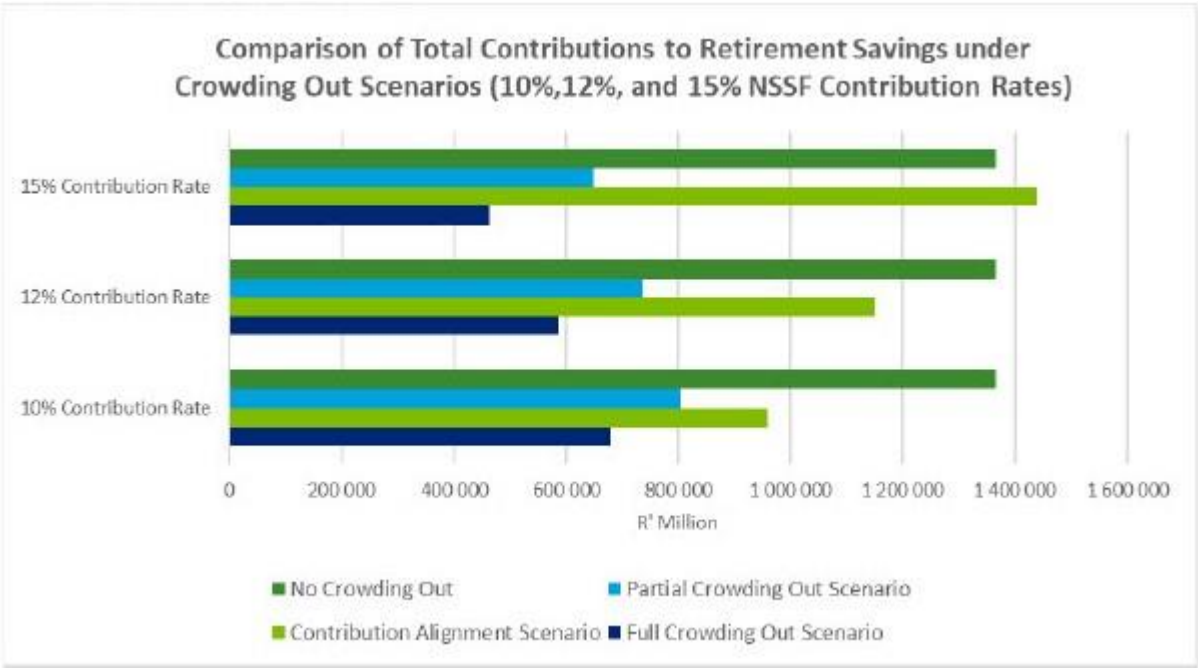
The following number of formally employed individuals are expected to be covered in terms of retirement savings over the period 2020 to 2025 allowing for Implementation of the NSSF and the various crowding out scenarios. Coverage has been calculated as the proportion of the formally employed who contribute to retirement savings. It therefore does not allow for individuals who belong to more than one retirement savings vehicle.

Table 26: Covered Formally Employed Individuals from 2020 to 2024 (Base Scenario)

	2020	2021	2022	2023	2024	2025
Full Crowding Out Scenario (10% NSSF Contribution Rate)	5 065 593	5 157 948	5 171 101	5 177 906	5 238 540	5 299 883
Full Crowding Out Scenario (12% NSSF Contribution Rate)	5 065 593	2 448 425	2 466 436	2 488 137	2 538 508	2 602 656
Full Crowding Out Scenario (15% NSSF Contribution Rate)	5 065 593	2 264 970	2 277 717	2 293 517	2 320 374	2 347 549
Contribution Alignment Scenario	5 065 593	2 743 990	2 901 607	2 909 218	2 946 534	2 981 176
Partial Crowding Out Scenario(10% NSSF Contribution Rate)	5 065 593	2 448 425	2 466 436	2 488 137	2 538 508	2 602 656
Partial Crowding Out Scenario(12% NSSF Contribution Rate)	5 065 593	2 264 974	2 277 722	2 293 520	2 320 377	2 347 549
Partial Crowding Out Scenario (15% NSSF Contribution Rate)	5 065 593	1 648 468	1 652 672	1 752 543	1 823 804	1 911 498

A comparison of the total contributions to retirement savings over the period 2021 to 2025 under these scenarios, assuming contribution rates of 10%, 12% and 15% respectively to the NSSF is set out below:

Figure 7: Comparison of Total Contributions to Retirement Savings from 2021 to 2025 under Crowding Out Scenarios (10%, 12% and 15% NSSF Contribution Rates)



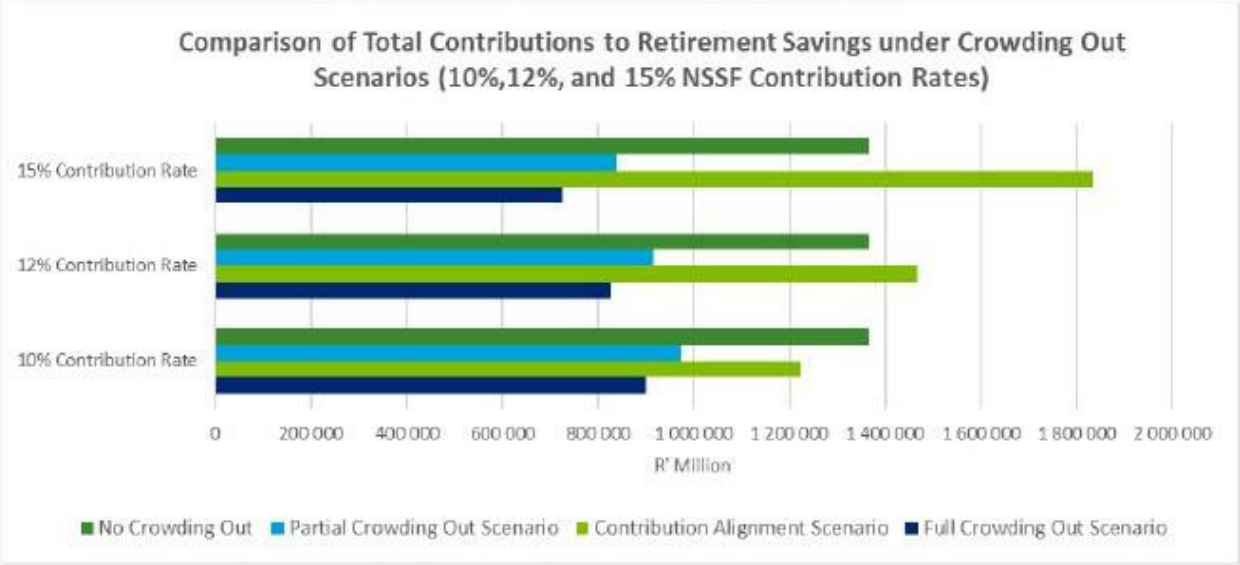
It is noted that the contributions to retirement savings reflected in the graph above are net of administration fees. Where no crowding out occurs, total contributions over the period 2021 to 2025 to retirement savings amount to R 1 366.2 billion, in line with the Applying the Status Quo scenario. This is considered a theoretical outcome given that no crowding out will not be possible for low-income earners.

Assuming partial crowding out, total contributions over the period 2021 to 2025 reduce by 50% (10% NSSF contribution rate). The reduction increases to 66% at a 15% NSSF contribution rate. Under the Contribution Alignment Scenario, total contributions to retirement savings reduce by 30% assuming a NSSF contribution rate of 10%. Given the alignment of contribution rates to the NSSF, the reduction increases to an increase of 5% assuming

a higher NSSF contribution rates of 15%. Under full crowding out, total contributions over the period 2021 to 2025 reduce by 41% assuming a NSSF contribution rate of 10%, increasing to 53% assuming a NSSF contribution rate of 15%.

Allowing for a NSSF earnings ceiling equal to the current UIF earnings limit, the comparison of the total contributions to retirement savings over the period 2021 to 2025 under these scenarios, assuming contribution rates of 10%, 12% and 15% respectively to the NSSF is as follows:

Figure 8: Comparison of Total Contributions to Retirement Savings from 2021 to 2025 under Crowding Out Scenarios (10%, 12% and 15% NSSF Contribution Rates, NSSF earnings ceiling equal to UIF earnings limit)



Reducing the NSSF earnings ceiling to the current UIF limit reduces the extent to which contributions to retirement savings are crowded out under the various crowding out scenarios. Assuming partial crowding out, total contributions over the period 2021 to 2025 reduce by 34% (10% NSSF contribution rate). The reduction increases to 47% at a 15% NSSF contribution rate. Under the Contribution Alignment Scenario, total contributions to retirement savings reduce by 10% assuming a NSSF contribution rate of 10%. Given the alignment of contribution rates to the NSSF, the reduction increases to an increase of 34% assuming a higher NSSF contribution rates of 15%. Under full crowding out, total contributions over the period 2021 to 2025 reduce by 29% assuming a NSSF contribution rate of 10%, increasing to 39% assuming a NSSF contribution rate of 15%.

The Government Employees Pension Fund represents 44% of total retirement savings as at 31 December 2019, representing funds of R 1.9 trillion. The NSSF will be mandatory for all formally employed individuals including public sector employees. The implementation of the NSSF is therefore expected to have a significant impact on the Government Employees Pension Fund.

Based on the most recent actuarial valuation report (effective 31 March 2018) for the Government Employees Pension Fund, the fund is 75.5% funded on a long-term funding basis and 108.3% on a minimum funding level basis. Given the immediate reduction in contributions expected on implementation of the NSSF and the delay before a reduction in benefit payments occurs due to the implementation of the NSSF, the funding position is expected to deteriorate unless contributions to the Government Employees Pension Fund are increased. It is noted that the funding policy of the fund requires the Trustees to take steps to ensure that the minimum funding level is always above 90% and to strive to maintain a long-term funding level at or above 100%.

The corresponding projected retirement savings as at 31 December 2025 under the various scenarios assuming contribution rates of 10%, 12% and 15% respectively to the NSSF is set out below, including an assessment of the change in retirement savings:

Table 27: Retirement Savings as at 31 December 2025 under Crowding Out Scenarios (10%, 12% and 15% NSSF contribution rates)

R' Million	10% Contribution Rate	12% Contribution Rate	15% Contribution Rate
Full Crowding Out Scenario	6 003 905	5 901 832	5 767 268
Contribution Alignment Scenario	6 378 265	6 652 397	7 063 595
Partial Crowding Out Scenario	6 138 780	6 063 682	5 969 580
No Crowding Out	6 778 320	6 778 320	6 778 320

Table 28: Change in Retirement Savings as at 31 December 2025 under Crowding Out Scenarios (10%, 12% and 15% NSSF contribution rates)

R' Million	10% Contribution Rate	12% Contribution Rate	15% Contribution Rate
Full Crowding Out Scenario	-774 415	-876 488	- 1 011 052
Contribution Alignment Scenario	-400 055	-125 923	285 275
Partial Crowding Out Scenario	-639 540	-714 638	-808 740
No Crowding Out	-	-	-

Accumulated retirement savings as at 31 December 2025, is lowest under the Full Crowding Out Scenario (15% NSSF contribution rate) given this scenario results in the most significant reduction in contributions to retirement savings. However, it is noted, that the reduction in contributions to retirement savings may increase discretionary savings.

Allowing for a NSSF earnings ceiling equal to the UIF earnings limit, the corresponding projected retirement savings as at 31 December 2025 under the various scenarios assuming contribution rates of 10%, 12% and 15% respectively to the NSSF is set out below, including an assessment of the change in retirement savings:

Table 29: Retirement Savings as at 31 December 2025 under Crowding Out Scenarios (10%, 12% and 15% NSSF contribution rates, NSSF earnings ceiling equal to UIF earnings limit)

R' Million	10% Contribution Rate	12% Contribution Rate	15% Contribution Rate
Full Crowding Out Scenario	6 243 428	6 162 768	6 054 166
Contribution Alignment Scenario	6 665 402	6 996 962	7 494 301
Partial Crowding Out Scenario	6 324 686	6 260 278	6 176 053
No Crowding Out	6 778 320	6 778 320	6 778 320

Table 30: Change in Retirement Savings as at 31 December 2025 under Crowding Out Scenarios (10%, 12% and 15% NSSF contribution rates, NSSF earnings ceiling equal to UIF earnings limit)

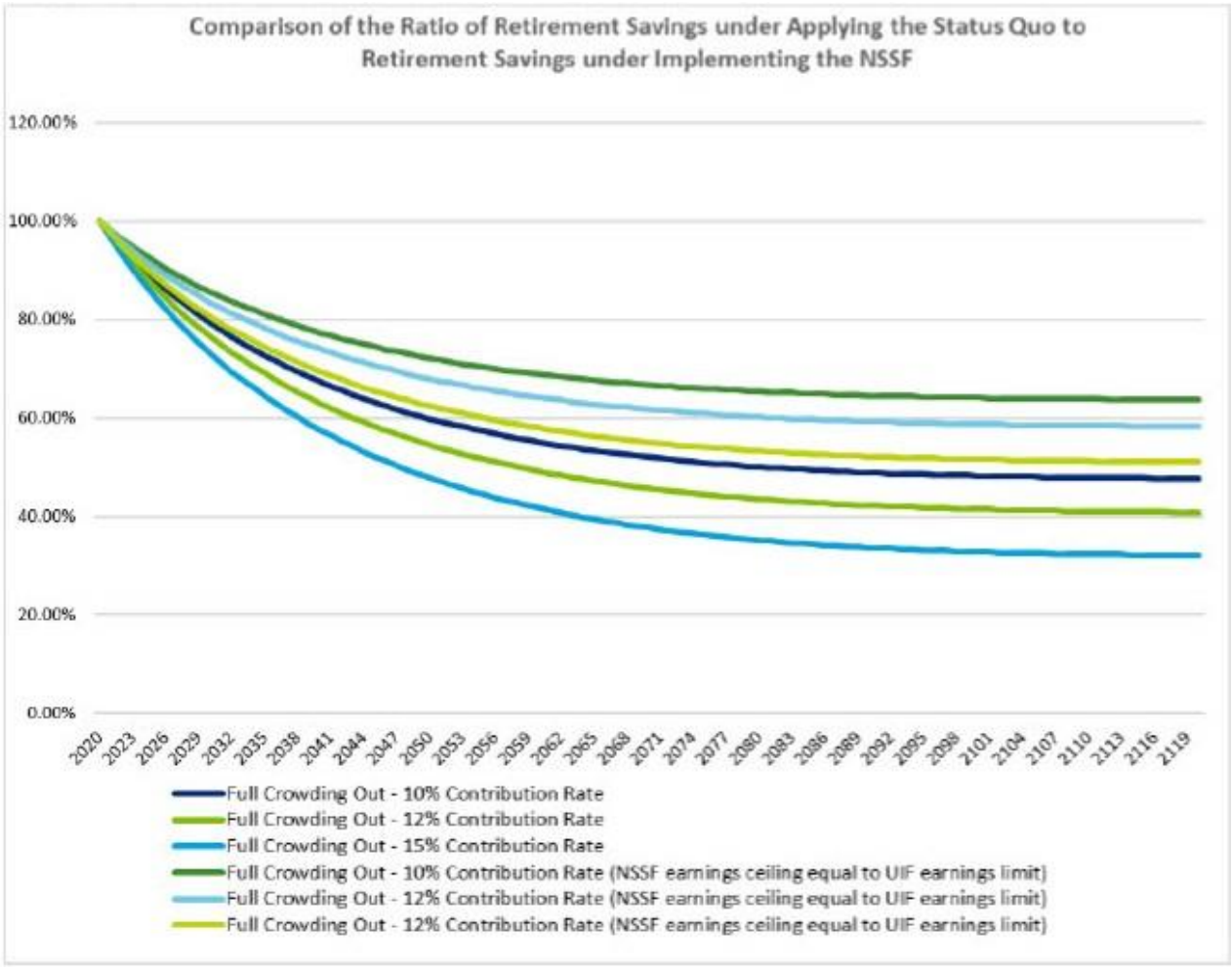
R' Million	10% Contribution Rate	12% Contribution Rate	15% Contribution Rate
Full Crowding Out Scenario	-534 892	-615 552	-724 154
Contribution Alignment Scenario	-112 918	218 642	715 981
Partial Crowding Out Scenario	-453 634	-518 042	-602 267
No Crowding Out	-	-	-

As noted above, reducing the NSSF earnings ceiling to the current UIF limit reduces the extent to which contributions to retirement savings are crowded out under the various crowding out scenarios hence increases projected retirement savings for all scenarios relative to an NSSF earnings ceiling of R 276 000 in 2018 terms.

3.4.2. Comparison of Projection of the Accumulation of Retirement Savings under Applying the Status Quo to under the Implementation of the NSSF

Over the long term, the implementation of the NSSF will reduce the accumulation of retirement savings compared to under Applying the Status Quo. The ratio of accumulated retirement savings under Implementing the NSSF to under Applying the Status Quo has been projected over a 100-year period assuming a NSSF contribution rate of 10%, 12% and 15% respectively. This projection has been done under the Full Crowding Out Scenario.

Figure 9: Comparison of the Ratio of Retirement Savings under Applying the Status Quo to Retirement Savings under Implementing the NSSF (10%, 12% and 15% NSSF Contribution Rates)



The reduction in the ratio of accumulated retirement savings under Implementing the NSSF to under Applying the Status Quo is significant over the first 34 years, after which the reduction slows until equilibrium is reached at 48% of accumulated retirement savings under Applying the Status Quo assuming NSSF contributions of 10%, 41% of accumulated retirement savings under Applying the Status Quo assuming NSSF contributions of 12% and 32% of accumulated retirement savings under Applying the Status Quo assuming NSSF contributions of 15%.

If the NSSF earnings ceiling is set equal to the current UIF earnings limit, equilibrium is reached at 64% of accumulated retirement savings under Applying the Status Quo assuming NSSF contributions of 10%, 58% of accumulated retirement savings under Applying the Status Quo assuming NSSF contributions of 12% and 51% of accumulated retirement savings under Applying the Status Quo assuming NSSF contributions of 15%.

3.5. Analysis of the Projected Impact of the NSSF on Changes in the Consumption, Saving and Investment Behaviour of Households and Firms

In economic terms, an increase in household savings translates to a decrease in household consumption if borrowing is not increased to maintain consumption levels and vice versa. The impact of the NSSF in terms of consumption will depend on whether individuals are covered in respect of retirement savings when the NSSF is implemented or not covered and their ability to borrow.

Historically, households in South Africa have displayed low and declining household savings rates with household savings rates being close to zero. With respect to 2019, South Africa's National Financial Accounts show that the households net borrowing position was R10 billion. Therefore, despite providing financial intermediaries with funds of R150 billion, households sourced R163 billion from non-financial business enterprises.

3.5.1. Individuals Covered in Respect of Retirement Savings on NSSF Implementation

Under the Full Crowding Out Scenario, full displacement of contributions due to the NSSF will result in no change in consumption for those individuals where current effective contributions rates are higher than the NSSF contribution rate. Where effective contribution rates are lower than the NSSF contribution rate, reduced consumption will be required in respect of these individuals if borrowing is note increased to maintain consumption levels. Therefore, the impact on consumption and borrowing is dependent on the NSSF contribution rate. The table below sets out the reduction in possible consumption resulting from the implementation of the NSSF (assuming no increase in borrowing). This is based on an assumption that employers will meet approximately 60% of the increase in contributions based on an analysis of IRP5 data for the 2017 and 2018 tax years.

Table 31: Full Crowding Out Scenario: Reduction in Consumption by Households Covered in Respect of Retirement Savings on NSSF Implementation (10%, 12% and 15% NSSF contribution rates)

R' million	2020	2021	2022	2023	2024
10% Contribution Rate	-	9 152	9 569	10 112	10 696
12% Contribution Rate	-	15 075	15 787	16 703	17 673
15% Contribution Rate	-	25 550	26 599	28 012	29 516

As per the table above, the reduction in consumption is linked to the level of NSSF contributions. It is noted that the impact of reduced consumption will be more significant for low-income earners, particularly, if a NSSF contribution rate of 15% is implemented. This can be mitigated by transitioning in the requirement for contributions to the NSSF.

3.5.2. Individuals Not Covered in Respect of Retirement Savings on NSSF Implementation

Approximately half of formally employed individuals are not covered in respect of retirement savings. The implementation of the NSSF will result in a reduction in consumption for these individuals if borrowing is not increased to maintain consumption levels resulting from the requirement to pay contributions to the NSSF on earnings to the earnings ceiling, if earning above the NSSF earnings floor.

The table below sets out the reduction in consumption resulting from the implementation of the NSSF.

Table 32: Reduction in Consumption by Households not Covered in Respect of Retirement Savings on NSSF Implementation (10%, 12% and 15% NSSF contribution rates)

R' million	2020	2021	2022	2023	2024
10% Contribution Rate	27 157	28 314	28 908	29 820	30 760
12% Contribution Rate	32 587	33 977	34 690	35 785	36 911
15% Contribution Rate	40 734	42 472	43 362	44 731	46 139

Given the coverage rates in respect of retirement savings based on formal employment for low-income earners presented in Section **3.2.1**, the impact of consumption will be most significantly felt by these individuals, given their ability to borrow is limited compared to high-income earners. It is noted that the average earnings of these individuals is R 45 000 in 2021 terms.

Half of the contributions due to the NSSF will be met by employers, therefore firms will face increased employment expenditure in line with the figures set out in the table above. Given this will impact low-income earners more significantly, given the that the average earnings of affected individuals is R 45 000 in 2021 terms, it has been proposed that wage subsidies could be implemented to minimise disruptions to the demand of supply of labour associated with the introduction of mandatory contributions.

The tables below set out the expected contribution subsidy resulting from the implementation of the NSSF. This has been calculated based on a full subsidy of contributions for those individuals' earnings less than the legislated minimum wage[56] and the SARS tax threshold for comparison purposes.

Table 33: Contribution Subsidy for Individuals Earnings less than the Minimum Wage and not Covered in Respect of Retirement Savings on NSSF Implementation (10%, 12% and 15% NSSF contribution rates)

R' million	2020	2021	2022	2023	2024
10% Contribution Rate	7 828	8 192	8 653	9 236	9 858
12% Contribution Rate	9 394	9 830	10 384	11 084	11 830
15% Contribution Rate	11 742	12 287	12 980	13 854	14 788

Table 34: Contribution Subsidy for Individuals Earnings less than the SARS Tax Threshold and not Covered in Respect of Retirement Savings on NSSF Implementation (10%, 12% and 15% NSSF contribution rates)

R' million	2020	2021	2022	2023	2024
10% Contribution Rate	20 280	21 409	22 616	24 139	25 106
12% Contribution Rate	24 335	25 691	27 139	28 967	30 127
15% Contribution Rate	30 419	32 113	33 924	36 209	37 659

It is expected that some disruption will occur at the ceiling at which the subsidisation of contributions will cease. This could be mitigated to an extent by a scaling down the level of subsidisation over a pre-defined earnings range. Based on the analysis set out in Section 4.1.3, individuals covered in respect of retirement savings, contribute at a minimum of 11% of earnings across genders on an age group and earnings group basis. Therefore, disruption will occur at NSSF contribution rates of 12% and 15% and for those who are not covered in respect of retirement savings, ranging from approximately 80% at the NSSF earnings floor to 20% at the NSSF earnings ceiling.

It is noted that the projections in relation to the NSSF assume no disruption in that the subsidisation of contributions will be met by funding through the government.

[56] Employment and Labour on new National Minimum Wage rate | South African Government (www.gov.za)

3.6. Analysis of the Projected Impact of the NSSF on Changes in the Flow of Funds between Households, Financial Institutions and Government

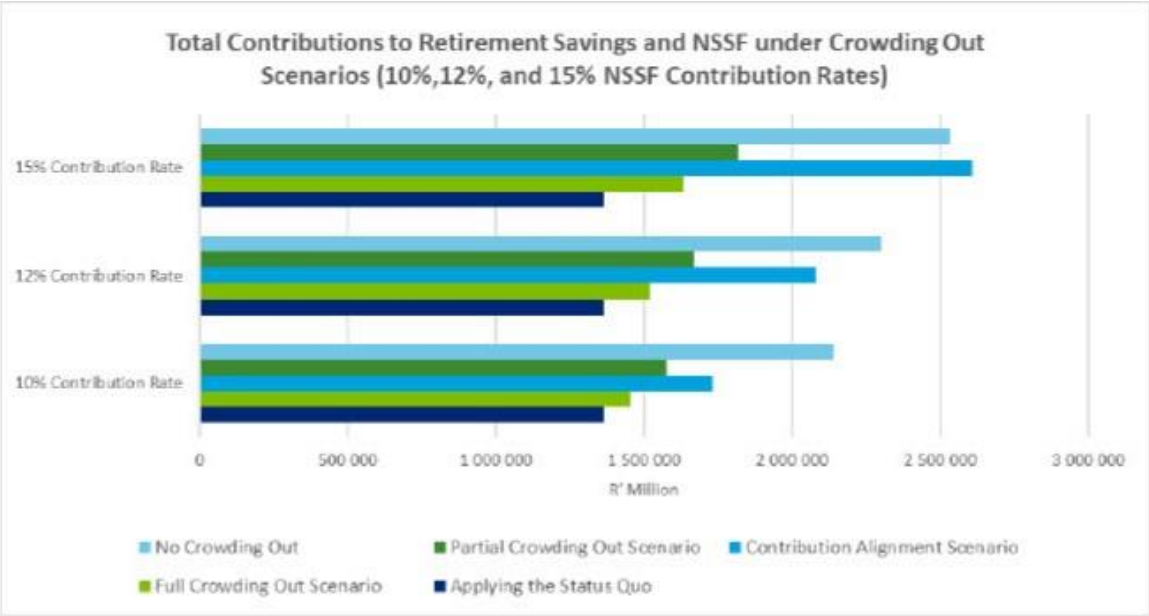
3.6.1. Comparison of the Total of Contributions towards Retirement Savings and the NSSF under Applying the Status Quo to Allowing for the Implementation of the NSSF

Under the various crowding out scenarios, the total of contributions towards the NSSF and retirement savings is either greater or less than contributions towards retirement savings with no implementation of the NSSF.

A comparison of the total contributions to the NSSF and retirement savings over the period 2021 to 2025 under the crowding out scenarios, assuming contribution rates of 10%, 12% and 15% respectively to the NSSF is set out below. Contributions arising under Applying the Status Quo are included for comparison purposes. It is noted that this analysis excludes the impact of the NSSF Supplementary Fund that contributions to the NSSF and retirement savings reflected in the graph above are net of administration fees.

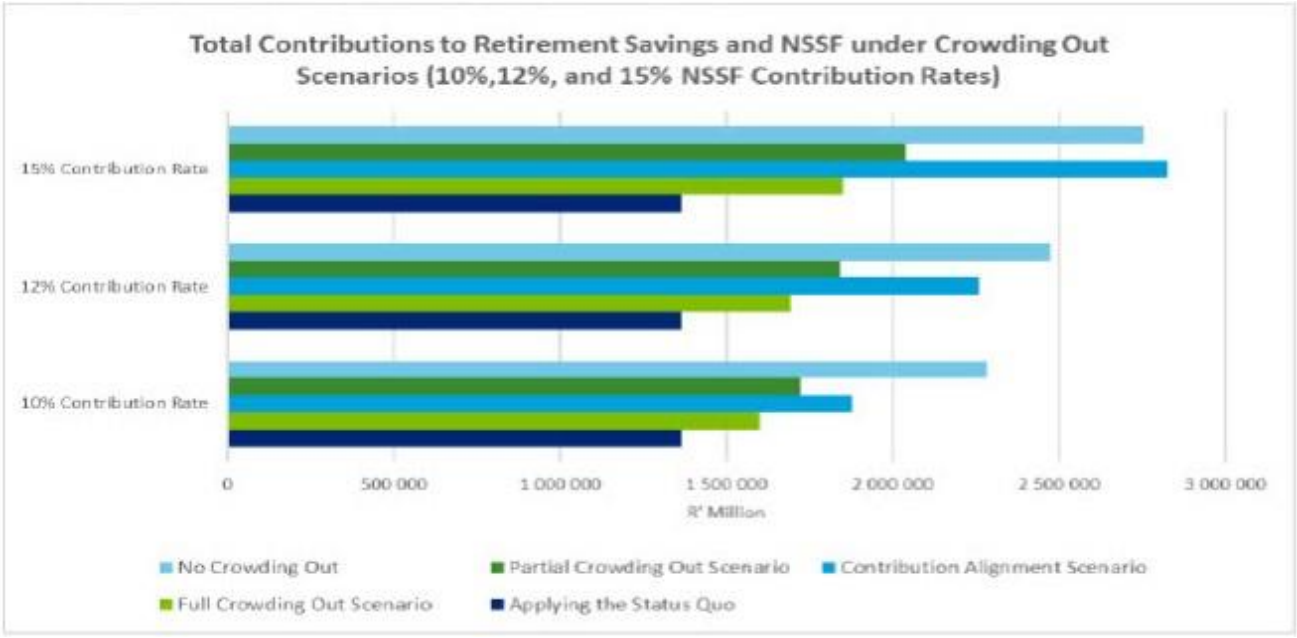
It is noted that the scenario with respect to the 10% contribution rate to the NSSF is representative of the combined NSSF contribution rate of 10% allowing for risk benefit and a separate NSSF contribution rate of 6% to retirement benefits and 4% to risk benefits.

Figure 10: Total Contributions to Retirement Savings and NSSF under Crowding Out Scenarios (10%, 12%, 15% NSSF Contribution Rates, Formal Employment)



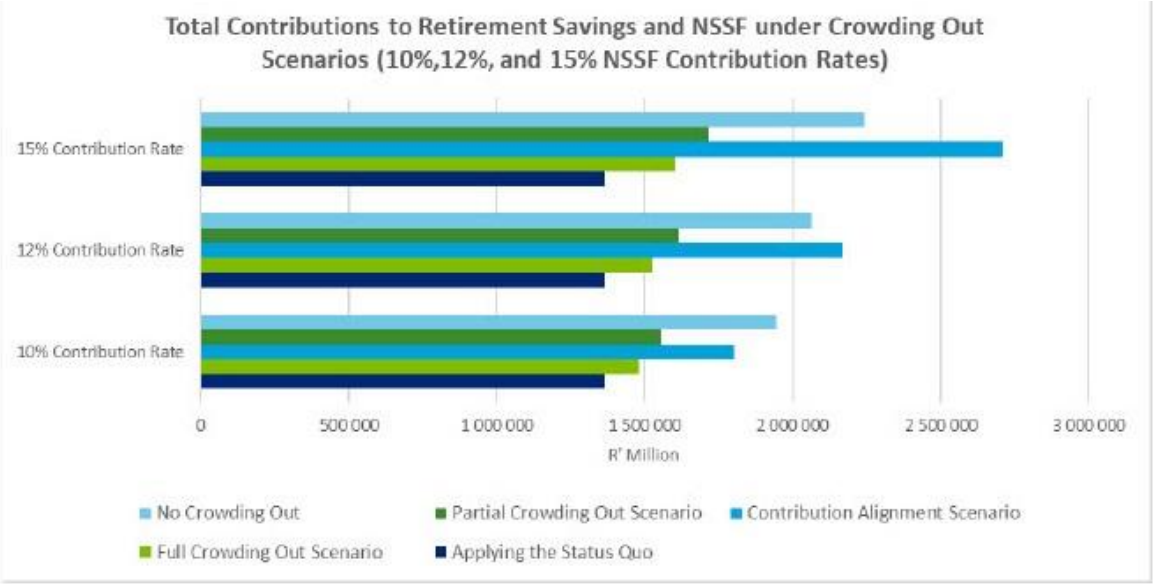
A comparison of the total contributions to the NSSF and retirement savings, allowing for the participation of informally employed individuals over the period 2021 to 2025 under the crowding out scenarios, assuming contribution rates of 10%, 12% and 15% respectively to the NSSF is set out below.

Figure 11: Total Contributions to Retirement Savings and NSSF under Crowding Out Scenarios (10%, 12% and 15% NSSF Contribution Rates, Formal Employment and Informal Employment)



If the NSSF earnings ceiling is set equal to the current UIF earnings limit, the resulting comparison of the total contributions to the NSSF and retirement savings, over the period 2021 to 2025 under the crowding out scenarios, assuming contribution rates of 10%, 12% and 15% respectively to the NSSF is set out below.

Figure 12: Total Contributions to Retirement Savings and NSSF under Crowding Out Scenarios (10%, 12% and 15% NSSF Contribution Rates, Formal Employment, NSSF earnings ceiling equal to UIF earnings limit)



Allowing for the participation of the informally employed increases total contributions to the NSSF and retirement savings by between 17.0% (Full Crowding Out Scenario at NSSF contribution rate of 10%) to 107.0% (Contribution Alignment Scenario at NSSF contribution rate of 15%). Similarly, setting the NSSF earnings ceiling equal to the UIF earnings limit, increases total contributions to the NSSF and retirement savings by between 8.3% (Full Crowding Out Scenario at NSSF contribution rate of 10%) to 198.4% (Contribution Alignment Scenario at NSSF contribution rate of 15%).

Considering all scenarios above, unless those individuals who are high earners who are currently covered in respect of retirements savings significantly reduce their contributions to retirement (which will be limited by the quasi-mandatory nature of Pillar 3), the implementation of the NSSF is not likely to reduce ongoing contributions to retirement savings.

3.6.2. Comparison of the Total of Accumulated Retirement Savings and the NSSF under Applying the Status Quo to Allowing for the Implementation of the NSSF

The corresponding change in the total of projected retirement savings and the NSSF as at 31 December 2025 under the various scenarios assuming contribution rates of 10%, 12%, 15% and 6% (retirement benefits only) respectively to the NSSF and allowing for the alternative investment strategies for the NSSF are set out below:

Table 35: Change in Projected Retirement Savings and NSSF as at 31 December 2025 under Crowding Out Scenarios (10%, 12%, 15% and 6% NSSF contribution rates, Formal Employment, Regulation 28 Investment Strategy)

R' Million	10% Contribution Rate	12% Contribution Rate	15% Contribution Rate	6% Contribution Rate
Full Crowding Out Scenario	160 541	257 824	422 296	-213 591
Contribution Alignment Scenario	534 900	1 008 389	1 718 623	160 769
Partial Crowding Out Scenario	295 416	419 674	624 608	-78 716
No Crowding Out	934 955	1 134 312	1 433 348	560 824
Applying the Status Quo	-	-	-	-

Table 36: Change in Projected Retirement Savings and NSSF as at 31 December 2025 under Crowding Out Scenarios (10%, 12%, 15% and 6% NSSF contribution rates NSSF contribution rates, Formal Employment, Conservative Investment Strategy)

R' Million	10% Contribution Rate	12% Contribution Rate	15% Contribution Rate	6% Contribution Rate
Full Crowding Out Scenario	138 919	231 662	389 323	-226 471
Contribution Alignment Scenario	513 279	982 228	1 685 650	147 889
Partial Crowding Out Scenario	273 794	393 512	591 636	-91 596
No Crowding Out	913 334	1 108 151	1 400 375	547 944
Applying the Status Quo	-	-	-	-

Allowing for the participation of informally employed individuals, the change in projected retirement savings and NSSF as at 31 December 2025 is set out below:

Table 37: Change in Projected Retirement Savings and NSSF as at 31 December 2025 under Crowding Out Scenarios (10%, 12%, 15% and 6% NSSF contribution rates, Formal Employment and Informal Employment, Regulation 28 Investment Strategy)

R' Million	10% Contribution Rate	12% Contribution Rate	15% Contribution Rate	6% Contribution Rate
Full Crowding Out Scenario	336 194	470 780	691 205	-107 578
Contribution Alignment Scenario	710 554	1 221 345	1 987 532	266 782
Partial Crowding Out Scenario	471 069	632 630	893 517	27 297
No Crowding Out	1 110 609	1 347 268	1 702 257	666 837
Applying the Status Quo	-	-	-	-

Table 38: Change in Projected Retirement Savings and NSSF as at 31 December 2025 under Crowding Out Scenarios (10%, 12%, 15% and 6% NSSF contribution rates, Formal Employment and Informal Employment, Conservative Investment Strategy)

R' Million	10% Contribution Rate	12% Contribution Rate	15% Contribution Rate	6% Contribution Rate
Full Crowding Out Scenario	310 499	439 690	652 024	-122 895
Contribution Alignment Scenario	684 858	1 190 256	1 948 352	251 465
Partial Crowding Out Scenario	445 374	601 540	854 337	11 981
No Crowding Out	1 084 913	1 316 179	1 663 077	651 520
Applying the Status Quo	-	-	-	-

Allowing for the NSSF earnings ceiling to be set equal to the current UIF earnings limit, the change in projected retirement savings and NSSF as at 31 December 2025 is set out below:

Table 39: Change in Projected Retirement Savings and NSSF as at 31 December 2025 under Crowding Out Scenarios (10%, 12%, 15% and 6% NSSF contribution rates, NSSF earnings ceiling equal to UIF earnings limit, Formal Employment, Regulation 28 Investment Strategy)

R' Million	10% Contribution Rate	12% Contribution Rate	15% Contribution Rate	6% Contribution Rate
Full Crowding Out Scenario	165 123	233 725	349 016	-115 430
Contribution Alignment Scenario	587 097	1 067 919	1 789 151	306 545
Partial Crowding Out Scenario	246 381	331 235	470 903	-34 171
No Crowding Out	700 015	849 277	1 073 170	419 463
Applying the Status Quo	-	-	-	-

Table 40: Change in Projected Retirement Savings and NSSF as at 31 December 2025 under Crowding Out Scenarios (10%, 12%, 15% and 6% NSSF contribution rates, NSSF earnings ceiling equal to UIF earnings limit, Formal Employment, Conservative Investment Strategy)

R' Million	10% Contribution Rate	12% Contribution Rate	15% Contribution Rate	6% Contribution Rate
Full Crowding Out Scenario	148 929	214 130	324 318	-125 069
Contribution Alignment Scenario	570 904	1 048 324	1 764 454	296 905
Partial Crowding Out Scenario	230 187	311 640	446 206	-43 811
No Crowding Out	683 821	829 682	1 048 473	409 823
Applying the Status Quo	-	-	-	-

The total of accumulated retirement savings and the NSSF as at 31 December 2025, is lowest under the Full Crowding Out for all scenarios considered considering NSSF contributions as at rate of 10%, 12 %, 15% and 6% (retirement benefits only). In line with the change in total contributions towards the NSSF and retirement savings, allowing for the participation of the informally employed, increases the projected accumulation of the NSSF and retirement savings to a greater extent that setting the NSSF earnings ceiling equal to the UIF earnings limit.

Based on the projected accumulation of retirement savings under the various scenarios, accumulated retirement savings and the NSSF is not expected decrease over the period considered with the exception of a NSSF contribution rate of 6% towards retirement benefits. However over the long term, the segregation of funding for retirement benefits in the NSSF, increases the sustainability of the NSSF over the long term (discussed below).

It is noted that where the level of savings and investments attributed to the retirement system after implementation of the NSSF, compared to Applying the Status Quo, is expected to increase over the period considered, any increase in savings channelled to the retirement system may be offset by decreases in individuals' discretionary savings.

Funds channelled through financial intermediaries are therefore not expected to reduce given the implementation of the NSSF. However, the underlying asset allocation will differ dependent on the investment strategy of the NSSF. In particular, based on the projected asset allocation of funds in 2025, allowing for no implementation of the NSSF, investment in government bonds in projected to reach R 1 697 billion assuming investment in line in asset allocations as at 31 December 2019. Allowing for the implementation of the NSSF with an investment strategy in line with Regulation 28, investment in government bonds is projected to reach R 1 943 billion and investment in South African equities R 3 575 billion under the Full Crowding Out Scenario allowing for NSSF contributions of 15%. Allowing for the implementation of the NSSF with a conservative investment strategy, investment in government bonds is projected to reach R 2 421 billion and investment in South African equities R 3 275 billion under the Full Crowding Out Scenario allowing for NSSF contributions of 15%.

Allowing for alternative crowding out scenarios will increase investment in South African equities and bonds further.

If the informally employed participate in the NSSF and the NSSF earnings ceiling is set equal to the UIF earnings limit, projected accumulation of the NSSF and retirement savings is increased further. The resulting investment in South African equities and bonds will therefore increase.

Over the long term, the implementation of the NSSF will impact the total funds available for savings and investment under the retirement system. The ratio of accumulated retirement system savings and investments under Implementing the NSSF compared to under Applying the Status Quo has been projected over a 100-year period assuming a NSSF contribution rate of 10%, 12% and 15% respectively. This projection has been done under the various crowding out scenarios.

The projections below assume a fixed NSSF contribution rate over the 100% period until the NSSF reduces to zero. Any increases to contributions to the NSSF are assumed to be adequate to meet ongoing cash flow from the NSSF with no subsequent reserve being built up.

Figure 13: Comparison of the Total of Accumulated Retirement Savings and the NSSF under Implementing the NSSF to Applying the Status Quo (10% NSSF Contribution Rate, Formal Employment, Conservative Investment Strategy)

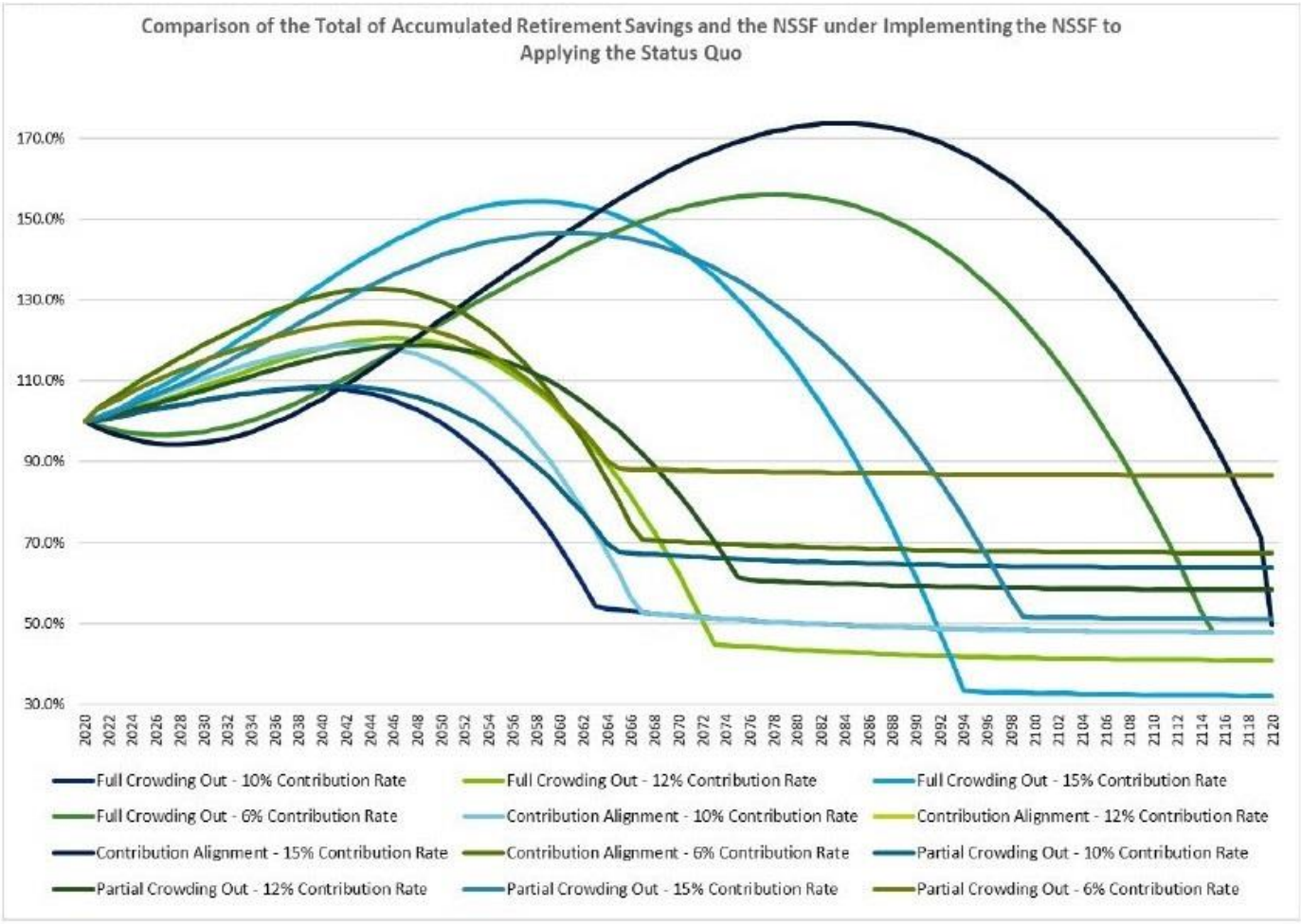


Figure 14: Comparison of the Total of Accumulated Retirement Savings and the NSSF under Implementing the NSSF to Applying the Status Quo (10%, 12%, 15% and 6% NSSF Contribution Rates, Full Crowding Out, Formal Employment and Informal Employment Conservative Investment Strategy)

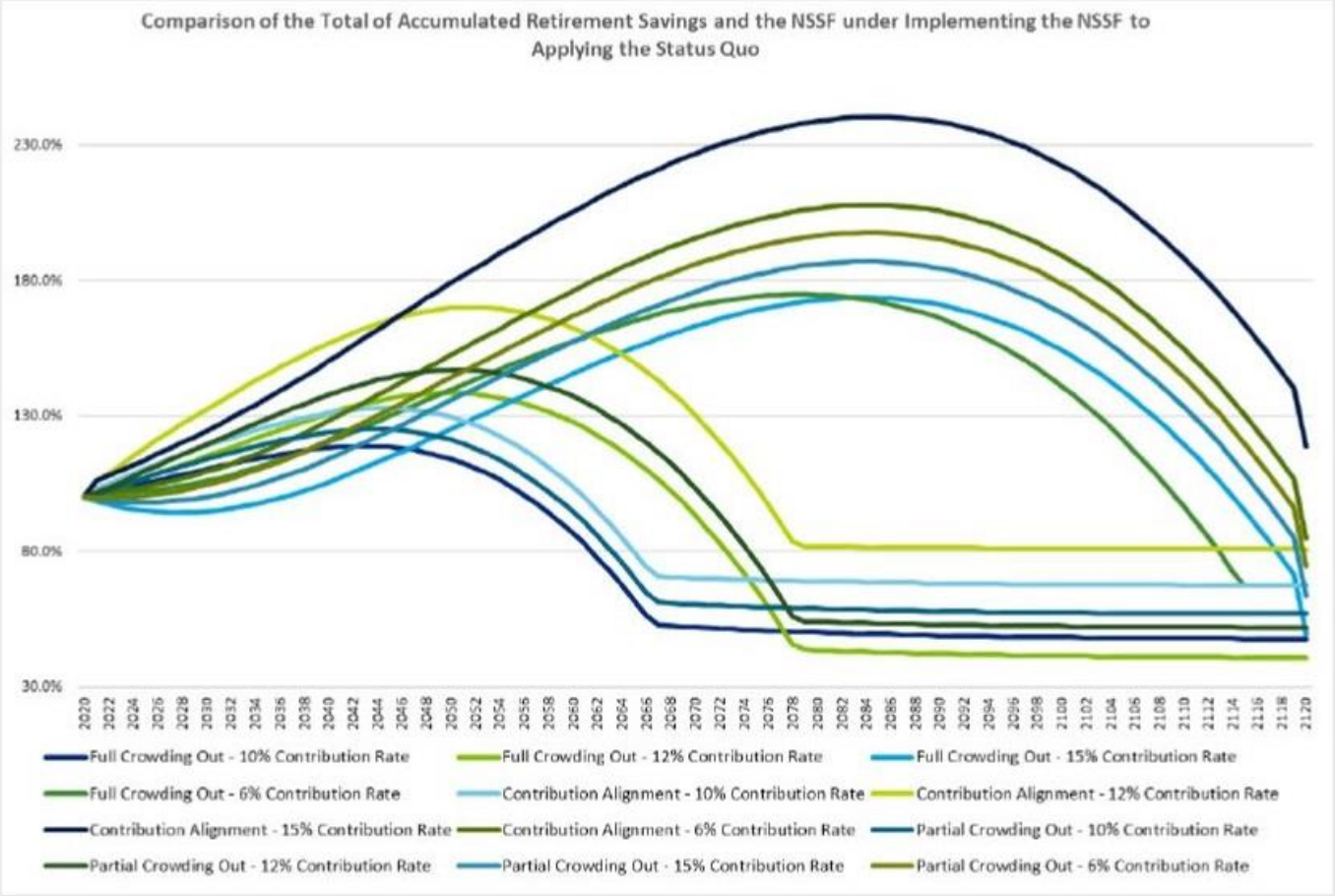
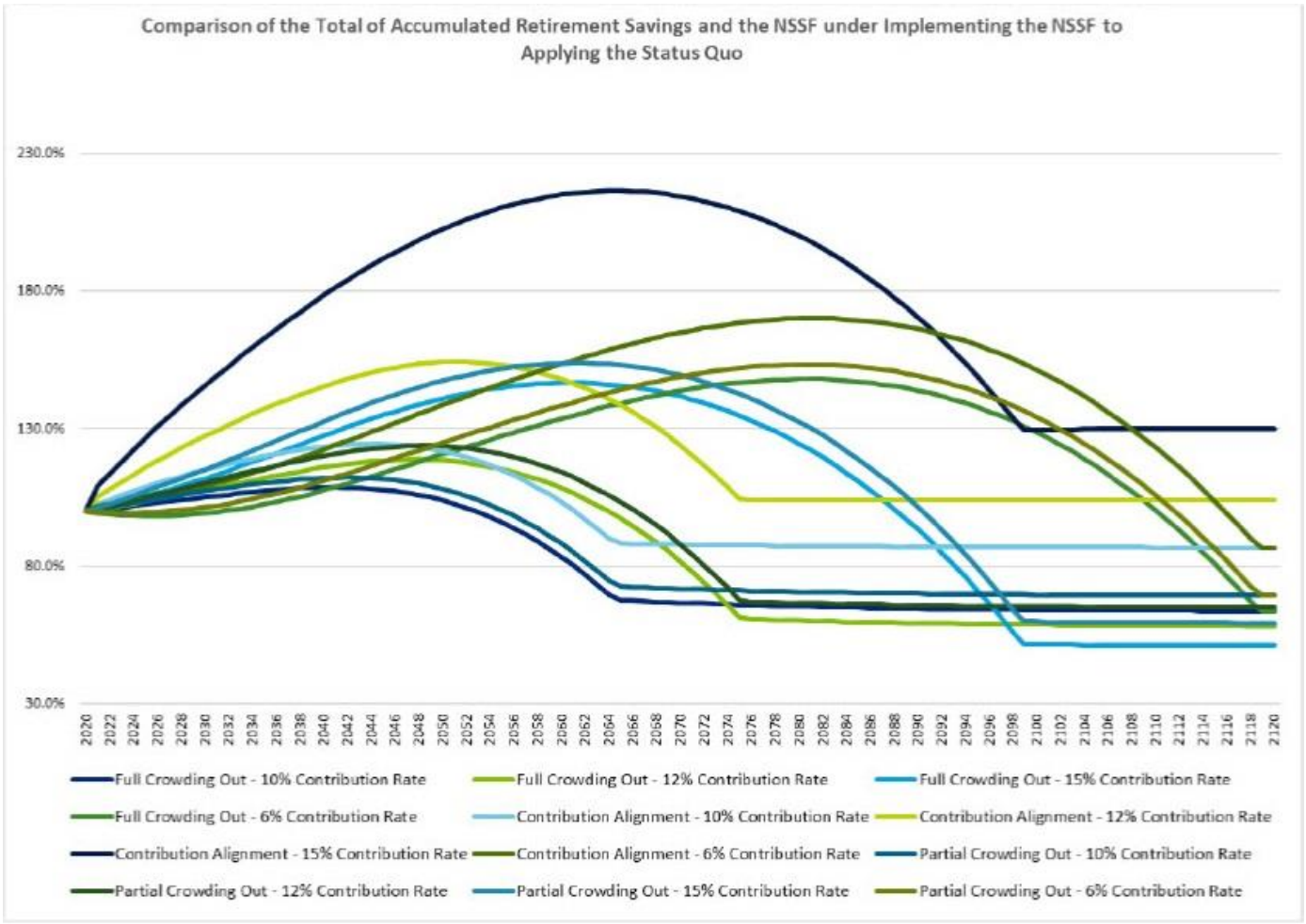


Figure 15: Comparison of the Total of Accumulated Retirement Savings and the NSSF under Implementing the NSSF to Applying the Status Quo (10%, 12%, 15% and 6% NSSF Contribution Rates, Full Crowding Out, NSSF earnings ceiling equal to UIF earnings limit, Conservative Investment Strategy)



Compared to Applying the Status Quo, the level of savings and investments attributed to the retirement system after implementation of the NSSF is expected to increase initially under all scenarios with the exception of a NSSF contribution rate of 6% towards retirement benefits only, where there is projected to be an insignificant decrease over the first ten years after implementation of the NSSF. The level of savings and investments then reaches a peak under the various scenarios and falls below 100% for under all scenarios with the exception of the Contribution Alignment scenario at a NSSF contribution rate of 15% allowing for participation of the formally and informally employed.

The impact of a higher NSSF contribution rate, 12% or 15% compared to 10% of earnings up to the NSSF earnings ceiling, is to increase the level to which accumulated funds build up as a result of higher funding for a fix set of benefits at higher NSSF contribution levels, allowing for larger accumulation of the NSSF before funds are depleted and the NSSF is assumed to move into a pay-as-you-go basis. The Contribution Alignment Scenario (15% NSSF contribution rate) produces the maximum increase in accumulated funds, namely 173.7% in 2067 allowing for formal employment participation only, 240.4% in 2067 allowing for formal and informal employment participation and 216.5% in 2067 allowing for the NSSF earnings ceiling set equal to the UIF earnings limit.

The impact of segregating funding for retirement benefits in the NSSF, allowing for a 6% contribution rate, increases the sustainability of the NSSF and hence, while it does not reach the maximum levels of savings and investment demonstrated under the other contribution rate scenarios, it minimises the drop in the level savings and investment over the 100 period.

The level of NSSF contributions therefore impacts on the level of savings and investments attributed to the retirement system over the period considered. This is as a result of higher funding for a fix set of benefits at higher

NSSF contribution levels, allowing for larger accumulation of the NSSF before funds are depleted and the NSSF is assumed to move into a pay-as-you-go basis.

It is noted that the underlying investment strategy will influence the underlying asset allocation will differ dependent on the investment strategy of the NSSF. Investments under the NSSF may favour debt markets and public sector funding (conservative investment strategy) resulting in reduced level of investment for other asset classes even where the overall level of savings after implementation is expected to increase. This may have a resulting impact on the cost of capital for the private and public sector as discussed in Section **2.8**.

The following tables set out the present value of savings and investments attributed to the retirement system under Applying the Status Quo and Implementing the NSSF allowing for NSSF contribution rates of 10%, 12%, 15% and 6% (retirement benefits only) respectively under the various crowding out scenarios.

Table 41: Present Value of the Total of Accumulated Retirement Savings and the NSSF under Implementing the NSSF compared to Applying the Status Quo under Crowding Out Scenarios (10%, 12%, 15% and 6% NSSF contribution rates, Formal Employment, Conservative Investment Strategy)

R' Million	Applying the Status Quo	Full Crowding Out Scenario	Contribution Alignment Scenario	Partial Crowding Out Scenario
10% Contribution Rate	142 785 822	141 370 721	158 621 279	149 055 202
12% Contribution Rate	142 785 822	163 730 643	198 654 311	172 952 016
15% Contribution Rate	142 785 822	224 413 917	284 537 071	235 940 611
6% Contribution Rate	142 785 822	214 296 115	231 546 673	221 980 597

Table 42: Present Value of the Total of Accumulated Retirement Savings and the NSSF under Implementing the NSSF compared to Applying the Status Quo under Crowding Out Scenarios (10%, 12%, 15% and 6% NSSF contribution rates, Formal Employment and Informal Employment, Conservative Investment Strategy)

R' Million	Applying the Status Quo	Full Crowding Out Scenario	Contribution Alignment Scenario	Partial Crowding Out Scenario
10% Contribution Rate	142 785 822	197 185 797	214 436 355	204 870 278
12% Contribution Rate	142 785 822	191 451 613	226 375 281	200 672 986
15% Contribution Rate	142 785 822	184 160 516	244 283 669	195 687 209
6% Contribution Rate	142 785 822	249 550 164	266 800 722	257 234 645

Table 43: Present Value of the Total of Accumulated Retirement Savings and the NSSF under Implementing the NSSF compared to Applying the Status Quo under Crowding Out Scenarios (10%, 12%, 15% and 6% NSSF contribution rates, NSSF earnings ceiling equal to UIF earnings limit, Conservative Investment Strategy)

R' Million	Applying the Status Quo	Full Crowding Out Scenario	Contribution Alignment Scenario	Partial Crowding Out Scenario
10% Contribution Rate	142 785 822	145 963 263	165 905 196	150 592 945
12% Contribution Rate	142 785 822	163 950 348	203 557 665	169 505 966
15% Contribution Rate	142 785 822	213 476 995	281 858 272	220 421 518
6% Contribution Rate	142 785 822	202 452 201	222 394 135	207 081 884

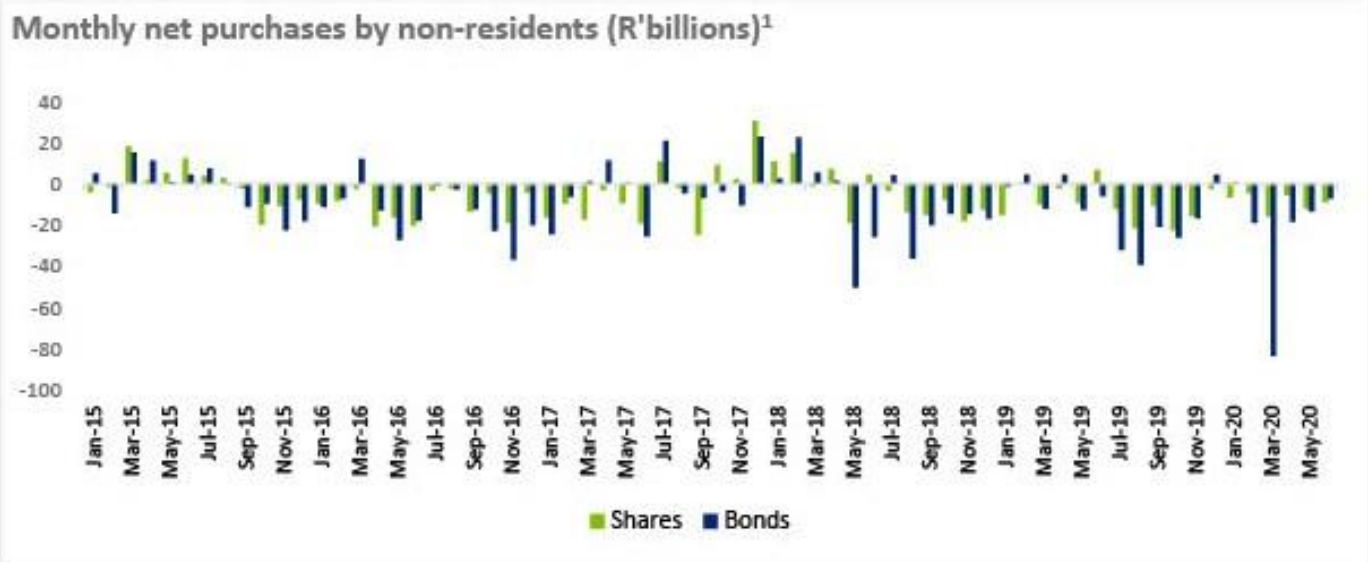
3.7. Analysis of the Projected Impact of the NSSF on Changes in the Financing of Business Investment and in Capital Market Flows

The extent to which the NSSF can support the State's ability to fund new business and infrastructure development will depend on the investment strategy that the Board of Trustees decides on.

Looking back over the last few decades, there has been a steady increase in interest in both South Africa's equity and fixed income markets. Since South Africa became a democracy in 1994, the average monthly size of share purchases has climbed from R1.9bn in 1994 to R74.9bn by 2019[57]. Similarly, the average monthly size of bond purchases has climbed from R1.9bn in 1994 to R214.2bn in 2019. The sharp rise in the size of the transactions also reflects the level of sophistication of South Africa's financial markets. Indeed, the Official Monetary and Financial Institutions Forum (OMFIF) ranked South Africa as number one in Africa for financial market development for a third year running in 2019[58].

Nevertheless, foreign (non-resident) sentiment towards South African financial assets has not enjoyed similar positive growth. Annual net purchases (purchases minus sales) of both shares and bonds by non-residents has been in negative territory since 2015. This trend has not changed in 2020, with net purchases of shares by non-residents totalling R53bn for the first half of the year. Net bond purchases show an even strong descent into negative territory, totalling R141.1bn for the first six months of 2020.

Figure 16: Monthly Net Purchases by Non-Residents



Given reduced sentiment towards South Africa, any reduced demand for South Africa government bonds can be mitigated to some extent by the increased funds available through implementation of the NSSF over the period to 2025, particularly in relation to a conservative investment strategy for the NSSF.

Considering the long-term projections presented in Section **3.6.2**, the overall level of savings and investments attributed to retirement savings under Implementation of the NSSF is expected to surpass the overall level of savings and investments attributed to retirement savings under Applying the Status Quo over at least the next 30 years, with the exception of a NSSF contribution rate of 6% towards retirement benefits only, where there is projected to be an insignificant decrease over the first ten years after implementation of the NSSF. After reaching a maximum level, depending on crowding out scenario and NSSF contribution level, the overall level of savings and investments attributed to retirement savings under Implementation of the NSSF reduces. Under all the scenarios except for the Contribution Alignment Scenario at a NSSF contribution rate of 15%, the level of savings

[57] SARB, Quarterly Bulletin. Available Online: https://www.resbank.co.za/Publications/Detail-Item-View/Pages/Publications.aspx?sarbweb=3b6aa07d-92ab-441f-b7bf-bb7dfb1bedb4&sarblist=21b5222e-7125-4e55-bb65-56fd3333371e&sarbitem=10093

[58] https://www.absa.co.za/content/dam/south-africa/absa/cib/pdf/insights/IA-Africa-financial-markets-index-report-IA-11-Oct.pdf

and investment reduces to less than the overall level of savings and investments attributed to retirement savings under Applying the Status Quo after 30 years. This can be mitigated by increasing NSSF contribution rates at pre-defined milestones over the period considered to maintain a minimum level of the NSSF.

4. CONCLUSION

4.1. Changes in the Flow of Funds Between Households, Financial Intermediaries and Government

Under the various crowding out scenarios, the total of contributions towards the NSSF and retirement savings[59] is either greater or less than contributions towards retirement savings with no implementation of the NSSF. As illustrated below, unless those individuals who are high earners who are currently covered in respect of retirements savings significantly reduce their contributions to retirement (which will be limited by the quasi-mandatory nature of Pillar 3), the implementation of the NSSF is not likely to reduce ongoing contributions to retirement savings. It is noted that this analysis excludes the impact of the NSSF Supplementary Fund that contributions to the NSSF and retirement savings reflected in the graph above are net of administration fees.

Table 44: Total Contributions to Retirement Savings and NSSF under Crowding Out Scenarios (10%, 12% and 15% NSSF Contribution Rates)

R' Million	10% Contribution Rate	12% Contribution Rate	15% Contribution Rate	6% Contribution Rate
Full Crowding Out Scenario	160 541	257 824	422 296	-213 591
Contribution Alignment Scenario	534 900	1 008 389	1 718 623	160 769
Partial Crowding Out Scenario	295 416	419 674	624 608	-78 716
No Crowding Out	934 955	1 134 312	1 433 348	560 824
Applying the Status Quo	-	-	-	-

The corresponding change in the total of projected retirement savings and the NSSF as at 31 December 2025 under the various scenarios assuming contribution rates of 10%, 12%, 15% and 6% (retirement benefits only) respectively to the NSSF and allowing for the alternative investment strategies for the NSSF are set out below.

Table 45: Change in Projected Retirement Savings and NSSF as at 31 December 2025 under Crowding Out Scenarios (10%, 12%, 15% and 6% NSSF contribution rates, Formal Employment, Regulation 28 Investment Strategy)

R' Million	10% Contribution Rate	12% Contribution Rate	15% Contribution Rate	6% Contribution Rate
Full Crowding Out Scenario	138 919	231 662	389 323	-226 471
Contribution Alignment Scenario	513 279	982 228	1 685 650	147 889
Partial Crowding Out Scenario	273 794	393 512	591 636	-91 596
No Crowding Out	913 334	1 108 151	1 400 375	547 944
Applying the Status Quo	-	-	-	-

Table 46: Change in Projected Retirement Savings and NSSF as at 31 December 2025 under Crowding Out Scenarios (10%, 12%, 15% and 6% NSSF contribution rates NSSF contribution rates, Formal Employment, Conservative Investment Strategy)

[59] Retirement savings includes approved pension, provident and retirement annuity funds and hence forms part of Pillar 3 of South Africa's proposed social security system.

R' Million	10% Contribution Rate	12% Contribution Rate	15% Contribution Rate	6% Contribution Rate
Full Crowding Out Scenario	336 194	470 780	691 205	-107 578
Contribution Alignment Scenario	710 554	1 221 345	1 987 532	266 782
Partial Crowding Out Scenario	471 069	632 630	893 517	27 297
No Crowding Out	1 110 609	1 347 268	1 702 257	666 837
Applying the Status Quo	-	-	-	-

Allowing for the participation of informally employed individuals, the change in projected retirement savings and NSSF as at 31 December 2025 is set out below:

Table 47: Change in Projected Retirement Savings and NSSF as at 31 December 2025 under Crowding Out Scenarios (10%, 12%, 15% and 6% NSSF contribution rates, Formal Employment and Informal Employment, Regulation 28 Investment Strategy)

R' Million	10% Contribution Rate	12% Contribution Rate	15% ContributionRate	6% Contribution Rate
Full Crowding Out Scenario	336 194	470 780	691 205	- 107 578
Contribution Alignment Scenario	710 554	1 221 345	1 987 532	266 782
Partial Crowding Out Scenario	471 069	632 630	893 517	27 297
No Crowding Out	1 110 609	1 347 268	1 702 257	666 837
Applying the Status Quo	-	-	-	-

Table 48: Change in Projected Retirement Savings and NSSF as at 31 December 2025 under Crowding Out Scenarios (10%, 12%, 15% and 6% NSSF contribution rates, Formal Employment and Informal Employment, Conservative Investment Strategy)

R' Million	10% Contribution Rate	12% Contribution Rate	15% Contribution Rate	6% Contribution Rate
Full Crowding Out Scenario	310 499	439 690	652 024	-122 895
Contribution Alignment Scenario	684 858	1 190 256	1 948 352	251 465
Partial Crowding Out Scenario	445 374	601 540	854 337	11 981
No Crowding Out	1 084 913	1 316 179	1 663 077	651 520
Applying the Status Quo	-	-	-	-

Allowing for the NSSF earnings ceiling to be set equal to the current UIF earnings limit, the change in projected retirement savings and NSSF as at 31 December 2025 is set out below:

Table 49: Change in Projected Retirement Savings and NSSF as at 31 December 2025 under Crowding Out Scenarios (10%, 12%, 15% and 6% NSSF contribution rates, NSSF earnings ceiling equal to UIF earnings limit, Formal Employment, Regulation 28 Investment Strategy)

R' Million	10% Contribution Rate	12% Contribution Rate	15% Contribution Rate	6% Contribution Rate
Full Crowding Out Scenario	165 123	233 725	349 016	-115 430
Contribution Alignment Scenario	587 097	1 067 919	1 789 151	306 545
Partial Crowding Out Scenario	246 381	331 235	470 903	-34 171
No Crowding Out	700 015	849 277	1 073 170	419 463
Applying the Status Quo	-	-	-	-

Table 50: Change in Projected Retirement Savings and NSSF as at 31 December 2025 under Crowding Out Scenarios (10%, 12%, 15% and 6% NSSF contribution rates, NSSF earnings ceiling equal to UIF earnings limit, Formal Employment, Conservative Investment Strategy)

R' Million	10% Contribution Rate	12% Contribution Rate	15% Contribution Rate	6% Contribution Rate
Full Crowding Out Scenario	148 929	214 130	324 318	-125 069
Contribution Alignment Scenario	570 904	1 048 324	1 764 454	296 905
Partial Crowding Out Scenario	230 187	311 640	446 206	-43 811
No Crowding Out	683 821	829 682	1 048 473	409 823
Applying the Status Quo	-	-	-	-

The total of accumulated retirement savings and the NSSF as at 31 December 2025, is lowest under the Full Crowding Out for all scenarios considered considering NSSF contributions as at rate of 10%, 12 %, 15% and 6% (retirement benefits only). In line with the change in total contributions towards the NSSF and retirement savings, allowing for the participation of the informally employed, increases the projected accumulation of the NSSF and retirement savings to a greater extent that setting the NSSF earnings ceiling equal to the UIF earnings limit.

Based on the projected accumulation of retirement savings under the various scenarios, accumulated retirement savings and the NSSF is not expected decrease over the period considered with the exception of a NSSF contribution rate of 6% towards retirement benefits. However over the long term, the segregation of funding for retirement benefits in the NSSF, increases the sustainability of the NSSF over the long term (discussed below).

It is noted that where the level of savings and investments attributed to the retirement system after implementation of the NSSF, compared to Applying the Status Quo, is expected to increase over the period considered, any increase in savings channelled to the retirement system may be offset by decreases in individuals' discretionary savings.

Funds channelled through financial intermediaries are therefore not expected to reduce given the implementation of the NSSF. However, the underlying asset allocation will differ dependent on the investment strategy of the NSSF. In particular, based on the projected asset allocation of funds in 2025, allowing for no implementation of the NSSF, investment in government bonds in projected to reach R 1 697 billion assuming investment in line in asset allocations as at 31 December 2019. Allowing for the implementation of the NSSF with an investment strategy in line with Regulation 28, investment in government bonds is projected to reach R 1 943 billion and investment in South African equities R 3 575 billion under the Full Crowding Out Scenario allowing for NSSF contributions of 15%. Allowing for the implementation of the NSSF with a conservative investment strategy, investment in government bonds is projected to reach R 2 421 billion and investment in South African equities R 3 275 billion under the Full Crowding Out Scenario allowing for NSSF contributions of 15%.

Allowing for alternative crowding out scenarios will increase investment in South African equities and bonds further. If the informally employed participate in the NSSF and the NSSF earnings ceiling is set equal to the UIF earnings limit, projected accumulation of the NSSF and retirement savings is increased further. The resulting investment in South African equities and bonds will therefore increase.

Considering longer term projections, the present value of savings and investments attributed to the retirement system under Implementing the NSSF is maximised allowing for a 15% contribution rate or a 6% contribution rate to retirement benefits only.

Table 51: Present Value of the Total of Accumulated Retirement Savings and the NSSF under Implementing the NSSF compared to Applying the Status Quo under Crowding Out Scenarios (10%, 12%, 15% and 6% NSSF contribution rates, Formal Employment, Conservative Investment Strategy)

R' Million	Applying the Status Quo	Full Crowding Out Scenario	Contribution Alignment Scenario	Partial Crowding Out Scenario
10% Contribution Rate	142 785 822	141 370 721	158 621 279	149 055 202
12% Contribution Rate	142 785 822	163 730 643	198 654 311	172 952 016
15% Contribution Rate	142 785 822	224 413 917	284 537 071	235 940 611
6% Contribution Rate	142 785 822	214 296 115	231 546 673	221 980 597

Table 52: Present Value of the Total of Accumulated Retirement Savings and the NSSF under Implementing the NSSF compared to Applying the Status Quo under Crowding Out Scenarios (10%, 12%, 15% and 6% NSSF contribution rates, Formal Employment and Informal Employment, Conservative Investment Strategy)

R' Million	Applying the Status Quo	Full Crowding Out Scenario	Contribution Alignment Scenario	Partial Crowding Out Scenario
10% Contribution Rate	142 785 822	197 185 797	214 436 355	204 870 278
12% Contribution Rate	142 785 822	191 451 613	226 375 281	200 672 986
15% Contribution Rate	142 785 822	184 160 516	244 283 669	195 687 209
6% Contribution Rate	142 785 822	249 550 164	266 800 722	257 234 645

Table 53: Present Value of the Total of Accumulated Retirement Savings and the NSSF under Implementing the NSSF compared to Applying the Status Quo under Crowding Out Scenarios (10%, 12%, 15% and 6% NSSF contribution rates, NSSF earnings ceiling equal to UIF earnings limit, Conservative Investment Strategy)

R' Million	Applying the Status Quo	Full Crowding Out Scenario	Contribution Alignment Scenario	Partial Crowding Out Scenario
10% Contribution Rate	142 785 822	145 963 263	165 905 196	150 592 945
12% Contribution Rate	142 785 822	163 950 348	203 557 665	169 505 966
15% Contribution Rate	142 785 822	213 476 995	281 858 272	220 421 518
6% Contribution Rate	142 785 822	202 452 201	222 394 135	207 081 884

Compared to Applying the Status Quo, the level of savings and investments attributed to the retirement system after implementation of the NSSF is expected to increase initially under all scenarios with the exception of a NSSF contribution rate of 6% towards retirement benefits only, where there is projected to be an insignificant decrease over the first ten years after implementation of the NSSF. The level of savings and investments then reaches a

peak under the various scenarios and falls below 100% for under all scenarios with the exception of the Contribution Alignment scenario at a NSSF contribution rate of 15% allowing for participation of the formally and informally employed.

The impact of a higher NSSF contribution rate, 12% or 15% compared to 10% of earnings up to the NSSF earnings ceiling, is to increase the level to which accumulated funds build up as a result of higher funding for a fix set of benefits at higher NSSF contribution levels, allowing for larger accumulation of the NSSF before funds are depleted and the NSSF is assumed to move into a pay-as-you-go basis.

The impact of segregating funding for retirement benefits in the NSSF, allowing for a 6% contribution rate, increases the sustainability of the NSSF and hence, while it does not reach the maximum levels of savings and investment demonstrated under the other contribution rate scenarios, it minimises the drop in the level savings and investment over the 100 period.

The level of NSSF contributions therefore impacts on the level of savings and investments attributed to the retirement system over the period considered. This is as a result of higher funding for a fix set of benefits at higher NSSF contribution levels, allowing for larger accumulation of the NSSF before funds are depleted and the NSSF is assumed to move into a pay-as-you-go basis.

It is noted that the underlying investment strategy will influence the underlying asset allocation will differ dependent on the investment strategy of the NSSF. Investments under the NSSF may favour debt markets and public sector funding (conservative investment strategy) resulting in reduced level of investment for other asset classes even where the overall level of savings after implementation is expected to increase. This may increase the cost of capital for the private sector or increase the cost of equity compared to debt. Increases to the cost of capital for private sector will reduce the demand for investment or change the relative attractiveness of equity versus debt.

4.2. Changes in Consumption, Saving and Investment Behaviour of Households and Firms

Under the Full Crowding Out Scenario, full displacement of contributions due to the NSSF will result in no change in consumption for those covered individuals where current effective contributions rates are higher than the NSSF contribution rate. Where effective contribution rates are lower than the NSSF contribution rate, reduced consumption will be required in respect of these individuals if borrowing is note increased to maintain consumption levels. Therefore, the impact on consumption and borrowing is dependent on the NSSF contribution rate. The table below sets out the reduction in possible consumption resulting from the implementation of the NSSF (assuming no increase in borrowing). This is based on an assumption that employers will meet approximately 60% of the increase in contributions based on an analysis of IRP5 data for the 2017 and 2018 tax years.

Table 54: Full Crowding Out Scenario: Reduction in Consumption by Households Covered in Respect of Retirement Savings on NSSF Implementation (10%, 12% and 15% NSSF contribution rates)

R' million	2020	2021	2022	2023	2024
10% Contribution Rate	8 743	9 152	9 569	10 112	10 696
12% Contribution Rate	14 384	15 075	15 786	16 703	17 673
15% Contribution Rate	24 556	25 550	26 599	28 012	29 516

It is noted that in respect of these individuals it has been assumed that any increases in the absolute value of contributions payable will be met by the individual and not their employer. As per the table above, the reduction in consumption is linked to the level of NSSF contributions. It is noted that the impact of reduced consumption will be more significant for low-income earners, particularly, if a NSSF contribution rate of 15% is implemented. This can be mitigated by transitioning in the requirement for contributions to the NSSF.

Approximately half of formally employed individuals are not covered in respect of retirement savings. The implementation of the NSSF will result in a reduction in consumption for these individuals if borrowing is not increased to maintain consumption levels resulting from the requirement to pay contributions to the NSSF on earnings to the earnings ceiling, if earning above the NSSF earnings floor. The table below sets out the reduction in consumption resulting from the implementation of the NSSF.

Table 55: Reduction in Consumption by Households not Covered in Respect of Retirement Savings on NSSF Implementation (10%, 12% and 15% NSSF contribution rates)

R' million	2020	2021	2022	2023	2024
10% Contribution Rate	27 157	28 314	28 908	29 820	30 760
12% Contribution Rate	32 587	33 977	34 690	35 785	36 911
15% Contribution Rate	40 734	42 472	43 362	44 731	46 139

Given the low coverage rates in respect of retirement savings based on formal employment for low-income earners, the impact of consumption will be most significantly felt by these individuals, given their ability to borrow is limited compared to high-income earners. It is noted that the average earnings of these individuals is R 45 000 in 2021 terms. Half of the contributions due to the NSSF will be met by employers, therefore firms will face increased employment expenditure in line with the figures set out in the table above. This will impact low-income earners more significantly and employment levels. It is therefore proposed that wage subsidies could be implemented to minimise disruptions to the demand of supply of labour associated with the introdsuction of mandatory contributions.

The tables below set out the expected contribution subsidy resulting from the implementation of the NSSF. This has been calculated based on a full subsidy of contributions for those individuals' earnings less than the legislated minimum wage[60] and the SARS tax threshold for comparison purposes.

Table 56: Contribution Subsidy for Individuals Earnings less than the Minimum Wage and not Covered in Respect of Retirement Savings on NSSF Implementation (10%, 12% and 15% NSSF contribution rates)

R' million	2020	2021	2022	2023	2024
10% Contribution Rate	7 828	8 192	8 653	9 236	9 858
12% Contribution Rate	9 394	9 830	10 384	11 084	11 830
15% Contribution Rate	11 742	12 287	12 980	13 854	14 788

[60] Employment and Labour on new National Minimum Wage rate | South African Government (www.gov.za)

Table 57: Contribution Subsidy for Individuals Earnings less than the SARS Tax Threshold and not Covered in Respect of Retirement Savings on NSSF Implementation (10%, 12% and 15% NSSF contribution rates)

R' million	2020	2021	2022	2023	2024
10% Contribution Rate	20 280	21 409	22 616	24 139	25 106
12% Contribution Rate	24 335	25 691	27 139	28 967	30 127
15% Contribution Rate	30 419	32 113	33 924	36 209	37 659

4.3. Changes in the Financing of Business Investment and in Capital Market Flows

The extent to which the NSSF can support the State's ability to fund new business and infrastructure development will depend on the investment strategy that the Board of Trustees decides on.

Given reduced sentiment towards South Africa, any reduced demand for South Africa government bonds can be mitigated to some extent by the increased funds available through implementation of the NSSF over the period to 2025, particularly in relation to a conservative investment strategy for the NSSF.

Considering the long-term projections presented in Section **3.6.2**, the overall level of savings and investments attributed to retirement savings under Implementation of the NSSF is expected to surpass the overall level of savings and investments attributed to retirement savings under Applying the Status Quo over at least the next 30 years, with the exception of a NSSF contribution rate of 6% towards retirement benefits only, where there is projected to be an insignificant decrease over the first ten years after implementation of the NSSF. After reaching a maximum level, depending on crowding out scenario and NSSF contribution level, the overall level of savings and investments attributed to retirement savings under Implementation of the NSSF reduces. Under all of the scenarios except for the Contribution Alignment Scenario at a NSSF contribution rate of 15%, the level of savings and investment reduces to less than the overall level of savings and investments attributed to retirement savings under Applying the Status Quo after 30 years. This can be mitigated by increasing NSSF contribution rates at pre-defined milestones over the period considered to maintain a minimum level of the NSSF.

4.4. Impact on Existing Retirement Funds

The following number of formally employed individuals are expected to be covered in terms of retirement savings over the period 2020 to 2025 allowing for Implementation of the NSSF and the various crowding out scenarios. Coverage has been calculated as the proportion of the formally employed who contribute to retirement savings. It therefore does not allow for individuals who belong to more than one retirement savings vehicle.

Table 58: Covered Formally Employed Individuals from 2020 to 2024 (Base Scenario)

	2020	2021	2022	2023	2024	2025
Full Crowding Out Scenario (10% NSSF Contribution Rate)	5 065 593	5 157 948	5 171 101	5 177 906	5 238 540	5 299 883
Full Crowding Out Scenario (12% NSSF Contribution Rate)	5 065 593	2 448 425	2 466 436	2 488 137	2 538 508	2 602 656
Full Crowding Out Scenario (15% NSSF Contribution Rate)	5 065 593	2 264 970	2 277 717	2 293 517	2 320 374	2 347 549
Contribution Alignment Scenario	5 065 593	2 743 990	2 901 607	2 909 218	2 946 534	2 981 176
Partial Crowding Out Scenario (10% NSSF Contribution Rate)	5 065 593	2 448 425	2 466 436	2 488 137	2 538 508	2 602 656

	2020	2021	2022	2023	2024	2025
Full Crowding Out Scenario (10% NSSF Contribution Rate)	5 065 593	5 157 948	5 171 101	5 177 906	5 238 540	5 299 883
Full Crowding Out Scenario (12% NSSF Contribution Rate)	5 065 593	2 448 425	2 466 436	2 488 137	2 538 508	2 602 656
Full Crowding Out Scenario (15% NSSF Contribution Rate)	5 065 593	2 264 970	2 277 717	2 293 517	2 320 374	2 347 549
Contribution Alignment Scenario	5 065 593	2 743 990	2 901 607	2 909 218	2 946 534	2 981 176
Partial Crowding Out Scenario (12% NSSF Contribution Rate)	5 065 593	2 264 974	2 277 722	2 293 520	2 320 377	2 347 549
Partial Crowding Out Scenario (15% NSSF Contribution Rate)	5 065 593	1 648 468	1 652 672	1 752 543	1 823 804	1 911 498

Over the short-term, the impact on accumulated retirement savings as at 31 December 2025, is highest under the Full Crowding Out Scenario (15% NSSF contribution rate) given this scenario results in the most significant reduction in contributions to retirement savings.

Table 59: Change in Retirement Savings as at 31 December 2025 under Crowding Out Scenarios (10%, 12% and 15% NSSF contribution rates)

R' Million	10% Contribution Rate	12% Contribution Rate	15% Contribution Rate
Full Crowding Out Scenario	774 415	876 488	- 1 011 052
Contribution Alignment Scenario	400 055	125 923	285 275
Partial Crowding Out Scenario	639 540	714 638	-808 740
No Crowding Out			

Allowing for a NSSF earnings ceiling equal to the UIF earnings limit, the corresponding change in retirement savings as at 31 December 2025 under the various scenarios assuming contribution rates of 10%, 12% and 15% respectively to the NSSF is set out below:

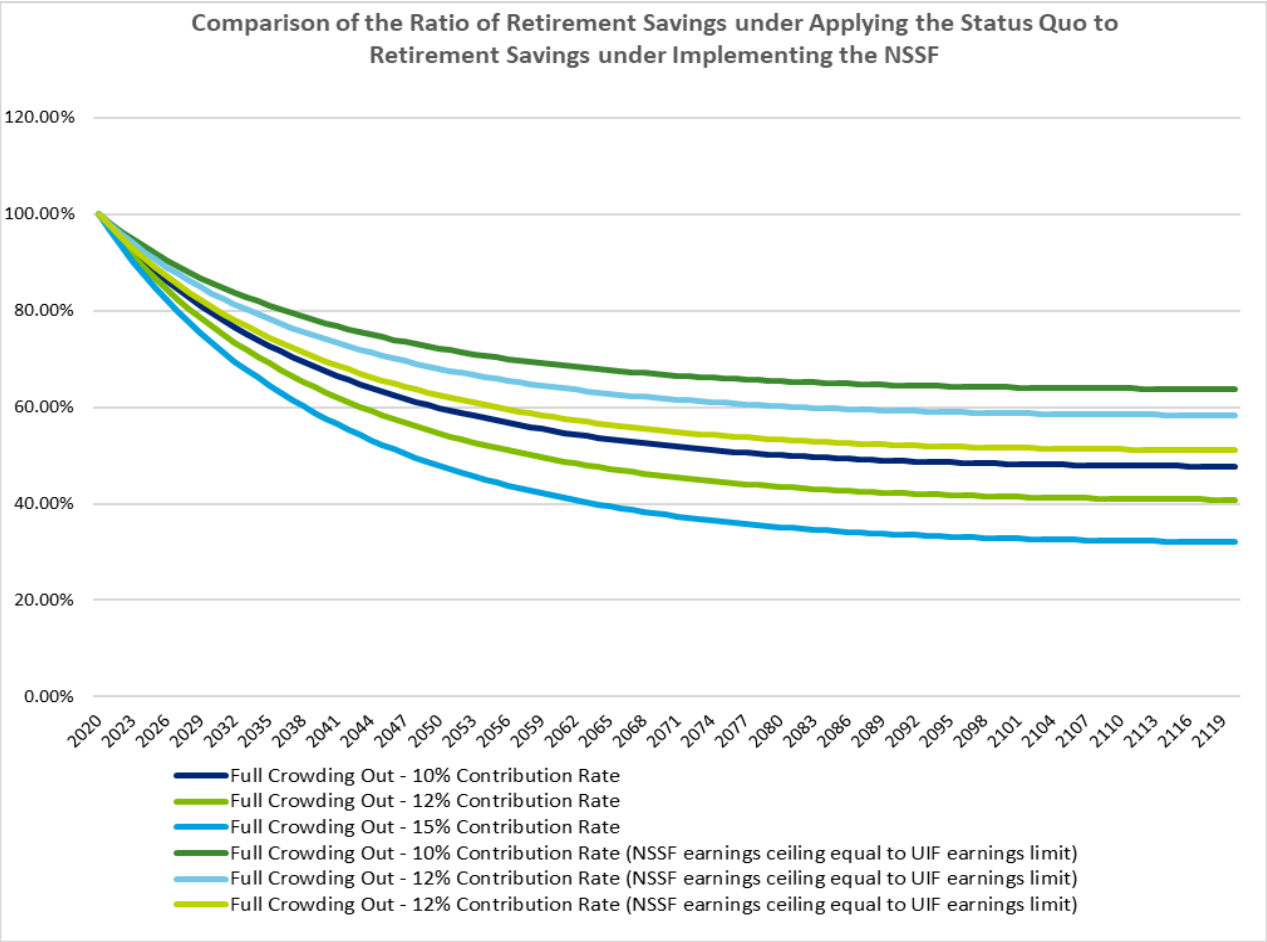
Table 60: Change in Retirement Savings as at 31 December 2025 under Crowding Out Scenarios (10%, 12% and 15% NSSF contribution rates, NSSF earnings ceiling equal to UIF earnings limit)

R' Million	10% Contribution Rate	12% Contribution Rate	15% Contribution Rate
Full Crowding Out Scenario	-534 892	-615 552	-724 154
Contribution Alignment Scenario	-112 918	218 642	715 981
Partial Crowding Out Scenario	-453 634	-518 042	-602 267
No Crowding Out	-	-	-

As noted above, reducing the NSSF earnings ceiling to the current UIF limit reduces the extent to which contributions to retirement savings are crowded out under the various crowding out scenarios hence increases projected retirement savings for all scenarios relative to an NSSF earnings ceiling of R 276 000 in 2018 terms.

Over the long term, the implementation of the NSSF will reduce the accumulation of retirement savings compared to under Applying the Status Quo. The ratio of accumulated retirement savings under Implementing the NSSF to under Applying the Status Quo has been projected over a 100-year period assuming a NSSF contribution rate of 10%, 12% and 15% respectively. This projection has been done under the Full Crowding Out Scenario.

Figure 17: Comparison of the Ratio of Retirement Savings under Applying the Status Quo to Retirement Savings under Implementing the NSSF (10%, 12% and 15% NSSF Contribution Rates)



The reduction in the ratio of accumulated retirement savings under Implementing the NSSF to under Applying the Status Quo is significant over the first 34 years, after which the reduction slows until equilibrium is reached at 48% of accumulated retirement savings under Applying the Status Quo assuming NSSF contributions of 10%, 41% of accumulated retirement savings under Applying the Status Quo assuming NSSF contributions of 12% and 32% of accumulated retirement savings under Applying the Status Quo assuming NSSF contributions of 15%.

If the NSSF earnings ceiling is set equal to the current UIF earnings limit, equilibrium is reached at 64% of accumulated retirement savings under Applying the Status Quo assuming NSSF contributions of 10%, 58% of accumulated retirement savings under Applying the Status Quo assuming NSSF contributions of 12% and 51% of accumulated retirement savings under Applying the Status Quo assuming NSSF contributions of 15%.

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