LifeWorks

11th Actuarial Review of the National Insurance Fund of St. Vincent & The Grenadines as of December 31, 2019

August 31, 2021

Table of Contents

Abbreviations and Acronyms

GDP	Gross Domestic Product
GoSVG	Government of St. Vincent and the Grenadines
EIB	Employment Injury Benefits
IE	Insurable Earnings (sometimes “Insurable Wages” used)
ILO	International Labour Office
IMF	International Monetary Fund
IPS	Investment Policy Statement
ISSA	International Social Security Association
LTB	Long-term Benefits
NAAP	Non-contributory Assistance Age Pension
NIB	National Insurance Board
NIF	National Insurance Fund
NIS	National Insurance Services
OECD	Organisation for Economic Co-operation & Development
SS	Social Security
STB	Short-term Benefits
SVG	St. Vincent and the Grenadines
TFR	Total Fertility Rate
UEB	Unemployment Benefit

Introduction

The St. Vincent & The Grenadines National Insurance Services (NIS) began operations in January 1987. It currently covers all employed and self-employed persons and offers three types of social security benefits - short-term benefits, long-term benefits or pensions and employment injury benefits. Payments related to the former National Provident Fund (NPF) are also administered by the NIS. All benefits are financed by contributions which are levied on employment earnings up to a wage ceiling and are paid by employers, employees and self-employed persons. Funds that have accumulated in previous years that are not yet required for the payment of benefits are invested locally, regionally and internationally in various types of securities and properties.

This is the report of the 11th Actuarial Review of the National Insurance Fund and it is being prepared as of December 31, 2019, three years after the 10th Actuarial Review. Section 17 of the National Insurance Act requires that such reviews be conducted at three year intervals. The timing of this report was deliberately delayed so that a clearer picture of the effect COVID-19 would have on SVG in the short and medium term would be factored into actuarial projections.

The main purpose of periodic actuarial reviews is to determine if the social security system in St. Vincent & The Grenadines operates on sound financial and actuarial bases and if it provides adequate and affordable levels of income protection. Where considered necessary, recommendations aimed at ensuring that these objectives can be achieved for current and future generations are made.

For this review, 60-year demographic and financial projections have been performed. It should be noted that these projections are dependent on the underlying data, methodology and assumptions concerning uncertain future events and that the outcomes and eventual experience will most likely differ, possibly materially, from that indicated in the projections. Therefore, in accordance with the National Insurance Act, periodic actuarial reviews should be conducted. The next Actuarial Review of the National Insurance Fund is due as of December 31, 2022.

We wish to thank Mr. Stewart Haynes, Director, and all other members of the National Insurance Services staff who provided data and otherwise assisted with this review.

All dollar amounts in this report are quoted in Eastern Caribbean (EC) dollars.

August 31, 2021

Executive Summary

Social security systems make promises to former and current workers that extend beyond sixty years. It is therefore important that it is well designed, well governed and properly administered. Periodic actuarial reviews provide a comprehensive assessment of the current and projected state of the National Insurance Fund. They also provide policy recommendations for changes designed to ensure that a suitable balance between benefit adequacy and financial sustainability is achieved for both current and future periods. This is the report of the 11th Actuarial Review of the National Insurance Fund (NIF) and has been conducted as of December 31st 2019. It covers the 3-year period 2017 to 2019.

While the COVID-19 impact on NIS finances in 2020 are not covered in this report, the effects of the pandemic have been considered in the outlook for SVG and the selection of assumptions for the projections included in this report.

In 2014 the contribution rate was increased from 8% to 10% and then in 2016 various pension reforms took effect. The increase in pensionable age from 60 to 65 which is the most material of the reforms, will not be fully phased in until 2027.

Experience During the Review Period

During the review period the economy grew at an average rate of 1.2% and inflation averaged 1.8% per annum. For the NIF:

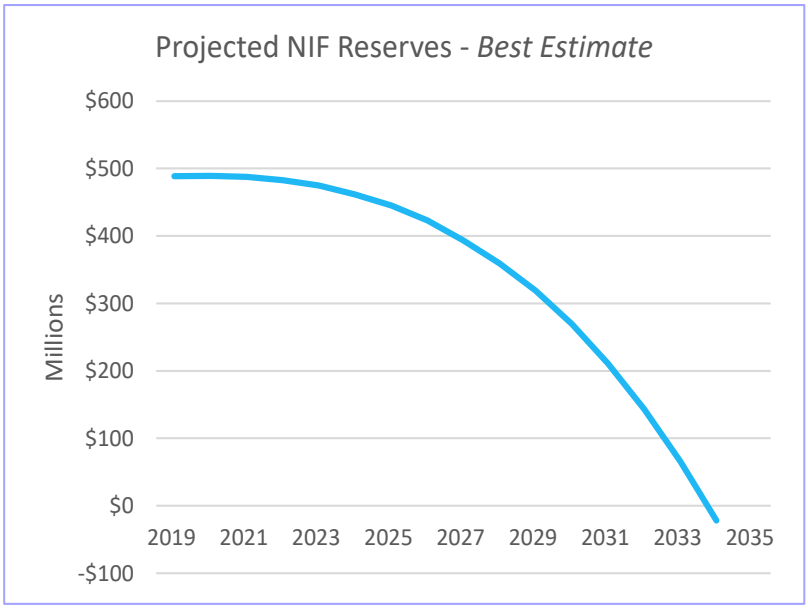
- The number of NIS contributors increased from 39,100 in 2016 to 42,400 in 2019.
- The number of pensioners increased from 7,198 in 2016 to 8,145 in 2019.
- Both contribution income and benefit expenditure increased each year with benefits increasing at a much faster pace.
- Total expenditure exceeded contribution income in all years but with investment income included, the Fund experienced a net surplus of $10 million over the three years.
- More investment funds were allocated to short-term investments even though yields are low.
- As of December 2019, 24% of all investments were held in the Bank of St. Vincent & The Grenadines and investments in government and quasi-government securities stood at 50%. 61% of the Fund's assets were invested in St. Vincent & the Grenadines.
- Total NIF reserves at the end of 2019 were $488.5 million, 6 times expenditure in 2019.

None of the contribution and benefit related recommendations in the report of the 10th Actuarial Review were made during the review period. However, in July 2019, the Board approved a comprehensive set of good governance guidelines in line with recommendations made in that report.

Main Findings & Projection Results

This report's assessment of NIS policy and design indicators suggests that current contribution and benefit provisions provide a fairly good level of benefit adequacy and income protection to most workers and pensioners. The periodic adjustment of pensions has been effective in replacing most of the price inflation felt by pensioners. Even though the wage ceiling has not been increased since 2006 only 6% of insureds earn more than $4,333 per month. Participation rates among self-employed persons and informal sector workers continues to be very low.

Although there remains a heavy concentration of investments in short-term deposits, the investment portfolio is otherwise fairly well diversified. Administrative costs relative to contributions collected decreased slightly during the review period.



60-year projections of NIS income, expenditure and reserves under three distinct population and economic growth scenarios are presented in this report. As shown in the adjacent chart, reserves are projected to be depleted in 2034 under the Best Estimate scenario if the contribution rate is not increased and benefit reforms not made.

When reserves are exhausted, there will only be two possible sources of additional income to meet benefit payments:- (i) higher contributions from employers and workers and (ii) special transfers from the Government.

At the current stage of Fund finances, higher investment returns will have little material impact on overall reserves.

Additional results from these three projection sets are shown below:

1. Total expenditure will exceed contribution income each year.
2. Total expenditure will first exceed total income in 2021.
3. The Fund will be depleted between 2033 and 2036.
4. The pay-as-you-go rate in 2079 will be between 24% and 34%.
5. The average long-term cost of benefits over the next 60 years, often referred to as the general average premium, is between 18% and 22%.

These results are similar to those of the 10th Actuarial Review and once again show that the Fund is not financially sustainable over the medium and long-terms at current benefit provisions and contribution rate.

Recommendations

As Fund depletion looms, immediate mitigating measures are required. Ideally, the burden felt by these measures should be shared by all, including those who are already in receipt of a pension. Therefore, given the state of Fund finances and low inflation in recent years, no increases to pensions in payment, or fixed dollar benefit amounts, are recommended at this time.

To ensure that measures aimed at extending the life of the Fund are well thought through, the Board should immediately prepare a Funding Policy and a Benefits Policy. At a high level, these policies will provide explicit documentation of what the NIS seeks to accomplish, what circumstances it wishes to avoid and where objectives conflict, what takes priority. Specifically,

- The Benefits Policy should include the purpose and goals of each benefit and justification for its eligibility rules and amounts paid.
- The Funding Policy should include the minimum number of years that reserves should remain positive along with how much, and when, the contribution rate should be increased to achieve that stated goal.

Critical to ensuring Fund solvency for at least the next 25 years is a contribution rate increase. It is therefore recommended that the contribution rate be adjusted in line with one of the two following options:

(a) 1% each year starting 2022, until at least 15% is reached in by 2026, or

(b) ½% each year starting in 2022 until 15% is reached in 2031.

Material savings from benefit reforms can only be realised from changes to Age pension provisions. Following are several opportunities for reducing long-term costs, all of which should be considered:

1. Reduce the maximum Age/Invalidity pension percentage rate from 60% to 55% before 55% is attainable under the current schedule of accrual rates.
2. Do not award Early Age pensions to insureds who have not substantially retired.
3. Gradually increase the age at which reduced Age pensions are awarded from 60 to 62.
4. Increase the reduction factors that apply to Early Age pensions from ½% per month to as much as ¾% per month in an effort to discourage early pensions.
5. Hasten the increase in pensionable age so that age 65 is reached in 2026 instead of 2028.

Other recommendations made throughout this report are:

6. Consider allowing those in receipt of an Age/Invalidity pension to also receive a portion of a Survivors pension if they meet the eligibility conditions for both pensions.
7. For Sickness, Maternity and Injury benefits, revise the days for which benefits are paid to exclude one day, instead of Sunday in every case.
8. Make NIS registration and payment of contributions mandatory for all self-employed and informal sector workers.
9. Implement new technologies that will allow self-employed persons and informal sector workers to easily pay contributions to, and receive benefits from, the NIS.

10. Improve contribution compliance through effective linkages with government departments that issue permits to businesses and self-employed persons.
11. Seek ways to reduce administrative costs.
12. Revise the composition of the Investment Committee so that two of the three Board members are replaced by two non-Board members with investment or financial experience.
13. Share openly with the public this report of the 11th Actuarial Review, recent financial audited financial statements, along with the Board's plan to ensure long-term sustainability of the National Insurance Fund. This report should be placed on the NIS website.

With the National Insurance Fund projected to be depleted in less than 15 years, meaningful changes are urgently required. Even if all of the recommendations made above are fully accepted and implemented by January 2022, additional contribution rate increases will be required to ensure the continued payment of benefits without Government support. Policymakers should therefore not depend on "hoped-for" results but instead adopt rational responses for the specific challenges that lie ahead.

Implementing the above recommendations will not be easy for the government to make or for stakeholders to accept. It is therefore recommended that extensive consultation be held with stakeholders and that the Board publish audited financial statements and actuarial review reports during such consultation.

Chapter 1 Activities & Experience Since The 10th Actuarial Review

1.1 Amendments to Act & Regulations

There were no amendments to the Act and/or Regulations made during the review period.
The following reforms which took effect in 2016 are being gradually phased in as scheduled:

- Pensionable Age and the number of contributions required for a full Age pension are being increased as follows:

Table 1.1. Scheduled Adjustments to Pensionable Age & Contribution Requirement

Period	Pensionable Age	# of contributions required for full Age pension
2019 – 2021	62	600
2022 – 2024	63	650
2025 - 2027	64	700
2028+	65	750

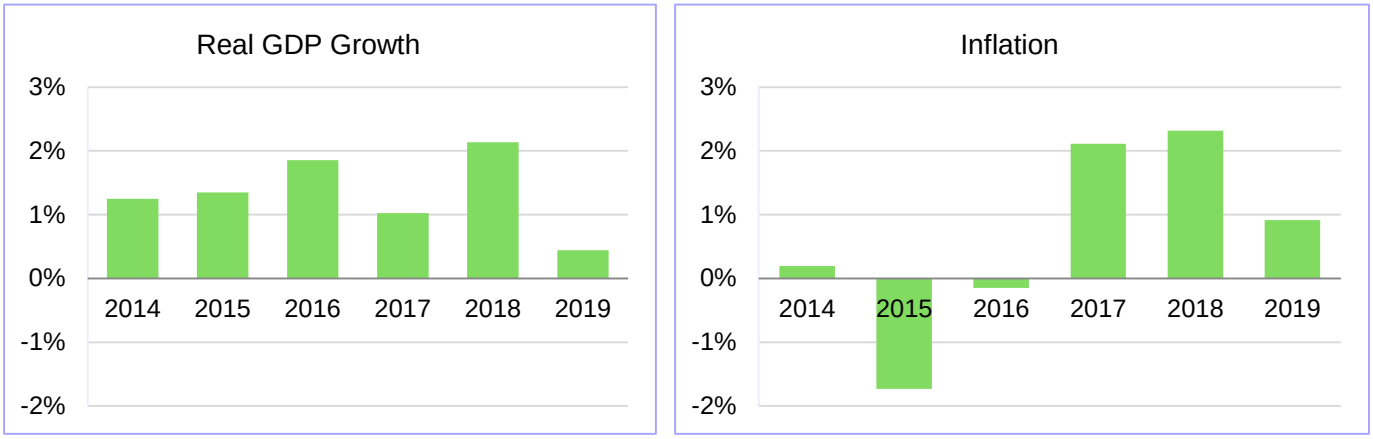
- For insureds at Pensionable Age who do not meet the minimum contribution requirement shown above, but have at least 500 weeks of contributions, a proportionately reduced pension will be available up to 2027. The proportion is the number of weekly contributions made to the number required for a full pension at the time of award.

Further details of all contribution and benefit provisions can be found in Appendix A.

1.2 Economic Experience

Contribution and investment income are closely linked to economic performance and labour market changes. As shown in Figure 1.1, real economic growth was positive in each of the three years in the review period, with the annual average growth rate being 1.2%. Average annual inflation during the review period was 1.8%.

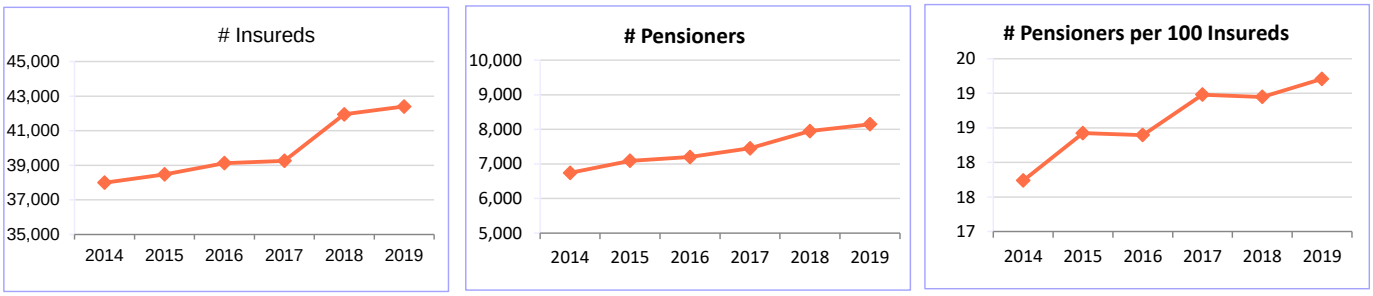
Figure 1.1. Key Economic Indicators, 2014 to 2019



1.3 National Insurance Fund Experience

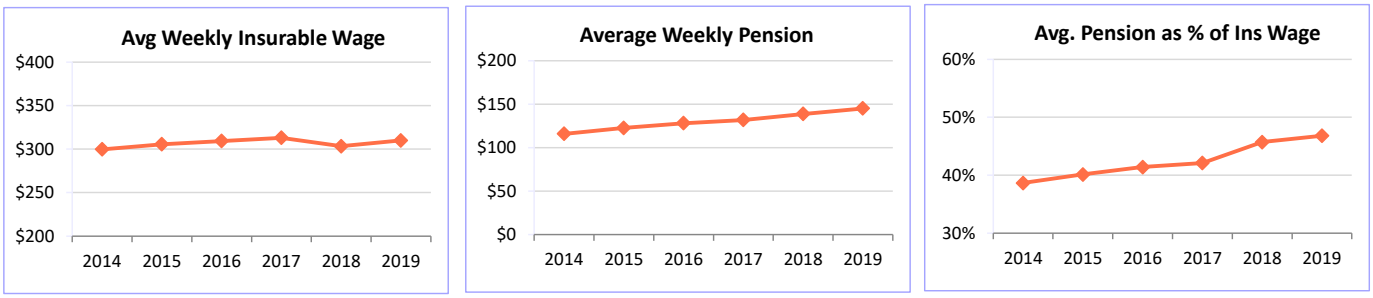
In line with modest economic growth, the number of contributors increased in each of the three years under review. (Figure 1.2) As expected, the number of pensions in payment increased each year. With the number of pensioners increasing at a faster rate than the number of contributors, there was an increase in the demographic ratio (number of pensioners per 100 insured persons) from 18.4 to 19.2 between 2016 and 2019.

Figure 1.2. Insured Persons (Contributors) & Pensioners, 2014 to 2019



While the average insurable wage was the same in 2016 and 2019, the average pension in payment increased. (Figure 1.3) Average pensions divided by average insurable earnings is often referred to as the replacement ratio. This ratio increased from 41.4% to 46.8% between 2016 and 2019.

Figure 1.3. Average Insurance Wages & Average Pensions, 2014 to 2019



Following are summary income and expenditure amounts for 2017 to 2019. A more detailed version of the National Insurance Fund finances for these years may be found in Appendix D.

Table 1.2. Summary of NIF Finances, 2017 – 2019 (millions of $'s)

	2017	2018	2019
Income			
Contributions (incl. impairment losses)	60.8	67.1	67.3
Net Investment	22.5	12.3	24.4
Other	0.4	2.2	1.8
Total	83.8	81.6	93.5
Expenditure			
Benefits (incl. NPF)	61.0	67.6	70.0
Administrative	10.5	11.1	11.7
Total	71.4	78.8	81.7
Excess of Income over Expenditure	12.4	2.8	11.7
Effect of Adopting IFRS 9		(16.9)	
Reserves (end of year)	**490.8**	**476.7**	**488.5**

1. Numbers may be off due to rounding
2. The presentation of income and expenditure above is different from audited financial statements.
   - Net investment income includes provisions for impairment, net changes in Fair Value of investments and income from associate.
   - Other income includes rent and surcharges and any impairments thereon.

Highlights of income and expenditure over the three-year review period are:

(i) Contributions (on an accrual basis) had a significant increase in 2018 and a very small increase in 2019.

(ii) Investment income was volatile.

(iii) Benefit expenditure increased each year.

(iv) Administrative costs increased slightly each year.

(v) There was a surplus from normal operations (investment income included) each year.

(vi) The adoption of International Financial Reporting Standard 9 resulted in a one-time loss on reserves of $16.9 million in 2018. IFRS 9 deals with the recognition and measurement of financial instruments and for the NIS, resulted in the recognition of impairment losses on various receivables.

Included in 2019 year-end reserves are contributions receivable of $5.1 million, a significant reduction from $9.5 million at the end of 2016.

Over the period 2017 to 2019, impairment provisions totaling $7.7 million have been made to various types of securities and receivables.

At the end of 2019, the NIF had $32.3 million of un-invested assets, including:

- Contributions receivable: $5.1 million
- Rent receivable: $0.6 million
- Property & Equipment: $26.6 million

1.4 Benefit Branch Experience & Reserves

NIS administers three major types of social security benefits – long-term benefits or pensions, short-term benefits and employment injury benefits. While the summary of NIS finances presented in the previous section shows total income and expenditure, internal accounting separates finances into benefit branches. Since the three benefit types have different characteristics and financing mechanisms, the separation allows for better monitoring of experience. Each benefit is allocated to a branch and each benefit branch is allocated a certain percentage of contribution income, investment income and administrative costs.

For the Short-term benefit and Employment Injury benefit branches, a pay-as-you-go method of financing is used. Under this method current contributions are expected to closely match current benefits with only a small reserve. Therefore, the contribution allocation to these branches should approximate expected expenditure and reserve levels should be small, relative to annual expenditure. As shown in Table 1.3, contributions allocated to these two branches exceeded total expenditure (expressed as a percentage of insurable wages) in all years.

Table 1.3. Summary Branch Experience (% of Insurable Earnings)

Benefit Branch	Contributions Allocated	Total Expenditure		
		2017	2018	2019
Short-term	0.82%	0.62%	0.64%	0.60%
Pension	8.55%	10.36%	10.54%	10.83%
Employment Injury	0.63%	0.14%	0.09%	0.15%
All Branches	**10.00%**	**11.12%**	**11.27%**	**11.59%**

Long-term benefits are partially pre-funded with the portion of the contribution rate not allocated to Short-term and Employment Injury benefits. As shown above, LTB branch expenditure exceeded contributions allocated in all three years.

The following table shows changes in total reserves and relative funding levels for each branch between 2016 and 2019. Also shown are suggested target funding ratios for the Short-term and Employment Injury Benefit branches.

Table 1.4. Benefit Reserves & Reserve-Expenditure Ratios, 2016 & 2019 ($'s are in millions)

Benefit Branch	Year-end Reserve (in millions)		Reserve-Expenditure Ratio		
	2016	2019	2016	2019	Suggested Target
Short-term	$24.5	$30.9	5.7	7.4	1.0
Pension	$359.6	$350.6	5.5	4.7	Not Applicable
Employment Injury	$59.4	$75.0	48.0	72.6	2.0

Note: Reserve-Expenditure ratio is the size of the year-end reserve relative to total expenditure in that year.

As shown in Table 1.4, reserve-expenditure ratios for the STB and EIB branches have increased during the 3-year review period and decreased for the LTB branch. At the end of 2019 actual funding ratios for the STB and EIB branches were well in excess of target funding ratios. Therefore, reserve transfers out of these two branches to the LTB branch and a reallocation of the contribution rate between branches are justified. (See Section 5.5.3)

The National Insurance Fund also comprises two other reserves – National Provident Fund and Fair Value Reserve as described in Table 1.5.

Table 1.5. Non-Benefit Reserves

Reserve	Description	Dec. 2019 (in millions)
National Provident Fund (NPF) Reserve	Accumulated NPF balances less members' claims settled.	$35.9
Fair Value Reserve	Cumulative gains and losses on revaluation of freehold properties and investments designated as "available for sale"	($3.9)

For the analysis and projections of this actuarial review, NPF and Fair Value Reserves are included in total reserves.

It should be noted that the existence of branches does not affect the overall financing or sustainability of the full National Insurance Fund.

The financial experience of each branch and detailed benefit experience for 2017 to 2019 may be found in Appendix E.

1.5 Experience Compared with Projections of the 10th Actuarial Review

In the 10th Actuarial Review, projections were prepared under three different sets of demographic and economic assumptions. Shown below is a comparison of actual cumulative experience over the 3-year period with the projections of the "Best Estimate" scenario of the 10th Actuarial Review.

Table 1.6. Projections from 10th Actuarial Review Compared with Actual Experience

	2017-2019 Projected (millions of $'s)	2017-2019 Actual (millions of $'s)	% Difference
Contribution Income	$187.1	$195.2	5% above projected
Investment Income	$61.2	$59.2	3% below projected
Benefit Expenditure	$193.2	$198.6	3% above projected
Administrative Expenditure	$32.2	$33.3	3% above projected
2019 Year-end Reserves*	$494.0	$488.5	1% below projected
Reserve-Expenditure Ratio (end of period)	6.3	6.0	

* Includes NPF and Fair Value reserves

1.6 Investments

At the end of 2019, National Insurance Fund investments stood at $444.6 million up from $427.5 million at the end of 2016. The relationship between investments and reserves, which measures how efficiently available funds are invested averaged 83% over the 3-year review period. This is low as it indicates that 17% of reserves are not earning investment income. At the end of 2019, interest and contributions receivable represented 3.8% of reserves while property, plant and equipment account for 5.4% of reserves.

During the review period, the average yield on investments was 4.9% and the average yield on reserves was 4.0%. With inflation averaging 1.8% per annum, the average real rate of return on reserves was 2.2%.

The following table provides a summary of the investment mix of the National Insurance Fund at year-ends 2016 and 2019.

Table 1.7. Summary of Cash & Investments, Year-end 2019 & 2016 (millions of $'s)

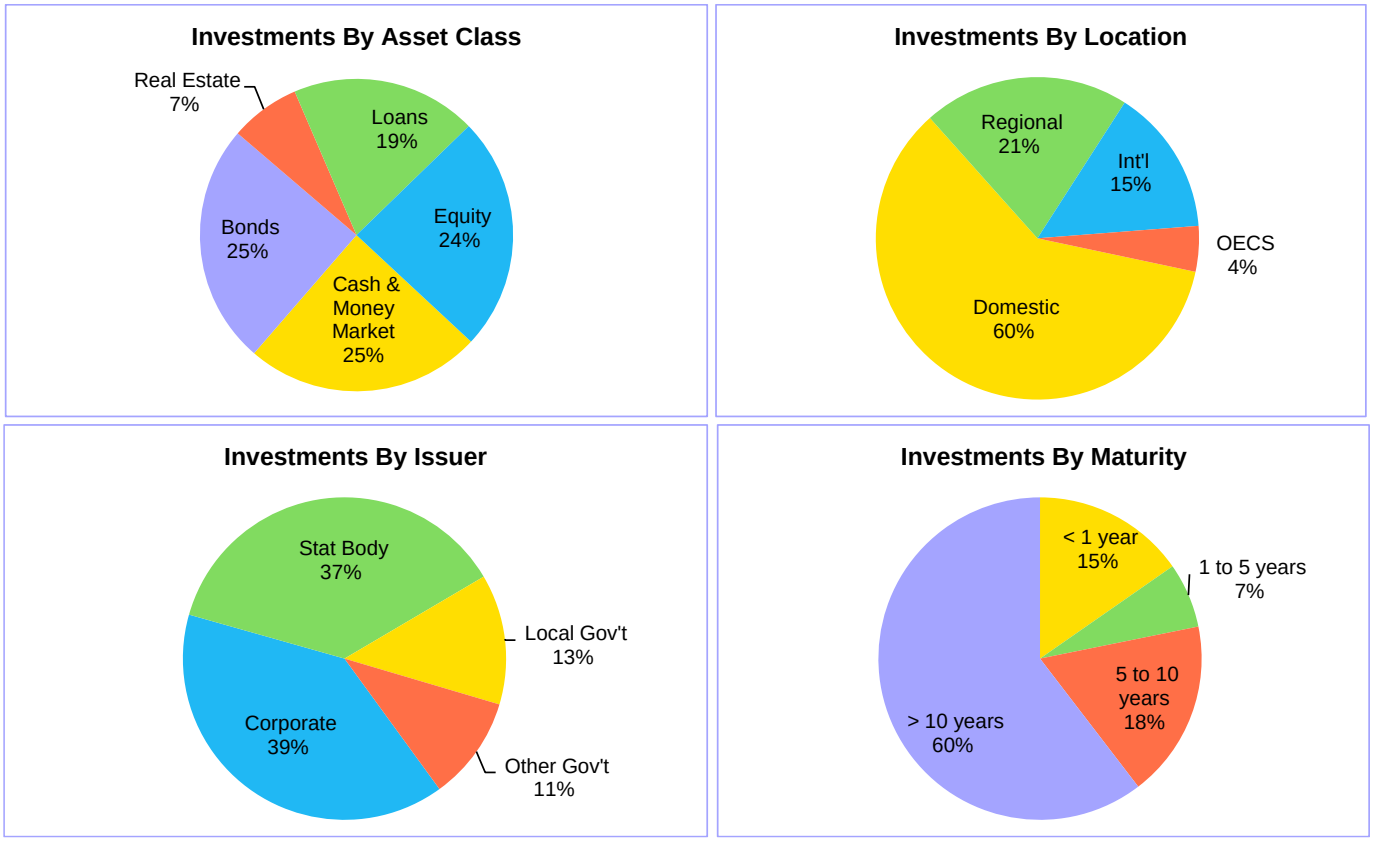
Investment Category	2019			2016	
	$'s	%		$'s	%
Cash & Equivalents	42.7	9.6		23.2	5.4
Deposits	65.8	14.8		55.8	13.1
Bonds	110.9	24.9		111.9	26.2
Loans	85.3	19.2		119.0	27.8
Equities	82.6	18.6		71.7	17.8
Interest In Associate	25.1	5.6		21.2	5.0
Real Estate	32.2	7.3		24.6	5.8
Total	**444.6**	**100.0**		**427.5**	**100.0**

Notes: Totals may be off due to rounding
Real estate includes land at Peter's Hope

Material changes in investment allocations during the review period include an increase in cash & equivalents and deposits, decrease in loans and an increase in real estate holdings.

Diversification is a critical component in the investment of social security funds. How well investments are diversified can be assessed using four criteria:- across various asset classes, across maturity dates, across different locations and by issuer of the underlying securities. The following charts illustrate the diversification of NIF investments as of December 2019.

Figure 1.4. Investments, December 2019



A summary of the asset mix, with specific emphasis on diversity, shows that:

- By asset class:- very well diversified with significant allocations to five different classes of investments.
- By location:- a significant portion (by regional standards) is held outside of SVG but still heavily concentrated within Caribbean countries that face similar economic challenges.
- By issuer:- exposure to the GoSVG and other governments decreased over the three year review period and remain relatively low by regional levels. If Bank of SVG, National Lotteries Ltd. National Properties Ltd and National Student Loan Company are considered public sector, exposure to the SVG public sector would be 50%. This is considered high.
- By maturity:- with the Fund's obligations being mostly long-term and current cash flows adequate to meet expenditure, there is an over-concentration of investments in cash and short-term deposits.

Further analysis of the Fund's investments at the end of 2019 reveals that 61% of all cash and deposits, or 24% of all investments, are held in the Bank of SVG.

NIF investments are guided by a Statement of Investment Policy & Procedures which was last accepted and approved in 2018. This Policy sets out investment objectives and guidelines for the Fund and defines the management structure and monitoring procedures for both internal and external investment management. It also includes a desired asset allocation policy for the Fund. The following table shows

the asset mix at December 31, 2019 compared with the acceptable ranges found in the Investment Policy Guidelines. As shown below holdings of deposits are well above the desired Investment Policy's strategic asset allocations.

Table 1.8. Asset Mix Compared To IPS Strategic Allocation, Dec. 2019

Asset Class/Region	Actual	Overall Target	Variance
Money Market Securities	24%	15%	Significantly over
Fixed Income – Bonds & Loans	44%	55%	Significantly under
Equities	24%	20%	Over
Real Estate	7%	10%	Slightly under
SVG Government	13%	Max. 20%	Significantly under
SVG Public Sector Debt	30%	Max. 30%	In line
Extra-regional	15%	15%	In line

Note: For each of the first four asset classes shown above, there are specific targets for local, regional and foreign allocations.

1.7 Subsequent Events

In March 2020, the COVID-19 pandemic began to affect St. Vincent & The Grenadines, initially in the tourism and hospitality sector. Shortly thereafter, the presence of positive cases led to Government taking drastic lockdown measures aimed at preventing the spread of the Coronavirus. This health crisis quickly transformed into an economic and labour market shock resulting in thousands of workers being either laid off or not being able to go to work.

To help alleviate the hardship caused by unexpected loss of employment income, the NIS implemented a Temporary Unemployment Benefit and the Government established a Displacement Supplementary Income Support Programme (DSIS) for hospitality workers and seafarers. The NIS administered both programmes. Total payments under the Temporary Unemployment Benefit was $2.36 million. A summary of the two programmes is provided below.

Table 1.9. Summary of 2020 Temporary Income Support Programmes

	Temporary Unemployment Benefit	Displacement Supplementary Income Support Programme
Eligible Groups	Insured workers	Hospitality workers
Eligibility Conditions	Laid off or terminated on or after March 1, 2020	Laid off, terminated or reduced employment with full employment prior to February 29, 2020
Benefit Amount & Duration	$75 per week for up to 13 weeks	$300 for up to 3 months
Financed By	NIS	GoSVG

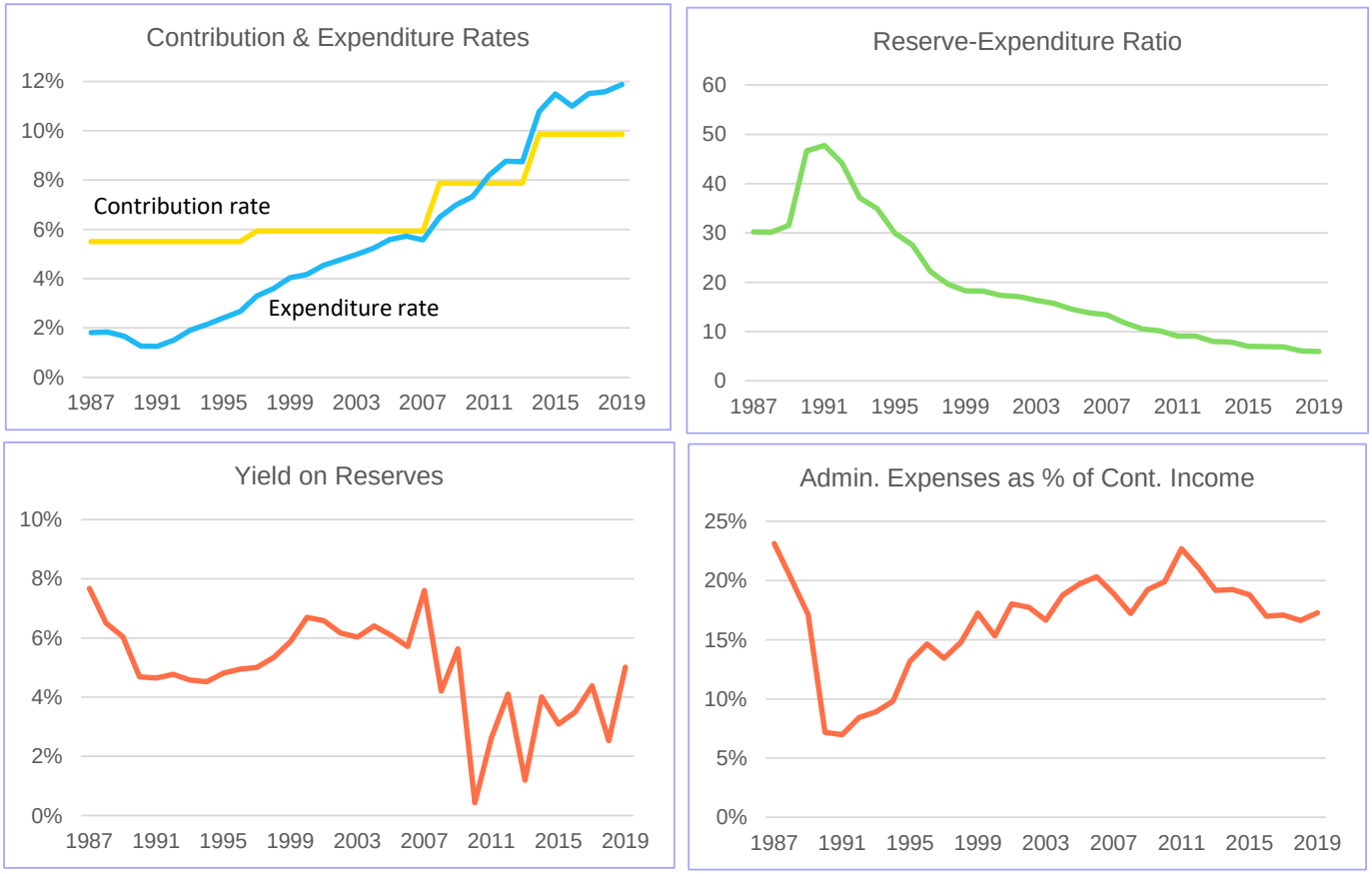
Chapter 2 Assessment of Performance & System Design

National social security systems must balance benefit adequacy with affordability and long-term sustainability. There is an obvious trade-off between these concepts:- higher benefits provide larger incomes to beneficiaries, but cost more. On the other hand, inadequate pensions result in pressures to increase benefits or add new ones. This Chapter contains a review of past trends for key financial indicators and current design parameters, and examines how well key policy objectives are being met.

2.1 Historical Performance, 1987 – 2019

Experience for key financial factors from 1987 to 2019 is presented in the following charts:

Figure 2.1. National Insurance Financial Experience



As a partially funded social security system matures total expenditure as a percentage of insurable wages gradually increases while the size of the reserve relative to annual expenditure decreases. This

has been the case for the NIS as depicted in the two top charts in Figure 2.1. Since 2011, expenditure exceeded contributions each year.

As the size of the Fund grows, the rate of return becomes more critical to enhancing long-term sustainability. As shown above, rates of return have been volatile since 2007 and after trending downwards for several years increased slightly in recent years. This volatility has been due mainly to more equities and write-downs in asset values while lower returns are consistent with larger amounts being held in cash and money market accounts.

Administrative costs as a percentage of contribution income trended upwards for over 20 years but have gradually trended downwards in the last eight years, averaging 17.0% of contribution income in the 3-year review period.

Following are values for several key indicators as of the dates of the 9th, 10th and 11th Actuarial Reviews along with a brief analysis of the changes that have occurred.

Table 2.1. National Insurance Performance Indicators

	2013	2016	2019	Comments
1. Contribution Rate (private)	7.9%	9.9%	9.9%	Increased in 2014 to 10% for employed persons
2. Expenditure Rate	8.7%	11.0%	11.9%	Gradual increase in line with expectations
3. Benefits as % of GDP	2.3%	2.7%	3.1%	Gradual increase in line with expectations
4. Reserve-Expenditure Ratio	8.0	7.0	6.0	Gradual decrease in line with expectations
5. 3-year average nominal yield on reserves	2.6%	3.5%	4.0%	Below target returns over last 9 years
6. 3-year average real yield on reserves (net of inflation)	0.4%	4.1%	2.2%	Low inflation in past 9 years
7. Administrative Expenses (3-yr average) as: ▪ % of Contributions ▪ % of Conts. + Benefits ▪ % of Insurable Wages	 21.0% 11.3% 1.6%	 18.3% 9.5% 1.8%	 17.0% 8.4% 1.7%	Rates lower in most recent review period.
8. # of Contributors Per Pensioner	5.8	5.4	5.2	Gradual decrease in line with expectations
9. Avg. Pension as % of Avg. Insurable Wage	35.6%	41.3%	46.8%	Faster increase than expected

All indicators are generally consistent with expectations of a maturing social security fund and economic conditions in the last nine years.

2.2 Meeting Policy Objectives

The National Insurance system is mandatory for all employed and voluntary for self-employed persons. It has a defined benefit structure where the rules governing eligibility and the amounts payable are defined in statute. The NIS is expected to be perpetual. Together, the rules and the amounts at which key parameters are set determine benefit adequacy. How well certain rules are enforced, and how well the system is managed, also impact how well policy objectives are met.

Following is a brief assessment of four of the NIS's primary objectives:- coverage, pension adequacy, financial stability and administrative efficiency.

- Coverage, which looks at how well workers of all sectors are covered for income security in old age;
- Pension adequacy, which relates to the ability of pensions to provide a decent standard of living;
- Financial sustainability, which ultimately relates to the affordability of the system to future contributors; and
- Administrative efficiency, which relate to keeping operating and management costs low while delivering quality service.

To determine how well these objectives are now being met, and how likely they are to be met in the future, an analysis of current contribution and benefit provisions, key rates and parameters as well as actual performance indicators have been reviewed. While some mention is made of Short-term and Employment Injury benefits, this analysis focuses primarily on pensions which accounted for 86% of NIF benefit expenditure in 2019.

2.2.1 Coverage

With NIS participation mandatory for all employed persons (voluntary for self-employed persons), coverage concerns relate to actual participation rates by formal and informal sector workers and the proportion of elderly residents receiving an NIS pension. The following five estimates for 2019 provide a fairly good analysis of current coverage levels:

a)	% of employed workers contributing to the NIS	80% to 85%
b)	% of contributors that have their wages fully covered by the NIS	94%
c)	% of the elderly resident population who receive an NIS pension	35% to 40%
d)	% of deaths resulting in funeral grants (2014 - 2015)	51%
e)	% of births resulting in maternity grants (2017 & 2018)	33%

The first two indicators above shows that most employed persons participate in the NIS and that most have their wages fully covered even though an adjustment to the wage ceiling has not occurred since 2008. For this reason, the current wage ceiling is still considered to be at an adequate level even though NIS is gradually losing relevance to higher paid individuals.
The low rates of awards shown above for elderly residents with NIS pensions, Funeral and Maternity grants awarded compared to births and deaths is concerning. Together, these confirm that many workers, both past and present, are not being covered by the NIS. After more than 30 years of existence higher percentages are expected for all three factors. These low rates are likely attributable to a large

segment of the workforce being informal and/or self-employed and not registering and paying NIS contributions. Therefore, while the NIS provides a high level of coverage to the employed population the actual level of protection provided to others is extremely low.

2.2.2 Adequacy

Benefit adequacy can be broken down into two components:

- Current adequacy: Are pensions adequate today?
- Future adequacy: Under current provisions, will the pension be adequate in the future?

Current Adequacy

The minimum contributory pension is $70 per week or $303 per month. This equates to 23% of the average insurable wage, unchanged from 2016. Relative to wages the minimum pension is slightly low. Although not legislated, the practice of adjusting pensions periodically provides good support to maintaining benefit adequacy. The last increase took effect in January 2017.

For pensioners receiving more than the minimum, their pension replacement rates are initially between 30% and 60% of their final average insurable wage, lower for the small percentage of very highly paid persons. This replacement level is considered adequate.

Future Adequacy

A worker who has steady earnings below the wage ceiling and contributes to the NIS for a full career, sustaining him/herself predominantly from his employment earnings, can expect a pension of close to 60% of pre-retirement earnings. By ILO and other international standards this is quite high and thus meets any reasonable test of benefit adequacy for a social security pension. The challenge quite often, especially for the self-employed and informal sector workers, is that many workers do not have steady wages and do not consistently work and contribute for 35 or 40 years.

Regular ceiling and pension adjustments will ensure benefit adequacy both at the time of award and throughout the pension payout period as the pension maintains its initial purchasing power. But given that neither the wage ceiling nor pension adjustments is legislated, there is some uncertainty re future benefit adequacy. Ad hoc ceiling increases also affects future benefit adequacy favourably for those who have earnings well in excess of the ceiling. The last ceiling increase was in 2008.

When compared with targeted replacement rates for mandatory social security pensions in OECD countries, the SVG NIS provides relatively high replacement rates. The significant difference between pensions in old age in SVG compared with OECD countries is the additional pensions that most in OECD countries can look forward to – state means-tested pensions to those at the lower end of the income scale and private pensions (employment linked or personal) for others. Given the low level of pension participation and personal long-term savings by workers, the higher replacement rate targets in SVG are reasonable.

Social security pensions are not intended to provide all of the income required to support oneself in old age. Based on the above, current contribution and benefit provisions provide pensions in old age that meet reasonable tests of future benefit adequacy.

When non-pension benefits are considered, the various short-term and employment injury benefits provide almost full income protection for all contingencies that could lead to involuntary loss of employment income. The sole benefit not currently provided is one that covers loss of income due to involuntary unemployment.

2.2.3 Financial Sustainability

Assessing the sustainability of a national pension system is complicated. Given the perpetual nature of these systems, some of the rules that apply to private pensions systems are not appropriate. Therefore, whether current reserves plus future contributions at the current contribution rate are sufficient to meet future expenditure should not be used to determine long-term sustainability. Instead, assessing sustainability involves looking at the cost of the system now and in the future, and considering whether or not employers and workers in the future will be able to afford the cost. A definition of financial sustainability that has become widely used in social security discussions is whether the pension system is able to meet the needs of current generations without compromising the needs of future generations.

By design, the NIF is partially funded and the current contribution rate and accumulated reserves are expected to be adequate to meet all obligations for approximately 15 to 20 more years. However, with contributions alone no longer sufficient to meet expenditure, increasing portions of investment income will be needed to pay benefits and then eventually investments will have to be liquidated. This is a natural progression for partially funded national pension systems.

It is not possible to determine today the highest contribution rate that workers and employers will be able to afford, or be willing to pay, twenty to thirty years from now. With reserves having plateaued and reduced rates of return on investments in the current low interest rate environment, contributions will have to account for the greater portion of future Fund income.

Based on regional and international comparisons the NIS provides a relatively generous benefits package for a moderate contribution rate and thus its financial sustainability may come into question. The key challenge for current and future Boards and governments regarding financial sustainability is determining when will be the right time to increase the contribution rate and/or reduce benefit promises. Reforms to both contributions and benefits were made in 2014 and 2016, respectively. Similar decisions, especially for contribution rates, will be required again soon.

2.2.4 Administrative Efficiency

An average of 17.0% of contribution income, 8.4% of contributions plus benefits, or 1.7% of insurable wages, was spent on operating expenses over the three-year review period. Administering a social security fund in a relatively small island-state in a traditional manner will be costly. Therefore, non-traditional approaches to performing tasks and providing required services should be considered.

Regarding effectiveness of its operation, it appears that the Board performs reasonably well at collecting contributions and adjudicating claims and paying benefits in a timely manner. Both cost savings and improved performance could however be achieved if greater use were made of available technology.

Recommendations for each of these national pension policy objectives are presented in Chapter 5.

2.3 COMPARISONS WITH OTHER OECS COUNTRIES

Even within the OECS, it is difficult to compare social security schemes given the special peculiarities of each country's system, history and economy. For example, the age of the scheme affects its current financial state as does the level of the initial contribution rate and reforms made since inception. The following table highlights the similarities and differences of the SVG NIS with other national insurance and social security schemes in the OECS in several key areas.

Table 2.2. SVG NIS Compared with Other SS & NIS Systems in the OECS

Contribution rate (private employees)	At 10% in SVG, only Montserrat (9%) has a lower rate. Rates are 10% in St. Lucia, 11% in Grenada and St. Kitts-Nevis, 13.5% in Antigua-Barbuda and 13% in Dominica. (Antigua-Barbuda and Dominica have annual scheduled increases for a specific period)
Wage ceiling	Only Montserrat ($4,000) has a lower wage ceiling than SVG ($4,333).
Self-employed coverage	While voluntary in SVG, St. Lucia and Montserrat, coverage is mandatory in Grenada, St. Kitts-Nevis and Antigua-Barbuda
Benefits package	Minor differences only
Pension Age	Grenada (60) and St. Kitts-Nevis (62) are unchanged since inception. Antigua-Barbuda, Dominica and Montserrat are gradually increasing to 65. St. Lucia already at 65.
Pension Accrual rates	Other than Antigua-Barbuda (50%), all others have a maximum pension of 60% of average insurable wages. The minimum accrual rate is 30% after 500 weeks in most except in Montserrat and Antigua where it is 25%.
Minimum Pension	Dominica ($158), Grenada ($201) and St. Lucia ($300) have lower monthly minimum pensions than SVG ($303). Slightly higher minimums are paid in Montserrat, Antigua-Barbuda and St. Kitts-Nevis.
Adjustment of wage ceilings and pensions:	Ad hoc increases in all countries. Although not in OECS, The Bahamas, Barbados and the BVI now have automatic adjustments to both.
Administrative Costs	Only Anguilla and Montserrat have higher operating cost ratios. Antigua-Barbuda, St. Lucia, Dominica and Grenada spend less than 15% of contribution income on administrative costs.

Chapter 3 Best-Estimate Projections

Many demographic and economic factors, such as changes in the size and age structure of the population, economic growth, employment and wage levels and inflation, influence National Insurance Fund finances. Therefore, to best assess the Fund's long-term costs and sustainability, projections of St. Vincent & The Grenadines' total population and the economy are required. For this review 60-year projections have been performed.

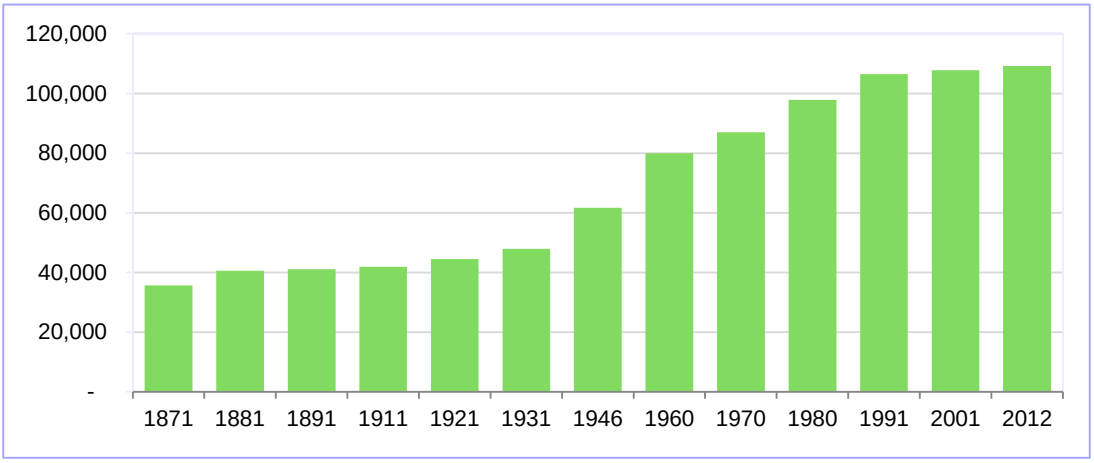
In developing the assumptions used for the projections, historical trends and reasonable future expectations, as well as the interrelationships between the various assumptions, have been taken into account. Core projections have been performed using assumptions that reflect best estimates. The demographic and financial projection results based on this assumption set is referred to throughout this report as "*Best Estimate.*"

Given the uncertainty inherent in forecasting long periods, projections using two additional sets of assumptions have also been performed. These alternative projection sets, which encompass assumptions that are generally more optimistic and more pessimistic than best-estimate assumptions, are labelled "*Optimistic*" and "*Pessimistic*", given the implications for future NIF finances. Results of these projections are presented in Chapter 4.

3.1 Population Projections

St. Vincent & The Grenadines has experienced net out-migration for decades and as shown below in Figure 3.1, the population has remained relatively stable since 1991.

Figure 3.1. Historical SVG Population



3.1.1 Projection Assumptions

Projections of St. Vincent & The Grenadines' population begin with the results of the 2012 census and in each projection year thereafter, fertility, mortality and migration assumptions are applied. Fertility rates are used to estimate the number of births each year while mortality rates determine how many, and at what ages, people are expected to die. Net migration represents the difference between the number of persons who permanently enter and leave St. Vincent & The Grenadines, and is the most volatile of the three factors. The 2012 population census placed St. Vincent & The Grenadines' population at 109,991.

The total fertility rate (TFR) represents the average number of live births per female of childbearing age in a particular year. If there is no migration, a TFR of 2.1 is required for each generation to replace itself. The number of births in St. Vincent & The Grenadines in 2017 and 2018 suggest that the TFR has fallen below 2.0. For these projections it is assumed that TFR's in St. Vincent & The Grenadines will decrease to 1.75 by 2025.

The United Nations Latin America life table and the number of deaths in the past few years suggest life expectancy at birth in 2019 of around 71 for males and 77 for females. Improvements in life expectancy are assumed to occur in accordance with UN estimates.

The third factor that affects population size is migration. This is the most volatile and most difficult to measure. Using the 2001 and 2012 census counts, and reported births and deaths between censuses, implied net out-migration between 2001 and 2012 is estimated at between 900 and 1,000 per year.

The economic assumptions used for this report assume stable and positive economic growth and labour productivity in all years. Although simplistic, they approximate usual economic cycles and volatility that encompass periods of expansion and recession. They also account for projected changes in the population and labour force that will provide the capacity for additional output through more workers and increased productivity (real wages).

The following table indicates the principal demographic and economic best-estimate assumptions for this and the previous Review. Further details may be found in Appendix B.

Table 3.1. Principal Demographic & Economic Assumptions

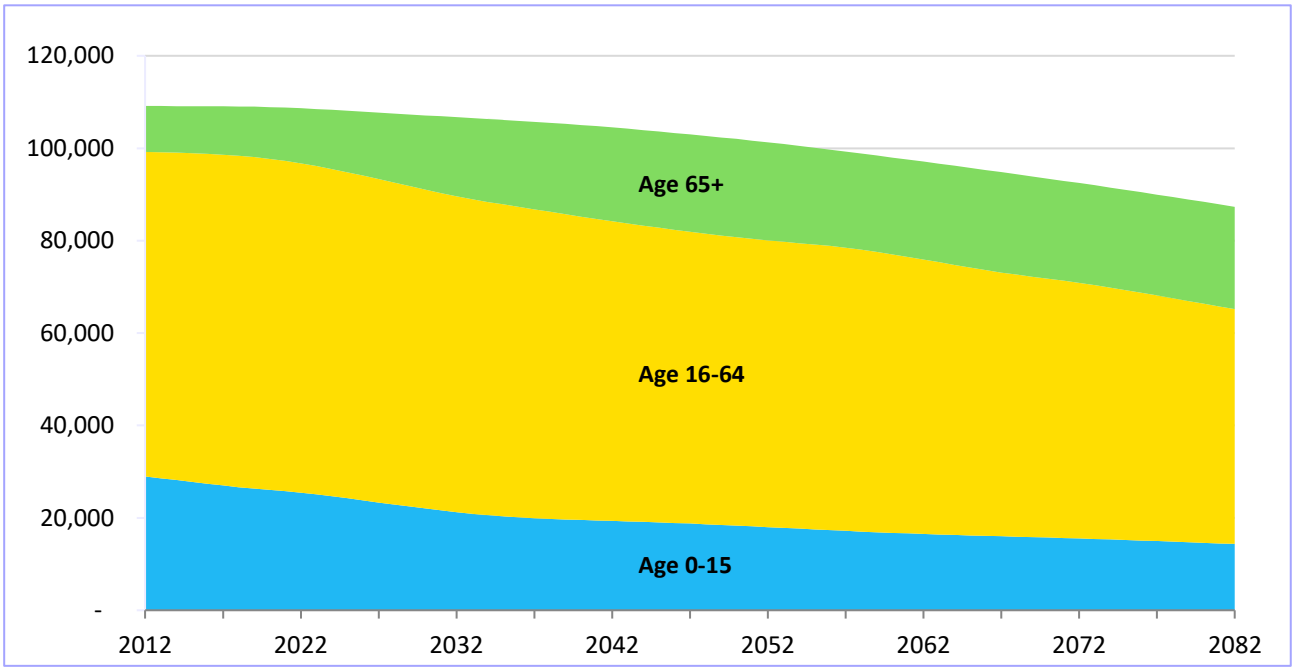
		10th Actuarial Review	11th Actuarial Review
Total Fertility Rate		Decreasing from 2.14 in 2016 to 1.8 in 2025	Decreasing from 1.93 in 2019 to 1.75 in 2025
Mortality Improvements^		Slow	Slow
Net In-Migration Per Annum		-900 p.a. in 2016 decreasing to -200 in 2050, constant thereafter	-900 p.a. in 2016 decreasing to -100 in 2050, constant thereafter
Real GDP Growth Rates	Short-term Med-term Long-term	2.0% decreasing to 1.5% in 2021 1.5% 0.5%	1.5% decreasing to 1.25% in 2025 1.25% until 2039 0.5% thereafter
Real Increase in Wages		0.6%	0.6%
Long-term Inflation		2.0%	2.0%

^ UN mortality improvement rates

3.1.2 Projection Results

From the 2012 Census population of 109,991, and with the above assumptions, St. Vincent & The Grenadines' population is projected to remain around current levels over the next 20 years and then gradually decrease.

Figure 3.2. Projected SVG Population *(Best-Estimate scenario)*



It should be noted that the projections presented in this report have been prepared for the sole purpose of determining the implications for NIF finances under three different sets of future economic growth and development scenarios.

For the NIF, while projected future population size is important, the age distribution is more critical, as pensions to the elderly represent the bulk of expenditure and contributions will be paid by those in the working-age groups. As shown above, while the number of children and working-age persons is projected to decrease over time, the elderly population is expected to increase. These projections show a slightly smaller projected population than presented in the 10th Actuarial Review. (See Table C.1 in Appendix C for specific population projections results.)

3.2 National Insurance Fund Projections

Best Estimate National Insurance Fund demographic and financial projections have been modeled using the best-estimate population results, best estimate NIS-specific assumptions and the contribution and benefit provisions that were in place on January 1, 2020, with provisions made for reforms that are being phased in gradually.

3.2.1 Assumptions

Key National Insurance assumptions are shown below.

Table 3.2. National Insurance Best Estimate Assumptions

	10th Review	11th Review
Avg. Contribution Rate	9.87% in all years	9.87% in all years
Insurable Wage Ceiling Increases	$5,000 per month in 2019, annually thereafter by the change in average wages	$5,000 per month in 2023, annually thereafter by the change in average wages
Short-term Benefits	0.52% of IE increasing to 0.6% over 20 years	0.52% of IE increasing to 0.6% over 20 years
Employment Injury Benefits	Increasing from 0.04% to 0.06% of IE over 20 years	Increasing from 0.05% to 0.06% of IE over 20 years
Pension Increases	5% in 2019 then annually thereafter by inflation (2.0%)	5% in 2022 then annually thereafter by inflation (2.0%)
Long-term Yield on Reserves	4.0% (2.0% above inflation)	4.0% (2.0% above inflation)
Other Income	2% of Contribution Income	2% of Contribution Income
Administrative Expenses	Decreasing from 1.65% to 1.5% of IE over 20 years	Decreasing from 1.60% to 1.5% of IE over 20 years
Other Expenses	0.05% of reserves	0.05% of reserves

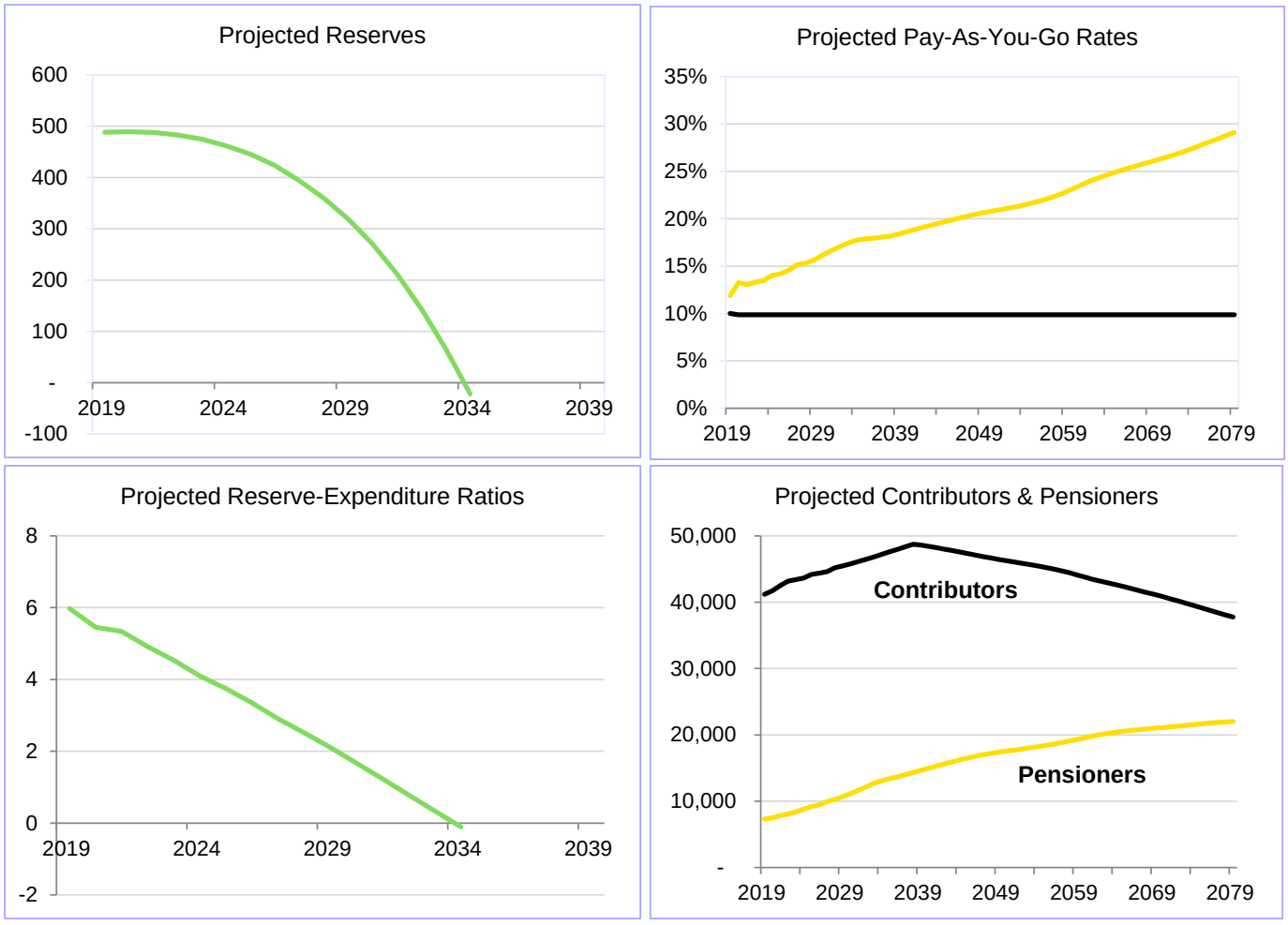
It should be noted that the rates in the above table are not targets which the NIS should aim to achieve but instead are the assumptions on which the projections are based.

By assuming that the wage ceiling and pensions in payment will be increased every year in line with inflation, it is being assumed that the prevailing level of coverage and income security made possible by the ceiling and minimum pension will be maintained throughout the projection period.

3.2.2 Projection Results

For this report, the projections for the three benefit branches, NPF and Fair Value Reserves, are combined. Total reserves as of December 2019 were $488.5 million. The charts in Figure 3.3 highlight key projection results of the *Best Estimate* scenario assuming that the contribution rate is not increased and that there are no changes to benefit rules other than those already legislated.

Figure 3.3. Projection Results – Best Estimate Scenario



The key results of these projections are summarised as follows:

1. Expenditure will exceed contribution income in each year.
2. The next cash flow deficit (total expenditure greater than total income) will occur in 2021.
3. Reserves are projected to be exhausted in 2034.

4. When reserves are exhausted, annual expenditure relative to total insurable wages (pay-as-you-go rate) will be 17.7%. The contribution rate will therefore have to be increased to this level to meet total expenditure.
5. The pay-as-you-go rate will increase to 29.7% in 2079.
6. The number of contributors for each pension in payment is expected to fall from 5.6 in 2019 to 1.7 in 2079.

Numerical details of the financial and demographic projections for the *Best Estimate* scenario are provided in Tables 3.3 to 3.5.

Table 3.3. Projected Income, Expenditure & Reserves -Best Estimate *(millions of $'s)*

Year	Cash Inflows				Cash Outflows					Reserves	
	Contribution Income	Investment Income	Other Income	Total	Benefits	Admin. Expenses	Other Expenses	Total	Surplus/ (Deficit)	End of Year	# of times current year's expenditure
2017	61.2	22.1	0.4	**83.8**	61.0	10.5	0.0	**71.4**	**12.4**	**491**	6.9
2018	67.0	12.4	2.2	**81.6**	67.6	11.1	0.0	**78.8**	**2.8**	**477**	6.1
2019	67.8	23.8	1.8	**93.5**	70.0	11.7	0.0	**81.7**	**11.7**	**488**	6.0
2020	66.7	22.0	1.8	**90.5**	78.6	10.8	0.2	**89.7**	**0.8**	**489**	5.5
2021	69.2	19.2	1.4	**89.7**	80.0	11.2	0.2	**91.4**	**(1.7)**	**488**	5.3
2022	72.9	19.0	1.5	**93.4**	86.3	11.7	0.2	**98.2**	**(4.9)**	**483**	4.9
2023	76.6	18.8	1.5	**97.0**	92.2	12.3	0.2	**104.8**	**(7.8)**	**475**	4.5
2024	79.3	18.4	1.6	**99.3**	99.7	12.7	0.2	**112.6**	**(13.4)**	**462**	4.1
2025	82.7	17.8	1.7	**102.1**	105.3	13.2	0.2	**118.8**	**(16.6)**	**445**	3.7
2029	95.3	13.3	1.9	**110.5**	136.0	15.0	0.2	**151.2**	**(40.7)**	**319**	2.1
2039	134.8	(20.6)	2.7	**117.0**	230.5	20.6	0.0	**251.0**	**(134.1)**	**(592)**	(2.4)
2049	174.6	(100.7)	3.5	**77.4**	338.0	26.5	0.0	**364.6**	**(287.2)**	**(2,713)**	(7.4)
2059	222.6	(258.7)	4.5	**(31.7)**	481.4	33.8	0.0	**515.3**	**(546.9)**	**(6,872)**	(13.3)
2069	277.2	(556.7)	5.5	**(274.0)**	688.0	42.1	0.0	**730.2**	**(1,004.1)**	**(14,702)**	(20.1)
2079	338.4	(1,082.5)	6.8	**(737.3)**	946.7	51.4	0.0	**998.2**	**(1,735.5)**	**(28,471)**	(28.5)

Negative reserves indicate the indebtedness of the Fund and negative investment income is the current cost of servicing that debt.

***Table 3.4. Projected Benefit Expenditure - Best Estimate** (millions of $'s)*

Year	Long-term Pensions & Grants					Short-term Benefits	Emp. Injury Benefits	NPF	Benefits as a % of:	
	Age	Invalidity	Survivors	NAAP & EAB	All Grants				Insurable Wages	GDP
2017	44.7	0.7	4.4	1.3	3.9	3.1	0.5	2.4	9.8%	2.9%
2018	50.4	0.9	4.9	1.2	4.3	3.6	0.3	2.2	9.9%	3.1%
2019	54.9	1.0	4.5	1.1	2.5	3.4	0.6	2.0	10.2%	3.1%
2020	58.9	1.2	5.1	0.9	3.7	6.5	0.5	1.9	10.6%	3.2%
2021	62.5	1.2	5.5	0.7	4.1	3.7	0.5	1.7	10.5%	3.2%
2022	68.3	1.3	6.1	0.7	3.8	3.9	0.6	1.6	11.0%	3.3%
2023	72.8	1.4	6.7	0.5	4.7	4.1	0.6	1.4	11.1%	3.4%
2024	79.6	1.5	7.2	0.4	4.9	4.3	0.7	1.2	11.6%	3.6%
2025	85.0	1.5	7.6	0.4	4.6	4.5	0.7	1.0	11.9%	3.7%
2029	112.3	1.8	9.5	0.2	5.8	5.4	0.8	0.8	13.5%	4.3%
2039	196.0	2.8	15.2	0.0	7.0	8.1	1.3	-	16.4%	5.4%
2049	292.0	4.0	21.6	-	8.0	10.6	1.8	-	18.7%	6.2%
2059	419.0	5.9	29.2	-	11.5	13.5	2.4	-	20.8%	6.9%
2069	604.8	7.4	40.1	-	15.8	16.9	3.0	-	23.9%	7.9%
2079	840.0	9.1	53.9	-	19.4	20.6	3.7	-	27.0%	8.7%

Table 3.5. Projected Contributors & Pensioners at Year-end - Best Estimate

Year	# of Contributors	# of Pensioners					Total # of Pensioners	Ratio of Contributors to Pensioners
		Age	Invalidity	Survivors	Death & Disablement	NAAP & EAB		
2017	39,261	5,325	123	1,281	35	723	**7,487**	**5.2**
2018	41,953	5,863	138	1,303	33	645	**7,982**	**5.3**
2019	42,404	6,020	157	1,374	30	594	**8,175**	**5.2**
2020	41,749	6,074	165	1,242	32	467	**7,980**	**5.2**
2021	42,497	6,319	166	1,317	33	378	**8,212**	**5.2**
2022	43,160	6,490	171	1,396	35	306	**8,398**	**5.1**
2023	43,423	6,707	181	1,467	36	247	**8,639**	**5.0**
2024	43,647	7,089	186	1,520	38	199	**9,031**	**4.8**
2025	44,186	7,368	193	1,557	39	161	**9,318**	**4.7**
2029	45,479	8,788	216	1,622	42	68	**10,736**	**4.2**
2039	48,625	12,583	251	1,767	47	5	**14,653**	**3.3**
2049	46,447	15,234	264	1,866	50	-	**17,413**	**2.7**
2059	44,113	17,078	286	1,893	52	-	**19,310**	**2.3**
2069	41,135	18,751	272	1,929	51	-	**21,004**	**2.0**
2079	37,770	19,802	250	1,916	49	-	**22,018**	**1.7**

# of pensioners in 2017 to 2019 are those with at least one payment during the year

3.2.3 General Average Premium

For National Insurance systems that are partially funded and designed to be perpetual, costs are usually presented in terms of the pay-as-you-go-rates, which represent annual expenditure as a percentage of covered wages. For private pension plans, however, where full funding is the financing objective, there are other measures of the system's cost that may be useful for National Insurance policy makers to be aware of.

The general average premium is the average level contribution rate required over the next 60 years to fully cover total expenditure during that period. This rate may be looked at as the average long-term cost of the complete National Insurance benefits package. For the *Best Estimate* projections, the general average premium is 20.0%.

3.2.4 Actuarial Balance

Another measure of the financial sustainability of a National Insurance system is called actuarial balance. For a given period, the actuarial balance can be defined as the difference between:

a) the sum of the beginning reserves and the present value of future contributions (money available to meet expenditure), and

b) the present value of future expenditure,

divided by the present value of future insurable wages. This formula produces a rate that indicates the adequacy or insufficiency of the present contribution rate for a given period. For the National Insurance Fund, the deficiency expressed in dollars and as a percentage of GDP is shown in Table 3.6.

Table 3.6. Actuarial Balance 2020 – 2079 ($'s are in millions)

	2019 Year-end Reserves	488
Plus	PV of Future Contributions	3,185
Minus	PV of Future Expenditure	6,445
Equal	PV of Surplus/(Shortfall)	(2,772)
	Actuarial Balance (% of Insurable Earnings)	-8.6%
	Actuarial Balance (% of GDP)	-123%

Consistent with previous discussions, the negative actuarial balance indicates that together with reserves, the current contribution rate is insufficient to meet future expenditure for the next 60 years. The shortfall of 8.6% indicates that the average contribution rate would have to be increased to 18.7% for the entire period in order for reserves to last up to 2079 under *Best Estimate* assumptions.

3.3 Comparison with Results of the 10th Actuarial Review

The projection results presented earlier in this chapter differ only slightly from those of the 10th Actuarial Review as shown in the following table:

Table 3.7. Summary Results From 10th & 11th Actuarial Reviews

	11th Actuarial Review	10th Actuarial Review
Expenditure Exceeds Income	2021	2021
Reserves Depleted	2034	2034
General Average Premium	20.0%	19.3%
Pay-as-you-go rate in 2076	28.1%	27.6%

3.4 Sensitivity Analysis – NIS Factors

Given the extensive set of assumptions required for projecting NIF finances and the length of the projection period, future experience will certainly differ from that projected under best estimate assumptions. To illustrate a reasonable range for the Fund's outlook, projections using two different sets of population, economic and National Insurance assumptions are presented in the following chapter. However, certain National Insurance factors such as yield on reserves and contribution collection rates will also impact the Fund's outlook. The change in long-term costs for differences in investment returns is shown in the following table.

Also shown below is the impact on projections of a 1-time "shock" in the 6th projection year, such as a hurricane or pandemic, which results in $10 million in unplanned benefit costs and a contribution income reduction of 5% and 2% in the 5th and 6th projection years, respectively.

Table 3.8. Sensitivity Tests – NIS Factors

Assumption	Differs From Best Estimate	Reserve Ratio in 2030	General Average Premium	Reserves Depleted
Best Estimate		1.7	20.0%	2034
Long-term Yield on Reserves (4.0%)	+1%	2.2	19.3%	2035
	-1%	1.2	20.7%	2034
Contribution Collections	+2%	1.8	20.0%	2035
	-2%	1.6	20.0%	2034
One-time Shock in 6th projection year	+$10m benefits in 2025, lower conts. in 2025-26	1.6	20.0%	2034
Average New Pension	5% lower (all years)	1.9	19.2%	2035
	10% lower (gradually over 10 years)	1.8	18.8%	2035

As shown above, the outlook for the Fund is only slightly better/worse if yields on reserves and contribution collections are greater/lower than assumed, and minimal for a one-time shock where an extra $10 million is paid out. For scenarios where average benefits are reduced, the impact on reserves being depleted is minimal but the long term cost of the benefits is materially lowered. These small changes in outlook are a consequence of the significant effect that changing demographics will have on future expenditure assuming no changes to projected benefits.

Chapter 4 Alternative Scenarios

Best Estimate projections up to 2079 presented in the previous chapter provide estimates of future National Insurance Fund demographics and finances under best-estimate assumptions. Given the uncertainty in forecasting such a long period, two alternative scenarios that highlight the sensitivity of the results to differences in assumptions regarding future outlook have been performed. These alternative projection sets encompass assumptions that are generally more optimistic and more pessimistic than those of the *Best Estimate* projections. However, since long-term sustainability will likely be more sensitive to future population growth and economic development than NIS-specific factors such as compliance rates and operating costs, the basis for the alternative scenarios also focus on differences in population and economic outlooks.

The *Optimistic* scenario represents a larger economy with higher wages, lower pensions, better contribution compliance and higher investment returns while the *Pessimistic* scenario represents a smaller population with lower wages and larger pensions, lower contribution compliance and lower investment returns. Following is a summary of the main assumptions for the three projection scenarios. The values for all other assumptions are similar across scenarios.

Table 4.1. Principal Demographic, Economic & National Insurance Assumptions

	Optimistic	***Best Estimate***	***Pessimistic***
Ultimate Total Fertility Rate	1.85	1.75	1.65
Mortality Improvements^	Very Slow	Slow	Medium
Net (In) Migration Per Annum	50% of Best Estimate *(lower out migration)*	-900 p.a. in 2016 decreasing to -100 in 2050, constant thereafter	125% of Best Estimate *(higher out migration)*
Ultimate Real GDP Growth	½% higher in each year	1.5% decreasing to 1.25% in 2025 1.25% until 2039 0.5% thereafter	½% lower in each year
Real Increase In Wages (p.a.)	0.8%	0.6%	0.4%
Collection Of Contributions	+2%	-	-2%
Admin. Cost in 20 years (% of IW)	1.25%	1.5%	1.75%
Long-term Yield on Reserves	4.5%	4.0%	3.5%

^ UN mortality improvement rates

The main population and National Insurance demographic and financial results of the three projection sets are presented in Figure 4.1 and Table 4.2. As expected, the outlook for National Insurance finances are closely linked to the size and age distribution of the general population and National Insurance performance indicators such as contribution collection rates and yield on investments.

Figure 4.1. Projection Results – All Scenarios

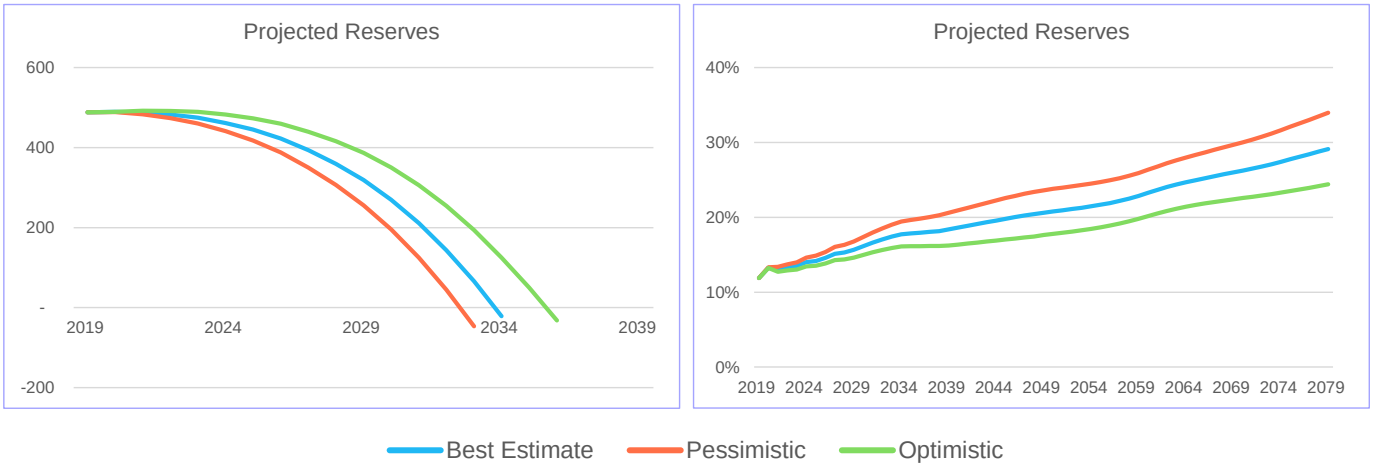


Table 4.2. Summary Results – All Scenarios

	Optimistic	Best Estimate	Pessimistic
Expenditure First Exceeds Total Income	2021	2021	2021
Reserves Depleted	2036	2034	2033
General Average Premium	18.0%	20.0%	22.0%
Pay-as-you-go rate in 2049	17.6%	20.6%	23.6%
Pay-as-you-go rate in 2079	24.4%	28.1%	34.0%
# of Contributors per pensioner – 2079	2.0	1.7	1.5

Chapter 5 Relevance & Sustainability

NIF sustainability is inextricably linked to the local economy for contributions and investment returns. While the COVID-19 pandemic caused an economic and labour market shock in 2020, and much uncertainty remains regarding its medium and long-term effects on economic performance, recent pronouncements of major foreign investment projects could provide thousands of new jobs. If the next decade sees sustained positive economic growth with increasing employment and wage levels, the first of the four ingredients considered necessary for long-term NIS success, a “good economy”, will be in place. The other three ingredients, over which NIS policymakers have greater control are:

1. Good design – a system that provides relevant, equitable and affordable benefits that are consistent with prevailing socio-economic and labour market conditions, other employment linked benefits and available technology.
2. Efficient & effective administrative systems – low cost, timely and transparent claims processing and benefit payments.
3. Honest & responsible government (good governance) – proactive and prudent decision making in the best long-term interest of SVG at all governance levels.

Shortly after the COVID-19 pandemic began to affect employment, the GoSVG and the NIS quickly introduced income support programs to deal with unexpected income losses. Recent experience with COVID-19 and that of previous natural disasters and economic shocks, provides Government and the NIS with an ideal opportunity to re-think all income support programs including those found in labour legislation. Health care should also be included.

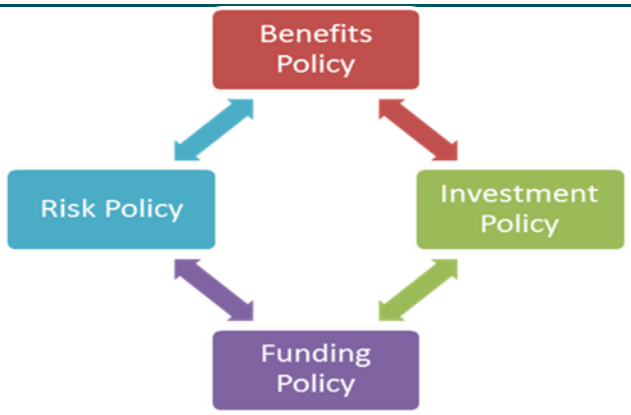
The first step in the process should be the creation of an explicit Benefits Policy and an explicit Funding Policy. For the NIS, each of these policies, should clearly state what the NIS is trying to achieve as well as what it is trying to avoid. Conflicting priorities must then be balanced so that the final result will be a system that is able to adjust to periodic shocks while remaining on a steady path to long-term sustainability.

The next two components of a comprehensive review of the NIS are a thorough review of the Fund’s risks, with updates to the Enterprise Risk Management Policy and it’s the Investment Policy. These four policies, Benefits, Funding, Investments and Risk, should then form a new Governance Policy for the NIS that contains best practices and rationale responses to specific potential outcomes. The interconnectedness of four polices and their contents are illustrated in Figure 5.1.

Figure 5.1. Interconnected Policies for a Relevant & Sustainable NIF

Benefits Policy

- What are we trying to accomplish? What are we trying to avoid?
- Where objectives conflict, what are our priorities?



Funding Policy

- What are we trying to accomplish? What are we trying to avoid? Where objectives conflict, what are our priorities?

Risk Policy

- Potential risks
- Prior incidents
- Likelihood of occurrence
- "Treatment Plan" – how to avoid & how to handle
- Track risk management successes & failures

With the above policies in place, the NIS would then be able to adopt an outcome-focused approach to decision making, where it is designed and managed around objectives, preferences and "what ifs". Instead of hoping for positive results, leaders should prepare rational responses to specific potential outcomes such as severe economic downturns, natural disasters and the next pandemic.

Investment Policy

- Where to invest?
- How will conflicting investment objectives (yield, liquidity, safety, social utility) be balanced?
- What if we suffer losses?

The remainder of this chapter contains discussions and recommendations on design and policy features of these policies geared towards ensuring relevance, benefit adequacy and long-term sustainability.

5.1 Funding Policy

The NIS does not currently have any explicit funding targets. As a result, there is no requirement for specific actions such as increasing the contributing rate or amending benefit formulas, when a certain funding level is either reached or projected by the actuary. Funding targets and prescribed actions will help ensure that future rate increases are gradual and predictable.

It is strongly recommended that a formal funding policy be established. Such a policy would have medium and/or long-term funding objectives and then guided by actuarial advice, a rate adjustment strategy would be devised.

Given that projected depletion of reserves is so near - less than fifteen years from the time of writing this report, and the reserve-expenditure ratio is already below 6, the options for funding targets are few. For inclusion in the first Funding Policy, the following two targets are suggested for consideration.

Figure 5.2. Funding Policy Priorities & Triggers

Funding Target #1 - **Avoid Fund depletion within next 25 years**	• Projected reserves should not be depleted within 25 years of the actuarial review date. *(2044 for this review)*
Funding Target #2 **Avoid the Reserve-Expenditure ratio falling below 3 within 10 years**	• Projected reserves should not fall below three (3) times annual expenditure within 10 years of the actuarial review date. *(2029 for this review)*

With targets set based on the number of years from each review date, the target year will be always moving but the minimum number of future years that Fund sustainability is expected, remains constant; 25 years in the above example.

Following are three sets of contribution rate increase schedules, two of which meet the above recommended funding targets. In each case, the first increase is assumed to take effect in January 2022.

Table 5.1. Sample Contribution Rate Adjustment Schedules

Contribution Rate Increase Schedule	Reserves Depleted	R-E Ratio in 2029	Target #1 Met?	Target #2 Met?
½% increase each year for 9 years ***(14½% in 2030)***	2045	3.3	√	√
1% increase for each year for 4 years ***(14% in 2025)***	2041	3.5	×	√
1% increase each year for 5 years ***(15% in 2026)***	2045	3.8	√	√

As shown above, rate increases starting 2022 and reaching around 15% is the minimum required to meet the two funding targets described above.

5.2 Benefits Policy

It is also recommended that a Benefits Policy be created. A comprehensive Benefits Policy should include specific objectives, priorities and circumstances to be avoided for each NIS benefit. It should specifically consider benefit adequacy, equity and affordability. Analysis presented in Chapter 2 showed that benefits are adequate and equitable while projection results presented in Chapter 3 suggest that current benefits may be unaffordable. With such a conflict it may be necessary to reduce some benefits in the future.

Age pensions account for around 80% of total benefit expenditure and thus any meaningful change to future benefit costs must focus primarily on Age pension provisions. The provisions and specific parameters that would effect reductions in long-term costs are those that would result in reducing future pay-as-you-go rates. The following formula breaks down PAYG costs for pensions into two fractions and four components.

Figure 5.4. Components of The Age Pension Pay-As-You-Go Rate

$$\text{Expenditure as a \% of Insurable Wages } \textit{(pay-as-you-go rate)} = \frac{\text{Total Pension Expenditure}}{\text{Total Insurable Wages}}$$

$$= \frac{\text{\# Pensioners} \times \text{Avg. Pension}}{\text{\# Contributors} \times \text{Avg. Ins. Wage}}$$

$$= \underbrace{\frac{\text{\# Pensioners}}{\text{\# Contributors}}}_{\textit{Demographic Ratio}} \times \underbrace{\frac{\text{Avg. Pension}}{\text{Avg. Ins. Wage}}}_{\textit{Replacement Ratio}}$$

To reduce future pay-as-you-go rates, one or both of the two ratios (demographic and replacement) would need to be lower than under the status quo scenario. The following table summarises the means by which each ratio could be reduced over time.

Table 5.2. Options for Reducing Long-term Pension Costs

	Demographic Ratio	Financial Ratio
Economic growth	✓	✓
Award pensions at a later age	✓	
Award pensions only if (substantially) retired	✓	
Make it more difficult to qualify	✓	
Reduce average new pension amount (slower pension accruals, progressive accrual rates, longer period for average wages, career average formula)		✓
No, or smaller, pension increases		✓

5.2.1 Old-Age Pension

Several measures aimed at reducing both demographic and replacement ratios were addressed during the pension reforms that took effect in 2016. However, it is clear from Chapter 3 that contribution rate increases will be required to meet benefit obligations in the future.

Following is a list of specific reforms that could be made to Old Age Contributory pensions to effect reductions in the demographic and replacement ratios.

Table 5.3. Options for Reducing Long-term Old-age Pension Costs

Reform Measure	Current Provision	Possible Changes	Rationale
Award pensions at a later age	▪ Pensionable Age gradually increasing to 65 in 2028 ▪ Early pension available at age 60	▪ Continue the increase until age 67 is reached in 2032 ▪ Increase the first age at which pensions may be claimed to 62	Reduce the number of years of pensions paid or reduce the average pension amount (larger reduction would apply)
Larger reduction factors for Early Age Pension	▪ ½% per month (6% per year) that pension starts prior to age 60	▪ Up to ¾% per month (9% per year) that pension starts prior to age 60	Discourage early take up of the pension
Award Early Age pension only if retired or at least substantially retired	▪ No requirement to have retired or reduced employment income	▪ Must be fully retired or at least have earnings no more than 50% of the wage ceiling	Change from an age based pension to a retirement based pension to reduce the number of pensions in payment
Maximum Old-age Pension Replacement rate	▪ 60% after 2,000 weekly contributions (approx. 40 years)	▪ 55% after 40 years after 2,000 weeks	This change will not affect any current pensioner as maximum 55% not yet attainable
Make the pension formula explicitly progressive – lower pension rate for higher income levels	▪ Pension amount = benefit rate times average insurable wage (e.g. 45% of $4,000)	▪ Use a lower benefit rate for income above a certain amount. (e.g. 45% of $3,000 + 40% of $1,000)	Ensures same benefit for those with lower incomes but slightly lower benefit for those with higher incomes

Each measures may not have a major impact on Fund finances in the short to medium term. However, if several are adopted together, projected Fund outlook would be materially enhanced. (See Table 3.8) Other reform options that may have even a smaller impact on future costs than those presented above, should also be considered.

5.2.2 Other Benefit Provisions to be Considered in new Benefits Policy

In the report of the 10th Actuarial Review several other issues related to enhancing benefit adequacy were discussed and several recommendations were made. These recommendations are still considered relevant and are listed below as changes have not yet been enacted.

a) Allowing Old Age and Invalidity pensioners to also receive a portion of a Survivors benefit should they meet the qualifying conditions for both pensions. Currently, they are only entitled to receive the higher of the two pensions.

b) Provide for the payment of Sickness, Maternity and Employment Injury benefits for six days with their regular day off, instead of Sunday, being the day that is always excluded.

c) With 25% of the deceased's pension being the maximum percentage payable to surviving children, even where there is no spouse, award each child up to a maximum of four, 25% of the deceased person's pension when there is no spouse.

d) The Second Schedule to Employment Injury regulations should be updated to provide better guidance on the degree of disablement for a wider range of occupational diseases and injuries.

While all recommendations listed above will result in increased benefit costs, the additional expenditure associated with (b), (c) and (d) should be minimal but each change will positively impact those impacted by the change.

5.2.3 Contingent Benefits and Automatic Adjustment Stabilizers

Recommendations made above, call for individual Benefits and Funding Policies. However, these two polices are interconnected as conflicts will arise when a desired level of benefits results in required contributions that exceed those permitted or desirable by the Funding policy. Two ways of dealing with such conflicting objectives are contingent benefits and automatic adjustment stabilizers. Practical examples of each are shown below.

Table 5.4. Contingent Benefits and Automatic Adjustment Stabilizers

Contingent Benefits	Automatic Stabilizers
▪ Pension increases deferred for several years if certain conditions/targets not met ▪ 90% of the regular new pension amount is guaranteed but the remaining 10% is only paid if projections meet certain targets	▪ If projections fall short of minimum funding levels or required contribution rates exceed set rates, benefits have to be reduced so that objectives met. For example: ○ Pensionable age will increase ○ Negative adjustment for pension amounts for new awards

While these examples may seem extreme as they hurt existing pensioners, they provide protection to current contributors who could be forced to pay much higher contribution rates or receive substantially lower benefits.

5.3 Investment Policy

A sound governance framework is paramount for the effective and proper investment of social security funds and investment policy statements are designed to guide decision making. The NIS has an "Investment Policy & Guidelines" which was most recently updated in August 2018. This document explicitly covers the area of governance and clearly maps out the operational and oversight responsibilities and duties of all fiduciaries including the Board, Investment Committee, internal and external investment managers.

Projection results in Chapter 3 show that the Fund is about to enter a stage where some reserves will have to be liquidated to meet monthly expenditure. As a result, investments should be managed in a prudent manner, focusing primarily on long-term safety and stability, targeting moderate rates of return as opposed to higher returns from riskier investments. While supporting local private sector initiatives could enhance economic growth, the NIF should be cautious about participating in projects where its liquidity needs in the next twenty to thirty years may not be consistent with the other entity's cash flow positions. It should also be noted that when funds are invested locally there is an implicit dependence on the output and productivity of future generations. Therefore, there should be a move to investing a greater portion of the Funds overseas.

As per Section 33 of the Act, the Investment Committee consists entirely of Board members:- the Chairman, the Director and three of the other seven Board members. To enhance the level of independence it is strongly recommended that two of the three other Investment Committee members be non-Board members, each with some experience in investments, business and/of finance. Further, it may also be good to separate the roles of Board Chairman and Investment Committee chairman.

In keeping with the requirement for triennial review, the Investment Policy & Guidelines should be reviewed in 2021 and signed off by the Board. As highlighted in Section 1.5 this review should include strategic asset allocations especially the amount held in cash and short-term deposits. The Pessimistic projections presented in Chapter 4 could be used as a worse-case scenario for medium term planning of cash flow needs.

5.4 Risk Policy

The projections presented earlier indicate that under current contribution rate and benefit provisions the NIF will be depleted within the next 15 years. Specific measures to delay Fund depletion have been presented in previous sections. There remains, however, several risks that could result in Fund depletion even sooner than projected as well as NIS not providing adequate benefits to SVG residents. Many of these risks are briefly discussed in the following table.

Table 5.5. Risks & Risk Mitigation Strategies

Risk Item	Mitigation Strategies/Reactions
Inadequate cash to meet benefit obligations	• Regularly updated cash flow projections with worse case scenarios • Appropriate levels of liquid assets at all times
Fund depleted sooner than projected	• Funding policy (when and by how much to increase contribution rate and make other adjustments) • Better compliance • Higher rate of return on investments with appropriate risks • Benefits policy (appropriate benefits each with relevant qualifying conditions and benefit formula and amount) • Lower admin costs
Growing # of elderly without a pension	• Better enforcement of compliance among both businesses/employers and Self-employed persons
Benefits being inadequate	• Agree on the ideal level of the wage ceiling and adjust it regularly • Periodic pension adjustments to offset the effect of inflation • Where insured meets requirements for both Old-Age/Invalidity and Survivors pensions pay more than just the higher of the two • Pay Sickness, Maternity and Employment Injury benefits for six days (which could include Sunday) depending on insured's scheduled work-week
Gov't unable to repay bonds/loan on time	• Constant review of financial experience and budget expectations • Early indication to government of possible need to call investments earlier than expected • Where level of repayment uncertainty is high, seek buyers even if sale will be at a loss
Unexpected call on NIF to provide income support (e.g. COVID-19)	• Add an Unemployment benefit to the NIS benefit package • Pre-identified maximum amount of Fund that can be allocated to unexpected purposes • Proper case made by government for why the support should be financed by the NIS as well as strict guidelines on how much, to whom and for how long the temporary support will be provided • Amend relevant legislation prior to releasing any funds
Sharp drop in equity prices	• Pre-determined responses to the various reasons for, and extent of, fall in values

In 2016 the Board created an Enterprise Risk Management Policy that, at a high level, identifies the various risks that could cause the NIS to not meet its objectives. It is recommended that this policy be reviewed and updated by assigning scores and/or colour codes to each risk as provided for in Appendix 1 of the Policy. For each risk there should also be a description of (i) the level of exposure, (b) tolerance for such risk, and (c) specific measures and strategies to mitigate each risk to the extent possible.

5.5 Other Matters

5.5.1 Self-employed & Informal Sector Workers

Previous actuarial reviews have highlighted the lack of participation by most in the informal sector. The primary effect of low coverage among this group is a growing number of elderly persons who will not have a secure pension in old age. COVID-19 related lockdowns and restrictions affected many in this sector and Government felt forced to provide income support to affected persons.

The consequences of low coverage of informal sector workers and high unemployment rates are evidenced by only one-third of births resulting in Maternity grant, just over 50% of deaths resulting in a Funeral benefit claim and approximately 40% of the elderly resident population receiving a contributory pension from the NIS.

To avoid increasing levels of non-participation among self-employed and informal sector workers, new approaches to reaching informal sector workers is critical. The most effective approach is likely to include:

(a) Make it mandatory for NIS contributions to register and contribute,

(b) Make NIS contributions a requirement for permission to carry on their respective trade, and

(c) Have severe consequences if they do not have the required permit or license.

Banks, airlines, utilities and other sectors have made significant strides in recent years in how they use technology to interact with their customers to deliver services. These innovations have both reduced costs and afforded customers enhanced opportunities. Living with COVID-19 has also led to a significant shift in more efficient ways of transferring funds between individuals and institutions. Together with various SVG Government departments, the NIS should quickly adopt new approaches using available technology to allow its customers, especially informal sector workers, to interact with the NIS.

5.5.2 Good Governance Guidelines

The reports of the 9th and 10th Actuarial Reviews contained recommendations for the introduction of a set of good governance guidelines using the framework set out by the International Social Security Association (ISSA). In 2019 the Board adopted its Corporate Governance Guidelines which includes:

(a) Board Charter

(b) Powers and Duties Of The Minister

(c) Functions & Duties Of The Board

(d) Other Responsibilities of The Board

(e) Terms of Reference – Role of The Chairman
(f) Terms of Reference – Director/CEO
(g) Terms of Reference – Chairperson of Board Committees
(h) Board Members Code of Conduct
(i) Disclosure Of Information Policy
(j) Orientation & Continuing Education for Board Members Policy
(k) Whistleblower Policy
(l) Confidential Information Policy
(m) Conflict of Interest Policy
(n) NIS as an Employer- Employers' Obligations under the NIS
(o) Role of the Employer in the Employees' Benefits

NIS Management and the Board are congratulated for the introduction of this comprehensive set of guidelines that if followed, will ensure that good governance practices are commonplace in all aspects of the NIS's administration and operations.

5.5.3 Administrative Efficiency

Administrative efficiency relates to both how well National Insurance Services administers the social security program (collects contributions, adjudicates and pays benefits and invests surplus funds) and how much it costs to perform these functions. As shown in Chapter 2, the cost of administering the NIS during the period 2017 to 2019 was 17% of contributions and 8.4% of contributions plus benefits. Although down from the previous review period, both rates are still considered high. Staff costs account for between 50% and 55% of general and administrative expenses.

There is no single benchmark or target that is ideal for all countries and all social security systems. However, given the level of technology now available for pension and benefit administration, targets of 14% of contributions in 5 years and 10% of contributions in 10 years are not unreasonable. Both targets would be revised downwards if the contribution rate is increased soon.

The NIS has been slow to adopt a modern administration system. The high upfront cost of such systems may be a deterrent. However, if such a system is procured, designed and implemented well, and appropriate levels of staff employed thereafter, operational efficiency should increase and in the long-run, costs should decrease.

5.5.4 Branch Allocations & Transfer of Reserves

As of December 2019, reserves of the Short-term and Employment Injury branches were 7.4 and 72.6 times annual expenditure, respectively, making both branches significantly over funded. The overfunded positions are a result of expenditure being consistently less than the percentage of contribution income allocated. Therefore, reallocations of contribution income and the transfer of reserves from both branches to the Long-term benefits branch could be made.

Table 5.6. Benefit Branch Reserves, Contribution Allocation & Expenditure

Benefit Branch	Dec. 2019 Reserves	Reserve-Expenditure Ratio		Current Contribution Allocation	Projected Expenditure
		2019	Target		
Short-term	$30.9m	7.4	1.0	0.82%	0.6% to 0.7%
Employment Injury	$75.0m	72.6	2.0	0.63%	0.1% to 0.2%

The recommended changes to the allocation of contribution and transfer of reserves between branches are shown in table 5.7.

Table 5.7. Recommended Changes to Contribution Allocation & Reserve Transfers

Benefit Branch	Contribution Income Allocation		Reserve Transfer
	Current	Recommended	
Short-term	0.82%	0.65%	$25 million to LTB Branch
Employment Injury	0.63%	0.15%	$65 million to LTB Branch
Long-term	8.55%	9.2%	$90 million from STB & EIB Branches
All	10.00%	10.00%	

It should be noted that changes in the allocation of contribution and investment income, and transfer of reserves between branches, have no impact on the overall present or future funded position of the National Insurance Fund. These adjustments are for internal accounting purposes only and are consistent with the manner in which the NIS has elected to finance and account for the various types of benefits.

5.5.5 National Provident Fund Reserves

NIF accounting splits the Fund into four benefit branches – Short-term, Long-term, Employment Injury and NPF. For the NPF, investment income is added and NPF payments are deducted. At the end of 2019 NPF reserves totaled $35.9 million and NPF payments during 2017 to 2019 averaged $2.2 million per annum.

The present value of projected future NPF payments has been estimated at $9 to $10 million. This suggests that there are surplus reserves in the NPF branch. While this potential surplus may appear available for additional benefits to former NPF contributors or pensions to elderly residents who are not now receiving a pension from NIS, this is not the case. Since NPF reserves were combined with NIF reserves many years ago all monies in the NIF, regardless of the branch they fall under, can be used the pay all NIS benefits. NPF payouts and reserves are included in the projections presented in this report.

Chapter 6 Unemployment Benefit

While almost all industrialised countries have some form of unemployment insurance, Barbados and The Bahamas are the only Caribbean countries with a permanent unemployment benefit (UEB). This benefit provides partial income replacement to eligible covered workers for short periods following involuntary unemployment. Like other contributory social security benefits, unemployment benefits are paid as a matter of right with no demonstration of need required.

The Labour Force Surveys conducted in 2015 and 2017 estimated the unemployment rate at between 25% and 26%.

In 2020, both the Government and the NIS provided income support to workers who lost employment income due to temporary businesses closures due to COVID-19.

A detailed assessment of whether or not the introduction of an unemployment benefit is viable is beyond the scope of this review. However, a brief discussion of the purpose and design issues to be considered prior to implementing such a programme are presented below.

Unemployment insurance programmes have both primary and secondary objectives. The primary objectives involve assisting individual workers during periods of involuntary unemployment while the secondary objectives stress the promotion of economic efficiency and stability. Specifically, these objectives may be summarised as follows:

Table 6.1. Objectives of Unemployment Insurance Programmes

Primary Objectives	Secondary Objectives
(1) Provide cash payments during involuntary unemployment, (2) Maintain to a substantial degree the unemployed worker's standard of living, (3) Provide time to find employment consistent with their skills and experience, (4) Help unemployed workers find jobs.	(1) Stabilise economy during recessions by enabling unemployed workers to maintain their personal income & consumption, (2) Promote better utilisation of labour by encouraging unemployed workers to find appropriate jobs and, where necessary, helping them to improve their job skills, (3) Help employers maintain a skilled work force as skilled workers are not forced to seek other jobs, and thus are free to return when they are called back.

When designing an unemployment benefit, the following issues should be considered:

Table 6.2. Unemployment Benefits Design Considerations

Design Element	Typical Provision	Issues for Added Consideration
Who should be covered	▪ Employed persons - those most at risk of becoming involuntarily unemployed	▪ Should permanent civil servants be covered? (In Barbados they are not but in The Bahamas they are) ▪ Self-employed persons are more difficult to cover but could be included with some differences
Definition of unemployment	▪ Lost job through no fault of your own and are available for and able to work, but can't find a job	▪ Unemployed could also include "partial unemployment" – working for reduced hours/days/income (Included in Barbados but not in The Bahamas)
Eligibility Requirements	▪ Was employed in insurable employment ▪ Lost job through no fault of your own (a few exceptions may be allowed) ▪ Been without work and without pay for at least a certain # of days or weeks ▪ Worked and contributed to the NIS for the required # of weeks in one or more recent periods, or since the last UEB claim; ▪ Ready, willing and capable of working; and ▪ Actively looking for work	▪ Could add an element of job-specific online training
Benefit Replacement rate	▪ Will depend on initial design objectives (currently 60% in Barbados, 40% in The Bahamas)	▪ Start with a modest rate first (e.g. 40% or 50%) and increase as experience unfolds
Maximum benefit duration	▪ Will depend on initial design (currently 26 weeks in Barbados, 13 weeks in The Bahamas)	▪ Start with say 13 weeks and increase as experience unfolds
Verified continued eligibility	▪ Thorough checks required to verify ongoing eligibility status	▪ Verification could be conducted within the NIS or by a 3rd party
Efficient integration of UEB with labour law (Severance/Redundancy)	▪ Avoid duplication and/or anomalies between UEB and benefits payable by employer if made redundant	▪ Amendments to the Labour law may be required
Contribution Rate	▪ Rate required based on benefit rules and funding objectives	▪ Rate reviewed triennially as part of actuarial review

Design Element	Typical Provision	Issues for Added Consideration
Sharing of Contributions between workers and employer	▪ 50%/50% employer/employee	
Accounting for UEB	▪ Separate Fund (Barbados) or part of the STB Branch (The Bahamas)	▪ Could also be a new branch within the NIF
Funding objectives (adequacy of reserves)	▪ Build up enough reserves, even for times of "crisis" when a significant portion of workforce is unemployed for an extended period	▪ Addition of UEB should not compromise long-term sustainability of the NIF
Job-matching service (JMS)	▪ Place for employers to post available jobs and unemployed persons to register	▪ Registration with a JMS should be a prerequisite for claiming UEB. Claimant must sign a "Job Seeker Agreement" ▪ This service could also be used to confirm whether unemployed persons meet the conditions for ongoing eligibility

Rough estimates of the incidence of unemployment claims and the likely average duration suggest that a contribution rate of 0.75% to 1.25% of insurable earnings should be sufficient to meet expenditure for a scheme that replaces 50% of earnings for a maximum of 13 weeks. The following matrix shows the contribution rates required for various combinations of unemployment incidence rates and average benefit durations for a 50% benefit rate.

Table 6.3. Estimated UEB Costs For 50% Benefit Rate

Avg. Benefit Duration (weeks)	% of Eligible Insureds That Claim in A Year				
	3%	4%	5%	6%	7%
6	0.20%	0.27%	0.34%	0.41%	0.48%
8	0.27%	0.36%	0.45%	0.54%	0.63%
10	0.34%	0.45%	0.57%	0.68%	0.79%
12	0.41%	0.54%	0.68%	0.81%	0.95%
14	0.48%	0.63%	0.79%	0.95%	1.11%
16	0.54%	0.72%	0.90%	1.09%	1.27%

Chapter 7 Recommendations

Projections presented in this report indicate that the National Insurance Fund will be depleted in the early 2030's. Further reforms are therefore required. The following table classifies the many recommendations made in this report into three priority categories. While all recommendations are considered important and necessary, some may be delayed temporarily if further dialogue with stakeholders is considered necessary.

High Priority

1. Increase the contribution rate to at least 15% over the next 10 years starting in 2022.
2. Prepare two new policies - Benefits Policy and Funding Policy, and update the existing Investment Policy and Enterprise Risk Management Policy.
3. Consider the options presented in Table 5.3 to reduce the long-term costs of Old-age pensions.
4. Revise the composition of the Investment Committee by replacing two of the three Board Members with non-Board members.
5. Make NIS registration and payment of contributions mandatory for all self-employed and informal sector workers.
6. Using new technology and perhaps even a significant change in the way the NIS is structured, create innovative ways for informal sector workers to participate in the NIS.
7. Improve contribution compliance through effective linkages with government departments that issue permits to businesses and self-employed persons.
8. Share openly with the public the Board's plan to ensure long-term sustainability of the National Insurance Fund. Place this report on the NIS website.

Medium Priority

1. Consider allowing those in receipt of an Age/Invalidity pension to also receive a portion of a Survivors pension if they meet the eligibility conditions for both pensions.
2. For Sickness, Maternity and Injury benefits, revise the days for which benefits are paid to exclude one day, instead of Sunday in every case.

Low Priority

1. Transfer reserves from the Short-term and Employment Injury Benefit branches to the Long-term benefit branch and revise the allocation of contributions between the three branches.

Statement of Actuarial Opinion

It is our opinion that for this report of the 11th Actuarial Review of the National Insurance Fund:

- the data on which the projections and analysis are based are sufficient and reliable;
- the assumptions used are, in the aggregate, reasonable and appropriate, and
- the methodology employed is appropriate and consistent with sound actuarial principles.

This report has been prepared in accordance with the Caribbean Actuarial Association Actuarial Practice Standard #3 for Social Security Programs.

LifeWorks

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Partner

Marcia Tam-Marks
Partner

August 31st, 2021

References

2018 Article IV Consultation, IMF, February 2019

Financial Statements of the National Insurance Fund

National Insurance Act & Regulations

NIS Investment Policy & Guidelines

Report of the 10th Actuarial Review of the National Insurance Fund, Morneau Shepell, 2017

Various reports and publications by the St. Vincent & The Grenadines Central Statistical office

Appendix A Summary of Contribution & Benefit Provisions

A.1 Benefits, Insured Persons & Contribution Rates

The NIS provides for the following benefits:

a. ***Long-term benefits:*** Age Benefit and Grant, Invalidity Benefit and Grant, and Survivors' Benefit and Grant, Funeral Grant, Non-contributory Assistance Age Pension (NAAP), Funeral Grant, Elderly Assistance Benefit.

b. ***Short-term benefits:*** Sickness Benefit, Maternity Benefit & Grant.

c. ***Employment Injury (EI) Benefits:*** Injury Benefit, Disablement Benefit and Grant, Death Benefit, Medical Expenses, Funeral Grant.

Employed, self-employed and voluntary insured persons aged 16 to pensionable age are covered for the above contingencies as follows:

- Employed persons age 16 to Pensionable Age: All contingencies.
- Self-employed persons: All contingencies except Employment Injury benefits.
- Employed persons over Pensionable Age: Employment injury benefits only.
- Voluntary insured persons: Age, Survivors Benefits and Funeral Grant.

Pensionable Age, which was previously 60, is gradually increasing to 65 as follows:

- 2019 to 2021: 62
- 2022 to 2024: 63
- 2025 to 2027: 64
- 2028 onwards: 65

Earnings used for determining contributions and benefits are limited to $1,000 per week or $4,333 per month. Earnings include basic salary and all other remuneration in cash or kind such as overtime, allowances, bonuses, service charges etc. The monthly ceiling on insurable wages has increased since 1987 as follows:

1987 to 1995	$1,668
1996 to 2000	$2,600
2001 to 2003	$3,250
2004 to 2005	$3,770
2006 to present	$4,333

Contributions are computed as a percentage of insurable earnings. Contribution rates for the four classes of contributors in 2017 are as follows:

Classification	Employees	Employers	Total
Private	4.50%	5.50%	10.00%
Self Employed	-	-	9.50%
Government	4.29%	5.25%	9.54%
Voluntary	-	-	8.84%

The above rates came into effect January 2017 following a 2% adjustment for each category.

A.2 Summary of Benefits Provisions

A.2.1. LONG-TERM BENEFITS

(a) AGE BENEFIT – WEEKLY PENSION

Contribution Requirement: Before 2016, 500 paid or credited weekly contributions. Since 2016, the number of paid or credited weekly contributions is increasing as follows:

- 2016 to 2018: 550
- 2019 to 2021: 600
- 2022 to 2024: 650
- 2025 to 2027: 700
- 2028 onwards: 750

Age Requirement: 60 for a reduced pension (starting 2019) and Pensionable Age for an unreduced pension. Pensionable age is increasing gradually from 61 in 2019 to 65 in 2028 as shown on previous page.

Amount of Benefit: 30% of average insurable earnings in the best five years over the insured's career, plus ½% for every 25 weeks paid credited in excess of the first 500 weeks (750 starting in 2028).

Maximum Pension: 60% of average earnings over the best five years over one's career.

Minimum Pension: $70.00 per week.

(b) REDUCED AGE PENSION

Eligibility: Between 2019 and 2027, payable to an insured who has attained pensionable age and has at least 500 paid or credited weekly contributions.

Amount of Benefit: 30% of average insurable earnings in the best five years over the insured's career, plus ½% for every 25 weeks in excess of the number of contribution weeks required for an Age Pension. Prior to 2028, persons with less than 750 contributions will receive a proportionately reduced pension. Pensions awarded prior to Pensionable Age are reduced by ½% for each month that the award precedes Pensionable Age.

(c) AGE BENEFIT – GRANT

Contribution Requirement: 50 but less than 500 (750 starting in 2028) paid or credited weekly contributions.

Eligibility: Pensionable Age.

Amount of Benefit: six (6) times the average weekly insurable earnings in the last fifty (50) weekly paid contributions. This amount is paid as a lump sum.

(d) INVALIDITY PENSION

Contribution Requirement: 150 paid weekly contributions.

Eligibility: The applicant is:

(i) Less than pensionable age,

(ii) Medically declared an invalid.

Amount of Benefit: 30% of average insurable earnings over the best five years over the insured's career, plus 1% for every 50 weeks paid in excess of the first 500 weeks.

Minimum Pension: $70.00 per week.
Duration of Pension: Payable as long as invalidity continues until pensionable age.

(e) INVALIDITY GRANT

Contribution Requirement: 50 paid or credited weekly contributions.

Eligibility: Other than for the contribution requirement, the applicant must be eligible for Invalidity Pension.

Amount of Benefit: 6 times the average weekly insurable earnings for each 50 weekly contributions paid or credited. This amount is paid as a lump sum.

(f) SURVIVORS' PENSION

Contribution Requirement: The deceased, at time of death, was receiving or had paid enough contributions to qualify for an Invalidity or Age benefit.

Eligibility: Widow or widower married for at least three years (includes common-law spouse), child(ren) under 16, 21 if in full-time education or invalid and parents.

Amount of Benefit: The proportion of the Age or Invalidity pension paid or payable shown below:

- Widow or widower: 75%;
- Child: 25% (50% if orphan);
- Parents: 50%;

Minimum Child Pension: $17.50 per week.

Duration of Benefit:

- Widow or widower: for life if over age 55 or has dependent children or invalid at time of death. For 1 year only if otherwise.
- Child: Up to age 18 or 21 if in school or college; for life if invalid.

(g) SURVIVORS' GRANT

Contribution Requirement: 50 contributions paid by the deceased insured person.

Eligibility: Other than for the contribution requirement of the deceased, the applicant must be eligible for survivors pension.

Amount of Benefit: Product of Age grant and respective percentage for survivors' pension benefit

(h) FUNERAL GRANT

Contribution Requirement: 26 contributions paid by deceased.

Eligibility: Deceased met contribution requirement, was in receipt of Old Age or Invalidity pension or the spouse or dependent child of such a person.

Amount of Grant: Maximum of $4,525; $2,263 for a spouse, $452 to $2263 for children based on age.

(i) NAAP PENSION

Eligibility: No further additions are expected to this category of pensioner. Former requirements for eligibility were age 60 and not qualified for Old Age or Invalidity Pension

Amount of Benefit: $37.50 per week

(j) **NAAP FUNERAL GRANT**

Eligibility: Age 60 and not otherwise qualified for Funeral Grant
Amount of Grant: Maximum of $2,263; $1,131 for a spouse, percentage for child based on age.

(k) **ELDERLY ASSISTANCE PENSION**

Eligibility: No further additions are expected to this category of pensioner.
Amount of Benefit: $37.50 per week

A.2.2. SHORT-TERM BENEFITS

(a) SICKNESS BENEFIT

Contribution Requirements: 26 paid contribution weeks with at least 8 weeks in the last 13. The insured must be under Pensionable age and be off from work.

Eligibility Requirements: 16 or older but less than Pensionable Age

Waiting Period: 3 days.

Amount of Benefit: 65 per cent of average weekly insurable earnings during the last 13 weeks prior to the illness.

Duration of Benefit: Maximum of 26 weeks.

(b) MATERNITY ALLOWANCE

Contribution Requirement: Insured for 30 weeks with at least 20 paid contributions in the last 30 weeks immediately preceding the week that is 6 weeks before the expected week of confinement or the week from which benefit began, if later.

Amount of Benefit: 65% of average weekly insurable earnings during the last 30 weeks.

(c) MATERNITY GRANT

Contribution Requirement: Insured or spouse has at least 20 paid contributions in the last 30 weeks immediately preceding confinement.

Amount of Grant: $660 per child.

A.2.3. EMPLOYMENT INJURY BENEFITS

(a) INJURY BENEFIT

Eligibility: Incapable of work as a result of an accident arising out of insured employment, or as a result of an illness as a result of employment.

Amount of Benefit: 70% of average insurable earnings in the last 13 weeks before the accident or disease occurred (or shorter period if applicable.)

Duration of Benefit: Maximum of 26 weeks.

Waiting Period: 3 days.

(b) DISABLEMENT BENEFIT

Eligibility: Loss of at least 30% of any physical or mental faculty as a result of a job-related accident or disease.

Amount of Benefit: The payment of a pension or a grant is based on the percentage loss of faculty suffered.

Duration of Benefit: For life or until disability ceases

(c) DISABLEMENT GRANT

Eligibility: Same as Disablement Pension but loss of faculty is less than 30%.

Amount of Benefit: The product of (i), (ii) and (iii) where:

(i) 70% of average weekly insured earnings

(ii) Degree of disablement

(iii)Factor of 365

(d) CONSTANT ATTENDANCE ALLOWANCE

Payable to an injured person whose disablement is 100% and who requires the constant help of another person but is not institutionalised.

Amount of Allowance: 50% of the Disablement Pension

Duration of Allowance: Up to 260 weeks following the date of the disablement.

(e) DEATH PENSION

Eligibility: Dependants are defined as for survivors' benefit in Long Term Benefits.
Amount of Benefit: Same as the Survivors' pension under the long-term benefits branch but calculated with reference to the deceased worker's primary employment injury benefit.

Amount of Benefit: The proportion of the Age/Invalidity pension paid or payable shown below:

Widow or widower: 50%;
Child: 16.7% (33% if invalid);
Other dependants: 16.7%;

Minimum Child Pension: $10.00 per week.

(f) MEDICAL EXPENSES

Amount: Injured insured is reimbursed for 80% of reasonable expenses occurred as a result of an employment injury.

(g) FUNERAL GRANTS

Eligibility: Paid upon death of the worker as a result of an employment injury.

Amount: The amount of funeral expenses, maximum of $4,525

A.2.4 CARICOM SOCIAL SECURITY AGREEMENT

St. Vincent & The Grenadines is a signatory to the CARICOM Agreement on Social Security. By totalising contributions made in all CARICOM countries, persons who have insufficient contributions to qualify for a pension in one or more states, may receive pensions from all systems if the total number of contributions made exceeds the number required in that state. The pension payable would be the proportion that contributions made in that state bear to the total contributions made times the pension that would have been payable for the total number of contributions made. The Agreement covers Old-age, Invalidity, Survivors and Disablement benefits only. In 2019, 41 pensions were being paid under this agreement.

St. Vincent & The Grenadines is also signatory to a Social Security Agreement with Canada. In 2019, 2 pensions were being paid under this agreement.

Appendix B Methodology, Data & Assumptions

This actuarial review makes use of the comprehensive methodology developed at the Financial and Actuarial Service of the ILO (ILO FACTS) for reviewing the long-term actuarial and financial status of a national pension scheme. The review has been undertaken by modifying the generic version of the ILO modelling tools to fit the specific case of St. Vincent & The Grenadines and the National Insurance Fund. These modelling tools include a population model, an economic model, a labour force model, a wage model, a long-term benefits model and a short-term benefits model.

The actuarial valuation begins with a projection of St. Vincent & The Grenadines' future demographic and economic environment. Next, projection factors specifically related to National Insurance are determined and used in combination with the demographic/economic framework to estimate future cash flows and reserves. Assumption selection takes into account both recent experience and future expectations, with emphasis placed on long-term trends rather than giving undue weight to recent experience. Projections have been made under three assumption sets for which the demographic and economic assumptions vary.

B.1 Modelling the Demographic & Economic Developments

The general St. Vincent & The Grenadines population has been projected beginning with totals obtained from the preliminary results of the 2012 national census and by applying appropriate mortality, fertility and migration assumptions.

For the *Best Estimate* scenario the total fertility rate is assumed to decline from 1.93 to 1.75 in 2025. Table B.1 shows ultimate age-specific and total fertility rates. For the *Pessimistic* and *Optimistic* scenarios, total fertility rates are assumed to decline to 1.65 and 1.85, respectively.

Table B.1. Age-Specific & Total Fertility Rates

Age Group	2019	Ultimate Fertility Rates		
		Optimistic	*Best Estimate*	*Pessimistic*
15 - 19	0.054	0.050	0.045	0.042
20 - 24	0.116	0.124	0.111	0.105
25 - 29	0.106	0.125	0.113	0.106
30 - 34	0.065	0.058	0.052	0.049
35 - 39	0.040	0.032	0.029	0.027
40 - 44	0.010	0.007	0.006	0.006
45 - 49	-	-	-	-
TFR	**1.93**	**1.85**	**1.75**	**1.65**

Mortality rates have been determined using United Nations life tables for Latin America. These rates have been adjusted to model closely the actual number of deaths in SVG. Improvements in life expectancy for the Best Estimate scenario have been assumed to follow the "slow" rate as established by the United Nations with a "medium" rate assumed for the Pessimistic scenario and "very slow"[1] for the Optimistic scenario. Sample mortality rates for the Best Estimate scenario and the life expectancies at birth and at age 65 for sample years are provided in Table B.2.

[1] Midpoint of Slow rates and no improvements

Table B.2. Sample Mortality Rates & Life Expectancies

Age	Males			Females		
	2019	2049	2079	2019	2049	2079
0	0.0371	0.0241	0.0048	0.0044	0.0041	0.0050
5	0.0009	0.0005	0.0003	0.0002	0.0001	0.0001
15	0.0006	0.0004	0.0003	0.0003	0.0001	0.0001
25	0.0012	0.0008	0.0010	0.0010	0.0006	0.0002
35	0.0017	0.0011	0.0010	0.0009	0.0006	0.0004
45	0.0034	0.0024	0.0022	0.0021	0.0016	0.0015
55	0.0082	0.0062	0.0061	0.0057	0.0045	0.0039
65	0.0203	0.0164	0.0149	0.0137	0.0103	0.0092
75	0.0502	0.0434	0.0424	0.0393	0.0297	0.0248
85	0.1188	0.1103	0.1224	0.1181	0.0934	0.0701
95	0.2557	0.2515	0.2801	0.2765	0.2449	0.2097
Life Expectancy at:						
Birth	**71.1**	**74.9**	**76.9**	**77.6**	**80.3**	**82.4**
Age 65	**15.8**	**16.8**	**16.8**	**17.3**	**19.2**	**20.6**

	2019	2079		
		Optimistic	Best Estimate	Pessimistic
Male	15.8	16.7	16.8	18.2
Female	17.3	19.0	20.6	20.6

Net migration (in minus out) for each scenario and 10-year age groups is shown below for years 2019 and 2049.

Table B.3. Net Migration

Age	2019			2049		
	Optimistic	Best Est.	Pessimistic	Optimistic	Best Est.	Pessimistic
0 - 9	(32)	(57)	(80)	(10)	(10)	(25)
10 - 19	(31)	(55)	(78)	(9)	(9)	(24)
20 - 29	(185)	(329)	(461)	(56)	(56)	(141)
30 - 39	(105)	(187)	(262)	(32)	(32)	(80)
40 - 49	(30)	(54)	(76)	(9)	(9)	(23)
50 - 59	(8)	(14)	(19)	(2)	(2)	(6)
60 - 69	(2)	(3)	(4)	(1)	(1)	(1)
70+	(0)	(1)	(1)	(0)	(0)	(0)
All Ages	**(393)**	**(700)**	**(982)**	**(120)**	**(270)**	**(338)**

The projection of the labour force, i.e. the number of people available for work, is obtained by applying assumed labour force participation rates to the projected number of persons in the total population. Over the first 30 years age-specific labour force participation rates for females are assumed to increase by 2%. Further, for ages above 53, participation rates are assumed to be an additional 2% and 5% higher for males and females, respectively, after 30 years. Table B.3 below shows the assumed age-specific labour force participation rates in 2019 and 2079.

Table B.4. Age-Specific & Total Labour Force Participation Rates

Age	Males		Females	
	2019	2079	2019	2079
17	42%	42%	40%	41%
22	63%	63%	60%	61%
27	90%	90%	83%	85%
32	92%	92%	84%	86%
37	93%	93%	84%	86%
42	93%	93%	86%	88%
47	93%	93%	86%	88%
52	93%	93%	86%	88%
57	84%	87%	67%	72%
62	59%	62%	42%	47%
67	31%	34%	11%	15%

Year	Males	Females
2019	76%	67%
2024	75%	67%
2029	75%	66%
2039	76%	68%
2049	77%	69%
2059	76%	69%
2069	76%	68%
2079	75%	67%

The projected real GDP divided by the projected labour productivity per worker gives the number of employed persons required to produce total output. Unemployment is then measured as the difference between the projected labour force and employment.

Estimates of increases in the total wages as well as the average wage earned are required. Annual average real wage increases are assumed equal to the assumed increase in labour productivity as it is expected that wages will almost adjust to efficiency levels over time. The inflation assumption affects nominal average wage increases. Actual projection assumptions for each scenario may be found in Table 4.1.

B.2 Projection of National Insurance Income & Expenditure

This actuarial review addresses all National Insurance Fund revenue and expenditure items. For Short-term and Employment Injury benefits, income and expenditure are projected as a percentage of insurable earnings. Projections of pensions are performed following a year-by-year cohort methodology. For each year up to 2076, the number of contributors and pensioners, and the dollar value of contributions, benefits and administrative expenditure, is estimated.

Once the projections of the insured (covered) population, as described in the previous section, are complete, contribution income is then determined from the projected total insurable earnings, the contribution rate and contribution density. Contribution density refers to the average number of weeks of contributions persons make during a year.

Benefit amounts are obtained through contingency factors based primarily on plan experience and applied to the population entitled to benefits. Investment income is based on the assumed yield on the beginning-of-year reserve and net cash flow in the year. National Insurance's administrative expenses are modelled as a percentage of insurable earnings. Finally, the end-of-year reserve is the beginning-of-year reserve plus the net result of cash inflow and outflow.

B.3 National Insurance Population Data and Assumptions

The data required for the valuation of the National Insurance Fund is extensive. As of December 31st, 2019, required data includes the insured population by active and inactive status, the distribution of insurable wages among contributors, the distribution of paid and credited contributions and pensions in payment, all segregated by age and sex.

Scheme specific assumptions such as the incidence of invalidity, the distribution of retirement by age, density and collection of contributions, are determined with reference to the application of the scheme's provisions and historical experience.

Projecting investment income requires information of the existing assets at the valuation date and past performance of each class. Future expectations of changes in asset mix and expected rates of return on each asset type together allow for long-term rate of return expectations.
Details of National Insurance specific input data and the key assumptions used in this report are provided in tables B.5 through B.9.

Table B.5. 2019 Active Insured Population, Earnings & Past Credits

Age	# of Active Insureds		Average Monthly Insurable Earnings		Average # of Years of Past Contributions	
	Male	Female	Male	Female	Male	Female
15 - 19	585	489	828	765	0.5	0.4
20 - 24	2,599	2,455	1,167	991	1.7	1.6
25 - 29	2,920	2,982	1,512	1,383	4.0	3.8
30 - 34	2,614	2,765	1,840	1,811	6.9	7.0
35 - 39	2,433	2,882	1,988	1,858	9.5	9.7
40 - 44	2,266	2,676	2,012	1,785	11.0	11.6
45 - 49	2,248	2,348	2,026	1,755	13.1	14.2
50 - 54	2,123	2,193	2,018	1,676	15.0	16.0
55 - 59	1,867	1,782	1,956	1,525	15.8	16.7
60 - 64	885	693	1,936	1,375	16.6	16.9
65+	260	150	2,096	1,447	17.7	20.7
All Ages	**20,800**	**21,415**	**1,773**	**1,576**	**9.2**	**9.7**

Table B.6. Pensions in Payment - December 2019

Age	Old-Age Benefit		Invalidity Benefit		Survivors Benefits		NAAP & EAB	
	Male	Female	Male	Female	Male	Female	Male	Female
0 - 4					9	9		
5 - 9					40	35		
10 - 14					103	90		
15 - 19					85	90		
20 - 24					6	6		
25 - 29					-	6		
30 - 34			-	1	3	9		
35 - 39			2	1	6	20		
40 - 44			3	2	8	25		
45 - 49			5	3	6	29		
50 - 54			14	14	14	44		
55 - 59			37	23	24	59		
60 - 64	1,042	925	25	15	22	108	-	-
65 - 69	948	914	-	-	13	86	4	4
70 - 74	549	461	-	-	19	102	3	7
75 - 79	288	247	-	-	15	78	51	36
80 - 84	182	162	-	-	7	44	42	50
85 - 89	60	75	-	-	11	32	51	104
90 - 94	1	1	-	-	3	4	44	82
95 - 99	-	-	-	-	-	2	14	24
# of Pensioners	**3,070**	**2,785**	**86**	**59**	**394**	**878**	**209**	**307**
Avg Monthly Pension	**$ 843**	**$ 729**	**$ 622**	**$ 575**	**$ 254**	**$ 373**	**$ 325**	**$ 325**

The following table shows assumed density factors, or the average portion of the year for which contributions are made. These rates are assumed to remain constant for all years.

Table B.7. Density of Contributions

Age	Males	Females
17	34%	34%
22	58%	58%
27	70%	70%
32	74%	74%
37	74%	74%
42	76%	76%
47	76%	76%
52	77%	77%
57	77%	77%
62	73%	73%

The following table shows the expected incidence rates of insured persons qualifying for Invalidity benefit which is assumed for all projection years.

Table B.8. Rates of Entry into Invalidity

Age	Males	Females
17	-	-
22	-	-
27	-	-
32	0.128	0.121
37	0.137	0.463
42	0.294	0.125
47	0.445	0.284
52	2.826	1.976
57	4.642	2.432
62	-	2.887

Table B.9, shows the assumed probability of Survivor benefit claims and the average ages of new claimants, grouped by the age of the deceased.

Table B.9. Probability of a Deceased Having Eligible Survivors & Their Average Ages

Age	Males		Females	
	Probability of Eligible Spouse	Avg # of Eligible Children	Probability of Eligible Spouse	Avg # of Eligible Children
17	0%	-	0%	-
22	8%	0.0	0%	0.1
27	5%	0.1	0%	0.3
32	25%	0.5	8%	0.7
37	23%	0.9	15%	1.4
42	26%	1.4	13%	1.3
47	31%	1.3	10%	1.2
52	29%	0.8	8%	0.9
57	32%	0.5	10%	0.2
62	31%	0.6	10%	0.1
67	26%	0.2	7%	-
72	10%	0.2	4%	-
77	9%	0.2	3%	-
82	8%	0.1	2%	-
87	6%	0.0	1%	-

Appendix C Projection Results – Alternate Scenarios

Table C.1. Projected St. Vincent & The Grenadines Population, All Scenarios

Year	All Ages	0-15		16-64		65+		Age Depend. Ratio
2019	109,023	26,331	24.2%	71,762	65.8%	10,930	10.0%	0.15
Best Estimate								
2021	108,811	25,759	23.7%	71,509	65.7%	11,543	10.6%	0.16
2031	106,931	21,638	20.2%	68,662	64.2%	16,631	15.6%	0.24
2041	104,793	19,445	18.6%	65,255	62.3%	20,094	19.2%	0.31
2051	101,673	18,174	17.9%	62,229	61.2%	21,270	20.9%	0.34
2061	97,562	16,639	17.1%	59,851	61.3%	21,071	21.6%	0.35
2071	92,960	15,636	16.8%	55,717	59.9%	21,606	23.2%	0.39
Pessimistic								
2021	106,724	25,139	23.6%	69,988	65.6%	11,597	10.9%	0.17
2031	102,543	19,798	19.3%	65,851	64.2%	16,895	16.5%	0.26
2041	98,670	17,241	17.5%	60,865	61.7%	20,564	20.8%	0.34
2051	94,001	15,742	16.7%	56,726	60.3%	21,533	22.9%	0.38
2061	88,417	13,925	15.7%	53,897	61.0%	20,595	23.3%	0.38
2071	82,581	12,701	15.4%	49,011	59.3%	20,870	25.3%	0.43
Optimistic								
2021	112,901	26,836	23.8%	74,571	66.1%	11,493	10.2%	0.15
2031	115,278	24,582	21.3%	74,337	64.5%	16,360	14.2%	0.22
2041	116,239	22,920	19.7%	73,727	63.4%	19,592	16.9%	0.27
2051	115,605	22,139	19.2%	72,262	62.5%	21,204	18.3%	0.29
2061	113,650	20,984	18.5%	70,198	61.8%	22,468	19.8%	0.32
2071	110,819	20,117	18.2%	67,015	60.5%	23,687	21.4%	0.35

Table C.2. Projected Cash Flows & Reserves, Pessimistic Scenario (millions of $'s)

Year	Cash Inflows				Cash Outflows				Surplus/ (Deficit)	Reserves	
	Contribution Income	Investment Income	Other Income	Total	Benefits	Admin. Expenses	Other Expenses	Total		End of Year	# of times current year's expenditure
2017	61.2	22.1	0.4	**83.8**	61.0	10.5	0.0	**71.4**	**12.4**	**491**	6.9
2018	67.0	12.4	2.2	**81.6**	67.6	11.1	0.0	**78.8**	**2.8**	**477**	6.1
2019	67.8	23.8	1.8	**93.5**	70.0	11.7	0.0	**81.7**	**11.7**	**488**	6.0
2020	66.4	22.0	1.8	**90.2**	78.6	10.8	0.2	**89.6**	**0.6**	**489**	5.5
2021	67.2	16.7	1.3	**85.3**	79.9	10.9	0.2	**91.0**	**(5.8)**	**483**	5.3
2022	70.4	16.5	1.4	**88.3**	86.2	11.5	0.2	**97.9**	**(9.6)**	**474**	4.8
2023	73.7	16.1	1.5	**91.3**	92.2	12.1	0.2	**104.5**	**(13.2)**	**460**	4.4
2024	75.9	15.5	1.5	**92.9**	99.7	12.5	0.2	**112.4**	**(19.5)**	**441**	3.9
2025	78.8	14.8	1.6	**95.1**	105.4	13.1	0.2	**118.7**	**(23.6)**	**417**	3.5
2029	89.1	9.7	1.8	**100.6**	136.2	15.1	0.2	**151.4**	**(50.8)**	**256**	1.7
2039	120.7	(25.1)	2.4	**98.0**	230.5	21.3	0.0	**251.8**	**(153.9)**	**(808)**	(3.2)
2049	149.8	(103.0)	3.0	**49.8**	331.7	26.6	0.0	**358.2**	**(308.4)**	**(3,149)**	(8.8)
2059	183.4	(245.0)	3.7	**(58.0)**	448.8	32.5	0.0	**481.3**	**(539.3)**	**(7,394)**	(15.4)
2069	219.0	(493.2)	4.4	**(269.8)**	619.6	38.8	0.0	**658.4**	**(928.2)**	**(14,804)**	(22.5)
2079	256.7	(908.4)	5.1	**(646.6)**	837.6	45.5	0.0	**883.1**	**(1,529.7)**	**(27,174)**	(30.8)

Negative reserves indicate the indebtedness of the Fund and negative investment income is the current cost of servicing that debt.

***Table C.3. Projected Benefit Expenditure– Pessimistic Scenario** (millions of $'s)*

Year	Long-term Pensions & Grants					Short-term Benefits	Emp. Injury Benefits	NPF	Benefits as a % of:	
	Age	Invalidity	Survivors	NAAP & EAB	All Grants				Insurable Wages	GDP
2017	44.7	0.7	4.4	1.3	3.9	3.1	0.5	2.4	9.8%	2.9%
2018	50.4	0.9	4.9	1.2	4.3	3.6	0.3	2.2	9.9%	3.1%
2019	54.9	1.0	4.5	1.1	2.5	3.4	0.6	2.0	10.2%	3.1%
2020	58.9	1.2	5.1	0.9	3.7	6.5	0.5	1.9	10.6%	3.2%
2021	62.6	1.2	5.4	0.7	4.0	3.6	0.5	1.7	10.6%	3.2%
2022	68.5	1.3	6.1	0.7	3.7	3.8	0.6	1.6	11.1%	3.4%
2023	73.0	1.4	6.6	0.5	4.6	4.0	0.6	1.4	11.3%	3.5%
2024	80.0	1.5	7.1	0.4	4.8	4.1	0.6	1.2	11.9%	3.7%
2025	85.5	1.5	7.5	0.4	4.4	4.3	0.7	1.0	12.3%	3.9%
2029	113.4	1.8	9.2	0.2	5.6	5.0	0.8	0.8	14.2%	4.5%
2039	198.3	2.7	14.5	0.0	6.5	7.3	1.2	-	18.0%	5.9%
2049	289.2	3.6	20.6	-	7.6	9.1	1.6	-	20.9%	7.1%
2059	392.7	5.2	26.9	-	10.9	11.1	2.0	-	23.1%	7.8%
2069	549.4	6.5	33.8	-	14.1	13.3	2.5	-	26.7%	9.1%
2079	753.5	7.5	42.0	-	16.1	15.6	2.9	-	31.0%	10.4%

Table C.4. Projected Contributors & Pensioners, Pessimistic Scenario

Year	# of Contributors	# of Pensioners					Total # of Pensioners	Ratio of Contributors to Pensioners
		Age	Invalidity	Survivors	Death & Disablement	NAAP & EAB		
2017	39,261	5,325	123	1,281	35	723	**7,487**	**5.2**
2018	41,953	5,863	138	1,303	33	645	**7,982**	**5.3**
2019	42,404	6,020	157	1,374	30	594	**8,175**	**5.2**
2020	41,602	6,079	165	1,239	32	467	**7,982**	**5.2**
2021	42,210	6,330	166	1,309	33	378	**8,216**	**5.1**
2022	42,738	6,509	171	1,384	34	306	**8,405**	**5.1**
2023	42,869	6,737	182	1,450	36	247	**8,652**	**5.0**
2024	42,963	7,131	186	1,497	37	199	**9,050**	**4.7**
2025	43,373	7,423	194	1,528	39	161	**9,344**	**4.6**
2029	44,143	8,901	216	1,568	41	68	**10,794**	**4.1**
2039	45,755	12,878	243	1,660	45	5	**14,831**	**3.1**
2049	42,634	15,528	244	1,764	46	-	**17,583**	**2.4**
2059	39,861	16,845	268	1,776	49	-	**18,938**	**2.1**
2069	36,258	18,229	257	1,694	47	-	**20,226**	**1.8**
2079	32,114	19,230	224	1,596	42	-	**21,093**	**1.5**

# of pensioners in 2017 to 2019 are those with at least one payment during the year

Table C.5. **Projected Cash Flows & Reserves, Optimistic Scenario** (millions of $'s)

Year	Cash Inflows				Cash Outflows					Reserves	
	Contribution Income	Investment Income	Other Income	Total	Benefits	Admin. Expenses	Other Expenses	Total	Surplus/ (Deficit)	End of Year	# of times current year's expenditure
2017	61.2	22.1	0.4	**83.8**	61.0	10.5	0.0	**71.4**	**12.4**	**491**	6.9
2018	67.0	12.4	2.2	**81.6**	67.6	11.1	0.0	**78.8**	**2.8**	**477**	6.1
2019	67.8	23.8	1.8	**93.5**	70.0	11.7	0.0	**81.7**	**11.7**	**488**	6.0
2020	67.0	22.0	1.8	**90.8**	78.7	10.9	0.2	**89.8**	**1.0**	**490**	5.5
2021	71.2	21.6	1.4	**94.3**	80.2	11.4	0.2	**91.8**	**2.4**	**492**	5.4
2022	75.4	21.7	1.5	**98.5**	86.4	11.9	0.2	**98.6**	**(0.1)**	**492**	5.0
2023	79.6	21.6	1.6	**102.8**	92.3	12.5	0.2	**105.1**	**(2.2)**	**490**	4.7
2024	82.8	21.4	1.7	**105.8**	99.7	12.8	0.2	**112.8**	**(6.9)**	**483**	4.3
2025	86.6	21.1	1.7	**109.4**	105.2	13.3	0.2	**118.8**	**(9.3)**	**473**	4.0
2029	101.6	17.7	2.0	**121.3**	135.3	14.8	0.2	**150.4**	**(29.1)**	**387**	2.6
2039	150.3	(11.9)	3.0	**141.4**	228.1	19.3	0.0	**247.4**	**(106.0)**	**(325)**	(1.3)
2049	205.4	(85.4)	4.1	**124.0**	341.0	26.0	0.0	**367.0**	**(242.9)**	**(2,064)**	(5.6)
2059	272.7	(244.2)	5.5	**33.9**	512.5	34.5	0.0	**547.0**	**(513.1)**	**(5,807)**	(10.6)
2069	354.2	(572.7)	7.1	**(211.4)**	759.2	44.9	0.0	**804.1**	**(1,015.5)**	**(13,523)**	(16.8)
2079	451.1	(1,185.3)	9.0	**(725.3)**	1,058.8	57.1	0.0	**1,115.9**	**(1,841.1)**	**(27,853)**	(25.0)

Negative reserves indicate the indebtedness of the Fund and negative investment income is the current cost of servicing that debt.

***Table C.6. Projected Benefit Expenditure– Optimistic Scenario** (millions of $'s)*

Year	Long-term Pensions & Grants					Short-term Benefits	Emp. Injury Benefits	NPF	Benefits as a % of:	
	Age	Invalidity	Survivors	NAAP & EAB	All Grants				Insurable Wages	GDP
2017	44.7	0.7	4.4	1.3	3.9	3.1	0.5	2.4	9.8%	2.9%
2018	50.4	0.9	4.9	1.2	4.3	3.6	0.3	2.2	9.9%	3.1%
2019	54.9	1.0	4.5	1.1	2.5	3.4	0.6	2.0	10.2%	3.1%
2020	58.8	1.2	5.1	0.9	3.7	6.5	0.5	1.9	10.5%	3.2%
2021	62.5	1.2	5.5	0.7	4.2	3.8	0.6	1.7	10.4%	3.1%
2022	68.2	1.3	6.2	0.7	3.9	4.0	0.6	1.6	10.8%	3.3%
2023	72.5	1.4	6.8	0.5	4.8	4.3	0.6	1.4	10.9%	3.4%
2024	79.1	1.4	7.3	0.4	5.0	4.5	0.7	1.2	11.4%	3.5%
2025	84.4	1.5	7.8	0.4	4.7	4.7	0.7	1.0	11.6%	3.6%
2029	110.7	1.8	9.8	0.2	6.0	5.7	0.9	0.8	12.8%	4.0%
2039	190.7	2.9	16.4	0.0	7.6	9.1	1.4	-	14.8%	4.8%
2049	289.1	4.6	24.3	-	8.5	12.5	2.0	-	16.3%	5.4%
2059	441.0	6.7	34.0	-	11.4	16.6	2.8	-	18.5%	6.0%
2069	662.3	8.6	47.7	-	15.4	21.5	3.7	-	21.1%	6.8%
2079	928.4	11.3	64.8	-	22.0	27.4	4.8	-	23.1%	7.2%

Table C.7. Projected Contributors & Pensioners, Optimistic Scenario

Year	# of Contributors	# of Pensioners					Total # of Pensioners	Ratio of Contributors to Pensioners
		Age	Invalidity	Survivors	Death & Disablement	NAAP & EAB		
2017	39,261	5,325	123	1,281	35	723	**7,487**	**5.2**
2018	41,953	5,863	138	1,303	33	645	**7,982**	**5.3**
2019	42,404	6,020	157	1,374	30	594	**8,175**	**5.2**
2020	41,894	6,070	164	1,248	32	467	**7,981**	**5.2**
2021	42,765	6,309	165	1,328	33	378	**8,213**	**5.2**
2022	43,543	6,472	170	1,414	35	306	**8,397**	**5.2**
2023	43,916	6,677	180	1,493	37	247	**8,633**	**5.1**
2024	44,248	7,043	184	1,554	38	199	**9,017**	**4.9**
2025	44,895	7,305	192	1,600	39	161	**9,297**	**4.8**
2029	46,654	8,644	215	1,703	43	68	**10,673**	**4.4**
2039	51,358	12,144	260	1,944	50	5	**14,404**	**3.6**
2049	53,522	14,794	295	2,131	56	-	**17,276**	**3.1**
2059	51,541	17,460	320	2,216	60	-	**20,055**	**2.6**
2069	49,301	19,751	304	2,268	59	-	**22,382**	**2.2**
2079	46,984	20,865	295	2,265	58	-	**23,482**	**2.0**

# of pensioners in 2017 to 2019 are those with at least one payment during the year

Appendix D Income, Expenditure & Reserves, 2017–2019

	2017	2018	2019
Income			
Contribution Income (net)	60.815	67.105	67.256
Investment Income	22.533	12.298	24.383
Other Income	0.444	2.172	1.812
Total Income	**83.792**	**81.574**	**93.452**
Expenditure			
Benefits			
Sickness Benefit	1.616	1.858	1.913
Maternity Benefit	1.190	1.334	1.155
Maternity Grant	0.325	0.362	0.311
Funeral Grant	2.072	2.194	1.886
Invalidity Benefit	0.693	0.887	0.978
Survivors Benefit	4.412	4.855	4.498
Age Benefit	44.657	50.391	54.925
Age Grant	1.805	2.111	0.616
Non-Cont Ass pension	0.963	0.844	0.750
Elderly Asst Benefit	0.380	0.367	0.339
NIS Emp Inj Medical	0.139	0.011	0.305
NIS Emp Injury	0.180	0.113	0.138
NIS Emp Disablement	0.087	0.084	0.091
NIS Emp Death	0.063	0.046	0.077
NPF	2.388	2.159	2.013
Total Benefit Expenditure	60.970	67.616	69.996
Administrative Expenditure	10.458	11.142	11.724
Total Expenditure	**71.428**	**78.758**	**81.719**
Excess of Income over Expenditure	**12.364**	**2.817**	**11.732**
Effect of Adopting IFRS 9	-	(16.911)	-
Reserves at End of Year	**490.840**	**476.745**	**488.478**
Short-term Benefits Reserves	26.765	28.120	30.904
Long-term Benefits Reserves	363.753	351.172	350.648
Employment Injury Benefits Reserves	65.111	68.977	74.966
National Provident Fund	39.401	37.600	35.891
Fair Value Reserve	(4.190)	(9.124)	(3.931)

Appendix E Benefit Experience & Analysis

E.1. Long-term Benefit Experience, 2017 – 2019

In the following tables, Age Benefit includes Early Age pension and Partial Age pension.

Table E.1. LTB Branch Expenditure as % of Insurable Wages, 2017-2019

Pension Type	2017	2018	2019
Funeral Benefit	0.33%	0.32%	0.27%
Invalidity Benefit	0.11%	0.13%	0.14%
Survivors Benefit	0.71%	0.71%	0.65%
Age Benefit	7.19%	7.41%	7.98%
Age Grant	0.29%	0.31%	0.09%
Invalidity Grant	0.00%	0.00%	0.00%
NAAP	0.16%	0.12%	0.11%
Elderly Assistance Benefit	0.06%	0.05%	0.05%
All Benefits & Grants	**8.86%**	**9.07%**	**9.30%**
Administrative Expenses	1.51%	1.47%	1.53%
Total Branch Expenditure	**10.36%**	**10.54%**	**10.83%**

Table E.2. Pensions in Payment, Awarded & Terminated, 2017- 2019

Pension Type	Paid in Dec. 2016	Awarded 2017- 2019	Terminated 2017-2019	Paid in Dec. 2019	Average Weekly Pension December 2016	Average Weekly Pension December 2019
Age	4,849	1,457	451	5,855	$156.41	$217.96
Invalidity	89	103	47	145	$104.75	$135.92
Survivors	1,195	317	240	1,272	$70.30	$82.19

E.2. Short-term Benefit Experience, 2017 – 2019

Table E.3. STB Branch Expenditure as % of Insurable Wages, 2017-2019

Pension Type	2017	2018	2019
Sickness Benefit	0.26%	0.27%	0.28%
Maternity Allowance	0.19%	0.20%	0.17%
Maternity Grant	0.05%	0.05%	0.05%
All Benefits & Grants	**0.50%**	**0.52%**	**0.49%**
Administrative Expenses	0.12%	0.11%	0.11%
Total Branch Expenditure	**0.62%**	**0.64%**	**0.60%**

With an allocation of 0.82% of insurable earnings plus investment returns, the STB Branch incurred surpluses in each year.

Table E.4. Sickness Benefit Experience, 2017 – 2019

Year Ended	# Claims Awarded per 1,000 Insureds	Average benefit Duration (days)	Average Weekly Benefit
2017	154	5.7	$283
2018	156	5.7	$299
2019	161	5.9	$282

Table E.5. Maternity Allowance Experience, 2017 – 2019

Year Ended	# Claims Awarded per 1,000 Insureds	Average Allowance Duration (days)	Average Weekly Allowance
2017	9.6	71.3	$266
2018	9.8	74.2	$262
2019	8.0	75.8	$271

Table E.6. Maternity Grant & Funeral Grant Experience, 2017 – 2019

Year Ended	# Births	# Grants Awarded	Cost as a % of Ins. Wages	# Deaths	# Grants Awarded	Cost as a % of Ins. Wages
2017	1,539	487	0.05%	Not Available	496	0.33%
2018	1,524	539	0.05%	Not Available	507	0.32%
2019	Not Available	462	0.05%	Not Available	443	0.27%

E.3. Injury Benefit Experience, 2017 – 2019

Table E.7. EIB Branch Expenditure as % of Insurable Wages, 2017-2019

Pension Type	2017	2018	2019
Emp Injury Medical	0.022%	0.002%	0.044%
Emp Injury	0.029%	0.017%	0.020%
Emp Disablement	0.014%	0.012%	0.013%
Emp Death	0.010%	0.007%	0.011%
Disablement Grant	-	-	-
Total Benefits & Grants	**0.075%**	**0.038%**	**0.089%**
Administrative Expenses	0.061%	0.055%	0.061%
Total Branch Expenditure	**0.136%**	**0.093%**	**0.150%**

With an allocation of 0.63% of insurable earnings plus investment returns, the EIB Branch incurred large surpluses in each year.

Table E.8. Employment Injury Benefit Experience, 2017- 2019

Year Ended	# Claims Awarded per 1,000 Insureds	Average Benefit Duration (days)	Average Weekly Benefit
2017	7.9	10.3	Not available
2018	6.0	7.8	Not available
2019	7.6	8.2	Not available

Table E.9. Medical & Disablement Grant Experience, 2017-2019

Year Ended	# Medical Claims Awarded	# Disablement Grants Awarded
2017	35	-
2018	40	-
2019	40	-

Table E.10. Disablement & Death Benefits, Awards & Pensions in Payment, 2017- 2019

	Disablement Pensions		Death Benefit	
Year Ended	# Pensions Awarded	Pensions In Payment (December)	# Pensions Awarded	Pensions In Payment (December)
2017	14	Not available	21	Not available
2018	15	Not available	18	Not available
2019	15	Not available	15	Not available

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