



TRINITY CONSULTING LTD.

Actuarial Solutions to Manage Risk

August 17th, 2022

Ms. Rhesa Cartwright
Director/CEO
Turks & Caicos Island National Insurance Board
Hon. Hilly A. Ewing Bldg.
Providenciales
Turks & Caicos Islands, BWI

VIA E-MAIL

Dear Ms. Cartwright:

RE: 2022 VALUATION REPORT – FINAL

As per the contract dated May 19th, 2022, the Final Report of the actuarial valuation as at March 31st, 2022, of the Turks & Caicos Islands National Insurance System is hereby submitted to the Board.

The Draft Report was submitted on August 15th, 2022, which the Management reviewed and submitted some edits. Those edits and others have been incorporated into the Final Report. A soft copy is attached and four (4) hard copies will be sent via FedEx to the TCI NIB.

The TCI NIB is reminded that the Report, as required by the NIB Ordinance 45, cap 17.09, must be laid before the House of Assembly and that the next valuation will be due as at March 31st, 2025.

Please call if you have any questions.

Sincerely,

Judith Veira
Fellow, Society of Actuaries
Consulting Actuary

Attachment



Turks and Caicos Islands
National Insurance Board

Providing social insurance protection you can depend on

10TH ACTUARIAL VALUATION
REPORT
FOR
THE TURKS & CAICOS ISLANDS
NATIONAL INSURANCE BOARD
FINAL
REVIEW AS AT MARCH 31ST 2022

Final- Submitted August 17th, 2022

Draft-Submitted August 15th, 2022

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PREAMBLE

The Turks & Caicos Islands National Insurance Ordinance, CAP 137 of 1991¹, established a National Insurance System (NIS) and a National Insurance Fund (Fund) to provide payments related to retirement, invalidity, sickness, employment injury and other benefits, to qualified employed and self-employed insured persons. As of November 1st, 2020, Unemployment benefits were added to the list of benefits provided to eligible insured persons. The Ordinance went into effect April 1992 and has had a number of amendments since that date. The most recent NIO is dated “as of March 31st, 2021”.

Section 45 of the Ordinance requires that an actuarial review be performed every three years and a copy be laid before the House of Assembly. This is the tenth (10th) actuarial valuation report of the National Insurance Board of Turks & Caicos Islands². The contract for the March 31st, 2022, valuation was signed May 19th, 2022 (approval received via e-mail May 11th, 2022.) The valuation was based on actual scheme specific data as at March 31st, 2022, the audited financial statements for years ended March 31st, 2021, and the Management Accounts for the year ended March 31st, 2022.

The income and expenditure stream of the NIS is projected from 2023 to 2082 by integrating a defined set of assumptions, actuarial methodologies and a national and scheme specific database into the ILO³-PENS projection model. The base year for the projection is 2022. The overall goal of the valuation is to review and analyse the relative values of the projected income and expenditure flows and thus assess whether the NIS will be financially sustainable for the long-term and to make necessary recommendations.

The NIS is an important component of persons’ future retirement, as many may not have access to a pension from their employer upon retirement. Many retirees have to rely solely on private savings, if any, and money received from the NIS. NIS requires mandatory savings but one that is more than worth it when an individual attains the age of 65 and has no other source of income.

The Actuary would like to take this opportunity to thank Ms. Rhesa Cartwright, Director/CEO of the NIB, Ms. Cherrie Ingham, Benefits & Research Analyst, Ms. Gerilane Rigby, Investment Manager, Ms. Marie Smith, Financial Controller, Mr. Leroy Tull, Legal Counsel and the other members of the NIS Staff for their unwavering commitment in ensuring that the highest quality of data and information was submitted and for their sound and informed advice in developing various elements of the review.

The eleventh actuarial valuation is expected to be performed as at March 31st, 2025.

All currency in the report is the US dollar. All “years” are for the 12-month period ending March 31st, unless otherwise stated.

¹ It has since been updated to National Insurance Ordinance, CAP 17.09, revision date March 2021

² Referred to as the NIB of TCI or the Board

³ ILO – International Labor Organisation

EXECUTIVE SUMMARY

The overall goal of the valuation is to determine whether the NIS is financially sound and to assess the adequacy of the current contribution rate with respect to the NIS's projected expenditures. Specifically, the actuarial valuation is necessary to:

- ✓ Estimate the long-term cost of the NIS and review the sufficiency of the reserves;
- ✓ Determine the suitability of its financial system;
- ✓ Determine the adequacy of the contribution rate and when a change will be required based on the projected long-term cost;
- ✓ Estimate the required cash flow for the current and projected years which in turn will affect the investment strategy;
- ✓ Determine the sensitivity of the financial and benefit structure to changes in key variables; and
- ✓ Provide recommendations to the structure of the NIS based on analysis of the above and all other valuation results.

To achieve the above, actuarial methodologies and a defined set of assumptions are integrated into the ILO-PENS⁴ projection model, to project the income and expenditure streams for the NIS over the period 2023 to 2082, with a base year of 2022. It is a quantitative tool that aims at linking the interactions among the national economic and demographic profile with that of the NIS insured population (contributors to the NIS) and pensioners (beneficiaries of the NIS), over a 60-year projection period. The ILO-PENS model is intended to be dynamic, continuously refined and updated, reflecting actual and more comprehensive data as they become available.

The projection results signal the possible financial future of the NIS and thus enable the administrators of the NIS to make necessary adjustments to the parameters in a timely manner, so as to ensure the long-term, and on-going financial sustainability of the NIS.

Analysis of the results and recommendations are based on the projections of uncertain future events applying a given set of assumptions, available data and methodology. It is reasonable to expect that the actual values may differ, possibly significantly, from the projected values and for this reason, the triennial actuarial reviews are performed taking into account these actual values.

⁴ Model developed by the International Labor Organisation Financial, Actuarial and Statistical branch.

A. Main Findings

Based on the *current* NIS design structure and parameters (this includes the amendments which have been legislated to go into effect post-March 31st, 2019 through to and including April 1st, 2024), the NIS is projected to be financially sustainable for the medium to long-term. The Fund is projected to have sufficient reserves to support the current projected expenditures for another 42 years. Consequent to the reform measures (primarily the reduction in the benefit accrual rates and contribution rate increases) which have been legislated and will go into effect as of April 1st, 2022, the Period of Equilibrium is projected to last 27 years (end in the year 2049) as compared to the 17-year period projected in the Prior Review.

The Scheme's financial position can be considered in two periods - 2023 to 2042 and then 2043 to 2062. *In the first twenty years (2023 to 2042)*, the Fund Ratio remains above 10 years, the Dependency Ratio gradually increases, as do the pensions costs but the costs (as measured by the PAYG Rate as a % of IE) remain below the average Contribution Rate of 11.9%⁵. Then, *in the next twenty-year period (2043 to 2062)*, the Dependency Ratio increases more rapidly, nearly doubles to 60 pensioners for every 100 active contributors by 2055 onwards, the Scheme's costs rapidly increase, in tandem with the increasing DR, to an average of 18.5% of Insurable Earnings and the Fund Ratio begins to decline from 9.8 years to 0.9 years. The Schemes average PAYG Rate (costs) in the second twenty-year period is double the average PAYG Rate (costs) of 9.7% of IE in the first period (2023 to 2042).

The Fund is projected to be fully depleted by 2064/2065. Maintaining the Reserves at a minimum level is critical. They are there to buffer the system (in particular to ensure the continuous payment of promised benefits) during periods of economic downturn and to control the contribution rate. To a limited extent, the Fund can also be a source of funds for national economic development.

Notwithstanding that the TCI NIB has made great strides in improving the financial soundness and sustainability of the Fund, at a future date, Full Pension Reform⁶ will be inevitable, especially in the contribution rates. This will be necessary if the Scheme is to continue to be financially sound and to ensure the continued protection of the System for the long-term.

⁵ Refer to Legal Notices 5 and 6 of 2022 -Contribution rate increases from 8.0% to 10% April 1st, 2022, to 11% April 1st, 2023 and then 12% April 1st, 2024.

⁶ This typically would start with defining a target, such as, a minimum Fund Ratio or a maximum PAYG rate, to be attained by a certain time, and then adjusting the Scheme's parameters to meet that target.

Key highlights of the projection results are as follows:

1. **For the FY⁷ ended March 31st, 2022** (the valuation date and base year for the projections), the NIS had \$417.7Mn in reserves and \$43.6Mn in contribution income was generated as compared to the \$30.7Mn of expenses.
 - ✓ The expenses are attributable to benefit expenditures - \$2.3Mn of STBs⁸, \$20.7Mn of LTBs, \$0.6Mn of EIBs and other expenditures - \$4.4Mn administrative and \$2.7Mn investment expenses.
 - ✓ The excess of contribution income over the above itemised expenses, plus surcharge income and investment income, generated \$31.7Mn of Net Income⁹ which was then added to the reserve account.
2. **The critical projection years** are 2038, 2049 and 2064. The NIS is projected to have sufficient contribution income to cover expenses until the year **2038**, after which investment and/or surcharge income will also have to be used to cover expenses. The Reserve Fund is projected to peak in 2049 and a negative cashflow in 2050. The Reserve Fund is projected to be fully depleted by the year **2064**.
 - ✓ Negative reserves in 2065 onwards are indicative of the funds which will need to be borrowed for payment of expenses.
 - ✓ The reserves will gradually lose its capacity to protect the NIS against the rapidly increasing pension expenditure, *based on the current structure & design*¹⁰.
3. **The Period of Equilibrium** or the period during which projected income can cover projected expenses and there is no depletion of the reserves, is estimated at 27 years or projected to end in 2049.
4. **Note** the results in points 2 and 3 above assume that the current benefit and contribution structure, which includes those legislated after March 31st, 2019 through to and including April 1st, 2024, remain the same throughout the projection period.

⁷ FY – Financial Year

⁸ STB – Short-term Benefits; EIB – Employment Injury Benefits; LTB – Long-term Benefits.

⁹ Other Comprehensive Income and provision expense are included.

¹⁰ This includes the amendments which have been legislated post-March 31st, 2019 through to and including April 1st, 2024, in particular the amendment to the benefit accrual rate and the incremental contribution rate increases.

5. **The Fund Ratio**¹¹ as at the FY 2022 is 13.6 years, well above the Reserve Ratios set out in the Financial & Accounting Regulations. The Regulations require each benefit branch to be financially autonomous. It specifically states that income must not be used to cover the expenditure of another branch unless there is a temporary insufficiency and if it occurs, the transfer will have to be repaid by that borrowing branch.

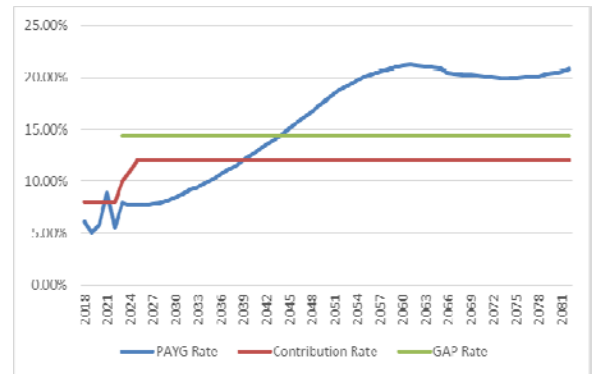
This following table summarises the projected values of the review. *However, the relative values are far more instructive than absolute dollar amounts.*

Projected NIS Cash flows \$(,000) and PAYG Rates

Year	Cont'ns	Surcharge	Investment Income (gross)	Total Income (OCI not included)	Benefit Expenditure	Admin and Investment Expenses	Total Expenses (provision expense NOT included)	Net Income (incl. OCI and Provision Expense)	Fund at EOY	Fund Ratio	PAYG Rate
2018	35,052	1,224	31,300	67,576	16,294	7,049	23,343	40,393	259,197	9.5	6.1%
2019	37,877	553	8,946	47,376	18,293	4,996	23,289	22,825	282,022	11.6	5.1%
2020	40,498	523	9,645	50,666	19,609	7,257	26,867	(1,782)	280,240	9.4	5.8%
2021	29,094	908	18,167	48,169	24,566	6,808	31,374	105,742	385,982	11.8	8.9%
2022	43,621	353	18,439	62,413	23,655	7,068	30,724	31,690	417,671	13.6	5.6%
2027	78,852	1,183	34,921	114,956	39,529	12,650	52,179	62,777	670,992	12.9	7.8%
2032	99,143	1,487	48,736	149,366	59,846	16,962	76,809	72,557	1,013,403	13.2	9.2%
2037	122,276	1,834	67,652	191,762	93,257	22,181	115,438	76,324	1,394,269	12.1	11.2%
2042	150,040	2,251	85,965	238,256	144,290	27,400	171,690	66,566	1,756,262	10.2	13.5%
2047	183,817	2,757	99,185	285,759	217,233	34,276	251,508	34,250	2,004,872	8.0	16.2%
2052	226,111	3,392	100,150	329,652	319,189	42,534	361,723	(32,071)	1,990,940	5.5	18.9%
2062	359,501	5,393	35,853	400,747	579,476	56,833	636,308	(235,562)	601,377	0.9	21.2%
2072	575,233	8,628	0	583,861	894,235	80,821	975,056	(391,195)	(2,678,714)	-2.7	20.0%
2082	870,463	13,057	0	883,520	1,409,364	125,390	1,534,755	(651,235)	(7,800,196)	-5.1	20.8%

- Provision expense and Other Comprehensive Income not shown in detail.

6. **The PAYG Rate**¹² or, cost of the NIS (benefits, administrative and investment expenses) as a percent of Insurable Earnings, is projected to rapidly increase as the number of pensioners and the amount of the pensions that is earned increases, stabilising at approximately 20% of Insurable Earnings in about 33 years.



- PAYG Rate for 2022 was 5.6% as compared to contribution rate of 8.0%. *However, in 2021 the PAYG Rate exceed the Contribution rate – 2020/2021 was the period impacted by the global Pandemic, during which most countries effectively closed their borders and TCI experienced an abnormally high unemployment rate.*
- PAYG Rate for 2082, it is projected at 20.8%. The levelling off of the PAYG rates is indicative of the NIS attaining maturity around the year 2055.

¹¹ Fund Ratio is the ratio of reserves as at the BOY to the expenditure amount for that year.

¹² Pay-as-you-Go Rate – percent of Insurable Earnings required to cover all NIB expenses (also see section 2.4).

- iii. **The General Average Premium (GAP) Rate** is 14.37%, a theoretical contribution rate which if held constant during the projection period is expected to be sufficient, with other income, to cover expenditures and leave a reserve balance of about \$0 by 2082.
7. **The average net Rate of Return (ROR)** on reserves during the past 5 financial years was 5.61%, which fell short of the benchmark of the IPS¹³ - benchmark¹⁴ of 6.38% based on 2018 to 2022 average.

The Fund has experienced volatility in its returns during the past 5 to 7 years, which is not unexpected given that about 50% of assets are allocated to equity investments. Therefore, one cannot analyse whether the returns have been “good” over just a few years – the Report has smoothed the returns over a 3 and 7-year averaging period for consideration.

8. **The NIS’s Dependency Ratio** is projected to increase by about a factor of seven.
- ✓ In 2022, 100 active contributors support 11 pensioners; and
 - ✓ During the last 10 years of the projection period, this key demographic ratio is projected to stabilise at 100 active contributors having to support an average of 66 pensioners – the stabilisation of this key demographic ratio is indicative of the NIS reaching maturity.
 - ✓ Consequently, there will be a greater financial burden on the working age population to ensure that sufficient funds will be available to pay out the ever-increasing amount and number of retirement age pension benefits.
9. **The administrative expenses** have averaged 1.06% of IE during 2018 to 2022 as compared to the assumption of an average of 1.21% of IE (2018 to 2022) in the Prior Review. FY 2022 expense was 0.79% of IE or an Administrative Index of 6.44% (Index based on benefits plus contributions).

Administrative expenses are projected to average 1.5% of IE 2023 to 2082. Every effort should be made to continue to control these expenses and ideally maintained at a maximum of 1.5% of IE over the long-run.

10. **The Catchment Factor**, the ratio of the average IE to average total earnings, is estimated at 87%; the Ceiling of \$48,000 is 1.94 times the Average Insurable Earnings of \$24,759.

¹³ Investment Policy Statement May 2020

¹⁴ US CPI for the years ended March 31st used as a proxy for this inflation measure.

B. Scenario Analysis

The ILO recommends¹⁵ that sensitivity analysis be performed as part of the valuation review or alternatively scenario analysis. For the scenario analysis, key assumptions were changed assuming a negative economic outlook and alternatively a positive economic outlook as compared to the baseline projections. Scenario analysis provides information to the decision makers on the possible variability of the baseline results should actual data differ from the expected.

Key Performance Indicator (KPIs)	Pessimistic	Baseline	Optimistic
Average PAYG Rate (last 10 years)	20.8%	20.2%	18.9%
Average Costs for the projection period	16.6%	16.2%	15.3%
General Average Premium Rate	15.1%	14.4%	13.6%
Contributions cover Expenses until the year	2037	2038	2040
Period of Equilibrium Ends in the year	2047	2049	2052
First Year of negative reserves	2061	2064	2067

As expected, the pessimistic scenario results in a higher required PAYG rate (percent of IE needed to pay for all NIS's expenses) and a shorter period of financial equilibrium. Compared to the baseline results, the pessimistic scenario assumed:

- ✓ Lower growth in GDP;
- ✓ Lower rates of return and lower contribution compliance; and
- ✓ Increased unemployment.

(The reverse for the optimistic scenario)

C. Primary Recommendations

1. Pensions-in-Pay

The recommendation is to increase Pensions-in-Pay based on the inflation experienced since the last increase, so as to retain the value of the pensions over time. The last increase was effective January 1st, 2018, based on inflation experienced to December 31st, 2016.

The recommendation is to increase Pensions-in-Pay, based on the financial year that the pension was awarded, and on the estimated inflation experienced from January 1st, 2017 or year of the award, if later, to December 31st, 2021. Recommended that increases go into effect on January 1st, 2023.

“Pensions-in-Pay” means Retirement Age, Invalidity, Survivors, and Disablement pensions.

Pensions awarded April 1st, 2020, to March 31st, 2022, no increases are recommended at this time; these are recently calculated pensions and, as such, recent inflation experience has been captured in the pension amounts.

¹⁵ Source: ILO Text - “Actuarial Practice in Social Security”

2. Grants, Minimum Pensions, NCOAP pension

The recommendation is to increase the minimum pensions, grants and the NCOAP, based on the inflation experienced since the last increase, so as to retain their value over time. The last increase was effective January 1st, 2018, based on inflation experienced to December 31st, 2016.

The recommendation is to increase the minimum pensions and the flat dollar benefits based on estimated inflation experienced January 1st, 2017, to December 31st, 2021. Recommended that increases go into effect on January 1st, 2023.

3. Constant Attendance Allowance

The recommendation is to increase the weekly allowance from \$50 to \$200. No increases have ever been given to this Allowance. Among other factors, the increase takes into consideration current weekly rates for private home care. Recommended that increases go into effect on January 1st, 2023.

4. Increase of Insurable Earnings Ceiling

No increases are recommended at this time.

The most recent increase was \$48,000¹⁶ effective April 1st, 2017, and TCI currently has the highest Ceiling among regional social security institutions. Further, consideration is also given to the contribution rate increases that will be going into effect April 1st, 2022, 2023 and 2024.

Based on available data, the Catchment Factor (the average of Insurable Earnings to average total earnings) is reasonable at 87%. The ratio of the Ceiling to the Average Insurable Earnings is 1.94.

Assuming the Ceiling remains fixed to March 31st, 2025, the date of the next actuarial valuation, the Catchment Factor is expected to remain at about 82% and the ratio of the Ceiling to projected AIE averages at 2.1.

5. Income Bands for the Self-Employed

No increases are recommended at this time.

The highest band is pegged to the Ceiling in effect.

The Actuary recommends that the reader refer to the applicable sections for further discussion and explanation. The above information is a summary of the results in the actuarial valuation report.

¹⁶ The actual Ceiling is \$925 per week if paid weekly or \$4,000 per month if paid monthly.

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LIST OF ABBREVIATIONS & ACRONYMS

Administrative Index/Index	Administrative expenses as a percent of contributions plus benefits
AIE	Average Insurable Earnings
Board/Board of Directors	National Insurance Board of the Turks & Caicos Islands
BOY	Beginning of the Year
DEPS	Department of Economic Planning & Statistics
D.R.	Dependency Ratio
ECLAC	Economic Commission for Latin America and the Caribbean
EI	Employment Injury
EIBs (Branch)	Employment Injury Benefits (Branch)
EOY	End of Year
IE	Insurable Earnings
FR	Fund Ratio
Fund	National Insurance Fund
Fund Ratio	It is the ratio of reserves to the expenses for that year. It indicates the number of years that the Scheme can cover expenses, assuming expenses remain at the current level, if there is no future contribution income.
FY	Financial Year ended March 31 st .
GAP Rate	General Average Premium Rate – it is a theoretical contribution rate which if held constant during the projection period will be adequate, with other income, to cover expenditures and leave a reserve balance of about \$0 by 2082.
GDP	Gross Domestic Product
KPIs	Key Performance Indicators
IMF	International Monetary Fund
Index	Administrative Index
IPS	Investment Policy Statement
LTBs (Branch)	Long-Term Benefits (Branch)
LN(s)	Legal Notice(s)
Mn	Millions
NCOAP	Non-Contributory Assistance Age Pensions/ (Pensioners)



NHIP	Turks & Caicos Islands National Health Insurance Plan, established under Section 3 of the National Health Insurance Ordinance
NIB of TCI/TCI NIB	National Insurance Board of Turks & Caicos Islands
NIS	National Insurance System of the Turks & Caicos Islands established under the National Insurance Ordinance (or Ordinance)
NPF	National Provident Fund
Ordinance	TCI National Insurance Ordinance and its subsequent amendments; currently it is National Insurance Ordinance, CAP 17.09, revision date March 2021
PAYG Rate	Pay-as-you-go Rate (cost of the NIS as a percent of Insurable Earnings)
Prior Report/Prior Review	The 9th actuarial review prepared as of 3/31/2019
Regulations	National Insurance Regulations
ROR	Investment rate of return
Statistics Dept.	Turks and Caicos Islands Statistic Department (www.gov.tc/stats)
SSOs	Social Security Organisations
STBs (Branch)	Short-Term Benefits (Branch)
TCI	Turks & Caicos Islands
UN	United Nations



SECTION 1. ECONOMIC, DEMOGRAPHIC & GOVERNANCE CONTEXT

1.1 Economic Position

TCI, as the rest of the world, experienced a significant slump in the economy resulting from the COVID-19 Pandemic and a temporary shut-down of most parts of the economy and closure of the borders. Tourism was hit particularly hard. TCI NIB paid Temporary Unemployment Assistance Benefits to insureds who involuntarily lost their job due to the unexpected and unusual socio-economic environment created by the Pandemic.

It is expected that there will be a rebound in the economy, post COVID-19 Pandemic, primarily driven by the tourism and construction sectors (including the rebuilding of new projects). The tourism sector is highly dependent upon the economy in the USA and this reliance is a possible downside risk to the projected future growth and indicates a need for diversification of the TCI economy.

Further, TCI will continue to be vulnerable to hurricanes as was evident by the contraction of the economy in 2017 in the aftermath of Hurricanes Irma and Maria.

Consistent with the rebound in the economy is a rebound in the number of employed and thereby the number of contributors and the contribution earnings base for the NIS.

The Table 1-1 below provides the historical and short-term projected GDP values

Table 1-1 Historical Economic Position

	2017	2018	2019	2020	2021	2022
Labour Force	25,418	26,182	26,967	28,312	29,321	29,630
Employed Popl'n as a % of Total Popl'n	60.0%	58.9%	58.4%	56.6%	57.8%	58.5%
Employed Popl'n as a % of Popl'n 15+	74.2%	72.8%	72.2%	70.0%	71.5%	72.3%
Employed Population	23,886	24,349	25,079	25,197	26,682	27,260
- Govt employees	2,115	2,232	2,337	2,318	2,802	2,808
Unemployment Rate	6.0%	7.0%	7.0%	11.0%	9.0%	8.0%

Source: TCI Statistics Dept. and S&P Report



Labour Framework

During the years of 2012 to 2015, TCI experienced exceptionally high unemployment rate, at its peak of 18.2% in the year 2012. Thereafter, there had been a continuous decline in the rate back to a level consistent with the average unemployment rate of 7.8% experienced during the “pre-global economic crisis period” of 2001 to 2008. Specifically, the unemployment rate reached as low as 6.0% for 2017, sourced from the TCI Labour Force Survey Report 2017.

However, this positive rebound in the economy was interrupted by the onset of the COVID-19 Pandemic in 2020 and TCI once again experienced a high unemployment rate of 11% in 2020. With the gradual re-opening of borders, TCI’s unemployment rate is once again on the decline.

The National Socio-Economic Strategy 2008 – 2017 paper focuses on improving and increasing labour productivity and projects annual labour productivity at 2.0%, with an expectation of technological improvements.

The table below provides a summary of the *available* labour data which was used as the basis for the projections.

Table 1-2 Historical Employment Data

	2017	2018	2019	2020	2021	2022
Labour Force	25,418	26,182	26,967	28,312	29,321	29,630
Employed Popl'n as a % of Total Popl'n	60.0%	58.9%	58.4%	56.6%	57.8%	49.1%
Employed Popl'n as a % of Popl'n 15+	74.2%	72.8%	72.2%	70.0%	71.5%	72.3%
Employed Population	23,886	24,349	25,079	25,197	26,682	27,260
- Govt employees	2,115	2,232	2,337	2,318	2,802	2,808
Unemployment Rate	6.0%	7.0%	7.0%	11.0%	9.0%	8.0%

Source: TCI Statistics Dept. and the S&P Draft 3/2022 Report; Government employees estimated from TCI NIB Scheme specific submitted data. 2017 was based on the Labour Force Survey Report

Earnings Framework

There is no official data on the national gross Wages & Salaries, in aggregate or by age/gender and this is a key component in determining increases of NIS benefits and the maximum insurable earnings (the Ceiling). The Actuary has estimated that it is 60% of GDP and this has been held constant throughout the projection period.

To check the reasonableness of the “60%” assumption, an estimate of 2022 National Wages & Salaries by age and gender, was estimated based on available information sourced from various Government labour related reports¹⁷, TCI NIB scheme specific Insurable Earnings data by gender/age/government/private and self-employed categories, and assumptions applied.

¹⁷ Sources: Primarily, “TCI Budget 2018/2023” and www.gov.tc/stats/.com



It is noted that Government employees account for about 10% of the employed population¹⁸, their Insurable Earnings (IE) account for about 14% of total IE, their 2022 gross wages & salaries are estimated at \$93.072Mn and their gross wages & salaries account for about 8.4% of GDP (average 2020 to 2022);

1.2 Demographics

National population data was sourced from:

- The 2012 census results;
- The TCI Statistical Dept. Vital Statistical Report 2020;
- S&P Draft 3/2022 Report; and
- The ECLAC Population Projections Report¹⁹ for the years 2022 and 2027.

The population of Turks & Caicos Islands (TCI) tends to parallel the growth of the tourism industry and is dependent upon a migrant population. The table below summarises all the available data on the population that is currently available from a national source.

Table 1-3 Historical Demographic Data

	2018	2019	2020	2021	2022
Age Group					
0 to 14	7,918	8,224	8,527	8,831	8,924
15 to 64	31,725	32,950	34,166	35,384	35,757
65 and over	1,717	1,784	1,850	1,915	1,936
Total	41,360	42,957	44,543	46,131	46,617
As a % of total					
0 to 15	19%	19%	19%	19%	19%
16 to 64	77%	77%	77%	77%	77%
65 and over	4%	4%	4%	4%	4%
Total	100%	100%	100%	100%	100%
ratio of male to female	1.04	1.04	1.04	1.04	1.04
Fertility Rate	1.26	1.32	1.31	1.25	1.24
Crude Birth Rates	11.00	11.34	11.38	10.84	10.73
Crude Death Rates	2.47	2.84	2.96	2.57	2.55
Migration	no data was available				

¹⁸ Estimated from historical scheme data.

¹⁹ The Economic Commission for Latin America and the Caribbean; sourced from the Statistical Dept.



1.3 Governance & Development of the NIS

Vision Statement: *The National Insurance Board is committed to becoming the largest provider of Pensions, in the Turks & Caicos Islands providing social security and other Services to the people of the Islands.*

The Turks & Caicos Islands National Insurance Board is moving in a positive direction toward achieving its Vision Statement. There exists a very knowledgeable and experienced management team and a Board of Directors providing overall guidance on policies and strategies. The NIB continues to be administered and managed with a high level of integrity, competence, skill and foresight, laying the foundation for good governance.

The Team should be proud of its many accomplishments, some of which were noted in the Prior Report. They continue to add to their list of accomplishments and future plans, as noted below:

- Appointing a CEO, Ms. Rhesa Cartwright, who acted in the position for 33 months and was then confirmed in September 2020; Also, the Board is planning on returning to the governance model of two Deputy Directors in 2023/2024.
- Implementing a new risk register, incorporating all strategic objectives.
- Awarding a contract for a new computer system, which is expected to be fully implemented by 2024.
- Paying about \$4Mn in Temporary Unemployment Assistance benefits to insured persons to alleviate some of hardship experienced when they became involuntarily unemployed due to the COVID-19 Pandemic.
- Enacting and putting into legislation a number of reform measures related to contribution rate increases and reduction of the benefit accrual rate, thus improving the financial sustainability of the NIB operations and enhancing the financial security of future pensioners.
- Amending the legislation to allow insureds to continue to be substantially employed and retire as early as age 60.
- Informing and educating the public, via outreach programs, media releases and other means on the reform measures and the reason that these changes were necessary.
- Approving and adopting an updated Investment Policy Statement, as of May 2020.
- Effectively managing the administrative expenses, reaching as low as 0.8% of Insurable Earnings in 2022, and averaging 1.11% during 2020 to 2022.
- Celebrating the 30th Anniversary with a series of public meetings; one of the outcomes was the Board and Management making a commitment to how they can best address the concerns of those registered in the islands and be a more responsive corporate citizen.
- Convening a ZOOM meeting with the Actuary, to present, outline the valuation process and discuss the 2019 Valuation Report to the Management Team.
- Participating in the Public Sector Employees Pension Plan²⁰, effective April 2022, with the TCI NIB contributing 3.0% of salary on behalf of the employee.

²⁰ Refer to Public Sector Employees Pension Fund, Ordinance 5 of 2022



Of further note:

- The Government has issued a directive for the merger of NIB and the NHIP Collections and Compliance functions by April 2023; and
- The Board has approved a study to explore the feasibility of the NIB establishing a Social Impact Fund, with the objective that the Fund will assist contributors at times of unforeseen shocks to the social environment and extreme events, like the Pandemic and devastating natural disasters.

The Investment Management Committee is assisted by, and consults with, outside investment professionals as needed and periodically updates the Investment Policy. With the exception of the year 2021 (an unprecedented time of the COVID-19 Pandemic with high unemployment), the NIS has not had to dip into investment income nor reserves to meet its annual expenditures; all expenditures have been covered with the annual contribution income flows, except for 2021 year.

- In 2021, contribution income was \$2.2Mn less than expenses.

The TCI NIB is in compliance with Section 45 of the Ordinance which requires an actuarial review be performed every three years and a copy be laid before the House of Assembly.

The Fund is audited annually by independent professional auditors and there exists an internal audit department. To date, all financial statements have been audited with the exception of the statement ending March 31st, 2022, which is in-progress (at time of preparing this report).

The NIS is relatively young (the youngest in the region) and as to be expected is experiencing an increase in the number of pensioners and the pension amount. This will place increasing pressure to maintain and improve the long-term financial stability and good governance of the system.



SECTION 2. FINANCING OF THE SCHEME

2.1 Sources of Income

The Fund's sources of income are from contributions received from employees and employers, investment earnings on the reserves and penalty charges for late payment of contributions (also referred to as Surcharges).

- **Increased contribution rates will be going into effect as of April 1st, 2022, 2023 and 2024 and were factored into the Valuation – Refer to the Appendix I, Legal Notices 5 and 6 of 2022 for further details. Also:**
 - Contribution rate increases reflect the addition of Unemployment Benefits; and
 - Contribution rate allocation was changed for the STBs and EIBs branches, for certain sectors.
- Surcharges are relatively small and have minimal impact on total Fund income. The Surcharge is 10% of outstanding contributions for each month of delay and 3% for each additional month of delay.
- All insured persons, employees between the ages of 16 and 65 who are substantially employed, are required to contribute at the prescribed rates, as provided below. Substantially employed is defined as persons who have earnings of 25% or greater of the Insurable Earnings Ceiling.

Table 2-1 Contribution Rates by Type of Insured

	Employees Over 65	Temporary Residents	Voluntary Contributors	Self- employed	Public Officers	All other insured employees ²¹
Contribution Rates in effect as at 3/31/2022						
Total	1.2%	2.5%	10.0%	6.8%	6.85%	8.0%
Employee rate	0%	0%	10.0%	6.8%	2.825%	3.4%
Employer rate	1.2%	2.5%	n/a	n/a	4.025%	4.6%
Contribution Rates in effect as at 4/1/2022						
Total	1.2%	2.5%	10.0%	8.0%	9.15%	10.0%
Employee rate	0%	0%	10.0%	8.0%	4.075%	4.5%
Employer rate	1.2%	2.5%	n/a	n/a	5.075%	5.5%
Contribution Rates in effect as at 4/1/2023						
Total	1.2%	2.5%	10.0%	9.0%	10.15%	11.0%
Employee rate	0%	0%	10.0%	9.0%	4.575%	5.0%
Employer rate	1.2%	2.5%	n/a	n/a	5.575%	6.0%
Contribution Rates in effect as of 4/1/2024						
Total	1.2%	2.5%	10.0%	10.0%	11.15%	12.0%
Employee rate	0%	0%	10.0%	10.0%	5.075%	5.5%
Employer rate	1.2%	2.5%	n/a	n/a	6.075%	6.5%

²¹ Includes TCIG Employees; TCIG Officers are considered Public Officers.



Table 2-2 Entitlement to a Specific Benefit Depending on the Insureds Grouping

	Employees Over 65	Temporary Residents	Voluntary Contributor	Self-employed	Public Officers	All other insured employees ²²
Unemployment benefits, effective 4/1/2022					✓	✓
Sickness benefits		✓		✓		✓
Maternity Allowance		✓		✓		✓
Maternity Grant		✓		✓	✓	✓
Retirement, Invalidity, Survivors, NCOAP and grants			✓	✓	✓	✓
Funeral grant			✓	✓	✓	✓
Employment Injury	✓	✓			✓	✓

The Contributions rates for the STBs and the LTBs branches are shared equally by the employee and the employer and the contribution rate for the Employment Injury branch is fully paid for by the employer, with adjustments for certain sectors.

Other contributions are:

- 6.8% (or the applicable contribution rate increases going into effect April 1st, 2022 to 2024) of insured earnings contributed by the self-employed;
 - Self-employed persons shall elect a weekly income from any of the following amounts - Income Bands effective June 1st, 2018, are as follows:

Income bands effective April 1 st , 2017,
\$925
\$725
\$525
\$325
\$225

- Voluntary contributors - persons who are no longer covered by the NIB and elect to make voluntary contributions toward long-term benefits;
- Public Officers – coverage of sickness benefits and maternity allowance is excluded; and
- Temporary Residents – fully paid for by the employer; covered for sickness and maternity benefits and effective January 1st, 2012, coverage was expanded to the employment injury benefits allowance and medical treatment only.²³ Long Term benefits are not covered.

No contributions are required on Insurable Earnings:

- less than \$25 per week or \$108 per month, defined as Negligible Earnings; or
- In excess of the Insurable Earnings Ceiling or Ceiling²⁴ defined as follows:
 - \$925 per week or \$4,000 per month effective April 1st, 2017.

²² Includes TCIG Employees; TCIG Officers are considered Public Officers.

²³ Legal Notice 32 of 2011.

²⁴ Increases were enacted in Legal Notice 58 of 2014.



2.2 Partially Exempt Workers

An insured person deemed to be a Public Officer is exempt from coverage for sickness benefits and maternity allowance and their contributions are reduced accordingly. The Public Officer is specified in the National Insurance Contributions Regulations, Cap 17.09 as follows:

“Employed persons employed by the Government of the Islands who under the terms and condition of his employment is entitled to sick leave on full salary for at least three month during any period of 12 months ending on the last day of the sick leave granted.”

Given the relatively small number of persons that fall into this exempt category, this provision and reduced rates were ignored for valuation purposes.

2.3 Allocation of Income and Administrative Expenses

The contribution rates for each group of employees specified in the table below are allocated among the benefit branches in accordance with the National Insurance (Financial and Accounting) Regulations.

Note: Increased contribution rates will be going into effect as of April 1st, 2022, 2023 and 2024. Refer to the Appendix I for the allocations post March 31st, 2022.

The specified allocations are as follows:

Table 2-3 Allocation of Contribution Rates by Benefit Branch & Type of Insured as at 3/31/2022

	Employees Over 65	Temporary Residents	Voluntary Contributors	Self-employed	Public Officers	All other insured employees
Total Contribution rate	1.2%	2.5%	10.0%	6.80%	6.85%	8.0%
Short-term benefits branch	0%	1.3%	0%	1.3%	0.15%	1.3%
Long-term Benefits branch	0%	0%	10.0%	5.5%	5.5%	5.5%
Employment Injury benefits branch	1.2%	1.2%	0%	0%	1.2%	1.2%

Source: Schedule of the NI (Financial and Accounting) Regs

Based on the historical income posted in the financial statements, the nominal amounts were allocated as follows:

Table 2-4 Historical Allocation of Income by Benefit Branch

	2018	2019	2020	2021	2022
Allocation of Contribution Income					
STB	15.6%	15.6%	15.7%	15.4%	15.4%
LTB	69.6%	69.7%	69.7%	69.9%	69.9%
EIB	14.8%	14.7%	14.7%	14.8%	14.8%
Total	100.0%	100.0%	100.0%	100.0%	100.0%
Allocation of Investment Income					
STB	12.0%	12.2%	12.5%	12.9%	12.3%
LTB	71.8%	70.9%	70.0%	68.9%	68.6%
EIB	16.2%	16.8%	17.5%	18.3%	19.1%
Total	100.0%	100.0%	100.0%	100.0%	100.0%
Surcharge Income as a % of Contribution Income	3.5%	1.5%	1.3%	3.1%	0.8%
Investment Expense as a % of EOY Reserves	0.56%	0.60%	0.56%	0.39%	0.65%

Per National Insurance (Financial and Accounting) Regulations, the administrative expenses are allocated as follows:

- ✓ Long-term benefits branch – 67%
- ✓ Short-term benefits branch – 17%; and
- ✓ Employment Injury branch – 16%.



2.4 Financing Method

The financing method chosen by a scheme has no impact on the ultimate costs of the scheme. It simply allows for the orderly build-up of reserves to pay for future expenses, thus keeping current contribution rates as low as possible.

PAYG Rate

The period during which the contribution rate, currently at 8.0% of IE, is greater than the PAYG rate, is the time during which all expenses of the NIS will be able to be covered by contribution income and the remaining income added to the reserve account. The reserve account will then protect against any unforeseen contingencies and provides some flexibility in the payment of future benefits and other expenses, during periods when the contribution rate is less than the PAYG rate.

The PAYG rate or Pay-as-you-go Rate is the percent of Insurable Earnings required to cover all expenses for that year (i.e., there will be zero net income for that year). The rate will be very low in the early years, rapidly increasing as the system matures and more pensioners have to be paid and in greater amounts, and then stabilising in about 50 to 60 years when the system attains a mature state.

Financing Method

The financing method adopted for the scheme must meet certain minimum requirements:

- It must be suitable to the nature of the benefits it is financing;
- It must ensure that there are sufficient funds on hand to pay all the expenses (benefit payments and administrative expenses) projected over the next few years;
- If it generates excess income, the reserves must be able to be absorbed and invested profitably by the economy; and
- It must allow for some financial stability of the scheme.

To meet the above requirements, the NIS has adopted the following financing methods, with the objective of meeting the minimum reserve requirements for each branch as stipulated in the Regulations.

1. **Close to Assessment Premium method** to cover the short-term risks (Short-term benefits branch and the allowance, grants, medical claims and injury benefit of the Employment Injury branch)
 - Minimal reserves are held for these benefits;
 - These benefits are paid for a period of not more than one year; and
 - The annual income collected should be slightly greater than the annual expenditures to be paid out.



2. **Partial Funding** to cover the Long-Term Benefits branch (long term risks)
 - This method builds up excess reserves to allow for the payment of contingencies, to maintain the current contribution rate for as long as possible and to keep the rate as low as possible.
 - The contribution rate is set a level such that the minimum reserve requirements are met i.e., the Reserve Ratio System.
3. **Full Funding** method to cover the Employment Injury Branch long-term risks i.e., death and disablement pensions.
 - The level of reserves must be at least equal the present value of benefits currently in pay status.

If the reserve levels fall below the minimum required for an extended period of time, the necessary adjustments will have to be adopted to increase the reserve level to the required amount. The minimum reserve requirements are as follows:

Table 2-5 Minimum Reserve Requirements per Regulations

Benefits Branch	Reserve level must be at least equal to the amounts specified below
Short-term benefits	25% of the benefit expenditure during the previous two financial years.
Long-term Benefits	Benefit expenditure during the three previous financial years.
Employment Injury Benefits “Short-term Benefits” – Injury benefit, disablement & death grant and medical care	50% of the benefit expenditure in the two previous financial years.
Employment Injury Benefits – Disablement & Death benefits	Excess, if any, of reserves for the EI branch over the reserves set aside for the EI “short-term” benefits specified above.

For the early years of the NIB, the contribution rate was set greater than the PAYG Rate, to facilitate an excess build-up of reserves. It is critical to set the Fund Ratio (reserve to expenditure ratio) relatively high to allow for the build-up of reserves which will be utilised as the NIS matures and an increasing number of pensions have to be paid. As the NIS matures, the ratio of contributors to pensioners starts to stabilise and the annual expenditure is far more predictable.

There are currently excess reserve levels in all branches.



SECTION 3. CURRENT STATUS OF THE SCHEME

3.1 Legal Provisions

The legal provisions of the NIS are governed by the National Insurance Ordinance and subsequent amendments and regulations, most recently provided for in the National Insurance Ordinance CAP 17.09, revised March 31st, 2021 and Legal Notices post-March 31st, 2021. The Prior Report recommended a number of amendments, which were enacted and adopted as of April 1st, 2022. The primary objective of those amendments was to increase the Period of Equilibrium and improve the financial sustainability of the Fund.

Recent amendments, those after the March 2019 valuation, are summarised in **Appendix I and further in Appendix II**. The key amendments recently adopted were:

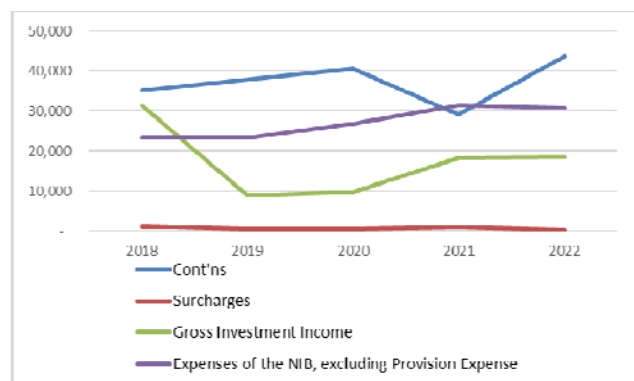
- i. Removal of the condition to be substantially employed to be eligible for the Retirement Age pension, if paid earlier than age 65;
- ii. Reduction in the benefit accrual rate (except for those insureds who were age 50 or older on April 1st, 2022);
- iii. Increase to the contribution weeks for entitlement to an Invalidity pension;
- iv. Incremental contribution rate increases and re-allocation of contribution rate among the branches;
- v. Payment of Temporary Unemployment Assistance benefits due to significant number of insureds who became involuntarily unemployed, under-employed or laid-off due to the economic fallout created by the COVID-19 Pandemic;
- vi. Inclusion of Unemployment Benefits in the Short-term benefits branch; and
- vii. Temporary waiver of the penalty charge for late payment of contributions.

3.2 Financial Position

For the FY ended March 31st, 2022 values (refer to Table 3-2):

- ✓ The Fund's contribution income has been more than sufficient to cover its expenses, *with the notable exception of 2021- 2020/2021* was the period impacted by the global Pandemic, during which most countries effectively closed their borders and TCI experienced an abnormally high unemployment rate.
- ✓ The NIS had reserves of \$417.7Mn, with the LTBs branch accounting for 67.7%;
- ✓ Gross investment income of \$18.4Mn;
- ✓ Net income of \$31.7Mn and net ROR of 4.0%;

Table 3-1 Historical Income, by source versus Expenses



- ✓ The Fund Ratio for all branches (ratio of Reserves to expenditure for the year) is 13.6 years – the minimum required per Regulations is 3 years for the LTB branch, which is the branch driving the cost of the Fund; and
- ✓ A PAYG rate of 5.57% as compared to the contribution rate of 8.0% of insurable earnings.

The historical financial information is also presented in the table below:

Table 3-2 Historical Costs of All NIS Operations

US\$ (,000)s	2018	2019	2020	2021	2022
Income (incl OCI)	67,576	47,152	28,029	138,348	62,413
<i>Contributions</i>	35,052	37,877	40,498	29,094	43,621
<i>Surcharges</i>	1,224	553	523	908	353
<i>Gross. Investment Income</i>	31,300	8,946	9,645	18,167	18,439
Expenses (incl the IAS37 provision)	27,183	24,327	29,811	32,606	30,724
<i>Benefits</i>	16,294	18,293	19,609	24,566	23,655
<i>Administrative</i>	5,589	3,308	5,687	5,292	4,335
<i>Investment</i>	1,460	1,688	1,570	1,516	2,733
Net Income	40,393	22,825	(1,782)	105,742	31,690
Reserves at EOY	259,197	282,022	280,240	385,982	417,671
Fund Ratio (years)	9.5	11.6	9.4	11.8	13.6
ROR (net) on ALL Reserves	13.32%	2.72%	2.91%	5.13%	3.99%

Source: Audited financial statements except 2022 used Management Accounts.

Included in the expenses, as shown in Table 3-2, are provisions for the actuarial present value of long-term benefits, other than retirement benefits, in compliance with IAS 37, as follows:

- 2018: \$3.8Mn
- 2019: \$1.0Mn
- 2020: \$2.9Mn
- 2021: \$1.2Mn
- The additional provision for FY2022 will be available after the completion of the financial audit.

Included in the Income, as shown in Table 3-2, is Other Comprehensive Income (OCI) as follows:

- 2018: \$0
- 2019: \$-0.2Mn
- 2020: \$-22.6Mn
- 2021: \$90.1Mn



Gross Investment Income/Loss

Gross investment income was exceptionally high in 2018 and thereafter it declined significantly but rebounded in 2021 and 2022.

- The values are presented in the table below and the Net Investment Income is presented in Chart 3-1.

The actuarial projections assumed an average net ROR of 5.0% during 2018 to 2022 compared to the actual average of 5.60%.

- If the net ROR (averaged over a reasonable period) is less than the rate assumed in the actuarial projections, then the Fund will be unable to meet its long-term obligations under the existing benefit and contribution structure.

Chart 3-1 Net Investment Income 2018 to 2022

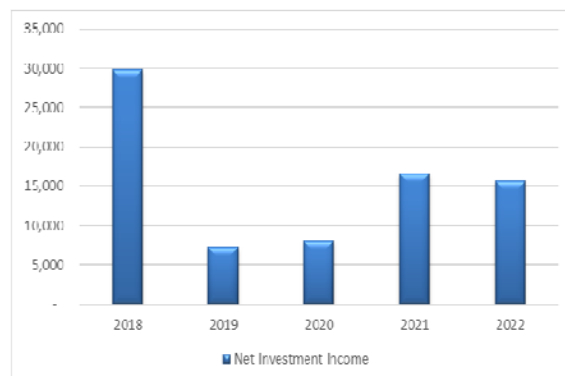


Table 3-3 Investment Income 2018 to 2022

	\$Mns				Net ROR	Gross Investment Income as a % of Total Income (OCI not included)
	EOY Reserves	Gross Investment Income	Investment Expenses	Net Investment Income		
2018	259,197	31,300	1,460	29,840	13.3%	46.3%
2019	282,022	8,946	1,688	7,259	2.7%	18.9%
2020	280,240	9,645	1,570	8,075	2.9%	19.0%
2021	385,982	18,167	1,516	16,651	5.1%	37.7%
2022	417,671	18,439	2,733	15,706	4.0%	29.5%
Average					5.6%	30.3%



Reserves & Fund Ratio

The current Fund Ratio of 13.6 years is well above the minimum acceptable levels specified by the Regulations. If there are no more contributions into the Fund after March 31st, 2022, there are sufficient reserves available to pay out expenses, based on the 2022 expenditure level, for about the next 13 years.

The level of the reserves has increased steadily to \$417.6Mn in 2022 from \$259Mn in 2018 (illustrated in Chart 3-3 below).

Over the period 2018 to 2022, the reserves, as a percent of GDP, has averaged 26%.

Chart 3-3 Historical End of Year Reserves

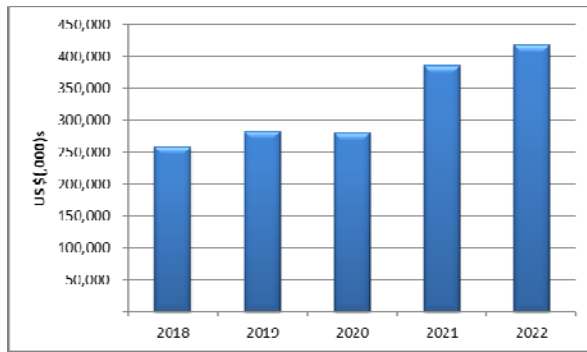
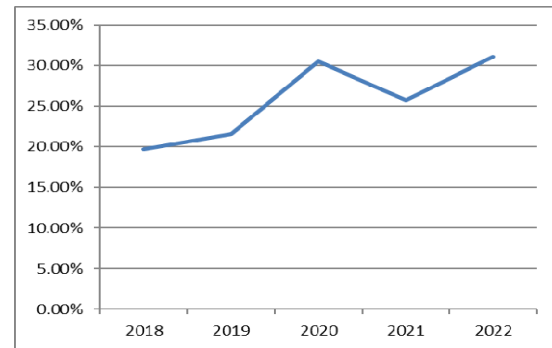


Chart 3-2 Historical Reserves as a % of GDP



As indicated in the table below, each branch has reserves in excess of the minimum required. The LTBs branch accounts for 68% of all 2022 reserves.

Table 3-4 Minimum Required Reserves

Benefit Branch	Reserves as of March 31st, Year						Minimum Reserve Requirement 3/31/2022 per Regulations \$,000	Fund Ratio 2022
	2017		2019		2022			
	US\$(,000)	% of total	US\$(,000)	% of total	US\$(,000)	% of total		
STB	26,166	12%	35,238	12%	53,149	13%	2,108	15.8
LTB	157,132	72%	197,549	70%	282,761	68%	54,945	11.1
EI	35,506	16%	49,234	17%	81,761	20%	(for non-pension benefits)171	43.7
Total Reserves	218,804	100%	282,022	100%	417,671	100%		13.6



Income vs. Expenses

The annual growth in contributions has been greater than that of expenses (Chart 3-4), resulting in positive net income and the continuous build-up of the reserves (Chart 3-3). The results are summarised as follows:

- Contribution income has averaged 70% of total income for 2020 to 2022 and steadily increased from increased to \$43.6Mn from \$40.5Mn over the same period.
- Contribution income by sector has remained stable over at least the past five years, with the private sector accounting for 92% of all contribution income – refer to Table 3-5.
- The expenses, which are mostly the benefit expenditures, averaged \$29.7Mn over 2020 to 2022, as compared to an average contribution income of \$37.7Mn.
- *The year 2021 was an exception – the contribution income was less than the expenses by about \$2.2Mn*

Chart 3-4 Historical Contribution Income vs Expenses

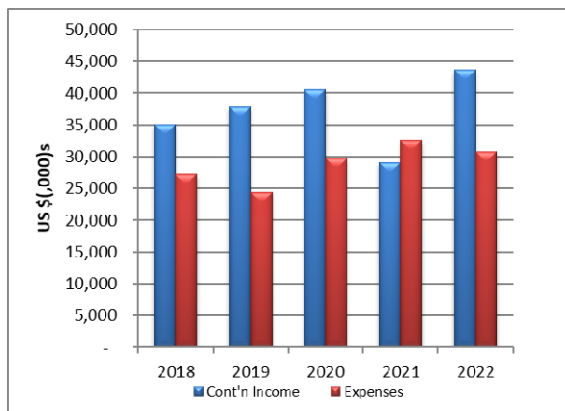


Table 3-5 Contributions by Sector

Contributions by Sector \$Mn	2018	2019	2020	2021	2022
Public (includes TCIG officers only)	1,867	1,872	1,933	1,957	2,167
Non-Public	0	0	0	0	0
Private (includes TCIG employees)	32,385	34,936	37,318	26,337	40,249
Self-employed	800	1,069	1,246	799	1,205
Voluntary	0	0	0	0	0
Total	35,052	37,877	40,498	29,094	43,621



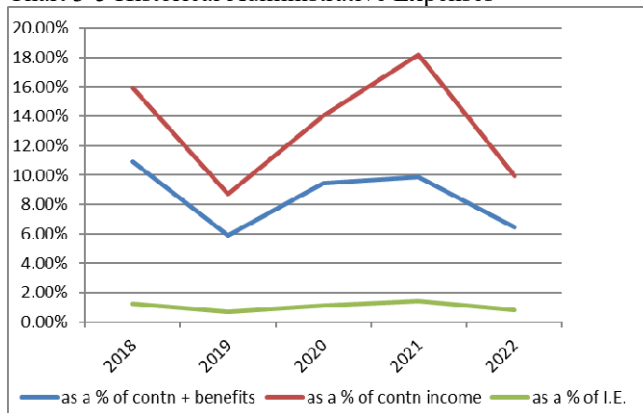
Administrative Index

The Index assumes that the staff spends an equal amount of time collecting contributions and processing benefit payments and can be used to measure the workload of the NIS Staff. TCI NIB has made improvements in decreasing the administrative expenses in recent years.

- During the past five years, the Administrative Index has averaged 8.51% of benefits plus contributions.
- Alternatively, the Administrative expenses have averaged 1.06% of Insurable Earnings during 2018 to 2022 and 0.8% of IE in 2022.
- The administrative expenses have experienced some fluctuations over the years.

Managing administrative expenses can be quite challenging in such a small, multi-island country like TCI which is limited in reaping the full advantages of economies of scale. To date, the NIS has been quite successful in this regard as is evident by the above indicators. It is a part of the NIS operations that must be closely monitored and controlled.

Chart 3-5 Historical Administrative Expenses



Ceiling on Insurable Earnings

Based on available information, the gross wages & salaries for the insured population were estimated and in turn the Catchment Factor for 2022 estimated at 87%, slightly lower than the 3/31/2019 estimate of 88%. It is currently projected to remain at about 84% Catchment Factor.

The Insurable Earnings ceiling of \$48,000 is about 2 times the AIE of \$24,759 as at 3/31/2022 just outside of the given guideline²⁵ of 2.5 to 3 times the AIE;

²⁵ Source: "Social Security in the CARICOM Single Market Economy" by Derek Osborne



3.3 Benefit Experience

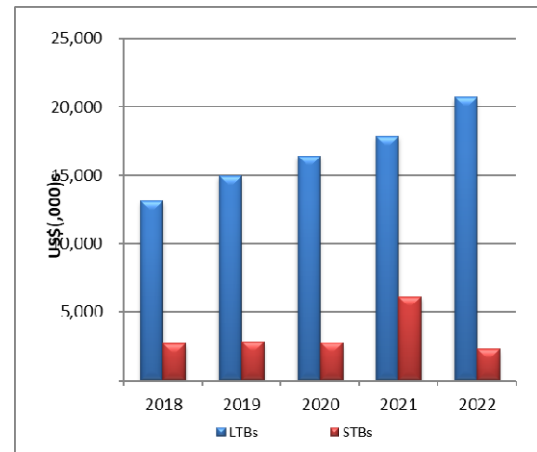
For the FY 2022, benefits from all branches were 4.3% of IE plus Other Costs²⁶ of 1.3%, giving a total cost of 5.6% of IE, as compared to a contribution collection rate of 8.0% of IE.

Benefits grew to \$23.6Mn FY 2022 from \$16.3Mn in 2018; the number of pensioners increased to 2,607 in 2022 from 1,890 in 2018.

LTBs Branch

- The LTBs in 2022 was \$20.7Mn or 87% of all benefits in FY 2022; gradually increasing year to year.
- This steady growth in the long-term benefits is expected as more and more covered persons were able to accumulate contribution weeks, resulting in an increasing number of retiring insureds eligible for a pension instead of a grant and payment of higher average benefits to the newly awarded pensioners.

Chart 3-6 Historical LTBs vs STBs



STBs and EIBs Branches

- These are relatively small benefit payments, paid for the short to medium term, and therefore a small change in benefit payments can cause a fair amount of variability in the results.
- The spike in the 2021 STBs was due to \$4Mn incurred for the Temporary Unemployment Assistance Benefits (TUB).
- Ignoring the TUB of 2021, the STBs have remained relatively flat, averaging \$2.5Mn 2018 to 2022.
- The EIB has experienced fairly stable benefit payments during the past five years, average for the period of \$0.5Mn. Fluctuations in expenditure in this branch is not unexpected.

²⁶ Other Costs are administrative plus investment expenses.



3.4 Comparison to Other Caribbean Schemes

From available information, most Caribbean countries have a similar social security benefit structure. The vast majority of the countries require 10 years to be eligible for a minimum pension of 30% of AIE and a maximum replacement rate of 60% after 35 to 40 years of contributions.

Turks & Caicos Islands social security organisation is the youngest in the Caribbean – the average year of adopting a social security system among the Caribbean countries is 1978²⁷ as compared to TCI's date of 1992.

In recent years, a few countries, such as, St. Lucia, St. Vincent and Barbados have reformed their schemes by increasing the contribution rates and/or increasing the normal retirement age and/or increasing the contribution weeks required for pension eligibility and other parametric reform measures.

Chart 3-7 to Chart 3-10 below graphically illustrate the comparative normal retirement ages, contributions rates, administrative expenses and ceiling levels (based on currently available information), respectively.

Comparative Retirement Ages:

- Seven (7) of the Caribbean countries surveyed have set the normal retirement age (NRA) at age 65 – Anguilla, Bahamas, BVI, Jamaica (males only), St. Lucia, Turks & Caicos and Trinidad;
- Others are gradually increasing the NRA to age 65 over a period of time;
 - Grenada is the only Scheme with an NRA as young as age 60.
 - Remaining Schemes have an NRA ranging from 61 to 64.
- Barbados is at 67 years; and
- The data is based on retirement ages currently in effect.

Comparative Contribution Rates:

- Average contribution rate is 11.0% of Insurable Earnings;
 - The average has increased from 10.6% to 11.0% since the Prior Report.
- Currently, TCI is on par with most other countries in the region and the rates will be increased incrementally from April 1st, 2022 to April 1st, 2024.
- The data is based on contribution rates currently in effect.

²⁷ Based on nine Caribbean SSOs.



Chart 3-7 Normal Retirement Ages of Caribbean SSOs

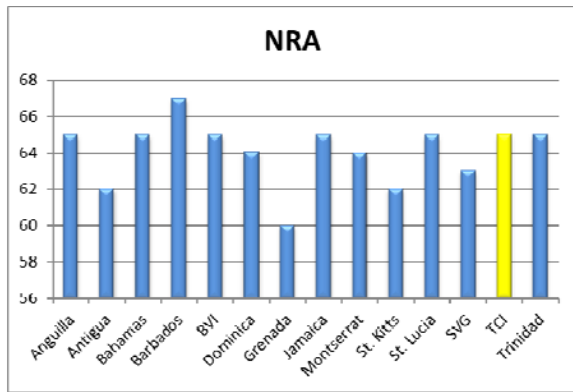
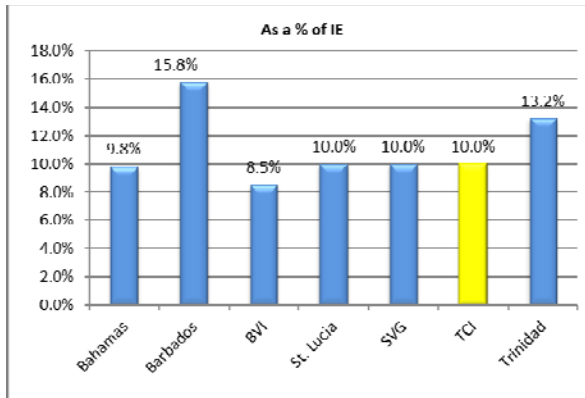


Chart 3-8 Contribution Rates of Caribbean SSOs



Comparative Administrative Expense:

- Average administrative index (expense as a percent of benefits plus contributions) is 8.4%.
- TCI’s administrative Index has in recent years decreased to one of the lowest in the region (based on currently available data from other Schemes) – 2022 Index was 6.44% and averaged 8.6% for the past three years – this is commendable given the challenges of being able to reap economies of scale for small and/or multi-island Caribbean countries, like the TCI.
- Other comparative measures are TCI’s administrative expense of 1.11% of IE or 14.1% of contribution income²⁸ as compared to regional averages²⁹ of 1% to 2% of IE or 15% of contribution income (The Actuary’s data collection produces a regional average of 13.7% of contribution income and 1.4% of IE).

Comparative Ceiling Amounts:

- Average Insurable Earnings ceiling is \$31,512 with much variation among the countries, which is reflective of the different economic situations among other reasons.
- Some of the countries have relatively greater wealth than others due to the tourism dollar and therefore the ceiling amount is expected to be above average.
- TCI’s Ceiling Amount of \$48,000 is the highest.
- The data is based on ceiling amounts currently in effect.

²⁸ TCI administrative expenses based on average for 2020 to 2022.

²⁹ Source of regional averages: Workable Pension Systems Olivia Mitchell and Derek Osborne



Chart 3-10 Administrative Expenses as a % of IE

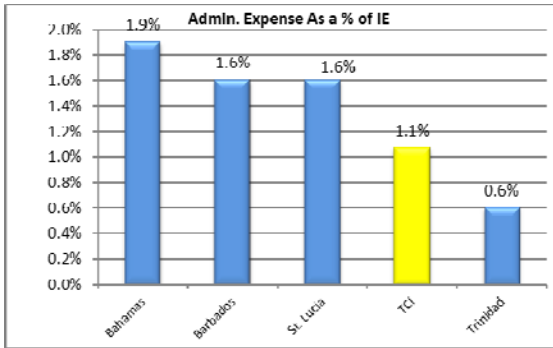


Chart 3-9 Admin Expenses as a % of Cont'n Income

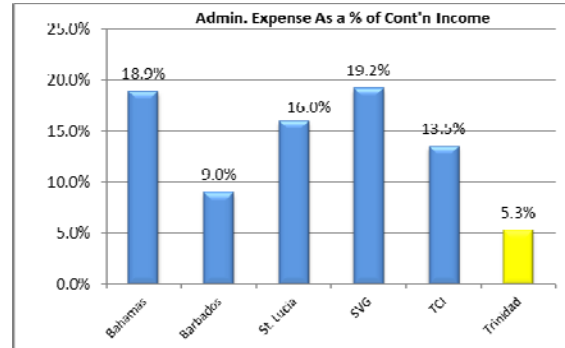


Chart 3-10 Administrative Index

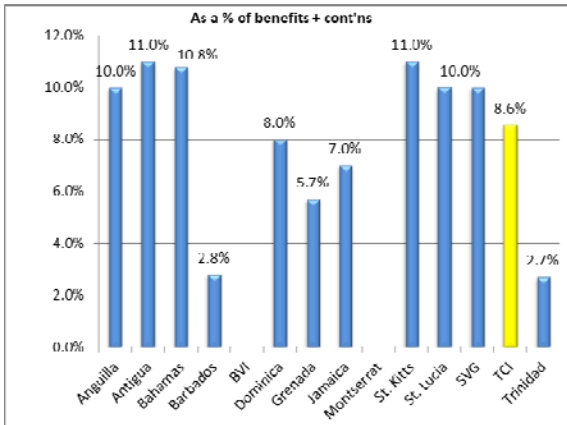
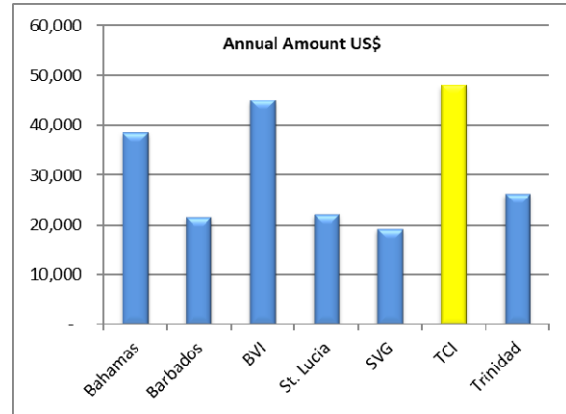


Chart 3-10 Ceiling on IE



SECTION 4. ACTUARIAL PROJECTIONS

4.1 Methodology

To perform the valuation and the actuarial projections, the computer-based modelling tools, developed by the International Labour Organisation, Financial, Actuarial and Statistical Branch (ILO FACTS) were used. The model is intended to be dynamic, continuously refined and updated, reflecting actual and more comprehensive data as they become available, and a revised set of assumptions. The basis of the data set and assumptions used in the Models are provided in the next section. For purposes of developing the projection results, the plan provisions noted in Appendices I and II were included.

The ILO models are:

ILO-POP ---used to project the population of TCI

ILO-DIST---used to project the salaries and IE of the projected population and other outputs.

ILO-ECO---used to project national economic framework, the labour force and employment data

ILO-PENS---used to project data referring to the insured and pensioner population of the NIS, and other scheme specific data.

The final output produces NIS results for the LTBs Branch, for the valuation year and each projection year thereafter, such as:

- ✓ Amount of benefits and number of pensioners;
- ✓ Administrative expenses;
- ✓ Insurable Earnings and number of contributors;
- ✓ Contribution income and investment earnings;
- ✓ Income & expenditure statement; and
- ✓ Contribution rates based on alternative financing systems.

Throughout the many steps of ILO-PENS program, sound actuarial methods and principles are employed. Those same methods and principles are then used in the analysis of the results and the determination as to whether the results are reasonable or if further modification is needed.

The projections are based on a year-by-year cohort approach.

- For the Population Projection – Population by age and gender is projected from one year to the next by applying mortality rates to determine deaths, fertility rates to determine births and migration used as a balancing item.
- For the economic framework – Assumptions are made in the growth in key variables, such as, growth in GDP, inflation and percentage wage share of GDP. It is assumed that in the long run, real wage increases will converge toward rate of growth in productivity.
- For the Labour Framework – Participation rates, by age and gender, are applied to the population data to determine the labour force, and employment rates are then applied to



the labour force to determine the employed count. From the employed data, the active contributors are projected.

For the other two branches, the projections are simplified based on an iterative projection and assumptions as to the development of costs and the net change in insureds/number of cases.

The projection period is sixty (60) years from 2023 to 2082. The base year for the projection was 2022 as this was the year with the most reliable data and projections based on actual data for the years to 2022.

4.2 Sources of Information

The main sources of data were:

- The Turks & Caicos Islands Statistical Dept. website (www.gov.tc/stats.com);
- S&P's Draft 3/2022 Report;
- TCIG Draft Budget 2018/2023;
- TCI Labour Force Survey Report 2017;
- The 2012 census results;
- The audited financial statements for all financial years except for the FY2022 - Management Accounts were used for FY2022; and
- NIB's Investment Policy Statement of May 2020.

The Actuary used current and projected data from the sources above; otherwise, the Actuary made adjustments and assumptions to other relevant data available to estimate the required 2022 values and projected values.

A. Data from the NIS

The NIB Statistical Branch provided actual scheme specific data to the end of FY 2022. The data provided was quite comprehensive, by age, gender and presented in an orderly and manageable format.³⁰ The Actuary reviewed the Scheme specific data for overall reasonableness, submitted queries and data checks to the TCI NIB, and after some adjustments and updates to the data set by the TCI NIB, it was considered to be credible data for input into the valuation model.

The data submitted with respect to the active contributors as of March 31st, 2022, resulted in over coverage³¹ when compared to the 2022 estimated employment data by age/gender (the estimate was developed based on 2017 Labour Force Survey Report). This is not an atypical issue for national insurance plans and may occur due to a combination of data discrepancies, differing definitions of insured contributor and employed person, differences in the timing of data collection between the NIB and the Labour Force Survey Report, and contributors having more than one job. In such instances, the recommendation by the ILO is to reduce the covered population by age brackets to avoid the over coverage, while holding the total count of

³⁰ The NIS submitted the data in an Excel file using the format recommended by the ILO "Social Security in Actuarial Practice"

³¹ Over coverage occurs when the ratio of active contributors to employed persons is greater than 100%.



contributors fixed. This method was applied and with additional adjustments were deemed necessary.

B. Data Limitation

As previously noted in Section 1.1, the projections were limited to the extent that there is currently no official national data base of gross wages & salaries, in aggregate and by age/gender allocation.

4.3 Assumptions

Determination of assumptions is based on analysis of past experience of the NIS while taking into account expected future developments and sound actuarial judgement. Applicable information and projected values cited in the national reports noted in Section 4.2 were also factored into the assumptions. The assumptions are deemed to be individually realistic and consistent with all other related assumptions and the projected long-term outlook for the economy and the NIS.

All assumptions were presented and discussed with the NIB Management Team before the final report was submitted.

A. Key Population and Macroeconomic Assumptions

Statistic

Assumption

TCI Population

Population for the years 2018 to 2025 was based on values sourced from the Statistical Office and the S&P Report. After 2025, population data was based on the fertility, mortality and migration assumptions below.

- The goal was not to replicate the projected population of 2022 and 2027 provided by the Statistical Office but a reasonably close approximation taking into account currently available statistics and information.

Average annual growth in the projection period of 0.4%.

Total fertility rate (TFR) of 1.25, increasing to 1.6 by 2050 and remaining constant thereafter; Base TFR of 1.25 based on age-specific birth data sourced from the Statistical Office for the years 2018 to 2020.

Male to female ratio of new-borns 1.04.



Initial life expectancy, at birth, in 2022 is 76 for males and 82.4 for females. Life expectancy at birth assumed to experience moderate improvements – by 2082, the projected life expectancy at birth is 82.3 male and 86 female.

In 2012 census, the non-Belonger population accounted for about 63% of total population and this high percentage of a migrant population is expected to continue. Migration data was unavailable (same as for past valuations) and used as a balancing item to ensure that the annual natural increase was consistent with actual and projected natural increase data sourced from the Statistical Dept. and that projected population values did not grow to unrealistic levels.

Mortality rates	United Nations “Latin America” rates, with adjustments taking into consideration other population parameters and aiming for projected population values that did not increase to unrealistic levels .
Inflation	Prior to 2021, inflation values sourced from TCI Statistical website; Projected inflation values of 4.5% (2021), 6.0% (2022), 3.5%(2023), 2.1% (2024 and 2.1% (2025) sourced from the TCI Statistical Office and S&P Report. Thereafter, inflation of 2.1% held constant during the projection period.
National Nominal Earnings	Average annual growth during the projection period of 4.2%.
Wage share of GDP	Estimated at 60% of GDP during the projection period.
Gross Wages & Salaries	Based on the age/sex allocation of IE data submitted by NIB (also Section 1.1 Earnings Framework)
Growth in real GDP	Real GDP growth average of -2.2% for 2016 to 2020. Estimated 13.6% (2021), 7.3% (2022), 7.1% (2023) ,4.2% (2024) and 4.2% (2025). Statistical Office and S&P Report. Assumed to remain constant thereafter at 2.2%. Average growth in real GDP during the projection period of 2.3%



Growth in GDP	<p>Based on the same information as above for real GDP growth and projected values.</p> <p>Average growth in GDP during the projection period of 4.5%.</p>
Labour Force Participation Rates	<p>Based on the 2017 Labour Force Survey Report, average: 80.3% (male 84% and female 76.4%)</p> <p><u>Averages for the Base Year 2022:</u> Male: 85.2% Female 75.9% Combined 80.7%</p> <p><u>Averages for the period 2023 to 2082:</u> Male – 86.5% (minimum of 85.1% and maximum of 87.8%) Female – 78.7% (minimum of 75.6% and maximum of 82.4%) Combined – 82.7%.</p>
Unemployment rate (UR)	<p>2017 Labour Force Survey Report unemployment rate for 2017: 6.0% (male 5.7% and female 6.4%)</p> <p>Average unemployment rate for 2016 and 2020: 7.6%. UR of 11.0% (2015). Projected UR of 9.0% (2021), 8.0% (2022) and 7.0% (2023 to 2025). TCI Statistical Office and S&P Report</p> <p>Based on historical data, the expected growth in GDP and economic strategy, the unemployment rate is assumed to remain fairly constant during the projection period.</p> <p><u>Averages for the Base Year 2022:</u> Male: 7.64% Female: 8.42% Combined: 8.0%</p> <p><u>Averages for the period 2023 to 2082:</u> Male – 7.16% (minimum of 7.04% and maximum of 7.48%) Female – 7.03% (minimum of 6.67% and maximum of 8.22%)</p>



Growth in employees Combined – 7.10%. (Minimum of 6.88% and maximum of 7.82%)
Annual average of 0.25% for the projection period.

B. Key NIS Specific Assumptions

<u>Statistic</u>	<u>Assumption</u>
Net Return on Investments	5.0% for the years 2023 to 2027 and 4.5% thereafter (investment income allocated by branch reserve amount).
Investment Expenses	0.62% of the FY reserve.
Ceiling on Insurable Earnings	Effective 4/1/2017, the Ceiling is \$48,000. From 2022 onwards, it is assumed to increase annually with national average wage increase.
Minimum Pension	Increases annually with national average wages.
Funeral Benefit	Increases annually with inflation.
Pensions in pay	Increases annually with inflation.
Contribution rates	As at March 31 st , 2022: 8.0% of Insurable Earnings. April 1 st , 2022: 10% April 1 st , 2022: 11% April 1 st , 2024: 12%
	Rates shown above are for the Private Sector only - refer to the Appendix I for the rate increases for the other sectors.
	Also, the rate increase includes the provision of Unemployment Benefits.
Surcharge	2023 to 2024: 1.75% of contribution income; 2025 to 2029: 1.50% of contribution income; and 2030+: 1.50% of contribution income.
Contribution Compliance	82% for 2022 and gradually increasing to 85% by the year 2028 and remaining constant thereafter. Contribution compliance refers to the ratio of insured persons who actually paid contributions in a given year to those (contributors and employers) who are legally required to pay – it is a ratio of actual to expected contributions collected.



Density Ratio	<p>Density Ratio is the ratio of contributions weeks actually paid in a year to 52 weeks.</p> <p>2022 Age/gender specific rates were submitted by the NIB. Weighted average rates as follows: <u>Base Year 2022:</u> Male: 78.4%; Female: 79.8%</p> <p><u>Average 2023 to 2082</u> Male: 81.4%; Female: 82.0%.</p>
Administrative Index Factor	<p>Base Year 2022: 6.44% 7.5% for the years 2023 to 2027; 7% for the years 2028 to 2032; 6.5 for 2033 to 2037 5.75% for 2038 to 2042 5.5% thereafter.</p> <p>Average Index 2023 to 2082: 8.50% The assumptions took into consideration the incremental rate increases that have been enacted.</p> <p>The Index is applied to the benefits plus contributions and proportionately allocated among the branches per Regulations.</p>
Retirement Rates	Pensioners assumed to retire at 63.
Coverage Rates	<p>Ratio of active contributors to employed population. 2022 base year rates, by age and gender, were increased minimally (year to year) over for the projection period. Weighted average rates will be impacted by changing population structure over time. Weighted average rates are:</p> <p><u>Base Year 2022</u> Male: 80.5%; Female: 79.4%</p> <p><u>Average 2023 to 2082</u> Male: 84.7%; Female: 85.3%</p>



C. Other Assumptions used for the STBs & EIBs Branch

<u>Statistic</u>	<u>Assumption</u>
Morbidity Rates	Prior to the valuation date, it is based on actual data. From the valuation date onwards, based on actuarial projections taking into account past and expected experience.
Mortality Rates	Same basis as the determination of morbidity rates
Rate of New Awards	Same basis as the determination of morbidity rates
Cost per day	Grants projected based on inflation; other benefits projected based on maximum of wage increases.
EI Medical Expense	For 2022 onwards, assumed to equal 100% of the five-year average of the employment injury benefit allowance expense.



4.4 Changes in Assumptions from the Prior Valuation

The prior valuation used 2019 as the base year and provided projection results to the year 2079. This Report uses 2022 as the base year and projected results to the year 2082.

The table below provides comparative assumption information, where possible of the two reports.

Table 4-1 Assumptions: 2019 vs. 2022 Projections

Macro-Economic Variables	2019 Valuation (base year 2019)	2022 Valuation (base year 2022)
Population		
2019	43,098	Na
2022	47,444	46,617
2039	59,123	55,984
2059	58,841	61,153
2079	59,200	60,249
Average annual growth during the projection period for the above valuation	0.5%	0.4%
Fertility Rate		
2019	1.54	Na
2022	1.59	1.25
2029	1.71	1.34
2034	1.80	1.40
2050+	1.80	1.60
Life expectancy at birth		
2019	75.8 Males; 77.8 Females	Na
2022	76.08 Male; 78.07 Females	76 Male; 82.4 Female
2079	79.25 Male; 84.57 Female	82 Male; 85.8 Female
Life expectancy at age 65		
2019	16.6 Males; 17.4 Females	Na
2022	16.5 Males; 17.5 Females	16.5 Male; 20.5 Females
Average Inflation for projection period	2.1%	2.1%
Average annual growth in wages	4.2%	4.2%
Average Growth in real GDP for projection period	2.5%	2.3%
Labour Force Participation Rates		
2019	84.3% Males; 76.4% Females	Na
2022	84.3% Males; 76.4% Females	85.2% Males; 75.9% Females
2079	90.1% Males; 81.9% Females	87.7% Males; 82.1% Females
Average for the projection period ³²	88.8% Males; 79.6% Females	86.5% Males; 78.7% Females

³² 2020 to 2079 for the 2019 Valuation and 2023 to 2082 for the 2022 Valuation.



Macro-Economic Variables	2019 Valuation (base year 2019)	2022 Valuation (base year 2022)
Unemployment Rates		
2019	6.7% Males; 7.3% Females	Na
2022	6.7% Males; 7.3% Females	7.64 Males 8.4 Females (8.0% combined)
2079	6.8% Males; 7.4% Females	7.1% Males; 6.9% Females
Average for the projection period	6.7% Males; 7.46% Females (7.0% combined)	7.16% Males; 7.03% Females (7.10% combined)

NIS Specific Variables	2019 Valuation	2022 Valuation
Contribution Rate (shown only for the private sector)	Remain constant at 8.0%	Increased to 10%, April 1 st , 2022 Increased to 11%, April 1 st , 2023 Increased to 12%, April 1 st , 2024 and remaining constant
Benefit Accrual Rate for Retirement Age Pension (% applied to AWIE)	30% for the first 500 weeks, then 2% for the weeks in excess of 500 but less than 750, then 1% for weeks in excess of 750	20% for the first 500 weeks, then 2% for the weeks in excess of 500 but less than 1,000, then 1% for weeks in excess of 1,000 Those 50+ on 4/1/2022, no change in the benefit accrual rates.
Contribution Compliance	Constant at 89%	82% in 2022 and gradually increasing to 85% by 2028 and remaining at that level
Density		
2019	82.8% Males; 84.5% Females	Na
2022	82.6% Males; 83.1% Females	78.4% Males; 79.8% Females
2079	82.2% Males; 82.1% Females	83.2% Males; 82.9% Females
Average for projection period	82.3% Males; 82.7% Females	81.4% Males; 82% Females
Return on Investments	2017 to 2027: 5.0% and; 4.5% thereafter	2023 to 2027: 5.0% and; 4.5% thereafter

SECTION 5. PROJECTION RESULTS

The projection results can signal the possible financial future of the NIS and thus enable the administrators to make the necessary adjustments to the structure and provisions sooner rather than later. The value and reliability of projection results are based on available data and the set of assumptions identified in the prior section. If the actual statistics differ significantly to the assumptions, then the projection results should be re-analysed.

The relative values and the movement of values from one year to the next are far more instructive than the absolute dollar amounts.

For purposes of developing the projection results, the plan provisions noted in Appendices I and II were included.

5.1 Results of the Demographic Projection

5.1.1 TCI Population

The TCI population is projected to grow at an annual average of 0.4%, increasing from 46,617 in the base year to 60,244 by the year 2082 and remaining fairly stable at about 60,000 for the latter part of the projection period. See Chart 5-1 below.

We expect to observe an ageing of the population, with the 65+ age group increasing from 4.2% of the 2022 population to 27% of the 2082 population. Parallel with that is the decreasing working age population, which is critical to the financial sustainability of the Fund- it is projected to decline from 75% to 59% of the population. The changing age structure is depicted in Chart 5-2. This allocation is typical of Caribbean countries, with the exception of Barbados which already has a relatively high aged population.

The above changes in the distribution of the population by age groups would have a direct impact on the NIS as it translates to relatively fewer potential contributors and an increasing number of elderly persons for those contributors to support. There will be a greater financial burden on the working age population to ensure that sufficient funds will be available to pay out the ever-increasing amount and number of retirement age pension benefits.

The assumptions used for the population projections are detailed in Section 4.3.



Chart 5-1 Projected TCI Population

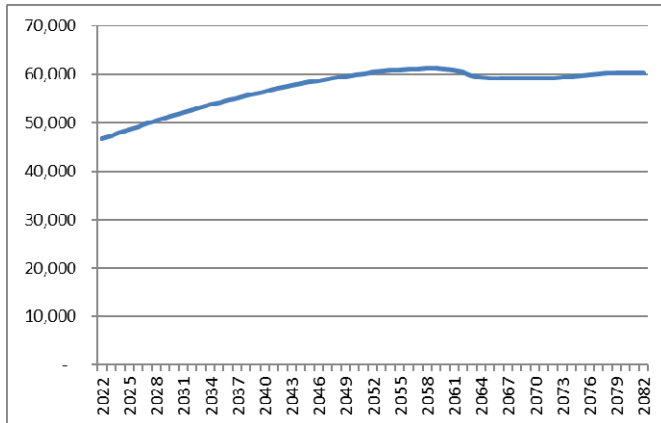
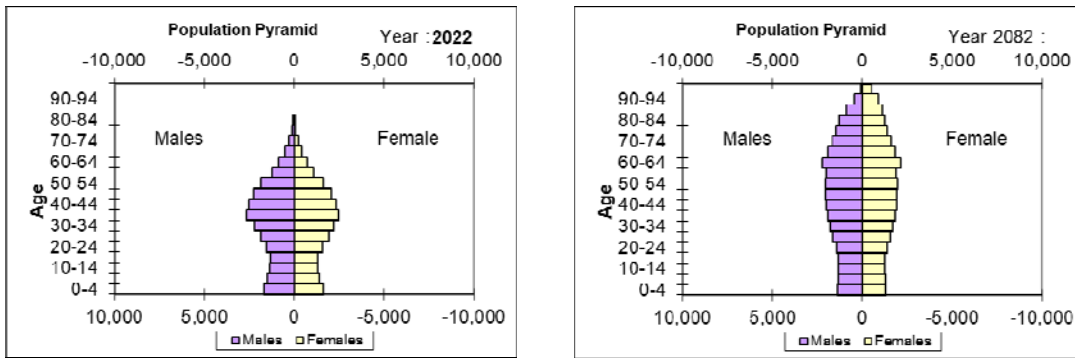


Chart 5-2 Population Pyramids 2022 and 2082



Nominal results of the demographic projections for the TCI population are provided below.

Table 5-1 TCI Population Projection

Year	Total Population	nominal amounts			as a % of total population		
		Population 0 to 15	Population 16 to 64	Population 65 plus	Popln 0 to 15	Popln 16 to 64	Popln 65 plus
2018	41,360	8,356	31,348	1,656	20.2%	75.8%	4.0%
2019	43,098	8,707	32,665	1,726	20.2%	75.8%	4.0%
2020	44,543	8,527	34,166	1,850	19.1%	76.7%	4.2%
2021	46,130	8,831	35,384	1,915	19.1%	76.7%	4.2%
2022	46,617	9,446	35,236	1,936	20.3%	75.6%	4.2%
2027	49,804	9,389	37,263	3,152	18.9%	74.8%	6.3%
2032	52,637	9,019	38,826	4,792	17.1%	73.8%	9.1%
2037	55,097	8,185	39,751	7,162	14.9%	72.1%	13.0%
2042	57,218	7,916	39,303	9,999	13.8%	68.7%	17.5%
2047	58,997	7,994	38,026	12,977	13.6%	64.5%	22.0%
2052	60,366	8,258	36,291	15,816	13.7%	60.1%	26.2%
2062	60,424	8,429	34,234	17,760	14.0%	56.7%	29.4%
2072	59,132	8,043	34,808	16,281	13.6%	58.9%	27.5%
2082	60,244	8,342	35,596	16,306	13.8%	59.1%	27.1%



5.1.2 NIS Population (Contributors and Pensioners)

The most important change in the demographic data, and a key issue in the financial planning of the NIS, is the growing percentage of elderly persons and consequently, the growing number of pensioners. The growth in pensioners is expected as the working age population matures and transitions to the “65 and over” age group and simultaneously an increasing number of contributors will be accumulating contribution weeks to be eligible for a pension instead of a grant.

The financial foundation of the NIS assumes a constant flow of new *active* contributors to support the ever-growing number of pensioners. However, given the low projected growth in the population and unemployment rate projected to remain at about 7% throughout the projection period, the annual growth in contributors is not expected to keep pace with the growing number of pensioners.

Table 5-2 Demographic Projection for the NIS

Year	TCI Popln	Employed Popln	Active Contributors	Total Number of Pensioners	Retirement Age Pensioners as a % of Popl'n 65+	Active Contributors as a % of TCI Popln
2018	41,360	24,349	21,122	1,890	71.0%	51.1%
2019	43,098	25,079	21,483	2,036	74.6%	49.8%
2020	44,543	25,197	22,384	2,168	76.1%	50.3%
2021	46,130	26,682	19,961	2,344	80.6%	43.3%
2022	46,617	27,260	22,274	2,607	94.6%	47.8%
2027	49,804	29,381	24,061	3,387	80.9%	48.3%
2032	52,637	31,153	25,951	4,720	78.5%	49.3%
2037	55,097	32,603	27,237	6,523	75.0%	49.4%
2042	57,218	33,283	27,818	8,903	74.9%	48.6%
2047	58,997	33,030	27,513	11,679	76.6%	46.6%
2052	60,366	32,153	26,687	14,646	79.7%	44.2%
2062	60,424	30,210	25,931	18,052	85.8%	42.9%
2072	59,132	30,279	26,964	18,418	92.4%	45.6%
2082	60,244	31,632	28,023	18,685	93.2%	46.5%



5.1.3 Dependency Ratios

The population's Aged Dependency Ratio (D.R.) and more so, the NIS's D.R should be closely monitored. The Dependency Ratios indicate the level of support that will be required of the working age population/active contributors to the dependent population/pensioners.

The ratios are described as follows and the values are provided in Table 5-3:

- ✓ Dependency Ratio (D.R.) is the ratio of persons aged "0 to 15" and aged "65 plus" to persons aged "16 to 64" (ratio of *all* dependents to working persons)
 - In the year 2022, 100 working age persons supported 32 dependent persons, and by the year 2082, they will have to support 69 dependent persons.
- ✓ The *Aged D.R.* is the number of persons aged "65 plus" to persons aged "16 to 64".
 - In 2022, 100 working age persons supported 5 elderly persons, and by the year 2082, they will have to support 45 elderly persons.
- ✓ The *NIS's D.R.* is the number of pensioners to the number of active contributors.
 - In the year 2022, 100 active contributors provided financial support for 11 pensioners, and by the year 2082, they will have to support 66 pensioners.

Table 5-3 Dependency Ratios

Year	Dependency Ratio	Aged Dependency Ratio	Scheme's Dependency Ratio
2018	31.9%	5.3%	8.9%
2019	31.9%	5.3%	9.5%
2020	30.4%	5.4%	9.7%
2021	30.4%	5.4%	11.7%
2022	32.3%	5.5%	11.7%
2027	33.7%	8.5%	14.1%
2032	35.6%	12.3%	18.2%
2037	38.6%	18.0%	23.9%
2042	45.6%	25.4%	32.0%
2047	55.2%	34.1%	42.4%
2052	66.3%	43.6%	54.9%
2062	76.5%	51.9%	69.6%
2072	69.9%	46.8%	68.3%
2082	69.2%	45.8%	66.7%

The increasing NIS D.R. speaks directly to the need for and importance of the NIB staff ensuring that employers and employees comply fully with NIB registration, continuing a campaign of getting self-employed persons to register and continuing to market the financial advantages of the NIS and of actively contributing to the NIS.

Even though quite difficult and probably unattainable, the goal of the NIB is for 100% of the employed population to be active contributors. The employed person must not simply be registered under the NIS, but they must make the necessary contributions to the NIS on a consistent basis.



Retirement Age Pensioners

Retirement age pensioners account for 70% of all pensioners as at the end of FY 2022 and is projected to account for 81% of all pensioners by the end of the projection period. This is the group that is, and will continue to be, the driving force behind the escalating costs of the NIS.

As illustrated in Chart 5-3 below the number of retirement age pensioners is projected to increase rapidly and so too will the number and level of pension payments. This rapid increase would place greater importance on the:

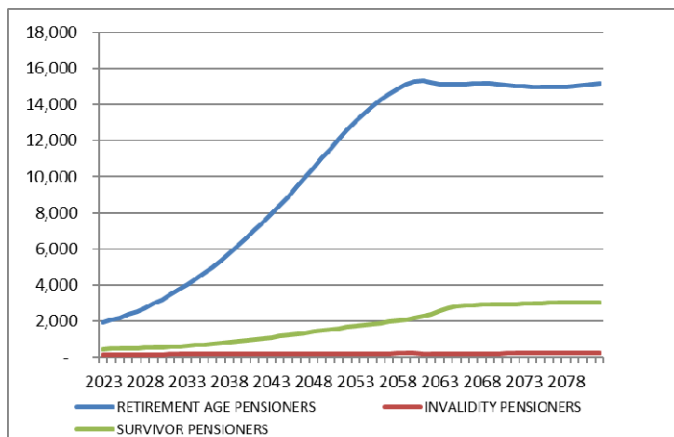
- ✓ Collection of contributions;
- ✓ Ensuring the contribution rate is adequate to meet expenses;
- ✓ Build-up of adequate reserves;
- ✓ Continuous analysis of cash flow needs; and
- ✓ Strategic investment of the Funds.

Other Pensioners

Other pensioners are relatively insignificant. Survivor pensioners will increase as pensioners increase and no major growth projected for the EI and invalidity pensioners. There is no major growth projected for the NCOAP as these elderly persons will be dying off and more and more persons will be able to qualify for the retirement age pension and not need this non-contributory pension. Currently, eligibility for the NCOAP is based on age and residency status and payment depends on satisfying a “means test”.

The chart below graphically illustrates the relative importance of retirement age pensioners as compared to other pensioners in the NIS.

Chart 5-3 Projected Pensioners



5.2 Results of the Financial Projection

Appendix IV has the projection results for every year in the projection period and for each branch. The results provided are:

- ✓ Costs in nominal amounts and as a percentage of insured earnings for each benefit;
- ✓ Total costs of each of three benefit branches;
- ✓ Cash flow statements for each benefit branch;
- ✓ Administrative costs for the NIS's operations by benefit branch and in total;
- ✓ Costs of the NIS operations in its entirety in nominal amounts and as a percentage of insured earnings; and
- ✓ Cash flow statement for the NIS operations in its entirety, including funding ratios.

The Table 5-4 below provides a summary of the projected income, expense and reserve values for the total NIS operations in absolute dollars and Table 5-5 provides a summary of the costs as a percentage of Insurable Earnings – the relative numbers are far more instructive than absolute dollar amounts.

Table 5-4 Projected NIS Operations \$(,000)

Year	Cont'ns	Surcharge	Investment Income (gross)	Total Income (OCI not included)	Benefit Expenditure	Admin and Investment Expenses	Total Expenses (provision expense NOT included)	Net Income (incl. OCI and Provision Expense)	Fund at EOY	Fund Ratio	PAYG Rate
2018	35,052	1,224	31,300	67,576	16,294	7,049	23,343	40,393	259,197	9.5	6.1%
2019	37,877	553	8,946	47,376	18,293	4,996	23,289	22,825	282,022	11.6	5.1%
2020	40,498	523	9,645	50,666	19,609	7,257	26,867	(1,782)	280,240	9.4	5.8%
2021	29,094	908	18,167	48,169	24,566	6,808	31,374	105,742	385,982	11.8	8.9%
2022	43,621	353	18,439	62,413	23,655	7,068	30,724	31,690	417,671	13.6	5.6%
2027	78,852	1,183	34,921	114,956	39,529	12,650	52,179	62,777	670,992	12.9	7.8%
2032	99,143	1,487	48,736	149,366	59,846	16,962	76,809	72,557	1,013,403	13.2	9.2%
2037	122,276	1,834	67,652	191,762	93,257	22,181	115,438	76,324	1,394,269	12.1	11.2%
2042	150,040	2,251	85,965	238,256	144,290	27,400	171,690	66,566	1,756,262	10.2	13.5%
2047	183,817	2,757	99,185	285,759	217,233	34,276	251,508	34,250	2,004,872	8.0	16.2%
2052	226,111	3,392	100,150	329,652	319,189	42,534	361,723	(32,071)	1,990,940	5.5	18.9%
2062	359,501	5,393	35,853	400,747	579,476	56,833	636,308	(235,562)	601,377	0.9	21.2%
2072	575,233	8,628	0	583,861	894,235	80,821	975,056	(391,195)	(2,678,714)	-2.7	20.0%
2082	870,463	13,057	0	883,520	1,409,364	125,390	1,534,755	(651,235)	(7,800,196)	-5.1	20.8%

- *Provision expense and Other Comprehensive Income not shown in detail – refer to 3.2*



Table 5-5 Projected Costs as a % of Insurable Earnings

Year	Short-Term Branch	Long-Term Branch	Employment Injury Branch	Total	RR for All Retirement Age Pension (new & existing)	RR for New Cases Only - Retirement Age Pension
2018	0.86%	4.74%	0.53%	6.14%		
2019	0.75%	4.02%	0.31%	5.08%		
2020	0.77%	4.70%	0.36%	5.82%	39.64%	41.49%
2021	1.97%	6.43%	0.47%	8.87%	49.80%	75.24%
2022	0.61%	4.62%	0.34%	5.57%	36.28%	41.33%
2027	1.50%	5.88%	0.45%	7.82%	37.00%	31.00%
2032	1.53%	7.15%	0.48%	9.16%	34.00%	37.00%
2037	1.56%	9.08%	0.52%	11.16%	34.00%	37.00%
2042	1.58%	11.39%	0.56%	13.52%	33.00%	36.00%
2047	1.59%	13.97%	0.61%	16.17%	31.00%	34.00%
2052	1.63%	16.62%	0.66%	18.91%	29.00%	34.00%
2062	1.63%	18.80%	0.72%	21.16%	27.00%	35.00%
2072	1.44%	18.08%	0.51%	20.03%	27.00%	37.00%
2082	1.44%	18.85%	0.55%	20.84%	30.00%	38.00%

* Replacement Ratio is the ratio of average pension benefits to average Insurable Earnings

5.2.1 Income vs. Expenses of all Branches

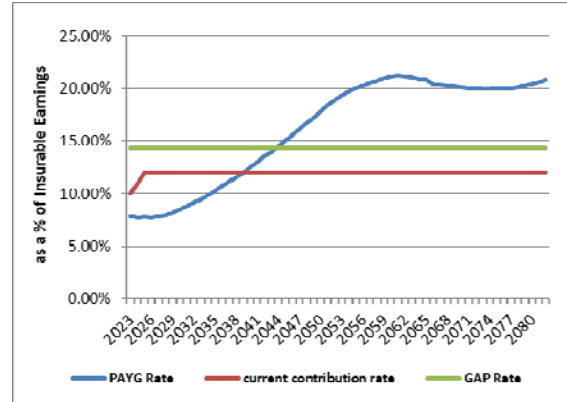
Key areas to be highlighted are:

- 1) **The Replacement Ratio** (RR- the ratio of the average pension to the average insurable earnings) reduces over time since the average rate of annual increase of pensions-in-pay is lower than the average increase of insurable earnings over the projection period. The RR of the Retirement Age pension for “new retirees only” is expected to increase over the projection period as insureds retire with increased past service credits.
- 2) **Contribution income** is projected to cover all expenses until the year 2038, based on the current benefit provisions, the amended benefit provisions which will go into effect April 1st, 2022, the current contribution rate of 8.0% and the incremental contribution rate increases which will go into effect April 1st, 2022, 2023 and 2024.
 - **After 2038**, the NIS will have to use some of its investment income, in addition to its contribution income to cover the projected expenses. Consequently, there will be a reduction in the rate of the build of reserves.
- 3) **NIS costs** will escalate, primarily due to the LTBs Branch. That branch currently accounts for 83% of all costs and is projected to increase to 90.5% of all costs.
 - As the NIS matures more persons will be covered and will accumulate a greater number of contribution weeks, which enables them to qualify for a pension instead of a grant and to qualify for a greater average benefit amount.



4) **The PAYG rate**, or costs of the NIS as a percent of IE, is clearly depicted in Chart 5-4 below, increasing from 5.6% in 2022 to 20% in 2082. As the NIS nears maturity in the next 30+ years, the costs begin to stabilise around 20% of IE.

Chart 5-4 Projected PAYG Rate vs. Cont'n Rates vs. GAP Rate



- TCI NIB with its recently enacted amendments to the benefit accrual rate and contribution rate, has made a significant step forward in closing the gap between the projected PAYG rate (the expenses as a % of IE) and the contribution income (as at April 1st, 2024, the rate will be 12%). However, similar measures will be needed again at some future date, as is depicted in the graph, to ensure the continued financial sustainability of the Fund.
- A PAYG rate in excess of 20% of Insurable Earnings may not be tolerated or bearable by contributors and therefore, the Board may ultimately have to implement Full Pension Reform³³ to contain the cost of the NIS.

5) **The General Average Premium (GAP) Rate** is estimated at 14.37% and is a theoretical contribution rate which if held constant during the projection period will be adequate, with other income, to cover expenditures and result in a reserve balance of \$0 by 2082.

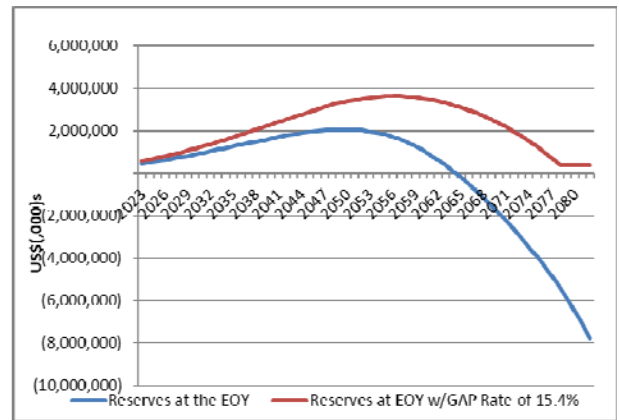
- The GAP rate facilitates easy comparison of the effect of proposed changes to the NIS versus the baseline parameters.
- In reality, the NIB will increase the contribution rate in stages.

³³ This typically would start with defining a target, such as, a minimum Fund Ratio or a maximum PAYG rate, to be attained by a certain time, and then adjusting the Scheme’s parameters to meet that target.



6) **The reserves** are projected to have positive growth until the year 2049 at which time it would have reached its peak at \$2,040Mn.

Chart 5-5 Projected Reserves



- From 2050 and beyond it is projected that net income will be negative and reserves will have to be used to support the projected expenditures of the NIS;

- The reserves are projected to be depleted by 2064 and the Fund will have to borrow money to pay its expenses;

- For purposes of comparison, the reserves under the theoretical GAP Rate of 14.37% are illustrated – the reserves remain positive throughout the projection period; and

- The Reserves are there to buffer the system (in particular to ensure the continuous payment of promised benefits) during periods of economic downturn and to control the contribution rate. To a limited extent, the Fund can also be source of funds for national economic development. As noted below, the reserves account for a significant portion of the GDP.

7) **Reserves as a percent of GDP** gradually increases from 31% in the base year, reaching the peak of about 52% in the year 2041. Thereafter, reserves as a percent of GDP expectedly decline for the remaining projection period due to the decreasing growth in the reserves.

8) **The Fund Ratio**³⁴ is projected to decline during the projection period, from 13.6 years in 2022 to –5.1 years by the end of the projection period. During the years 2023 to 2029, the Fund Ratio averages about 12 years, after which it steadily declines.

- The reserves will be gradually losing its capacity to protect the NIS against the rapidly increasing expenditure, based on the current structure & design.

9) **The administrative expenses** are projected to average 1.5% of I.E., during the projection period.

³⁴ Fund Ratio is the reserves to the expenses in that year. It is projected that for the year 2022, if there is no future contribution income, there will be sufficient funds on hand to pay out expenses for another 13 years, assuming expenses remain at its current level.



5.2.2 Long Term Benefits Branch

The LTB branch will dominate the cost of the NIS operations, increasing from 83% of total costs in 2022 and to a projected 91% of total costs by 2082. As a percentage of Insurable Earnings, the cost of the LTBs branch is projected to steadily increase from 5.9% in 2023 to 18.8% by the year 2082.

Within the LTB branch, the Retirement Age pension will account for most of the costs. Chart 5-6 and Chart 5-7 illustrate the current and growing dominance of the Retirement Age pension in the LTBs branch relative to the other pensions.

Chart 5-6 Allocation of LTBs: 2022

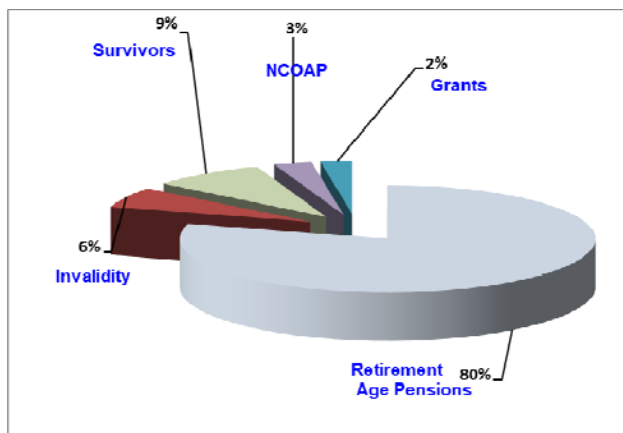
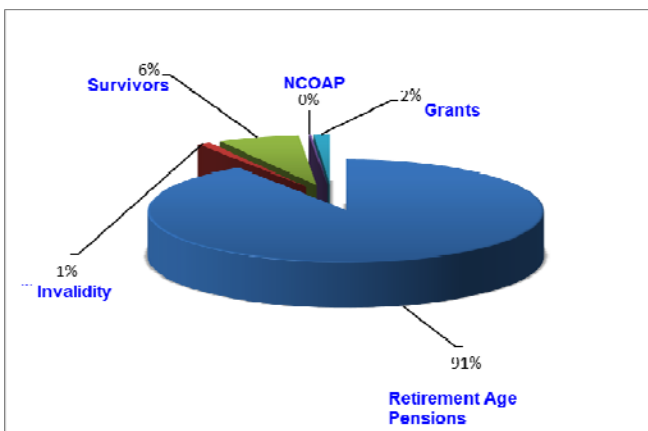


Chart 5-7 Allocation of LTBs: 2082



5.2.3 Other Branches

Short-Term Benefits

A new benefit, the Unemployment benefits (UBs), will be added to this branch effective April 1st, 2022. Further, the contribution rate for the STB branch will increase to 2.0%³⁵.

With the addition of the UBs, the costs of the STBs Branch are projected average 1.54% of IE during the projection period, in excess of the contribution rate, resulting in a significant build-up of reserves, far in excess that is required for this branch.

Employment Injury Benefits

The results are similar for the EIBs Branch, where the average cost during the projection period is 0.56% as compared to the average inflows of 1.9% of IE. This branch is exposed to the possibility of few claims but with significant financial costs. During 2018 to 2022 the benefit amounts were fairly stable.

³⁵ Based on the private sector rates.



SECTION 6. COMPARISON TO THE PRIOR VALUATION

The comparison of results from one review date to the next, facilitates improvements in the development of future projections and may point to any possible errors in the valuation process.

Assumptions

Table 4-1 states the differences in the assumptions used in the Prior Report as compared with this current report.

- The average unemployment rate for the 2020 to 2022 was projected at 7.0% versus the current estimated average of 9.33%.

Critical Financial Values

The Table 6-1 below summarises critical projected versus actual financial values for the period 2020 to 2022, in aggregate for the NIB's operations.

The actual benefit expenditure is approximately the same as the projected values.

The 2019 projections did not include Other Comprehensive Income which was \$67Mn in aggregate for 2020 to 2022.

Table 6-1 Actual vs Projected 2020 to 2022 Financial Flows

	2020-2022 Projected \$Mns	2020-2022 Actual \$Mns	Variance \$Mns	% Difference
Contribution Income	116.6	113.2	-3.3	-2.9%
Gross Investment Income	52.3	46.3	-6.1	-11.6%
Benefit Expenditure	68.0	67.8	-0.2	-0.2%
Admin. & Invest. Expenditure	24.4	21.1	-3.3	-13.4%
	2022 Projected \$Mns	2022 Actual \$Mns	Variance \$Mns	% Difference
2022 Year End Reserve	357.8	417.7	59.9	16.7%



Other Key Results

The table below provides further comparative information of differences in projection results. The variances of actual from the projected values for 2020 to 2022 are not significant but as noted throughout the Report the Pandemic period of 2020/2021 was an unexpected and exceptionally unusual event, with significant negative consequences in most, if not all, layers of the economy and globally.

Table 6-2 Projected versus Actual 2020 to 2022 Key Results

Year	Active Contributors		Retirement Old Age Pensioners		Dependency Ratio (all pensioners)		PAYG Rate as a % of IE.		Insurable Earnings \$(,000)s	
	2019 Report	Actual	2019 Report	Actual	2019 Report	Actual	2019 Report	Actual	2019 Report	Actual
2020	21,916	22,384	1387	1,407	9.8%	9.7%	6.07%	5.82%	470,169	511,885
2021	22,866	19,961	1496	1,543	9.9%	11.7%	6.23%	8.87%	492,907	367,745
2022	23,637	22,274	1623	1,832	10.2%	11.7%	6.48%	5.57%	510,888	551,490
	68,419	64,619	4,506	4,782					1,473,964	1,431,119
Average	22,806	21,540	1,502	1,594	10.0%	11.0%	6.26%	6.75%	491,321	477,040

Assessing the Impact of the Amendments to the Benefits (refer to Appendix I)

The average costs of the NIB operations over the projection period were assessed under different scenarios. The key parameter that was changed was the benefit accrual rates. As noted in the table below, the amendments, as detailed in Appendix I, reduced the average costs of the Scheme to 16.2% of IE from 17.5% of IE.

Table 6-3 Comparison of Average Costs under Different Benefit Scenarios

Scenario	Average Costs 2023 to 2082
Assuming no changes to the benefit structure – same “30%” as was used in the 2019 valuation	17.5% of IE
Assuming the reduced benefit accrual rate of “20%” is applied to all insureds	15.4% of IE
Baseline results – Benefit accrual rate reduced to “20%”; For insureds 50+, their benefit accrual rate remains at “30%”	16.2% of IE



Key Performance Indicators

The following table provides a summary and comments with respect to key performance indicators in 2022 and in comparison, to the prior valuation of 2019.

Table 6-4 Key Performance Indicators

Key Performance Indicators	2019 Report Results	2022 Report Results	Comments
FINANCIAL INDICATORS			
Weighted average contribution rate (base year)	7.91%	7.92%	The projections of the 2022 Valuation Report reflect the contribution rate increases, the benefit accrual rate reduction, the grandfathered benefits and other benefit amendments that have been legislated effective April 1st, 2022. Legislated amendments to the NIO are detailed in the Appendices
Contributions cover all expenses until the year	2027	2038	
Average PAYG Rate (last 10 years of projection period)	20.5%	20.2%	
General Average Premium Rate	15.42%	14.37%	
Average cost over projection period	16.1%	16.2%	
First Cash Flow deficit (expenses > income)	2037	2050	
Negative Reserve in year	2049	2065	
Average Gross Investment Income as a % of Total Income (2018 to 2022)	30.6%	30.0%	For 2019 Report, these are the projected values for 2020 to 2022. Yields shown are net of expenses. The goal stipulated in the investment policy is a return of at least 3% plus US CPI inflation over a 3 to 5 year period.
5 year average net yield on reserves (2018 to 2022)	6.04%	5.61%	
5 year average real yield on reserves (2018 to 2022)	3.92%	2.23%	
Admin. Expense as a % of Contribution Income - average over 2018 to 2022 (projected values from the 2019 Report)	15.2%	13.4%	Based on available data (mostly 2013 reports), the average for the Caribbean (6 countries) is 13.7%. TCI is expected to be above average since it is a small, multi-island country but the ratio is heading in the right direction for TCI as compared to prior years.
Catchment Factor (base year)	88%	87%	The Catchment Factor has remained fairly stable. The benchmark is a Ceiling of 2.5 to 3 times the AIE; for the Caribbean, it ranges from 1.3 to 3.4 of AIE. . Continual increases ensures that the NIS benefits retain their value over time for the higher-paid employees. Benchmark of 15% to 20% of AIE.
Ratio of Ceiling to Avg. National Wage (base year)	1.86	1.75	
Ratio of Ceiling to Avg. IE (base year)	2.20	1.94	
Minimum Age Pension as a % of AIE (base year)	22%	20%	
Average Old Age Pension as a % of AIE (2018 to 2022)	44%	41%	
Benefits as a % of GDP (2022)	2.0%	1.9%	As the Scheme matures, it is expected that benefits and reserves grow in value and as a percentage of GDP.
BOY Reserves as a % of GDP (2022)	27%	31%	
Reserve to Expenditure Ratio i.e. Fund Ratio (2022)	10.8	13.6	
DEMOGRAPHIC INDICATORS			
Number of Pensioners for every 100 contributors (2022)	10.2	11.7	Change in the absolute values, but overall the results indicates that for every 100 contributors, there is a rapidly increasing number of pensioners they will have to support.
Number of Pensioners for every 100 contributors (2079)	60.0	65.0	
Coverage of Employed persons	95+	95+	Remains excellent & critical to maintaining/increasing the contribution base and thereby the financial stability of the Fund.
Ratio of active contributors to all insured persons (base year)	36.7%	35.6%	



SECTION 7. SCENARIO ANALYSIS

The expenditure and income values after the year 2022 are projections over a 60-year period, based on a given set of assumptions and actuarial methodologies. It is quite possible that the actual results may differ, and possibly materially so, from the baseline projection results. For this reason, scenario analysis was performed, and the results are presented in the following section. Also, for long-term projections, the relative numbers are far more instructive than absolute dollar amounts.

Scenario analysis, determining the impact on the projection results by collectively changing a group of key assumptions, provides information to the decision makers on the possible variability of the baseline results should actual data differ from the expected.

Pessimistic (negative economic outlook) and an Optimistic (positive economic outlook) scenarios were compared to the baseline/best estimate projections.

An outline of the variables changed for each Scenario and the results are presented in the Table 7-1 and Table 7-2, respectively.

Table 7-1 Alternative Scenarios

Assumption	Pessimistic Scenario	Baseline	Optimistic Scenario
Average Growth in Real GDP	2.1%	2.3%	3.0%
Net ROR	Minus 50bp each year	5.0% for the first five years and 4.5% thereafter.	Plus 50bp each year
Average Contribution Compliance	82%	84.9%	88.8%
Average Unemployment rate	8.04% (8.07% males and 8.02% females)	7.1% (7.16%% males and 7.03% females)	6.03% (6.0% for males and 6.05 females)



As expected, under the **Pessimistic Scenario** (slower economic growth, lower employment, reduced investment returns and reduced compliance), less active contributors and pensioners are projected, the reserves will be depleted sooner than expected and the required GAP rate³⁶ will be higher as compared to the baseline results.

Under the Pessimistic Scenario, the Period of Equilibrium is reduced by two (2) years – from 27 years baseline to 25 years, Pessimistic Scenario. The KPIs, under the **Optimistic Scenario**, improve as compared to the baseline results.

Table 7-2 Results of the Scenario Analysis

Key Performance Indicator (KPIs)	Pessimistic	Baseline	Optimistic
Average PAYG Rate (last 10 years)	20.8%	20.2%	18.9%
Average Costs for the projection period	16.6%	16.2%	15.3%
General Average Premium Rate	15.1%	14.4%	13.6%
Contributions cover Expenses until the year	2037	2038	2040
Period of Equilibrium Ends in the year	2047 (25 years)	2049 (27 years)	2052 (30 years)
First Year of negative reserves	2061	2064	2067

³⁶ GAP Rate - the theoretical contribution rate if held constant over the projection period will be sufficient, with other income, to cover all expenses and leave a reserve of about \$0 in 2082.



SECTION 8. CURRENT INVESTMENT POSITION

The NIB uses a pooled investment approach in which reserves from all branches are combined for investment purposes and the investment income is then proportionally allocated among the branches. The investment of the Fund is subject to an Investment Policy Statement, dated May 2020 (replaces the IPS dated October 2017) and the basic principles are:

- Preservation of capital;
- Meeting the liquidity needs of the NIB;
- Minimum target yield on the reserves; and
- Moderate risk.

Investment Income

Generation of investment income is a critical component to the sustainability of the NIB. It is the secondary source of income, after contribution income, to meet expenses, without having to dip into the reserves; more investment income leads to a greater build-up of reserves, which will be greatly needed in coming years with the rapid growth in pensioners and pension amounts.

Investment income averaged 30% of total income over the years 2018 to 2022.

The table below indicates the variability that has been experienced in the investment income, 2016 having experienced an investment loss; investment expenses as a percent of reserves has remained fairly stable, and in absolute dollars, small increases over the years.

Table 8-1 Historical Rates of Return of the Fund

Year Ended March 31st	Net ROR	US CPI	Real Net ROR	Target Net ROR, per IPS	Assumed Net ROR per actuarial projections
2016	-5.10%	0.90%	-6.00%	3.90%	5.0%
2017	8.29%	2.40%	5.89%	5.40%	5.0%
2018	13.32%	2.40%	10.92%	5.40%	5.0%
2019	2.72%	1.91%	0.81%	4.91%	5.0%
2020	2.91%	1.50%	1.41%	4.50%	5.0%
2021	5.13%	2.60%	2.53%	5.60%	5.0%
2022	3.99%	8.50%	-4.51%	11.50%	5.0%
3-Year Average	4.01%	4.20%	-0.19%	7.20%	5.00%
5-Year Average	5.61%	3.38%	2.23%	6.38%	5.00%
7-Year Average	4.46%	2.89%	1.58%	5.89%	5.00%

Rates of Return

The target net rate of return³⁷, assuming an investment horizon of 5 to 7 years, is a minimum of inflation³⁸ plus 3.0%, after transaction costs and investment management fees. The investment performance is subject to periodic reviews within that horizon.

³⁷ Net of investment expenses

³⁸ USA CPI to be used as a proxy to measure inflation.



The Fund has experienced volatility in its returns during the recent past years, which is not unexpected given that over 50% of assets are allocated to equity investments. Therefore, one cannot analyse whether the returns have been “good” over just a few years – to date, the Report has smoothed the returns over a 3- and 7-year averaging period for consideration.

The equity and commodities asset classes suffered significant losses of about 20% due to the economic fallout resulting from the COVID-19 Pandemic. This had a significant impact on TCI NIB investments as about 50% of assets are invested in equities. The asset values later rebounded, as global economies, including the TCI, slowly re-opened borders, reaped the positive effects of vaccination rates and pent-up demand of consumers. However, this was tempered with the circulation of the Omicron variant, high inflation and the global political tensions.

The Fund earned:

- An average net ROR of 5.61% over the last five years, below the target set by the IPS of 6.38%;
- An average net ROR of 4.46% over the last seven years, missing the target set by the IPS of 5.89% and the target of 5.0% assumed in the actuarial projection.

If the Fund does not meet the net ROR assumed in the actuarial projections, then the Scheme will be unable to meet its long-term obligations under the existing benefit and contribution structure.

Given that the Fund has missed the actuarial projections in a few instances, the level of volatility in the investment market, the projected net ROR assumptions are more conservative than in prior years. Specifically, the assumptions are as follows:

- The actuarial projections assume a net ROR of 5.0% over the next 6 years and 4.5% thereafter
- Assumptions based on historical experience and the asset manager’s recent expected forward-looking returns simulated from its risk model.

Asset Allocation

The table below shows how the investments have been allocated among the various asset classes and in comparison, to the target asset allocation specified in the IPS. All asset classes are within the lower and upper limit of the strategic asset allocations stated in the IPS.

Table 8-2 Allocation of the Fund’s Investments

	Year ended 3/31/2022			Year Ended 3/31/2019		
	2022 Asset Allocation	May 2020 Investment Policy Strategic Asset Allocation	Variance	2019 Asset Allocation	October 2017 Investment Policy Strategic Asset Allocation	Variance
Cash & Money Market Instruments	4%	3%	1%	8%	5%	3%
Fixed Income	14%	15%	-1%	19%	18%	1%
Convertibles	4%	4%	0%	8%	8%	0%
Real Estate	0%	0%	0%	0%	0%	0%
Equities	50%	48%	2%	47%	44%	3%
Hedge Funds	14%	15%	-1%	11%	15%	-4%
Private Equity	12%	15%	-3%	6%	10%	-4%
Commodities	2%	0%	2%	2%	0%	2%
Total	100%	100%		100%	100%	



Significant Events Affecting the Investment Results

Significant events during the Review Period (including some significant events which were previously noted in the Prior Report) were as follows:

1. Additional Provisions

TCI NIB elected to adopt IAS 37 resulting in additional provisioning for the actuarial present value long-term benefits, other than retirement benefits. This was recognised starting in the FY 2013.

2. 2016 Gross Investment Loss

For the FY 2016, there was a gross investment loss of \$8.7Mn, resulting in a negative rate of return of -4.5%; the investments also underperformed the Investment Policy's Benchmark Index, which had a weighted return of -3.47%.

- Per the TCI NIB, the significant loss was due to "poor returns in the commodities asset class, particularly a decline in the oil prices, soft economic growth, the currency devaluation in China and uncertainty around the Federal Reserve interest rate hike."

3. 2019 Low Investment Income

For the FY2019, the gross investment income was significantly lower than the two prior years. This was primarily attributable to the volatility in the market over the US-China trade wars and a slowing global economic growth. The portfolio returns rebounded in the final quarter of the 2019 fiscal year.

4. COVID-19 Pandemic of 2020

- Supply chain disruption
- Pent up demand, high inflation
- Tight monetary policies adopted by the Feds and other Central Banks, increasing the interest rates to control inflation and avoid a recession.
- Drop in market values of about 15% to 20%.
- Readjustments to the projected growth in the global economies.

5. TCI Bank

The Fund holds substantial investments (approx. 16% of ordinary shares), long-term deposits and current accounts with TCI Bank. The TCI Bank has been in liquidation since October 29th, 2010.

- In August 2012, the full-face value of a note receivable was repaid.
- Management made fair value adjustments to the NIB's asset holdings, including but not limited to, a 56% fair value adjustment to the long-term deposits and current account.
- The shares held of TCI Bank were valued at \$0 due to the bank going into liquidation.
- As of 2020, the NIB has received \$0.55 on the dollar in distributions from the liquidator, on its long-term deposit and current account.



- A final resolution on this liquidation matter and by extension the actual fair value adjustments to the financial statements, remains outstanding.
6. Domestic Investments (DI)
- Domestic investments are limited to 10% of the Fund and the Fund currently holds one domestic investment of \$5.0M (long-term bond). To date, there have been no breaches in the DI policy guidelines.
- The investment policy includes clear guidelines as it relates to domestic investments, due diligence process and limitations of public versus private sector domestic investments.

The overall responsibility of the Board is to ensure that the funds are invested so as to earn a reasonable rate of return, without unduly risking the capital preservation, to meet the cash flow requirements of its members and to ensure that the financial security of future pensioners is not eroded. The IPS provides an appropriate framework to achieve those goals.



SECTION 9. RECOMMENDED CHANGES

The review process includes recommendations, where necessary, with the goal of the maintaining or improving the financial viability of the Fund, protecting the value of benefits and pensions against the eroding effects of inflation and ensuring that contribution and qualifying conditions are reasonable and equitable and any other related issues.

The adjustments, whether automatic or ad-hoc, to the flat dollar benefits, the minimum pensions, the pensions-in-pay and the Ceiling, are usually applied simultaneously, so that they retain their real values over time and values relative to each other.

To that end, the recommended changes of this Report are as follows:

1. Adjustment of Pensions and Other Benefits

The National Insurance Ordinance (NIO), section 51, requires that the Board review benefits “from time to time” to ensure that their values are retained in relation to “cost of living and the general level of earnings”. There is no legal requirement as to the exact timing of the review or for the automatic adjustment of the benefits based on a specified index. However, it is expected that the Board will eventually make the necessary adjustments and so for purposes of the long-term projection, indexation is assumed to occur annually.

It is recommended that the NIO specify that the review be at least once every three years, at the time of the triennial actuarial review, and that pensions and other benefits be automatically adjusted based on a specified index and per NIO, section 51 “having regard to the financial condition of the Fund and the general economic conditions in the Islands”.

Typically, for pensions-in-pay and the minimum pension, the specified index is the lesser of price inflation and wage increases and for the other benefits, the specified index is the price inflation. The adjustment should be based on the changes of the chosen index since the pension commenced and when the last increase was given.

This recommendation would then require credible data being available from an official source or alternatively a proxy, to establish the index and so defined in the NIO.



2. Pensions-in-Pay

The recommendation is to increase Pensions-in-Pay based on the inflation experienced since the last increase, so as to retain the value of the pensions over time. The last increase was effective January 1st, 2018, based on inflation experienced to December 31st, 2016.

The recommendation below is based on estimated inflation experienced January 1st, 2017 to December 31st, 2021, and increases to be effective January 1st, 2023:

- ✓ Pensions-in-Pay which were awarded on or before March 31st, 2017 be granted a 13.2% increase;
- ✓ Pensions-in-Pay awarded April 1st, 2017 to March 31st, 2018, dates inclusive, be granted a 10.9% increase.
- ✓ Pensions-in-Pay awarded April 1st, 2018, to March 31st, 2019, dates inclusive, be granted a 8.6% increase; and
- ✓ Pensions-in-Pay awarded April 1st, 2019, to March 31st, 2020, dates inclusive, be granted a 6.3% increase.

“Pensions-in-Pay” means Retirement Age, Invalidity, Survivors, and Disablement pensions.

Pensions awarded April 1st, 2020, to March 31st, 2022, no increases are recommended at this time; these are recently calculated pensions and, as such, recent inflation experience has been captured in the pension amounts.

3. Minimum Pensions, NCOAP pension and Grants

The recommendation is to increase the minimum pensions, grants and the NCOAP, based on the inflation experienced since the last increase, so as to retain their value over time, *except* for the Death Grant amount for dependents. The rationale for the increase for the Death Grant amount for the dependents is noted in recommendation # 4.

The last increase was effective January 1st, 2018, based on inflation experienced to December 31st, 2016.

The recommendation below is based on estimated inflation experienced January 1st, 2017, to December 31st, 2021, and values rounded to the nearest multiple of 5. Recommended that increases go into effective on January 1st, 2023:

- i. Primary minimum pension increased
 - Increased to \$460 from \$405.
- ii. Spouse minimum pension
 - Increased to \$340 from \$300.
- iii. Dependents minimum pension
 - Increased to \$135 from \$120.
- iv. NCOAP
 - Increased to \$345 from \$300.



- v. Maternity grant
 - Increased to \$680 from \$600.
- vi. Funeral grant and dependent's funeral grant
 - Increased to \$2,720 from \$2,390 and increased to \$1,765 from \$1,550, respectively.
- vii. Death grant and dependent's death grant
 - Increased to \$2,720 from \$2,390 and increased to \$1,765 from \$955, respectively.

4. Death Grant for Dependents

The recommendation is to :

- i. Set the Funeral Grant (FG) amount for Insureds equal to the Death Grant (DG) amount for the Insureds;
- ii. Set the Funeral Grant for dependents equal to 65% of the Funeral Grant amount for the Insured; and
- iii. Set the Death Grant amount for the dependents equal to 65% of the Death Grant amount for the Insured.

Recommendation that the change goes into effect January 1st, 2023

Rationale

The National Insurance Ordinance (NIO), dated August 2009, had the FG and DG amounts for dependents set equal, as follows:

- FG Insured/Dependent: \$1,200/\$800
- DG Insured/Dependent: \$2,000/\$800

Over the following years, amendments to the NIO and recommendations in the valuation reports, inadvertently excluded increases to the DG, and the FG for the dependents became greater than the DG for the dependents.

The recommendation is consistent with the levels of the FGs in relation to the DGs of other similar national insurance schemes in the region.

The above recommendation seeks to normalize and standardize the amounts and ensure that as of January 1st, 2023 and later, the DG amounts for the Insured and dependent, are automatically increased with any increases given to the FG amount for the Insured and dependent.



5. Constant Attendance Allowance

Recommendation is to increase the weekly allowance from \$50 to \$200. Recommended that the increase goes into effect January 1st, 2023. Refer to NIO dated as at March 31st, 2021, Section 22 and the National Insurance (Benefit) Regulations, Section 43.

The recommendation factors in the following:

- The weekly amount has not been increased since August 2009, possibly earlier;
- The NIO provides for the Director to determine the duration of the allowance;
- The NIO provides that the Director may refer the case to a medical board to assess entitlement to the allowance;
- The NIO has other restrictions so that the Director can control the allowance costs;
- The benefit is given to an Insured who has met the criteria of 100% disablement;
- Home Care costs are even higher than the recommended increase; and
- For 2014 to 2022, the Financial Statements have recorded a Constant Attendance Allowance expenditure of only \$8,000 each year – this is an immaterial expenditure compared to the NIB's overall operations.

6. Increase of Insurable Earnings Ceiling

No increases are recommended at this time.

The most recent increase was \$48,000³⁹ effective April 1st, 2017, and TCI currently has the highest Ceiling among regional social security institutions. Further, consideration is also given to the contribution rate increases that will be going into effect April 1st, 2022, 2023 and 2024 and that there is yet no official source of National Wages & Salaries.

Based on available data and assumptions, the Catchment Factor (the average of Insurable Earnings to average total earnings) is reasonable at 87%. The ratio of the Ceiling to the Average Insurable Earnings is estimated at 1.94.

Assuming the Ceiling remains fixed to March 31st, 2025, the date of the next actuarial valuation, the Catchment Factor is expected to remain at about 82% and the ratio of the Ceiling to projected AIE averages at 2.1.

7. Review LN 4 of 2022

- i. Review the National Insurance Benefits Amendment Regulation 2022 LN 4 of 2022- The LN 4 of 2022 should have also included an amendment to the National Insurance (Benefit) Regulation (sourced from the NIO as at March 31st, 2021) section 9(2) and decreased the benefit percentage to 20% from 30% for all insureds except those 50 years and older on April 1st, 2022.
- ii. Review the National Insurance Benefits Amendment Regulation 2022 LN 4 of 2022- Regulation 3(5) and change to "...maximum of 30%..." from "...maximum of 30% per month..."

³⁹ The actual Ceiling is \$925 per week if paid weekly or \$4,000 per month if paid monthly.



8. Income Bands for the Self-Employed

No increases are recommended at this time.

The highest band is pegged to the Ceiling in effect.

9. Improvement in the Statistics

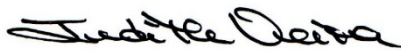
- i. There is a need for detailed statistics of the gross wages & salaries of the insured members, by age/gender/employment sector (private, self-employed and public officers). This data is needed to assess more accurately the Catchment Factor of the NIB and the relative value of the pensions to earnings. Currently, the data is estimated.
- ii. Similar to the above, is detailed data on the gross wages & salaries for TCI so that it can be determined more accurately the wage share and the capital share of the GDP for each year. Currently, it is estimated.



SECTION 10. ATTESTATION

The Actuary attests to the following for the preparation of the projections and the results presented herein:

- The national and NIB scheme specific data were sufficiently credible to be relied upon to prepare the projections;
- The determination of assumptions is based on analysis of past experience of the NIS while taking into account expected future developments and sound actuarial judgement. The assumptions are deemed to be individually realistic and consistent with all other related assumptions and the projected long-term outlook for the economy and the NIS;
- The projections were based on sound actuarial methods and principles; and
- The actuarial valuation, its calculations, analysis, recommendations and conclusions and content of the Report comply with the recommended ILO guidelines for executing a social security scheme actuarial valuation and the Actuarial Practice Standard 3 for social security programs adopted by the Caribbean Actuarial Association.



Judith Veira
Fellow, Society of Actuaries
Consulting Actuary

August 17th, 2022

APPENDIX I - CHANGES IN PLAN PROVISIONS

The last valuation, which was performed 3/31/2019, recommended a number of amendments to the Board. The amendments which were recommended and enacted after March 31st, 2019, through to and including April 1st, 2024, are as follows:

1. Temporary Unemployment Assistance Benefits
 - Provided for the payment of Temporary Unemployment Assistance benefits for those who became involuntary unemployed, underemployed or laid-off as a direct result of the COVID-19 Pandemic.
 - Payment of benefits was for the period November 1st, 2020, to October 31st, 2021.
 - Effective November 1st, 2020.
 - LN 106 of 2020, LN 48 of 2021 and LN 82 of 2021.
2. Waiver of Penalty Charges
 - Provided for the temporary waiver of penalty charges for late payment of contributions for any period prior to and including February 28th, 2021.
 - Effective March 29th, 2021.
 - LN 65 of 2021 and Ordinance 1 of 2021.
3. Increase of Self-Employed Minimum
 - Removed the requirement that a self-employed who is over the age of 50 on the Appointed Day (April 6th, 1992) shall not elect a weekly income which exceeds \$200.
 - For those who reached age 54 and did not pay contributions in that year, may elect for any subsequent contribution year a minimum weekly income not in excess of \$325 – this is an increase from \$200.
 - Effective May 21st, 2021.
 - LN 84 of 2021.
4. Early Retirement and Substantially Employed
 - The condition that Insureds who elect to retire as early as age 60 must no longer be substantially employed if they elect to collect pensions as early as age 60, has been removed.
 - Effective August 28th, 2021.
 - LN 107 of 2021.
5. Orphan's Pension
 - Entitlement to an orphan's pension has been removed.
 - Effective August 28th, 2021.
 - LN 107 of 2021.



6. Unemployment Benefits (UBs)

- Unemployment benefits was added to the list of short-term benefits.
- The applicable contribution rate will go into effect as of April 1st, 2022 and benefits payable as of October 1st, 2022.
- Effective November 1st, 2020.
- Ordinance 22 of 2020, LN 107 of 2020, LN 40 of 2021, LN 41 of 2021 and LN 42 of 2021.

7. Incremental Contribution Rate Increases – *Refer to Appendix 1A for further details*

- Contribution rates increased in stages – as of April 1st, 2022, April 1st, 2023, and April 1st, 2024.
- Allocation of contribution rates among branches, between the employee and the employer and contribution rates for each sector (or group of insureds) was defined.
- Effective April 1st, 2022.
- LN 5 of 2022 and LN 6 of 2022.

Amendments 7 to 9 below are all effective April 1st, 2022 – LN 4 of 2022

8. Amended Benefit Accrual Rate - *Refer to Appendix 1B for further details*

- Benefit rate applied for insureds who have met the Eligibility Conditions for a Retirement Pension has been reduced from 30% to 20% of AWIE for the first 500 paid or credited contribution weeks.
- Benefit rate applied for Insureds who have met the Eligibility Conditions for a Retirement Pension is 2.0% of AWIE for the contribution weeks paid or credited in excess of 500 contribution weeks but not in excess of 1000 contribution weeks.
- Benefit rate applied for Insureds who have met the Eligibility Conditions for a Retirement Pension is 1.0% of AWIE for the contribution weeks paid or credited in excess of 1,000 contribution weeks
- The amendment to the benefit accrual rate does not apply to insureds who are 50 years and older on April 1st, 2022 – their benefits are grandfathered/protected.

9. An Insured who retires after age 65 and not in receipt of a retirement pension prior to age 65, shall have the pension increased 0.5% per month for each month that receipt of pension is delayed past age 65, maximum of 30% increase.

10. Eligibility for Invalidity Pension

- Increased to 300 paid contribution weeks from 150 paid contribution weeks.

11. NCOAP Age

- Entitlement Increased to 70 from 68.



Appendix 1A

SUMMARY OF CONTRIBUTION RATES - LNs 5 and 6 of 2022

<i>Current Rates In effect as at March 31st, 2022</i>	Long -Term Benefit Branch	Short-Term Benefit Branch	Employment Injury Branch	Unemployment Benefit (this will be included in the STBs branch)	Total	ER Rate	EE Rate	Total Rate
Private Sector	5.50%	1.30%	1.20%	0.00%	8.00%	4.60%	3.40%	8.00%
Public Sector	5.50%	0.15%	1.20%	0.00%	6.85%	4.025%	2.825%	6.85%
Temporary Resident	0.00%	1.30%	1.20%	0.00%	2.50%	2.50%	0.00%	2.50%
Self-Employed	5.50%	1.30%	0.00%	0.00%	6.80%	0.00%	6.80%	6.80%
Voluntary	10.00%	0.00%	0.00%	0.00%	10.00%	0.00%	10.00%	10.00%
Person over 60 and retired	0.00%	0.00%	1.20%	0.00%	1.20%	1.20%	0.00%	1.20%

<i>Effective April 1st, 2022</i>	Long -Term Benefit Branch	Short-Term Benefit Branch	Employment Injury Branch	Unemployment Insurance Benefit (this will be included in the STBs branch)	Total	ER Rate	EE Rate	Total Rate
Private Sector	7.00%	2.00%	1.00%		10.00%	5.500%	4.500%	10.00%
Public Sector	7.00%	1.15%	1.00%		9.15%	5.075%	4.075%	9.15%
Temporary Resident	0.00%	1.30%	1.20%	0.00%	2.50%	2.500%	0.000%	2.50%
Self-Employed	7.00%	1.00%	0.00%	0.00%	8.00%	0.000%	8.000%	8.00%
Voluntary	10.00%	0.00%	0.00%	0.00%	10.00%	0.000%	10.000%	10.00%
Person over 60 and retired	0.00%	0.00%	1.20%	0.00%	1.20%	1.200%	0.000%	1.20%

<i>Effective April 1st, 2023</i>	Long -Term Benefit Branch	Short-Term Benefit Branch	Employment Injury Branch	Unemployment Insurance Benefit (this will be included in the STBs branch)	Total	ER Rate	EE Rate	Total Rate
Private Sector	8.00%	2.00%	1.00%		11.00%	6.000%	5.000%	11.00%
Public Sector	8.00%	1.15%	1.00%		10.15%	5.575%	4.575%	10.15%
Temporary Resident	0.00%	1.30%	1.20%	0.00%	2.50%	2.500%	0.000%	2.50%
Self-Employed	8.00%	1.00%	0.00%	0.00%	9.00%	0.000%	9.000%	9.00%
Voluntary	10.00%	0.00%	0.00%	0.00%	10.00%	0.000%	10.000%	10.00%
Person over 60 and retired	0.00%	0.00%	1.20%	0.00%	1.20%	1.200%	0.000%	1.20%

<i>Effective April 1 2024</i>	Long -Term Benefit Branch	Short-Term Benefit Branch	Employment Injury Branch	Unemployment Insurance Benefit (this will be included in the STBs branch)	Total	ER Rate	EE Rate	Total Rate
Private Sector	9.00%	2.00%	1.00%		12.00%	6.500%	5.500%	12.00%
Public Sector	9.00%	1.15%	1.00%		11.15%	6.075%	5.075%	11.15%
Temporary Resident	0.00%	1.30%	1.20%	0.00%	2.50%	2.500%	0.000%	2.50%
Self-Employed	9.00%	1.00%	0.00%	0.00%	10.00%	0.000%	10.000%	10.00%
Voluntary	10.00%	0.00%	0.00%	0.00%	10.00%	0.000%	10.000%	10.00%
Person over 60 and retired	0.00%	0.00%	1.20%	0.00%	1.20%	1.200%	0.000%	1.20%



Appendix 1B**Summary of Key Changes in the Retirement Age Pension Benefit Formula**

Retirement Age Benefit Accrual in effect up to and including March 31st, 2022			
30% of AWIE for the first 500 contribution weeks paid or credited	2.0% for the contribution weeks paid or credited in excess of 500 but no more than 750.	1.0% of the contribution weeks paid or credited in excess of 750	Maximum 60% of AWIE
Retirement Age Benefit Accrual in effect as of April 1st, 2022, except for insureds who are eligible for the grandfathered benefit			
20% of AWIE for the first 500 contribution weeks paid or credited	2.0% of the contribution weeks paid or credited in excess of 500 but no more than 1,000	1.0% of the contribution weeks paid or credited in excess of 1,000	Maximum 60% of AWIE
Persons 50 years or older on April 1st, 2022 are eligible to have the benefit accrual rates which were in effect prior to April 1st, 2022 i.e their retirement pension amount is grandfathered/protected			



APPENDIX II- PLAN PROVISIONS

The NIS has three benefit branches, which are the long-term benefits, the short-term benefits, and the employment injury benefits branch.

The section below provides information on the benefits offered in each of these branches **as at the Valuation Date of March 31st, 2022, unless otherwise stated** –Amendments that have been legislated and have published Legal Notices, post the Valuation Date of March 31st, 2022 through to an including April 1st, 2024, have been reflected into the March 31st, 2022, Valuation and projections.

The valuation report should not be relied upon for determining eligibility, amount of a benefit or any other related matters but refer to the National Insurance Ordinance, subsequent amendments and its regulations.

Long-Term Benefits Branch

This branch covers four risks, which are Retirement Age, Survivorship, Invalidity and Death. Even though a funeral grant is in actuality a short-term benefit it is included in the LTBs branch since its payment is contingent upon the other three long-term benefits.

A. Retirement Benefit – Monthly Pension and Grant⁴⁰

Normal Retirement Age: Age 65

Early Retirement Age: Age 60 or older, but no older than age 65.

Eligibility for Retirement Pension:

An insured person who has attained 65 years of age, whether or not substantially employed, and has satisfied the Contribution Conditions, which are (i) and (ii) defined as follows:

- (i) Has paid at least one hundred and fifty (150) weeks of contributions; and
- (ii) Has paid or been credited with at least five hundred (500) weeks of contributions.

Eligibility for Early Retirement Pension

Effective August 28th, 2021

An insured person can elect to receive the retirement age pension from the Early Retirement Age if he has satisfied the Contribution Conditions above; the Retirement Pension paid at an Early Retirement Age will be reduced. The Insured can continue to be substantially employed and collect the retirement age pension-LN 107 of 2021

⁴⁰ Coverage does not extend to the Temporary Residents.



Amount of Weekly Pension: 30% to 60% of Average Weekly Insurable Earnings (AWIE), where the AWIE is based on the five (5) best contribution years of the last 10 prior to retirement age. AWIE will be based on the earnings on which contributions were paid or credited.

The weekly amount is then multiplied by 52/12 to determine the monthly pension payable.

Form of Payment: Pension is paid monthly for the life of the insured.

Substantially Employed Earnings of at least 25% of the Insurable Earnings Ceiling.

Rate of Pension Accrual: The weekly rate of accrual is the sum of (i), (ii) and (iii) defined below:

- (i) 30% of the Average Weekly Insurable Earnings (AWIE).
- (ii) 2.0% of AWIE for each complete 50 weeks of contributions, paid or credited, in excess of the first 500 weeks of contributions, maximum of 750 weeks.
- (iii) 1.0% of AWIE for each complete 50 weeks of contributions, paid or credited, in excess of the first 750 weeks.

The monthly pension will be determined by multiplying the above by 52/12.

Rate of Pension Accrual
Effective April 1st, 2022

The weekly rate of accrual is the sum of (i), (ii) and (iii) defined below:

- (i) 20% of the Average Weekly Insurable Earnings (AWIE).
- (ii) 2.0% of AWIE for each complete 50 weeks of contributions, paid or credited, in excess of the first 500 weeks of contributions, maximum of 1,000 weeks.
- (iii) 1.0% of AWIE for each complete 50 weeks of contributions, paid or credited, in excess of the first 1,000 weeks.

For insureds who are age 50 or older on April 1st, 2022, the Rate of Pension Accrual in effect on March 31st, 2022, will be applied

LN 4 of 2022



Early Retirement Pension:	The full Retirement Pension, as determined above, will be reduced at the rate of 0.5% per month for each month that the Early Retirement Age precedes age 65. No pension is paid before age 60.
Late Retirement Pension Effective April 1st, 2022,	The full Retirement Pension, as determined above, will be increased at the rate of 0.5% per month for each month that the Late Retirement Age is delayed past age 65, maximum of a 30% increase - Legal Notice 4 of 2022.
Minimum Monthly Pension:	\$405.00
Eligibility for Grant:	An insured person who has attained the age of 65 and has paid at least 50 weeks of contributions but has not satisfied the Contribution Conditions specified above.
Amount of Grant:	A lump sum payment equal to two (2) times the AWIE for each fifty (50) weeks of contributions paid or credited.
Funeral Grant:	Refer to Section F below.

B. Transitional Retirement Pension

Eligibility:	An insured person who was older than 48 on April 6 th , 1992, is awarded 50 weeks of contributions for each year of age in excess of 48, subject to a maximum of 350 credits.
Funeral Grant:	Refer to Section below.



C. Invalidation Benefit – Weekly Pension and Grant⁴¹

Eligibility for Weekly Pension: An insured person, who is less than age 60, is deemed to be an invalid for at least 26 consecutive weeks prior to week in which a claim is made and has satisfied the Contribution Conditions outlined below:

- (i) Paid at least 150 weeks of contributions;
- (ii) Paid or credited, at least 60 weeks of contributions during the last three consecutive years immediately preceding the year prior to a claim; and
- (iii) Paid or credited, at least 8 weeks of contributions in the first 13 weeks or the last 13 weeks of the last 26 weeks immediately preceding the week in which the insured became an invalid.

The benefit will be paid while the invalidity status continues but at age 60 it will be converted to a Retirement Pension.

Eligibility for Invalidation Pension
Effective April 1st, 2022,

Contribution Condition item (i) above increased to 300 weeks – LN 4 of 2022

Amount of Weekly Pension: 30% to 60% of AWIE in the five (5) best contribution years of the last 10 immediately preceding the contribution year in which the invalidity occurred.

The invalidity pension is paid monthly and is the weekly pension times 52/12.

Rate of Pension Accrual

The annual rate of accrual is the sum of (i) and (ii) defined below:

- (i) 30% of the AWIE for the first contribution weeks paid or credited not in excess of 500.
- (ii) 2.0% of AWIE for each complete 50 weeks of contributions, paid or credited, in excess of the first 500 weeks, up to 750 weeks.
- (iii) 1.0% of AWIE for each complete 50 weeks of contributions, paid or credited, in excess of 750 weeks.

⁴¹ Coverage does not extend to the Temporary Residents.



Rate of Pension Accrual Effective April 1st, 2022,	The Percentage of AWIE changes in line with the amendment to the Retirement Age benefit accrual rate amendment, effective April 1 st , 2022.
Minimum Pension	\$405 per month.
Funeral Grant:	Refer to Section F below.

D. Survivors' Benefit – Weekly Pension and Grant

Eligibility for Weekly Pension: This benefit is paid to the survivors of the deceased insured where survivors could be the widow/widower and child(ren). The deceased insured is one who at the time of death:

- (i) Was receiving an invalidity or retirement pension; or
- (ii) Would have met eligibility conditions to have qualified for an invalidity pension or a retirement pension.

Who will receive a Pension
And Period of Payment:

The widow/widower shall receive a benefit if she/he was married to, or cohabitated with, the deceased insured person and the widow/widower:

- i. Was over the age of 50 at time of the insured's death; or
- ii. Is permanently unable to work and was wholly dependent on the insured at time of death; or
- iii. Was caring for his/her minor children at time of the insured's death or if the widow was pregnant by the insured at the time of the insured's death.

The widow/widower pension will be paid for life for eligibility conditions (i), (ii) and (iii), only if the widow/widower has past age 50 and is still caring for the dependent children under the age of 16.

Otherwise, benefits will cease immediately upon the widow/widower remarrying or cohabitating or the children are no longer under the age of 16 or the widower has found regular employment.

Each Minor child, who was dependent on the deceased insured at the time of death is eligible to receive a child's pension.



Dependents:	<p>A widow/widower is one who was lawfully married to, or cohabitated with, the deceased insured, as determined by the Director.</p> <p>A Minor child of the deceased insured will receive a benefit to age 16 or age 21 if in full-time education or for life if the child, regardless of age, is unmarried and totally incapable of self-support.</p> <p>The child could be natural, adopted, illegitimate, step, unmarried, living with the deceased or one who was being permanently maintained by the deceased.</p>
Amount of Weekly Pension:	<p>The survivors receive a specified percentage of the benefit the deceased insured was receiving, or would have been entitled to, at time of death. The specified percentages are given below:</p> <ul style="list-style-type: none"> (i) 50% for the widow/widower. (ii) 25% for the children or 40% if the child is at least 16 and permanently incapable of self-support at the time of insured's death. <p>Aggregate of the widow/widower and/or children's pension is 60% of the deceased insured's AWIE; if in excess, benefits are proportionately reduced.</p>
Minimum Pension:	<p>Minimum monthly pension paid to a spouse is \$300.00 Minimum monthly pension paid to dependants is \$120.00</p>
Eligibility for Grant and Amount of Grant:	<p>The survivors receive a grant, instead of a pension, if the deceased insured did not satisfy the Contribution Conditions for the retirement pension at the time of death.</p> <p>A lump sum payment equal to the specified percentages noted above times the Retirement Grant Amount (where the Retirement Grant Amount is two (2) times the AWIE of the deceased insured, for each 50 contributions paid or credited by the deceased insured).</p>
Funeral Grant:	<p>Refer to Section F below.</p>



E. NCOAP⁴² Benefit- Weekly Pension and Funeral Grant

Eligibility:	A person who has attained age sixty-eight (68), has satisfied the residency requirements as of that age, is a Turks & Caicos Islander, satisfies the Board's Means Test and is in receipt of a pension less than the \$69.23 per week (or \$300 per month)
Eligibility Effective April 1 st , 2022,	The eligibility age increased from 68 to 70 -LN 4 of 2022
Amount of Pension:	The weekly pension is the difference between \$69.23 and the actual pension or other payment being received.
Funeral Grant:	See Section F below.

F. Funeral Grant⁴³

Eligibility:	<p>The deceased insured must have:</p> <ul style="list-style-type: none"> (i) Paid at least 26 weeks of contributions immediately before the week in which death occurs; and (ii) Paid or credited, at least 8 weeks of contributions in the first 13 weeks or the last 13 weeks in the 26-week qualifying period. <p>The grant is paid upon the death of one of the following events:</p> <ul style="list-style-type: none"> (i) An age, invalidity, survivor or non-contributory pensioner or an insured person that would have been entitled to one of those pensions. (ii) An insured person in receipt of a sickness benefit or maternity allowance. (iii) The relative, spouse or minor child of (i) or (ii) above.
Amount of Benefit:	\$2,390 if the deceased person satisfied (i) or (ii) above; otherwise, \$1,550. The funeral grant is paid to the surviving spouse or other persons as determined by the Director.

⁴² NCOAP is an abbreviation for Non-contributory Old Age Pension

⁴³ Coverage does not extend to Temporary Residents.



Short-Term Benefits Branch⁴⁴

The short-term benefits branch covers three types of risks, which are sickness, maternity and unemployment.

A. Sickness Benefits

Eligibility:	An insured person who is age 16 but not older than age 65 and who has: <ul style="list-style-type: none"> (i) Paid at least 26 weeks of contributions in the week prior to the week becoming ill and unable to come to work; (ii) Paid or credited, at least 8 of the weeks in the first 13 weeks or the last 13 weeks of the above 26-week qualifying period; and (iii) Worked immediately before the first day of becoming ill.
Amount of Weekly Allowance:	An insured person will be paid sixty percent (60%) of their AWIE for a maximum period of 156 days. The “average” is based on the first 13 contribution weeks of the above 26-week qualifying period. <p>The daily rate is 1/6 of the weekly allowance amount.</p>
Limitations:	The benefit will not be paid if the person is receiving full salary from their employer or has failed to satisfy other conditions established.
Waiting Period:	It will only be paid if the illness lasts for more than three (3) consecutive days and the first benefit day will be day four (4).
Funeral Grant:	Refer to Section F above.

B. Maternity Benefits – Weekly Allowance and Grant

Eligibility for Allowance:	An insured woman and who has: <ul style="list-style-type: none"> (i) Paid at least 26 contribution weeks; and (ii) Paid or been credited at least 8 weeks of contributions in the first 13 weeks or the last 13 weeks during the 26-week contribution period immediately preceding the fifth week before the expected day of confinement or the day the allowance is claimed, whichever is later.
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⁴⁴ Coverage, except for the maternity grant, is not extended to Public Officers.



Amount of Weekly Allowance: An insured woman will be paid sixty percent (60%) of her AWIE for a maximum period of fourteen (14) consecutive weeks.

The AWIE is based on the first 13 weeks of the 26-week qualifying period referred to in (ii) above.

The maternity allowance will cease immediately upon the insured person's return to work or upon her death.

Eligibility for Grant:

The insured woman or her spouse must have:

- i. Paid at least twenty-six (26) weeks of contributions; and
- ii. Paid or have credited, at least 8 contribution weeks in the first 13 weeks of the 26-week period immediately preceding the week in which confinement occurs.

Amount of Grant:

A \$600 lump sum payment for each child born at one confinement.

Funeral Grant:

Refer to Section F above.

C. Unemployment Benefits (UBs)– Benefits paid as of April 1st, 2022

Refer to Ordinance 22 of 2020 and Legal Notices 107 of 2020, 40 of 2021, 41 of 2021 and LN 42 of 2021

Entitlement

An Insured person who satisfies the following conditions:

- (i) Involuntarily unemployed;
- (ii) Period of continuous unemployment of at least 2 weeks; and
- (iii) Capable of and available for work.

Self-Employed persons, Voluntary Contributors and Temporary Residents and not eligible for the Unemployment Benefit.

Eligibility

An Insured person who:

- (i) Paid not less than 26 contribution weeks;
- (ii) Paid not less than 8 contributions in any continuous 13 contributions weeks of the last 26 weeks immediately preceding the week in which the first day of the continuous period of unemployment occurred; and
- (iii) Engaged in insurable employment immediately prior to the day on which the first day of the continuous period of unemployment occurred.



An Insured can receive Unemployment Benefits and disablement benefits and refund of medical expenses

Amount of Weekly Allowance	50% of Average Weekly Insurable Earnings based on weeks in which contributions were paid or credited during the period of the last 26 weeks immediately preceding the week in which the first day of continuous unemployment occurred, divided by the number of weeks for which contributions were paid or credited in the same period.
Duration:	Maximum of 13 weeks within a fifty-two-week period.
Waiting Period:	An unemployed person eligible for the UB shall not receive the UB for the first three (3) days of any continuous period of incapacity from work.

D. Temporary Unemployment Assistance Benefit (UAB)– Effective November 1st, 2020

Refer to Legal Notices 106 of 2020, 48 of 2021 and 82 of 2021

Entitlement	<p>The Insured must satisfy the following conditions:</p> <ul style="list-style-type: none"> (i) Be deemed to be “unemployed”, meaning the insured is Involuntarily unemployed or underemployed or laid-off, as a direct result of COVID-19 Pandemic; (ii) Had a continuous period of unemployment of at least 2 weeks; and (iii) Capable of an available for work.
Eligibility	<p>The person must:</p> <ul style="list-style-type: none"> (i) Be an Insured person immediately prior to April 1st, 2020, except as a Voluntary Contributor; (ii) Be under age 65, prior to April 1st, 2020; (iii) Have 250 contribution weeks prior to becoming unemployed; (iv) If a Turks & Caicos Islander, paid not less than 50 contribution weeks and credited at least 200 contribution weeks. (v) If a permanent resident, paid not less than 150 contribution weeks and credited not less than 100 contribution weeks; (vi) Satisfy the other eligibility conditions as specified in LN 106 of 2020
Amount of Weekly Allowance	50% of Average Weekly Insurable Earnings based on weeks in which contributions were paid or credited during the period of the last 26 weeks immediately preceding the week in which the first day of continuous unemployment occurred divided by the



number of weeks for which contributions were paid or credited in the same period.

If the AWIE is less than \$275, the \$275 shall be used as the AWIE to calculate the benefit.

Duration: Maximum of 8 weeks

Period For Payment of Benefits Term of Temporary UAB November 1st, 2020, to October 31st, 2021

Employment Injury Benefits Branch

Six types of risks are included in the EI branch, which are:

- A. Risk of injury
- B. Risk of disablement
- C. Risk of survivorship
- D. Risk of incurring medical & travel expenses
- E. Risk of death

A. Injury Benefit

Eligibility: A worker who is incapacitated because of an employment accident and was employed at the time the incapacity started. Not eligible for a benefit during the first 3 days of continuous incapacity.

Amount of Allowance: 60% of the AWIE. The AWIE based on earnings during the maximum of 13 weeks or actual number of weeks of employment, immediately prior to the period of incapacitation.

Allowance paid for a maximum period of 12 months of confinement.

B. Disablement Benefit – Weekly Pension and Grant

Eligibility for Pension: A worker who has suffered from the loss of physical or mental faculty a degree of at least 20% as a result of an employment injury. Benefit becomes payable after the maximum period for the Injury Allowance is reached and the degree of disablement has been determined.

Amount of Pension: Same as the amount for the Injury Allowance, if totally and permanently disabled. For less than 100% disablement, the



amount is reduced to the proportion of the degree of disablement.

Constant Attendance Allowance: The pension may be increased by \$50 per week, for constant attendance allowance, as determined by the Director.

Eligibility for Grant: Same as for EI disability pension but the degree of disablement must be at least 10% but no greater than 20%.

Amount of Grant: The product of (i), (ii) and (iii) where:
 (i) AWIE
 (ii) Degree of disablement
 (iii) Factor of 220

C. Medical Treatment & Travel Expenses

Medical treatment is free, as provided by the National Health Insurance Plan medical services. Reasonable amount of travel expenses incurred as a result of the accident will be reimbursed, as determined by the Director.

D. Death Benefit

Eligibility: For the widow, widower or child, the conditions are the same as for the survivor's pension under the Long-term benefits branch and paid upon the death of the worker as a result of an employment injury or disease.

A death benefit may also be payable to dependent parents of the insured if the total death benefit payable has not been exhausted by the other dependents above.

Amount of Pension: Same as the Survivors' pension under the long-term benefits branch but calculated with reference to the deceased worker's primary employment injury benefit.

For the dependent parents, the specified percentage is 40%.

Aggregate death benefit pension payable to all dependents cannot exceed 60% of the AWIE of the deceased insured; otherwise, benefit amounts are proportionately reduced.

E. Death Grant

Eligibility: (i) Paid upon death of the worker as a result of an employment injury or disease; or



- (ii) Paid upon the death of the insured in receipt of the death benefit; or
- (iii) Paid upon the death of the dependent spouse or child, if the insured was entitled to a death benefit.

Amount: \$2,390 if the person satisfies (i) or (ii) above; otherwise, the death grant is \$955.



APPENDIX III – SOURCES OF DATA

- The Turks & Caicos Islands Statistical Dept. website (www.gov.tc/stats.com);
- TCIG Draft Budget 2018/2023;
- S& P's draft report 3/2022;
- TCI Labour Force Survey Report 2017;
- The 2012 census results;
- National Social-Economic Development Strategy 2008 – 2017;
- The audited financial statements for all financial years except for the FY2022 - Management Accounts were used for FY2022; and
- NIB's Investment Policy Statement of May 2020.



APPENDIX IV –DETAILED PROJECTION RESULTS

Table 1	Projected Contributor, Contributions & Insured Earnings
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**Table 1
Projected Contributors, Contribution Income and Insurable Earnings**

Year	Active Contributors	Average Insurable Earnings \$	Insurable Earnings by Branch			Insurable Earnings \$(,000)s	Contribution Rates by Benefit Branch				Amount of Contributions \$(,000s)			
			Employ. Injury Benefits	Short term Benefits	Long-term Benefits		Employ. Injury Benefits	Short-term Benefits	Long-term Benefits	Total	Employ. Injury Benefits	Short-term Benefits	Long-term Benefits	Total
2018	21,122	20,976	432,083	419,692	443,836	443,051	1.2%	1.3%	5.5%	8.0%	5,185	5,456	24,411	35,052
2019	21,483	22,285	464,025	455,571	479,750	478,759	1.2%	1.3%	5.5%	8.0%	5,568	5,922	26,386	37,877
2020	22,384	22,868	494,694	488,064	513,029	511,885	1.2%	1.3%	5.5%	8.0%	5,936	6,345	28,217	40,498
2021	19,961	18,423	357,791	344,270	369,548	367,745	1.2%	1.3%	5.5%	8.0%	4,293	4,476	20,325	29,094
2022	22,274	24,759	536,441	516,168	554,067	551,490	1.2%	1.3%	5.5%	8.0%	6,437	6,710	30,474	43,621
2023	22,302	22,178	485,654	485,654	485,654	494,606	1.0%	2.0%	7.0%	10.0%	4,857	9,713	33,996	48,565
2024	22,777	24,182	542,266	542,266	541,521	550,787	1.0%	2.0%	8.0%	11.0%	5,423	10,845	43,322	59,590
2025	23,230	25,286	578,301	578,648	578,532	587,392	1.0%	2.0%	9.0%	12.0%	5,783	11,573	52,068	69,424
2026	23,660	26,736	622,781	623,155	623,030	632,571	1.0%	2.0%	9.0%	12.0%	6,228	12,463	56,073	74,764
2027	24,061	27,729	656,838	657,232	657,101	667,164	1.0%	2.0%	9.0%	12.0%	6,568	13,145	59,139	78,852
2028	24,485	28,691	691,630	692,045	691,907	702,503	1.0%	2.0%	9.0%	12.0%	6,916	13,841	62,272	83,029
2029	24,892	29,519	723,836	723,836	723,691	734,774	1.0%	2.0%	9.0%	12.0%	7,234	14,477	65,132	86,843
2030	25,272	30,398	756,327	756,781	756,629	768,217	1.0%	2.0%	9.0%	12.0%	7,563	15,136	68,097	90,796
2031	25,623	31,334	790,447	790,922	790,763	802,874	1.0%	2.0%	9.0%	12.0%	7,904	15,818	71,169	94,892
2032	25,951	32,323	825,859	826,354	826,189	838,842	1.0%	2.0%	9.0%	12.0%	8,259	16,527	74,357	99,143
2033	26,249	33,352	861,927	862,444	862,271	875,477	1.0%	2.0%	9.0%	12.0%	8,619	17,249	77,604	103,473
2034	26,552	34,440	900,317	900,858	900,678	914,471	1.0%	2.0%	9.0%	12.0%	9,003	18,017	81,061	108,081
2035	26,798	35,532	937,430	937,993	937,805	952,167	1.0%	2.0%	9.0%	12.0%	9,374	18,760	84,402	112,537
2036	27,019	36,723	976,864	977,450	977,255	992,221	1.0%	2.0%	9.0%	12.0%	9,769	19,549	87,953	117,271
2037	27,237	37,984	1,018,562	1,019,173	1,018,969	1,034,574	1.0%	2.0%	9.0%	12.0%	10,186	20,383	91,707	122,276
2038	27,431	39,300	1,061,360	1,061,997	1,061,785	1,078,045	1.0%	2.0%	9.0%	12.0%	10,614	21,240	95,561	127,414
2039	27,582	40,718	1,105,682	1,106,346	1,106,125	1,123,064	1.0%	2.0%	9.0%	12.0%	11,057	22,127	99,551	132,735
2040	27,700	42,249	1,152,182	1,152,874	1,152,643	1,170,295	1.0%	2.0%	9.0%	12.0%	11,522	23,057	103,738	138,317
2041	27,776	43,885	1,200,083	1,200,803	1,200,563	1,218,949	1.0%	2.0%	9.0%	12.0%	12,001	24,016	108,051	144,068
2042	27,818	45,635	1,249,834	1,250,584	1,250,334	1,269,482	1.0%	2.0%	9.0%	12.0%	12,498	25,012	112,530	150,040
2043	27,826	47,505	1,301,424	1,302,205	1,301,945	1,321,883	1.0%	2.0%	9.0%	12.0%	13,014	26,044	117,175	156,233
2044	27,801	49,512	1,355,171	1,355,984	1,355,713	1,376,475	1.0%	2.0%	9.0%	12.0%	13,552	27,120	122,014	162,686
2045	27,733	51,673	1,410,836	1,411,683	1,411,400	1,433,015	1.0%	2.0%	9.0%	12.0%	14,108	28,234	127,026	169,368
2046	27,632	54,018	1,469,532	1,470,414	1,470,120	1,492,633	1.0%	2.0%	9.0%	12.0%	14,695	29,408	132,311	176,414
2047	27,513	56,528	1,531,194	1,532,113	1,531,806	1,555,265	1.0%	2.0%	9.0%	12.0%	15,312	30,642	137,863	183,817
2048	27,364	59,203	1,594,949	1,595,906	1,595,587	1,620,022	1.0%	2.0%	9.0%	12.0%	15,949	31,918	143,603	191,470
2049	27,203	62,046	1,661,701	1,662,698	1,662,366	1,687,824	1.0%	2.0%	9.0%	12.0%	16,617	33,254	149,613	199,484
2050	27,030	65,060	1,731,347	1,732,386	1,732,039	1,758,564	1.0%	2.0%	9.0%	12.0%	17,313	34,648	155,884	207,845
2051	26,849	68,256	1,804,214	1,805,297	1,804,936	1,832,578	1.0%	2.0%	9.0%	12.0%	18,042	36,106	162,444	216,592
2052	26,687	71,688	1,884,501	1,884,631	1,884,254	1,913,110	1.0%	2.0%	9.0%	12.0%	18,835	37,693	169,583	226,111
2053	26,549	75,302	1,968,243	1,969,425	1,969,031	1,999,185	1.0%	2.0%	9.0%	12.0%	19,682	39,388	177,213	236,284
2054	26,425	79,137	2,058,841	2,060,077	2,059,665	2,091,207	1.0%	2.0%	9.0%	12.0%	20,588	41,202	185,370	247,160
2055	26,298	83,226	2,154,816	2,156,109	2,155,678	2,188,691	1.0%	2.0%	9.0%	12.0%	21,548	43,122	194,011	258,681
2056	26,207	87,614	2,260,527	2,261,884	2,261,431	2,296,064	1.0%	2.0%	9.0%	12.0%	22,605	45,238	203,529	271,372
2057	26,113	92,147	2,369,017	2,370,439	2,369,965	2,406,260	1.0%	2.0%	9.0%	12.0%	23,690	47,409	213,297	284,396
2058	26,065	96,876	2,486,025	2,487,518	2,487,020	2,525,107	1.0%	2.0%	9.0%	12.0%	24,860	49,750	223,832	298,442
2059	26,015	101,679	2,604,206	2,605,769	2,605,248	2,645,145	1.0%	2.0%	9.0%	12.0%	26,115	52,234	234,472	312,630
2060	25,972	106,677	2,727,719	2,729,357	2,728,811	2,770,601	1.0%	2.0%	9.0%	12.0%	27,277	54,587	245,593	327,457
2061	25,950	111,889	2,858,622	2,860,338	2,859,766	2,903,561	1.0%	2.0%	9.0%	12.0%	28,586	57,207	257,379	343,172
2062	25,931	117,301	2,996,640	2,998,438	2,998,839	3,041,718	1.0%	2.0%	9.0%	12.0%	29,946	59,929	269,625	359,501
2063	25,895	123,014	3,136,131	3,138,014	3,137,386	3,185,433	1.0%	2.0%	9.0%	12.0%	31,361	62,760	282,365	376,486
2064	25,918	129,181	3,296,343	3,298,321	3,297,662	3,348,163	1.0%	2.0%	9.0%	12.0%	32,963	65,966	296,790	395,719
2065	25,978	135,269	3,459,615	3,461,692	3,461,000	3,514,003	1.0%	2.0%	9.0%	12.0%	34,596	69,234	311,490	415,320
2066	26,067	141,406	3,628,975	3,631,153	3,630,427	3,686,025	1.0%	2.0%	9.0%	12.0%	36,290	72,623	326,738	435,651
2067	26,199	147,617	3,807,548	3,809,834	3,809,072	3,867,405	1.0%	2.0%	9.0%	12.0%	38,075	76,197	342,816	457,089
2068	26,345	153,834	3,990,073	3,992,468	3,991,670	4,052,799	1.0%	2.0%	9.0%	12.0%	39,901	79,849	359,250	479,000
2069	26,494	160,196	4,178,611	4,181,119	4,180,283	4,244,301	1.0%	2.0%	9.0%	12.0%	41,786	83,622	376,225	501,634
2070	26,652	166,796	4,376,647	4,379,274	4,378,399	4,445,451	1.0%	2.0%	9.0%	12.0%	43,766	87,585	394,056	525,408
2071	26,810	173,557	4,581,106	4,583,856	4,582,939	4,653,124	1.0%	2.0%	9.0%	12.0%	45,811	91,677	412,465	549,953
2072	26,964	180,504	4,794,690	4,794,567	4,793,608	4,867,019	1.0%	2.0%	9.0%	12.0%	47,917	95,891	431,425	575,233
2073	27,190	187,641	5,023,057	5,026,072	5,025,067	5,102,023	1.0%	2.0%	9.0%	12.0%	50,231	100,521	452,256	603,008
2074	27,407	194,442	5,246,547	5,249,696	5,248,646	5,329,026	1.0%	2.0%	9.0%	12.0%	52,465	104,994	472,378	629,838
2075	27,617	201,406	5,476,053	5,479,339	5,478,244	5,562,139	1.0%	2.0%	9.0%	12.0%	54,761	109,882	493,042	657,389
2076	27,813	208,571	5,711,269	5,714,697	5,713,554	5,801,054	1.0%	2.0%	9.0%	12.0%	57,113	114,294	514,220	685,627
2077	27,996	216,039	5,954,609	5,958,183	5,956,991	6,048,219	1.0%	2.0%	9.0%	12.0%	59,546	119,164	536,129	714,839
2078	28,166	223,935	6,209,685	6,213,412	6,212,170	6,307,305	1.0%	2.0%	9.0%	12.0%	62,097	124,268	559,095	745,460
2079	28,180	232,162	6,441,053	6,444,919	6,443,631	6,542,310	1.0%	2.0%	9.0%	12.0%	64,411	128,898	579,927	773,236
2080	28,172	241,865	6,708,460	6,712,487	6,711,144	6,813,921	1.0%	2.0%	9.0%	12.0%	67,085	134,250	604,003	805,337
2081	28,143	252,089	6,984,857	6,989,049	6,987,652	7,094,663	1.0%	2.0%	9.0%	12.0%	69,849	139,781	628,889	838,518
2082	28,023	262,817	7,250,956	7,255,308	7,253,857	7,364,945	1.0%	2.0%	9.0%	12.0%	72,510	145,106	652,847	870,463

**Table 2 UB
Projected Unemployment Benefit**

Year	Active Contributors	Unemployment Rate	Number of Allowances	Rate of Allowances per Active Contributor	Average Weekly UIB	Cost \$(,000)s
2019						
2020						
2021						3,997
2022						0
2023	22,302	7.82%	1,334	0.05981	213	3,698
2024	22,777	7.65%	1,334	0.05855	233	4,031
2025	23,230	7.51%	1,335	0.05745	243	4,218
2026	23,660	7.39%	1,337	0.05653	257	4,470
2027	24,061	7.32%	1,347	0.05598	267	4,668
2028	24,485	7.27%	1,361	0.05560	276	4,882
2029	24,892	7.23%	1,376	0.05527	284	5,077
2030	25,272	7.20%	1,392	0.05508	292	5,289
2031	25,623	7.19%	1,410	0.05501	301	5,521
2032	25,951	7.16%	1,421	0.05477	311	5,743
2033	26,249	7.14%	1,435	0.05466	321	5,982
2034	26,552	7.04%	1,429	0.05382	331	6,152
2035	26,798	7.04%	1,444	0.05388	342	6,413
2036	27,019	7.06%	1,459	0.05401	353	6,699
2037	27,237	7.03%	1,465	0.05380	365	6,957
2038	27,431	7.03%	1,476	0.05380	378	7,249
2039	27,582	7.05%	1,487	0.05391	392	7,568
2040	27,700	7.04%	1,491	0.05383	406	7,874
2041	27,776	7.01%	1,489	0.05362	422	8,170
2042	27,818	6.97%	1,483	0.05332	439	8,462
2043	27,826	6.93%	1,474	0.05299	457	8,755
2044	27,801	6.88%	1,464	0.05266	476	9,060
2045	27,733	6.89%	1,461	0.05270	497	9,439
2046	27,632	6.89%	1,457	0.05274	519	9,841
2047	27,513	6.90%	1,453	0.05280	544	10,264
2048	27,364	6.91%	1,446	0.05286	569	10,704
2049	27,203	6.92%	1,440	0.05293	597	11,168
2050	27,030	6.93%	1,433	0.05301	626	11,653
2051	26,849	6.99%	1,436	0.05350	656	12,254
2052	26,687	7.02%	1,433	0.05368	689	12,838
2053	26,549	7.04%	1,430	0.05387	724	13,463
2054	26,425	7.08%	1,431	0.05417	761	14,159
2055	26,298	7.13%	1,434	0.05451	800	14,914
2056	26,207	7.10%	1,424	0.05433	842	15,594
2057	26,113	7.09%	1,416	0.05422	886	16,308
2058	26,065	7.09%	1,413	0.05421	931	17,110
2059	26,015	7.09%	1,412	0.05426	978	17,941
2060	25,972	7.10%	1,411	0.05432	1,026	18,811
2061	25,950	7.11%	1,412	0.05441	1,076	19,749
2062	25,931	7.08%	1,405	0.05418	1,128	20,599
2063	25,895	7.07%	1,400	0.05405	1,183	21,521
2064	25,918	7.03%	1,395	0.05381	1,242	22,520
2065	25,978	7.03%	1,397	0.05377	1,301	23,616
2066	26,067	7.03%	1,403	0.05381	1,360	24,792
2067	26,199	7.05%	1,414	0.05397	1,419	26,088
2068	26,345	7.08%	1,427	0.05416	1,479	27,438
2069	26,494	7.13%	1,445	0.05455	1,540	28,943
2070	26,652	7.16%	1,460	0.05478	1,604	30,441
2071	26,810	7.18%	1,473	0.05494	1,669	31,953
2072	26,964	7.19%	1,482	0.05497	1,736	33,444
2073	27,190	7.19%	1,495	0.05499	1,804	35,068
2074	27,407	7.17%	1,504	0.05487	1,870	36,547
2075	27,617	7.14%	1,508	0.05460	1,937	37,964
2076	27,813	7.11%	1,512	0.05436	2,005	39,418
2077	27,996	7.08%	1,515	0.05412	2,077	40,919
2078	28,166	7.04%	1,516	0.05383	2,153	42,437
2079	28,180	7.01%	1,511	0.05363	2,232	43,855
2080	28,172	6.99%	1,506	0.05347	2,326	45,546
2081	28,143	6.97%	1,501	0.05333	2,424	47,293
2082	28,023	6.94%	1,488	0.05310	2,527	48,887

**Table 2
Projected Sickness Allowance**

Year	Active Contributors	Number of Allowances	Rate of Allowances per Active Contributor	Avg. Number of Days per case	Days per Allowance	Cost \$(,000)s	Cost per Day \$
2018	21,122	1,100	0.0521	21	0.019	1,155	49.3
2019	21,483	1,045	0.0486	27	0.025	1,400	50.6
2020	22,384	988	0.0441	50	0.050	1,333	27.1
2021	19,961	1,197	0.0600	27	0.022	1,084	34.1
2022	22,274	1,677	0.0753	23	0.014	1,326	33.8
2023	22,302	1,249	0.0560	30	0.024	1,299	35.2
2024	22,777	1,294	0.0568	31	0.024	1,480	36.7
2025	23,230	1,358	0.0584	32	0.024	1,668	38.3
2026	23,660	1,451	0.0613	29	0.020	1,652	39.9
2027	24,061	1,482	0.0616	29	0.020	1,783	41.6
2028	24,485	1,441	0.0588	30	0.021	1,875	43.3
2029	24,892	1,478	0.0594	30	0.020	2,012	45.1
2030	25,272	1,514	0.0599	30	0.020	2,134	47.0
2031	25,623	1,543	0.0602	30	0.019	2,234	49.0
2032	25,951	1,557	0.0600	30	0.019	2,365	51.1
2033	26,249	1,566	0.0597	30	0.019	2,492	53.2
2034	26,552	1,589	0.0598	30	0.019	2,632	55.5
2035	26,798	1,606	0.0599	30	0.019	2,767	57.8
2036	27,019	1,619	0.0599	30	0.018	2,904	60.3
2037	27,237	1,631	0.0599	30	0.018	3,053	62.8
2038	27,431	1,642	0.0598	30	0.018	3,205	65.5
2039	27,582	1,651	0.0599	30	0.018	3,357	68.2
2040	27,700	1,659	0.0599	30	0.018	3,515	71.1
2041	27,776	1,663	0.0599	30	0.018	3,672	74.1
2042	27,818	1,665	0.0599	30	0.018	3,833	77.2
2043	27,826	1,666	0.0599	30	0.018	3,997	80.5
2044	27,801	1,665	0.0599	30	0.018	4,163	83.9
2045	27,733	1,660	0.0599	30	0.018	4,325	87.4
2046	27,632	1,654	0.0599	30	0.018	4,492	91.1
2047	27,513	1,647	0.0599	30	0.018	4,661	95.0
2048	27,364	1,638	0.0599	30	0.018	4,832	99.0
2049	27,203	1,629	0.0599	30	0.018	5,007	103.1
2050	27,030	1,618	0.0599	30	0.018	5,183	107.5
2051	26,849	1,608	0.0599	30	0.019	5,369	112.0
2052	26,687	1,598	0.0599	30	0.019	5,561	116.7
2053	26,549	1,590	0.0599	30	0.019	5,766	121.7
2054	26,425	1,582	0.0599	30	0.019	5,979	126.8
2055	26,298	1,575	0.0599	30	0.019	6,203	132.1
2056	26,207	1,569	0.0599	30	0.019	6,440	137.7
2057	26,113	1,563	0.0599	30	0.019	6,686	143.5
2058	26,065	1,561	0.0599	30	0.019	6,959	149.6
2059	26,015	1,558	0.0599	30	0.019	7,239	155.9
2060	25,972	1,555	0.0599	30	0.019	7,530	162.5
2061	25,950	1,554	0.0599	30	0.019	7,842	169.3
2062	25,931	1,553	0.0599	30	0.019	8,168	176.5
2063	25,895	1,550	0.0599	30	0.019	8,496	183.9
2064	25,918	1,552	0.0599	30	0.019	8,866	191.7
2065	25,978	1,555	0.0599	30	0.019	9,258	199.7
2066	26,067	1,561	0.0599	30	0.019	9,686	208.2
2067	26,199	1,569	0.0599	30	0.019	10,146	217.0
2068	26,345	1,577	0.0599	30	0.019	10,628	226.1
2069	26,494	1,586	0.0599	30	0.019	11,140	235.6
2070	26,652	1,596	0.0599	30	0.019	11,683	245.6
2071	26,810	1,605	0.0599	30	0.019	12,244	255.9
2072	26,964	1,614	0.0599	30	0.018	12,832	266.7
2073	27,190	1,628	0.0599	30	0.018	13,490	278.0
2074	27,407	1,641	0.0599	30	0.018	14,171	289.7
2075	27,617	1,653	0.0599	30	0.018	14,877	301.9
2076	27,813	1,665	0.0599	30	0.018	15,617	314.7
2077	27,996	1,676	0.0599	30	0.018	16,384	328.0
2078	28,166	1,686	0.0599	30	0.018	17,177	341.8
2079	28,180	1,687	0.0599	30	0.018	17,912	356.2
2080	28,172	1,687	0.0599	30	0.018	18,668	371.3
2081	28,143	1,685	0.0599	30	0.018	19,432	386.9
2082	28,023	1,678	0.0599	30	0.018	20,168	403.2

**Table 3
Projected Maternity Allowances & Grants**

Year	Active Contributors	Maternity Allowances					Maternity Grants				
		Number of Allowances	Rate of Allowances per Active Contributor	Avg. Number of Days per Case	Cost \$(,000)s	Cost per Day \$	No. of Births	No. of Grants	Rate of Grants	Cost of Grants \$(,000)s	Cost per Grant
2018	21,122	385	0.0182	84	1289.6	39.9	455	431	0.0204	244.7	568
2019	21,483	333	0.0155	84	1191.7	42.6	487	381	0.0177	232.2	609
2020	22,384	381	0.0170	84	1205.8	37.7	507	365	0.0163	219.0	600
2021	19,961	320	0.0160	84	877.4	32.6	507	289	0.0145	173.4	600
2022	22,274	273	0.0123	84	806.9	35.2	507	271	0.0122	167.4	618
2023	22,302	353	0.0158	84	1087.3	36.7	518	362	0.0162	231.4	639
2024	22,777	349	0.0153	84	1120.5	38.2	517	350	0.0154	228.5	653
2025	23,230	355	0.0153	84	1187.7	39.8	514	347	0.0149	231.3	666
2026	23,660	354	0.0149	84	1234.3	41.5	510	346	0.0146	235.4	680
2027	24,061	354	0.0147	84	1286.4	43.3	506	353	0.0147	245.3	695
2028	24,485	373	0.0152	84	1412.4	45.1	501	371	0.0152	263.2	709
2029	24,892	376	0.0151	84	1483.8	47.0	497	372	0.0150	269.4	724
2030	25,272	380	0.0151	84	1562.8	49.0	494	376	0.0149	278.0	739
2031	25,623	385	0.0150	84	1650.3	51.0	490	381	0.0149	287.7	755
2032	25,951	390	0.0150	84	1742.2	53.2	487	387	0.0149	298.3	771
2033	26,249	396	0.0151	84	1843.5	55.4	484	393	0.0150	309.3	787
2034	26,552	400	0.0151	84	1940.7	57.8	482	396	0.0149	318.2	804
2035	26,798	403	0.0150	84	2037.9	60.2	481	399	0.0149	327.4	820
2036	27,019	406	0.0150	84	2139.7	62.7	481	403	0.0149	337.6	838
2037	27,237	410	0.0150	84	2252.0	65.4	481	406	0.0149	347.2	855
2038	27,431	413	0.0151	84	2364.3	68.2	483	409	0.0149	357.1	873
2039	27,582	415	0.0150	84	2476.1	71.0	486	411	0.0149	366.4	892
2040	27,700	417	0.0150	84	2593.1	74.0	490	413	0.0149	375.9	910
2041	27,776	418	0.0150	84	2708.9	77.2	494	414	0.0149	384.8	929
2042	27,818	419	0.0150	84	2829.8	80.4	498	415	0.0149	393.8	949
2043	27,826	419	0.0150	84	2949.1	83.8	503	415	0.0149	402.1	969
2044	27,801	418	0.0150	84	3066.0	87.3	508	415	0.0149	410.5	989
2045	27,733	417	0.0150	84	3187.5	91.0	513	414	0.0149	418.1	1,010
2046	27,632	416	0.0150	84	3314.1	94.8	518	412	0.0149	424.8	1,031
2047	27,513	414	0.0150	84	3437.3	98.8	523	410	0.0149	431.7	1,053
2048	27,364	412	0.0150	84	3565.0	103.0	528	408	0.0149	438.6	1,075
2049	27,203	409	0.0150	84	3688.5	107.4	533	406	0.0149	445.6	1,098
2050	27,030	407	0.0150	84	3825.3	111.9	537	403	0.0149	451.6	1,121
2051	26,849	404	0.0150	84	3957.3	116.6	541	400	0.0149	457.6	1,144
2052	26,687	402	0.0150	84	4103.8	121.5	539	398	0.0149	464.9	1,168
2053	26,549	399	0.0150	84	4245.1	126.7	537	396	0.0149	472.3	1,193
2054	26,425	398	0.0150	84	4413.0	132.0	533	394	0.0149	479.8	1,218
2055	26,298	396	0.0150	84	4576.1	137.6	528	392	0.0149	487.4	1,243
2056	26,207	394	0.0150	84	4745.0	143.4	522	391	0.0149	496.3	1,269
2057	26,113	393	0.0150	84	4932.7	149.4	516	389	0.0149	504.2	1,296
2058	26,065	392	0.0150	84	5127.5	155.7	510	389	0.0149	514.7	1,323
2059	26,015	391	0.0150	84	5330.3	162.3	505	388	0.0149	524.2	1,351
2060	25,972	391	0.0150	84	5555.2	169.1	499	387	0.0149	533.8	1,379
2061	25,950	390	0.0150	84	5774.9	176.3	494	387	0.0149	545.0	1,408
2062	25,931	390	0.0150	84	6018.7	183.7	491	387	0.0149	556.5	1,438
2063	25,895	390	0.0150	84	6272.6	191.5	488	386	0.0149	566.7	1,468
2064	25,918	390	0.0150	84	6537.3	199.6	486	387	0.0149	580.1	1,499
2065	25,978	391	0.0150	84	6830.6	208.0	486	387	0.0149	592.3	1,530
2066	26,067	392	0.0150	84	7136.8	216.7	486	389	0.0149	607.9	1,563
2067	26,199	394	0.0150	84	7475.7	225.9	487	391	0.0149	623.8	1,595
2068	26,345	396	0.0150	84	7830.7	235.4	490	393	0.0149	640.2	1,629
2069	26,494	399	0.0150	84	8222.8	245.3	492	395	0.0149	656.9	1,663
2070	26,652	401	0.0150	84	8612.7	255.7	495	397	0.0149	674.1	1,698
2071	26,810	403	0.0150	84	9020.9	266.5	498	400	0.0149	693.5	1,734
2072	26,964	406	0.0150	84	9471.4	277.7	501	402	0.0149	711.6	1,770
2073	27,190	409	0.0150	84	9944.0	289.4	505	405	0.0149	732.0	1,807
2074	27,407	412	0.0150	84	10439.5	301.7	511	409	0.0149	754.7	1,845
2075	27,617	416	0.0150	84	10985.7	314.4	517	412	0.0149	776.2	1,884
2076	27,813	418	0.0150	84	11504.1	327.6	523	415	0.0149	798.3	1,924
2077	27,996	421	0.0150	84	12075.4	341.5	528	418	0.0149	820.9	1,964
2078	28,166	424	0.0150	84	12674.3	355.9	533	420	0.0149	842.2	2,005
2079	28,180	424	0.0150	84	13208.9	370.9	535	420	0.0149	859.9	2,047
2080	28,172	424	0.0150	84	13766.3	386.5	535	420	0.0149	877.9	2,090
2081	28,143	423	0.0150	84	14313.4	402.8	534	420	0.0149	896.4	2,134
2082	28,023	422	0.0150	84	14881.8	419.8	531	418	0.0149	910.8	2,179

Table 4
Projected Cost of the Short-Term Benefits Branch

Year	Cash Outflows \$(,000s)							Cash Outflows as a % of Insured Earnings								
	UI Benefit	Sickness Allow.	Maternity Allow.	Maternity Grant	Total ST Benefits	Admin. Expenses	Invest. Expenses	Outflow	UI Benefit	Sickness Allow.	Maternity Allow.	Maternity Grant	Total ST Benefits	Admin. Expenses	Invest. Expenses	Outflow
2018		1,155.0	1,289.6	244.7	2,689.3	950.0	174.6	3,814		0.26%	0.29%	0.06%	0.61%	0.21%	0.04%	0.86%
2019		1,399.8	1,191.7	232.2	2,823.7	562.4	206.8	3,593		0.29%	0.25%	0.05%	0.59%	0.12%	0.04%	0.75%
2020		1,333.4	1,205.8	219.0	2,758.2	966.9	196.2	3,921		0.26%	0.24%	0.04%	0.54%	0.19%	0.04%	0.77%
2021	3,997	1,084.0	877.4	173.4	6,131.7	899.6	195.4	7,227	1.09%	0.29%	0.24%	0.05%	1.67%	0.24%	0.05%	1.97%
2022	-	1,326.1	806.9	167.4	2,300.4	737.0	336.2	3,374	0.00%	0.24%	0.15%	0.03%	0.42%	0.13%	0.06%	0.61%
2023	3,698	1,298.6	1,087.3	231.4	6,315.4	1,007.7	329.5	7,653	0.75%	0.26%	0.22%	0.05%	1.28%	0.20%	0.07%	1.55%
2024	4,031	1,480.4	1,120.5	228.5	6,860.5	1,175.0	362.1	8,398	0.73%	0.27%	0.20%	0.04%	1.25%	0.21%	0.07%	1.52%
2025	4,218	1,667.7	1,187.7	231.3	7,305.0	1,327.9	399.2	9,032	0.72%	0.28%	0.20%	0.04%	1.24%	0.23%	0.07%	1.54%
2026	4,470	1,652.0	1,234.3	235.4	7,591.3	1,424.1	439.0	9,454	0.71%	0.26%	0.20%	0.04%	1.20%	0.23%	0.07%	1.49%
2027	4,668	1,782.5	1,286.4	245.3	7,982.6	1,509.4	484.0	9,976	0.70%	0.27%	0.19%	0.04%	1.20%	0.23%	0.07%	1.50%
2028	4,882	1,875.4	1,412.4	263.2	8,433.4	1,495.8	532.7	10,462	0.69%	0.27%	0.20%	0.04%	1.20%	0.21%	0.08%	1.49%
2029	5,077	2,012.0	1,483.8	269.4	8,841.9	1,582.9	582.7	11,008	0.69%	0.27%	0.20%	0.04%	1.20%	0.22%	0.08%	1.50%
2030	5,289	2,133.6	1,562.8	278.0	9,263.6	1,676.9	636.0	11,576	0.69%	0.28%	0.20%	0.04%	1.21%	0.22%	0.08%	1.51%
2031	5,521	2,233.7	1,650.3	287.7	9,692.4	1,780.4	692.5	12,165	0.69%	0.28%	0.21%	0.04%	1.21%	0.22%	0.09%	1.52%
2032	5,743	2,364.8	1,742.2	298.3	10,148.5	1,892.0	752.6	12,793	0.68%	0.28%	0.21%	0.04%	1.21%	0.23%	0.09%	1.53%
2033	5,982	2,491.7	1,843.5	309.3	10,626.0	1,866.5	816.3	13,309	0.68%	0.28%	0.21%	0.04%	1.21%	0.21%	0.09%	1.52%
2034	6,152	2,632.2	1,940.7	318.2	11,043.2	1,982.9	884.5	13,911	0.67%	0.29%	0.21%	0.03%	1.21%	0.22%	0.10%	1.52%
2035	6,413	2,766.9	2,037.9	327.4	11,544.8	2,103.8	957.3	14,606	0.67%	0.29%	0.21%	0.03%	1.21%	0.22%	0.10%	1.53%
2036	6,699	2,903.8	2,139.7	337.6	12,080.2	2,235.9	1,034.1	15,350	0.68%	0.29%	0.22%	0.03%	1.22%	0.23%	0.10%	1.55%
2037	6,957	3,053.2	2,252.0	347.2	12,609.6	2,381.6	1,115.2	16,106	0.67%	0.30%	0.22%	0.03%	1.22%	0.23%	0.11%	1.56%
2038	7,249	3,205.1	2,364.3	357.1	13,175.9	2,242.8	1,200.8	16,620	0.67%	0.30%	0.22%	0.03%	1.22%	0.21%	0.11%	1.54%
2039	7,568	3,357.1	2,476.1	366.4	13,767.1	2,388.5	1,293.0	17,449	0.67%	0.30%	0.22%	0.03%	1.23%	0.21%	0.12%	1.55%
2040	7,874	3,514.7	2,593.1	375.9	14,358.0	2,542.2	1,390.2	18,290	0.67%	0.30%	0.22%	0.03%	1.23%	0.22%	0.12%	1.56%
2041	8,170	3,671.9	2,708.9	384.8	14,935.2	2,704.7	1,492.9	19,133	0.67%	0.30%	0.22%	0.03%	1.23%	0.22%	0.12%	1.57%
2042	8,462	3,832.6	2,829.8	393.8	15,517.9	2,877.1	1,601.5	19,996	0.67%	0.30%	0.22%	0.03%	1.22%	0.23%	0.13%	1.58%
2043	8,755	3,996.8	2,949.1	402.1	16,103.4	2,926.1	1,716.4	20,746	0.66%	0.30%	0.22%	0.03%	1.22%	0.22%	0.13%	1.57%
2044	9,060	4,162.8	3,066.0	410.5	16,699.3	3,113.3	1,838.9	21,652	0.66%	0.30%	0.22%	0.03%	1.21%	0.23%	0.13%	1.57%
2045	9,439	4,325.3	3,187.5	418.1	17,370.3	3,312.1	1,968.5	22,651	0.66%	0.30%	0.22%	0.03%	1.21%	0.23%	0.14%	1.58%
2046	9,841	4,491.7	3,314.1	424.8	18,071.6	3,524.2	2,105.3	23,701	0.66%	0.30%	0.22%	0.03%	1.21%	0.24%	0.14%	1.59%
2047	10,264	4,661.3	3,437.3	431.7	18,794.6	3,749.8	2,249.6	24,794	0.66%	0.30%	0.22%	0.03%	1.21%	0.24%	0.14%	1.59%
2048	10,704	4,831.6	3,565.0	438.6	19,539.4	3,989.6	2,402.0	25,931	0.66%	0.30%	0.22%	0.03%	1.21%	0.25%	0.15%	1.60%
2049	11,168	5,007.4	3,688.5	445.6	20,309.5	4,244.5	2,562.6	27,117	0.66%	0.30%	0.22%	0.03%	1.20%	0.25%	0.15%	1.61%
2050	11,653	5,183.4	3,825.3	451.6	21,113.1	4,513.4	2,732.0	28,359	0.66%	0.29%	0.22%	0.03%	1.20%	0.26%	0.16%	1.61%
2051	12,254	5,368.5	3,957.3	457.6	22,037.6	4,799.4	2,910.5	29,748	0.67%	0.29%	0.22%	0.02%	1.20%	0.26%	0.16%	1.62%
2052	12,838	5,560.5	4,103.8	464.9	22,967.0	5,098.6	3,098.0	31,163	0.67%	0.29%	0.21%	0.02%	1.20%	0.27%	0.16%	1.63%
2053	13,463	5,765.8	4,245.1	472.3	23,946.5	5,412.7	3,295.3	32,654	0.67%	0.29%	0.21%	0.02%	1.20%	0.27%	0.16%	1.63%
2054	14,159	5,978.7	4,413.0	479.8	25,030.7	5,737.9	3,503.1	34,272	0.68%	0.29%	0.21%	0.02%	1.20%	0.27%	0.17%	1.64%
2055	14,914	6,203.4	4,576.1	487.4	26,181.0	6,082.0	3,721.8	35,985	0.68%	0.28%	0.21%	0.02%	1.20%	0.28%	0.17%	1.64%
2056	15,594	6,440.2	4,745.0	496.3	27,275.0	6,441.7	3,951.5	37,668	0.68%	0.28%	0.21%	0.02%	1.19%	0.28%	0.17%	1.64%
2057	16,308	6,686.3	4,932.7	504.2	28,430.9	6,811.9	4,194.1	39,437	0.68%	0.28%	0.20%	0.02%	1.18%	0.28%	0.17%	1.64%
2058	17,110	6,959.2	5,127.5	514.7	29,711.3	7,204.5	4,449.5	41,365	0.68%	0.28%	0.20%	0.02%	1.18%	0.29%	0.18%	1.64%
2059	17,941	7,238.9	5,330.3	524.2	31,034.6	7,597.0	4,717.6	43,349	0.68%	0.27%	0.20%	0.02%	1.17%	0.29%	0.18%	1.64%
2060	18,811	7,529.9	5,552.2	533.8	32,430.4	7,995.6	4,998.1	45,424	0.68%	0.27%	0.20%	0.02%	1.17%	0.29%	0.18%	1.64%
2061	19,749	7,842.4	5,774.9	545.0	33,911.8	8,393.3	5,290.0	47,595	0.68%	0.27%	0.20%	0.02%	1.17%	0.29%	0.18%	1.64%
2062	20,599	8,167.8	6,018.7	556.5	35,341.6	8,779.4	5,591.8	49,713	0.68%	0.27%	0.20%	0.02%	1.16%	0.29%	0.18%	1.63%
2063	21,521	8,495.8	6,272.6	566.7	36,855.7	9,166.5	5,900.2	51,922	0.68%	0.27%	0.20%	0.02%	1.16%	0.29%	0.19%	1.63%
2064	22,520	8,865.7	6,537.3	580.1	38,503.0	9,597.6	6,204.6	54,305	0.67%	0.26%	0.20%	0.02%	1.15%	0.29%	0.19%	1.62%
2065	23,616	9,257.8	6,830.6	592.3	40,297.0	10,050.4	6,467.4	56,815	0.67%	0.26%	0.19%	0.02%	1.15%	0.29%	0.18%	1.62%
2066	24,792	9,685.8	7,136.8	607.9	42,222.7	10,525.8	0.0	58,749	0.67%	0.26%	0.19%	0.02%	1.15%	0.29%	0.00%	1.43%
2067	26,088	10,146.0	7,475.7	623.8	44,333.8	11,023.4	0.0	61,357	0.67%	0.26%	0.19%	0.02%	1.15%	0.29%	0.00%	1.43%
2068	27,438	10,627.9	7,830.7	640.2	46,536.4	11,533.9	0.0	64,070	0.68%	0.26%	0.19%	0.02%	1.15%	0.28%	0.00%	1.43%
2069	28,943	11,139.5	8,222.8	656.9	48,962.5	12,058.0	0.0	67,021	0.68%	0.26%	0.19%	0.02%	1.15%	0.28%	0.00%	1.44%
2070	30,441	11,682.6	8,612.7	674.1	51,409.9	12,599.0	0.0	70,009	0.68%	0.26%	0.19%	0.02%	1.16%	0.28%	0.00%	1.44%
2071	31,953	12,244.1	9,020.9	693.5	53,911.0	13,158.1	0.0	73,069	0.69%	0.26%	0.19%	0.01%	1.16%	0.28%	0.00%	1.44%
2072	33,444	12,832.3	9,471.4	711.6	56,458.8	13,739.5	0.0	76,198	0.69%	0.26%	0.19%	0.01%	1.16%	0.28%	0.00%	1.44%
2073	35,068	13,489.5	9,944.0	732.0	59,233.6	14,364.9	0.0	79,598	0.69%	0.26%	0.19%	0.01%	1.16%	0.28%	0.00%	1.44%
2074	36,547	14,171.0	10,439.5	754.7	61,912.4	15,000.0	0.0	83,112	0.69%	0.27%	0.20%	0.01%	1.16%	0.28%	0.00%	1.44%
2075	37,964	14,876.7	10,985.7	776.2	64,602.1	15,664.7	0.0	86,267	0.68%	0.27%	0.20%	0.01%	1.16%	0.28%	0.00%	1.44%
2076	39,418	15,617.0	11,504.1	798.3	67,337.3	16,360.6	0.0	89,698	0.68%	0.27%	0.20%	0.01%	1.16%	0.28%	0.00%	1.44%
2077	40,919	16,383.6	12,075.4	820.9	70,199.4	17,091.4	0.0	93,291	0.68%	0.27%	0.20%	0.01%	1.16%	0.28%	0.00%	1.44%
2078	42,437	17,176.8	12,674.3	842.2	73,130.3	17,863.8	0.0	96,994	0.67%	0.27%	0.20%	0.01%	1.16%	0.28%	0.00%	1.44%
2079	43,855	17,912.1	13,208.9	859.9	75,836.3	18,636.4	0.0	100,473	0.67%	0.27%	0.20%	0.01%	1.16%	0.28%	0.00%	1.44%
2080	45,546	18,667.9	13,766.3	877.9	78,857.7	19,489.5	0.0	104,347	0.67%	0.27%	0.20%	0.01%	1.16%	0.29%	0.00%	1.44%
2081	47,293	19,432.3	14,313.4	896.4	81,935.2	20,389.1	0.0	108,324	0.67%	0.27%	0.20%	0.01%	1.15%	0.29%	0.00%	1.44%
2082	48,887	20,167.8	14,881.8	910.8	84,847.4	21,316.4	0.0	112,164	0.66%	0.27%	0.20%	0.01%	1.15%	0.29%	0.00%	1.44%

**Table 4.1
Cash Flow Statement for the Short-Term Benefit Branch**

Year	Cash Inflows/Income \$(,000)s				As a % of Insurable Earnings					
	Cash Outflows	Cont'n's	Surcharge	Gross Invest. Income	Cash Inflows	Net Income	Reserve Fund at EOY	Outflows	Inflows	Fund Ratio
2018	3,814	5,456	199	3,743	9,398	5,584	31,750	0.86%	2.12%	8.30
2019	3,593	5,922	90	1,096	7,108	3,488	35,238	0.75%	1.48%	9.80
2020	3,921	6,345	85	1,205	7,635	886	36,124	0.77%	1.49%	9.20
2021	7,227	4,476	148	2,342	6,965	11,362	47,486	1.97%	1.89%	6.60
2022	3,374	6,710	57	2,268	9,036	5,662	53,149	0.61%	1.64%	15.80
2023	7,653	9,713	170	3,021	12,904	5,251	58,400	1.55%	2.61%	7.60
2024	8,398	10,845	190	3,344	14,379	5,982	64,381	1.52%	2.61%	7.70
2025	9,032	11,573	174	3,704	15,450	6,418	70,800	1.54%	2.63%	7.80
2026	9,454	12,463	187	4,072	16,722	7,268	78,067	1.49%	2.64%	8.30
2027	9,976	13,145	197	4,482	17,824	7,848	85,915	1.50%	2.67%	8.60
2028	10,462	13,841	208	4,488	18,536	8,074	93,990	1.49%	2.64%	9.00
2029	11,008	14,477	217	4,899	19,593	8,585	102,575	1.50%	2.67%	9.30
2030	11,576	15,136	227	5,335	20,698	9,122	111,697	1.51%	2.69%	9.60
2031	12,165	15,818	237	5,798	21,853	9,688	121,385	1.52%	2.72%	10.00
2032	12,793	16,527	248	6,288	23,063	10,270	131,654	1.53%	2.75%	10.30
2033	13,309	17,249	259	6,809	24,317	11,008	142,662	1.52%	2.78%	10.70
2034	13,911	18,017	270	7,365	25,652	11,742	154,404	1.52%	2.81%	11.10
2035	14,606	18,760	281	7,956	26,997	12,391	166,795	1.53%	2.84%	11.40
2036	15,350	19,549	293	8,578	28,421	13,070	179,866	1.55%	2.86%	11.70
2037	16,106	20,383	306	9,233	29,922	13,816	193,681	1.56%	2.89%	12.00
2038	16,620	21,240	319	9,929	31,488	14,868	208,549	1.54%	2.92%	12.50
2039	17,449	22,127	332	10,670	33,129	15,681	224,230	1.55%	2.95%	12.90
2040	18,290	23,057	346	11,451	34,855	16,564	240,794	1.56%	2.98%	13.20
2041	19,133	24,016	360	12,274	36,650	17,518	258,312	1.57%	3.01%	13.50
2042	19,996	25,012	375	13,142	38,529	18,532	276,844	1.58%	3.03%	13.80
2043	20,746	26,044	391	14,061	40,495	19,749	296,593	1.57%	3.06%	14.30
2044	21,652	27,120	407	15,032	42,559	20,907	317,501	1.57%	3.09%	14.70
2045	22,651	28,234	424	16,057	44,714	22,063	339,563	1.58%	3.12%	15.00
2046	23,701	29,408	441	17,133	46,982	23,281	362,844	1.59%	3.15%	15.30
2047	24,794	30,642	460	18,263	49,364	24,570	387,415	1.59%	3.17%	15.60
2048	25,931	31,918	479	19,447	51,843	25,912	413,327	1.60%	3.20%	15.90
2049	27,117	33,254	499	20,686	54,439	27,322	440,649	1.61%	3.23%	16.30
2050	28,359	34,648	520	21,981	57,149	28,790	469,439	1.61%	3.25%	16.60
2051	29,748	36,106	542	23,331	59,979	30,231	499,671	1.62%	3.27%	16.80
2052	31,163	37,693	565	24,736	62,994	31,831	531,502	1.63%	3.29%	17.10
2053	32,654	39,388	591	26,197	66,176	33,522	565,023	1.63%	3.31%	17.30
2054	34,272	41,202	618	27,715	69,534	35,262	600,286	1.64%	3.33%	17.50
2055	35,985	43,122	647	29,274	73,043	37,058	637,344	1.64%	3.34%	17.70
2056	37,668	45,238	679	30,876	76,792	39,124	676,468	1.64%	3.34%	18.00
2057	39,437	47,409	711	32,503	80,623	41,186	717,654	1.64%	3.35%	18.20
2058	41,365	49,750	746	34,121	84,618	43,253	760,906	1.64%	3.35%	18.40
2059	43,349	52,115	782	35,685	88,582	45,233	806,139	1.64%	3.35%	18.60
2060	45,424	54,587	819	37,100	92,505	47,081	853,220	1.64%	3.34%	18.80
2061	47,595	57,207	858	38,205	96,270	48,675	901,895	1.64%	3.32%	18.90
2062	49,713	59,929	899	38,636	99,464	49,751	951,646	1.63%	3.27%	19.10
2063	51,922	62,760	941	37,321	101,023	49,100	1,000,746	1.63%	3.17%	19.30
2064	54,305	65,966	989	29,740	96,696	42,390	1,043,137	1.62%	2.89%	19.20
2065	56,815	69,234	1,039	0	70,272	13,457	1,056,594	1.62%	2.00%	18.60
2066	52,749	72,623	1,089	0	73,712	20,964	1,077,558	1.43%	2.00%	20.40
2067	55,357	76,197	1,143	0	77,340	21,982	1,099,541	1.43%	2.00%	19.90
2068	58,070	79,849	1,198	0	81,047	22,977	1,122,517	1.43%	2.00%	19.30
2069	61,021	83,622	1,254	0	84,877	23,856	1,146,373	1.44%	2.00%	18.80
2070	64,009	87,585	1,314	0	88,899	24,890	1,171,264	1.44%	2.00%	18.30
2071	67,069	91,677	1,375	0	93,052	25,983	1,197,247	1.44%	2.00%	17.90
2072	70,198	95,891	1,438	0	97,330	27,131	1,224,378	1.44%	2.00%	17.40
2073	73,598	100,521	1,508	0	102,029	28,431	1,252,809	1.44%	2.00%	17.00
2074	76,912	104,994	1,575	0	106,569	29,656	1,282,466	1.44%	2.00%	16.70
2075	80,267	109,587	1,644	0	111,231	30,964	1,313,429	1.44%	2.00%	16.40
2076	83,698	114,294	1,714	0	116,008	32,310	1,345,740	1.44%	2.00%	16.10
2077	87,291	119,164	1,787	0	120,951	33,660	1,379,400	1.44%	2.00%	15.80
2078	90,994	124,268	1,864	0	126,132	35,138	1,414,538	1.44%	2.00%	15.50
2079	94,473	128,898	1,933	0	130,832	36,359	1,450,898	1.44%	2.00%	15.40
2080	98,347	134,250	2,014	0	136,263	37,916	1,488,814	1.44%	2.00%	15.10
2081	102,324	139,781	2,097	0	141,878	39,553	1,528,367	1.44%	2.00%	14.90
2082	106,164	145,106	2,177	0	147,283	41,119	1,569,486	1.44%	2.00%	14.80

Table 5
Projected Cost of the Retirement Age Pensions

Year	Active Contributors	Retirement Age Pensions Awarded in the Year	No. of Deaths in the Year	Rate of New Pension Awards	Retirement Age Pensions as of End of Year	Average Annual Benefit Paid		Final Cost \$(,000)s
						Avg. Pensions \$	Awarded in the Year	
2018	21,122	126	22	0.00597	1,175	8,524	9,193	10,015
2019	21,483	129	20	0.00600	1,287	9,044	9,539	11,639
2020	22,384	156	35	0.00697	1,407	9,064	9,488	12,754
2021	19,961	145	43	0.00726	1,543	9,174	13,861	14,155
2022	22,274	369	62	0.01657	1,832	8,983	10,233	16,456
2023	22,302	147	66	0.00660	1,962	9,977	8,585	19,572
2024	22,777	166	71	0.00730	2,070	10,077	8,309	20,864
2025	23,230	201	76	0.00867	2,202	10,133	8,079	22,315
2026	23,660	233	82	0.00986	2,363	10,137	7,698	23,953
2027	24,061	261	89	0.01086	2,549	10,155	8,657	25,880
2028	24,485	284	97	0.01160	2,754	10,256	9,600	28,247
2029	24,892	279	105	0.01119	2,962	10,432	10,390	30,906
2030	25,272	359	114	0.01419	3,202	10,632	10,418	34,042
2031	25,623	370	124	0.01444	3,480	10,826	10,619	37,672
2032	25,951	380	136	0.01463	3,761	11,083	11,980	41,679
2033	26,249	396	148	0.01508	4,046	11,398	12,256	46,116
2034	26,552	421	160	0.01585	4,343	11,726	12,736	50,926
2035	26,798	441	173	0.01646	4,654	12,070	13,131	56,171
2036	27,019	501	188	0.01856	4,995	12,445	13,827	62,163
2037	27,237	529	205	0.01941	5,369	12,842	14,091	68,948
2038	27,431	570	223	0.02077	5,765	13,245	14,524	76,362
2039	27,582	588	241	0.02133	6,179	13,664	15,029	84,430
2040	27,700	619	259	0.02236	6,604	14,097	15,438	93,096
2041	27,776	634	279	0.02282	7,038	14,548	16,062	102,386
2042	27,818	672	300	0.02417	7,484	15,018	16,515	112,397
2043	27,826	687	322	0.02469	7,942	15,509	17,189	123,169
2044	27,801	746	344	0.02684	8,420	16,027	17,731	134,952
2045	27,733	759	368	0.02738	8,919	16,554	18,047	147,643
2046	27,632	801	393	0.02897	9,428	17,105	18,973	161,265
2047	27,513	811	416	0.02949	9,946	17,684	19,437	175,883
2048	27,364	860	439	0.03143	10,476	18,290	20,324	191,604
2049	27,203	876	461	0.03222	11,020	18,932	21,096	208,634
2050	27,030	894	485	0.03306	11,562	19,613	22,166	226,770
2051	26,849	896	511	0.03339	12,095	20,349	23,454	246,121
2052	26,687	872	538	0.03268	12,598	21,125	24,310	266,138
2053	26,549	859	563	0.03235	13,064	21,943	25,814	286,654
2054	26,425	839	589	0.03174	13,494	22,815	27,159	307,862
2055	26,298	831	616	0.03160	13,891	23,743	28,724	329,813
2056	26,207	817	643	0.03116	14,257	24,728	30,129	352,532
2057	26,113	811	669	0.03105	14,591	25,763	31,729	375,921
2058	26,065	805	703	0.03090	14,890	26,861	33,553	399,961
2059	26,015	796	757	0.03060	15,129	28,020	35,340	423,898
2060	25,972	787	838	0.03028	15,286	29,248	37,332	447,068
2061	25,950	766	950	0.02952	15,333	30,544	39,166	468,336
2062	25,931	746	1,100	0.02877	15,244	31,904	41,217	486,323
2063	25,895	720	1,111	0.02781	15,133	33,323	43,005	504,261
2064	25,918	704	990	0.02718	15,098	34,813	45,214	525,622
2065	25,978	688	913	0.02649	15,105	36,371	47,519	549,377
2066	26,067	672	866	0.02578	15,127	38,002	49,883	574,870
2067	26,199	658	842	0.02512	15,149	39,712	52,419	601,607
2068	26,345	646	840	0.02452	15,159	41,502	55,018	629,120
2069	26,494	632	851	0.02386	15,149	43,375	57,704	657,089
2070	26,652	625	866	0.02346	15,121	45,340	60,499	685,593
2071	26,810	625	881	0.02332	15,081	47,407	63,368	714,944
2072	26,964	632	898	0.02343	15,037	49,582	66,227	745,581
2073	27,190	639	903	0.02349	15,000	51,866	69,233	777,988
2074	27,407	647	898	0.02362	14,975	54,238	72,253	812,226
2075	27,617	657	892	0.02378	14,963	56,722	75,419	848,697
2076	27,813	666	886	0.02394	14,961	59,322	78,620	887,493
2077	27,996	676	880	0.02414	14,969	62,046	81,996	928,776
2078	28,166	689	874	0.02446	14,988	64,905	85,422	972,825
2079	28,180	702	867	0.02491	15,019	67,904	88,963	1,019,858
2080	28,172	717	860	0.02544	15,063	71,080	92,630	1,070,655
2081	28,143	734	852	0.02608	15,120	74,412	96,617	1,125,116
2082	28,023	753	844	0.02689	15,194	77,912	100,821	1,183,765

Table 6
Projected Cost of Invalidation Pensions

Year	Active Contributors	Invalidity Pensions Awarded in the Year	Rate of New Pension Awards	No. of Deaths	No. of Invalidity Pensioners as of EOY	Average Annual Benefit Paid		\$(,000)s Final Cost Inval. Pens.
						Avg. Pensions \$	Awarded in the Year	
2018	21,122	11	0.00052	7	94	9,076	11,348	853
2019	21,483	12	0.00056	7	93	9,748	11,865	907
2020	22,384	25	0.00112	8	116	9,862	10,439	1,144
2021	19,961	20	0.00100	16	114	9,438	11,501	1,076
2022	22,274	19	0.00085	17	118	10,844	10,702	1,280
2023	22,302	9	0.00039	2	127	9,517	5,255	1,208
2024	22,777	9	0.00038	2	134	9,455	5,558	1,265
2025	23,230	9	0.00037	2	141	9,414	5,733	1,323
2026	23,660	9	0.00036	2	147	9,415	5,978	1,384
2027	24,061	8	0.00034	3	153	9,425	6,214	1,444
2028	24,485	8	0.00032	3	159	9,456	6,486	1,502
2029	24,892	8	0.00030	3	164	9,509	6,765	1,560
2030	25,272	7	0.00029	3	169	9,584	7,044	1,617
2031	25,623	7	0.00027	3	173	9,678	7,329	1,674
2032	25,951	7	0.00026	4	177	9,786	7,611	1,731
2033	26,249	7	0.00026	4	181	9,907	7,895	1,789
2034	26,552	7	0.00025	4	184	10,041	8,185	1,847
2035	26,798	7	0.00025	4	187	10,182	8,475	1,904
2036	27,019	7	0.00024	4	190	10,337	8,777	1,962
2037	27,237	6	0.00024	5	192	10,505	9,087	2,021
2038	27,431	6	0.00024	5	195	10,682	9,402	2,079
2039	27,582	6	0.00023	5	197	10,875	9,731	2,138
2040	27,700	6	0.00023	5	198	11,084	10,076	2,198
2041	27,776	6	0.00023	5	200	11,310	10,441	2,260
2042	27,818	6	0.00023	6	201	11,554	10,825	2,323
2043	27,826	6	0.00023	6	202	11,820	11,232	2,389
2044	27,801	6	0.00023	6	203	12,110	11,668	2,459
2045	27,733	7	0.00024	6	204	12,431	12,135	2,535
2046	27,632	7	0.00024	6	205	12,789	12,643	2,618
2047	27,513	7	0.00024	6	206	13,182	13,188	2,710
2048	27,364	7	0.00025	6	206	13,615	13,774	2,811
2049	27,203	7	0.00025	6	208	14,088	14,401	2,924
2050	27,030	7	0.00026	6	209	14,605	15,074	3,048
2051	26,849	7	0.00026	6	210	15,168	15,793	3,186
2052	26,687	7	0.00026	6	212	15,785	16,570	3,339
2053	26,549	7	0.00027	6	213	16,449	17,395	3,506
2054	26,425	7	0.00027	6	215	17,165	18,277	3,689
2055	26,298	7	0.00027	6	217	17,941	19,222	3,889
2056	26,207	7	0.00027	6	219	18,786	20,241	4,109
2057	26,113	7	0.00027	6	221	19,672	21,310	4,341
2058	26,065	7	0.00027	6	222	20,606	22,435	4,582
2059	26,015	7	0.00027	7	223	21,571	23,598	4,815
2060	25,972	7	0.00027	8	223	22,589	24,814	5,036
2061	25,950	7	0.00027	9	221	23,673	26,085	5,233
2062	25,931	7	0.00027	11	217	24,821	27,404	5,387
2063	25,895	7	0.00027	11	214	26,035	28,788	5,562
2064	25,918	7	0.00027	8	213	27,336	30,266	5,815
2065	25,978	7	0.00027	7	213	28,634	31,756	6,103
2066	26,067	7	0.00027	6	214	29,953	33,271	6,418
2067	26,199	7	0.00027	6	216	31,299	34,809	6,755
2068	26,345	7	0.00027	6	217	32,661	36,357	7,103
2069	26,494	7	0.00026	6	219	34,064	37,930	7,462
2070	26,652	7	0.00026	6	221	35,523	39,537	7,835
2071	26,810	7	0.00026	6	222	37,024	41,174	8,220
2072	26,964	7	0.00026	6	223	38,572	42,847	8,619
2073	27,190	7	0.00026	6	225	40,166	44,560	9,035
2074	27,407	7	0.00026	6	226	41,717	46,231	9,446
2075	27,617	7	0.00026	6	228	43,309	47,935	9,874
2076	27,813	7	0.00026	6	230	44,949	49,679	10,319
2077	27,996	7	0.00026	6	231	46,653	51,481	10,786
2078	28,166	7	0.00027	6	233	48,431	53,353	11,279
2079	28,180	8	0.00027	6	235	50,279	55,294	11,798
2080	28,172	8	0.00027	6	237	52,391	57,490	12,391
2081	28,143	8	0.00028	6	238	54,604	59,818	13,020
2082	28,023	8	0.00028	6	240	56,917	62,287	13,686

**Table 7
Projected Cost of the Survivors Pensions**

Year	Active Contributors	Survivor Pensions Awarded in the Year	Rate of New Pension Awards	No. of Deaths	No. of Survivor Pensions as of EOY	Average Annual Benefit Paid		\$(000)s Final Cost of Survivor Pensions
						Avg. Pensions \$	Awarded in the Year	
2018	21,122	55	0.00260	33	374	3,340	3,325	1,249
2019	21,483	32	0.00149	0	406	3,434	3,632	1,394
2020	22,384	75	0.00335	60	421	3,568	3,791	1,502
2021	19,961	41	0.00205	0	477	3,316	4,400	1,582
2022	22,274	42	0.00189	52	467	3,942	3,953	1,841
2023	22,302	36	0.00160	35	468	3,893	4,103	1,821
2024	22,777	38	0.00167	31	475	4,047	4,170	1,922
2025	23,230	40	0.00173	30	485	4,191	4,257	2,033
2026	23,660	43	0.00180	33	494	4,345	4,338	2,147
2027	24,061	45	0.00187	32	507	4,495	4,542	2,281
2028	24,485	48	0.00195	31	524	4,657	4,775	2,439
2029	24,892	51	0.00204	34	541	4,827	5,007	2,610
2030	25,272	54	0.00213	35	559	5,008	5,230	2,802
2031	25,623	57	0.00222	33	583	5,191	5,460	3,026
2032	25,951	60	0.00230	31	612	5,368	5,649	3,283
2033	26,249	63	0.00239	31	643	5,541	5,824	3,563
2034	26,552	66	0.00248	31	677	5,718	6,012	3,872
2035	26,798	69	0.00258	32	714	5,892	6,189	4,208
2036	27,019	74	0.00273	35	753	6,069	6,363	4,568
2037	27,237	78	0.00288	36	795	6,240	6,507	4,960
2038	27,431	84	0.00306	39	840	6,413	6,642	5,385
2039	27,582	89	0.00322	39	889	6,575	6,755	5,846
2040	27,700	94	0.00338	42	941	6,732	6,857	6,332
2041	27,776	99	0.00357	45	995	6,885	6,988	6,849
2042	27,818	105	0.00376	48	1,052	7,036	7,127	7,400
2043	27,826	110	0.00396	51	1,110	7,189	7,286	7,983
2044	27,801	116	0.00418	56	1,171	7,345	7,438	8,601
2045	27,733	122	0.00441	60	1,233	7,504	7,568	9,252
2046	27,632	128	0.00465	65	1,296	7,669	7,760	9,939
2047	27,513	134	0.00486	70	1,360	7,844	7,983	10,664
2048	27,364	138	0.00505	75	1,423	8,031	8,236	11,426
2049	27,203	142	0.00522	80	1,484	8,232	8,528	12,221
2050	27,030	146	0.00539	85	1,545	8,451	8,842	13,054
2051	26,849	151	0.00563	91	1,604	8,686	9,176	13,937
2052	26,687	157	0.00589	97	1,664	8,940	9,527	14,881
2053	26,549	163	0.00612	102	1,725	9,213	9,913	15,889
2054	26,425	168	0.00638	108	1,785	9,503	10,278	16,962
2055	26,298	175	0.00664	114	1,846	9,809	10,639	18,103
2056	26,207	181	0.00690	120	1,907	10,131	11,052	19,318
2057	26,113	187	0.00716	126	1,968	10,474	11,500	20,613
2058	26,065	201	0.00771	140	2,029	10,845	12,021	22,006
2059	26,015	230	0.00885	165	2,094	11,261	12,622	23,582
2060	25,972	273	0.01050	195	2,171	11,741	13,296	25,494
2061	25,950	331	0.01275	231	2,271	12,307	14,132	27,952
2062	25,931	408	0.01573	271	2,408	12,992	15,109	31,283
2063	25,895	407	0.01570	237	2,578	13,736	15,844	35,405
2064	25,918	337	0.01302	190	2,725	14,426	16,242	39,304
2065	25,978	294	0.01131	199	2,819	15,046	16,618	42,413
2066	26,067	266	0.01020	209	2,876	15,630	17,019	44,952
2067	26,199	249	0.00950	218	2,907	16,198	17,468	47,088
2068	26,345	242	0.00917	227	2,922	16,770	18,103	49,000
2069	26,494	240	0.00907	232	2,930	17,363	18,938	50,881
2070	26,652	240	0.00899	233	2,937	17,990	19,813	52,832
2071	26,810	239	0.00890	232	2,944	18,649	20,733	54,895
2072	26,964	237	0.00879	228	2,953	19,340	21,706	57,107
2073	27,190	234	0.00862	221	2,966	20,066	22,767	59,526
2074	27,407	231	0.00843	214	2,984	20,832	23,872	62,151
2075	27,617	228	0.00826	210	3,001	21,638	25,021	64,938
2076	27,813	225	0.00810	209	3,018	22,487	26,222	67,858
2077	27,996	223	0.00796	209	3,032	23,382	27,440	70,891
2078	28,166	221	0.00784	210	3,043	24,324	28,703	74,018
2079	28,180	218	0.00775	212	3,049	25,322	30,035	77,215
2080	28,172	216	0.00766	216	3,049	26,386	31,442	80,454
2081	28,143	213	0.00757	220	3,042	27,523	32,926	83,728
2082	28,023	210	0.00750	225	3,028	28,739	34,490	87,014

Table 8
Projected Cost of Pension Grants

Year	Active Contributors	No. of Grants Awarded in the Year		Rate of Grants Awarded		Average Cost of Grants \$		Total Cost of Grants \$(,000)s		
		Retirement & Survivors	Funeral	Retirement & Survivors	Funeral	Retirement & Survivors	Funeral	Retirement & Survivors	Funeral	Cost of All Grants \$(,000)s
2018	21,122	41	95	0.00194	0.00450	3,290	2,189	135	208	343
2019	21,483	46	80	0.00214	0.00372	2,757	2,246	127	180	307
2020	22,384	41	91	0.00183	0.00407	3,549	2,203	146	200	346
2021	19,961	40	98	0.00200	0.00491	4,734	2,425	189	238	427
2022	22,274	50	110	0.00224	0.00494	4,563	2,580	228	284	512
2023	22,302	9	143	0.00041	0.00640	3,021	2,217	28	316	344
2024	22,777	10	153	0.00044	0.00674	2,541	2,297	26	353	378
2025	23,230	11	164	0.00048	0.00707	2,190	2,349	25	386	411
2026	23,660	13	176	0.00053	0.00743	1,965	2,401	25	422	447
2027	24,061	14	188	0.00059	0.00782	1,876	2,453	27	462	488
2028	24,485	16	201	0.00065	0.00822	1,885	2,505	30	504	535
2029	24,892	41	215	0.00166	0.00865	3,051	2,557	126	551	677
2030	25,272	45	230	0.00179	0.00910	3,175	2,610	143	600	744
2031	25,623	73	245	0.00284	0.00955	3,839	2,664	279	652	931
2032	25,951	108	261	0.00417	0.01005	4,549	2,718	493	709	1,202
2033	26,249	137	277	0.00520	0.01057	5,041	2,774	688	769	1,458
2034	26,552	161	293	0.00606	0.01104	5,450	2,832	877	831	1,708
2035	26,798	182	310	0.00681	0.01157	5,825	2,892	1,063	897	1,959
2036	27,019	194	329	0.00717	0.01216	6,055	2,951	1,174	970	2,143
2037	27,237	218	348	0.00800	0.01277	6,473	3,010	1,410	1,047	2,457
2038	27,431	225	369	0.00821	0.01344	6,757	3,070	1,521	1,132	2,653
2039	27,582	244	389	0.00886	0.01410	7,070	3,133	1,727	1,219	2,946
2040	27,700	251	409	0.00907	0.01476	7,366	3,200	1,851	1,308	3,159
2041	27,776	265	430	0.00955	0.01549	7,719	3,266	2,047	1,405	3,452
2042	27,818	279	452	0.01003	0.01625	8,125	3,334	2,267	1,507	3,774
2043	27,826	288	474	0.01033	0.01704	8,469	3,402	2,435	1,614	4,049
2044	27,801	298	497	0.01071	0.01787	8,990	3,472	2,677	1,725	4,402
2045	27,733	308	520	0.01112	0.01875	9,365	3,542	2,887	1,842	4,729
2046	27,632	317	544	0.01148	0.01968	9,873	3,613	3,133	1,965	5,098
2047	27,513	334	565	0.01213	0.02055	10,172	3,690	3,395	2,086	5,481
2048	27,364	344	586	0.01257	0.02142	10,851	3,770	3,733	2,210	5,943
2049	27,203	350	606	0.01288	0.02228	11,266	3,853	3,948	2,335	6,283
2050	27,030	345	627	0.01278	0.02319	11,862	3,936	4,098	2,467	6,565
2051	26,849	338	651	0.01259	0.02423	12,615	4,016	4,264	2,612	6,876
2052	26,687	328	674	0.01230	0.02525	13,118	4,098	4,307	2,761	7,068
2053	26,549	332	696	0.01251	0.02623	14,005	4,184	4,650	2,914	7,564
2054	26,425	315	720	0.01191	0.02725	14,550	4,272	4,578	3,076	7,654
2055	26,298	319	745	0.01212	0.02832	15,580	4,360	4,967	3,247	8,214
2056	26,207	309	769	0.01179	0.02935	16,226	4,451	5,012	3,423	8,435
2057	26,113	296	793	0.01132	0.03036	16,943	4,543	5,010	3,602	8,611
2058	26,065	302	829	0.01159	0.03181	17,882	4,653	5,402	3,858	9,261
2059	26,015	289	895	0.01112	0.03439	18,494	4,782	5,352	4,278	9,630
2060	25,972	285	998	0.01096	0.03844	19,180	4,914	5,458	4,906	10,364
2061	25,950	283	1,151	0.01091	0.04435	19,697	5,044	5,576	5,805	11,381
2062	25,931	299	1,369	0.01152	0.05278	19,948	5,167	5,958	7,072	13,030
2063	25,895	292	1,381	0.01127	0.05333	20,494	5,263	5,980	7,268	13,249
2064	25,918	281	1,197	0.01086	0.04617	21,636	5,350	6,090	6,403	12,493
2065	25,978	261	1,078	0.01006	0.04149	22,968	5,450	6,002	5,874	11,876
2066	26,067	248	1,005	0.00953	0.03854	24,161	5,560	6,002	5,585	11,588
2067	26,199	238	964	0.00908	0.03679	25,340	5,676	6,028	5,471	11,499
2068	26,345	230	955	0.00874	0.03626	26,472	5,793	6,097	5,533	11,630
2069	26,494	221	967	0.00835	0.03648	27,613	5,907	6,108	5,710	11,818
2070	26,652	211	981	0.00794	0.03681	28,756	6,021	6,082	5,908	11,989
2071	26,810	205	997	0.00766	0.03718	29,923	6,136	6,148	6,115	12,263
2072	26,964	204	1,013	0.00757	0.03758	31,095	6,249	6,344	6,331	12,675
2073	27,190	203	1,019	0.00745	0.03748	32,291	6,365	6,542	6,487	13,029
2074	27,407	204	1,014	0.00744	0.03700	33,400	6,492	6,814	6,582	13,396
2075	27,617	204	1,008	0.00739	0.03651	34,658	6,624	7,076	6,678	13,754
2076	27,813	206	1,002	0.00740	0.03603	36,046	6,761	7,421	6,775	14,195
2077	27,996	206	996	0.00736	0.03557	37,504	6,902	7,732	6,873	14,605
2078	28,166	207	990	0.00736	0.03513	38,991	7,047	8,081	6,973	15,055
2079	28,180	208	982	0.00737	0.03486	40,509	7,194	8,412	7,067	15,479
2080	28,172	208	975	0.00739	0.03459	42,201	7,346	8,781	7,160	15,941
2081	28,143	209	966	0.00742	0.03431	43,977	7,503	9,186	7,245	16,431
2082	28,023	211	956	0.00751	0.03411	45,884	7,665	9,662	7,327	16,989

**Table 9
Projected Cost of NCOAP Pension Benefits**

Year	Non-Contributory Old Age Pensions (NCOAP)								
	Est. No. of NOAP as of BOY	Awarded in the Year*	No. of Deaths	Rate of termin't'n	Rate of Entrants	No. of NOAP as of EOY	Avg. Annual Pension Amount	Avg. Number Paid in the Year	\$(,000)s Cost of NOAP Pensions
2018	211	13	12	0.0552	0.0616	212	3,212	212	679
2019	209	4	6	0.0284	0.0191	207	3,395	208	706
2020	207	10	12	0.0566	0.0483	181	3,389	194	657
2021	181	4	18	0.0984	0.0221	165	3,473	173	601
2022	165	3	19	0.1141	0.0182	151	3,878	158	613
2023	151	3	8	0.0500	0.0200	146	3,645	149	541
2024	146	3	7	0.0500	0.0200	142	3,958	144	570
2025	142	3	7	0.0500	0.0200	138	4,121	140	576
2026	138	3	7	0.0500	0.0250	134	4,340	136	590
2027	134	3	7	0.0500	0.0250	131	4,483	132	594
2028	131	3	7	0.0500	0.0250	127	4,620	129	595
2029	127	3	6	0.0500	0.0250	124	4,757	125	597
2030	124	3	6	0.0500	0.0250	121	4,902	123	601
2031	121	3	6	0.0500	0.0250	118	5,057	120	605
2032	118	3	6	0.0500	0.0250	115	5,220	117	609
2033	115	3	6	0.0500	0.0250	112	5,390	114	612
2034	112	3	6	0.0500	0.0250	109	5,569	110	615
2035	109	3	6	0.0500	0.0250	105	5,749	107	616
2036	105	3	5	0.0500	0.0250	103	5,945	104	620
2037	103	3	5	0.0500	0.0250	101	6,153	102	627
2038	101	3	5	0.0500	0.0250	98	6,370	99	634
2039	98	3	5	0.0500	0.0300	96	6,604	97	642
2040	96	3	5	0.0500	0.0300	94	6,856	95	652
2041	94	3	5	0.0500	0.0300	92	7,125	93	662
2042	92	3	5	0.0500	0.0300	90	7,412	91	673
2043	90	3	5	0.0500	0.0300	87	7,718	88	683
2044	87	3	4	0.0500	0.0300	86	8,046	87	697
2045	86	3	4	0.0500	0.0300	85	8,398	85	716
2046	85	3	4	0.0500	0.0300	83	8,780	84	736
2047	83	3	4	0.0500	0.0350	82	9,187	83	758
2048	82	3	4	0.0500	0.0350	81	9,621	81	783
2049	81	3	4	0.0500	0.0350	80	10,082	80	809
2050	80	3	4	0.0500	0.0350	78	10,570	79	836
2051	78	3	4	0.0500	0.0350	77	11,087	78	863
2052	77	3	4	0.0500	0.0350	76	11,642	77	891
2053	76	3	4	0.0500	0.0350	75	12,226	75	920
2054	75	3	4	0.0500	0.0350	73	12,845	74	949
2055	73	3	4	0.0500	0.0450	72	13,506	73	983
2056	72	3	4	0.0500	0.0450	72	14,215	72	1,025
2057	72	3	4	0.0500	0.0450	71	14,947	71	1,066
2058	71	3	4	0.0500	0.0450	70	15,709	71	1,108
2059	70	3	4	0.0500	0.0450	69	16,483	70	1,149
2060	69	3	4	0.0500	0.0450	68	17,287	69	1,190
2061	68	3	3	0.0500	0.0450	68	18,125	68	1,241
2062	68	3	4	0.0500	0.0450	68	18,995	68	1,292
2063	68	3	3	0.0500	0.0450	68	19,913	68	1,346
2064	68	3	3	0.0500	0.0450	68	20,906	68	1,414
2065	68	3	3	0.0500	0.0450	68	21,888	68	1,481
2066	68	3	3	0.0500	0.0450	68	22,880	68	1,550
2067	68	3	3	0.0500	0.0450	68	23,886	68	1,619
2068	68	3	3	0.0500	0.0450	68	24,895	68	1,688
2069	68	3	3	0.0500	0.0450	68	25,929	68	1,760
2070	68	3	3	0.0500	0.0450	68	27,003	68	1,834
2071	68	3	3	0.0500	0.0450	68	28,105	68	1,911
2072	68	3	3	0.0500	0.0450	68	29,238	68	1,990
2073	68	3	3	0.0500	0.0450	68	30,403	68	2,071
2074	68	3	3	0.0500	0.0450	68	31,514	68	2,148
2075	68	3	3	0.0500	0.0450	68	32,653	68	2,228
2076	68	3	3	0.0500	0.0450	68	33,824	68	2,311
2077	68	3	3	0.0500	0.0450	68	35,044	68	2,397
2078	68	3	3	0.0500	0.0450	69	36,321	68	2,487
2079	69	3	4	0.0500	0.0450	68	37,653	68	2,562
2080	68	3	3	0.0500	0.0450	68	39,223	68	2,652
2081	68	3	3	0.0500	0.0450	68	40,876	68	2,765
2082	68	3	3	0.0500	0.0450	68	42,611	68	2,884

Table 10
Projected Costs of the Long-Term Benefits Branch
 \$(,000s)

Year	LTB PENSIONS				NCOAP	Grants, including Funeral Grants	Cost of all LTB	Admin. Expenses	Invest. Expenses	Total LTB Outflow/Exp (incl change in provision for IAS26)
	Retirement	Invalidity	Survivors	Total L.T.						
2018	10,015	853	1,249	12,118	679	343	13,140	3,745	1,049	21,002
2019	11,639	907	1,394	13,940	706	307	14,952	2,217	1,197	19,264
2020	12,754	1,144	1,502	15,400	657	346	16,403	3,811	1,100	24,059
2021	14,155	1,076	1,582	16,813	601	427	17,841	3,546	1,044	23,646
2022	16,456	1,280	1,841	19,576	613	512	20,701	2,905	1,876	25,481
2023	19,572	1,208	1,821	22,601	541	344	23,487	3,972	1,753	29,211
2024	20,864	1,265	1,922	24,050	570	378	24,999	4,631	1,886	31,516
2025	22,315	1,323	2,033	25,671	576	411	26,658	5,234	2,072	33,964
2026	23,953	1,384	2,147	27,485	590	447	28,522	5,613	2,308	36,443
2027	25,880	1,444	2,281	29,605	594	488	30,686	5,949	2,568	39,203
2028	28,247	1,502	2,439	32,187	595	535	33,317	5,895	2,845	42,056
2029	30,906	1,560	2,610	35,076	597	677	36,349	6,238	3,124	45,712
2030	34,042	1,617	2,802	38,460	601	744	39,805	6,609	3,414	49,827
2031	37,672	1,674	3,026	42,372	605	931	43,908	7,017	3,711	54,635
2032	41,679	1,731	3,283	46,693	609	1,202	48,504	7,457	4,012	59,973
2033	46,116	1,789	3,563	51,468	612	1,458	53,537	7,356	4,316	65,210
2034	50,926	1,847	3,872	56,645	615	1,708	58,968	7,815	4,624	71,407
2035	56,171	1,904	4,208	62,283	616	1,959	64,858	8,291	4,930	78,079
2036	62,163	1,962	4,568	68,694	620	2,143	71,458	8,812	5,231	85,500
2037	68,948	2,021	4,960	75,929	627	2,457	79,013	9,386	5,523	93,923
2038	76,362	2,079	5,385	83,826	634	2,653	87,112	8,839	5,802	101,753
2039	84,430	2,138	5,846	92,415	642	2,946	96,002	9,414	6,069	111,485
2040	93,096	2,198	6,332	101,627	652	3,159	105,438	10,019	6,315	121,772
2041	102,386	2,260	6,849	111,496	662	3,452	115,610	10,660	6,536	132,805
2042	112,397	2,323	7,400	122,120	673	3,774	126,567	11,339	6,725	144,631
2043	123,169	2,389	7,983	133,541	683	4,049	138,272	11,532	6,879	156,684
2044	134,952	2,459	8,601	146,011	697	4,402	151,110	12,270	6,994	170,374
2045	147,643	2,535	9,252	159,430	716	4,729	164,875	13,054	7,060	184,899
2046	161,265	2,618	9,939	173,823	736	5,098	179,656	13,890	7,070	200,616
2047	175,883	2,710	10,664	189,257	758	5,481	195,496	14,779	7,015	217,290
2048	191,604	2,811	11,426	205,841	783	5,943	212,567	15,724	6,889	235,179
2049	208,634	2,924	12,221	223,778	809	6,283	230,870	16,728	6,680	254,279
2050	226,770	3,048	13,054	242,872	836	6,565	250,273	17,788	6,379	274,441
2051	246,121	3,186	13,937	263,244	863	6,876	270,983	18,915	5,977	295,875
2052	266,138	3,339	14,881	284,358	891	7,068	292,317	20,094	5,462	317,873
2053	286,654	3,506	15,889	306,049	920	7,564	314,533	21,332	4,829	340,694
2054	307,862	3,689	16,962	328,514	949	7,654	337,117	22,614	4,070	363,800
2055	329,813	3,889	18,103	351,805	983	8,214	361,003	23,970	3,180	388,153
2056	352,532	4,109	19,318	375,959	1,025	8,435	385,419	25,388	2,150	412,956
2057	375,921	4,341	20,613	400,876	1,066	8,611	410,553	26,847	974	438,374
2058	399,961	4,582	22,006	426,549	1,108	9,261	436,918	28,394	0	465,312
2059	423,898	4,815	23,582	452,295	1,149	9,630	463,074	29,941	0	493,015
2060	447,068	5,036	25,494	477,598	1,190	10,364	489,152	31,512	0	520,664
2061	468,336	5,233	27,952	501,521	1,241	11,381	514,143	33,079	0	547,223
2062	486,323	5,387	31,283	522,992	1,292	13,030	537,315	34,601	0	571,916
2063	504,261	5,562	35,405	545,229	1,346	13,249	559,823	36,127	0	595,950
2064	525,622	5,815	39,304	570,741	1,414	12,493	584,648	37,826	0	622,474
2065	549,377	6,103	42,413	597,892	1,481	11,876	611,250	39,611	0	650,860
2066	574,870	6,418	44,952	626,240	1,550	11,588	639,377	41,484	0	680,862
2067	601,607	6,755	47,088	655,450	1,619	11,499	668,568	43,445	0	712,013
2068	629,120	7,103	49,000	685,224	1,688	11,630	698,543	45,457	0	744,000
2069	657,089	7,462	50,881	715,432	1,760	11,818	729,010	47,523	0	776,533
2070	685,593	7,835	52,832	746,260	1,834	11,989	760,083	49,655	0	809,738
2071	714,944	8,220	54,895	778,060	1,911	12,263	792,234	51,858	0	844,092
2072	745,581	8,619	57,107	811,308	1,990	12,675	825,972	54,150	0	880,122
2073	777,988	9,035	59,526	846,548	2,071	13,029	861,648	56,615	0	918,263
2074	812,226	9,446	62,151	883,824	2,148	13,396	899,368	59,118	0	958,486
2075	848,697	9,874	64,938	923,509	2,228	13,754	939,491	61,737	0	1,001,229
2076	887,493	10,319	67,858	965,670	2,311	14,195	982,175	64,480	0	1,046,655
2077	928,776	10,786	70,891	1,010,453	2,397	14,605	1,027,454	67,360	0	1,094,815
2078	972,825	11,279	74,018	1,058,121	2,487	15,055	1,075,662	70,405	0	1,146,067
2079	1,019,858	11,798	77,215	1,108,871	2,562	15,479	1,126,912	73,449	0	1,200,362
2080	1,070,655	12,391	80,454	1,163,500	2,652	15,941	1,182,093	76,812	0	1,258,904
2081	1,125,116	13,020	83,728	1,221,863	2,765	16,431	1,241,060	80,357	0	1,321,417
2082	1,183,765	13,686	87,014	1,284,466	2,884	16,989	1,304,339	84,012	0	1,388,351

Table 10.1
Projected Cost of the Long-Term Benefits Branch
Percent of Insurable Earnings

Year	LTB PENSIONS				NCOAP	Grants	Admin. Expenses	Invest. Expenses	Total LTB Outflow/Exp.
	Retirement	Invalidity	Survivors	Total L.T.					
2018	2.26%	0.19%	0.28%	2.74%	0.15%	0.08%	0.85%	0.24%	4.74%
2019	2.43%	0.19%	0.29%	2.91%	0.15%	0.06%	0.46%	0.25%	4.02%
2020	2.49%	0.22%	0.29%	3.01%	0.13%	0.07%	0.74%	0.21%	4.70%
2021	3.85%	0.29%	0.43%	4.57%	0.16%	0.12%	0.96%	0.28%	6.43%
2022	2.98%	0.23%	0.33%	3.55%	0.11%	0.09%	0.53%	0.34%	4.62%
2023	3.96%	0.24%	0.37%	4.57%	0.11%	0.07%	0.80%	0.35%	5.91%
2024	3.79%	0.23%	0.35%	4.37%	0.10%	0.07%	0.84%	0.34%	5.72%
2025	3.80%	0.23%	0.35%	4.37%	0.10%	0.07%	0.89%	0.35%	5.78%
2026	3.79%	0.22%	0.34%	4.34%	0.09%	0.07%	0.89%	0.36%	5.76%
2027	3.88%	0.22%	0.34%	4.44%	0.09%	0.07%	0.89%	0.38%	5.88%
2028	4.02%	0.21%	0.35%	4.58%	0.08%	0.08%	0.84%	0.40%	5.99%
2029	4.21%	0.21%	0.36%	4.77%	0.08%	0.09%	0.85%	0.43%	6.22%
2030	4.43%	0.21%	0.36%	5.01%	0.08%	0.10%	0.86%	0.44%	6.49%
2031	4.69%	0.21%	0.38%	5.28%	0.08%	0.12%	0.87%	0.46%	6.80%
2032	4.97%	0.21%	0.39%	5.57%	0.07%	0.14%	0.89%	0.48%	7.15%
2033	5.27%	0.20%	0.41%	5.88%	0.07%	0.17%	0.84%	0.49%	7.45%
2034	5.57%	0.20%	0.42%	6.19%	0.07%	0.19%	0.85%	0.51%	7.81%
2035	5.90%	0.20%	0.44%	6.54%	0.06%	0.21%	0.87%	0.52%	8.20%
2036	6.27%	0.20%	0.46%	6.92%	0.06%	0.22%	0.89%	0.53%	8.62%
2037	6.66%	0.20%	0.48%	7.34%	0.06%	0.24%	0.91%	0.53%	9.08%
2038	7.08%	0.19%	0.50%	7.78%	0.06%	0.25%	0.82%	0.54%	9.44%
2039	7.52%	0.19%	0.52%	8.23%	0.06%	0.26%	0.84%	0.54%	9.93%
2040	7.95%	0.19%	0.54%	8.68%	0.06%	0.27%	0.86%	0.54%	10.41%
2041	8.40%	0.19%	0.56%	9.15%	0.05%	0.28%	0.87%	0.54%	10.90%
2042	8.85%	0.18%	0.58%	9.62%	0.05%	0.30%	0.89%	0.53%	11.39%
2043	9.32%	0.18%	0.60%	10.10%	0.05%	0.31%	0.87%	0.52%	11.85%
2044	9.80%	0.18%	0.62%	10.61%	0.05%	0.32%	0.89%	0.51%	12.38%
2045	10.30%	0.18%	0.65%	11.13%	0.05%	0.33%	0.91%	0.49%	12.91%
2046	10.80%	0.18%	0.67%	11.65%	0.05%	0.34%	0.93%	0.47%	13.44%
2047	11.31%	0.17%	0.69%	12.17%	0.05%	0.35%	0.95%	0.45%	13.97%
2048	11.83%	0.17%	0.71%	12.71%	0.05%	0.37%	0.97%	0.43%	14.52%
2049	12.36%	0.17%	0.72%	13.26%	0.05%	0.37%	0.99%	0.40%	15.07%
2050	12.90%	0.17%	0.74%	13.81%	0.05%	0.37%	1.01%	0.36%	15.61%
2051	13.43%	0.17%	0.76%	14.36%	0.05%	0.38%	1.03%	0.33%	16.15%
2052	13.91%	0.17%	0.78%	14.86%	0.05%	0.37%	1.05%	0.29%	16.62%
2053	14.34%	0.18%	0.79%	15.31%	0.05%	0.38%	1.07%	0.24%	17.04%
2054	14.72%	0.18%	0.81%	15.71%	0.05%	0.37%	1.08%	0.19%	17.40%
2055	15.07%	0.18%	0.83%	16.07%	0.04%	0.38%	1.10%	0.15%	17.73%
2056	15.35%	0.18%	0.84%	16.37%	0.04%	0.37%	1.11%	0.09%	17.99%
2057	15.62%	0.18%	0.86%	16.66%	0.04%	0.36%	1.12%	0.04%	18.22%
2058	15.84%	0.18%	0.87%	16.89%	0.04%	0.37%	1.12%	0.00%	18.43%
2059	16.03%	0.18%	0.89%	17.10%	0.04%	0.36%	1.13%	0.00%	18.64%
2060	16.14%	0.18%	0.92%	17.24%	0.04%	0.37%	1.14%	0.00%	18.79%
2061	16.13%	0.18%	0.96%	17.27%	0.04%	0.39%	1.14%	0.00%	18.85%
2062	15.99%	0.18%	1.03%	17.19%	0.04%	0.43%	1.14%	0.00%	18.80%
2063	15.83%	0.17%	1.11%	17.12%	0.04%	0.42%	1.13%	0.00%	18.71%
2064	15.70%	0.17%	1.17%	17.05%	0.04%	0.37%	1.13%	0.00%	18.59%
2065	15.63%	0.17%	1.21%	17.01%	0.04%	0.34%	1.13%	0.00%	18.52%
2066	15.60%	0.17%	1.22%	16.99%	0.04%	0.31%	1.13%	0.00%	18.47%
2067	15.56%	0.17%	1.22%	16.95%	0.04%	0.30%	1.12%	0.00%	18.41%
2068	15.52%	0.18%	1.21%	16.91%	0.04%	0.29%	1.12%	0.00%	18.36%
2069	15.48%	0.18%	1.20%	16.86%	0.04%	0.28%	1.12%	0.00%	18.30%
2070	15.42%	0.18%	1.19%	16.79%	0.04%	0.27%	1.12%	0.00%	18.21%
2071	15.36%	0.18%	1.18%	16.72%	0.04%	0.26%	1.11%	0.00%	18.14%
2072	15.32%	0.18%	1.17%	16.67%	0.04%	0.26%	1.11%	0.00%	18.08%
2073	15.25%	0.18%	1.17%	16.59%	0.04%	0.26%	1.11%	0.00%	18.00%
2074	15.24%	0.18%	1.17%	16.59%	0.04%	0.25%	1.11%	0.00%	17.99%
2075	15.26%	0.18%	1.17%	16.60%	0.04%	0.25%	1.11%	0.00%	18.00%
2076	15.30%	0.18%	1.17%	16.65%	0.04%	0.24%	1.11%	0.00%	18.04%
2077	15.36%	0.18%	1.17%	16.71%	0.04%	0.24%	1.11%	0.00%	18.10%
2078	15.42%	0.18%	1.17%	16.78%	0.04%	0.24%	1.12%	0.00%	18.17%
2079	15.59%	0.18%	1.18%	16.95%	0.04%	0.24%	1.12%	0.00%	18.35%
2080	15.71%	0.18%	1.18%	17.08%	0.04%	0.23%	1.13%	0.00%	18.48%
2081	15.86%	0.18%	1.18%	17.22%	0.04%	0.23%	1.13%	0.00%	18.63%
2082	16.07%	0.19%	1.18%	17.44%	0.04%	0.23%	1.14%	0.00%	18.85%

Table 11
Cash Flow Statement for the Long-Term Benefits Branch

Year	Cash Outflows	Cash Inflows/Income \$(,000s)					Net Income	\$(,000)s Fund at EOY	As a % of Insurable Earnings		Fund Ratio
		Contn's	Surcharge	Gross Invest. Income	Cash Inflows	Outflows			Inflows		
2018	21,002	24,411	841	22,478	47,730	26,728	183,860	4.74%	10.77%	8.8	
2019	19,264	26,386	380	6,346	33,112	13,689	197,549	4.02%	6.92%	10.3	
2020	24,059	28,217	360	6,756	35,332	(4,584)	192,965	4.70%	6.90%	8.0	
2021	23,646	20,325	624	12,509	33,459	71,907	264,873	6.43%	9.10%	11.2	
2022	25,481	30,474	243	12,653	43,370	17,889	282,761	4.62%	7.86%	11.1	
2023	29,211	33,996	595	16,071	50,662	21,450	304,212	5.91%	10.24%	10.4	
2024	31,516	43,322	758	17,420	61,499	29,984	334,195	5.72%	11.17%	10.6	
2025	33,964	52,068	781	19,226	72,075	38,111	372,307	5.78%	12.27%	11.0	
2026	36,443	56,073	841	21,413	78,327	41,884	414,191	5.76%	12.38%	11.4	
2027	39,203	59,139	887	23,781	83,807	44,604	458,795	5.88%	12.56%	11.7	
2028	42,056	62,272	934	23,964	87,170	45,113	503,908	5.99%	12.41%	12.0	
2029	45,712	65,132	977	26,265	92,374	46,662	550,570	6.22%	12.57%	12.0	
2030	49,827	68,097	1,021	28,638	97,756	47,929	598,499	6.49%	12.73%	12.0	
2031	54,635	71,169	1,068	31,066	103,302	48,667	647,166	6.80%	12.87%	11.8	
2032	59,973	74,357	1,115	33,523	108,996	49,023	696,188	7.15%	12.99%	11.6	
2033	65,210	77,604	1,164	36,006	114,774	49,564	745,752	7.45%	13.11%	11.4	
2034	71,407	81,061	1,216	38,500	120,777	49,370	795,122	7.81%	13.21%	11.1	
2035	78,079	84,402	1,266	40,971	126,639	48,560	843,683	8.20%	13.30%	10.8	
2036	85,500	87,953	1,319	43,392	132,664	47,163	890,846	8.62%	13.37%	10.4	
2037	93,923	91,707	1,376	45,728	138,811	44,888	935,735	9.08%	13.42%	10.0	
2038	101,753	95,561	1,433	47,970	144,964	43,211	978,946	9.44%	13.45%	9.6	
2039	111,485	99,551	1,493	50,087	151,132	39,647	1,018,592	9.93%	13.46%	9.1	
2040	121,772	103,738	1,556	52,019	157,313	35,541	1,054,133	10.41%	13.44%	8.7	
2041	132,805	108,051	1,621	53,733	163,404	30,599	1,084,732	10.90%	13.41%	8.2	
2042	144,631	112,530	1,688	55,187	169,405	24,774	1,109,506	11.39%	13.34%	7.7	
2043	156,684	117,175	1,758	56,350	175,283	18,599	1,128,105	11.85%	13.26%	7.2	
2044	170,374	122,014	1,830	57,176	181,020	10,646	1,138,751	12.38%	13.15%	6.7	
2045	184,989	127,026	1,905	57,589	186,520	1,531	1,140,282	12.91%	13.02%	6.2	
2046	200,616	132,311	1,985	57,533	191,829	(8,787)	1,131,495	13.44%	12.85%	5.6	
2047	217,290	137,863	2,068	56,950	196,880	(20,410)	1,111,086	13.97%	12.66%	5.1	
2048	235,179	143,603	2,154	55,772	201,529	(33,651)	1,077,435	14.52%	12.44%	4.6	
2049	254,279	149,613	2,244	53,922	205,779	(48,499)	1,028,935	15.07%	12.19%	4.0	
2050	274,441	155,884	2,338	51,327	209,549	(64,892)	964,043	15.61%	11.92%	3.5	
2051	295,875	162,444	2,437	47,913	212,794	(83,081)	880,963	16.15%	11.61%	3.0	
2052	317,873	169,583	2,544	43,612	215,739	(102,134)	778,828	16.62%	11.28%	2.5	
2053	340,694	177,213	2,658	38,388	218,259	(122,436)	656,393	17.04%	10.92%	1.9	
2054	363,800	185,370	2,781	32,196	220,347	(143,454)	512,939	17.40%	10.54%	1.4	
2055	388,153	194,011	2,910	25,015	221,936	(166,218)	346,721	17.73%	10.14%	0.9	
2056	412,956	203,529	3,053	16,797	223,378	(189,578)	157,144	17.99%	9.73%	0.4	
2057	438,374	213,297	3,199	7,550	224,047	(214,328)	(57,184)	18.22%	9.31%	(0.1)	
2058	465,312	223,832	3,357	0	227,189	(238,123)	(295,306)	18.43%	9.00%	(0.6)	
2059	493,015	234,472	3,517	0	237,989	(255,026)	(550,332)	18.64%	9.00%	(1.1)	
2060	520,664	245,593	3,684	0	249,277	(271,387)	(821,720)	18.79%	9.00%	(1.6)	
2061	547,223	257,379	3,861	0	261,240	(285,983)	(1,107,703)	18.85%	9.00%	(2.0)	
2062	571,916	269,625	4,044	0	273,670	(298,246)	(1,405,949)	18.80%	9.00%	(2.5)	
2063	595,950	282,365	4,235	0	286,600	(309,350)	(1,715,299)	18.71%	9.00%	(2.9)	
2064	622,474	296,790	4,452	0	301,241	(321,232)	(2,036,531)	18.59%	9.00%	(3.3)	
2065	650,860	311,490	4,672	0	316,162	(334,698)	(2,371,229)	18.52%	9.00%	(3.6)	
2066	680,862	326,738	4,901	0	331,640	(349,222)	(2,720,451)	18.47%	9.00%	(4.0)	
2067	712,013	342,816	5,142	0	347,959	(364,054)	(3,084,506)	18.41%	9.00%	(4.3)	
2068	744,000	359,250	5,389	0	364,639	(379,361)	(3,463,866)	18.36%	9.00%	(4.7)	
2069	776,533	376,225	5,643	0	381,869	(394,664)	(3,858,530)	18.30%	9.00%	(5.0)	
2070	809,738	394,056	5,911	0	399,967	(409,772)	(4,268,302)	18.21%	9.00%	(5.3)	
2071	844,092	412,465	6,187	0	418,651	(425,441)	(4,693,742)	18.14%	9.00%	(5.6)	
2072	880,122	431,425	6,471	0	437,896	(442,226)	(5,135,968)	18.08%	9.00%	(5.8)	
2073	918,263	452,256	6,784	0	459,040	(459,223)	(5,595,191)	18.00%	9.00%	(6.1)	
2074	958,486	472,378	7,086	0	479,464	(479,022)	(6,074,213)	17.99%	9.00%	(6.3)	
2075	1,001,229	493,042	7,396	0	500,438	(500,791)	(6,575,004)	18.00%	9.00%	(6.6)	
2076	1,046,655	514,220	7,713	0	521,933	(524,722)	(7,099,727)	18.04%	9.00%	(6.8)	
2077	1,094,815	536,129	8,042	0	544,171	(550,643)	(7,650,370)	18.10%	9.00%	(7.0)	
2078	1,146,067	559,095	8,386	0	567,482	(578,585)	(8,228,955)	18.17%	9.00%	(7.2)	
2079	1,200,362	579,927	8,699	0	588,626	(611,736)	(8,840,691)	18.35%	9.00%	(7.4)	
2080	1,258,904	604,003	9,060	0	613,063	(645,841)	(9,486,532)	18.48%	9.00%	(7.5)	
2081	1,321,417	628,889	9,433	0	638,322	(683,095)	(10,169,627)	18.63%	9.00%	(7.7)	
2082	1,388,351	652,847	9,793	0	662,640	(725,711)	(10,895,338)	18.85%	9.00%	(7.8)	

Table 12
Projected Cost of Employment Injury Allowances, Travel & Medical Expenses
Short-term EI Benefits

Year	Active Contributors	Cost of Employment Injury Benefit Allowance					Cost of E.I. Medical Expenses, includes TCIG-NHIP Claim 2010 -2012					
		No. of Injury Allowances	Rate of Allowances	Days per Allowances	Total # of days claims were paid	Cost per Day	\$(,000)s Cost of Injury	No. of Payments	Rate of Payments per Injury Allowance	Cost Per Payment	\$(,000)s Total Cost	
2018	21,122	58	0.00275	57.12	3,313	31.77	105	1	0.0000	0	0	
2019	21,483	52	0.00242	58.19	3,026	34.70	105	1	0.0000	0	0	
2020	22,384	54	0.00241	76.06	4,107	30.16	124	1	0.0000	-92.8	(93)	
2021	19,961	24	0.00120	141.54	3,397	50.61	172	1	0.0000	0.0	0	
2022	22,274	29	0.00130	72.90	2,114	33.94	72	1	0.0000	99.0	99	
2023	22,302	45	0.00202	70.00	3,150	37.76	119	1	0.0000	115.6	116	
2024	22,777	46	0.00202	70.00	3,220	39.01	126	1	0.0000	118.3	118	
2025	23,230	47	0.00202	70.00	3,290	39.91	131	1	0.0000	122.4	122	
2026	23,660	48	0.00202	70.00	3,360	41.95	141	1	0.0000	123.9	124	
2027	24,061	49	0.00202	70.00	3,430	40.14	138	1	0.0000	117.7	118	
2028	24,485	49	0.00202	70.00	3,430	41.43	142	1	0.0000	130.9	131	
2029	24,892	50	0.00202	70.00	3,500	42.20	148	1	0.0000	135.5	136	
2030	25,272	51	0.00202	70.00	3,570	42.86	153	1	0.0000	139.9	140	
2031	25,623	52	0.00202	70.00	3,640	43.48	158	1	0.0000	144.3	144	
2032	25,951	52	0.00202	70.00	3,640	43.79	159	1	0.0000	147.7	148	
2033	26,249	53	0.00202	70.00	3,710	44.56	165	1	0.0000	152.1	152	
2034	26,552	54	0.00202	70.00	3,780	45.21	171	1	0.0000	156.7	157	
2035	26,798	54	0.00202	70.00	3,780	45.83	173	1	0.0000	161.4	161	
2036	27,019	54	0.00202	70.00	3,780	46.45	176	1	0.0000	165.4	165	
2037	27,237	55	0.00202	70.00	3,850	47.07	181	1	0.0000	168.9	169	
2038	27,431	55	0.00202	70.00	3,850	47.76	184	1	0.0000	173.3	173	
2039	27,582	56	0.00202	70.00	3,920	48.43	190	1	0.0000	177.0	177	
2040	27,700	56	0.00202	70.00	3,920	49.10	192	1	0.0000	180.8	181	
2041	27,776	56	0.00202	70.00	3,920	49.78	195	1	0.0000	184.6	185	
2042	27,818	56	0.00202	70.00	3,920	50.47	198	1	0.0000	188.5	189	
2043	27,826	56	0.00202	70.00	3,920	51.18	201	1	0.0000	191.8	192	
2044	27,801	56	0.00202	70.00	3,920	51.89	203	1	0.0000	195.2	195	
2045	27,733	56	0.00202	70.00	3,920	52.61	206	1	0.0000	197.9	198	
2046	27,632	56	0.00202	70.00	3,920	53.34	209	1	0.0000	200.6	201	
2047	27,513	55	0.00202	70.00	3,850	54.09	208	1	0.0000	203.4	203	
2048	27,364	55	0.00202	70.00	3,850	54.84	211	1	0.0000	205.5	206	
2049	27,203	55	0.00202	70.00	3,850	55.60	214	1	0.0000	207.6	208	
2050	27,030	55	0.00202	70.00	3,850	56.38	217	1	0.0000	209.8	210	
2051	26,849	54	0.00202	70.00	3,780	57.17	216	1	0.0000	211.9	212	
2052	26,687	54	0.00202	70.00	3,780	57.96	219	1	0.0000	213.3	213	
2053	26,549	54	0.00202	70.00	3,780	58.77	222	1	0.0000	215.5	215	
2054	26,425	53	0.00202	70.00	3,710	59.59	221	1	0.0000	217.7	218	
2055	26,298	53	0.00202	70.00	3,710	60.42	224	1	0.0000	219.1	219	
2056	26,207	53	0.00202	70.00	3,710	61.26	227	1	0.0000	220.5	221	
2057	26,113	53	0.00202	70.00	3,710	62.11	230	1	0.0000	222.8	223	
2058	26,065	53	0.00202	70.00	3,710	62.98	234	1	0.0000	225.0	225	
2059	26,015	52	0.00202	70.00	3,640	63.86	232	1	0.0000	227.3	227	
2060	25,972	52	0.00202	70.00	3,640	64.75	236	1	0.0000	229.6	230	
2061	25,950	52	0.00202	70.00	3,640	65.65	239	1	0.0000	231.9	232	
2062	25,931	52	0.00202	70.00	3,640	66.56	242	1	0.0000	234.2	234	
2063	25,895	52	0.00202	70.00	3,640	67.49	246	1	0.0000	236.6	237	
2064	25,918	52	0.00202	70.00	3,640	68.43	249	1	0.0000	239.0	239	
2065	25,978	52	0.00202	70.00	3,640	69.38	253	1	0.0000	242.3	242	
2066	26,067	53	0.00202	70.00	3,710	70.35	261	1	0.0000	245.7	246	
2067	26,199	53	0.00202	70.00	3,710	71.33	265	1	0.0000	250.1	250	
2068	26,345	53	0.00202	70.00	3,710	72.33	268	1	0.0000	254.6	255	
2069	26,494	53	0.00202	70.00	3,710	73.33	272	1	0.0000	259.1	259	
2070	26,652	54	0.00202	70.00	3,780	74.36	281	1	0.0000	263.7	264	
2071	26,810	54	0.00202	70.00	3,780	75.39	285	1	0.0000	269.4	269	
2072	26,964	54	0.00202	70.00	3,780	76.44	289	1	0.0000	274.2	274	
2073	27,190	55	0.00202	70.00	3,850	77.51	298	1	0.0000	279.1	279	
2074	27,407	55	0.00202	70.00	3,850	78.59	303	1	0.0000	285.1	285	
2075	27,617	56	0.00202	70.00	3,920	79.68	312	1	0.0000	291.2	291	
2076	27,813	56	0.00202	70.00	3,920	80.79	317	1	0.0000	297.4	297	
2077	27,996	56	0.00202	70.00	3,920	81.92	321	1	0.0000	303.8	304	
2078	28,166	57	0.00202	70.00	3,990	83.06	331	1	0.0000	310.2	310	
2079	28,180	57	0.00202	70.00	3,990	84.22	336	1	0.0000	316.8	317	
2080	28,172	57	0.00202	70.00	3,990	85.39	341	1	0.0000	323.5	324	
2081	28,143	57	0.00202	70.00	3,990	86.58	345	1	0.0000	329.2	329	
2082	28,023	57	0.00202	70.00	3,990	87.79	350	1	0.0000	334.9	335	

Table 13
Projected Cost of Employment Injury Pensions
Includes Survivor Pensions & Constant Attendance Allowance

Employment Injury Disablement Pensions							
Year	No. of Pensions Awarded in the Year	Rate of Awards per Injury Allowance	No. of Term'ns in the Year	Rate of Term'n	No. in Pay at EOY	Avg. Annual Benefit Awarded	Cost of EI Pensions \$(,000)s
2018	0	0.0000	0	0.0000	35	10,203	357
2019	0	0.0000	0	0.0000	43	9,572	412
2020	2	0.0370	0	0.0000	43	9,647	415
2021	2	0.0833	0	0.0000	45	9,377	422
2022	2	0.0690	1	0.0106	39	12,391	483
2023	2	0.0379	1	0.0106	40	10,913	437
2024	2	0.0454	1	0.0106	41	11,374	466
2025	3	0.0545	1	0.0106	43	11,854	510
2026	3	0.0580	1	0.0106	45	12,354	556
2027	3	0.0530	1	0.0106	47	12,875	605
2028	2	0.0498	1	0.0106	48	13,418	644
2029	3	0.0521	1	0.0106	50	13,984	699
2030	3	0.0535	1	0.0106	52	14,574	758
2031	3	0.0533	1	0.0106	54	15,189	820
2032	3	0.0523	1	0.0106	56	15,829	886
2033	3	0.0522	1	0.0106	58	16,497	957
2034	3	0.0527	1	0.0106	60	17,193	1,032
2035	3	0.0528	1	0.0106	62	17,919	1,111
2036	3	0.0527	1	0.0106	64	18,674	1,195
2037	3	0.0525	1	0.0106	66	19,462	1,285
2038	3	0.0526	1	0.0106	68	20,283	1,379
2039	3	0.0527	1	0.0106	70	21,139	1,480
2040	3	0.0526	1	0.0106	72	22,031	1,586
2041	3	0.0526	1	0.0106	74	22,960	1,699
2042	3	0.0526	1	0.0106	76	23,929	1,819
2043	3	0.0526	1	0.0106	78	24,938	1,945
2044	3	0.0526	1	0.0106	80	25,990	2,079
2045	3	0.0526	1	0.0106	82	27,087	2,221
2046	3	0.0526	1	0.0106	84	28,229	2,371
2047	3	0.0526	1	0.0106	86	29,420	2,530
2048	3	0.0526	1	0.0106	88	30,661	2,698
2049	3	0.0526	1	0.0106	90	31,955	2,876
2050	3	0.0526	1	0.0106	92	33,303	3,064
2051	3	0.0526	1	0.0106	94	34,708	3,263
2052	3	0.0526	1	0.0106	96	36,172	3,473
2053	3	0.0526	1	0.0106	98	37,698	3,694
2054	3	0.0526	1	0.0106	100	39,289	3,929
2055	3	0.0526	1	0.0106	102	40,946	4,176
2056	3	0.0526	1	0.0106	104	42,673	4,438
2057	3	0.0526	1	0.0106	106	44,474	4,714
2058	3	0.0526	1	0.0106	108	46,350	5,006
2059	3	0.0526	1	0.0106	110	48,305	5,314
2060	3	0.0526	1	0.0106	112	50,343	5,638
2061	3	0.0526	1	0.0106	114	52,467	5,981
2062	3	0.0526	1	0.0106	116	54,680	6,343
2063	3	0.0526	1	0.0106	118	56,987	6,724
2064	3	0.0526	1	0.0106	120	59,391	7,127
2065	3	0.0526	1	0.0106	122	61,896	7,551
2066	3	0.0526	1	0.0106	124	64,508	7,999
2067	3	0.0526	1	0.0106	126	67,229	8,471
2068	3	0.0526	1	0.0106	128	70,065	8,968
2069	3	0.0526	1	0.0106	130	73,021	9,493
2070	3	0.0526	1	0.0106	132	76,101	10,045
2071	3	0.0526	1	0.0106	134	79,312	10,628
2072	3	0.0526	1	0.0106	136	82,658	11,241
2073	3	0.0526	1	0.0106	138	86,145	11,888
2074	3	0.0526	1	0.0106	140	89,779	12,569
2075	3	0.0526	1	0.0106	142	93,566	13,286
2076	3	0.0526	1	0.0106	144	97,513	14,042
2077	3	0.0526	1	0.0106	146	101,627	14,838
2078	3	0.0526	1	0.0106	148	105,914	15,675
2079	3	0.0526	1	0.0106	150	110,383	16,557
2080	3	0.0526	1	0.0106	152	115,039	17,486
2081	3	0.0526	1	0.0106	154	119,892	18,463
2082	3	0.0526	1	0.0106	156	124,950	19,492

Table 14
Projected Cost of the Employment Injury Grants
short-term EI Benefits

Year	No. of Injury Allowances	Disablement & Death Grants			
		No. of Grants, minimum of 1 projected	Rate of Grants per Injury Allowance	Cost per Grant \$(,000)s	\$(,000)s Total Cost of Grants
2018	58	1	0.0172	2.39	2.39
2019	52	0	0.0000	0.00	0.00
2020	54	0	0.0000	0.00	2.39
2021	24	0	0.0000	0.00	0.00
2022	29	0	0.0000	0.00	0.00
2023	45	1	0.0000	0.00	0.00
2024	46	1	0.0000	0.00	0.00
2025	47	1	0.0000	0.00	0.00
2026	48	1	0.0000	0.00	0.00
2027	49	1	0.0000	0.00	0.00
2028	49	1	0.0000	0.00	0.00
2029	50	1	0.0000	0.00	0.00
2030	51	1	0.0000	0.00	0.00
2031	52	1	0.0000	0.00	0.00
2032	52	1	0.0000	0.00	0.00
2033	53	1	0.0000	0.00	0.00
2034	54	1	0.0000	0.00	0.00
2035	54	1	0.0000	0.00	0.00
2036	54	1	0.0000	0.00	0.00
2037	55	1	0.0000	0.00	0.00
2038	55	1	0.0000	0.00	0.00
2039	56	1	0.0000	0.00	0.00
2040	56	1	0.0000	0.00	0.00
2041	56	1	0.0000	0.00	0.00
2042	56	1	0.0000	0.00	0.00
2043	56	1	0.0000	0.00	0.00
2044	56	1	0.0000	0.00	0.00
2045	56	1	0.0000	0.00	0.00
2046	56	1	0.0000	0.00	0.00
2047	55	1	0.0000	0.00	0.00
2048	55	1	0.0000	0.00	0.00
2049	55	1	0.0000	0.00	0.00
2050	55	1	0.0000	0.00	0.00
2051	54	1	0.0000	0.00	0.00
2052	54	1	0.0000	0.00	0.00
2053	54	1	0.0000	0.00	0.00
2054	53	1	0.0000	0.00	0.00
2055	53	1	0.0000	0.00	0.00
2056	53	1	0.0000	0.00	0.00
2057	53	1	0.0000	0.00	0.00
2058	53	1	0.0000	0.00	0.00
2059	52	1	0.0000	0.00	0.00
2060	52	1	0.0000	0.00	0.00
2061	52	1	0.0000	0.00	0.00
2062	52	1	0.0000	0.00	0.00
2063	52	1	0.0000	0.00	0.00
2064	52	1	0.0000	0.00	0.00
2065	52	1	0.0000	0.00	0.00
2066	53	1	0.0000	0.00	0.00
2067	53	1	0.0000	0.00	0.00
2068	53	1	0.0000	0.00	0.00
2069	53	1	0.0000	0.00	0.00
2070	54	1	0.0000	0.00	0.00
2071	54	1	0.0000	0.00	0.00
2072	54	1	0.0000	0.00	0.00
2073	55	1	0.0000	0.00	0.00
2074	55	1	0.0000	0.00	0.00
2075	56	1	0.0000	0.00	0.00
2076	56	1	0.0000	0.00	0.00
2077	56	1	0.0000	0.00	0.00
2078	57	1	0.0000	0.00	0.00
2079	57	1	0.0000	0.00	0.00
2080	57	1	0.0000	0.00	0.00
2081	57	1	0.0000	0.00	0.00
2082	57	1	0.0000	0.00	0.00

Table 15
Projected Cost of the Employment Injury Benefits Branch

Year	Cost \$(,000)s							\$(,000)s Total Cost (incl change in provision IAS26)
	Injury Allowance	Travel & Medical Expenses	All Pensions	Grants	Total EI Benefits	Admin. Expenses	Invest. Expenses	
2018	105	0	357	2	465	894	237	2,368
2019	105	0	412	0	517	529	284	1,470
2020	124	-93	415	2	448	910	274	1,830
2021	172	0	422	0	594	847	277	1,733
2022	72	99	483	0	654	694	521	1,869
2023	119	116	437	0	671	948	507	2,126
2024	126	118	466	0	710	1,106	553	2,369
2025	131	122	510	0	763	1,250	604	2,618
2026	141	124	556	0	821	1,340	659	2,820
2027	138	118	605	0	861	1,421	719	3,000
2028	142	131	644	0	917	1,408	783	3,108
2029	148	136	699	0	982	1,490	848	3,320
2030	153	140	758	0	1,051	1,578	917	3,546
2031	158	144	820	0	1,123	1,676	991	3,789
2032	159	148	886	0	1,194	1,781	1,068	4,043
2033	165	152	957	0	1,274	1,757	1,150	4,181
2034	171	157	1,032	0	1,359	1,866	1,238	4,464
2035	173	161	1,111	0	1,446	1,980	1,331	4,757
2036	176	165	1,195	0	1,536	2,104	1,429	5,070
2037	181	169	1,285	0	1,635	2,242	1,533	5,409
2038	184	173	1,379	0	1,736	2,111	1,642	5,489
2039	190	177	1,480	0	1,847	2,248	1,759	5,854
2040	192	181	1,586	0	1,959	2,393	1,882	6,234
2041	195	185	1,699	0	2,079	2,546	2,012	6,637
2042	198	189	1,819	0	2,205	2,708	2,149	7,062
2043	201	192	1,945	0	2,338	2,754	2,293	7,385
2044	203	195	2,079	0	2,478	2,930	2,446	7,854
2045	206	198	2,221	0	2,625	3,117	2,607	8,349
2046	209	201	2,371	0	2,781	3,317	2,775	8,873
2047	208	203	2,530	0	2,942	3,529	2,953	9,424
2048	211	206	2,698	0	3,115	3,755	3,140	10,009
2049	214	208	2,876	0	3,298	3,995	3,335	10,628
2050	217	210	3,064	0	3,491	4,248	3,541	11,280
2051	216	212	3,263	0	3,691	4,517	3,757	11,964
2052	219	213	3,473	0	3,905	4,799	3,983	12,686
2053	222	215	3,694	0	4,132	5,094	4,220	13,446
2054	221	218	3,929	0	4,368	5,400	4,468	14,236
2055	224	219	4,176	0	4,620	5,724	4,729	15,073
2056	227	221	4,438	0	4,886	6,063	5,001	15,950
2057	230	223	4,714	0	5,167	6,411	5,287	16,866
2058	234	225	5,006	0	5,464	6,781	5,586	17,831
2059	232	227	5,314	0	5,773	7,150	5,897	18,821
2060	236	230	5,638	0	6,104	7,525	6,221	19,850
2061	239	232	5,981	0	6,452	7,900	6,556	20,907
2062	242	234	6,343	0	6,819	8,263	6,900	21,982
2063	246	237	6,724	0	7,207	8,627	7,247	23,081
2064	249	239	7,127	0	7,615	9,033	7,586	24,234
2065	253	242	7,551	0	8,046	9,459	7,868	25,374
2066	261	246	7,999	0	8,506	9,907	0	18,412
2067	265	250	8,471	0	8,986	10,375	0	19,361
2068	268	255	8,968	0	9,491	10,855	0	20,347
2069	272	259	9,493	0	10,024	11,349	0	21,373
2070	281	264	10,045	0	10,590	11,858	0	22,448
2071	285	269	10,628	0	11,182	12,384	0	23,566
2072	289	274	11,241	0	11,805	12,931	0	24,736
2073	298	279	11,888	0	12,465	13,520	0	25,985
2074	303	285	12,569	0	13,157	14,118	0	27,274
2075	312	291	13,286	0	13,890	14,743	0	28,633
2076	317	297	14,042	0	14,656	15,398	0	30,054
2077	321	304	14,838	0	15,462	16,086	0	31,548
2078	331	310	15,675	0	16,317	16,813	0	33,130
2079	336	317	16,557	0	17,210	17,540	0	34,750
2080	341	324	17,486	0	18,150	18,343	0	36,493
2081	345	329	18,463	0	19,138	19,190	0	38,328
2082	350	335	19,492	0	20,177	20,062	0	40,240

Table 16
Cash Flow Statement for the Employment Injury Benefits Branch

Year	Cash Inflows/Income \$(,000s)						Reserve Fund at EOY \$(,000s)			As a % of Insurable Earnings	
	Cash Outflows	Contr'n's	Surcharge	Gross Invest. Income	Cash Inflows	Net Income	Total	Amount in the EI STBs Reserves	Amount in the Disablement & Death Benefit (Pensions/LTBs) Reserve	Outflows	Inflows
2018	2,368	5,185	184	5,079	10,448	8,080	43,586	2,368	41,219	0.53%	2.36%
2019	1,470	5,568	83	1,504	7,156	5,648	49,234	1,470	47,764	0.31%	1.49%
2020	1,830	5,936	78	1,684	7,699	1,916	51,150	1,470	49,681	0.36%	1.50%
2021	1,733	4,293	136	3,316	7,746	22,472	73,623	1,470	72,153	0.47%	2.11%
2022	1,869	6,437	53	3,517	10,007	8,138	81,761	1,470	80,291	0.34%	1.81%
2023	2,126	4,857	85	4,647	9,588	7,462	89,223	1,470	87,753	0.43%	1.94%
2024	2,369	5,423	95	5,109	10,627	8,257	97,480	1,470	96,011	0.43%	1.93%
2025	2,618	5,783	87	5,608	11,478	8,860	106,341	1,470	104,871	0.45%	1.95%
2026	2,820	6,228	93	6,116	12,437	9,617	115,958	1,470	114,488	0.45%	1.97%
2027	3,000	6,568	99	6,658	13,325	10,325	126,282	1,470	124,812	0.45%	2.00%
2028	3,108	6,916	104	6,596	13,616	10,508	136,790	1,470	135,321	0.44%	1.94%
2029	3,320	7,234	109	7,130	14,472	11,152	147,942	1,470	146,473	0.45%	1.97%
2030	3,546	7,563	113	7,695	15,372	11,826	159,768	1,470	158,299	0.46%	2.00%
2031	3,789	7,904	119	8,293	16,316	12,527	172,295	1,470	170,826	0.47%	2.03%
2032	4,043	8,259	124	8,925	17,307	13,265	185,560	1,470	184,090	0.48%	2.06%
2033	4,181	8,619	129	9,597	18,345	14,164	199,724	1,470	198,254	0.48%	2.10%
2034	4,464	9,003	135	10,311	19,449	14,985	214,709	1,470	213,240	0.49%	2.13%
2035	4,757	9,374	141	11,063	20,578	15,822	230,531	1,470	229,061	0.50%	2.16%
2036	5,070	9,769	147	11,856	21,772	16,702	247,233	1,470	245,763	0.51%	2.19%
2037	5,409	10,186	153	12,691	23,029	17,620	264,853	1,470	263,383	0.52%	2.23%
2038	5,489	10,614	159	13,578	24,350	18,861	283,714	1,470	282,244	0.51%	2.26%
2039	5,854	11,057	166	14,516	25,739	19,885	303,599	1,470	302,129	0.52%	2.29%
2040	6,234	11,522	173	15,505	27,199	20,965	324,564	1,470	323,094	0.53%	2.32%
2041	6,637	12,001	180	16,544	28,725	22,088	346,653	1,470	345,183	0.54%	2.36%
2042	7,062	12,498	187	17,636	30,322	23,260	369,913	1,470	368,443	0.56%	2.39%
2043	7,385	13,014	195	18,787	31,997	24,612	394,524	1,470	393,055	0.56%	2.42%
2044	7,854	13,552	203	19,996	33,751	25,897	420,421	1,470	418,951	0.57%	2.45%
2045	8,349	14,108	212	21,262	35,582	27,232	447,653	1,470	446,184	0.58%	2.48%
2046	8,873	14,695	220	22,587	37,502	28,629	476,282	1,470	474,813	0.59%	2.51%
2047	9,424	15,312	230	23,972	39,514	30,090	506,372	1,470	504,902	0.61%	2.54%
2048	10,009	15,949	239	25,418	41,606	31,597	537,969	1,470	536,499	0.62%	2.57%
2049	10,628	16,617	249	26,924	43,790	33,162	571,131	1,470	569,661	0.63%	2.59%
2050	11,280	17,313	260	28,490	46,063	34,784	605,915	1,470	604,445	0.64%	2.62%
2051	11,964	18,042	271	30,114	48,427	36,463	642,378	1,470	640,908	0.65%	2.64%
2052	12,686	18,835	283	31,801	50,919	38,232	680,610	1,470	679,140	0.66%	2.66%
2053	13,446	19,682	295	33,546	53,524	40,078	720,688	1,470	719,218	0.67%	2.68%
2054	14,236	20,588	309	35,350	56,247	42,011	762,699	1,470	761,229	0.68%	2.69%
2055	15,073	21,548	323	37,195	59,066	43,993	806,692	1,470	805,222	0.69%	2.70%
2056	15,950	22,605	339	39,080	62,024	46,074	852,766	1,470	851,296	0.69%	2.70%
2057	16,866	23,690	355	40,973	65,019	48,153	900,919	1,470	899,449	0.70%	2.70%
2058	17,831	24,860	373	42,835	68,068	50,237	951,156	1,470	949,686	0.71%	2.70%
2059	18,821	26,042	391	44,607	71,040	52,219	1,003,375	1,470	1,001,905	0.71%	2.69%
2060	19,850	27,277	409	46,177	73,863	54,013	1,057,388	1,470	1,055,919	0.72%	2.67%
2061	20,907	28,586	429	47,347	76,362	55,455	1,112,843	1,470	1,111,374	0.72%	2.63%
2062	21,982	29,946	449	47,673	78,068	56,086	1,168,930	1,470	1,167,460	0.72%	2.57%
2063	23,081	31,361	470	45,842	77,674	54,593	1,223,522	1,470	1,222,053	0.72%	2.44%
2064	24,234	32,963	494	36,360	69,818	45,584	1,269,106	1,470	1,267,637	0.72%	2.09%
2065	25,374	34,596	519	0	35,115	9,741	1,278,848	1,470	1,277,378	0.72%	1.00%
2066	18,412	36,290	544	0	36,834	18,422	1,297,269	1,470	1,295,800	0.50%	1.00%
2067	19,361	38,075	571	0	38,647	19,286	1,316,555	1,470	1,315,086	0.50%	1.00%
2068	20,347	39,901	599	0	40,499	20,153	1,336,708	1,470	1,335,238	0.50%	1.00%
2069	21,373	41,786	627	0	42,413	21,040	1,357,748	1,470	1,356,278	0.50%	1.00%
2070	22,448	43,766	656	0	44,423	21,975	1,379,723	1,470	1,378,253	0.50%	1.00%
2071	23,566	45,811	687	0	46,498	22,932	1,402,655	1,470	1,401,185	0.51%	1.00%
2072	24,736	47,917	719	0	48,636	23,900	1,426,555	1,470	1,425,085	0.51%	1.00%
2073	25,985	50,231	753	0	50,984	24,999	1,451,553	1,470	1,450,084	0.51%	1.00%
2074	27,274	52,465	787	0	53,252	25,978	1,477,532	1,470	1,476,062	0.51%	1.00%
2075	28,633	54,761	821	0	55,582	26,949	1,504,480	1,470	1,503,011	0.51%	1.00%
2076	30,054	57,113	857	0	57,969	27,915	1,532,395	1,470	1,530,926	0.52%	1.00%
2077	31,548	59,546	893	0	60,439	28,891	1,561,286	1,470	1,559,816	0.52%	1.00%
2078	33,130	62,097	931	0	63,028	29,898	1,591,184	1,470	1,589,715	0.53%	1.00%
2079	34,750	64,411	966	0	65,377	30,626	1,621,811	1,470	1,620,341	0.53%	1.00%
2080	36,493	67,085	1,006	0	68,091	31,598	1,653,408	1,470	1,651,939	0.54%	1.00%
2081	38,328	69,849	1,048	0	70,896	32,568	1,685,977	1,470	1,684,507	0.54%	1.00%
2082	40,240	72,510	1,088	0	73,597	33,357	1,719,334	1,470	1,717,864	0.55%	1.00%

Table 17
All Expenses and Contributions by Branch

year	Total Invest. Expense	Allocation of Invest. Expenses			Total Admin Expense	Allocation of Admin. Expenses			Total Benefit Exp.	Benefits by Branch			Total Cont'n's	Contributions by Branch		
		EI	STB	LTB		EI	STB	LTB		EI	STB	LTB		EI	STB	LTB
2018	1,460	237	175	1,049	5,589	894	950	3,745	16,294	465	2,689	13,140	35,052	5,185	5,456	24,411
2019	1,688	284	207	1,197	3,308	529	562	2,217	18,293	517	2,824	14,952	37,877	5,568	5,922	26,386
2020	1,570	274	196	1,100	5,687	910	967	3,811	19,609	448	2,758	16,403	40,498	5,936	6,345	28,217
2021	1,516	277	195	1,044	5,292	847	900	3,546	24,566	594	6,132	17,841	29,094	4,293	4,476	20,325
2022	2,733	521	336	1,876	4,335	694	737	2,905	23,655	654	2,300	20,701	43,621	6,437	6,710	30,474
2023	2,590	507	330	1,753	5,928	948	1,008	3,972	30,473	671	6,315	23,487	48,565	4,857	9,713	33,996
2024	2,801	553	362	1,886	6,912	1,106	1,175	4,631	32,569	710	6,861	24,999	59,590	5,423	10,845	43,322
2025	3,076	604	399	2,072	7,811	1,250	1,328	5,234	34,727	763	7,305	26,658	69,424	5,783	11,573	52,068
2026	3,407	659	439	2,308	8,377	1,340	1,424	5,613	36,934	821	7,591	28,522	74,764	6,228	12,463	56,073
2027	3,771	719	484	2,568	8,879	1,421	1,509	5,949	39,529	861	7,983	30,686	78,852	6,568	13,145	59,139
2028	4,160	783	533	2,845	8,799	1,408	1,496	5,895	42,667	917	8,433	33,317	83,029	6,916	13,841	62,272
2029	4,555	848	583	3,124	9,311	1,490	1,583	6,238	46,174	982	8,842	36,349	86,843	7,234	14,477	65,132
2030	4,967	917	636	3,414	9,864	1,578	1,677	6,609	50,119	1,051	9,264	39,805	90,796	7,563	15,136	68,097
2031	5,394	991	693	3,711	10,473	1,676	1,780	7,017	54,723	1,123	9,692	43,908	94,892	7,904	15,818	71,169
2032	5,833	1,068	753	4,012	11,129	1,781	1,892	7,457	59,846	1,194	10,149	48,504	99,143	8,259	16,527	74,357
2033	6,283	1,150	816	4,316	10,979	1,757	1,866	7,356	65,438	1,274	10,626	53,537	103,473	8,619	17,249	77,604
2034	6,746	1,238	885	4,624	11,664	1,866	1,983	7,815	71,370	1,359	11,043	58,968	108,081	9,003	18,017	81,061
2035	7,218	1,331	957	4,930	12,375	1,980	2,104	8,291	77,848	1,446	11,545	64,858	112,537	9,374	18,760	84,402
2036	7,694	1,429	1,034	5,231	13,152	2,104	2,236	8,812	85,074	1,536	12,080	71,458	117,271	9,769	19,549	87,953
2037	8,171	1,533	1,115	5,523	14,010	2,242	2,382	9,386	93,257	1,635	12,610	79,013	122,276	10,166	20,383	91,707
2038	8,644	1,642	1,201	5,802	13,193	2,111	2,243	8,839	102,024	1,736	13,176	87,112	127,414	10,614	21,240	95,561
2039	9,121	1,759	1,293	6,069	14,050	2,248	2,389	9,414	111,616	1,847	13,767	96,002	132,735	11,057	22,127	99,551
2040	9,588	1,882	1,390	6,315	14,954	2,393	2,542	10,019	121,755	1,959	14,358	105,438	138,317	11,522	23,057	103,738
2041	10,041	2,012	1,493	6,536	15,910	2,546	2,705	10,660	132,624	2,079	14,935	115,610	144,068	12,001	24,016	108,051
2042	10,476	2,149	1,602	6,725	16,924	2,708	2,877	11,339	144,290	2,205	15,518	126,567	150,040	12,498	25,012	112,530
2043	10,889	2,293	1,716	6,879	17,212	2,754	2,926	11,532	156,714	2,338	16,103	138,272	156,233	13,014	26,044	117,175
2044	11,279	2,446	1,839	6,994	18,314	2,930	3,113	12,270	170,287	2,478	16,699	151,110	162,686	13,552	27,120	122,014
2045	11,635	2,607	1,969	7,060	19,483	3,117	3,312	13,054	184,871	2,625	17,370	164,875	169,368	14,108	28,234	127,026
2046	11,950	2,775	2,105	7,070	20,731	3,317	3,524	13,890	200,509	2,781	18,072	179,656	176,414	14,695	29,408	132,311
2047	12,218	2,953	2,250	7,015	22,058	3,529	3,750	14,779	217,233	2,942	18,795	195,496	183,817	15,312	30,642	137,863
2048	12,430	3,140	2,402	6,889	23,468	3,755	3,990	15,724	235,221	3,115	19,539	212,567	191,470	15,949	31,918	143,603
2049	12,578	3,335	2,563	6,680	24,968	3,995	4,245	16,728	254,477	3,298	20,309	230,870	199,484	16,617	33,254	149,613
2050	12,652	3,541	2,732	6,379	26,550	4,248	4,513	17,788	274,877	3,491	21,113	250,273	207,845	17,313	34,648	155,884
2051	12,644	3,757	2,911	5,977	28,232	4,517	4,799	18,915	296,711	3,691	22,038	270,983	216,592	18,042	36,106	162,444
2052	12,543	3,983	3,098	5,462	29,991	4,799	5,099	20,094	319,189	3,905	22,967	292,317	226,111	18,835	37,693	169,583
2053	12,344	4,220	3,295	4,829	31,839	5,094	5,413	21,332	342,612	4,132	23,946	314,533	236,284	19,682	39,388	177,213
2054	12,041	4,468	3,503	4,070	33,752	5,400	5,738	22,614	366,515	4,368	25,031	337,117	247,160	20,588	41,202	185,370
2055	11,631	4,729	3,722	3,180	35,777	5,724	6,082	23,970	391,804	4,620	26,181	361,003	258,681	21,548	43,122	194,011
2056	11,103	5,001	3,952	2,150	37,892	6,063	6,442	25,388	417,579	4,886	27,275	385,419	271,372	22,605	45,238	203,529
2057	10,456	5,287	4,194	974	40,070	6,411	6,812	26,847	444,151	5,167	28,431	410,553	284,396	23,690	47,409	213,297
2058	9,681	5,586	4,449	-	42,379	6,781	7,205	28,394	472,093	5,464	29,711	436,918	298,442	24,860	49,750	223,832
2059	8,769	5,897	4,718	-	44,688	7,150	7,597	29,941	499,882	5,773	31,035	463,074	312,630	26,042	52,115	234,472
2060	7,717	6,221	4,998	-	47,033	7,525	7,996	31,512	527,686	6,104	32,430	489,152	327,457	27,277	54,587	245,593
2061	6,522	6,556	5,290	-	49,372	7,900	8,393	33,079	554,507	6,452	33,912	514,143	343,172	28,586	57,207	257,379
2062	5,189	6,900	5,592	-	51,644	8,263	8,779	34,601	579,476	6,819	35,342	537,315	359,501	29,946	59,929	269,625
2063	3,729	7,247	5,900	-	53,920	8,627	9,166	36,127	603,886	7,207	36,856	559,823	376,486	31,361	62,760	282,365
2064	2,142	7,586	6,205	-	56,457	9,033	9,598	37,826	630,766	7,615	38,503	584,648	395,719	32,963	65,966	296,790
2065	422	7,868	6,467	-	59,120	9,459	10,050	39,611	659,593	8,046	40,297	611,250	415,320	34,596	69,234	311,490
2066	-	-	-	-	61,917	9,907	10,526	41,484	690,106	8,506	42,223	639,377	435,651	36,290	72,623	326,738
2067	-	-	-	-	64,844	10,375	11,023	43,445	721,887	8,986	44,334	668,568	457,089	38,075	76,197	342,816
2068	-	-	-	-	67,846	10,855	11,534	45,457	754,570	9,491	46,536	698,543	479,000	39,901	79,849	359,250
2069	-	-	-	-	70,930	11,349	12,058	47,523	787,996	10,024	48,963	729,010	501,634	41,786	83,622	376,225
2070	-	-	-	-	74,112	11,858	12,599	49,655	822,083	10,590	51,410	760,083	525,408	43,766	87,585	394,056
2071	-	-	-	-	77,400	12,384	13,158	51,858	857,327	11,182	53,911	792,234	549,953	45,811	91,677	412,465
2072	-	-	-	-	80,821	12,931	13,740	54,150	894,235	11,805	56,459	825,972	575,233	47,917	95,891	431,425
2073	-	-	-	-	84,500	13,520	14,365	56,615	933,347	12,465	59,234	861,648	603,008	50,231	100,521	452,256
2074	-	-	-	-	88,235	14,118	15,000	59,118	974,437	13,157	61,912	899,368	629,838	52,465	104,994	472,378
2075	-	-	-	-	92,145	14,743	15,665	61,737	1,017,983	13,890	64,602	939,491	657,389	54,761	109,587	493,042
2076	-	-	-	-	96,239	15,398	16,361	64,480	1,064,169	14,656	67,337	982,175	685,627	57,113	114,294	514,220
2077	-	-	-	-	100,538	16,086	17,091	67,360	1,113,116	15,462	70,199	1,027,454	714,839	59,546	119,164	536,129
2078	-	-	-	-	105,081	16,813	17,864	70,405	1,165,110	16,317	73,130	1,075,662	745,460	62,097	124,268	559,095
2079	-	-	-	-	109,626	17,540	18,636	73,449	1,219,959	17,210	75,836	1,126,912	773,236	64,411	128,898	579,927
2080	-	-	-	-	114,644	18,343	19,489	76,812	1,279,100	18,150	78,858	1,182,093	805,337	67,085	134,250	604,003
2081	-	-	-	-	119,936	19,190	20,389	80,357	1,342,133	19,138	81,935	1,241,060	838,518	69,849	139,781	628,889
2082	-	-	-	-	125,390	20,062	21,316	84,012	1,409,364	20,177	84,847	1,304,339	870,463	72,510	145,106	652,847

Table 18
Cost of National Insurance System of TCI
as a % of insurable earnings

Year	Total Expenditure/Outflows				Replacement Ratios	
	Short-term Benefit Branch	Long-term Benefit Branch	EI Benefit Branch	Total (PAYG) Rate	All Retirement Age Pension	New Cases Only - Retirement Age Pension
2018	0.86%	4.74%	0.53%	6.14%	40.6%	43.8%
2019	0.75%	4.02%	0.31%	5.08%	40.6%	42.8%
2020	0.77%	4.70%	0.36%	5.82%	39.6%	41.5%
2021	1.97%	6.43%	0.47%	8.87%	49.8%	75.2%
2022	0.61%	4.62%	0.34%	5.57%	36.3%	41.3%
2023	1.55%	5.91%	0.43%	7.88%	45.0%	39.0%
2024	1.52%	5.72%	0.43%	7.68%	42.0%	34.0%
2025	1.54%	5.78%	0.45%	7.77%	40.0%	32.0%
2026	1.49%	5.76%	0.45%	7.70%	38.0%	29.0%
2027	1.50%	5.88%	0.45%	7.82%	37.0%	31.0%
2028	1.49%	5.99%	0.44%	7.92%	36.0%	33.0%
2029	1.50%	6.22%	0.45%	8.17%	35.0%	35.0%
2030	1.51%	6.49%	0.46%	8.45%	35.0%	34.0%
2031	1.52%	6.80%	0.47%	8.79%	35.0%	34.0%
2032	1.53%	7.15%	0.48%	9.16%	34.0%	37.0%
2033	1.52%	7.45%	0.48%	9.45%	34.0%	37.0%
2034	1.52%	7.81%	0.49%	9.82%	34.0%	37.0%
2035	1.53%	8.20%	0.50%	10.23%	34.0%	37.0%
2036	1.55%	8.62%	0.51%	10.68%	34.0%	38.0%
2037	1.56%	9.08%	0.52%	11.16%	34.0%	37.0%
2038	1.54%	9.44%	0.51%	11.49%	34.0%	37.0%
2039	1.55%	9.93%	0.52%	12.00%	34.0%	37.0%
2040	1.56%	10.41%	0.53%	12.50%	33.0%	37.0%
2041	1.57%	10.90%	0.54%	13.01%	33.0%	37.0%
2042	1.58%	11.39%	0.56%	13.52%	33.0%	36.0%
2043	1.57%	11.85%	0.56%	13.98%	33.0%	36.0%
2044	1.57%	12.38%	0.57%	14.52%	32.0%	36.0%
2045	1.58%	12.91%	0.58%	15.07%	32.0%	35.0%
2046	1.59%	13.44%	0.59%	15.62%	32.0%	35.0%
2047	1.59%	13.97%	0.61%	16.17%	31.0%	34.0%
2048	1.60%	14.52%	0.62%	16.74%	31.0%	34.0%
2049	1.61%	15.07%	0.63%	17.30%	31.0%	34.0%
2050	1.61%	15.61%	0.64%	17.86%	30.0%	34.0%
2051	1.62%	16.15%	0.65%	18.42%	30.0%	34.0%
2052	1.63%	16.62%	0.66%	18.91%	29.0%	34.0%
2053	1.63%	17.04%	0.67%	19.35%	29.0%	34.0%
2054	1.64%	17.40%	0.68%	19.72%	29.0%	34.0%
2055	1.64%	17.73%	0.69%	20.07%	29.0%	35.0%
2056	1.64%	17.99%	0.69%	20.32%	28.0%	34.0%
2057	1.64%	18.22%	0.70%	20.56%	28.0%	34.0%
2058	1.64%	18.43%	0.71%	20.77%	28.0%	35.0%
2059	1.64%	18.64%	0.71%	20.99%	28.0%	35.0%
2060	1.64%	18.79%	0.72%	21.15%	27.0%	35.0%
2061	1.64%	18.85%	0.72%	21.21%	27.0%	35.0%
2062	1.63%	18.80%	0.72%	21.16%	27.0%	35.0%
2063	1.63%	18.71%	0.72%	21.06%	27.0%	35.0%
2064	1.62%	18.59%	0.72%	20.94%	27.0%	35.0%
2065	1.62%	18.52%	0.72%	20.86%	27.0%	35.0%
2066	1.43%	18.47%	0.50%	20.40%	27.0%	35.0%
2067	1.43%	18.41%	0.50%	20.34%	27.0%	36.0%
2068	1.43%	18.36%	0.50%	20.29%	27.0%	36.0%
2069	1.44%	18.30%	0.50%	20.24%	27.0%	36.0%
2070	1.44%	18.21%	0.50%	20.16%	27.0%	36.0%
2071	1.44%	18.14%	0.51%	20.09%	27.0%	37.0%
2072	1.44%	18.08%	0.51%	20.03%	27.0%	37.0%
2073	1.44%	18.00%	0.51%	19.95%	28.0%	37.0%
2074	1.44%	17.99%	0.51%	19.94%	28.0%	37.0%
2075	1.44%	18.00%	0.51%	19.96%	28.0%	37.0%
2076	1.44%	18.04%	0.52%	20.00%	28.0%	38.0%
2077	1.44%	18.10%	0.52%	20.07%	29.0%	38.0%
2078	1.44%	18.17%	0.53%	20.14%	29.0%	38.0%
2079	1.44%	18.35%	0.53%	20.32%	29.0%	38.0%
2080	1.44%	18.48%	0.54%	20.45%	29.0%	38.0%
2081	1.44%	18.63%	0.54%	20.61%	30.0%	38.0%
2082	1.44%	18.85%	0.55%	20.84%	30.0%	38.0%

Table 19
Projected Income of Total NIS Operations \$(,000s)

Year	Cont'ns	Surcharge	Gross Invest. Income	Total Income	Total Expenses, includes change in provisioning 2014 and 2015	Net Income	Fund at EOY (reflects the adj. to the 2013 FSs)	Fund Ratio (yrs)
2018	35,052	1,224	31,300	67,576	27,183	40,393	259,197	9.5
2019	37,877	553	8,946	47,376	24,327	22,825	282,022	11.6
2020	40,498	523	9,645	50,666	29,811	(1,782)	280,240	9.4
2021	29,094	908	18,167	48,169	32,606	105,742	385,982	11.8
2022	43,621	353	18,439	62,413	30,724	31,690	417,671	13.6
2023	48,565	850	23,739	73,154	38,991	34,163	451,835	11.6
2024	59,590	1,043	25,873	86,505	42,283	44,223	496,057	11.7
2025	69,424	1,041	28,538	99,004	45,614	53,390	549,447	12.0
2026	74,764	1,121	31,601	107,486	48,718	58,768	608,215	12.5
2027	78,852	1,183	34,921	114,956	52,179	62,777	670,992	12.9
2028	83,029	1,245	35,048	119,322	55,626	63,696	734,688	13.2
2029	86,843	1,303	38,294	126,439	60,040	66,399	801,087	13.3
2030	90,796	1,362	41,669	133,827	64,950	68,877	869,964	13.4
2031	94,892	1,423	45,157	141,472	70,590	70,882	940,846	13.3
2032	99,143	1,487	48,736	149,366	76,809	72,557	1,013,403	13.2
2033	103,473	1,552	52,411	157,436	82,700	74,736	1,088,139	13.2
2034	108,081	1,621	56,175	165,878	89,781	76,097	1,164,236	13.0
2035	112,537	1,688	59,990	174,215	97,442	76,774	1,241,009	12.7
2036	117,271	1,759	63,827	182,856	105,921	76,936	1,317,945	12.4
2037	122,276	1,834	67,652	191,762	115,438	76,324	1,394,269	12.1
2038	127,414	1,911	71,476	200,802	123,862	76,940	1,471,209	11.9
2039	132,735	1,991	75,274	210,000	134,788	75,212	1,546,422	11.5
2040	138,317	2,075	78,975	219,367	146,297	73,070	1,619,491	11.1
2041	144,068	2,161	82,551	228,780	158,575	70,205	1,689,696	10.7
2042	150,040	2,251	85,965	238,256	171,690	66,566	1,756,262	10.2
2043	156,233	2,344	89,198	247,775	184,814	62,961	1,819,223	9.8
2044	162,686	2,440	92,204	257,330	199,880	57,450	1,876,673	9.4
2045	169,368	2,541	94,907	266,816	215,989	50,826	1,927,499	8.9
2046	176,414	2,646	97,253	276,313	233,190	43,123	1,970,622	8.5
2047	183,817	2,757	99,185	285,759	251,508	34,250	2,004,872	8.0
2048	191,470	2,872	100,636	294,978	271,120	23,859	2,028,731	7.5
2049	199,484	2,992	101,532	304,008	292,023	11,985	2,040,716	7.0
2050	207,845	3,118	101,799	312,761	314,079	(1,318)	2,039,398	6.5
2051	216,592	3,249	101,358	321,200	337,587	(16,387)	2,023,011	6.0
2052	226,111	3,392	100,150	329,652	361,723	(32,071)	1,990,940	5.5
2053	236,284	3,544	98,131	337,959	386,795	(48,836)	1,942,104	5.0
2054	247,160	3,707	95,261	346,128	412,308	(66,180)	1,875,924	4.5
2055	258,681	3,880	91,483	354,045	439,211	(85,166)	1,790,758	4.1
2056	271,372	4,071	86,752	362,194	466,574	(104,380)	1,686,378	3.6
2057	284,396	4,266	81,027	369,688	494,677	(124,989)	1,561,389	3.2
2058	298,442	4,477	74,237	377,156	524,153	(146,997)	1,414,392	2.7
2059	312,630	4,689	66,332	383,651	553,340	(169,689)	1,244,703	2.2
2060	327,457	4,912	57,283	389,652	582,436	(192,784)	1,051,918	1.8
2061	343,172	5,148	47,103	395,422	610,402	(214,980)	836,939	1.4
2062	359,501	5,393	35,853	400,747	636,308	(235,562)	601,377	0.9
2063	376,486	5,647	23,584	405,718	661,535	(255,817)	345,560	0.5
2064	395,719	5,936	10,269	411,924	689,365	(277,440)	68,120	0.1
2065	415,320	6,230	-	421,550	719,136	(297,586)	(229,466)	-0.3
2066	435,651	6,535	-	442,186	752,023	(309,837)	(539,302)	-0.7
2067	457,089	6,856	-	463,945	786,731	(322,786)	(862,088)	-1.1
2068	479,000	7,185	-	486,185	822,417	(336,231)	(1,198,320)	-1.5
2069	501,634	7,525	-	509,158	858,926	(349,768)	(1,548,087)	-1.8
2070	525,408	7,881	-	533,289	896,195	(362,906)	(1,910,994)	-2.1
2071	549,953	8,249	-	558,202	934,727	(376,525)	(2,287,519)	-2.4
2072	575,233	8,628	-	583,861	975,056	(391,195)	(2,678,714)	-2.7
2073	603,008	9,045	-	612,053	1,017,847	(405,794)	(3,084,507)	-3.0
2074	629,838	9,448	-	639,285	1,062,672	(423,387)	(3,507,895)	-3.3
2075	657,389	9,861	-	667,250	1,110,129	(442,879)	(3,950,773)	-3.6
2076	685,627	10,284	-	695,911	1,160,407	(464,497)	(4,415,270)	-3.8
2077	714,839	10,723	-	725,562	1,213,654	(488,092)	(4,903,362)	-4.0
2078	745,460	11,182	-	756,642	1,270,191	(513,549)	(5,416,911)	-4.3
2079	773,236	11,599	-	784,834	1,329,585	(544,751)	(5,961,661)	-4.5
2080	805,337	12,080	-	817,417	1,393,745	(576,327)	(6,537,989)	-4.7
2081	838,518	12,578	-	851,096	1,462,069	(610,973)	(7,148,961)	-4.9
2082	870,463	13,057	-	883,520	1,534,755	(651,235)	(7,800,196)	-5.1

Table 20
Projected Population of Turks & Caicos Islands

Year	Total Popln	Popln. - nominal amounts			as a % of total population		
		0 to 15	16 to 64	65 & over	0 to 15	16 to 64	65 & over
2018	41,360	8,356	31,348	1,656	20.2%	75.8%	4.0%
2019	43,098	8,707	32,665	1,726	20.2%	75.8%	4.0%
2020	44,543	8,527	34,166	1,850	19.1%	76.7%	4.2%
2021	46,130	8,831	35,384	1,915	19.1%	76.7%	4.2%
2022	46,617	9,446	35,236	1,936	20.3%	75.6%	4.2%
2023	47,277	9,453	35,680	2,144	20.0%	75.5%	4.5%
2024	47,928	9,454	36,102	2,373	19.7%	75.3%	5.0%
2025	48,567	9,444	36,505	2,619	19.4%	75.2%	5.4%
2026	49,193	9,422	36,891	2,879	19.2%	75.0%	5.9%
2027	49,804	9,389	37,263	3,152	18.9%	74.8%	6.3%
2028	50,400	9,344	37,618	3,439	18.5%	74.6%	6.8%
2029	50,982	9,286	37,957	3,739	18.2%	74.5%	7.3%
2030	51,549	9,214	38,276	4,058	17.9%	74.3%	7.9%
2031	52,100	9,127	38,565	4,408	17.5%	74.0%	8.5%
2032	52,637	9,019	38,826	4,792	17.1%	73.8%	9.1%
2033	53,158	8,888	39,060	5,210	16.7%	73.5%	9.8%
2034	53,665	8,735	39,269	5,661	16.3%	73.2%	10.5%
2035	54,156	8,562	39,455	6,140	15.8%	72.9%	11.3%
2036	54,634	8,374	39,617	6,642	15.3%	72.5%	12.2%
2037	55,097	8,185	39,751	7,162	14.9%	72.1%	13.0%
2038	55,547	8,002	39,848	7,698	14.4%	71.7%	13.9%
2039	55,984	7,972	39,759	8,254	14.2%	71.0%	14.7%
2040	56,409	7,946	39,637	8,826	14.1%	70.3%	15.6%
2041	56,820	7,927	39,484	9,409	14.0%	69.5%	16.6%
2042	57,218	7,916	39,303	9,999	13.8%	68.7%	17.5%
2043	57,603	7,914	39,097	10,592	13.7%	67.9%	18.4%
2044	57,973	7,921	38,868	11,185	13.7%	67.0%	19.3%
2045	58,330	7,936	38,615	11,778	13.6%	66.2%	20.2%
2046	58,671	7,961	38,334	12,376	13.6%	65.3%	21.1%
2047	58,997	7,994	38,026	12,977	13.6%	64.5%	22.0%
2048	59,307	8,036	37,694	13,577	13.5%	63.6%	22.9%
2049	59,600	8,084	37,339	14,177	13.6%	62.6%	23.8%
2050	59,876	8,139	36,974	14,762	13.6%	61.8%	24.7%
2051	60,133	8,199	36,620	15,313	13.6%	60.9%	25.5%
2052	60,366	8,258	36,291	15,816	13.7%	60.1%	26.2%
2053	60,573	8,314	35,989	16,271	13.7%	59.4%	26.9%
2054	60,754	8,364	35,716	16,674	13.8%	58.8%	27.4%
2055	60,882	8,405	35,447	17,030	13.8%	58.2%	28.0%
2056	60,980	8,436	35,196	17,348	13.8%	57.7%	28.4%
2057	61,050	8,458	34,959	17,634	13.9%	57.3%	28.9%
2058	61,142	8,472	34,784	17,885	13.9%	56.9%	29.3%
2059	61,153	8,475	34,624	18,054	13.9%	56.6%	29.5%
2060	61,052	8,468	34,473	18,110	13.9%	56.5%	29.7%
2061	60,832	8,454	34,356	18,023	13.9%	56.5%	29.6%
2062	60,424	8,429	34,234	17,760	14.0%	56.7%	29.4%
2063	59,783	8,397	34,090	17,295	14.0%	57.0%	28.9%
2064	59,405	8,359	34,027	17,020	14.1%	57.3%	28.6%
2065	59,190	8,314	34,022	16,854	14.0%	57.5%	28.5%
2066	59,075	8,265	34,061	16,749	14.0%	57.7%	28.4%
2067	59,051	8,215	34,161	16,674	13.9%	57.9%	28.2%
2068	59,060	8,169	34,281	16,610	13.8%	58.0%	28.1%
2069	59,075	8,127	34,413	16,534	13.8%	58.3%	28.0%
2070	59,092	8,091	34,551	16,449	13.7%	58.5%	27.8%
2071	59,111	8,063	34,685	16,363	13.6%	58.7%	27.7%
2072	59,132	8,043	34,808	16,281	13.6%	58.9%	27.5%
2073	59,280	8,041	35,032	16,206	13.6%	59.1%	27.3%
2074	59,444	8,050	35,243	16,151	13.5%	59.3%	27.2%
2075	59,622	8,069	35,441	16,113	13.5%	59.4%	27.0%
2076	59,812	8,099	35,624	16,090	13.5%	59.6%	26.9%
2077	60,011	8,138	35,792	16,081	13.6%	59.6%	26.8%
2078	60,218	8,184	35,944	16,090	13.6%	59.7%	26.7%
2079	60,249	8,224	35,909	16,116	13.7%	59.6%	26.7%
2080	60,282	8,267	35,855	16,160	13.7%	59.5%	26.8%
2081	60,314	8,309	35,782	16,223	13.8%	59.3%	26.9%
2082	60,244	8,342	35,596	16,306	13.8%	59.1%	27.1%

**Table 21
Demographic Projection of the NIS**

Year	TCI Popln	Employed Popln	Active Contributor s	Active Contributors as a % of			Total no. of pensioners
				TCI Popln	Employed Popln	Employed Popln 15 to 64	
2018	41,360	24,349	21,122	51.1%	86.7%		1,890
2019	43,098	25,079	21,483	49.8%	85.7%	#N/A	2,036
2020	44,543	25,197	22,384	50.3%	88.8%	#N/A	2,168
2021	46,130	26,682	19,961	43.3%	74.8%	#N/A	2,344
2022	46,617	27,260	22,274	47.8%	81.7%	84.1%	2,607
2023	47,277	27,739	22,302	47.2%	80.4%	82.9%	2,743
2024	47,928	28,193	22,777	47.5%	80.8%	83.5%	2,862
2025	48,567	28,621	23,230	47.8%	81.2%	84.1%	3,009
2026	49,193	29,020	23,660	48.1%	81.5%	84.7%	3,183
2027	49,804	29,381	24,061	48.3%	81.9%	85.3%	3,387
2028	50,400	29,776	24,485	48.6%	82.2%	85.9%	3,612
2029	50,982	30,149	24,892	48.8%	82.6%	86.4%	3,841
2030	51,549	30,497	25,272	49.0%	82.9%	87.0%	4,103
2031	52,100	30,826	25,623	49.2%	83.1%	87.5%	4,408
2032	52,637	31,153	25,951	49.3%	83.3%	88.0%	4,720
2033	53,158	31,460	26,249	49.4%	83.4%	88.5%	5,039
2034	53,665	31,799	26,552	49.5%	83.5%	89.0%	5,373
2035	54,156	32,083	26,798	49.5%	83.5%	89.5%	5,722
2036	54,634	32,346	27,019	49.5%	83.5%	90.0%	6,105
2037	55,097	32,603	27,237	49.4%	83.5%	90.4%	6,523
2038	55,547	32,815	27,431	49.4%	83.6%	90.8%	6,966
2039	55,984	32,981	27,582	49.3%	83.6%	91.3%	7,431
2040	56,409	33,114	27,700	49.1%	83.7%	91.7%	7,909
2041	56,820	33,215	27,776	48.9%	83.6%	92.0%	8,398
2042	57,218	33,283	27,818	48.6%	83.6%	92.4%	8,903
2043	57,603	33,316	27,826	48.3%	83.5%	92.7%	9,420
2044	57,973	33,306	27,801	48.0%	83.5%	93.0%	9,960
2045	58,330	33,244	27,733	47.5%	83.4%	93.3%	10,522
2046	58,671	33,150	27,632	47.1%	83.4%	93.5%	11,096
2047	58,997	33,030	27,513	46.6%	83.3%	93.8%	11,679
2048	59,307	32,890	27,364	46.1%	83.2%	94.1%	12,274
2049	59,600	32,735	27,203	45.6%	83.1%	94.4%	12,882
2050	59,876	32,565	27,030	45.1%	83.0%	94.7%	13,486
2051	60,133	32,360	26,849	44.6%	83.0%	95.0%	14,081
2052	60,366	32,153	26,687	44.2%	83.0%	95.2%	14,646
2053	60,573	31,932	26,549	43.8%	83.1%	95.5%	15,174
2054	60,754	31,690	26,425	43.5%	83.4%	95.7%	15,667
2055	60,882	31,419	26,298	43.2%	83.7%	96.0%	16,128
2056	60,980	31,179	26,207	43.0%	84.1%	96.2%	16,558
2057	61,050	30,955	26,113	42.8%	84.4%	96.4%	16,957
2058	61,142	30,784	26,065	42.6%	84.7%	96.7%	17,320
2059	61,153	30,628	26,015	42.5%	84.9%	96.9%	17,625
2060	61,052	30,481	25,972	42.5%	85.2%	97.1%	17,860
2061	60,832	30,350	25,950	42.7%	85.5%	97.4%	18,008
2062	60,424	30,210	25,931	42.9%	85.8%	97.5%	18,052
2063	59,783	30,026	25,895	43.3%	86.2%	97.7%	18,110
2064	59,405	29,925	25,918	43.6%	86.6%	97.9%	18,223
2065	59,190	29,871	25,978	43.9%	87.0%	98.0%	18,327
2066	59,075	29,857	26,067	44.1%	87.3%	98.2%	18,409
2067	59,051	29,892	26,199	44.4%	87.6%	98.4%	18,466
2068	59,060	29,948	26,345	44.6%	88.0%	98.5%	18,494
2069	59,075	30,007	26,494	44.8%	88.3%	98.7%	18,497
2070	59,092	30,083	26,652	45.1%	88.6%	98.8%	18,478
2071	59,111	30,174	26,810	45.4%	88.9%	98.9%	18,449
2072	59,132	30,279	26,964	45.6%	89.0%	99.0%	18,418
2073	59,280	30,481	27,190	45.9%	89.2%	99.1%	18,397
2074	59,444	30,697	27,407	46.1%	89.3%	99.2%	18,393
2075	59,622	30,921	27,617	46.3%	89.3%	99.2%	18,402
2076	59,812	31,142	27,813	46.5%	89.3%	99.3%	18,420
2077	60,011	31,353	27,996	46.7%	89.3%	99.4%	18,447
2078	60,218	31,558	28,166	46.8%	89.3%	99.4%	18,481
2079	60,249	31,611	28,180	46.8%	89.1%	99.5%	18,521
2080	60,282	31,651	28,172	46.7%	89.0%	99.5%	18,568
2081	60,314	31,683	28,143	46.7%	88.8%	99.5%	18,622
2082	60,244	31,632	28,023	46.5%	88.6%	99.6%	18,685

Table 22
Projected Number of Pensioners

Year	Retirement Age	Invalidity	Survivors	E.I.	NCOAP	Total
2018	1,175	94	374	35	212	1,890
2019	1,287	93	406	43	207	2,036
2020	1,407	116	421	43	181	2,168
2021	1,543	114	477	45	165	2,344
2022	1,832	118	467	39	151	2,607
2023	1,962	127	468	40	146	2,743
2024	2,070	134	475	41	142	2,862
2025	2,202	141	485	43	138	3,009
2026	2,363	147	494	45	134	3,183
2027	2,549	153	507	47	131	3,387
2028	2,754	159	524	48	127	3,612
2029	2,962	164	541	50	124	3,841
2030	3,202	169	559	52	121	4,103
2031	3,480	173	583	54	118	4,408
2032	3,761	177	612	56	115	4,720
2033	4,046	181	643	58	112	5,039
2034	4,343	184	677	60	109	5,373
2035	4,654	187	714	62	105	5,722
2036	4,995	190	753	64	103	6,105
2037	5,369	192	795	66	101	6,523
2038	5,765	195	840	68	98	6,966
2039	6,179	197	889	70	96	7,431
2040	6,604	198	941	72	94	7,909
2041	7,038	200	995	74	92	8,398
2042	7,484	201	1,052	76	90	8,903
2043	7,942	202	1,110	78	87	9,420
2044	8,420	203	1,171	80	86	9,960
2045	8,919	204	1,233	82	85	10,522
2046	9,428	205	1,296	84	83	11,096
2047	9,946	206	1,360	86	82	11,679
2048	10,476	206	1,423	88	81	12,274
2049	11,020	208	1,484	90	80	12,882
2050	11,562	209	1,545	92	78	13,486
2051	12,095	210	1,604	94	77	14,081
2052	12,598	212	1,664	96	76	14,646
2053	13,064	213	1,725	98	75	15,174
2054	13,494	215	1,785	100	73	15,667
2055	13,891	217	1,846	102	72	16,128
2056	14,257	219	1,907	104	72	16,558
2057	14,591	221	1,968	106	71	16,957
2058	14,890	222	2,029	108	70	17,320
2059	15,129	223	2,094	110	69	17,625
2060	15,286	223	2,171	112	68	17,860
2061	15,333	221	2,271	114	68	18,008
2062	15,244	217	2,408	116	68	18,052
2063	15,133	214	2,578	118	68	18,110
2064	15,098	213	2,725	120	68	18,223
2065	15,105	213	2,819	122	68	18,327
2066	15,127	214	2,876	124	68	18,409
2067	15,149	216	2,907	126	68	18,466
2068	15,159	217	2,922	128	68	18,494
2069	15,149	219	2,930	130	68	18,497
2070	15,121	221	2,937	132	68	18,478
2071	15,081	222	2,944	134	68	18,449
2072	15,037	223	2,953	136	68	18,418
2073	15,000	225	2,966	138	68	18,397
2074	14,975	226	2,984	140	68	18,393
2075	14,963	228	3,001	142	68	18,402
2076	14,961	230	3,018	144	68	18,420
2077	14,969	231	3,032	146	68	18,447
2078	14,988	233	3,043	148	69	18,481
2079	15,019	235	3,049	150	68	18,521
2080	15,063	237	3,049	152	68	18,568
2081	15,120	238	3,042	154	68	18,622
2082	15,194	240	3,028	156	68	18,685

**Table 23
Dependency Ratios**

Year	Dependency Ratio	Aged Dependency Ratio	Scheme's Dependency Ratio
2018	0.32	0.053	0.089
2019	0.32	0.053	0.095
2020	0.30	0.054	0.097
2021	0.30	0.054	0.117
2022	0.32	0.055	0.117
2023	0.33	0.060	0.123
2024	0.33	0.066	0.126
2025	0.33	0.072	0.130
2026	0.33	0.078	0.135
2027	0.34	0.085	0.141
2028	0.34	0.091	0.148
2029	0.34	0.098	0.154
2030	0.35	0.106	0.162
2031	0.35	0.114	0.172
2032	0.36	0.123	0.182
2033	0.36	0.133	0.192
2034	0.37	0.144	0.202
2035	0.37	0.156	0.214
2036	0.38	0.168	0.226
2037	0.39	0.180	0.239
2038	0.39	0.193	0.254
2039	0.41	0.208	0.269
2040	0.42	0.223	0.286
2041	0.44	0.238	0.302
2042	0.46	0.254	0.320
2043	0.47	0.271	0.339
2044	0.49	0.288	0.358
2045	0.51	0.305	0.379
2046	0.53	0.323	0.402
2047	0.55	0.341	0.424
2048	0.57	0.360	0.449
2049	0.60	0.380	0.474
2050	0.62	0.399	0.499
2051	0.64	0.418	0.524
2052	0.66	0.436	0.549
2053	0.68	0.452	0.572
2054	0.70	0.467	0.593
2055	0.72	0.480	0.613
2056	0.73	0.493	0.632
2057	0.75	0.504	0.649
2058	0.76	0.514	0.664
2059	0.77	0.521	0.678
2060	0.77	0.525	0.688
2061	0.77	0.525	0.694
2062	0.77	0.519	0.696
2063	0.75	0.507	0.699
2064	0.75	0.500	0.703
2065	0.74	0.495	0.705
2066	0.73	0.492	0.706
2067	0.73	0.488	0.705
2068	0.72	0.485	0.702
2069	0.72	0.480	0.698
2070	0.71	0.476	0.693
2071	0.70	0.472	0.688
2072	0.70	0.468	0.683
2073	0.69	0.463	0.677
2074	0.69	0.458	0.671
2075	0.68	0.455	0.666
2076	0.68	0.452	0.662
2077	0.68	0.449	0.659
2078	0.68	0.448	0.656
2079	0.68	0.449	0.657
2080	0.68	0.451	0.659
2081	0.69	0.453	0.662
2082	0.69	0.458	0.667