

**Final
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B E L I Z E

Social Security Board

**Actuarial Performance Analysis of the Social Security Scheme
(At 31 December 2019)**

**Belmopan, Belize
16 July 2020**

Table of Contents

EXECUTIVE SUMMARY	1
I. CONCLUSIONS AND RECOMMENDATIONS	4
1. Impact of the Legal Amendments (2019)	4
2. Impact of COVID-19	4
3. Unemployment Relief Program	5
4. Consolidated Financial Trends.....	5
5. Short-Term Branch.....	6
6. Employment Injury Branch.....	8
7. Long-Term Branch.....	9
8. Self-Employed Scheme	11
9. Non-Contributory Pension Scheme	12
10. Administrative Expenditure	12
11. Investments.....	12
II LEGAL BASES AND CONSOLIDATED FINANCIAL OPERATIONS	13
1. Legal Bases, Coverage and Benefit Provisions	13
2. Summary of Legal Amendments (January 2019)	14
3. Subsequent Financial Amendments (as from July 2019).....	15
4. Operational Branches	16
5. Actuarial Systems.....	16
6. National Health Insurance Program	17
7. Income and Expenditure	17
8. Other Income.....	18
9. Balance Sheet and Reserves by Branch	18
10. Reserves as a Percent of GDP	19
11. Rate of Return on Investments	20
12. The integrity of the Reserves and Non-Performing Investments	20
13. Administrative Expenditure	21
14. Social Development Fund and Disaster Fund	22
15. Trend of NHI Key Parameters.....	22
16. Trend of Active Insured Persons and Insurable Earnings	23
III ANALYSIS OF THE SHORT-TERM BENEFIT BRANCH	24
1. Financial Operations	24
2. Income and Expenditure as a Percent of Insurable Earnings.....	24
3. Cost and Fund Ratios	25
4. Frequency and Unit Cost of Sickness Benefit	27
5. Actuarial Cost of Sickness Benefit	28
6. The trend of Maternity Benefits.....	28
7. Actuarial Cost of Maternity Benefits and Grants.....	28
8. Actual versus Expected Experience and Projected Actuarial Cost.....	29
9. Amendments to the Short-Term Branch (as from 2022)	30
a) Elimination of the Waiting Period	30
b) Incidence of Amendments to the Sickness Provisions	30
c) Net Actuarial Impact	31

IV	ANALYSIS OF THE EMPLOYMENT INJURY BRANCH	32
1.	Financial Operations of the Employment Injury Branch	32
2.	Income and Expenditure as a Percent of Insurable Earnings	32
3.	Statutory and Actual Reserves	33
4.	Incidence of Short-Term Injury Benefits	34
5.	Financial Trend of the Disablement & Death Benefits	35
6.	Incidence of Disablement and Death Benefits	35
7.	Trend of Pensions in Payment	36
8.	Medical Expenses	36
9.	Expected Cost of the EI Branch	36
10.	Funded Status of the Disablement and Death Reserve	37
11.	Update of the EI Degree of Disablement Schedule	39
V	ACTUARIAL PERFORMANCE OF THE LONG-TERM BRANCH	40
1.	Actuarial System	40
2.	Financial Operations	40
3.	Income and Expenditure as a Percent of Insurable Earnings	41
4.	Trend of Pensions in Payment	42
5.	Invalidity Pensions and Grants	43
6.	Trend of Demographic Ratios (Pensioners ÷ active insured)	43
7.	Distribution of Statutory Contributions	44
8.	Macro-Economic Trends	44
9.	Demographic Trends	45
10.	Actuarial Projections	46
11.	Financials Trend and Reserves	46
12.	Assumptions	48
VI	ASSESSMENT OF THE INVESTMENT PORTFOLIO	49
1.	Objective of the Analysis	49
2.	Investment Portfolio	49
3.	Public Sector Investments	50
4.	Enhancement of Development Issues	51
5.	Liquidity of the Investment Portfolio	52
6.	Scenarios of Risk-Adjusted Returns	53
7.	Allocations to Development Issues	54
8.	Cash Working Balance and Liquidity Requirements	56
VII	ACTUARIAL ASSESSMENT OF THE NATIONAL HEALTH INSURANCE PROGRAM	57
1.	Background	57
2.	The Health Care Model in Belize	57
3.	Financing of the Program	57
4.	Actuarial Systems	58
5.	NHI Financial Trends	58
6.	Financial Ratios	58
7.	Summary of Financial Operations by Region	59
8.	Cost of Benefits by Type of Service	59
9.	Membership Data	60
10.	Actuarial Cost of the Program	60
11.	Cost Estimates of the Rollover	61
12.	Conclusions and Recommendations	61

ANNEX A PERFORMANCE ANALYSIS OF THE SELF-EMPLOYED SCHEME	63
1. Registered and Active Contributors	63
2. Distribution of the Self-Employed by Wage-Group	63
3. Comparative Distribution of Self-Employed and General Insured Persons	64
4. Statistic of Benefits to the Self-Employed	64
5. Frequency of Short-Term Claims by the Self-Employed	65
6. Retirement Age of Self-Employed Persons	66
7. Financial Performance	66
8. Actuarial Cost of the Self-Employed Scheme	67
ANNEX B ASSESSMENT OF THE NON-CONTRIBUTORY PENSION SCHEME (NCP) ..	68
1. Background	68
2. The trend of Pensions in Payment.....	68
3. Financial Trends.....	69
4. Rates of Award and Terminations.....	69
5. Actuarial Cost of the Scheme.....	69
6. Conclusions and Recommendations	71
ANNEX C SUMMARY OF BENEFIT PROVISIONS	72
ANNEX D	77
Glossary of Terms	77

16 July 2020

Social Security Board
Belmopan, Belize

Sirs,

In accordance with the provisions of Section 45 of the Social Security Act, an actuarial performance assessment of the scheme was carried out as of 31 December 2019, as a complement to the triennial valuation carried out every three years, to assess the performance of the benefit branches and the adequacy of the statutory contributions to support benefits. The review was based on the legal provisions in force, including amendments introduced in 2019. The analysis also comprises an assessment of the Investment Portfolio, the National Health Insurance Program, the Self-Employed Scheme, and the Non-Contributory Pension Scheme.

Due to the imponderable effect caused by COVID-19 on the economic activities, the labor force, and the density of contributions, the projections of the long-term branch should be updated at the triennial actuarial valuation to be carried out at the close of the 2020 fiscal year.

A summary of the main findings and recommendations is set out in Chapter I of the report, while Chapter II describes the legal bases and the consolidated financial operations. Chapters III, IV and V present the actuarial analysis of the short-term benefits branch, the employment injury branch, and the long-term branch. Annexes will deal with the Investment Performance, as required by the Third Schedule of the Act, the performance of the Non-Contributory Pensions, and the Self-Employed Schemes, and a summary of the benefit provisions.

Attestation

The analysis was carried out according to applicable actuarial cost methods and our interpretation of the provisions in force. Further, the valuation was carried out utilizing actuarial and financial bases and assumptions, which, in our opinion, are reasonable and offer an adequate estimate of the anticipated experience.

Tours sincerely,

For: Hernando Perez Montas & Asociados, SRL
Consultores Actuariales

Hernando Pérez Montás

BELIZE
ACTUARIAL PERFORMANCE ANALYSIS OF THE SOCIAL SECURITY
SCHEME

(AT 31 DECEMBER 2019)

EXECUTIVE SUMMARY

After almost two decades of frozen key financial provisions, the stakeholders finally agreed on a significant set of legal amendments, subsequently sanctioned by the Government, to ensure the financial sustainability of the scheme and a closer linkage between actual earnings and benefit provisions. The amendments would improve the social standard of insured persons and the entire population of Belize. It also represents an initial step for a dynamic approach to the legal provision of the scheme, which had remained stagnant for almost two decades, a significant achievement thanks to the extraordinary effort of the stakeholders, the Board, and, in particular, the CEO, Dr. Colin Young, and his assistants.

Contribution income increased by a satisfactory 15% (5.3% in 2018), due to the impact of the legal amendments. Benefit and administrative expenditure rose by 9.5%, while investment income was almost stable. **The impact of the legal amendments reverted the declining trend of financial operations, yielding a surplus of \$16.8 million in 2019 as compared to \$11.5 million in 2018. The deficit of “current operations” (contributions less expenditure) also declined to \$4.9 million (\$9.5 million in 2018).**

The impact of COVID-19 early in 2020 has introduced imponderables to assess the financial trends of the scheme, particularly of the long-term branch, as the sequence of pensions in payment will not be affected, while the expected level of contribution income might experience a significant decline in the 2020 fiscal year, with an expected full recovery as from 2021. Therefore, any projection without a closer assessment of the impact of COVID-19 on key segments of the economy would be subject to abnormal deviations. Therefore, at present, only a preliminary scenario for 2020/2025 can be included, subject to an update at the close of 2020, once key updated parameters on employment become available.

The consolidated actuarial cost of administrative expenditure still exceeds standard benchmarks but has started to decrease as the increase in contributions due to the legal amendments exceeds the secular increase of administrative expenditure. The cost fell below 2% in 2019 (1.98% in 2018 and 2.20% in 2017) and should decline further as from 2021, particularly if the trend of salary adjustments is linked to the inflation trend in Belize. However, the ratio for 2020 might be distorted due to the impact of COVID-19 in contribution income.

The 2019 actuarial performance analysis shows improved financial results of the Short-Term branch, with a reversion of the former trend of declining reserves, ensuring the long-term actuarial sustainability of the branch. The amendments also contributed to rationalize the current operations of the Employment Injury branch, which still shows excess actuarial reserves, and to extend the Period of Equilibrium of the Long-Term branch until mid-2020, when the second tranche of legal amendments should be enacted.

The analysis shows that the Self-Employed Scheme is already insolvent, due to faulty design, including the “voluntary” feature of the scheme, which is conducive to adverse selection. Most of the pensioners have opted to claim pensions at the minimum age of 60 years, with the SSB unable to verify whether the individuals continue to work in the absence of an employer.

The analysis of the Non-Contributory Pension Scheme shows a steady reduction of actuarial costs of 0.14% of insurable earnings in 2019 (0.19% in 2018) and a further reduction of 0.12% of insurable earnings in the 2020/21 period.

The nominal rate of return on investments was assessed at 3.7% in 2019, the same as in the preceding year. Due to a lower inflation environment, the real return exceeded the 3% actuarial rate.

The execution of an investment plan to maximize income without undue risk is a key task of the Board, taking into consideration the advancing maturity of the scheme, as measured by the increase in the demographic ratio (pensioners / active insured persons). **The improved cash-flow due to the legal amendments would allow a strategic asset allocation to “development projects”, as required by the Board, to achieve a more adequate balance of a portfolio concentrated in financial issues.**

The analysis shows that diversification of the investment portfolio seems advisable, with fresh funds targeted to alternative investments, preceded by i) a sound risk/reward assessment, ii) a favorable anticipated risk-adjusted return, and iii) a careful evaluation of the collateral funds, to ensure full recovery of the unamortized portion of the investment in case of default.

Yours sincerely,

Hernando Perez Montas
Actuary

I

CONCLUSIONS AND RECOMMENDATIONS

1. Impact of the Legal Amendments (2019)

After almost two decades of frozen key financial provisions, the stakeholders finally agreed on a significant set of legal amendments, subsequently sanctioned by the Government, to ensure the financial sustainability of the scheme and a closer linkage between actual earnings and benefit provisions. As a by-product of the legal amendments, the period of equilibrium of the long-term branch was extended, albeit temporarily, restoring also a rising level of consolidated reserves and an extended horizon of the investment portfolio.

The step increases to the ceiling and the rates of contributions are expected to be replaced around mid-2020 with a second set of amendments to deal with “automatic trigger points” of the ceiling and the rate of contributions. These two key variables, plus subsidiary amendments such as the replacement of the obsolete system of “wage bands” for contribution rates based on actual insurable earnings, the allocation to the long-term branch of 72% rather than 65% of contributions (which is cost-neutral to employers and insured persons), the restructuring of the defective self-employed scheme, and adjustments to the qualifying provisions and the waiting period of short-term and long-term benefits, will ensure the long-term financial sustainability of the scheme.

2. Impact of COVID-19

The impact of COVID-19 early in 2020 has introduced imponderables to assess the financial trends of the scheme, particularly of the long-term branch, as the sequence of pensions in payment will not be affected, while the expected level of contribution income might experience a significant decline in the 2020 fiscal year, with an expected full recovery as from 2021. Therefore, a transitory scenario assuming a parametric reduction on contributions this fiscal year has been assumed on the projection of the long-term branch, to be updated at the close of this fiscal year.

Data provided by the financial area up to 30 April 2020 shows contributions 10.7% lower and benefits 6.7% lower than the budget. These ratios might change at the close of 2020. The analysis also shows that benefit expenses following the first two steps of adjustments to the ceiling and the rate of contribution, in July 2019 and January 2020,

lagged the pace of contribution income allocated to each branch, particularly in the Employment Injury (EI) branch, as anticipated. However, this process was abruptly reversed by a sharp reduction in contribution income as from March 2020 due to the impact of COVID-19 on the economy. As from April 2020, the EI branch and the short-term branch will be less impacted by the reduction in contribution income than the long-term branch, the latter with a sequential pace of retirement pensions less affected by the stagnant economic conditions. Once the economic potential of Belize is fully restored, including the tourism sector, the three benefit branches will be able to resume the anticipated actuarial objective implicit in the legal amendments.

Due to COVID-19, the economy and the employment pattern in Belize will suffer a significant decline in 2020. Therefore, any projection without a closer assessment of the impact of COVID-19 on key segments of the economy can cause abnormal variations. Therefore, at present, only a preliminary scenario for 2020/2025 can be included for the long-term branch, as shown below, subject to an in-depth revision at the close of 2020 once key updated parameters on employment become available.

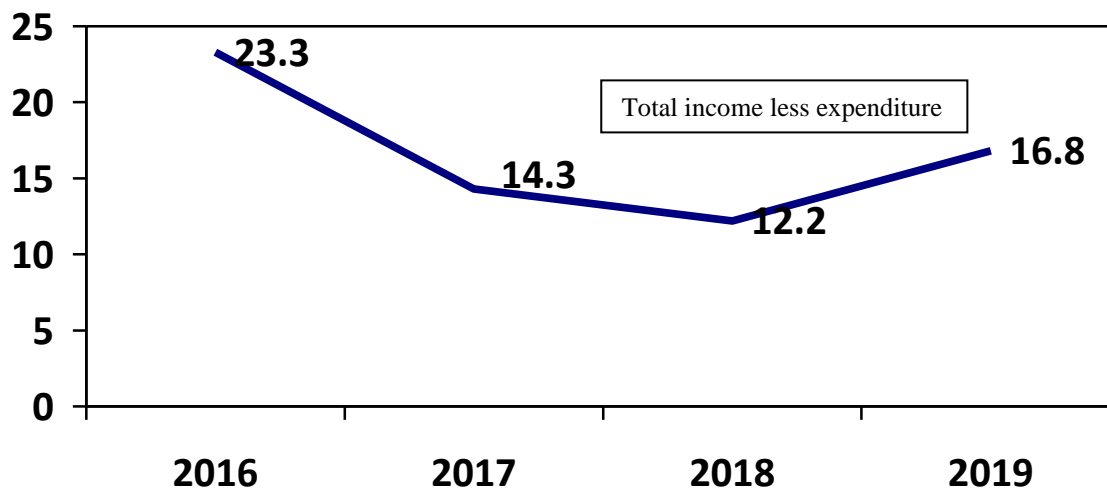
3. Unemployment Relief Program

The SSB is acting as the agent for the Unemployment Relief Program. A \$5.0 million relief fund approved by the SSB will be gradually disbursed to the Government, as a component of the social security development fund. The SSB is advised to charge the entire \$5.0 million fund to the EI branch, which shows a reserve in excess of actuarial requirements.

4. Consolidated Financial Trends

Contribution income increased by a satisfactory 15% (5.3% in 2018), due to the impact of the legal amendments. Benefit and administrative expenditure rose by 9.5%, while investment income was almost stable. **The impact of the legal amendments reverted the declining trend of financial operations, yielding a surplus of \$16.8 in 2019 as compared to \$11.5 million in 2018. The deficit of “current operations” (contributions less expenditure) also declined to \$4.9 million (\$9.5 million in 2018).**

Consolidated Income less Expenditure (amounts in Millions of BZ\$)



Trend of Consolidated Reserves (at 31 December) ^{a/} (amounts in Million of BZ\$)



^{a/} Includes NHI Reserves

5. Short-Term Branch

The contribution rate allocated to the branch rose from 1.54% of insurable earnings up to 2018 to an average of 1.85% in 2019, and a terminal rate of 2.25% as of 2021, as shown in Table 3, Chapter II. **Jointly with the adjusted ceiling on contributions, which comprises the segment of insured persons with earnings above \$320 per week up to \$500 per week with potentially lower morbidity rates than low-income workers, the updated financing bases, are anticipated to ensure the long-term sustainability of the short-term branch.**

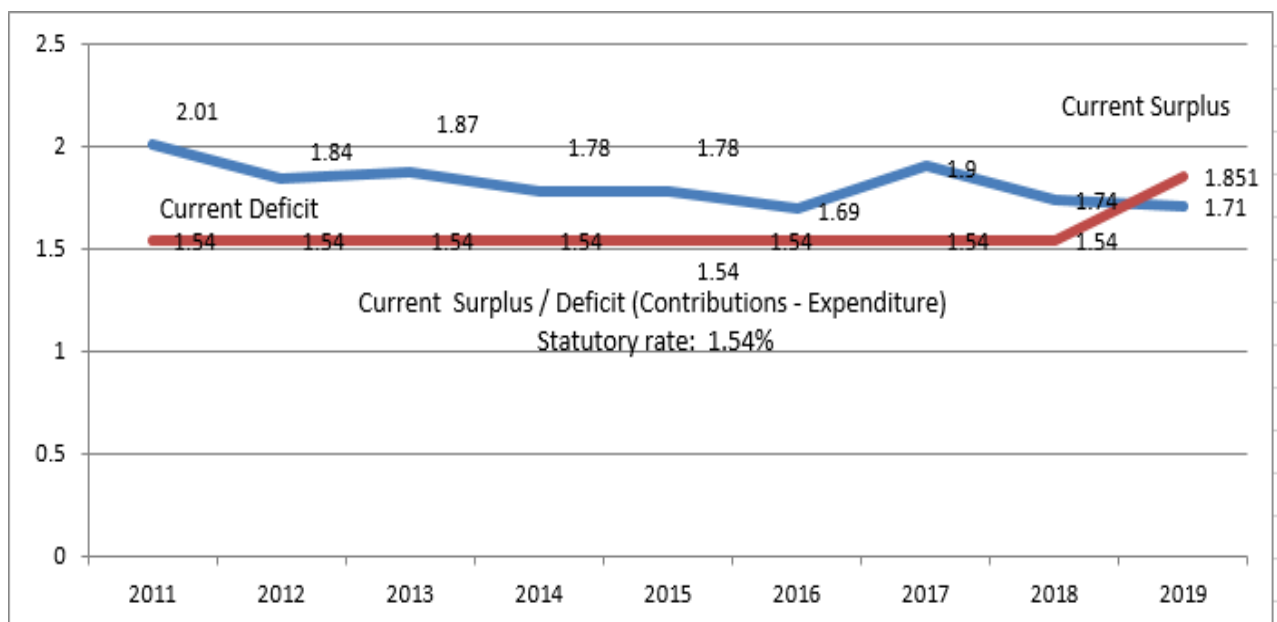
Deficits in the period 2016/18 were reversed due to the legal amendments with a \$2.84 million surplus in 2019. The steady decline of the reserves was also reversed, with a \$14.5 million surplus at the close of the fiscal year, exceeding the minimum statutory reserve stipulated in Section 17 (1) of the Financial Regulations.

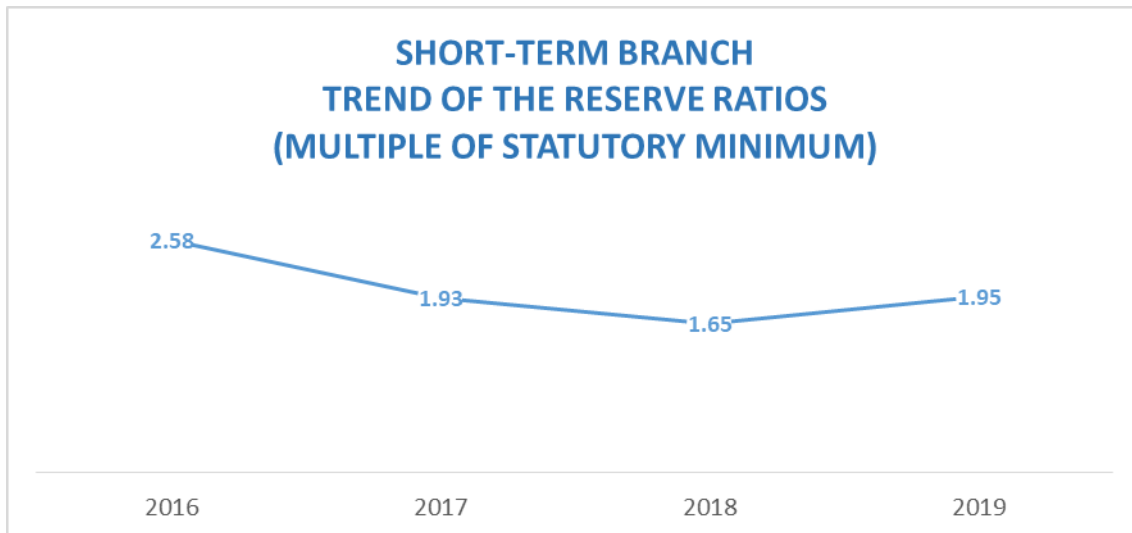
The impact of the dengue epidemic in 2019 did not have a significant actuarial impact on the consolidated operations of the short-term branch. COVID-19 should have an impact on the level of contributions in 2020, but also on the level of benefits, to be quantified at the close of the present fiscal year.

Lower morbidity rates of the segment of the insured person with earnings above the \$320 ceiling should contribute to ensure a positive financial performance in 2021/22.

Current Actuarial Operations of the Short-Term Branch

(as % of insurable earnings)





6. Employment Injury Branch

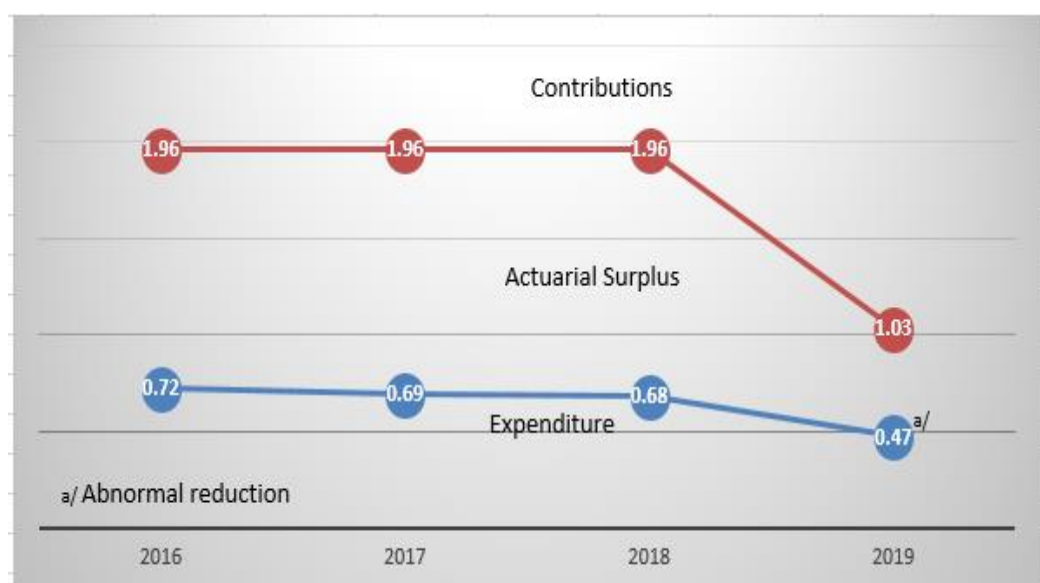
The contribution rate earmarked to the branch is still in excess of actuarial requirements, with investment income on the reserves augmenting the financial surplus. The reduction in the rate of contribution as from January 2019 also reduced sharply the 2019 surplus, to \$10.5 million (\$16.8 million in 2018), augmenting the branch reserve to \$87.0 million at year-end.

The minimum short-term reserve of the branch, as provided for in Section 17(2) of the Financial Regulations, should be equivalent to the average benefit expenditure in the preceding three years. **Therefore, at year-end, the reserve is 25.2 times higher than the stipulated minimum, a clear indication that the contribution rate assigned to the branch exceeds the actuarial requirements.**

The analysis of the Disablement and Death Reserve also shows an actuarial deficit as shown in Table 37. The balance of the joint programs still yields an actuarial surplus of \$64.9 million at 31 December 2019.

Due to the substantial surplus of the EI branch, the difference can be met by an internal transfer within the branch, although due to the fluctuation of the incidence of EI disability and death, and the long-term time-frame involved, such a transfer is not required at present.

Actuarial Cost of EI Branch
(as% of insurable earnings)



7. Long-Term Branch

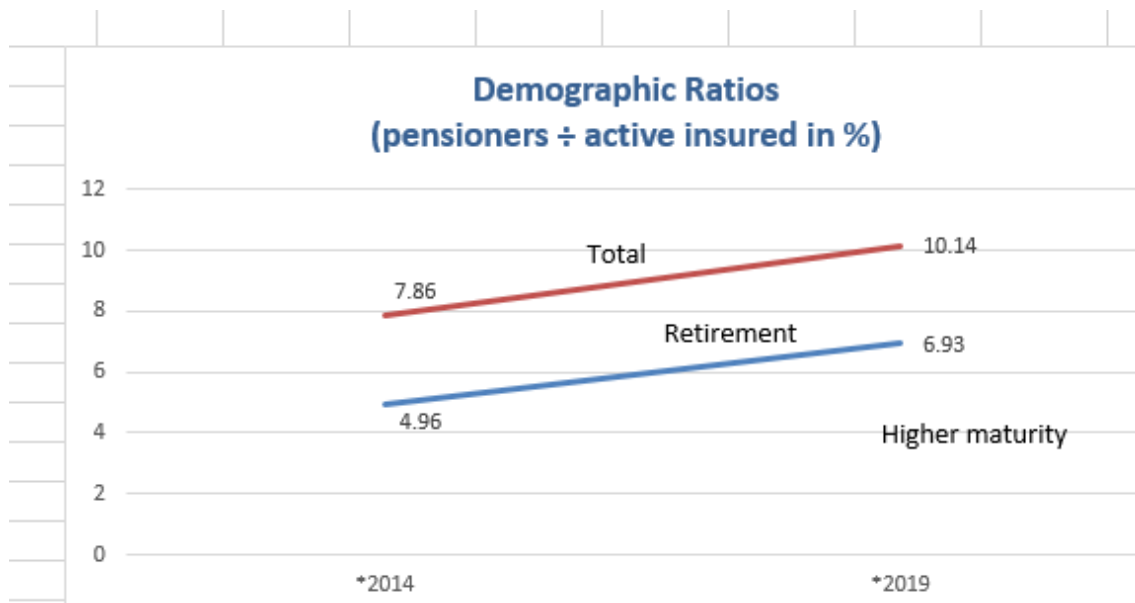
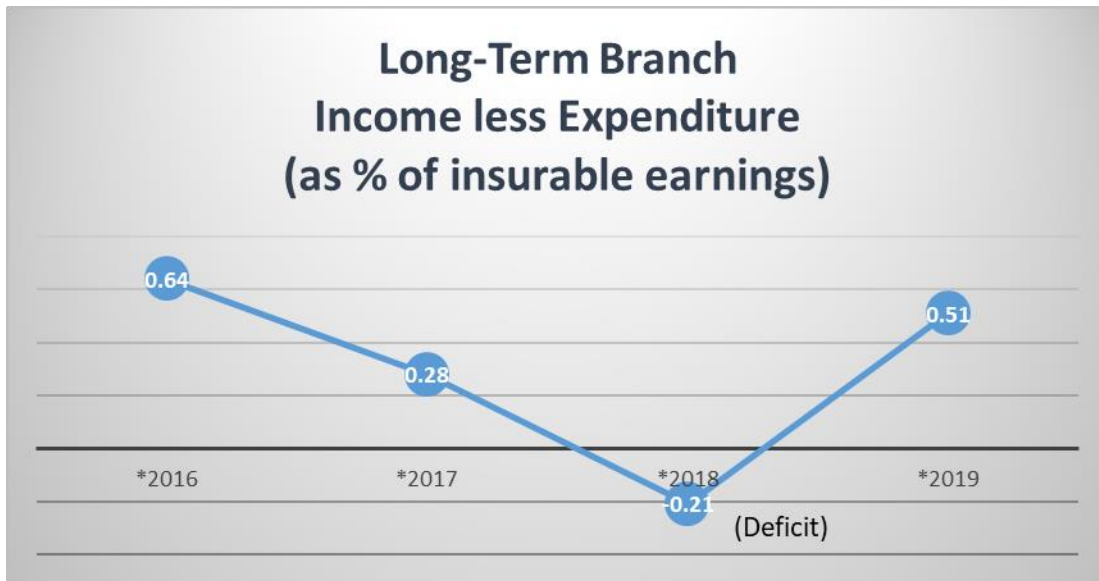
Step increases of the ceiling and the rate of contributions should cause an increase in contributions and the extension of the period of equilibrium until mid-2020. Negative income less expenditure in 2018, for the first time since the inception of the scheme, was reversed into a surplus in 2019, restoring a trend of increasing reserves.

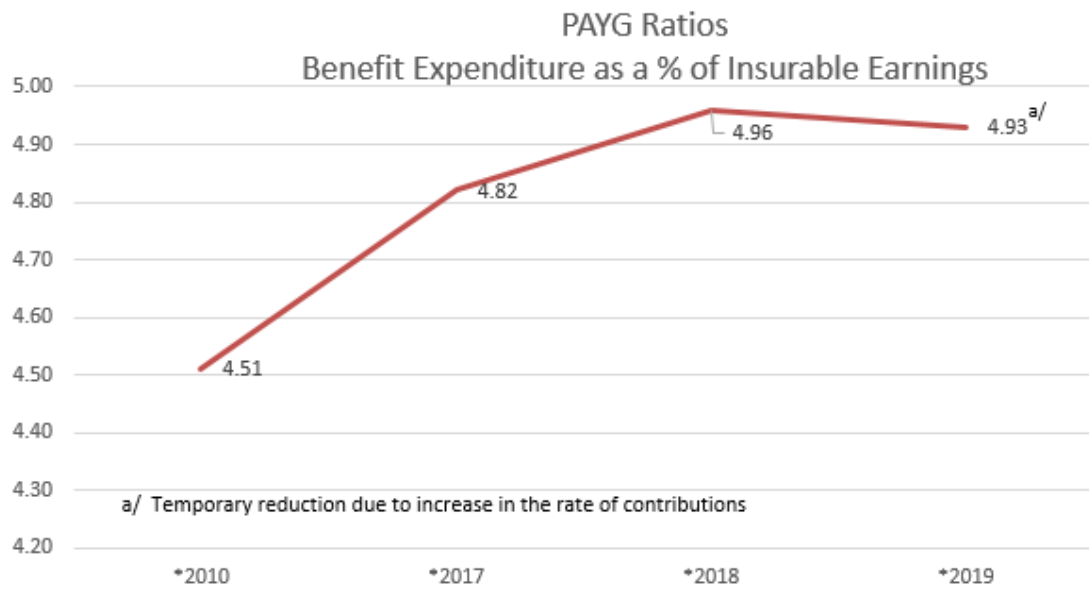
Additional amendments later this decade will allow a further extension of the period of equilibrium, such as automatic trigger adjustments to the ceiling, and an allocation of 75% of contributions to the long-term branch. The scheme still shows a young rate of actuarial maturity, with Demographic Ratios and the cost of benefit that will increase steadily in the future at a higher pace than contributions.

The increase in benefits was focused basically on retirement benefits, due to an acceleration in the number of early retirement pensions at ages 60 to 64 years, including the self-employed. The increase in the ceiling as of July 2019 will be reflected gradually over the next 36 months.

COVID-19 will cause a temporary negative impact on 2020 contributions, but the medium-term trend (2020/25) is expected to show a positive performance, due to the impact of the first set of legal amendments. More precise financial trends should be quantified at the close of the present financial year, once the negative impact of the COVID-19 on the economy decreases gradually, particularly the critical tourism sector.

Demographic ratios and Pay-as-you-go (PAYG) ratios are steadily increasing, a normal pattern of development due to the actuarial maturity of the long-term branch.





8. Self-Employed Scheme

The analysis shows that the self-employed scheme is already insolvent, due to faulty design, including the “voluntary” feature of the scheme, which is conducive to **adverse selection**. The self-employed can qualify for a minimum pension with a low number of contributions, negatively impacting the actuarial situation of the SSB, and generating a transfer of funds from employed persons to the self-employed. The matrix of legal amendments should address these issues, including the exclusion of “housewives”, requiring a higher number of self-employed contributions to qualify for pensions, the elimination of the window of early retirement at age 60, and establishing “compliance” standards once they become voluntarily insured. Specific details are shown in Annex A.

Most of the pensioners have opted to claim pensions before the statutory age of 65 years, with the SSB unable to verify whether the individuals continue to work, in the absence of an employer. Substantial actuarial deficits are emerging, to be subsidized by employers and employees in the general scheme, affecting negatively the financial situation of the long-term branch.

Rather than introducing “parametric adjustments” to the self-employed scheme, a study by the ILO has recommended a “structural adjustment”, based on a new model. Specific recommendation by the Board and still pending as of mid-2020.

9. Non-Contributory Pension Scheme

The actuarial cost of the NCP has been declining steadily, due to the joint incidence of mortality of pensioners and more stringent eligibility requirements imposed by the NCP Committee.

The analysis shows a steady reduction of actuarial costs of 0.14% of insurable earnings in 2019 (0.19% in 2018) and a further reduction of 0.12% of insurable earnings in the 2020/21 period. Specific details are shown in Annex B, as well as pending amendments to the eligibility regulations.

10. Administrative Expenditure

The consolidated actuarial cost of administrative expenditure still exceeds standard benchmarks but has started to decrease as the increase in contributions due to the legal amendments exceeds the secular increase of administrative expenditure. The cost fell below 2% in 2019 (1.98% in 2018 and 2.20% in 2017) and should decline further as from 2021, particularly if the trend of salary adjustments is linked to the inflation trend in Belize. However, the ratio for 2020 might be distorted due to the impact of COVID-19 in contribution income.

11. Investments

The report shows an analysis of the investment portfolio, as required by the Third Schedule of the Act, Section 17. **The nominal rate of return on investments was assessed at 3.7% in 2019, the same as in the preceding year. Due to a lower inflation environment, the real return exceeded the 3% actuarial rate.**

The execution of an investment plan to maximize income without undue risk is a key task of the Board, taking into consideration the advancing maturity of the scheme.

The analysis shows that diversification of the investment portfolio seems advisable, with fresh funds targeted to alternative investments, preceded by i) a sound risk/reward assessment, ii) a favorable anticipated risk-adjusted return, and iii) a careful evaluation of the collateral funds, to ensure full recovery of the unamortized portion of the investment in case of default.

The improved cash-flow due to the legal amendments allows a strategic of asset allocation to “development projects”, as required by the Board, to achieve a more adequate balance of a portfolio concentrated in financial issues.

II

LEGAL BASES AND CONSOLIDATED FINANCIAL OPERATIONS

1. Legal Bases, Coverage and Benefit Provisions

The social protection system in Belize, as regards to cash benefits, is composed of the national social security scheme administered by the Social Security Board (SSB), as the first pillar of pension protection, the Civil Service Pension Scheme and a limited number of complementary pension schemes, as a second pillar. The SSB operates a "defined benefit" and contributory scheme funded on a bipartite basis by employers and employees, whereas the Government system is non-contributory and unfunded, with payments made from current revenues. The remaining complementary schemes are usually funded on a bipartite basis. No individual retirement provisions (IRA) with tax incentives are presently envisaged as a third voluntary pillar of pension protection. The adequate planning of social protection should take into consideration these arrangements for an adequate and sustainable design of the pension system in Belize, although the present report deals exclusively with the national social security scheme administered by the SSB.

The legal bases of the social security scheme are set out in the Social Security Act (1980) and the regulations issued thereunder. The scheme commenced operations on 1 June 1981 and, except for marginal amendments to the benefit regulations, the level of benefits and contributions were not updated until 1 January 2001, when a comprehensive improvement in benefit provisions took place, including a National Health Insurance Scheme, the outdated ceiling on contributions were amended, as described below. On 1 January 2003, a voluntary self-employed scheme was introduced; in May 2003, non-contributory pensions to eligible females were introduced, and on 1 July 2003, the rate of contribution was increased from 7% to 8% of insurable earnings, to strengthen the actuarial situation of the long-term branch. Late in 2007 non-contributory pensions for males as from 67 years of age were introduced and the amount of non-contributory pensions were increased to \$100 per month, affecting negatively the actuarial situation of the long-term branch. Also, a Third Schedule regulating the Investment Framework, as recommended by the Actuary, was annexed to the Act in 2007. A significant set of legal amendments were finally approved in 2019, as shown below, including step increases to the ceiling and the rate of contributions, and a reallocation of contribution income among the benefit branch.

The scheme provides a basic level of social protection, and, after a full career, the scheme is designed to provide a maximum pension of 60% of pensionable salary, which in practice should yield average replacement ratios of 50% to 55% of the last salary, due to salary progression and density of work before retirement. However, the minimum pension increased from \$47 per week to \$49.35 per week as from April 2016 and represents a rather high percentage of the salary for low income or low-density workers.

The scheme covers all employed persons from 14 to 64 years of age, with specified exceptions such as domestic workers working less than 8 hours per week, persons in the military service, and elected officials. Employed persons 65 years and over are covered only against employment injury. A summary of the benefit provisions is shown in Appendix A. Effective 1 January 2009, the distribution of contributions by branch was amended as shown below. A further adjustment is required as from 2015, apportioning to the short-term branch a higher level of contributions, to allow the recapitalization of the branch, and to strengthen the financial bases of the long-term branch.

2. Summary of Legal Amendments (January 2019)

Amendments to the Regulations submitted by the Board were approved by the Minister responsible for Social Security in 2019. Several of the amendments would have a minor incidence on the actuarial situation of the scheme, such as amendments to Non-Contributory Pensions and Claims and Payments Regulations. Amendments to four other provisions will have a specific incidence on the financial trends to the benefits branches, as follows, as from 12 January 2019:

- a) **Redistributes the share of contributions by branch**, as per actuarial recommendations.
- b) **Restores the maximum pension of 60% of the average weekly insurable earnings**, excluding the 5% erroneous adjustments to new pensions.
- c) **Provides for the payment of invalidity pensions for life** upon the attainment of 60 years of age.
- d) **Upgrades the qualifying conditions for pensions from 110 to 250 weekly contributions**.

3. Subsequent Financial Amendments (as from July 2019)

After intense exchanges with the social partners and a countrywide information campaigns, key amendments to the financing provisions became effective as from 1 July 2019, establishing phased adjustments to the ceiling and the rate of contributions. Concurrently, amendments to the qualifying conditions were also implemented.

The following four tables showed a summary of the 2019 financial amendments.

Table 1
Allocations by Branch as a percent of Contributions

Branch	2009/2018	As from January 2019
Short-Term	19.25	22.50
Employment Injury	24.50	12.50
Long-Term	56.25	65.00
Total	100%	100%

Table 2
Step-Increase of the Ceiling on Insurable Earnings (per week)

Up to June 2019	\$320
June / December 2019	\$440
January / December 2020	\$480
As from 2021	\$520

Table 3
Actuarial Rate of Contributions by Branch
(Rate as a percent of Insurable Earnings)

Branch	Up to 2018	January / June 2019	June / December 2019	2020	2021	2022a/
Short-Term	1.54%	1.80%	1.912%	2.025%	2.250%	1.90%
E. Injury	1.96	1.00	1.063	1.125	1.250	0.90
Long-Term	4.50	5.20	5.525	5.850	6.500	7.20
Total	8.00%	8.00%	8.50%	9.00%	10.00%	10.00%

^aRecommended, subject to an actuarial assessment at the close of 2021.

Table 4
Percent Adjustment to the Rate and the Ceiling of Contributions

Period	Rate Adjustments	Ceiling Adjustments
July / December 2019	8.5 / 8.0 = 6.25%	440/320 = 37.5%
2020	9.0 / 8.5 = 5.88%	480/440 = 9.09%
2021	10.0 / 9.0 = 11.11%	520/480= 8.33%

4. Operational Branches

Three benefit branches are presently in operation: a Short-Term branch comprising sickness and maternity benefits; a Long-Term branch comprising retirement, invalidity and survivors' benefits, and an Employment Injury branch comprising medical care, temporary employment injury benefits, and grants or pensions in the event of permanent disability or death due to employment injury. The Long-Term branch also comprises two sub-branches: a Non-Contributory pension's scheme and a Self-Employed voluntary Scheme. Medical care for employment injury was provided only in government installations but as from September 1999, private medical facilities have been integrated into the available options, and at present, most of such care is dispensed by the private sector.

If the insured person is over 65 years, the employer pays only \$2.60 per week only for employment injury benefits, **a rate that should be adjusted due to the high cost of medical treatment of elderly insured persons.** Investment income is allocated to each branch in proportion to the reserves of each branch at the beginning of the year, whereas other income is distributed equally among the three benefit branches.

The original ceiling contribution of \$130 per week has been increased only twice in 2001 when the ceiling was raised to \$320 per week, and the skewed original bipartite contribution schedule (6:1 the employer/employee) was reset at one-half each for earnings above \$130 per week and in 2019, as shown above. However, low-income workers are still eligible for a minimum pension of \$49.35 per week and are still paying a minimum contribution of \$0.83 per week, as the recent set of amendments **did not include the actuarial recommendation to phase out the first two wage bands**, which do not correlate with the minimal legal wages, resulting in the distortion specified above.

The phased increase in the ceilings from July 2019 will provide a better alignment of benefit to actual earnings.

5. Actuarial Systems

The regulations state that each branch shall be financially autonomous. The short-term branch and the temporary injury benefit of the employment injury branch operate under the "assessment" or pay-as-you-go (PAYG) system of financing, as relative costs are expected to remain within a narrow range for long periods. Any adverse fluctuations or trends would be covered by a "contingency" reserve. The

reserve is established in the regulations as the six months average benefit expenditure in the last three years for the short-term branch, and 12 months of the same average for the employment injury branch.

The survivors' and disability pensions of the employment injury branch operate under the "assessment of constituent capitals", under which the present value of pensions awarded is accounted for as the expense in a given year. The "technical" reserve should theoretically be sufficient to meet the actuarial liabilities in respect of pensions in force. This method was recommended in the actuarial valuation carried out before the inception of the scheme and should be retained, due to the distinct nature of short-term obligations and long-term disability pensions.

The long-term branch operates under the "scaled-premium" system of finance, which is a partial capitalization system under which the contribution rate should provide for increasing reserves for a given "period of equilibrium". When expenses exceed contribution income and interest, or before reserves fall below the prescribed minimum, the contribution rate should be adjusted to ensure an adequate level of capitalization.

It is noted that the phased amendments to the financing provisions would have a minimum impact on labour cost to employers, ensuring the medium-term **sustainability** of the scheme, and restoring the **adequacy** of the benefits provisions to more than 100,000 insured persons and their dependents, with a positive impact on 85% of the population of Belize.

6. National Health Insurance Program

Based on the recommendations of a National Health Sector Reform Committee, the Government amended the Social Security Act to include a new chapter to introduce a National Health Insurance Scheme (NHI). The Act was gazetted on 29 July 2000 but the financing regulations have yet to be implemented. On a transition basis, a focalized program at present is funded exclusively by Government transfers, although managed by the SSB. The program was focalized initially in two geographical areas (Belize City and Southern Belize) and is being expanded to the northern regions of Belize.

7. Income and Expenditure

Accounting standards and policies are outlined in Section 46 (1) of the Act and the report of the external auditors. Also, investment income is recorded on an accrual basis, and income from associates is accounted for by the equity method.

Table 5 shows the consolidated income and expenditure in the last three financial years, excluding NHI operations.

Table 5
Consolidated Statement of Income and Expenditure (ex-NHI Operations)
(Amounts in thousands of BZ\$)

Income	2019 ^{4/}	2018	2017
Contributions ^{1/}	100,181	87,043	82,611
Investment income	19,747	20,453	23,889
Other income ^{2/}	2,022	1,263	1,084
Total Income	121,950	108,759	107,584
Benefits			
Short-term branch	15,567	14,357	15,233
Long-term branch ^{3/}	60,054	54,032	49,859
Employment injury branch	5,545	5,755	5,410
Benefit Expenditure	81,166	74,144	70,502
Administrative and other expenses	23,978	22,415	22,792
Total expenditure	105,144	96,559	93,294
Net income	16,806	12,200	14,290
Contributions less expenditure	(4,963)	(9,516)	(10,683)

^{1/} Excludes GOB contribution to the NHI Fund and NHI operations.

^{2/} Includes interest on rental income, staff advances, and surcharges for late contributions.

^{3/} Includes non-contributory pensions.

^{4/} Unaudited

8. Other Income

The rate of other income has fluctuated between 0.11% and 0.15% of insurable earnings, including interest on late contributions, and rental income. The income is distributed in equal parts among the three benefit branches, according to the provisions of Section 14(3) of the Financial Regulations. The actuarial rate will be adjusted based on future valuations if higher compliance by employers tends to reduce the penalties for late contributions.

9. Balance Sheet and Reserves by Branch

Table 6 shows the balance sheet.

Table 6
Balance Sheet of the Social Security Board (as at 31 December)
(Amounts in thousands of BZ\$)

	2019 ^{b/}	2018	2017
Cash and bank balance	30,667	35,934	30,943
Short-term investments	19,842	29,988	27,272
Long-term investments ^{a/}	444,717	416,106	428,201
Accounts receivable and others	30,136	28,391	26,114
Fixed & other assets (net)	33,284	36,865	28,043
Total assets	558,646	547,284	540,573
Liabilities and deferred income	(13,511)	(13,913)	(13,804)
Net reserves and special funds	545,135	533,371	526,769

^{a/}Includes investments in Associates and loans.

^{b/}Unaudited

As to the distribution of reserves by branch, Table 7 shows increases in Long-term branch, Short-term, and EI branch reserves, the latter exceeding accepted benchmarks, whereas the Disablement and Death reserve has remained relatively stable.

Table 7
Distribution of Reserves by Branch
(As at 31 December, in thousands of BZ\$)

Benefit Branch	2019 ^{p/}	2018	2017
Short-term	14,546	11,848	13,278
Long-term	426,238	424,738	431,200
Employment Injury	87,586	79,461	64,331
Disablement and Death	12,367	13,655	14,546
National Health Insurance Fund	2,774	2,543	2,206
Social Security Development Fund	2,614	2,176	1,502
Pension reserve ^{a/}	(930)	(991)	(294)
Total	545,195^{p/}	533,370	526,769

^{a/} As per the actuarial review

^{p/}Preliminary, unaudited

10. Reserves as a Percent of GDP

Table 8 shows the consolidated SSB reserves as a percent of GDP, slightly above 14% (current prices). However, GDP is projected to decline significantly in 2020 due to COVID-19, while the SSB reserves would increase due to the incidence of legal amendments.

Table 8
SSB Reserves as Percent of Gross Domestic Product (GDP)

	2019	2018	2017
(amounts in millions of BZ\$)			
GDP ^{1/}	3,779 ^{p/}	3,742	3,673
SSB Reserves	558	512	527
As % of GDP	14.8%	13.7%	14.3%

^{1/}Current prices.

^{p/}Provisional assumes a 1% increase in 2019

11. Rate of Return on Investments

As shown in Table 9 the **Rate of Return on Assets (ROA)**. The nominal rates show a triennial average of 40%, and the real (inflation-adjusted) return shows an average of 3.44%. The actuarial rates might differ from the financial rates computed by the financial areas, due to different methodology. Due to the low inflation rate, the real rate of return has exceeded the 3% actuarial assumption utilized for the projection of the long-term branch.

Table 9
Rates of Return on Financial Investments (net assets)
(Amounts in millions of BZ\$)

	2019	2018	2017
Net investment income	19,747	19,749	23,889
Nominal rate of return ^{1/}	3.67%	3.72%	4.60%
Average inflation rate	0.20%	0.30%	1.10%
Real return ^{2/}	3.46%	3.41%	3.46%

^{1/} According to the formula $i = 2I/(R_0 + R_1 - I)$, where I is the return on investments and R the assets at the beginning and the end of the year, excluding in financial expenses.

^{2/} According to the formula: $[(1 + i) / (1 + s)] - 1$ where i and s represent the interest rate and the inflation rate.

Due to the importance of the investment return, a strategy must be developed to ensure a prudent investment policy aimed at maximizing a return compatible with the safety of the capital, the latter being the primary consideration. Actuarial projections, in conjunction with expert advice on investments, provide a platform for a long-term investment strategy as from 2020.

12. The integrity of the Reserves and Non-Performing Investments

The Board has strengthened compliance procedures with debtors and it is expected that the risk of potential losses on investment will be reduced gradually. In view of the above, the external auditors have strengthened the status of non-performing

investments, to determine any material incidence on the actuarial reserves, yielding a substantial increase in the provision for losses on investment and providing the SSB with a more realistic picture of the financial situation of the scheme.

13. Administrative Expenditure

Administrative expenditure is distributed among the three benefit branches by a weighted share of the sum of contribution income and benefit of the branch as compared to the Fund as a whole. Table 10 shows the trend in the administrative expenditure of the basic scheme.

Table 10

Distribution of Administrative Expenditure (amounts in thousands of BZ\$)

	2019	2018	2017
Total operating expenditure ^{1/}	23,094	22,415	22,791
Depreciation (administration)	n/a	(964)	(964)
Amortization (establishment)	n/a	(466)	(466)
Net operating expenses	23,094	20,985	21,361
Actuarial cost (total) ^{2/}	1.98%	2.06%	2.20%
Actuarial cost (net) ^{3/}	n/a	1.93%	2.06%
Budget Performance Indicators			
as % of contributions	23.9%	25.7%	27.6%
as % of contributions + benefits	13.2%	13.9%	14.8%

^{1/}Excluding NHI expenses

^{2/}As percent of insurable earnings

^{3/}Excluding depreciation / amortization

The bottom part of Table 10 shows the performance ratios of administrative expenditure, which are applicable for budgeting purposes, with a decline in the rate of administrative expenditure over the last three years, as compared to contributions and benefits.

The distribution by a branch of the total actuarial costs is shown in Table 11.

Table 11

Administrative Expenditure by Branch, as a percent of insurable earnings

	2019	2018	2017
Short-term branch	0.43%	0.41%	0.47%
EI branch	0.20%	0.35%	0.36%
Long-term branch	1.35%	1.30%	1.37%
Total	1.98%	2.06%	2.20%

^{a/}Includes retroactive salary adjustments and restoration of contributions to the staff pension plan.

As the ceiling and the rates of contributions have been updated, raising the level of insurable earnings and contributions, **the relative cost of administrative expenditure should decline, but reaching a competitive level of similar social security schemes in Central America and the Caribbean requires cost-curtailement measures.** Nominal costs are not comparable, as the Belize scheme operates nine District Offices and two sub-offices, which is not the case in smaller schemes in the Caribbean. The workload arising from the reduction of the “waiting period” for short-term claims has required additional clerical staff to process the increase in the number of sickness claims lasting less than three days.

14. Social Development Fund and Disaster Fund

Originally 0.15% of insurable earnings of the short-term branch were assigned to a Social Development Account, reducing the effective financing of short-term branch benefits. As of 2009, the financing of those funds has been transferred to the EI branch, as recommended by the actuary. As of 31 December, the accounts had the following balances:

Table 12

Reserves of the Social Development of Disaster Funds

	2019	2018	2017
	(Amounts in thousands of BZ\$)		
Social Development Fund	874	625	201
Natural Disaster Fund	1,801	1,551	1,301
Total	2,675	2,176	1,502

15. Trend of NHI Key Parameters

The NHI financial trend is shown in Table 13.

Table 13

	2019	2018	2017
	(Amounts in thousands of BZ\$)		
(GOB contributions	17,950	17,600	17,000
Benefit expenses ^{a/}	(16,706)	(16,305)	(15,823)
Administrative expenditure	1,013	(958)	(931)
Surplus	231	337	246
Reserve	2,587	2,543	2,206
In benefit months ^{b/}	1.96	1.87	1.67

^{a/} Excludes outstanding claims

^{b/} Minimum desirable reserve: 6-months benefit expenditure

16. Trend of Active Insured Persons and Insurable Earnings

The trend of insurable earnings is shown in Table 14 and 15. The analysis shows the impact of the legal amendments on the income from contributions, with a 15.1% increase, in 2019 (5.4% in 2018).

Table 14

	2019 ^{p/}	2018	2017
Insured persons	110,937	108,269	104,683
Contributions	100,181	87,043	82,611
Insurable earnings	1,216,456	1,088.037	1,032.637

^{p/}Provisional

Table 15

**Rates of Increase of Insured Persons, Contributions
and Weekly Insurable Earnings
(Amounts in thousands of BZ\$)**

	2019	2018	2017
Average insurable earnings (per week)	\$211	\$193	\$190
Percent increase (insured persons)	2.46%	3.42%	1.39%
Percent increase (contribution)	15.1%	5.4%	3.14%
Average increase (average weekly earnings)	9.33%	1.58%	3.83%

III

ANALYSIS OF THE SHORT-TERM BENEFIT BRANCH

1. Financial Operations

Table 16 shows the financial operations of the short-term benefit branch. Deficits in the period 2016/18 were reversed due to the legal amendments with a \$2.84 million surplus in 2019. The steady decline of the reserves was also reversed, with a \$14.5 million surplus at the close of the fiscal year.

The impact of the dengue epidemic in 2019 did not have a significant actuarial impact on the consolidated operations of the short-term branch. COVID-19 should have an impact on the level of contributions in 2020, but also on the level of benefits, but to a lower extent, to be quantified at the close of the present fiscal year.

Lower morbidity rates of the segment of the insured person with earnings above the \$320 ceiling should contribute to ensuring a positive financial performance as of 2021.

Table 13
Income and Expenditure of the Short-Term Benefits Branch
(Amounts in Thousands of Belize Dollars)

	2019	2018	2017
Contributions	22,541	16,756	15,903
Investment and other income	1,140	936	1,126
Total Income	23,681	17,692	17,029
Maternity allowances	4,081	4,013	3,604
Sickness benefits	10,536	9,348	10,658
Maternity grants	949	996	971
Total Benefits	15,566	14,357	15,233
Operational expenses	5,275	4,535	4,854
Total Expenditure	20,841	18,892	20,086
Income less Expenditure	2,840	(1,200)	(3,057)
Contingency Reserve	14,546^{a/}	11,848	13,278

^{a/}Steady decline reversed due to the higher contribution allocation as of January 2019.

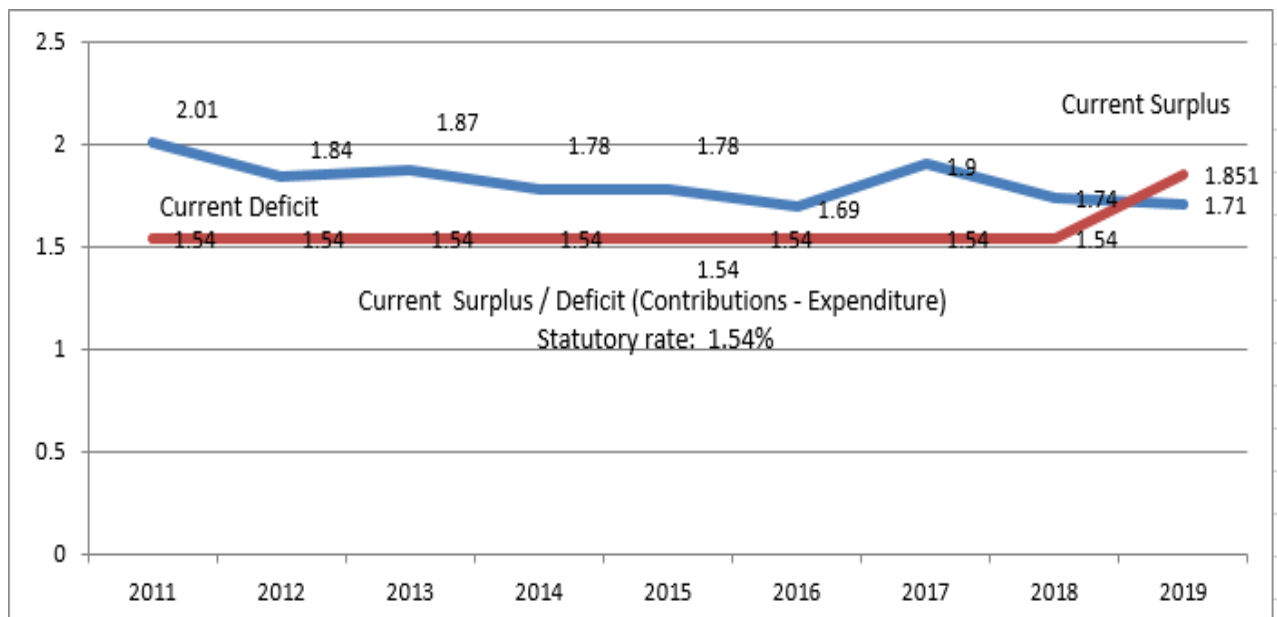
2. Income and Expenditure as a Percent of Insurable Earnings

Income and expenditure as a percentage of insurable earnings are shown in Table 17. The average contribution rate allocated to the branch in 2019 exceeded the total expenditure, restoring a financial structure in accordance with actuarial requirements. Investment income contributed to augment the surplus.

Table 17
Income and Expenditure of the Short-Term Branch as a Percent of Insurable Earnings

	2019	2018	2017
Contributions	1.853	1.540	1.540
Investment & other income	0.094	0.084	0.110
Total Income	1.947	1.624	1.650
Maternity allowances	0.335	0.368	0.346
Sickness benefits	0.867	0.860	1.007
Maternity grants	0.078	0.091	0.094
Total Benefits	1.280	1.319	1.447
Operating expenses	0.433	0.417	0.467
Total Expenditure	1.713	1.736	1.914
Income less Expenditure	0.234	(0.112)	(0.263)
Contributions less Expenditure	0.140	(0.196)	(0.374)

Current Actuarial Operations of the Short-Term Branch
(as % of insurable earnings)



3. Cost and Fund Ratios

Section 17 (1) of the Financial Regulations set a minimum level of reserves equivalent to six months the average benefit expenditure in the last three years. As shown in Table 15, at the end of 2019 the reserve stands above the minimum stipulated in the regulations.

Table 18
Statutory Minimum Level of Reserves (31 December)

	2019	2018	2017
	(amounts in thousands of BZ\$)		
Minimum statutory reserve ^{1/}	7,526	7,072	6,878
Actuarial reserve	14,646	11,657	13,278
Reserve ratio (actual / minimum)	1.95	1.65	1.93

^{1/} Six months average benefit expenditure in the last three years.

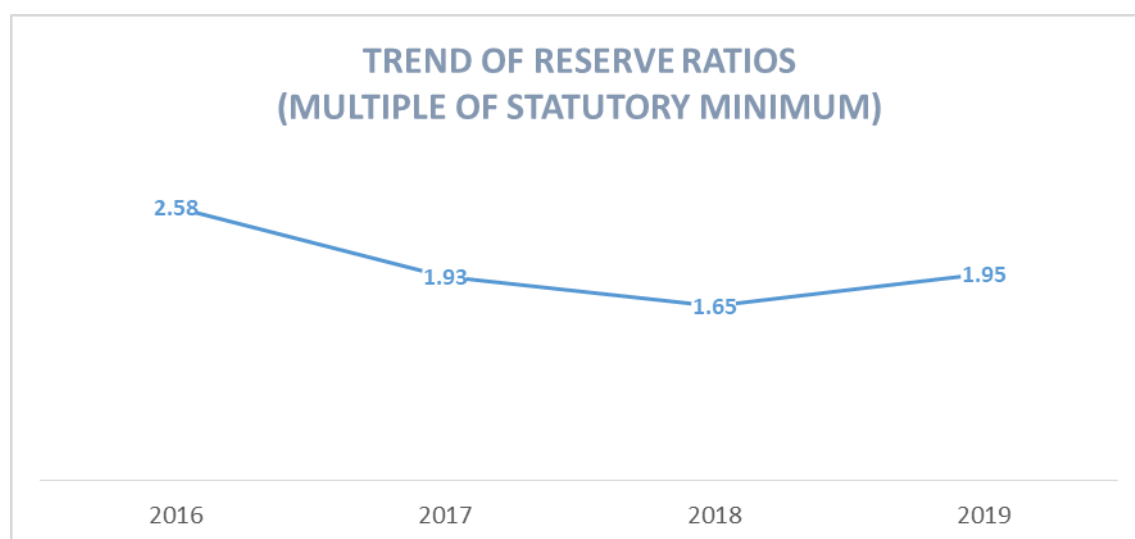


Table 19 shows the cost and funding ratios of the short-term branch, with the following summary:

- Declining ratio of benefits divided by contributions of 87% in 2019.**
- Cost Ratios (expenditure divided by contributions and total income) declining to less than one, yielding a "current surplus".**
- The Fund Ratio increased to 0.70 or 8.4 months of expenditure (0.62 in 2018), slightly above the internationally accepted minimum of six months' total expenditure.**

Table 19
Cost and Fund Ratios of the Short-Term Branch

	2019	2018	2017
Benefits ÷ contributions	0.69	0.86	0.93
Total expenditure ÷ contributions	0.92	1.13	1.24
Total expenditure ÷ total income	0.88	1.07	1.16
Fund Ratio ^{a/}	0.70	0.62	0.69

^{a/} Reserve ÷ total expenditure in the year

4. Frequency and Unit Cost of Sickness Benefit

The analysis for the period under review shows (Tables 20 and 21):

- a) **The average duration of terminated sickness cases of 7.9 days**, higher than in the preceding two years.
- b) **Average “morbidity rates”** (days paid per insured per year) of 3.06 days, with a steady trend (all cases).
- c) **Morbidity rates for females higher than for males**, that deserves an in-depth analysis by the Research Section, to determine causalities and introduce cost reduction strategies.
- d) **An average duration per new cases** in a calendar year of 9.85 days, and average days per insured of 3.06 days in 2019.

Table 20
Sickness Incidence of Terminate Cases

	2019	2018	2017
Insured Population			
Males	64,900	65,837	64,265
Females	40,946	42,432	40,418
Total Active Insured	110,937	108,629	104,683
Terminated Cases			
Cases	3,474	3,827	4,499
Days paid	27,464	28,408	37,223
Average duration (days)	7.90	7.42	8.27

Table 21
Sex Differentials of Sickness Claims Granted (New Cases)

Granted New Cases	2019	2018	2017
No. of Cases	34,550	33,204	39,301
No. of Days	340,191	332,358	390,085
Active Insured	110,937	108,629	104,683
Average days per case	9.85	10.01	9.92
Average cases per insured	0.31	0.30	0.38
Average days per insured ^{a/}	3.06	3.06	3.72
Cases / Insured			
Males	0.26	0.25	0.32
Females	0.43	0.39	0.46

^{a/}Morbidity rate

5. Actuarial Cost of Sickness Benefit

Table 22 shows the actual actuarial cost of sickness benefits. For the intermediate period 2020/21, a rate of 0.90% of insurable earnings has been assessed, taking into consideration that the anticipated increase in the ceiling would reduce the incidence of sickness claims.

Table 22

Average	Actual		
	2019	2018	2018
Cases per 100 insured	0.31	0.30	0.38
Days per insured (Morbidity rate)	3.06	3.08	3.36
Cost per case	\$305	\$282	\$271
Cost per insured	\$94	\$86	\$99
Actuarial cost ^{a/}	0.87%	0.86%	1.01%

^{a/}As a percent of insurable earnings.

6. The trend of Maternity Benefits

The rates of maternity allowances were as follows:

Table 23

Actuarial Cost of Maternity Benefits

	2019	2018	2017
Active contributors	110,937	108,629	104,683
Female contributors	44,055	42,432	40,418
Number of allowances paid	1,439	1,466	1,341
Number of grants paid	3,157	3,334	3,195
Allowance paid per 100 females	3.27	3.46	3.28
Grants paid per 100 females	3.24	3.49	4.43
Allowances by 100 average contributors	1.31	1.35	1.28
Grants per 100 average contributors	2.89	3.07	2.09

7. Actuarial Cost of Maternity Benefits and Grants

The cost of maternity allowances and grants has remained rather stable in the last three years, (Table 24). For the period 2020/21, the joint average cost was assessed at 0.43% of insurable earnings.

Table 24

Actuarial Cost of Maternity Benefit

	2019	2018	2017
Actuarial cost (allowances)	0.34%	0.37%	0.35%
Actuarial cost (grants)	0.08%	0.10%	0.09%
Total	0.41%	0.47%	0.44%

The statistical data shows that the fertility rate has started to decline moderately in Belize, and the age structure of the population over 15 years is changing gradually, a trend which is also influenced by migration, with an estimate of 10% of the population over 60 years of age, as compared to 8% in 2002, a ratio that should be monitored periodically.

The sequential experience is shown in Table 25, showing a steady reduction of the actuarial cost due to lower fertility rates:

Table 25

Year	Allowances	Grants	Total
(as % of Insurable earnings)			
2019	0.37	0.09	0.46
2018	0.34	0.08	0.42
2015/17	0.35	0.10	0.45
2012/14	0.38	0.08	0.46
2009/11	0.43	0.13	0.56

8. Actual versus Expected Experience and Projected Actuarial Cost

Table 26 shows a comparison between the actual and expected actuarial cost of the short-term branch benefits. The actuarial cost estimate for 2020/21 is assessed at 1.78% of insurable earnings, assuming stable morbidity and fertility rates. No significant reductions should be expected until a waiting period, or until the former benefit provisions, are restored on a partial basis. A current surplus of 0.36% is assessed for the biennia, subject to fluctuations arising in 2020 due to the impact of the COVID-19. The cost ratios for 2022/25, are expected to yield a steady surplus, to be assessed at the close of 2020.

Table 26

Comparison between Actual and Expected Actuarial Cost of Benefits **(as % of insurable earnings)**

	Projected	Actual
	2020/21	2017/18
Sickness allowance	0.90	0.91
Maternity allowance	0.35	0.35
Maternity grant	0.08	0.09
Total benefits	1.33	1.35
Administrative expenses	0.45	0.43
Total	1.78%	1.78%
Contribution rate	2.14^{a/}	1.54
Surplus deficit	0.36	(0.24)

^{a/}Average rate for 2020/21

9. Amendments to the Short-Term Branch (as from 2022)

a) Elimination of the Waiting Period

Statistics on sickness claims show that approximately 45% of the total lasted from one to three days, accounting for 13.6% of the total days paid and 14.4% of the amounts paid. Therefore, the elimination of the 3-day waiting period in the legal amendments enacted in 2001 has almost doubled the number of claims processed, generating a significant increase in the administrative workload, while increasing the SSB cost of sickness benefits. **Restoration of a waiting period will have no material incidence in the direct cost to employers, but it will reduce the SSB administrative cost.** Partial restoration of 2-days (lower than the usual 3-days in many CARICOM schemes) would be advisable as from 2020.

The morbidity rate (days paid per insured) should decrease by 25%, due to a high incidence of cases in the agricultural sector, usually before the conclusion of the harvesting season. **The high replacement ratio of 80% of the average insurable earnings, as compared to 60% to 70% in other schemes, also contributes to the high incidence and duration of sickness cases, particularly if the beneficiary can work in the informal sector as a self-employed without being detected by the SSB.**

The restoration of a waiting period and a benefit rate of 70%, rather than 80% for sickness and maternity benefits, would align the SSB legal provisions with other schemes, and reduce further the cost of the Short-Term Branch. Restoration of the waiting period would also contribute to reducing the workload involved in processing the number of claims and the cost of administration.

b) Incidence of Amendments to the Sickness Provisions

The application of the waiting period and a level replacement rate of 70% rather than 80% would reduce the actuarial cost is shown in Table 27.

Table 27

Alternative Cost of the Short Term Branch

	Percent of Insurable Earnings	Actuarial Surplus ^{a/}
Actuarial projected cost / present legal provisions	1.78%	0.47
With a 2-days waiting period and a 70% rate	1.70%	0.55
With a 3-days waiting period and a 70% rate	1.60%	0.65

^{a/}Rate of 2.25% of insurable earnings as from 2021

c) **Net Actuarial Impact**

The restoration of a waiting period and the rate of benefits would yield a steady actuarial surplus, requiring a reduction of the contribution rate allocated to the short-term branch.

IV

ANALYSIS OF THE EMPLOYMENT INJURY BRANCH**1. Financial Operations of the Employment Injury Branch**

Table 28 shows the operations of the employment injury branch, which records as expenses the actuarial present value of disablement and survivor' pensions, in accordance with the actuarial method of "terminal reserves" or "assessment of constituent capital" applied to the scheme. The transfer of \$80 million in 2016 to the long-term branch reduced the reserve to \$49.9 million at 31 December 2016, but it increased steadily again to \$87.5 million at 31 December 2019. Due to a significant decline in benefits claims in 2019. Therefore, the reduced contribution rate earmarked to the branch is still in excess of actuarial requirements, with investment income on the reserves augmenting the financial surplus. The reduction in the rate of contribution as from January 2019, also reduced sharply the 2019 surplus, to \$10.5 million (\$16.8 million in 2018), augmenting the branch reserve to \$87.0 million at year-end.

Table 28
Income and Expenditure of the Employment Injury Branch
(Amounts in thousands of BZ\$ Dollars)

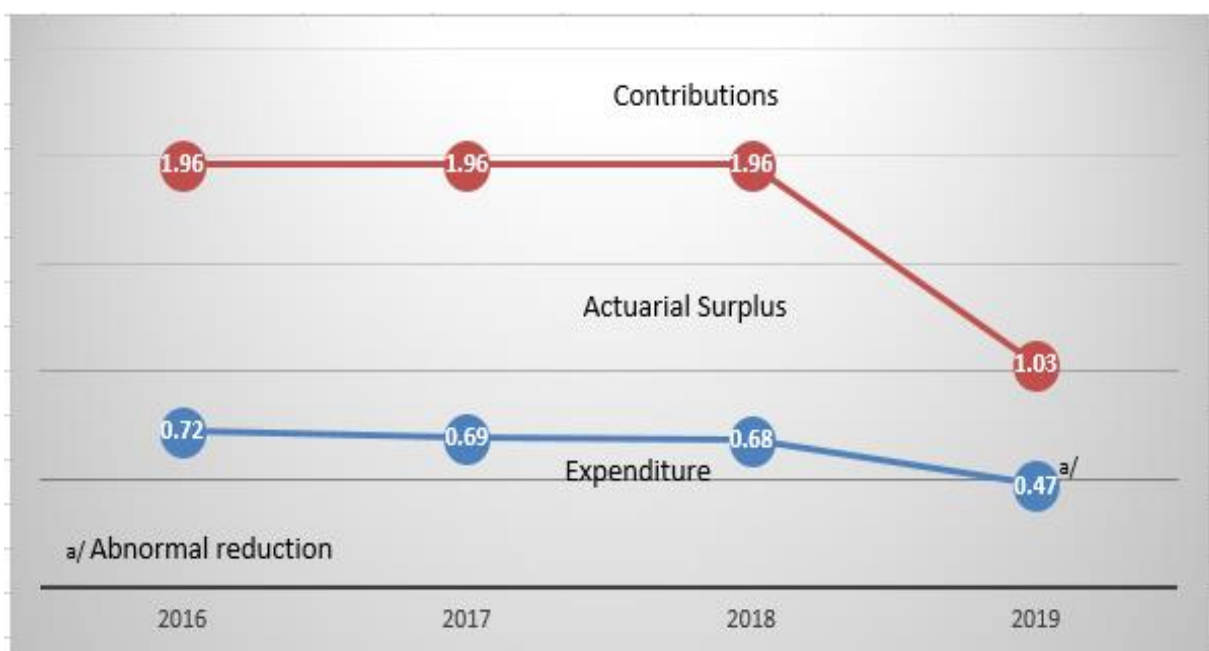
	2019	2018	2017
Contributions	12,523	21,326	20,240
Investment and other income	3,809	2,948	2,699
Total Income	16,332	24,275	22,939
Disablement grants	414	484	518
Employment injury (short-term)	2,436	2,348	2,468
Disablement benefits (actuarial value)	296	599	109
Death benefits (actuarial value)	213	223	212
Funeral grants	9	9	2
Total Benefits	3,368	3,663	3,309
Operating expenses	2,456	3,727	3,769
Total Expenditure	5,824	7,390	7,078
Income less Expenditure	10,508	16,885	15,860
Net Reserve (Short-term benefits)	87,586	79,401	64,330

2. Income and Expenditure as a Percent of Insurable Earnings

Income and expenditure as a percentage of insurable earnings are shown in table 29. Total benefits in 2019 were equivalent to 0.28% of insurable earnings (0.34% in 2018). The relative rate of contribution, which was reduced by almost one-half in 2019, still yielded a current surplus in 2019.

Table 29**Income and Expenditure as a Percent of Insurable Earnings (EI Branch)**

	2019	2018	2017
Contributions	1.030	1.960	1.960
Investment and other income	0.313	0.263	0.262
Total Income	1.343	2.223	2.222
Disablement grants	0.034	0.044	0.050
Employment injury (short-term)	0.200	0.216	0.240
Disablement benefits (actuarial value)	0.024	0.056	0.011
Death benefits (actuarial value)	0.018	0.020	0.020
Funeral grants	0.061	0.001	0.000
Total Benefits	0.277	0.337	0.321
Operating expenses	0.202	0.342	0.365
Total Expenditure	0.479	0.677	0.686
Income less Expenditure	0.864	1.546	1.274
Contributions less expenditure	0.551	1.283	1.274

Actuarial Cost of EI Branch**(as% of insurable earnings)****3. Statutory and Actual Reserves**

Reserves of employment injury benefits have evolved as shown in table 30. The minimum short-term reserve of the branch, as provided for in Section 17(2) of the Financial Regulations, should be equivalent to the average benefit expenditure in the

preceding three years. **Therefore, at year-end, the reserve is 25.2 times higher than the stipulated minimum, a clear indication that the contribution rate assigned to the branch exceeds the actuarial requirements.**

Table 30
Employment Injury Benefit Reserve
(Amounts in thousands of BZ\$)

31 December	Reserve	Statutory Minimum	Multiple Minimum Reserve
2019	86,997	3,447	25.2
2018	78,266	3,595	21.7
2017	64,330	3,736	17.2
2016	49,933 ^{a/}	4,183	11.9
2015	112,738	4,322	26.1

^{a/}Impact of \$80 million transferred to the long-term branch

4. Incidence of Short-Term Injury Benefits

Table 31 shows the incidence and cost ratios of employment injury benefit.

Table 31
Incidence of Employment Injury Short-Term Benefit

	2019	2018	2017
Cases paid	1,492	1,745	1,789
Amount paid (in thousands)	\$2,436	\$2,348	\$2,468
Active insured persons	110,937	108,629	104,683
Cases per 100 insured	1.34	1.61	1.70
Cost per case	\$1,632	\$1,344	\$1,385
Cost per insured	\$21.96	\$21.61	\$23.64
Actuarial cost (% of salaries)	0.200	0.216	0.240

The emerging trend shows that the anticipated incidence has been slightly lower to the actuarial expectations, as shown in Table 32. For the next two years, the actuarial cost estimate is assessed at 0.22%, equal to the average of the preceding three years.

Table 32
Actual and Expected Cost of Injury Benefits ^{a/}

	2020/21	2019	2018
Cases per 100 insured	1.40	1.34	1.61
Actuarial cost (% of salaries) ^{a/}	0.22%	0.20%	0.22

^{a/}Excludes medical expenses

5. Financial Trend of the Disablement & Death Benefits

The sub-branch operates on the actuarial funding method of “assessment of constituent capitals” or terminal reserves. Each year the actuarial present value (APV) of the cases occurring during the year is credited to the reserve of the sub-branch, jointly with the investment income earned by the reserve. The updated cumulative reserve should be sufficient to cover the cost of pensions in payment at the close of the year.

Table 33 shows the income, expenditure, reserve, and the Fund Ratio of the Disablement and Death benefits. The Disablement and Death Reserve is different to the PAYG reserve of short-term benefits, representing the amounts required to pay pensions in payment until the cessation of payment due to death, recovery, or termination of survivors' benefits, while the short-term branch “contingency reserve” is designed to cover adverse deviations in the experience.

Table 33

Income, Expenditure, and Reserves of Disablement & Death Benefits

	2019	2018	2017
APV disablement benefits	296,056	599,349	108,717
APV death benefits	212,662	222,682	211,772
Total APV	508,718	822,031	320,489
Net investment income	538,354	566,959	727,152
Total income	1,047,072	1,388,991	1,047,641
<u>Expenditure</u>			
Disablement pension	1,547,487	1,446,074	1,453,450
Death benefits	629,253	646,540	647,438
Total benefits	2,176,740	2,092,614	2,100,888
Excess of income over expenditures	(1,129,668)	(703,623)	(1,053,247)
Actuarial Reserve	12,305,656	13,655,200	14,541,268
Key Indicators			
Actuarial cost (new cases) ^{a/}	0.04% ^{b/}	0.08%	0.03%
Fund Ratio Reserve ÷ benefit expenditure	5.65	6.41	6.92

^{a/} APV of new cases ÷ insurable earnings

^{b/} Reduction due to lower disablement claims in 2019.

6. Incidence of Disablement and Death Benefits

Table 34 shows the rates of accidents per 1000 insured persons due to EI accidents. The incidence of accidents shows significant volatility, according to preliminary data, but the cases of permanent incapacity tend to increase.

Table 34
Number of Accidents by Consequence and Rates per 1000 insured

Year	Number of Cases			Rates for 1000 insured		
	Medical Care only	Permanent incapacity	Deaths	Medical care only	Permanent incapacity	Death
2019	1,482	197	8	13.4	1.78	0.07
2018	1,746	226	13	16.2	2.09	0.15
2017	1,781	165	12	17.1	1.59	0.12
2016	1,842	132	1	17.9	1.29	0.01

7. Trend of Pensions in Payment

The statistics shown in Table 35 indicate a gradual increase in pensions in payment.

Table 35
EI Pensions in Course of Payment

	2019	2018	2017
<u>Disablement Pensions</u>			
Number	489	478	472
Monthly amount	\$117,824	\$115,123	\$113,378
<u>Widows</u>			
Number	87	86	86
Monthly amount	\$33,342	\$32,045	\$32,180
<u>Orphans</u>			
Number	151	164	170
Monthly amount	\$24,602	\$25,886	\$27,461

8. Medical Expenses

Medical expenses are budgeted as a separate item but are shown on a consolidated basis with employment injury benefits in the financial statements, as noted above.

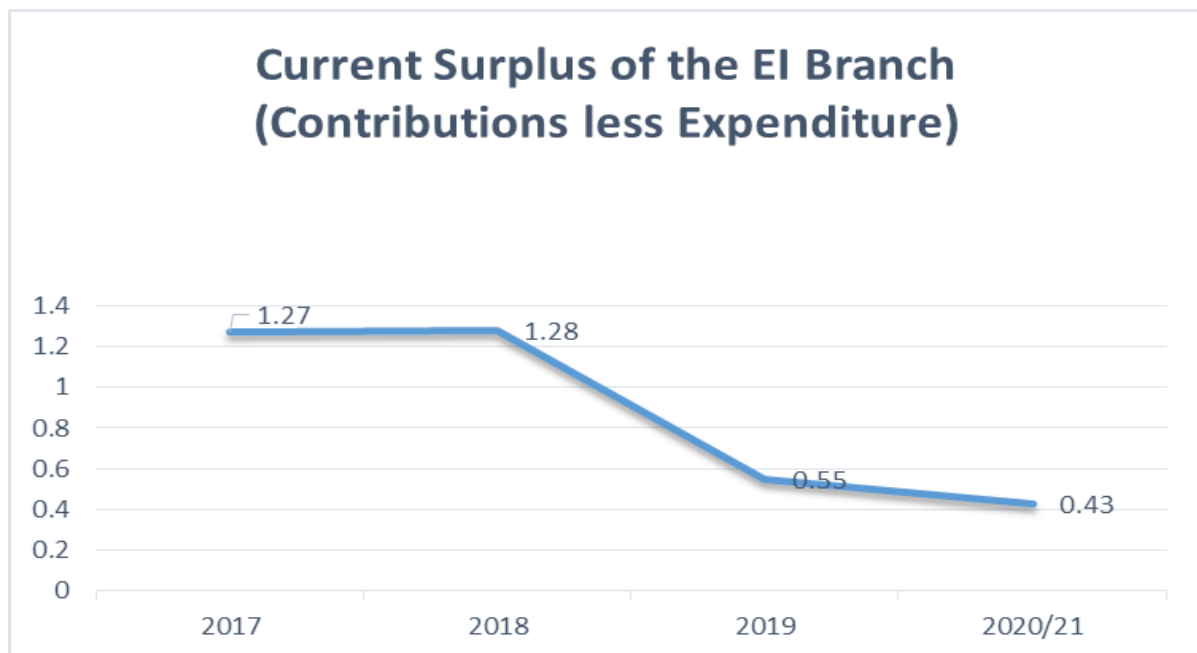
9. Expected Cost of the EI Branch

The assessed emerging actuarial cost for 2020/21 is equivalent to 1% of insurable earnings, which includes a safety factor to account for catastrophic cases causing substantial medical expenses. However, due to the significant accumulated reserve, the EI branch is projected to continue to show a material actuarial surplus.

Table 36
Actuarial Cost of the EI Branch
(as % of insurable earnings)

Benefit	2020/2021	2019/2020
	Projected	Actual
Employment Injury	0.25	0.20
Disablement & Death Benefits (APV)	0.06	0.05
Grants & Medical	0.05	0.04
Total Benefits	0.35	0.28
Administrative Expenditure	0.40	0.20
Total	(0.76)	(0.48)
Contributions ^{a/}	1.19	1.03
Current Surplus (deficit)^{a/}	0.43	0.55

^{a/}Contributions less Expenditure, excluding capital gains.



10. Funded Status of the Disablement and Death Reserve

A direct valuation of the level of sufficiency of the Disablement and Death Reserve was performed on 31 December 2017. The sequential assessment was carried out according to the following bases, to be updated with an actuarial valuation at 31 December 2020.

Mortality Table: GAM-83

Mortality of Disabled Lives: $a_x + 4$ (x = age).

Remarriage Rates (Widows): Non-material. Reduction factor (widows): 0.90 (remarriage and contingent suspension at age 50).

Basic Discount Rate: 4% (ad hoc pension adjustments)

Actuarial Reserve: \$14.5 million (at 31 December 2017)

The analysis of the Disablement and Death Reserve also shows an actuarial deficit as shown in Table 37. The balance of the joint programs still yields an actuarial surplus of \$64.9 million at 31 December 2019.

The analysis of the Disablement and Death Reserve also shows an actuarial deficit as shown in Table 37. The balance of the joint programs still yields an actuarial surplus of \$64.9 million at 31 December 2019.

Due to the substantial surplus of the EI branch, the difference can be met by an internal transfer within the branch, although due to the fluctuation of the incidence of EI disability and death, and the long-term time-frame involved, such a transfer is not required at present.

Table 38 shows a consolidated assessment of the EI branch. The surplus reserves of short-term benefits, assessed at 25 times the statutory minimum, compensates by a wide margin the deficit of the Disablement and Death Obligations, still yielding a consolidated surplus of \$64.889 million at 31 December 2019.

Table 37
Funded Status of the EI/Disablement & Death Reserve
(at 31 December)
(Amounts in millions of BZ\$)

	2019 ^{a/}	2018	2017
Present value of pensions in payments	30,967	31,540	31,661
Reserve	(12,306)	(13,655)	(14,541)
Net Liability	18,661	17,885	17,120

^{a/}Gross estimate. Individual assessment to be carried out at 31 December 2020 (triennial valuation).

Table 38
Consolidated Actuarial Assessment of the Employment Injury Brand
(at 31 December 2019)

	Reserve	Actuarial Liabilities	Surplus (Deficit)
	(amounts in millions of BZ\$)		
Short-term benefits ^{a/}	86,997	(3,447)	83,550
Disablement death benefits ^{b/}	12,306	(30,967)	(18,661)
Total	99,303	(34,414)	64,889

^{a/} Statutory reserve (PAYG basis)

^{b/} Actuarial reserve (present value of pensions in payment)

11. Update of the EI Degree of Disablement Schedule

The Second Schedule of the Benefit Regulation 43 should be updated by the SSB. For example, Item 15 (loss of one thumb) stipulates a 30% degree of disablement, allowing the insured person to a minimum life pension of \$47 per week, **and to continue in active employment.** However, Item 25 (loss of all toes of both feet) stipulates a 20 degree of disablement, allowing the insured person to only a lump-sum grant. For an insured person with average earnings of \$55 per week, the minimum pension would be equivalent to 85% of the salary.

Measures are being implemented to avoid the payment of disablement pensions to individuals who return to work as self-employed, thus avoiding detection by the SSB compliance services.

V**ACTUARIAL PERFORMANCE OF THE LONG-TERM BRANCH****1. Actuarial System**

For the long-term branch, the "scaled-premium" system of finance is being applied. Under this system, the contribution rate is fixed at such a level that the income from contributions and investment is expected to exceed the expenditure on benefits and administration for a period of years referred to as the "period of equilibrium". Throughout the period of equilibrium, the annual excess of income over expenditure is accumulated in a reserve that increases steadily but declines thereafter if there are no adjustments to the contribution rate. A primary objective of the actuarial review is to ascertain the adequacy of the statutory contribution rate in accordance with the system of finance and to quantify the projected level of reserves derived from the financial development of the branch.

2. Financial Operations

The comparative data in Table 39 shows the trend of benefit and administrative expenditure in the period under review. The analysis shows the impact of the enhanced contribution as from 2019, reversing the \$2.4 million loss of 2018 into a \$6.2 million surplus in 2019.

The increase in benefits was focused basically on retirement benefits, due to an acceleration in the number of early retirement pensions at ages 60 to 64 years, including the self-employed. The increase in the ceiling as of July 2019 will be reflected gradually over the next 36 months.

COVID-19 will cause a temporary negative impact on 2020 contributions, but the medium-term trend (2020/25) is expected to show a positive performance, due to the impact of the first set of legal amendments. Therefore, more precise financial trends should be quantified at the close of the present financial year.

Table 39
Income and Expenditure of the Long-Term Branch
(Amounts in thousands of Belize Dollars)

	2019	2018	2017
Contributions	65,117	48,962	46,468
Investment and other income	17,416	17,264	20,417
Total Income	82,533	66,226	66,885
Retirement benefits	44,997	39,405	35,453
Invalidity benefits	4,004	3,631	3,588
Survivors' benefits	7,900	7,627	7,160
Funeral Grants	1,333	1,361	1,361
Non-contributory pensions	1,754	2,009	2,297
Total Benefits	59,988	54,033	49,859
Operating Expenses	16,314	14,031	14,164
Total Expenditure	76,302	68,064	64,023
Contributions less expenditure (current deficit)	(11,185)	(19,102)	(17,555)
Income less Expenditure	6,231	(1,837)	2,862
Actuarial Reserve	426,238	424,737	431,199
Fund Ratio ^{a/}	5.6	6.1	6.7

^{a/} Reserves ÷ total expenditure

3. Income and Expenditure as a Percent of Insurable Earnings

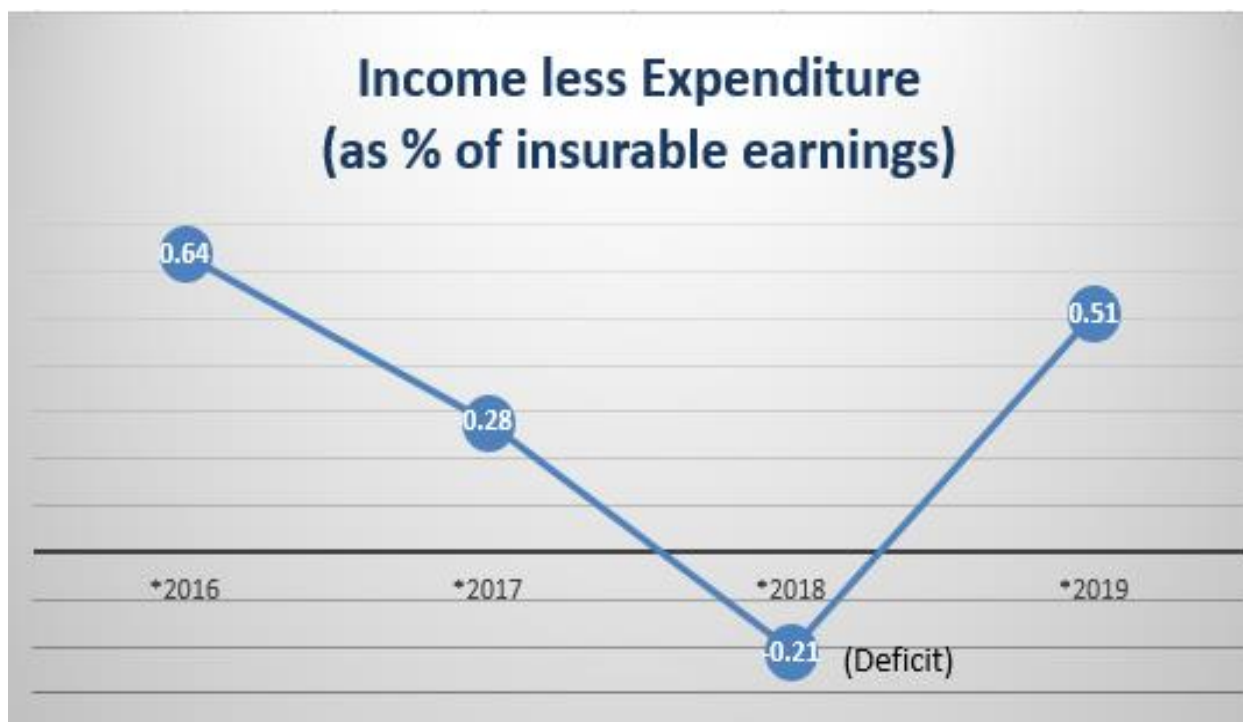
Table 40 shows the financial experience as a percent of insurable earnings. Total benefits and administrative expenditure were quasi-stable, but the higher rate of contributions caused a reversal of the 2018 loss into a surplus of 0.51% of insurable earnings, and total expenditure to 6.25% of insurable earnings, higher than the 4.5% rate allocated to the branch. The “current deficit” (contributions less expenditure) also decreased and might yield a minor surplus as from 2021. However, the investment income on the substantial reserve should be the main contributor to the financial performance of the long-term branch.

Table 40
Income and Expenditure as a Percent of Insurable Earnings

	2019	2018	2017
Contributions	5.35	4.50	4.50
Investment & other income	1.43	1.54	1.97
Total Income	6.78	6.04	6.47
Retirement benefits	3.70	3.62	3.43
Invalidity benefits	0.33	0.33	0.35
Survivors' benefits	0.65	0.70	0.69
Funeral Grants	0.11	0.12	0.13
Non-contributory pensions	0.14	0.19	0.22
Total Benefits^{a/}	4.93	4.96	4.82
Operating Expenses	1.34	1.29	1.37
Total Expenditure	6.27	6.25	6.19
Income less Expenditure	0.51	(0.21)	0.28
Current Surplus (deficit)^{b/}	(0.92)	(1.75)	(1.69)

^{a/} PAYG rate (pay-as-you-go)

^{b/} Contributions less expenditure



4. Trend of Pensions in Payment

Table 41 shows the trend of pensions in payment, with a steady increase in all the categories of pensioners, a normal trend reflecting the gradual demographic maturity of the long-term branch.

Table 41
Number of Pensions in Payment (year-end)

	Retirement	Invalidity ^{a/}	Widows/ers	Orphans	Total Pensions	Rate of Increase (%)
2015	5,309	413	1,216	1,380	8,236	7.2
2016	5,827	449	1,336	1,471	8,967	8.8
2017	6,446	480	1,387	1,544	9,632	7.4
2018	6,957	500	1,451	1,589	10,497	8.9
2019	7,685	532	1,490	1,540	11,247	7.2

^{a/}Pensions transferred to the category of retirement pensions at age 60, up to 2018.

The low rate of increase in the number of invalidity and orphans' pensions is due, in the first instance, to high termination rates due to the transfer of invalidity persons to retirement pensions as from 60 years of age, a process that has been suspended as from 2019, and also due to terminations, as many pensioners resume work and the pension is then suspended, or by reaching the maximum qualifying age in the case of orphans.

5. Invalidity Pensions and Grants

Tables 42 and 43 show the incidence of invalidity pensions awarded and of invalidity grants.

Table 42

Number and Frequency of Invalidity Pensions Awarded

	Number awarded	Incidence Rate (per thousand)
2019	61	6.55
2018	52	0.48
2017	58	0.54
2016	69	0.68
2015	56	0.56
2014	52	0.56

Table 43

Invalidity Grants Paid

	Number	Rate per 1,000 insured
2019	22	0.20
2018	30	0.28
2017	49	0.47
2016	38	0.37
2015	57	0.57
2014	41	0.42

6. Trend of Demographic Ratios (Pensioners ÷ active insured)

Table 44 shows the trend of demographic ratios. The higher rate of the increase took place for retirement pensions, with 6.93 pensioners per 100 active contributors in 2019. The consolidated ratio increased to 9.71 on 31 December 2018. A trend that should continue for several decades.

Table 44

Trend of Demographic Ratios

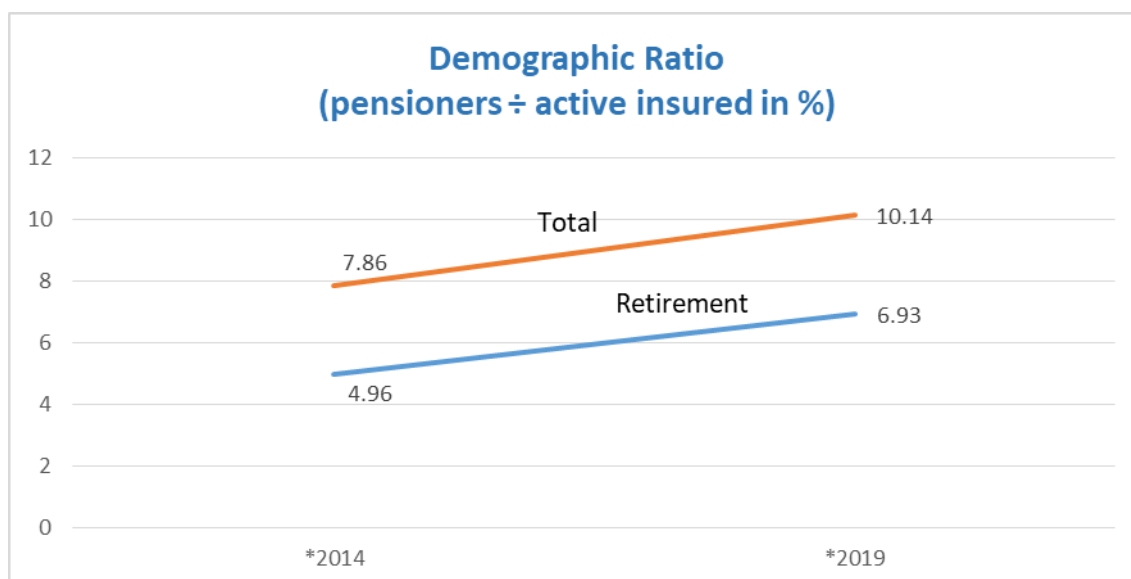
(At 31 December)

	2019	2018	2017	2016	2015	2014
Demographic Ratios (Pensioners ÷ active contributors, in %)						
Retirement ^{a/}	6.93	6.44	6.08	5.62	5.21	4.96
Invalidity ^{b/}	0.48	0.46	0.37	0.37	0.35	0.37
Survivors ^{c/}	2.73	2.81	2.81	2.71	2.44	2.53
Total	10.14	9.71	9.26	8.70	8.00	7.86

^{a/}Excludes NC pensions

^{b/}Pension transferred to an old-age category at age 60, up to 2018 only.

^{c/}Includes orphans



7. Distribution of Statutory Contributions

Deducting from the new gross share of contributions allocated to the long-term branch the estimated costs of grants, non-contributory pensions, and administrative expenditures, yields a net rate of contributions to cover the cost of retirement, invalidity and survivor's pensions of 2.82% in 2018, 3.7% in 2019, and an average of 4.68% in 2020/21, as shown in Table 45.

Table 45
Distribution of the Statutory Contribution Rate as a percent of Insurable Earnings
(Excluding investment income)

	2020/21 ^{P/}	2019	2018	2014/17
Gross rate	6.17	5.35	4.50	4.50
Other income	0.03	0.02	0.02	0.04
Total contributions	6.20	5.37	4.52	4.54
Administrative expenditure ^{a/}	(1.30)	(1.34)	(1.29)	(1.23)
Grants	(0.10)	(0.11)	(0.12)	(0.20)
Non-contributory pensions	(0.12)	(0.14)	(0.19)	(0.34)
Net rate for contributory pension benefits	4.68%	3.78%	2.82%	2.77%

^{P/}Projected. Subject to material adjustments due to the impact of COVID-19 on the insured population. A lower rate anticipated for 2021/22.

8. Macro-Economic Trends

The active insured population has been increasing steadily yielding a coverage rate of two-thirds of the total employed labour force, with a level of compliance estimated at 90% by the SSB, excluding the self-employed. However, COVID-19 might cause a sharp reduction in 2020. The inception of a self-employed scheme as from 1 March 2003, although voluntarily, does not have a material incidence in the total active insured population, due to a stagnant level of “voluntary” participation.

Statistical data show 45,000 persons categorized as “own business”, of which only 3.8% are voluntarily contributing to the self-employed scheme, most of them on an irregular basis.

The economy is characterized by a highly seasonal pattern of employment, and a significant proportion of insured persons spend part of the year either unemployed or in self-employed activities.

The total population of Belize has increased in the last decade at a pace similar to the high variant projections of the Statistical Institute of Belize (SIB). Such a rate of population increase is expected to decline in the future, from an average of 2.7% in 2000/2010 to 1.2% as from 2020. Family planning and higher educational standards should slow the intrinsic rate of fertility. From an actuarial standpoint, high fertility rates contribute to delay in the aging of the population and, thus, the demographic ratio of pensioners over active contributors. Nevertheless, the age structure of the population has experienced a gradual change, with a demographic ratio (population 60 years and over divided by the population 15 to 60 years), that has increased steadily, indicative of the gradual incidence of aging and its emerging incidence on pension costs in the future. However, the gross mortality rates have declined from 28 per thousand in 1990/95 to 15 per thousand, and the life expectancy at birth increased by three years in the last 15 years, reaching an average of 73.7 years at present, according to estimates of the Statistical Institute of Belize (SIB), while the life expectancy at 60 years of age has also increased by approximately two years, impacting the actuarial cost of pensions in payment.

9. Demographic Trends

The ratio of pensioners to active insured persons continues to increase an indicator of the demographic maturity of the long-term branch. Longer-term, the increase of the demographic ratio, a normal pattern of a maturing pension scheme, as the rate of increase in pensions in force is higher than the rate of increase of active insured persons. A projection carried out on the last triennial valuation in 2017 is shown below, to be updated at the next triennial valuation as at 31 December 2020, with rates as from 2020 higher than anticipated in the preceding triennial valuation.

Table 43
Trend of Demographic Ratios ^{a/}
(2017 Triennial Valuation)
(Pensioners ÷ Active Insured)

Year	Retirement Pensions	All Pensions
2019	6.9	10.1
2023	7.7	10.5
2030	10.3	11.4
2040	15.6	14.7
2050	23.6	21.6
2060	35.8	31.8

^{a/}To be updated at the 2020 triennial valuation

10. Actuarial Projections

Long-term actuarial projections have been carried out every three years, based on legal provisions in force at the valuation date. The last long-term projection was carried out on 31 December 2017. However, structural legal amendments to the financing bases were implemented in 2019. These amendments would have a material incidence on the cash flows of the SSB as a whole, and each of the statutory branches. Therefore, medium-term projections are shown below for the next decade.

Due to COVID-19, the economy and the employment pattern in Belize will suffer a significant decline in 2020. Therefore, any projection without a closer assessment of the impact of COVID-19 on key segments of the economy can cause abnormal variations. Therefore, at present, only a preliminary scenario for 2020/2025 can be included, as shown below, subject the in-depth revision at the close of 2020 once key updated parameters on employment become available.

11. Financials Trend and Reserves

Due to the emerging impact of COVID-19, any projection at present would be unrealistic. Therefore, a simulation is shown in Table 46, subject to an update at the close of 2020, once the full impact of COVID-19 on the labour force and contributions can be fully assessed.

Table 46
Preliminary Medium Term Projection
(Amounts in millions of BZ\$)

Year	IE	K(%)	C	E	CS	I	S	R
2017	1,032	4.50	46.5	64.0	(17.5)	20.4	2.9	435
2018	1,089	4.50	49.0	68.0	(19.0)	16.8	2.4	417
2019	1,216	5.35	65.1	76.3	(11.2)	17.4	6.2	427
2020	851 ^{a/}	5.85	49.8	83.9	(34.1)	17.8	(16.3)	410
2021	1,216	6.50	79.0	93.3	(13.3)	18.4	5.1	415
2022	1,277	6.50	83.0	101.5	(18.5)	18.6	0.1/9	416
2023	1,340	6.50	87.1	111.7	(24.6)	18.7	(5.9)	410
2024	1,407	6.50	91.4	122.8	(31.4)	18.5	(12.9)	397
2025	1,478	6.50	96.1	135.1	(39.0)	17.9	(21.1)	376

^{a/}Impact of COVID-19 in 2020. Preliminary amount to be updated at the end of 2020.

IE: Insurable earnings

K: Contribution rate (Scenario B: Increase to 72% as from 2022).

C: Contributions (in millions of BZ\$)

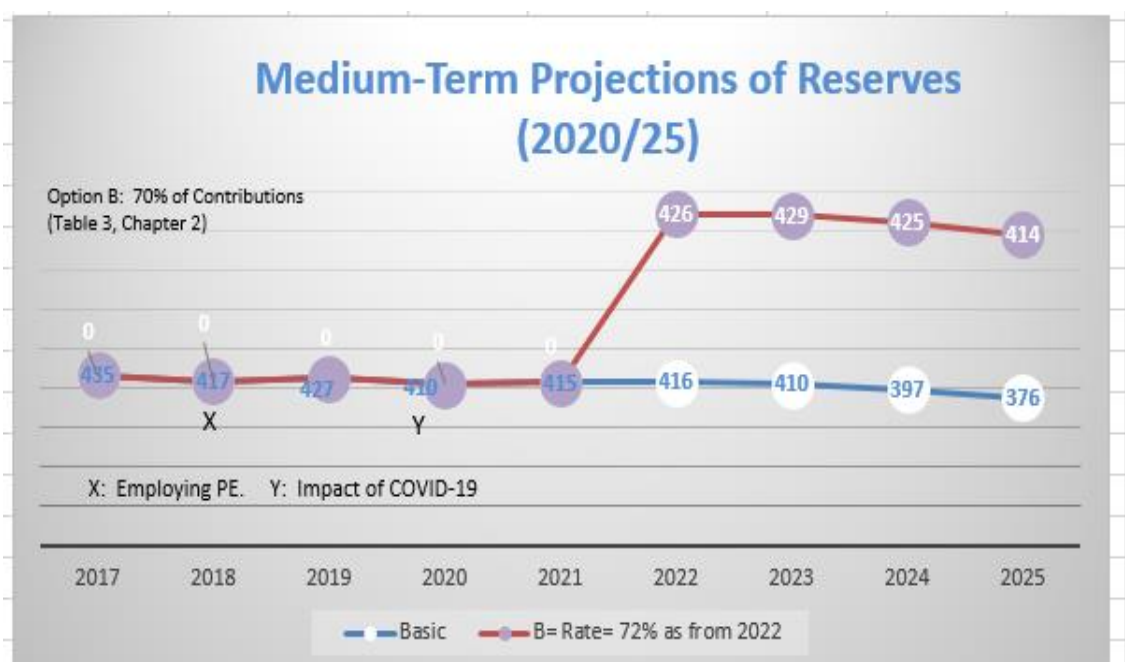
E: Expenditure

CS: Current surplus (deficit)

I: Investment income

S: Total Surplus (deficit)

R: Accumulated reserve



12. Assumptions

- 30% impact of COVID-19 in 2020 and restoration of normal pattern in 2021
- 4.5% investment return (2021+)
- Wage base increase of 5% (2021+) (salary + increased contributions)
- **Scenario B**, with 72% of contributions as from 2022 (See Chart).

VI

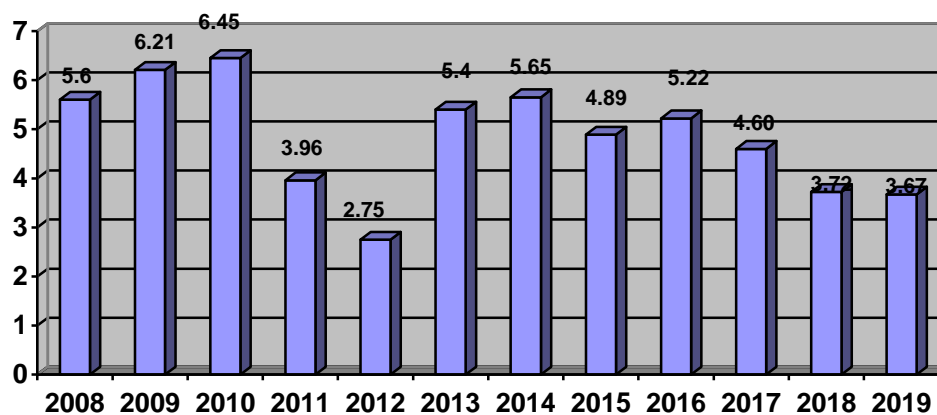
ASSESSMENT OF THE INVESTMENT PORTFOLIO (Third Schedule of the Act, Section 17)

1. Objective of the Analysis

Pursuant to the legal provisions, an analysis is presented below of the investments, the strategic assets allocation, and related technical issues, as required by the Third Schedule of the Social Security Act, as a supplement to the statutory actuarial valuation. Chapter II of the report shows the rate of return on assets both on a nominal basis and an inflation-adjusted basis.

Nominal Rate of Return on Investments

(In percentages)



2. Investment Portfolio

Table 46 and 47 show the investment portfolio of the scheme. The SSB investments are made on a “pooled-fund” basis rather than by branch and then distributed in accordance with the assets of each branch, as an interpretation of the provision of Section 14(2) of the Financial Regulations. In the last fiscal year, the Board increased the allocation in Associates and long-term investments and reduced the proportion in other categories.

It is also noted that a comprehensive assessment was carried out in 2018 by a consulting firm, with recommendations undervaluation by the Board. Therefore, the

present report is focused on key specific issues dealing with the performance of the investment portfolio.

Table 46
Investment Portfolio

	December 2019	December 2018
Short-Term Investment	19,842,445	29,988,181
Investment in Associates	190,728,032	193,263,669
Long-Term Investments	105,590,711	75,627,550
Agriculture	33,911,724	36,607,299
Education	657,973	750,397
Tourism	23,476,606	25,729,002
Housing	6,883,146	8,601,193
Utilities	62,774,996	62,874,820

Table 47
Percent Distribution of the Assets (at 31 December)

	2019	2018
Cash equivalents	5.5%	6.9%
Short-term investments	3.6	5.6
Long-term investments	34.1	42.6
Investment in Associates ^{a/}	45.5	37.0
Sub-Total	8.87	92.1
Other assets	11.3	7.9
Total	100%	100%

^{a/}Includes utilities

3. Public Sector Investments

As the short-term bank deposits are below the actuarial rate of 3% to 3.5% real, net of inflation, an increase in allocations in Central Bank obligations would enhance the SSB ability to obtain a real rate of return on the investment portfolio in accordance with the actuarial recommendations, a strategy under consideration by the SSB, as well as a higher asset allocation to “development” investments rather than “financial” investments, as shown below.

The amendments setting a 10% contribution rate and a \$520 per week ceiling allows a long-horizon of the investment portfolio, with rising cash flows until mid-2020. An expansion of the investment portfolio, including additional allocations to the agricultural sector, would then become feasible. However, it is reiterated:

- i) Offshore investment in US Dollars will be constrained by the monetary situation, and
- ii) Higher allocations to GoB bonds offer a rate of return that should allow the key actuarial assumption of a 3% real return on a long-term basis, after inflation. Such allocation offers a risk-adjusted return which is probably higher than loans to private enterprises or utilities.

The purchase of additional shares issued by statutory bodies or private enterprises is no longer advisable, to meet diversification and liquidity principles.

It is also noted that the SSB is essentially a subordinate provider of loans to private enterprises and not a substitute for the traditional banking sector lending activities. The Board is also advised to require the return of dividend and interest in cash, as no recapitalization of shares are feasible due to the SSB need for liquid returns. Avoiding allocation in a single entity above 20% of assets should also be required, in compliance with ISSA guidelines.

4. Enhancement of Development Issues

The sectoral structure of the investment portfolio shows a skewed distribution in favour of **Financial Issues** as compared to **Development Issues**, the former comprising a large proportion of the portfolio. In view of the above, the CEO provided the actuary with specific models to attain a more adequate balance, in accordance with recognized diversification principles and Board's policies, to enhance the development of the agricultural sector of Belize, as discussed at a special meeting in the Investment and the Strategic Committees of the Board.

An analysis of the medium-term cash flows shows the advisability to restructure the distribution of the investment portfolio by:

- Freezing temporarily the allocation to utilities and targeting fresh funds to productive sectors of the economy. This would cause a gradual reduction of the **relative distribution** of the investments in utilities, as shown below.
- Prioritizing the investment of fresh funds targeted to GoB bonds and the Agricultural and related sectors, to enhance the rate of return on investments (bonds), and the value of exports, employment creation.

- Fresh funds would become available to target funds to development issues, although the distribution at the specific dates would depend on market conditions and the impact of COVID-19. The Board might modify the anticipated distribution if, for example, GOB bonds offer a better “risk/reward” ratio than agricultural loans.
- The analysis also shows that the financial statements at 31 December 2019 adequately meets the Cash Working Balance outlined in Section 19 of the Financial Regulations, as well as the Liquidity Position. However, COVID-19 might have a significant impact on the cash flow in FY2020.

5. Liquidity of the Investment Portfolio

In view of the increased actuarial maturity of the scheme, the Board is advised to seek an adequate level of liquidity on new investments. Actuarial liquidity means that the investment could be realized in cash when actuarially required, with an investment horizon, which, at present is rather time-limited, including Central Bank obligations.

The actuary also advises cautionary measures in non-liquid assets as collateral on commercial loans, such as land or fixed assets, which might have a fair value lower than the appraisal value in case of a forced liquidation. Financing parameters for collateral loans could range from 40% to 70% depending on the type of property, and could ever be lower for collateral such as land.

The actuary further advises avoiding additional purchases of local shares, as there is no active securities market in Belize due to liquidity concerns, as well as the higher risk of a shareholder as compared to a bondholder or depositor. Allocations on high-quality shares or bonds abroad could be evaluated in due course, as a diversification policy of the investment portfolio.

The significant reduction in the rates of interest payable by the local banks, due to excess liquidity and restrained demand by personal and institutional borrowers, is having a negative incidence on the rates of return. It is not possible to ascertain for how long this cycle will persist, but as the economic slowdown subsides, the demand for loans, and thus the “passive” rates of interest, should again move upward.

The Board should assess the feasibility of negotiating with the banking sector the establishment of “special deposits”, for loans to private enterprises or individuals (earmarked), at the same rates that “active” interest rates are payable by borrowers, allowing the banks an adequate profit margin, yielding a net SSB return that might be

higher than the “passive” rates payable on term deposits. To this effect, the SSB financial area should inform the Board, periodically, of the on-going rates charged by the banks on personal and institutional loans, plus closing costs.

As the GOB has a direct subsidiary obligation to guarantee the financial solvency of the SSB, **the purchase of additional Treasury Notes or Bonds is deemed a more secure investment than private-sector obligations.**

The actuary reiterates that the SSB is amid a second-phase of actuarial maturity, with contributions lower than expenditure by a steadily wider margin, as shown in the actuarial valuations. **As a result, the availability of cash for new investments would be restricted to the potential liquidation of deposits to pay benefits.**

6. Scenarios of Risk-Adjusted Returns

The Sharpe Ratio is a risk-adjusted measure of the excess return of a portfolio and how efficient the asset allocation is on a risk/reward basis. **The higher the ratio the better the performance.**

Assuming a risk-free return of 5%, the Sharpe Measure yields the following risk-adjusted return for each category.

$S = R_p - r / SD$, where **R_p**=Return of the investment, **r**= Risk-Free return (Central Bank Notes).
SD= Standard deviation

The higher the Sharpe Ratios the better the risk-adjusted return on the investments.

Sharpe Ratios (Post -ante) 2016

$$\begin{aligned} \text{Term deposits} &= (0.025 - 0.050) / 0.05 = \mathbf{-0.50} \\ \text{Associates \& loans} &= (0.065 - 0.050) / 0.10 = \mathbf{0.12} \\ \text{Total portfolio} &= (0.0462 - 0.050) / 0.06 = \mathbf{-0.05} \end{aligned}$$

The post - ante examples, based on actual returns show that high-risk investment in Associates and loans (with higher nominal returns and risks) performed better than low-risk bank deposits. The assessment shows the advisability of reducing the high proportion of assets in Bank CDs, avoiding further allocations in shares, while increasing the positions in Notes at the Central Bank. The formulae show that with issues at the Central Bank yielding 5.25% risk-free (plus contingent CPI “long-term” adjustments), yield expected returns of 7.25%. Therefore, rates payable on new loans should exceed rates payable by the

Central Bank, to yield a “risk-adjusted” return compatible to the Central Bank Notes.

7. Allocations to Development Issues

The Board wishes to evaluate alternative investment goals, to restore a more adequate balance of the investment portfolio **between Financial Issues and Development Issues.**

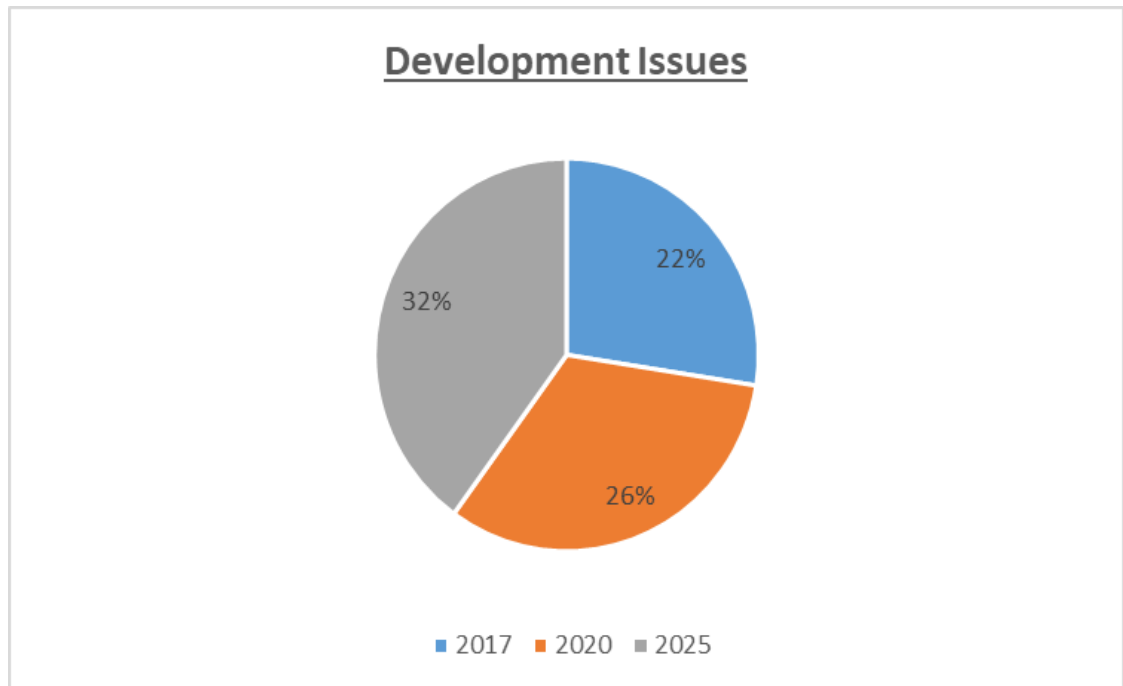
Table X shows a scenario increasing the proportion of **Development allocations** to 32%. Conversely, the proportion of **Financial Issues** would decline to 68%, with a balance of the portfolio more in accordance with diversification guidelines.

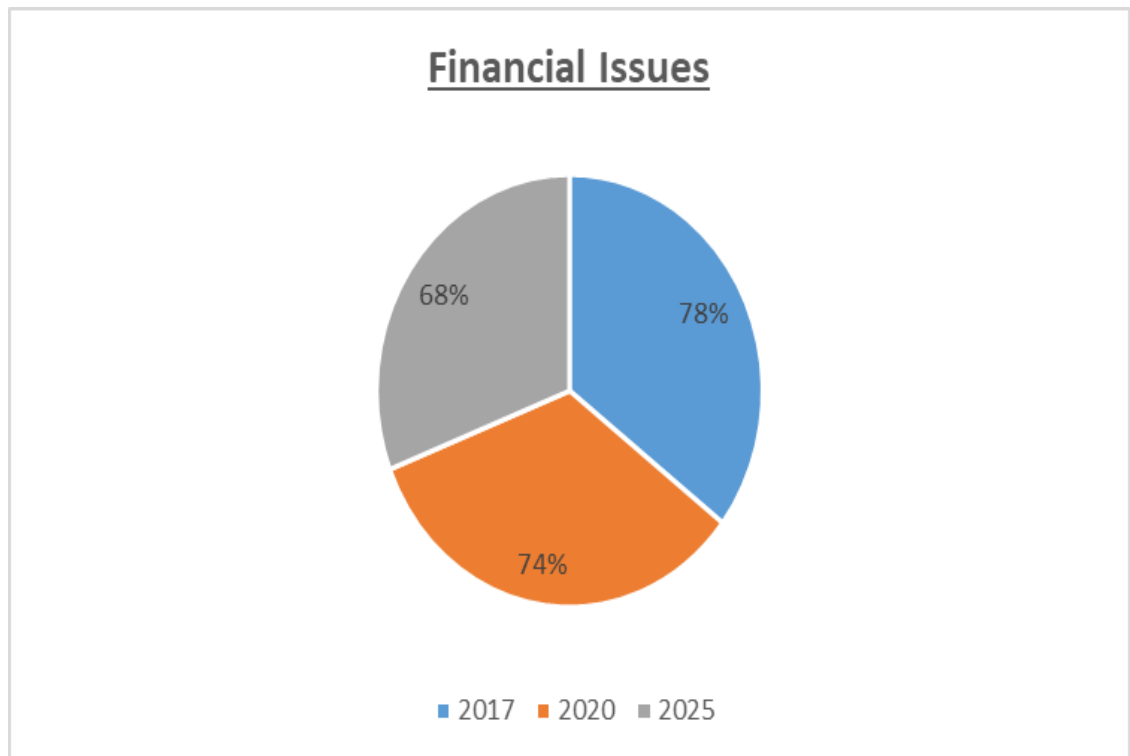
The **gradual decline in allocations to utilities would be attained by freezing** the nominal allocation in monetary terms, rather than investments. **Fresh assets would then be re-directed in its entirety to Development Issues,** particularly the **Agricultural Sector.** This is contingent upon the articulation of a solid investment strategy complete with risk parameters for each sector of investment e.g, agro-productive and the setting of investment ceiling per sector e.g, 20% of reserves in the agro-productive sector, etc.

Table 49
Proposed Medium-Term Investment Limits by Category

Item	2020/21	2025
GOB and financial obligations	16%	20%
Investment in utilities	53	40
Certificates of Deposits	4	4
Other (municipal, loans, etc.)	2	4
Sub-Total (Financial Issues)	75%	68%
DFC	5	5
Agriculture	13	23
Mortgages / Land / Tourism / Education	8	7
Sub-Total Development Issues	26%	32%
Total	100.0	100.0

Relative Distribution of the Investment Portfolio (2018/2020/2025)





8. Cash Working Balance and Liquidity Requirements

Section 19 of the financial regulations stipulate a “**cash working balance**” of two months' average expenditure over the preceding three years. On 31 December 2019, the unaudited financial statements show a cash position in excess of the statutory minimum. However, COVID-19 might restrict the cash working balance in 2020.

In addition to the minimum **cash working balance**, **liquid assets** also include short-term investments in CDs and related items. Emerging scenarios concerning the proposed allocation to development issues and the impact of COVID-19 on the SSB liquidity position should be assessed periodically.

VII
ACTUARIAL ASSESSMENT OF THE NATIONAL
HEALTH INSURANCE PROGRAM

1. Background

As stipulated in Part VI of the Social Security Act, the Board has been entrusted with the management of the National Health Insurance Program (NHI). However, the financing regulations have yet to be enacted, the program has been in operation in South Side Belize, then in the Southern Region (Stann Creek and Toledo Districts), and gradually in the Northern Region as from 2016.

2. The Health Care Model in Belize

Belize has a multiple health care model based on three pillars, namely: a) services provided by the MOH, b) Primary Care Services in South Side Belize, the Southern Region and areas of the Northern Region provided by the NHI, and c) private services directly or through insurance companies or facilities offshore.

The NHI program is limited in geographical coverage, providing a primary health care package of benefits (excluding surgery, general hospitalization, and other services), was funded in its entirety by the SSB until December 2007, co-financed with GOB transfers as from 2008, and entirely by GOB funds as from 2009.

3. Financing of the Program

In the first phase, the program was financed by the SSB, which implied a substantial financial burden to the SSB of about BZ\$40 million. From a fiscal standpoint, the redistribution of income was very regressive, as funds contributed by all stakeholders were utilized to benefit a small segment of the population, regardless of their social insurance status.

As from late 2006, in view of the financial inability of the SSB to earmark additional funds for the roll-out (expansion) to additional geographical areas, the Government began to supplement the funds allocated by the SSB with transfers from the MOH budget and direct Government transfers. As recommended in the actuarial assessment, no further SSB subsidies were feasible, and as of 2009, the program has been financed exclusively by GOB transfers to the SSB, and residual reserves from previous SSB transfers, which have been consumed.

4. Actuarial Systems

The program operates on a pay-as-you-go basis, with income-based on GOB contributions equivalent to expected expenditure, and a margin for a contingency reserve. The same system would be applied if the financing model were expanded to include additional sources of revenue.

5. NHI Financial Trends

The financial trend is shown below.

Table 50
Financial Trends of the National Health Insurance Fund
Amounts in thousands of BZ\$

	2019 ^{a/}	2018	2017
Total contributions (GOB)	17,950	17,800	17,000
Payments to providers (benefits)	16,706	16,305	15,937
Operating expenses	1,013	958	801
Total expenditure	(17,719)	(17,263)	(16,738)
Excess of income over expenditure	231	337	262
NHI Reserves ^{b/}	2,774	2,543	2,206

^{a/}Unaudited financial statements.

^{b/}Excludes claims pending payment

6. Financial Ratios

Key financial ratios have evolved as shown in Table 51.

Table 51
Key Financial Ratios

	2019	2018	2017
Benefits as % of contributions	93.1%	92.6%	93.7%
Total expenses as % of contributions	98.7%	98.1%	98.5%
Operating expenses as % of benefits	6.1%	5.9%	5.0%
Fund ratio (reserves ÷ total expenditure)	0.15	0.15	0.13
* In months	1.7	1.7	1.6

The analysis shows a Fund Ratio equivalent to only 1.7 months' expenditure, which is below the minimum international accepted benchmarks of six months' expenditure. The ratio would decline further if outstanding claims were deducted from the reserves. Therefore, the scheme is operating under a PAYG (pay-as-you-go) actuarial system with funds equivalent to operational expenses. A key task of the NHI is to strengthen the Fund Ratio with contingency reserves equivalent to six months' average expenditure, to cover potential increases in claims, a strategy that would require a higher level of public funding. Also, assessment of the number of

pending claims at the close of the year is advisable to assess the real value of net reserves.

If outstanding claims are equivalent to 5% the average monthly benefit expenditure, a rather liberal ratio, almost \$1 million would be deducted from the gross reserve, practically erasing the reserve registered in the accounts.

7. Summary of Financial Operations by Region

Table 52 shows a summary of the financial operations by region, according to the NHI activity reports. Expenses in Southside Belize account for the greater part of the total, as several services are provided only in Belize City. The proportion of expenses in the Northern Region accounts for 8% of the total, which might increase in correlation with the expansion of services in that area.

Table 52
Financial Operations by Region
(percent distribution)

	2019	2018	2017
South Side Belize City	44	47	47
Southern Region	39	38	39
Northern Region	11	9	8
Total purchasing expenses	94	94	94
Administrative expenses	6	6	6
Total expense	100	100	100

8. Cost of Benefits by Type of Service

Table 53 shows the cost of benefits by type of service and region. Services in the Southern and Northern Regions are limited to Primary Care, Ophthalmology, and hospital deliveries. PCP accounts for 73% of total benefits expenditure, pharmaceuticals at 12%, and Lab tests 9%, with non-material secular variations.

Table 53
Benefit NHI Expenditure by Specific Service, (in thousands of BZ\$)

	2019	2018	2017
Primary Care (PCP)	12,137	11,655	10,993
Pharmacy	1,072	1,246	1,748
Imaging	633	636	579
Lab tests	1,470	1,378	1,299
Ophthalmology	272	222	236
Hospitalization	^{a/}	248	223
Total	15,795	15,385^{a/}	15,078

^{a/}\$16,707 including other items.

9. Membership Data

Table 52 shows the membership (beneficiaries) data for the **last three years**, with an increase in the number of beneficiaries in **2019**.

Table 54
NHI Membership Southside Belize, Southern Region and Northern Region
(December 2019)

	2019	2018	2017
BFLA	13,081	12,775	13,693
BMA	12,318	11,997	13,293
Integral	12,125	11,909	13,795
M. Roberts	11,099	10,526	12,363
Sub-total	48,623	47,207	53,144
Dangriga	16,245	15,790	16,336
Independence	15,334	14,524	14,147
Punta Gorda	13,110	12,594	12,477
San Antonio	9,914	9,611	9,498
Mercy Clinic	3,129	2,842	1,758
Corozal +	19,828	19,123	-
Sub-total	57,732	55,361	54,216
Total	126,183	121,691	107,360

10. Actuarial Cost of the Program

Table 53 shows the actuarial costs as a percent of the wage-base, showing estimated actuarial costs of 4.86% in 2019 (5.29% in 2018), assuming a “notional” wage base of 30% the total SSB insurable earnings.

Table 55
Estimated Actuarial Cost of Benefits
(Amounts in thousands of BZ\$)

	2019	2018	2017
SSB wage base	1,216,456	1,088,300	1,032,625
NHI beneficiaries	126,183	105,009	109,428
NHI wage-base (30%) ^{1/}	364,937	326,490	309,787
NHI benefit expenditure (\$)	16,706	16,305	15,937
Administrative expenditure (\$)	1,613	957	801
Total expenditure	17,719	17,262	16,738
Cost as % of NHI wage-base	4.86%	5.29%	5.40%
Cost per member per year	1.40	\$142	\$156

^{1/}Estimated average wages of the low income and indigent segment of the NHI target population. Subject to re-assessment.

NHI has been covering a rather limited range of benefits, excluding key services such as general hospitalization, surgery, etc. Adding this to the package of benefits would entail additional costs to be borne by the GOB.

The total cost of a comprehensive package of benefits to the total population of the country (universal coverage) would amount to approximately 7.5% to 8.5% of the SSB insurable earnings, or BZ\$60 million. Deducting from this amount the GOB budget for healthcare with the Ministry of Health and other statutory bodies, along with private health ensuring policies, would provide general indicators of additional resources required to set up a universal National Health Insurance Plan in Belize, funded by contributions and/or earmarked taxes.

11. Cost Estimates of the Rollover

The additional cost to the GOB would depend on the proportion of beneficiaries to be covered, whether 100% or a lower proportion. A specific analysis should be carried out to assess the utilization and cost of the pending rollover.

12. Conclusions and Recommendations

The GOB has in place a program for residents of a section of Belize City and selected areas in the Southern and Northern Regions, financed by budget transfers. The reserve ratio represents only 1.7 months of expenditure as at 31 December 2019, below the accepted benchmarks of six months' average expenditure. The ratio may fall further taking into account outstanding claims not reflected yet in the financial statements. **The analysis shows that the NHI has been able to expand services to the Northern Region with static funding, generating a reduction in actuarial costs in 2019.**

The estimated average actuarial cost has declined to 4.86% the notional wage base of the targeted population, and the unit cost per beneficiary is assessed at \$140 per year. Primary health services account for about 60% of total benefit expenditure, and closer coordination of services with the Ministry of Health might improve the cost ratios.

The actuarial cost to cover additional geographical areas under alternative financing scenarios was assessed in an actuarial report submitted by the actuary in June 2008 (NHI Assessment of Actuarial Costs and Financing Options), which should be updated based on emerging trends.

The authorities have not yet adopted a decision on the remaining roll-out strategy or the financing of the scheme for 2020/24, and more comprehensive actuarial assessments should be carried out once policy decisions in this respect are

adopted. The administrative cost of the scheme is below 6% of benefits, lower than accepted benchmarks.

As per Part II of the Social Security Act, the NHI scheme is managed by the Board, but financing is the responsibility of the Government. Therefore, the scheme is cost-neutral to the SSB, despite marginal supervisory and financial support by the SSB.

ANNEX A

PERFORMANCE ANALYSIS OF THE SELF-EMPLOYED SCHEME

1. Registered and Active Contributors

The voluntary self-employed scheme started on 1 January 2003 and the number of active contributors has increased gradually in the period under review, with effective coverage of a minimal number of self-employed persons in the country. The majority of active self-employed are females, an anomalous situation as it would be expected that most eligible self-employed would be males. This might be due to the inclusion of housewives among the “self-employed,” a category which in many legislations is not considered as self-employed.

Global statistics show that more than 40,000 self-employed persons in Belize, of which only a fraction is actively contributing in the voluntary self-employed scheme, but on an irregular basis, with a rather high frequency of “new registrations”, equivalent to one-third the total active contributors in 2019.

Table 1
Registered Self-Employed and Active Contributors by Year
(Amounts in thousands of BZ\$)

Year	Active Insured Self-employed	Rate of Increase	New Registrations
2016	1,389	16.0%	521
2017	1,464	5.4%	439
2018	1,556	6.6%	515
2019 ^{p/}	1,746	11.6%	590

^{p/}Preliminary

2. Distribution of the Self-Employed by Wage-Group

Table 2 shows the distribution of the active self-employed by wage-group and the comparison with the distribution of employed persons. The data shows that one-fifth of self-employed persons have declared notional earnings in the top wage band, a lower proportion than in the general scheme, but adjustments, as they get closer to retirement age, could contribute them to access to higher pensions at retirement.

Table 2
Percent Distribution of Active Insured by Wage-Group (2019)

Income Range	Weekly Wage-group	Percent Distribution	
		Self-employed	Employed
Low	Less than 110	24	9
Middle	110/300	50	49
High	300 and over	26	42
	Total	100%	100%

3. Comparative Distribution of Self-Employed and General Insured Persons

Table 3 shows that 23% of the active self-employed are 55 years and over, as compared to only 7% in the general scheme, an indicator of “adverse selection”, to obtain a “financial gain” by participating in the “voluntary” self-employed scheme at later ages.

Table 3
Differential Age Distribution of Employed and Self-Employed Person by Age Group

Age-Group	Self-Employed	Employed
15/34	18%	56%
35/54	59%	37%
55 +	23%	7%
Total	100%	100%

4. Statistic of Benefits to the Self-Employed

Table 4 shows the number of benefits awarded to the self-employed, with a much higher frequency than for employed persons in case of age pensions.

Table 4
Benefits Awarded to Self Employed Insured Persons

Benefit Type	Number of Claims Allowed		
	2017	2018	2019
Total	321	325	287
Short Term	243	233	211
Sickness Benefit	213	208	192
Maternity Benefit	13	12	13
Maternity Grant	17	13	6
Long Term	62	76	66
Funeral Grant (NC)	4	5	6
Invalidity	2	4	3
Retirement	51	60	51
Survivor's	5	7	6
Employment Injury	16	16	10
Injury Benefit	15	16	9
Disablement	1	0	1
Death	0	0	0

Source: Social Security Board

5. Frequency of Short-Term Claims by the Self-Employed

Table 5 shows the frequency of short-term benefit by the active self-employed persons. Table 6 shows the differential rates of claims of short-term benefits, with a lower incidence by the self-employed, which could imply a “preference” for retirement pensions, rather than short-term benefits.

Table 5
Frequency of Short-Term Claims by the Self-Employed

Year	Averaged Insured	Number of Total Claims	Claims Sickness	Incidence Rate	Sickness Benefit Only
2017	1,426	243	213	17.0%	4.9%
2018	1,510	233	208	15.4%	13.8%
2019	1,651	211	192	12.7%	11.6%

Table 6
The ratio of Short-Term Benefits to Active Insured Person

	Employed	Self-Employed
2017	0.44	0.15
2018	0.38	0.14
2019	0.38	0.12

Table 7 shows that in only 16 years, the maturity of the self-employed scheme as measured by the ratio of pensioners to active contributors is much higher than the maturity of pensioners in the general scheme. Although a proportion of former self-employed pensioners also had previous credits as employed persons, the disparity in the demographic ratios shows the “window of opportunity” offered by the voluntary self-employed scheme, allowing insured persons to activate their self-insured status and take advantage of the liberal provisions of the scheme, to obtain life pensions lasting 20/25 years after credited contributions for ten years and over. The negative impact on the sustainability of the long-term branch is shown below.

Table 7

Comparative Demographic Ratios (General Scheme and Self-Employed Scheme)

Pensions	General Scheme	Self-Employed Scheme
	(Pensioners ÷ active contributors), in %	
Retirement	6.9	21.7
Invalidity	0.5	1.3
Widows ^{a/}	2.8	2.1
Total	10.2	25.2

^{a/}Includes orphans

6. Retirement Age of Self-Employed Persons

A total of 51 retirement pensions were awarded to the self-employed in 2019, of which 39 (76%) were awarded at age 60, 11 (21%), at ages 61/64, and only one pension awarded at age 65. This clearly shows that most self-employed persons opt to retire before the “normal” retirement age of 65 years, and having no employer, the SSB is unable to determine whether they continue as active self-employed before reaching the statutory age of 65 years.

7. Financial Performance

Table 8 shows the widening gap between contributions and expenditure of the self-employed scheme.

Table 8
Financial Performance of the Self-employed Scheme

	2019	2018	2017
Contributions	939,340	807,273	742,676
Benefit Expenditure	(1,931,490)	(1,638,458) ^{a/}	(1,498,120)
Share of administrative expenditure	(200,000)	(200,000)	(200,000)
Total expenses	(2,131,490)	(1,838,458)	(1,698,120)
Net surplus (deficit)	(1,192,149)	(1,031,784)	(955,444)

^{a/}91% pensions and 9% short-term benefits.

8. Actuarial Cost of the Self-Employed Scheme

The scheme is financed by 7% of insurable earnings, and already is confronting financial deficits, as shown in Table 9. Such deficits are funded by internal transfers from the general scheme, that will worsen over time the actuarial situation of the long-term branch.

Table 9

Actuarial Cost of the Self -Employed Scheme

(In percent of insurable earnings)

	2019	2018	2015
Contributions	7.0%	7.0%	7.0%
Short-term benefits	0.9	1.4	1.3
Long-term benefits	13.5	12.4	10.8
Administrative expenditure	1.5	1.7	1.5
Total expenditure	15.9	15.5	13.6%
Surplus (deficit)	(8.9)%	(8.5)%	(6.6)%

ANNEX B

ASSESSMENT OF THE NON-CONTRIBUTORY PENSION SCHEME (NCP)

1. Background

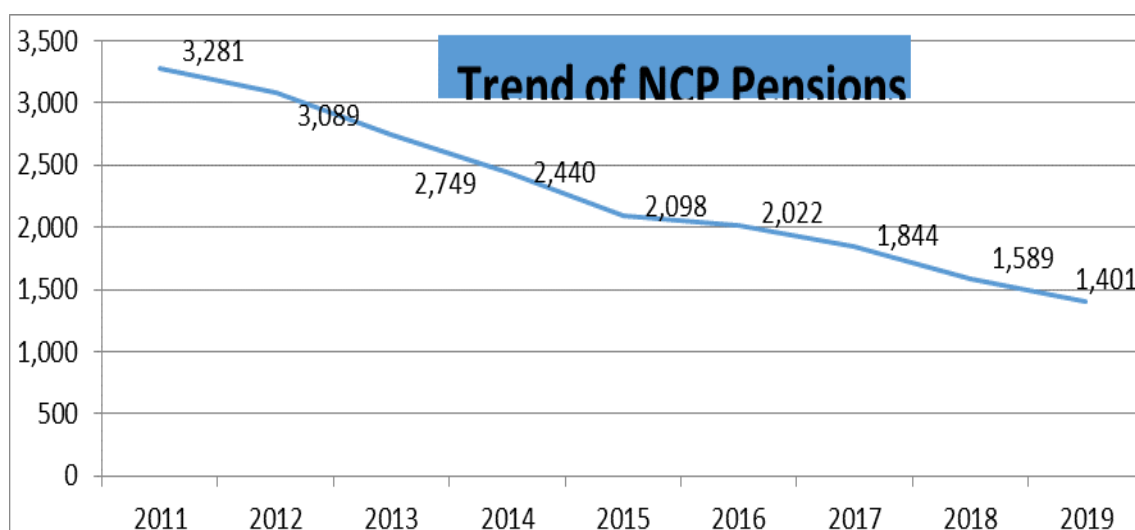
The payment of Non-Contributory Pensions (NCP) was transferred from the Ministry of Social Services to the SSB in July 2003. In December 2007, the Government decided to add eligible males as beneficiaries of NCP and increased the payment to \$100 per month, which caused a significant increase in the number of beneficiaries and benefit expenditure. A financial assistance scheme funded by the Long-Term branch, effective entitlement controls by the NCP Committee has caused a steady decline in the number of active beneficiaries and the actuarial cost of the scheme.

2. The trend of Pensions in Payment

The total number of NCPs has declined steadily from a peak of 4,934 early in 2008 to 1,401 pensions in payment in December 2019. The mortality of pensioners and more thorough evaluation procedures contributed to offset the abnormal surge of pensions awarded during the initial phase of operations.

Table 1
The trend of NCP Pensions (at 31 December)

	2019	2018	2017
<u>Number of pensions in payment</u>			
Males	457	525	614
Females	944	1,064	1,230
Total	1,401	1,589	1,844



3. Financial Trends

Table 2 shows the trend of benefit expenditure of non-contributory pensions with a steady reduction in benefit expenditure and a lower incidence in long-term actuarial cost.

Table 2
NCP Benefit Payments
(Amounts in thousands of BZ\$)

Year	Expenditure (BZ\$)	Rate of Increase (decrease) in %
2010	\$4,201	(10.7)
2011	\$4,189	(1.3)
2012	\$3,781	(8.8)
2013	\$3,404	(10.0)
2014	\$3,032	(10.9)
2015	\$2,754	(9.2)
2016	\$2,505	(9.0)
2017	\$2,297	(8.3)
2018	\$2,009	(12.5)
2019	\$1,365	(12.1)

4. Rates of Award and Terminations

Table 3 shows the rates of terminations and awards in the past three years.

Table 3
Rates of Award and Terminations of NCP (In percent)

	2019	2018	2017
Death	(7.9)	(7.6)	(7.1)
Other	(3.2)	(8.2)	(4.1)
Sub-total	(11.0)	(11.0)	(11.2)
New awards	3.2	3.2	2.5
Net increase (decrease)	(7.8)	(7.8)	(8.1)

5. Actuarial Cost of the Scheme

The actuarial cost of benefits has evolved as follows, excluding management expenses:

Table 4
Actuarial Cost of NCP Benefits

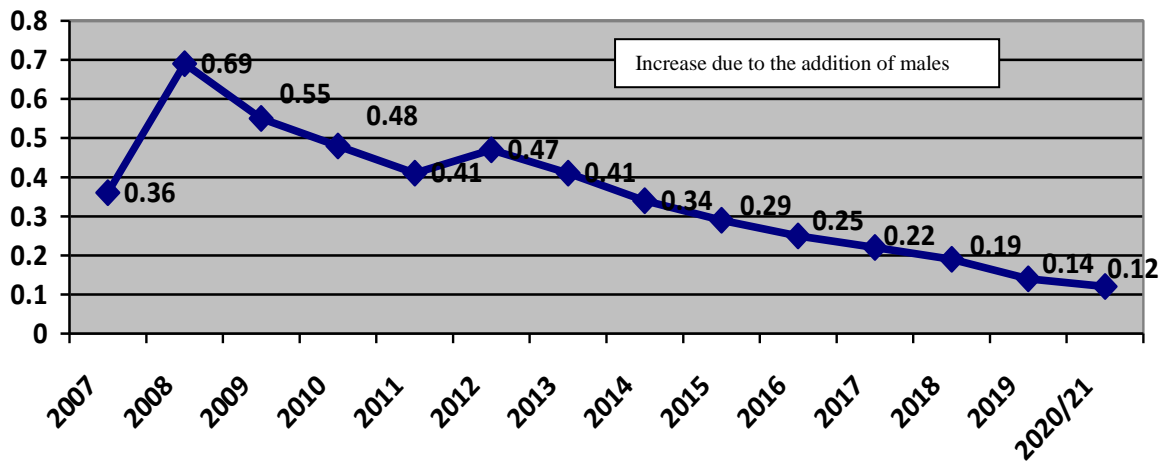
Year	Percent of insurable earnings
2007	0.36%
2008	0.69%*
2009	0.62%
2010	0.55%
2011	0.55%
2012	0.47%
2013	0.41%
2014	0.34%
2015	0.29%
2016	0.25%
2017	0.22%
2018	0.19%
2019	0.14%
2020/21	0.12% ^{p/}

* Increase due to the addition of males

^{p/}Projected

More strict evaluation procedures and the mortality of pensioners have exceeded the award of new pensions to a significant extent, with actuarial cost declining to only 0.14% at 31 December 2019 (0.19% in 2018). Assuming a restricted pace of revaluation of pensions in payment, the long-term trend of the scheme is assessed at 0.12% of insurable earnings, including the incidence of the recent legal amendments raising both the ceiling and the rates of contributions. Raising the initial eligibility age to 67 years for females would reduce further the actuarial cost.

Actuarial Cost of NCP Scheme
(% of insurable
earnings)



6. Conclusions and Recommendations

The analysis has shown that more strict reduction procedures by the Committee and the incidence of a recent legal amendment, raising the ceiling and the rate of contributions, have caused a steady decline in the actuarial cost of the scheme. Further reductions are forecast in 2020/21 due to the impact of legal amendments. The actuarial cost of the scheme is assessed at 0.12% of insurable earnings for the period 2020/21.

ANNEX C

SUMMARY OF BENEFIT PROVISIONS

A. Sickness Benefit

Eligibility:	Insured persons rendered temporarily incapable of work, over 14 years and not older than 65 years of age, and in insurable employment when becoming incapacitated for work.
Contribution Conditions:	Not less than 50 contributions paid, and in insurable employment on the day of the incapacity with 5 weeks of contributions in the preceding 13 weeks.
Duration of Payment:	From the first day of incapacity (as from 1 January 2003) and for a continuous period of sickness not exceeding 39 weeks or 234 days. (Paid from the third day in 2001 and the second day in 2002). From the first day in 2001 and 2002 if, the incapacity lasts for 14 days or more.
Rate of daily benefit:	80% of average weekly insurable earnings divided by 7 the first 156 days, and 60% the remaining 78 days (Sundays included).
Average weekly insurable earnings:	Total weekly insurable earnings on which contributions were paid in the preceding 13 weeks divided by the number of weeks for which contributions were paid.

B. Maternity Benefits

(a) Maternity Allowance

Eligibility:	Payment to an insured woman in case of pregnancy and confinement.
Contribution conditions:	Not less than 50 contributions paid since the appointed day (1 June 1981) and in the period of 39 consecutive weeks immediately preceding the sixth week before the expected date of confinement; not less than 30 contributions must have been paid or credited (of which 20 must have been paid).
Starting date of payments:	Not earlier than 7 weeks before the expected date of confinement.
Rate and duration of weekly benefits:	80% of average weekly insurable earnings, for a period of 14 weeks.
Average weekly insurable earnings:	Total weekly insurable earnings on which contributions were paid in the 39 weeks preceding the sixth week before the expected date of confinement, divided by the number of weeks for which contributions were paid.

(b) Maternity Grant

Payable to an insured woman or a husband on the occasion of his wife's confinement if his wife is not entitled to the grant.

Eligibility: Not less than 50 contributions paid since the appointed day and 25 contributions paid in the 50 weeks immediately preceding the week in which the confinement occurs.

Amount of grant: \$300 per child (payable only once in respect of any contribution year).

C. Retirement Benefit**(a) Retirement Pension**

Retirement age: As from 60 years of age, and retired from insurable employment (last condition not required if an insured person has attained 65 years). **New provision: Eligibility jointly with a survivor's pension.**

Contribution condition: 500 paid or credited weekly contributions, of which 150 have been paid.

Rate of pension: 30% of average insurable earnings plus 2% for every 50 contributions (excluding special credits) in excess of 500 up to 750; and 1% for every 50 contributions in excess of 750 (plus an overall 5% adjustment / to be deleted).

Average insurable earnings: Sum of weekly insurable earnings during the best three years in the last 15 years (or lesser period of contribution years if contributions not made for 15 years) divided by 150.

Minimum pension: \$49.35 per week as of April 2016.

Maximum pension: 60% of average insurable earnings.
Retirement Grant
Payable to insured persons retiring after the age of 60 years and not qualifying for a retirement pension.

Contribution conditions: Not less than 26 contributions paid.

Amount of grant: Six times the average insurable earnings for every 50 contributions paid or credited, or 2½ times the sum of such earnings divided by the number of weeks of contributions for each unit of 50 such contributions.

Minimum grant: \$800.

D. Invalidity Pension**(a) Invalidity Pension**

Invalidity: Insured person under the age of 60 years who is incapable of work due to a specific disease or bodily or mental disablement which is likely to be permanent, and who has been incapacitated for not less than 13 consecutive weeks immediately preceding the week in which the benefit is claimed.

Contributions conditions:	Not less than 150 contributions <u>paid</u> and not less than 110 contributions paid or credited in the last five years, and not less than five contributions paid in the last 13 weeks.
Special credits:	Claimant satisfying contribution conditions are awarded special credits equal to 25 contributions for each year between the age of the claimant and 60 years.
Rate of pension:	If more than 500 contributions paid or credited, as for retirement pension; otherwise, 25% of average insurable earnings with 150 to 299 contributions plus 1% for every 50 contributions in excess of 299 up to 499.
Minimum pension:	\$49.35 per week as of April 2016.
Maximum pension:	60% of average insurable earnings.

(b) Invalidity Grant

Payable to an invalid person not qualifying for an invalidity pension.

Contribution conditions:	Not less than 26 contributions paid.
Amount of grant:	As for retirement pension.
Minimum amount:	\$800.

a) Funeral Grant

Qualifying conditions:	Insured persons entitled to or in receipt of sickness or maternity benefit, or in receipt of, or satisfying the contribution for, a retirement or invalidity pension.
Contribution conditions:	50 contributions paid; 150 contributions paid in respect of Funeral Grant for deceased spouse and deceased dependent child.
Amount of grant:	\$1,500 deceased \$1,000 deceased spouse. \$ 500 deceased dependent child.

b) Survivor's Benefit

Survivor's Pension

Qualifying conditions: Deceased received retirement or invalidity pension or would have been entitled to invalidity or retirement pension if he had become incapacitated or retired at the time of his death.

Qualifying conditions of Beneficiaries:

- (a) Widow:
- On the date of her husband's death she was pregnant by the deceased or had the care of a child of his under 16 years of age, or on the date of his death she had been married to the deceased for not less than 3 years and
 - i) she is over the age of 50 or,
 - ii) she is permanently incapable of self-support and was wholly dependent on her deceased husband.

Period of Pension

During the period while she has the care of a child, and if aged 50 or over when she no longer has care of a child, for her lifetime thereafter or until remarriage. For one year if the widow does not qualify for a longer period.

- (b) Widower: Married to the deceased not less than 3 years, permanently incapable of self-support, and wholly dependent on his deceased wife.
- (c) Unmarried Child: Until 16 years of age, (or until 21 years, if receiving full-time education, whichever is earlier).
- (d) Invalid Child: Unmarried, permanently incapable of self-support, and wholly dependent on the deceased.
- Rate of Benefit: Widows and Widowers: 66%; each child 25%, or 40% if invalid; parents – 40%.
- Minimum pension: \$49.35 per week.
- Maximum pension: 100% of the pension paid or payable to the deceased. Otherwise, each share is reduced proportionately.
- (b) Survivor's Grant

Payable to beneficiaries if they are not entitled to pensions on the death of an insured person who satisfied the contribution conditions for retirement or invalidity grant. The grant is payable in the same proportion as the survivor's pensions and the total amount of the grant is the same as the retirement grant.

E. Employment Injury Benefits

The following benefits are included:

- Injury benefit (temporary incapacity for work), including accidents occurring "to and from work".
- Disablement benefit (permanent disability).
- Medical care required as a result of employment injury.
- Constant-attendance allowance.
- Survivor's pension and funeral grant.

Average insurable earnings: earnings for which the last four contributions have been paid divided by four (or two or three as the case may be).

No contribution conditions are required and the rates (or the amounts) of benefit are as follows:

- a) Injury benefit: 80% of the average insurable earnings from the first day of incapacity up to a maximum of 26 weeks.

Minimum pension: \$49.35 per week.

Disablement benefit

- degree of disability
25% or more Periodical payment equal to 60% of the average weekly insurable earnings times the degree of disability.
- degree of disability
less than 25% Lump-sum grant equal to 260 times the average weekly insurable earnings times the degree of disability.

Medical care:	Provided free of charge in public or private facilities or abroad provided the Board to give prior approval.
Constant-attendance allowance:	25% of the amount of the disablement benefit for 100% disability, as per Section 21 of the Act and Section 45 of the Benefits Regulations.
Funeral grant:	\$1,500.

F. Non-Contributory Pensions

As from age 65 females, and age 67 males (as from December 2007), and meeting the conditions to qualify for pensions. The monthly amount of \$100 increased from \$75, as of November 2007.

ANNEX D

Glossary of Terms

Adapted from the ILO/ISSA publication “Actuarial Practice in Social Security”,
Plamondon, Drouin, Pérez Montás, etc. (2002)

Assessment of Constituent Capitals

A financial system applied to employment injury (EI) benefits under which the annual cost of the scheme is determined as the present value of all future payments relative to pensions awarded during that year. Under that system, a reserve is continuously maintained equal to the present value of pensions in payment. This is sometimes designated as “the terminal funding” system of finance.

Defined-benefit scheme

A scheme under which the benefit is a defined amount, which depends on the number of contributions or insurance years and the number of insurable earnings.

Defined-contribution scheme

A pension plan under which contributions are paid to an “individual account” for each participant. The retirement pension is “undefined” and is dependent on the capitalized balance and the value of annuities at retirement, usually through for-profit entities (financial institutions or insurance companies).

Financial system

The systematic arrangement for raising the resources necessary to meet the financial obligations of a scheme. This is an expression often used to refer to the selected method of financing long-term pensions under a defined-benefit scheme (pay-as-you-go, partial funding, or full funding).

Level or average premium

A financial system based on a theoretical constant contribution rate that can be applied indefinitely or for the projection period. It is calculated by equating the present value of projected future contributions of active insured persons and new entrants, plus the value of existing reserves, to the present value of the projected future benefit and administration expenses.

Pay-as-you-go rate (PAYG)

The ratio of the total expenditure of a scheme to the sum of insurable earnings of that scheme. The PAYG financial system is usually applied to short-term benefits.

Period of equilibrium

As stated below in the “scaled premium system”, in actuarial valuations of a national pension scheme, the period of equilibrium measures the number of years when reserves will be increasing. At the end of the period of equilibrium, income from contributions and investments equal benefits and administrative expenditure, according to the actuarial assumptions. Without an adjustment to the contribution rate, assets will need to be liquidated to pay current expenditure, and reserves will begin to decrease.

Scaled premium system

A financial system for pensions under which contribution rates are increased throughout the life cycle of a pension scheme on a step-by-step basis (where the duration of each individual “step” is called the “**period of equilibrium**”). In a more narrow definition, the contribution rate is calculated for a defined period of years, that is, a “period of equilibrium” (which often ranges from ten to 25 years), with the objective of equating, at the end of the period of equilibrium, the income from contributions and the investment income to the expenditure on benefits and administration.

State Plan

A term used in accounting standards for a pension plan sponsored by a State or Government on a not-for-profit basis, and therefore with indefinite duration, as opposed to pension plans sponsored by an enterprise which can become insolvent if the enterprise fails.

Terminal funding

A financial system under which a premium equal to the present value of a pension is paid at the time the pension starts. The premium is set aside as a reserve to guarantee future benefit payments.