WORK SAFE. FOR LIFE.
WORKERS' COMPENSATION BOARD OF NOVA SCOTIA

2022 Funding Strategy

With financial projections 2022–2026

Prepared by the Finance, Audit and Risk Committee June 21, 2021

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EXECUTIVE SUMMARY

The funding strategy outlines the planned approach to funding operations and the stabilization of the funded position at the WCB. Funding of the Workplace Safety and Insurance System (WSIS) requires consideration of a number of complex variables and assumptions relating to future events. This creates significant uncertainty and limits our ability to accurately predict future funded positions precisely, and as a result, we communicate that these are estimates of potential funded statuses.

On March 11, 2020, the World Health Organization declared COVID-19 as a pandemic. The estimated impact on our funding strategy in the months that followed was a 2-year increase in the estimated time it would take to eliminate the unfunded liability from 2022 to 2024.

Like the rest of Canada and the world, Nova Scotians battled the pandemic, and we did so pretty well. Despite significant declines in investment markets following the pandemic declaration, markets rebounded, as did the WCB investment portfolio with an investment return greater than planned. The strong investment returns, favourable actuarial experience and revenues on par with 2019, led to better than expected financial outcomes for 2020. As a result, the WCB's financial position was strengthened in 2020, with the Accident Fund reaching 102.9 per cent funded. This eliminated the unfunded liability – a significant financial milestone.

With the elimination of the unfunded liability, we will turn our attention to maintaining our funded position while providing stability in terms of assessment and benefit rates. As we consider a stable funded range for the workers and employers of today and tomorrow, a long term view and financial prudence have simply never been more important. To ensure long term sustainability, a system where assets exceed liabilities, a funding ratio in excess of 100 per cent will be required.

We will continue to focus on strengthening our financial position holding the average assessment rate at $2.65/$100 of payroll in 2022. The portion of the assessment rate needed to fund current operations is expected to decrease over time. However, our progress is dependent on investment returns that are sufficient to cover the growth in the benefits liability; and economic activity that supports projected revenue and claims costs.

Annual revisions to the funding strategy are required to reflect actual experience and changes in assumptions. Actual claims experience, assessable payroll (premium revenue), investment experience, benefit enhancements, slow economic recovery and the accrual of costs associated with occupational disease in the latency period are among the factors incorporated into the funding plan. A foundation scenario is used to prepare the financial projections and is the basis of the discussion included here. Details of the financial projections resulting from the foundation scenario are included in Appendix A.

The impact of the global pandemic continues into 2021. The size of the workforce will impact both time loss claims and payroll in 2021. By the end of 2021, we have projected that the economy in Nova Scotia will recover, however, our targets project the workforce will not likely return to 2019 levels until 2022. Investment returns were notably above the expected 6 per cent return in 2020. In keeping with our long term assumption, returns of less than 6 per cent have been factored into the funding strategy from 2021 to 2026.

The foundation scenario includes allowances for increases in annual claims costs incurred to reflect the impact of changes in processes and technology; as well as psychological impairments that can significantly challenge return to work. In addition, the pandemic continues to challenge our ability to return injured workers to work in a safe and timely manner – including the treatment programs available to injured workers and limited return to work opportunities. We have worked with health service providers to find new ways to safely deliver services during the pandemic and to offer Permanent Medical Impairment assessments at our offices in Halifax and Sydney. The current plan anticipates experience will improve in the second half of 2021 as vaccine distribution continues and economic activity increases.

The above has led to a significant increase in Time-Loss Days Paid per 100 Covered Employees. We have therefore revised our expectations in this regard and have concluded that substantially improved outcomes will take longer to emerge. We estimate a gradual decrease in claims costs from $1.78 to $1.68 from 2021 to 2026. The targeted outcome will be achieved through a continued focus on prevention and return to work. The administrative portion of the rate will remain steady at $0.64 through 2026.

The base case currently reflects a combined cost of claims and administration $2.42 in 2021. Following a projected economic recovery in late 2021, the combined costs are expected to reduce to $2.39 in 2022 and to $2.32 by 2026. The probability of achieving these estimates will be significantly improved based on the system investment we have made. As per the current version of the plan, the excess available to improve our funded position in 2022 will be $0.26. With a rate of $2.65, the excess available in 2026 would be $0.33.

Financial gains can occur when revenue is greater than expected and/or costs are lower than expected. The probability of exceeding cost savings targets is currently considered low given the current environment. Significant gains or losses could occur due to investment market volatility within any given year. This can have a significant impact on the funded position. In March 2020, after significant investment market declines the funded position was 88 per cent, and following market rebounds, end of year result of 102.9 per cent. These wide fluctuations in investment returns demonstrate how results can vary over a short period of time and the impact this can have on the funded position. We therefore believe it may be unwise to adjust the premium or benefit structure based on gains or losses in this area absent sustained change over multiple years.

The proposed 2022 Administrative, Legislated Obligations and System Support budget of $93.2 million reflects the operational, capital and project investments needed to deliver results in the various areas noted above while maintaining the current average actual assessment rate and strengthening our funded position. A continued focus on reducing claims costs through investment in prevention and return to work is an area of focus in the 2021–2023 strategic plan.

Comprehensive income of $40.9 million is projected for 2022; contributing positively to the funded position. As we move forward we must take a long term view to maintain sustainable funding into the future.

The long-awaited elimination of the unfunded liability is all but here. But “full funding” is something different, and a concept yet to be defined. While assets exceeding liabilities is in once sense the end of one journey, it’s more importantly the beginning of another – toward a workplace safety and insurance system with the right funding parameters in place, so such an imbalance never happens again.

The projections shown here are estimates based on the assumptions noted. It is important to note that actual results will vary from the information presented and the variation may be material.

BACKGROUND

The Workers' Compensation Act passed in the spring of 1995 makes specific reference to the Workers' Compensation Board funding requirements in Section 115. That

Section states that the WCB must make an assessment on and collect from employer's sufficient funds to:

a) meet the costs of all claims payable during the year;
b) subject to Section 116, meet the future costs of all claims for all injuries occurring during the year;
c) pay the expenses incurred in administering this Act; and
d) pay all other amounts payable from the accident fund.

These requirements give the WCB guidance for funding and budgeting decisions on an annual basis. The funding strategy incorporates this foundational guidance and other key assumptions into a financial model with an underlying goal of modelling financial sustainability into the future.

Investment income is a key component of the funding strategy. The general premise is that invested assets will generate sufficient income to cover the growth in the benefits liability. While it is a key component, it is also a key source of variability. On balance, for the period 1995 to 2020, investment returns averaged 6.9 per cent per annum; exceeding our long term assumption of 6.0 per cent. Over the last 20 years, investments returns averaged 6.2 per cent annually. Overall, this aligns with our long term assumption.

As we move toward a stronger financial position, it will be important to maintain progress and be positioned to absorb unexpected shocks to the system. The original funding strategy was developed in December 1995 and anticipated elimination of the unfunded liability in 2039. Since that time, new and enhanced entitlements for chronic pain, supplementary benefits, and firefighter cancer added hundreds of millions of dollars to the liability. The reinstatement of survivor benefits, changes to accounting policies and allowance for latent occupational disease challenged our financial position.

While there were challenges, we also experienced economic growth to a larger scale than expected leading to covered payroll in recent years that exceeded original estimates significantly. Overall, our progress toward financial sustainability has been faster than anticipated. Looking forward there are still risks that require mitigation in order to preserve the progress made to date.

Assets exceeded liabilities by $62.1 million at the end of 2020. This represents a funded ratio of about 102.9 per cent. Based on our current assumptions, we have just barely eliminated the unfunded liability.

The WCB's updated Strategic Plan for 2021-2023 includes considerations for the establishment of a sustainable funded percentage range. Many jurisdictions across Canada consider sustainable funding to be a percentage greater than 100 per cent. A funding policy could consider a range, setting upper and lower thresholds where action may occur. This supports long term sustainability and stability of rates and benefits.

The financial projections of a Workplace Safety and Insurance System (WSIS) are complex and are subject to variance in one or more key variables. Accordingly, annual revisions to the funding plan are required and can involve material changes in financial projections covering a relatively long period of time.

Each year we explore a variety of scenarios. As our funded position improves, the alternatives explored are increasingly complex in nature and capturing the impact of these complex scenarios is becoming more challenging. We continue to work with our actuarial consultants to better understand the likelihood and impact of various future events and to more accurately predict the impact that changes in the cost structure have on the benefits liability.

To date and to a large extent, the funding period has been used to absorb variations between financial projections and actual results. This approach has allowed us to meet a key objective of maintaining a plan to eliminate the unfunded liability while providing relative stability in assessment rates and in the benefit structure. With this in mind, we have constructed a foundation scenario incorporating recent results, assumptions on future performance and working toward long term financial stability;

The target for total revenues for 2022 is $463.7 million based on:

- a projection for insured firms' assessable payroll of $12.6 billion, yielding assessment revenue of $335.9 million,
- investment income of $120.3 million, and
- revenue from self-insured employers of $7.5 million (administration fee).

In 2022, assets exceeding liabilities is expected to increase by $40.9 million, improving the funded position. This results from the total revenue target of $463.7 million minus

- claim costs of $222.8 million (insured claims),
- the growth in present value of the benefits liability of $112.8 million,
- administrative costs of $67.7 million,
- adjustment for future administration costs reducing liabilities by $(2) million, and
- legislated obligations and system support of $21.5 million.

Additional key projection assumptions made in the funding strategy for 2022 and onward include:

- Gross Interest Rate of 5.25 per cent per annum,
- Investment Income averaging 5.25 per cent through 2026; 6 per cent thereafter,
- Consumer Price Index (CPI) of 2 per cent,
- Continued progress on savings targets arising from investments in prevention, return to work and service delivery,
- Average assessment rate is $2.65, holding constant until financial sustainability is defined and achieved.

Long-term disability is the WCB's largest cost area. In recent years, the volume of EERBs awarded has fluctuated, but remains below the long term assumption used in the valuation. In 2019, the implementation of Guidewire led to delays in our processing as staff absorbed the new tools and technology. This led to a non-typically low volume of EERBs awarded in 2019, followed by pandemic challenges in 2020. The backlog of EERB awards is expected to be addressed leading to a higher than expected number of EERBs in 2021. In 2022, more traditional EERB volumes are expected to return. Given the aging workforce and the incidence of chronic pain and post-traumatic stress disorder in Nova Scotia, these benefits represent a significant area of risk for the WCB.

Assessment revenue could also generate gains in any given year. However, a significant increase would be required to impact the funding period. For example, a five percent increase in assessment revenue would require a sustained increase in the payroll base for assessable employers of approximately $500 million. Increases in payroll can result from growth in wages, growth in the workforce, and increases in the maximum assessable payroll.

In 2021, we target a recovery in the covered workforce following the 4.2 per cent decline experienced in 2020. Additionally, we plan to automate a number of payments for health care providers thereby eliminating delays in payments. This is expected to lead to a substantial increase in health care payments in 2021 followed by more traditional payment patterns in 2022 and beyond.

Health care is about 30 per cent of the total claims costs incurred. The remaining 70 per cent of claims costs incurred are almost all wage related. It therefore seems reasonable that over the longer term, these costs will grow at a rate similar to growth in payroll. We therefore assume wage growth and increases in covered payroll will continue to generate payroll growth approximating CPI plus 1 per cent; consistent with the rate of growth expected on wage related benefits.

Positive economic conditions, combined with operational improvements, have improved the Workers' Compensation Board's actual financial position since December 1994. However, positive variances from the funding plan are subject to reversal as was the case in 2003 with the inclusion of the estimated costs of chronic pain related benefits; in 2007 when we experienced higher than expected costs in both long term disability and health care along with lower than expected investment returns; and in 2008 when we experienced significant losses in our investment portfolio.

A limitation of the funding strategy model is that it does not fully reflect the likely changes in the estimated liability that will accompany planned reductions in the cost structure. Given the complexity of the savings targets, the limitations of the model noted above, and the impact of the global pandemic, it is advisable to hold the average rate at $2.65 as we finalize our plans to adopt a funding corridor.

RECENT FINANCIAL RESULTS

The operating results for 2020 and 2019 are attributed to the following factors:

	2020 (000's)	2019 (000's)
Assessment revenue in excess of current year costs	$ 32,473	$ 39,539
Investment income above liability requirements*	82,066	144,254
Actuarial liabilities and adjustments less than previously anticipated	24,939	50,329
Other comprehensive income from actuarial losses on post-employment benefits	(3,221)	(4,495)
Total comprehensive income	$ 136,257	$ 229,627

**Surplus of investment income relative to growth in present value of the benefits liabilities.*

As the table indicates, 2020 delivered very favourable financial results. Assessable payroll was higher than expected (essentially flat with 2019), and investment income exceeded the return assumptions by more than 3 per cent. A favourable experience adjustment also had a positive impact on results. These factors led to the elimination of the unfunded liability in 2020. While this is quite favourable, the impact of the global pandemic and the timing and magnitude of the economic recovery adds uncertainty to the funded position in 2021 and into 2022.

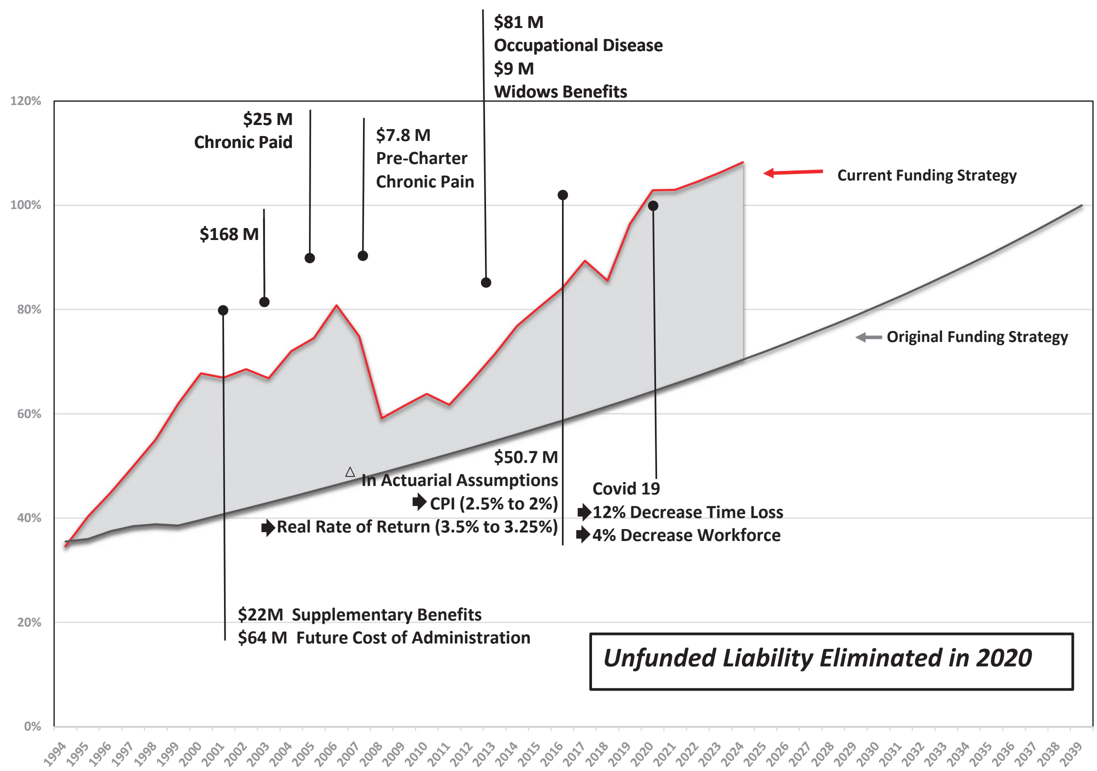
In workers' compensation, assessment revenue should roughly equal current year costs, otherwise transfers to or from future or past employers are occurring. These intergenerational transfers to current and future employers from past employers will no longer be required, however preserving our financial health will require mitigation strategies including a continued stabilization charge on rates. Approximately $0.31 (2020) of the assessment rate was set aside to absorb the shortfall between investment income and the growth in the benefits liability, and to eliminate the unfunded liability. If targeted performance indicators and investment returns are achieved as expected, $0.26 the assessment rate will be used to stabilize our funded position in 2022. The decisions we make now are important not only for the employers we cover today, but for generations in the future.

In a system without an unfunded liability, investment income should be expected to equal liability requirements. That is, the invested funds should increase at a rate equal to the increase in the liability. In 2020, investments income exceeded the liability requirement by $82.1 million. Going forward, we expect that the higher than expected returns achieved in 2020 could smooth out over the next five years such that investments returns average to long term expectations and over the entire period, the required growth will be achieved.

FUTURE CLAIMS COSTS AND POTENTIAL SAVINGS

Real changes in claims costs incurred, excluding inflation, may result from the following factors:

1. The **benefit structure** contained in the *Workers' Compensation Act*, which is the governing legislation. A comprehensive review of the legislation was completed in March 2002 (Dorsey Report). Court decisions and resulting legislation periodically change coverage. For example, in 2003, a court decision relating to chronic pain benefits had a significant impact on the unfunded liability and on the estimated claims costs incurred for current and future years. In 2013, legislation was introduced to extend additional retroactive benefits to survivors whose benefits were terminated upon remarriage. These and other changes that have increased the benefits liabilities are chronicled below:



2. **Actuarial and accounting standards** for reporting liabilities of Workers' Compensation Benefits. In 2013, the Actuarial Standards Board adopted a new standard of practice requiring an estimation of liabilities for occupational disease during the latency period. In prior periods, the liability only included an amount for occupational disease confirmed through diagnosis. This change had a significant impact on the benefits liabilities and, to a lesser extent, on the claims cost incurred.

3. **The number and severity of injuries**, which occur in work places across the province. This is normally correlated with the real growth in the economy but also reflects to some degree the shift between different sectors of the economy. This is important, as certain sectors are subject to more workplace injuries than other sectors. In order for the WCB to achieve the targeted results, it is critical that work places across the province embrace prevention and return to work and work with the WCB to improve claim outcomes.

4. **Administrative processes** can have a significant impact on claims costs incurred, primarily due to changes in the way that claims are administered. For example, the WCB's early intervention philosophy is anticipated to reduce claims costs incurred over time by shortening durations for the average claim and reducing the number of claims going on to long term disability. However this philosophy of increased early support has increased some costs as we look more broadly to determine how we might assist injured workers to return to work in a safe and timely manner. These expenses are intended to reduce overall costs by helping injured workers return to work.

5. T**he Covid 19 Pandemic** introduces areas of uncertainty. The global economic shutdown could impact investments, assessment revenue and claims costs. There is risk that the virus will force future shutdowns and that claims will emerge for workers infected on the job or PTSD will result for front line workers treating those affected. Additionally, treatment programs, impairment assessments and job search activities have been delayed which could impact the timing of claim resolution. These could impact our corporate performance measures and return to work efforts.

It is important to recognize that the Workers' Compensation Act of Nova Scotia has legislative language on the process of estimating potential earnings ability (EPEA) requiring that alternative work be both suitable and available. Relative to other jurisdictions, this limits the impact of the EPEA process on claims costs as suitable and available work is difficult to secure in rural Nova Scotia.

As mentioned previously, the pace of long term awards has slowed in recent years. As we work through the backlog the increased volume of long term awards will generate unfavourable experience adjustments and a slowdown in annual claims cost savings in 2021. This experience is not expected to continue into the future. The potential to reduce long term benefit costs seems reasonable and achievable given Nova Scotia's experience relative to other jurisdictions. In 2019, the number of injured workers receiving wage loss benefits six years after the injury was the highest among all the provinces in Canada, (the most recent metric available for Canada).

The current years' experience led to a significant increase in Time-Loss Days Paid per 100 Covered Employees. We have therefore revised our expectations in this regard and have concluded that substantially improved outcomes will take longer to emerge. Our new estimates are based on the assumption that improvements will begin to materialize in 2021 and that Time-Loss Days Paid per 100 Covered Employees will decrease to 203 days[1] by the end of 2026 (from 351 in 2020). As a result, the portion of the rate used to cover current year benefit costs is expected to increase from $1.75 in 2020 to $1.78 in 2022. A gradual decrease to $1.68 is expected between 2022 and 2026. The targeted outcomes will be achieved through a continued focus on prevention and return to work.

In 2020, administrative portion of the rate was $0.62; a decrease of $0.02 from the 2019 amount of $0.64. Continued investments in 2021, along with a recovered workforce suggests the administrative portion of the rate will remain at $0.64 through 2026.

The base case currently reflects a combined cost of claims and administration that is expected to increase from $2.37 in 2020 to $2.42 in 2021. Following a projected economic recovery in late 2021, the combined costs are expected to reduce to $2.39 in 2022 and to $2.32 by 2026. The probability of achieving these estimates will be significantly improved based on the system investments we have made. As per the current version of the plan, the excess available to improve our funded position in 2021 will be $0.23. With a rate of $2.65, the excess available in 2026 would be $0.33.

ADMINISTRATION COSTS AND LEGISLATED OBLIGATIONS

The proposed 2022 Administrative, Legislated Obligations and System Support budget of $93.2 million includes the investments needed to deliver the results targeted in the strategic plan. Details regarding the breakdown of operational, capital and project investments are outlined in the 2022 Operational Plan and Budget.

FACTORS CONSIDERED

Funding of the Workplace Safety and Insurance System (WSIS) reflects the balance struck between the level of benefits, rates charged to employers and the WCB's funding position.

When financial results were different than the target, whether better or worse, there were three possible courses of action: adjust benefits to workers, adjust rates paid by employers or increase or decrease the time period over which the unfunded liability is to be eliminated. As the level of benefits is set by the Legislature, subject to interpretation by the Courts, the funding equation is not entirely within the control of the WCB as the neutral administrator.

Many of the variables that influence the funding plan, such as CPI, economic activity and investment returns, are outside the control of the WCB and can be subject to significant variability. While we make every effort to provide reasonable estimates, there are times when extraordinary events can occur that can have a significant impact on the funding plan. For example, the payroll base in Nova Scotia grew considerably in the mid to late 90's and we experienced 30 per cent growth in covered payroll from 1995 to 2000. The growth in payroll together with better than expected investment returns led to significant progress on the elimination of the unfunded liability and the estimated funding period was reduced. Conversely, in 2008 investment markets delivered significant losses globally and a lengthening of the funding period was required.

Factors to consider when constructing a strategy to achieve financial sustainability:

1. **Stability** – regardless of the rate strategy selected, employers prefer to have some certainty and a long term outlook with respect to the direction rates are heading as opposed to a significant amount of volatility.

2. **Competitiveness** – at more than 2½ per cent of payroll, Nova Scotia rates are viewed as the highest rates in the country while providing among the lowest benefits to individuals. However, this is part of the story as comparisons do not take into account key differences across jurisdictions. For example, Nova Scotia covers 74 per cent of the payroll base and this results in a higher rate than those that provide universal coverage.

3. **Policy** in the context of an unfunded liability – the existence of a large unfunded liability tended to have a dramatic impact on any significant policy or financial initiative of the WCB or the Legislative Assembly when considering new legislation. The WCB's updated Strategic Plan for 2021–2023 will include strategic considerations for the establishment of a sustainable funded policy.

4. **Intergenerational transfers** – now that the unfunded liability is eliminated, intergenerational transfers between employers can be avoided if strategies are adopted to mitigate the risk of falling outside specified funding ranges in future years.

5. **Security** – the potential for liabilities to exceed assets in future will call into question the sustainability of the fund and the security of future benefits.

RATIONALE FOR KEY ASSUMPTIONS

A key point to emphasize throughout the discussion of the estimates used in establishing the funding strategy is the interdependence of various assumptions.

In some cases, the relationship between two or more assumptions plays a more significant role in the projections than the choice of individual assumptions. For example, when determining the assessment rate required to fund the cost of future injuries, it is the relationship between the rate of claims cost increase and assessable payroll growth rate that is more important than either of the individual rates. Therefore, it is important to take care in setting both individual assumptions and the relationships among the various assumptions.

The rationale for the various assumptions proposed is as follows:

1. **Consumer Price Index Assumption**

   Based on an analysis of CPI using a running 10-year, 20-year and 50-year average, the long term assumption for CPI is 2.0 per cent.

   For planning, the Conference Board of Canada's forecast as of April, 2021 indicates the following inflation rates for Nova Scotia:

2021	1.4%
2022	1.4%
2023	1.5%
2024	1.5%
2025	1.5%
2026	1.6%

   The long term assumption of 2.0 per cent is considered the most relevant for the Workers' Compensation Board's long term financial planning, as we are primarily concerned with specific components of inflation; wages and health care costs, rather than the general inflation rate. We will monitor the economic forecasts for long term inflation for post COVID economic recovery.

2. **Claims Costs Incurred**

   The original funding strategy assumed claims costs incurred would grow at the rate of inflation (CPI) except for health care costs which would grow at CPI plus 0.5 per cent. Our assumptions changed over the years to reflect experience. Going forward we assume health care costs will grow at CPI plus 2.25 per cent with all other benefits growing at CPI + 1 per cent. For 2021, health care costs are expected to increase more substantially as we work toward eliminating process delays in our health care payment processing.

3. **Assessable Payroll**

   In Nova Scotia over the 40-year period of 1981 to 2020, claims costs incurred and administration costs have grown at a compound rate of 5 per cent while assessable payroll has grown at 4 per cent. While the administration budget did grow in the period, the main source of increase in Nova Scotia was claims costs; a result of the implementation of the new earnings loss system in 1996.

   In order to reach financial strength, the trend of growth in costs exceeding growth in payroll in Nova Scotia must reverse. From 2021 to 2026 growth in payroll will have to exceed growth in costs. Targeted reductions in the frequency and duration of claims will have to materialize in order to achieve this goal.

The Average Assessment Rate Table in Appendix A indicates the importance of the relationship between the rate of growth of claims costs incurred and assessable payroll. If payroll and costs grow as expected, the average rate for current year costs is expected to be at $2.32 in 2026; a reduction from the 2020 cost of $2.37.

4. **Real Rate of Return**

The funding strategy has a real rate of return assumption of 3.25 per cent in 2022. Analysis indicates that 3.25 per cent is a realistic real rate of return and is comparable with other jurisdictions and the Canadian national average. The real rate of return coupled with our long term CPI assumption of 2.00 per cent, yields a nominal rate of 5.25 per cent. Changes in these assumptions can significantly impact the liabilities of the accident fund.

5. **Investment Returns**

Investment market volatility can create significant fluctuations in reported income in any given year. For financial statement reporting purposes all realized and unrealized gains and losses are recorded directly into income. For purposes of our funding plan, the WCB believes smoothing of investment returns more appropriately captures our long term expectations.

Our approach is to estimate investment income based on a pattern that will yield a nominal rate of return approximating 6.0 per cent over time. In 2020 we contracted Mercer to conduct an asset liability study to assess the probability of this return as related to funded position where assets equal liabilities. An integral part of the study was centered on expected investment returns.

We have modeled the expected investment returns such that the long term average of 6.0 per cent per year will be achieved when averaged over the long term; however there could be variations with some years exceeding 6.0 per cent and others falling short.

6. **Mortality**

The mortality assumption that underlies the calculation of liabilities and claims costs incurred for long-term disability and survivors' pensions will also influence the projections. The 2020 benefits liability valuation utilizes the 1983 Group Annuitant Mortality Table (with 10% margin) as the basis underlying liabilities under those categories for which a mortality assumption has been made. There are newer versions of the Group Annuitant Mortality Table and it is prudent to review the reasonableness of the mortality assumption from time to time. Given the general trend over recent years to increased life expectancies, it is possible that future valuations will feature actuarial adjustments in respect of mortality. Such adjustments, in the absence of other offsetting adjustments, would lead to increases in both liabilities and claims costs incurred projections. However, the magnitude of such adjustments would be small (less than one percent of benefits liabilities) as the largest component of long term disability costs relates to extended earnings replacement benefits payable to age 65. The current table assumes virtually all earnings loss award recipients will collect benefits until age 65. A change in the group annuitant mortality table will therefore impact only the costs associated with permanent impairment awards which are becoming a smaller portion of total long term disability costs.

KEY AREAS OF UNCERTAINTY

There are key areas of uncertainty that the WCB considers when it deliberates with respect to the funding strategy. Some of these areas of uncertainty include:

1. **Changes in the Provincial Economy**

   A combination of factors including the Conference Board of Canada projections were used to estimate the size of the Nova Scotia workforce for the next several years.

   In 2020, the workforce decreased by 4.2 per cent due to the global pandemic. In 2021, we have targeted a recovery of the workforce leading to a larger than average increase in payroll of 4.2 per cent. A significant variance from this assumption would have a material impact on the plan.

2. **Long Term Disability Costs**

   From an actuarial perspective, the WCB has limited experience to date with long term disability costs in an earnings loss environment. The plan includes a series of assumptions around reductions in costs available through improvements in durations and return to work outcomes. Beyond the savings noted, no other provisions have been made to claims costs incurred or the benefits liability that may result from actual experience in earnings loss.

3. **Legislative Framework**

   The claims costs incurred side of the funding equation is driven primarily by legislative decisions with respect to benefit levels. The March 2002 report titled “The Nova Scotia Workers’ Compensation Program, A Focused Review” (The Dorsey Report) contained recommendations for program enhancements. Changes, such as increases in indexing, increases in maximum assessable earnings, and elimination of the three-worker rule are considered longer-term objectives and are not considered in the foundation scenario.

4. **Inflation**

   The *Workers’ Compensation Act* prescribes a partial indexing formula to be applied to clinical rating system (CRS) pensions, permanent impairment benefits (PIB), and extended earnings replacement benefits (EERB). Due to partial indexing, CPI increases that differ from the long term assumption represent a risk to the accident fund. This occurs because inflationary increases to benefits are calculated at 50 per cent of CPI. If CPI is higher than expected, the gap between actual CPI and the indexing applied to benefits is larger resulting in lower than expected increases to the benefits liability. If CPI is lower than expected, the difference between actual CPI and the amount of indexing applied to benefits is smaller and would therefore result in higher than expected increase in the benefits liabilities.

5. **Coverage for New Conditions**

   The cost estimates assume that there will be no change in the WCB’s policy, practice, or experience and that there will be no coverage for new conditions. Any provision for new benefit costs flowing from judicial decisions, legislative amendments, and/or changes in WCB policy except as expressly noted in this document will require revisions to the funding strategy.

6. **Financial Reporting Standards**

The financial statements of the WCB are prepared in accordance with International Financial Reporting Standards (IFRS) for publicly accountable entities as at December 31, 2019. Two of the more significant standards that impact the WCB include accounting for investments and liabilities recorded at market value.

Since 2004, the WCB has recorded investments at market value. The adoption of IFRS in 2011 had no impact on net income. However the recording of unrealized gains now flows directly into investment income rather than through other comprehensive income.

It is anticipated that IFRS standard17 – Insurance Contracts will require that liabilities be recorded at fair market value beginning in 2023. This standard will have material impacts for the WCB's financial reporting by introducing new recognition and measurement approaches for insurance revenue and liabilities that could impact the funded position significantly.

More specifically, under this standard, the basis of accounting for the benefits liabilities will change to fair value utilizing a market based discount rate. At the end of 2020, this would have decreased the financial statement funded ratio from 102.9 per cent to 83.2 per cent, impacted in 2020 by declines in interest rates.

The last change to the nominal rate assumption used for valuation purposes occurred in 2017. The revised assumptions related to CPI (2.5 per cent to 2.0 per cent) and the real rate of return (3.5 per cent to 3.25 per cent) to a combined nominal rate of 5.25 per cent – bringing us closer to the applicable rate that would be required under IFRS.

The long term assumption used today effectively smoothes the impact of fluctuations in the market value of liabilities. Upon adopting the proposed standard, smoothing will no longer be appropriate or permissible for financial statement reporting. However, the WCB may consider if smoothing of the discount rate in the funding strategy for planning and rate setting purposes. We expect that the process could be similar to that used to smooth in fluctuations in investment income.

Although the Funding Strategy clearly labels assumptions as such, many users may credit the strategy with more certainty and precision than warranted given the number and nature of assumptions it contains. Users are reminded that the Funding Strategy is our best estimate of what will happen given the assumptions. As noted in previous Annual Reports and the Funding Strategy, actual results will differ from the projections and these differences may be material.

APPENDIX A: 2022–2026 FINANCIAL PROJECTIONS

WORKERS' COMPENSATION BOARD OF N.S.
PROJECTED STATEMENT OF OPERATIONS

	2020 Actual	2021 Original	2021 Forecast	2022 Budget	2023 Projection	2024 Projection	2025 Projection	2026 Projection
REVENUE:								
Assessments - Regular Classified	$305,831,000	$322,248,000	$324,494,000	$335,865,000	$347,635,000	$359,819,000	$372,431,000	$383,575,000
Assessments - Self Insured	$8,108,000	$7,500,000	$7,500,000	$7,500,000	$7,500,000	$7,500,000	$7,500,000	$7,725,000
Investment Income	$183,284,000	$177,624,000	$113,435,000	$120,296,000	$129,653,000	$139,877,000	$151,009,000	$162,964,000
	$497,223,000	$507,372,000	$445,429,000	$463,661,000	$484,788,000	$507,196,000	$530,940,000	$554,264,000
Claim Costs	$203,861,000	$216,948,000	$217,600,000	$222,776,000	$224,525,000	$228,770,000	$234,298,000	$241,886,000
Growth PV of Benefits Liability	$101,217,000	$106,673,000	$107,413,000	$112,784,000	$118,424,000	$124,344,000	$130,560,000	$137,090,000
Administration Costs *	$63,051,000	$66,382,000	$67,164,000	$67,609,000	$72,517,000	$74,527,000	$76,831,000	$79,363,000
Liability for Future Administration Costs	($2,783,000)	($2,000,000)	($2,000,000)	($2,000,000)	($2,000,000)	($2,000,000)	($2,000,000)	($2,000,000)
OCI OPEBs Actuarial Gains/Losses	$3,221,000	$0	$0	$0	$0	$0	$0	$0
Legislated Obligations	$16,326,000	$19,461,000	$19,654,000	$20,544,000	$20,956,000	$21,375,000	$21,803,000	$22,239,000
System Support	$1,012,000	$1,057,000	$1,057,000	$1,078,000	$1,100,000	$1,122,000	$1,144,000	$1,166,000
Actuarial Experience Adjustments	($24,939,000)	($20,000,000)	$30,000,000	$0	$0	$0	$0	$0
	$360,966,000	$388,521,000	$440,888,000	$422,791,000	$435,522,000	$448,138,000	$462,636,000	$479,744,000
EXCESS OF OPERATING /REVENUES OVER EXPENSES	$136,257,000	$118,851,000	$4,541,000	$40,870,000	$49,266,000	$59,058,000	$68,304,000	$74,520,000

* Excludes Total Capital	2020 Actual	2021 Original	2021 Forecast	2022 Budget	2023 Projection	2024 Projection	2025 Projection	2026 Projection
Unfunded Liability,End of Year	$62,093,000	($239,674,000)	$66,634,000	$107,504,000	$156,770,000	$215,828,000	$284,132,000	$358,652,000
Funded Ratio, End of the Year	102.9%	89.7%	103.0%	104.5%	106.3%	108.3%	110.4%	112.5%

Notes:

1) The average assessment rate used to calculate revenue is $2.65 through 2026.

2) It is important to note that these cost estimates assume that there will be no change in the WCB's policy, practice, or experience and that there will be no coverage for new conditions. Any provision for new benefit costs flowing from judicial decisions, legislative amendments, and/or changes in WCB policy except as expressly noted in this document will require revisions to the funding strategy.

3) The Statement of Operations reflects the administrative expenses net of an adjustment for the liability for future administrative expenses. This adjustment is approximately 6% of the difference between claims costs incurred (CCI) and claims payments made(CPM). In a mature and stable environment, CCI and CPM would be relatively close in dollar amounts with a minimal adjustment. In recent years adjustments have been made to the benefits liability to reflect the inclusion of chronic pain benefits, resulting in CPM exceeding CCI by a significant margin. This margin is factored into the funding strategy with a decreasing trend as the adjudication of chronic pain claims are processed through the system and the margin between CPM and CCI is less.

4) Based on administrative budget assumptions and funding strategy projections.
(Funding Strategy - June 11, 2021).

5) As of January 1, 2018 the WCB has adopted IFRS 15 as related to revenue recognition. The change impacts revenue and claims costs incurred for Self-insured employers. In previous years, reported revenue included amounts billed to self-insured firms to reimburse claim costs. Beginning in 2018, neither the claims costs nor the offsetting revenue will be reflected in the statement of operations. Only the administration fee billed to Self-insured employers will be recorded as revenue in 2018 and future years.

2021 - 2026 PROJECTION ASSUMPTIONS
AVERAGE ASSESSMENT RATE

	Claims Cost Incurred and Admin	Contribution	Total
2019 *	$2.38	$0.28	$2.66
2020 *	$2.37	$0.31	$2.68
2021	$2.42	$0.23	$2.65
2022	$2.39	$0.26	$2.65
2023	$2.37	$0.28	$2.65
2024	$2.34	$0.31	$2.65
2025	$2.37	$0.28	$2.65
2026	$2.32	$0.33	$2.65

* 2019 and 2020 - Contribution to unfunded laibility
2021 to 2026 - Stabilization Contribution

APPENDIX B: CURRENT FUNDING STRATEGY AND ASSUMPTIONS

Rate of $2.65 Until Funding reaches 120% (2030)
Administration and Legislated Obligations Budget 2022-2026
Payroll Growth (Per Target Assumptions)
Claims Cost Incurred and Investment Income - See Assumptions Tab
CPI - 2%

Workers' Compensation Board of Nova Scotia

$ 2.65

Calendar Year	Total Assessment Rate	Assessable Payroll ($millions)	Total Revenue ($millions)	Assessment Revenue ($millions)	Assessment Penalties ($millions)	Self Insured Admin Fee ($millions)	Investment Revenue ($millions)	Recognized Inv Revenue ($millions)	Change In OCI Investments 2004-2010	Smoothing of Investments ($millions)	Gross Interest Rate	Admin & Leg. Obl. ($millions)	Change in OCI Post-Employmen Benefits 2012…
2011	2.67	9,354	266.355	249.419	1.042		15.894	15.894	-	0.00	7.00%	51.802	
2012	2.65	9,483	368.395	250.917	0.968		116.510	116.510	-	0.00	6.50%	48.410	0.887
2013	2.66	9,627	447.046	255.766	1.054		190.226	190.226	-	0.00	6.50%	51.705	2.769
2014	2.67	9,958	403.291	266.970	1.050		135.271	135.271	-	0.00	6.00%	56.747	-3.770
2015	2.65	10,236	344.553	273.715	1.100		69.738	69.738	-	0.00	6.00%	57.872	3.661
2016	2.65	10,502	379.933	278.6670	1.196		100.070	100.070	-	0.00	6.00%	61.107	(0.867)
2017	2.66	10,880	451.998	287.4210	1.335		163.242	163.242	-	0.00	5.25%	63.346	-1.400
2018	2.65	11,281	280.276	296.8910	1.487	7.151	(25.253)	(25.253)	-	0.00	5.25%	*73.920*	5.409
2019	2.66	11,673	565.514	311.8470	0.841	7.352	245.474	245.474	-	0.00	5.25%	77.661	(4.495)
2020	2.68	11,677	497.223	305.8220	0.009	8.108	183.284	183.284	-	0.00	5.25%	77.606	(3.221)
2021	2.65	12,207	445.429	323.4938	1.000	7.500	113.435	113.435	-	(20.00)	5.25%	85.875	
2022	2.65	12,636	463.660	334.8646	1.000	7.500	120.296	120.296	-	(20.00)	5.25%	87.231	
2023	2.65	13,081	484.788	346.6351	1.000	7.500	129.653	129.653	-	(20.00)	5.25%	92.573	
2024	2.65	13,540	507.196	358.8193	1.000	7.500	139.877	139.877	-	(20.00)	5.25%	95.024	
2025	2.65	14,016	530.941	371.4318	1.000	7.500	151.009	151.009	-	(20.00)	5.25%	97.778	
2026	2.65	14,437	554.264	382.5747	1.000	7.725	162.964	162.964	-	(20.00)	5.25%	100.77	
2027	2.65	14,870	598.684	394.0520	1.000	7.957	195.675	195.675	-		5.25%	103.79	
2028	2.65	15,316	625.445	405.8735	1.000	8.195	210.376	210.376	-		5.25%	106.90	
2029	2.65	15,775	653.476	418.0497	1.000	8.441	225.985	225.985	-		5.25%	110.11	
2030	2.35	16,249	632.634	381.8450	1.000	8.695	241.095	241.095	-		5.25%	113.42	
2031	2.35	16,736	658.914	393.3004	1.000	8.955	255.658	255.658	-		5.25%	116.82	
2032	2.36	17,238	688.076	406.8232	1.000	9.224	271.029	271.029	-		5.25%	120.32	
2033	2.37	17,755	718.658	420.8035	1.000	9.501	287.353	287.353	-		5.25%	123.93	
2034	2.37	18,288	748.904	433.4276	1.000	9.786	304.691	304.691	-		5.25%	127.65	
2035	2.38	18,837	782.386	448.3141	1.000	10.079	322.992	322.992	-		5.25%	131.48	

Rate of $2.65 Until Funding reaches 120% (2030)
Administration and Legislated Obligations Budget 2022-2026
Payroll Growth (Per Target Assumptions)
Claims Cost Incurred and Investment Income - See Assumptions Tab
CPI - 2%

Workers' Compensation Board of Nova Scotia

Calendar Year	LTD ($millions)	Survivors ($millions)	TERB ($millions)	Rehab Income ($millions)	Health Care ($millions)	Rehab Non-Incon ($millions)	Total Incurred Claims ($millions)	Total Incurred Claims plus Admin. ($millions)	Growth in PV of Liab ($millions)	Adj. To Ben. Liab. ($millions)	BOY Estimated Liabilities ($000s)	BOY Estimated OCI ($000s)	BOY Estimated Assets ($000s)	BOY Gross UL ($000's)	BOY Net UL ($000's)	BOY Estimated Funded Percentage	Surplus (Deficit) From Op's ($000's)	Total Comp. Income ($000's)
2011	74.763	1.873	36.244	0.000	47.183	0.829	160.892	212.694	112.638	6.538	1,662,617	0	1,061,407	601,090	601,090	63.84%	-65,515	-65,515
2012	79.586	2.151	34.535	0.000	49.035	0.861	166.168	215.465	117.833	(26.234)	1,742,566	0	1,075,961	666,605	666,605	61.75%	61,331	62,218
2013	84.424	3.578	33.789	0.000	48.761	0.992	171.544	226.018	112.537	61.871	1,802,865		1,198,478	595,877	604,387	66.48%	49,389	52,158
2014	84.460	2.133	34.468	0.000	48.991	0.866	170.918	223.895	116.367	(42.301)	1,929,019	0	1,376,790	546,488	552,229	71.37%	101,560	97,790
2015	84.148	1.373	35.8360	0.000	49.089	0.813	171.259	229.131	107.571	(61.059)	1,965,686	0	1,511,249	444,927	454,437	76.88%	68,910	72,571
2016	89.222	1.936	36.777	0.00	51.501	0.754	180.190	241.297	108.682	(35.154)	1,963,391	0	1,581,525	376,017	381,666	80.55%	65,108	64,241
2017	92.528	1.591	38.418	0.00	53.125	0.704	186.366	249.712	111.809	(11.247)	2,002,025	0	1,684,400	310,909	317,625	84.13%	101,724	100,324
2018	101.054	2.792	41.027	0.00	56.280	0.883	202.036	275.956	98.672	(2.453)	2,043,629	0	1,826,329	209,185	217,301	89.37%	-91,899	-86,490
2019	93.388	2.660	46.368	0.00	59.612	0.812	202.840	280.501	101.220	(50.329)	2,100,431	0	1,796,640	301,084	303,791	85.54%	234,122	229,627
2020	97.095	2.014	48.651	0.00	55.315	0.786	203.861	281.467	101.217	(24.939)	2,120,986	-7,202	2,046,822	66,962	74,164	96.50%	139,478	136,257
2021	100.008	2.074	52.545	0.00	62.073	0.900	217.600	303.475	107.413	30.000	2,148,269	-10,423	2,210,362	-72,516	-62,093	102.89%	4,541	4,541
2022	103.008	2.137	51.993	0.00	64.711	0.927	222.776	310.007	112.783	-	2,255,682	-10,423	2,322,316	-77,057	-66,634	102.95%	40,870	40,870
2023	106.098	2.201	47.810	0.00	67.462	0.954	224.525	317.098	118.424	-	2,368,466	-10,423	2,475,970	-117,927	-107,504	104.54%	49,266	49,266
2024	109.281	2.267	45.910	0.00	70.329	0.983	228.770	323.794	124.344	-	2,486,890	-10,423	2,643,660	-167,193	-156,770	106.30%	59,058	59,058
2025	112.560	2.335	45.073	0.00	73.318	1.012	234.298	332.076	130.561	-	2,611,234	-10,423	2,827,062	-226,251	-215,828	108.27%	68,304	68,304
2026	115.937	2.405	46.068	0.00	76.434	1.043	241.886	342.654	137.090	-	2,741,795	-10,423	3,025,927	-294,555	-284,132	110.36%	74,520	74,520
2027	119.41	2.48	47.45	0.00	79.682	1.074	250.098	353.889	143.944	-	2,878,885	-10,423	3,237,537	-369,076	-358,652	112.46%	100,850	100,850
2028	123.00	2.55	48.87	0.00	83.069	1.106	258.597	365.501	151.141	-	3,022,829	-10,423	3,482,332	-469,926	-459,503	115.20%	108,802	108,802
2029	126.69	2.63	50.34	0.00	86.599	1.140	267.393	377.505	158.699	-	3,173,971	-10,423	3,742,275	-578,728	-568,305	117.91%	117,272	117,272
2030	130.49	2.71	51.85	0.00	90.279	1.174	276.497	389.913	166.633	-	3,332,669	-10,423	4,018,246	-696,000	-685,577	120.57%	76,088	76,088
2031	134.40	2.79	53.41	0.00	94.116	1.209	285.921	402.738	174.965	-	3,499,302	-10,423	4,260,968	-772,089	-761,666	121.77%	81,210	81,210
2032	138.43	2.87	55.01	0.00	98.116	1.245	295.675	415.997	183.713	-	3,674,268	-10,423	4,517,144	-853,299	-842,876	122.94%	88,366	88,366
2033	142.59	2.96	56.66	0.00	102.286	1.283	305.771	429.703	192.899	-	3,857,981	-10,423	4,789,222	-941,664	-931,241	124.14%	96,055	96,055
2034	146.86	3.05	58.36	0.00	106.633	1.321	316.223	443.873	202.544	-	4,050,880	-10,423	5,078,177	-1,037,720	-1,027,297	125.36%	102,487	102,487
2035	151.27	3.14	60.11	0.00	111.165	1.361	327.043	458.522	212.671	-	4,253,424	-10,423	5,383,208	-1,140,207	-1,129,784	126.56%	111,193	111,193