ANNUAL REPORT | 2017

Auditors' Report

Annual Financial Statements

Actuarial Valuation Report

HEALTHCARE BENEFIT TRUST

BENEFIT FROM EXPERIENCE

Financial Statements
(Expressed in thousands of dollars)

HEALTHCARE BENEFIT TRUST

Year ended December 31, 2017

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INDEPENDENT AUDITORS' REPORT

To the Board of Trustees of Healthcare Benefit Trust

We have audited the accompanying financial statements of Healthcare Benefit Trust, which comprise the statement of financial position as at December 31, 2017, the statements of changes in net assets and changes in benefit obligations for the year then ended, and notes, comprising a summary of significant accounting policies and other explanatory information.

Management's Responsibility for the Financial Statements

Management is responsible for the preparation and fair presentation of these financial statements in accordance with Canadian accounting standards for pension plans, and for such internal control as management determines is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

Auditors' Responsibility

Our responsibility is to express an opinion on these financial statements based on our audit. We conducted our audit in accordance with Canadian generally accepted auditing standards. Those standards require that we comply with ethical requirements and plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on our judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, we consider internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Opinion

In our opinion, the financial statements present fairly, in all material respects, the financial position of Healthcare Benefit Trust as at December 31, 2017 and its changes in net assets and its changes in benefit obligations for the year then ended in accordance with Canadian accounting standards for pension plans.

KPMG LLP

Chartered Professional Accountants

Vancouver, Canada
April 12, 2018

HEALTHCARE BENEFIT TRUST

Statement of Financial Position
(Expressed in thousands of dollars)

December 31, 2017, with comparative information for 2016

	Notes	2017	2016
Assets			
Cash and cash equivalents	3	$ 88,984	$ 40,841
Investments	4	1,025,043	1,041,639
Accrued interest and other receivables		77	640
Contributions receivable		30,671	53,174
Accounts Receivable		16,719	-
Underfunded actuarial benefits	5	-	33,719
Exit levies receivable		-	1,429
Property, equipment and intangible assets	6	724	476
		1,162,218	1,171,918
Liabilities			
Benefits and accounts payable		15,789	17,045
Overfunded Actuarial Benefits	5	45,871	-
Net assets available for benefits		1,100,558	1,154,873
Plan benefit obligations	7	1,099,913	1,149,695
Economic dependence	8		
Commitments	9		
Surplus		$ 645	$ 5,178

See accompanying notes to financial statements.

Approved on behalf of the Board of Trustees:

_______________________ Trustee

_______________________ Trustee

HEALTHCARE BENEFIT TRUST

Statement of Changes in Net Assets
(Expressed in thousands of dollars)

Year ended December 31, 2017, with comparative information for 2016

	Notes	2017	2016
Surplus, beginning of year		$ 5,178	$ 7,649
Contributions and income:			
Change in underfunded/overfunded actuarial benefits and exit levies receivable		(73,372)	(64,782)
Contributions	10	359,455	382,099
Investment income	11	187,394	52,377
Changes in unrealized gain on investments		(104,626)	(7,539)
Interest on underfunded (overfunded) actuarial benefits		6,153	4,738
Joint Trust Administration Fees		1,038	-
		376,042	366,893
Disbursements and expenses:			
Benefits paid	12	407,823	467,425
Net change in plan benefit obligations		(49,782)	(124,515)
Operating expenses	13	22,434	26,364
Bad debt expense		100	90
		380,575	369,364
Contributions and income less disbursements and expenses		(4,533)	(2,471)
Surplus, end of year		$ 645	$ 5,178

See accompanying notes to financial statements.

HEALTHCARE BENEFIT TRUST

Statement of Changes in Benefit Obligations
(Expressed in thousands of dollars)

Year ended December 31, 2017, with comparative information for 2016

	Notes	2017	2016
Plan benefit obligations, beginning of year		$ 1,149,695	$ 1,274,210
Benefits accrued		337,780	439,043
Experience gains		6,771	42,847
Interest accrued		58,278	53,991
Permitted pool policy update		7,480	-
Changes in actuarial assumptions		(30,772)	(166,524)
Benefits and operating expenses paid		(429,319)	(493,872)
Plan benefit obligations, end of year	7	$ 1,099,913	$ 1,149,695

See accompanying notes to financial statements.

1. Description of the Trust:

The Healthcare Benefit Trust (the Trust) was created to receive contributions forwarded by participating employers and to make investments for the purpose of funding future health and welfare benefits, excluding pension benefits, in accordance with the Healthcare Benefit Trust Plan (the Plan). The Plan provides Long-term Disability (LTD), Group Life, Dependent Life, Extended Health Care (EHC), Dental and Accidental Death & Dismemberment (AD&D) coverage. Adjudication and administration of coverage is provided through third party administrators. Participating employers' plans conform to collectively bargained benefit packages where appropriate.

The Trust was established in 1979 through the Agreement and Declaration of Trust (the Trust Agreement). The Trust Agreement describes the composition, appointment, power, function, and duties of the Board of Trustees. The Board of Trustees is responsible for the governance of the Plan.

Public healthcare services in British Columbia are provided through organizations known as Health Authorities, which are set for each of five geographic regions of the province plus one overall region. Providence Healthcare Society, a society organized for managing certain healthcare facilities, is grouped in the Health Authority category for purposes of these financial statements only. The Trust provides benefits for employees of the Health Authorities, other participating health employers (who are present or past members of the Health Employers Association of BC), community society services sector employers (who are present or past members of the Community Social Services Employers' Association) and other permitted employers.

The Trust's capital is comprised of its net assets. The Trust's objective for managing capital, including member contributions, is to ensure that the assets of the Trust are invested soundly and effectively to meet the future obligations of the Plan.

The Healthcare Benefit Trust is a trust that is exclusively dedicated to providing certain employee benefits and services related to those benefits. The Trust is not an insurance company and the benefits it provides are not insured by an insurance company. The Trust is not subject to regulation under the British Columbia Financial Institutions Act.

Effective April 1, 2017, the Community Bargaining Association, Facilities Bargaining Association and Health Sciences Professionals Bargaining Association formed separate trusts ("Joint Trusts") for the purposes of providing benefits to their employees and functions independently of the Trust. These three Joint Trusts reduced the number of covered lives in the Trust by approximately 50%, but did not result in a transfer of existing assets or liabilities from the Trust. The Trust provides administrative services relating to the provision of employee benefits to the Joint Trusts.

2. Significant accounting policies:

(a) Basis of presentation:

These financial statements have been prepared in accordance with the Canadian Accounting Standards for Pension Plans. For accounting policies that are not related to the Trust's investments or benefit obligations, the Trust has complied with International Financial Reporting Standards (IFRS). The financial statements were authorized for issue by the Board of Trustees on April 12, 2018.

(b) Financial instruments:

(*i*) Cash and cash equivalents:

Cash and cash equivalents consists of cash on hand, bank balances and investments in money market instruments with original maturities of three months or less.

(*ii*) Non-derivative financial instruments:

Investments are recorded at fair value and are comprised of units of pooled funds. Pooled fund units are valued based on closing net asset values at the date of the statement of net assets. Changes in fair value of investments are recognized in the statement of changes in net assets as unrealized gains or losses on investments.

Cash and cash equivalents, accrued interest and other receivables, contributions receivable, underfunded actuarial benefits and exit levies receivable are classified as loans and receivables and are measured at amortized cost. Loans and receivables are financial assets with fixed or determinable payments that are not quoted in an active market. Benefits and accounts payable and overfunded actuarial benefits are classified as other financial liabilities and are measured at amortized cost.

Such assets and liabilities are recognized initially at fair value plus any directly attributable transaction costs. Subsequent to initial recognition these assets and liabilities are measured at amortized cost using the effective interest method, and, where applicable for financial assets, less any impairment losses.

At each reporting date, management considers whether there is objective evidence that its financial assets are impaired. If there is objective evidence that a loss in value has occurred, the financial asset is written down. When a subsequent event causes the amount of impairment loss to decrease in impairment loss is reversed in that period.

(c) Property, equipment, and intangible assets:

Property, equipment and intangible assets are recorded at historical cost and amortized using the straight-line method over their estimated useful lives, commencing when they are put into use, as follows:

2. Significant accounting policies (continued):

(c) Property, equipment, and intangible assets (continued):

Asset	Estimated useful lives
Computer hardware	3 years
Leasehold improvements	Over term of lease
Other property and equipment	5 to 8 years
Computer software	5 to 7 years

The Trust reviews the carrying value of property, equipment and intangible assets for impairment annually, and whenever events and circumstances indicate that the carrying value of an asset may not be recoverable from the estimated future cash flows expected to result from its use and eventual disposition. An impairment is recognized if and to the extent the recoverable amount is less than the carrying value.

(d) Plan benefit obligations:

Liabilities are recorded for future benefit payments on claims reported prior to the fiscal year end and on claims that have been incurred prior to the fiscal year end but not reported by that time. These liabilities are actuarially determined based on historical claims experience, current and expected future rates of investment return, and the time value of money. The liabilities include a provision for the future cost of investigation and settlement of those claims incurred prior to the fiscal year end.

Changes to these liabilities based on changes to the underlying actuarial assumptions are recorded in the period during which the change is made.

The provision for Plan benefits and claims are estimates subject to variability because all events affecting the ultimate settlement of claims have not taken place and may not take place for some time. Estimates may vary because of receipt of additional claim information and significant changes from historical trends in severity and/or frequency of claims.

(e) Revenue recognition:

Investment income is recognized on an accrual basis.

(f) Taxation:

The Trust is a Health and Welfare Trust, which is subject to income tax pursuant to subsections 104(2) and 122(1) of the *Income Tax Act (Canada)*. The Trust, in determining its income subject to tax, may deduct certain expenses and benefits paid, to the extent of its gross trust income. Generally, it is unlikely that the Trust will have taxable income in a taxation year as it is expected that the Trust's deductible expenses and benefits paid will far exceed its gross trust income in any given taxation year. Accordingly, the Trust does not record income taxes.

2. Significant accounting policies (continued):

(g) Use of estimates:

The preparation of financial statements in accordance with Canadian Accounting Standards for Pension Plans requires management to make estimates and assumptions that affect the application of accounting policies and the reported amounts of assets and liabilities at the date of the financial statements, and the reported amounts of income and contributions and disbursements and expenses during the reporting period. Areas of significant estimation include plan benefit obligations, which are further described in note 7. Actual results could differ from these estimates as additional information becomes available in the future.

(h) Standards and interpretations issued but not yet effective:

At December 31, 2017, a number of standards and interpretations, and amendments thereto, had been issued by the International Accounting Standards Board (“IASB”), which are not effective for these financial statements. Those which are relevant to the Trust’s financial statements are set out below:

IFRS 9 - *Financial Instruments:*

IFRS 9 addresses the recognition, derecognition, classification and measurement of financial instruments and its requirements and represent a significant change from the existing requirements in IAS 39, *Financial Instruments: Recognition and Measurement*, in respect of financial assets. The standard contains two primary measurement categories for financial assets: amortized cost and fair value. A financial asset would be measured at amortized cost if it is held within a business model whose objective is to hold assets in order to collect contractual cash flows, and the asset’s contractual terms give rise on specified dates to cash flows that are solely payments of principal and interest on the principal outstanding. All other financial assets would be measured at fair value. The standard eliminates the existing IAS 39 categories of held-to-maturity, available-for-sale and loans and receivables.

This standard is effective for years beginning January 1, 2018. The standard is not expected to have a significant impact on the Trust as the Trust’s financial instruments are already measured at amortized cost or fair value. Accordingly, no transition adjustments are expected on implementation of this standard.

IFRS 16 - *Leases*:

In January 2016, the IASB issued IFRS 16, *Leases*. This new standard specifies how to recognize, measure, present and disclose leases. The standard provides a single lessee accounting model, requiring the recognition of assets and liabilities for all leases, unless the lease term is 12 months or less or the underlying asset has a low value.

This standard is effective for annual periods beginning on or after January 1, 2019. The Trust is yet to assess the full impact of this standard.

(Tabular amounts, excluding percentages and investment units, expressed in thousands of dollars)

2. Significant accounting policies (continued):

(i) New standard not yet issued:

IFRS 17 - *Insurance Contracts*:

This standard changes the basis of measuring insurance contracts. The standard is effective for annual periods beginning on or after January 1, 2021. The standard will impact the classification and measurement of insurance liabilities. The Trust is yet to assess its full impact.

3. Restricted cash:

Included in cash and cash equivalents is restricted cash held for separate Trusts and for monthly benefit payments of employees under a separate agreement. Restricted cash at December 31, 2017 was $ 1,521,978 (2016 - $1,573,712).

4. Investments:

As at December 31, the amount of investments of the Trust were comprised as follows:

	2017	2016
Pooled investment vehicles:		
Healthcare Investment Unit Trust	$ 926,632	$ -
Canadian pooled fixed income funds	11,097	419,818
Canadian pooled equity funds	-	174,971
Global pooled equity fund	-	359,109
Infrastructure pooled funds	26,650	27,384
Real estate limited partnership	60,350	60,531
Foreign currency contracts	314	(174)
	$ 1,025,043	$ 1,041,639

In 2017 a new investment vehicle was created to allow for the pooling of investments for HBT and the Joint Trusts. The Healthcare Investment Unit Trust (HIUT) was created and trustees appointed by the participating beneficiary trusts. HIUT has appointed British Columbia Investment Management Corporation (BCI) to manage the investments of HIUT. HBT transitioned all of its liquid assets into the HIUT in September 2017. Illiquid assets remain under HBT’s independent investment account with BCI. It is anticipated that HBT will transfer the remaining illiquid assets in 2018.

As at December 31, 2017, the Trust held funds in an investment account in trust for the Health Sciences Professionals Bargaining Association with a fair value of $ 10,288,506 (2016 - $11,016,243). These investments have not been recognized in the Trust’s statement of financial position as the Trust has no right to utilize or apply these funds without the consent or direction from the Health Sciences Professionals Bargaining Association.

(Tabular amounts, excluding percentages and investment units, expressed in thousands of dollars)

5. Underfunded/overfunded actuarial benefits:

The Trust maintains 10 notional LTD pools, one for each of the seven Health Authorities and three Non-Health Authority Pools. Two of these non-Health Authority Pools are made up of a large number of smaller employers, which share claims experience amongst all employers in their respective pool. The Non-Health Authority Pools are:

- CSSEA (present or past members of the Community Social Services Employers' Association);
- Non-HEABC (permitted employers who are not members of an employers association); and
- Employee paid (Non-Taxable).

The Health Authorities are responsible for their own pools, included in which are their proportionate share of affiliates that were previously contained in a separate pool. Other entities are amalgamated into pools with other like agencies. As the entities are effectively self-insured through the Trust, if an underfunded actuarial benefit exists, participating employers are liable for this amount. Health Authorities are invoiced annually for their share of any underfunded actuarial benefits receivable to bring them to 100% funded. The funding policy of the Trust requires that the Health Authorities make minimum monthly payments in respect of these amounts over 20 years. This policy was approved by all participating Health Authorities. Invoiced amounts are charged interest at an effective annual rate equal to the annual discount rate used for determining the actuarial liability for Plan benefit obligations. If a Health Authorities' respective pool is in a surplus at year end, the Trust recognizes a liability to the respective Health Authorities which is reduced over 20 years ("overfunded actuarial benefits"). Health Authorities have the option of having the liability settled net of contributions receivable or can elect not to receive a credit. Alternatively, a contribution holiday may be implemented to reduce the liability.

The portion of the underfunded actuarial benefits not related to a Health Authority is not invoiced annually. Recovery of the liability for these groups is through deficit recovery rates applied to long-term disability contributions and through an exit levy for terminating groups. Exit levies are obligations borne by departing employers in respect of their share of any underfunded actuarial benefits that exists at the date of termination of participation in the Trust.

6. Property, equipment and intangible assets:

	2017	2016
Property and equipment	$ 317	$ 135
Intangible assets	407	341
	$ 724	$ 476

(Tabular amounts, excluding percentages and investment units, expressed in thousands of dollars)

6. Property, equipment and intangible assets (continued):

(a) Property and equipment:

	Computer hardware	Leasehold improvements	Other property and equipment	Total
Cost:				
Balance, January 1, 2016	$ 861	$ 320	$ 388	$ 1,569
Additions	53	-	3	56
Disposals	-	-	-	-
Balance, December 31, 2016	914	320	391	1,625
Additions	55	213	4	272
Disposals	-	-	-	-
Balance, December 31, 2017	$ 969	$ 533	$ 395	$ 1,897

	Computer hardware	Leasehold improvements	Other property and equipment	Total
Amortization:				
Balance, January 1, 2016	$ 786	$ 214	$ 384	$ 1,384
Amortization	55	46	5	106
Disposals	-	-	-	-
Balance, December 31, 2016	841	260	389	1,490
Amortization	43	45	2	90
Disposals	-	-	-	-
Balance, December 31, 2017	$ 884	$ 305	$ 391	$ 1,580
Carrying amounts:				
December 31, 2016	$ 73	$ 60	$ 2	$ 135
December 31, 2017	85	228	4	317

(Tabular amounts, excluding percentages and investment units, expressed in thousands of dollars)

6. Property, equipment and intangible assets (continued):

(b) Intangible assets - software:

Balance, January 1, 2016	$	827
Additions		36
Disposals		-
Balance, December 31, 2016		863
Additions		234
Disposals		(37)
Balance, December 31, 2017	$	1,060

Balance, January 1, 2016	$	390
Amortization		132
Disposal		-
Balance, December 31, 2016		522
Amortization		168
Disposal		(37)
Balance, December 31, 2017	$	653
Carrying amounts:		
December 31, 2016	$	341
December 31, 2017		407

7. Plan benefit obligations:

	2017	2016
Long-term disability:		
Admitted claims	$ 894,821	$ 901,291
Incurred but not reported claims	54,468	102,095
Group life, accidental death and dismemberment, dental and extended healthcare:		
Disabled extended healthcare	92,932	72,924
Disabled dental	18,606	18,917
Disabled group life/accidental death and dismemberment	29,496	33,402
Incurred but not reported claims	9,590	21,066
	$ 1,099,913	$ 1,149,695

(Tabular amounts, excluding percentages and investment units, expressed in thousands of dollars)

7. Plan benefit obligations (continued):

Plan benefit obligations represent the present value of future benefit payments payable by the Trust. An actuarial valuation is performed annually, with the effective date being consistent with the year-end of the Trust. The actuarial liabilities are determined using accepted actuarial practices in accordance with the standard of practice established by the Canadian Institute of Actuaries (CIA). Liabilities primarily cover benefits payable to claimants on LTD, including both reported and unreported claims at December 31, 2017.

In addition to LTD benefits, plan benefit obligations also provide for the following:

– Incurred but not reported claims of active employees for EHC, dental, group life and AD&D.

– Future costs for EHC, dental, group life and AD&D for existing Health Authorities' disabled claimants (collectively, disabled non-income benefits).

These liabilities are only recognized in respect of certain types of participating employees.

In determining the obligations of the Trust, the cost of claims, future changes in claims costs, the time value of money (to discount future claims to present value) and expenses to administer the benefits, are included in the determination. These liabilities are dependent on economic and demographic experience. To determine the obligations, assumptions about future economic and demographic experience are necessary.

Demographic assumptions are largely derived based on past experience. Economic assumptions, on the other hand, are based more on current market conditions than experience. Demographic and economic assumptions will change over time. It is possible that such changes could cause a material change in the actuarial present value of future benefit payments.

The following long-term assumptions were used in the actuarial valuation:

	2017	2016
Discount rate	5.8%[1]	5.3%[1]
Expense assumption (rate varies by benefit product)	4.0 – 11.0%	3.0 - 11.0%
IBNR assumption:		
Group Life and AD&D	$ 700	$ 1,500
LTD	48 – 64%	57%[2]
Dental[3]	12/365	16 / 365
EHC[3]	27/365	38 / 365
Disabled non-income benefits[4]	2.2 – 10.8%	140%
Assumed Indexing rates	1.5%	1.5%

1. Non-taxable claims are valued using an annual discount rate of 3.8% (3.3% - 2016) and all other Employer Pool claims are valued at 5.8% (4.3% - 2016 Permitted Employer Pool)
2. Percentage of LTD base contributions billed in previous 12 months by agreement.
3. Fraction of payments and expenses in previous 12 months.
4. The ratio of LTD IBNR to the reported LTD liability of each pool (2016 - Percentage of liabilities incurred in previous 12 months).

7. Plan benefit obligations (continued):

The rate of terminations of active claims and the Canadian Pension Plan approval rate are also critical assumptions used in the actuarial valuation.

Long-term economic and actuarial assumptions and methods are reviewed periodically. Management believes that the valuation methods and assumptions are, in aggregate, appropriate for the valuation.

The actuarial valuation involves making assumptions about the future. Actuarial assumptions are approved by the Board of Trustees. The rationales for key assumptions are:

– Discount rate: this has been set equal to the Trust’s best estimate of investment return of 5.8% (2016 - 5.3%) excluding the Non-Taxable and Non-HEABC Pools. A discount rate of 3.8% (2016 - 3.3%) was used for the Non-Taxable Pool which includes a 2.0% margin for adverse deviation. Should the discount rate increase or decrease by 1% this would impact the actuarial liability by ($51,100,000) or $56,800,000, respectively (2016 - ($50,800,000) or $56,400,000, respectively).

– Rate of terminations of active claims: the actuary used the CIA 2004-2008 non-Quebec, female termination table with adjustments based on actual experience of the Trust for the 60 month period ending June 30, 2017 (2016 – used a single termination table provided by the CIA which has been modified by 48 months of the Trust’s actual experience to June 30, 2016). A risk could arise that the Trust’s future termination experience is worse than the assumed termination rates.

– Canadian Pension Plan (CPP) approval rate: a study was performed by the actuary on actual approvals of CPP disability claims by active claimants. The resulting assumption is the best estimate without margins and incorporates actual experience to June 30, 2017 (2016 - actual experience to June 30, 2016). The CPP approval rate assumption is based on age and duration since disability. A risk could arise that the Trust’s future CPP approval experience is worse than the assumed CPP approval rates.

The Trust accepts insurance risk through its provision of health and welfare benefits for participating employees, and is exposed to uncertainty surrounding the timing, frequency, and severity of claims. The Trust manages its insurance risk within an overall risk management framework and through annual review of contribution rates.

The Trust further reduces exposure to insurance risk through stop loss insurance in respect of its dental, EHC and group life products. The Trust pays stop loss insurance to third party administrators to cover claims costs in excess of predetermined levels each year. The stop loss insurance provides a maximum ceiling of uncertainty for incurred claims. To further tighten the insurance risk, the Trust has reinsurance in place on extended health to insure against large individual losses.

7. Actuarial liabilities for plan benefit obligations (continued):

There is uncertainty inherent in the estimation process. The actual amount of ultimate claims costs can only be ascertained once all claims are closed. Changes in key assumptions used to value insurance contracts would result in increases or decreases to the benefit obligations recorded, with corresponding decreases or increases, respectively to the change in net assets and deficit.

The Trust is exposed to a risk that actual claims experience will differ from the assumptions used in the rate setting process. As rates are set every year, based on the past experience and assumptions as to future events, this risk is mitigated through adjustments to the following year's rates. Any deficiencies are factored into the rate setting assumptions and will be recovered in future years. The Trust also has the ability to recover any deficit related to its plan benefit obligations. The Trust's participating employers are segregated into pools whereby each pool bears the risk of LTD claims experience. The Health Authorities are billed for their deficiencies in claims experience for LTD, if any, as discussed in note 5, whereas the deficiencies incurred by the non-Health Authority employers' are recovered through deficit recoveries built into their rates. In addition, non-Health Authority employers that wish to leave the Trust are billed an exit levy that covers any deficiencies arising from excess claims experience.

The Trust is also exposed to concentration risk within its insurance activities with its operating exposure being primarily within BC and with a high percentage of participating employees working for a limited number of employers. Significant risks could potentially arise from epidemics, natural disasters and other catastrophes. However, the Trust's stop loss insurance would limit their exposure to losses that would arise from health related catastrophes.

8. Economic dependence:

The Trust receives approximately 90% (2016 - 86%) of its participant contributions from the Health Authorities and is dependent upon the ability of the Health Authorities to meet future contribution rate payments.

9. Commitments:

The Trust has entered into a lease agreement for the head office location, expiring March 2023, and the Kelowna location, expiring February 2023, covering office premises used in operations. The Kelowna location has been sublet from 2014 until 2019.

(Tabular amounts, excluding percentages and investment units, expressed in thousands of dollars)

9. Commitments (continued):

The aggregate rentals and operating costs payable for the remaining terms of the leases are as follows:

2018	$ 312
2019	320
2020	367
2021	373
2022	378
Thereafter	90
	$ 1,840

10. Contributions:

	2017	2016
Straight Time Payroll	$ 231,985	$ -
LTD	51,437	166,983
EHC	38,248	106,779
Dental	34,772	99,724
AD&D/Group Life	3,013	8,613
	$ 359,455	$ 382,099

Beginning April 1, 2017, all Healthcare Employers of the Trust moved from product based rates to a percentage of payroll basis for determining contribution amounts. Permitted and CSSEA Employers remain using product based contribution rates.

(Tabular amounts, excluding percentages and investment units, expressed in thousands of dollars)

11. Investment income:

	2017	2016
Interest from cash and cash equivalents	$ 566	$ 300
Income from pooled investment vehicles	188,514	54,350
Investment expenses	(1,120)	(1,190)
Withholding taxes	(566)	(1,083)
	$ 187,394	$ 52,377

During the year, the Trust realized $125,037,000 (2016 - nil) in gains from the transfer of investments to the HIUT. The amount is included in income from pooled investment vehicles in the table above. Also included in income from pooled investment vehicles is investment income from HIUT of $19,440,982.

12. Benefits paid:

	2017	2016
LTD:		
Active LTD	$ 181,984	$ 178,018
Early Retirement Incentive Benefit	3,645	5,284
GWL Rehab Costs	6,280	7,024
Other	143	428
EHC	122,330	145,257
Dental	84,461	122,407
AD&D/Group Life	8,980	9,007
	$ 407,823	$ 467,425

13. Operating expenses:

	Notes	2017	2016
Claims adjudication and administration		$ 17,492	$ 20,671
Staff costs	14,15	2,605	2,978
Office expenses and other	14	985	1,355
Other professional services		701	676
Amortization		258	238
Actuarial fees		210	229
Audit fees		128	123
Trustee operations		55	94
		$ 22,434	$ 26,364

(Tabular amounts, excluding percentages and investment units, expressed in thousands of dollars)

14. Related party transactions:

As per the Trust Agreement, the administration of the applicable health and welfare plan document requires direction from the Health Employers Association of BC. Therefore, the Health Employers Association of BC may provide the Trust with administrative services, on a services incurred basis $2,000 fees were paid in 2017 (2016 - $nil). The Health Employers Association of BC appoints the trustees of the Trust.

The Trust is the Administrator of HIUT and during the year paid for certain expenses on behalf of the HIUT. Included in accounts receivable is a balance due from HIUT for these expenditures totaling $76,138 (2016 -$nil). The Trust is related to the HIUT by virtue of common directors.

Key management personnel include senior executive officers of the Trust and members of the Board of Trustees. During the year, compensation of key management personnel, which is included in staff costs as set out in note 13, was as follows:

		2017		2016
Compensation and short-term employee benefits	$	724	$	910
Long-term employee benefits		80		83
	$	804	$	993

Short-term employee benefits include: EHC, dental, and MSP. Long-term employee benefits include: Group life, LTD, AD&D, and Dependent life and contributions to a post-employment defined benefit plan.

15. Employee benefit plans:

The Trust and its employees contribute to the Municipal Pension Plan (the MPP), a jointly trusteed pension plan. A Board of Trustees of the MPP, representing plan members and employers, is responsible for overseeing the management of the MPP, including investment of the assets and administration of the benefits. The pension plan is a multi-employer contributory pension plan. Basic pension benefits provided are defined. The MPP serves more than 299,000 active, inactive and retired plan members and more than 900 plan employers.

Every three years an actuarial valuation is performed to assess the financial position of the MPP and the adequacy of plan funding. The most recent valuation available as at the date of this report was December 31, 2015. The MPP's actuary does not attribute portions of the unfunded liability to individual employers. The Trust paid $212,700 (2016 - $206,472) for employer contributions to the MPP in the year ended December 31, 2017.

In addition, the Trust itself is a participating employer in Healthcare Benefit Trust and its employees are covered for long-term disability, extended health, dental, accidental death and dismemberment, group life, and dependent life benefits on the same basis as employees of other participating non-Health Authority employers. The Trust expensed $164,745 (2016 - $177,626) for employer contributions for these non-pension benefits in the year ended December 31, 2017.

(Tabular amounts, excluding percentages and investment units, expressed in thousands of dollars)

16. Fair value of financial instruments:

(a) Fair value hierarchy:

The Trust's financial instruments consist of cash and cash equivalents, investments, accrued interest and other receivables, contributions receivable, exit levies receivable, benefits and accounts payable and under/overfunded actuarial benefits.

The fair value of a financial instrument is the estimated amount that the Trust would receive or pay to settle a financial asset or financial liability as at the reporting date. Investments are carried at fair value in the financial statements. The carrying value of cash and cash equivalents, accrued interest and other receivables, contributions receivable, exit levies receivables and benefits and accounts payable approximates fair value due to their short-term to maturity. The fair value of the under/overfunded actuarial benefits is considered by management to equal to its carrying value as the interest charged against outstanding amounts is periodically adjusted to market rates.

The Trust has categorized the inputs used to value its financial instruments held at fair value into a three-tier fair value hierarchy that reflects the significance of the inputs used in making the measurements.

The hierarchy of inputs is summarized below:

– Quoted prices (unadjusted) in active markets (Level 1).

– Inputs other than quoted prices included in Level 1 that are observable either directly (i.e., prices) or indirectly (i.e., derived from prices) (Level 2).

– Inputs that are not based on observable market data (unobservable inputs) (Level 3).

	Valuation technique			
December 31, 2017	Level 1	Level 2	Level 3	Total
Investments:				
HIUT	$ -	$ 926,632	$ -	$ 926,632
Canadian pooled fixed income funds	11,097	-	-	11,097
Infrastructure pooled funds	-	-	26,650	26,650
Real estate limited partnership	-	-	60,350	60,350
Foreign currency contracts	-	314	-	314
	$ 11,097	$ 926,946	$ 87,000	$ 1,025,043

(Tabular amounts, excluding percentages and investment units, expressed in thousands of dollars)

16. Fair value of financial instruments (continued):

(a) Fair value hierarchy (continued):

	Valuation technique			
December 31, 2016	Level 1	Level 2	Level 3	Total
Investments:				
Canadian pooled fixed income funds	$ 73,503	$ 346,315	$ -	$ 419,818
Canadian pooled equity funds	-	174,971	-	174,971
Global pooled equity fund	-	359,109	-	359,109
Infrastructure pooled funds	-	-	27,384	27,384
Real estate limited partnership	-	-	60,531	60,531
Foreign currency contracts	-	(174)	-	(174)
	$ 73,503	$ 880,221	$ 87,915	$ 1,041,639

There were no transfers into or out of Level 1 or 2 during the years ended December 31, 2017 and 2016.

The following table reconciles the Trust's Level 3 fair value measurements:

	2017	2016
Opening balance, January 1, 2017	$ 87,915	$ 76,600
Purchases	973	18,548
Settlements	-	(6,270)
Realized gain	-	307
Unrealized loss	(1,888)	(1,270)
Closing balance, December 31, 2017	$ 87,000	$ 87,915

Level 3 investments are comprised of closed-end private market infrastructure pooled funds and a real estate limited partnership. Level 3 investments are valued based on the respective pooled investment vehicles' net asset value, which is determined annually in accordance with the valuation policies established by the Trust's investment manager, and according to generally accepted industry practices.

(Tabular amounts, excluding percentages and investment units, expressed in thousands of dollars)

16. Fair value of financial instruments (continued):

(b) Significant unobservable inputs used in measuring fair value:

The table below sets out information about significant unobservable inputs used at year-end in measuring financial instruments categorized as Level 3 in the fair value hierarchy.

December 31, 2017						
Description		Fair value	Valuation technique	Unobservable input	Amount	Sensitivity to change in significant unobservable input
Pooled investment vehicles	$	87,000	Net asset value	Net asset	$87,000	The estimated fair value would increase (decrease) if the net asset value was higher (lower)

December 31, 2016							
Description		Fair value	Valuation technique	Unobservable input		Amount	Sensitivity to change in significant unobservable input
Pooled investment vehicles	$	87,915	Net asset value	Net asset	$	87,915	The estimated fair value would increase (decrease) if the net asset value was higher (lower)

Although the Trust believes that its estimates of fair value are appropriate, the use of an unobservable input in determining fair value leads to greater subjectivity in the fair value derived. At December 31, 2017, if the net asset value of the pooled investment vehicles were to increase or decrease by 10%, the fair value of these investments would increase or decrease, respectively, by $ 8,700,000 (2016 - $8,791,500).

(Tabular amounts, excluding percentages and investment units, expressed in thousands of dollars)

17. Financial risk management:

The Trust has exposure to financial risks associated with its financial instruments and benefit obligations. Analysis of sensitivity to specified risks is provided where there may be an effect on the financial position. These financial risks include credit risk, liquidity risk and market risks (currency, interest rate and other price risk). Sensitivity analysis is performed by relating the reasonably possible changes in the risk variables at December 31, 2017 and 2016 to financial instruments outstanding on that date.

(a) Credit risk:

The Trust is exposed to credit risk resulting from:

- The possibility that parties may default on their financial obligations;
- If there is a concentration of transactions carried out with the same party; and
- If there is a concentration of financial obligations which have similar economic characteristics such that they could be similarly affected by changes in economic conditions. The Trust does not directly hold any collateral as security for financial obligations.

The maximum exposure of the Trust to credit risk at December 31 is as follows:

	2017	2016
Cash and cash equivalents	$ 88,984	$ 40,841
Investments (fixed income)	433,215	419,818
Accrued interest and other receivables	77	640
Contributions receivable	30,671	53,174
Accounts receivable	16,719	-
Underfunded actuarial benefits	-	33,719
Exit levies receivable	-	1,429
	$ 569,666	$ 549,621

Cash and investments:

Credit risk associated with cash and cash equivalents and fixed income investments is minimized substantially by ensuring that these assets are invested in financial obligations of: governments; major financial institutions that have been accorded investment grade ratings by a primary rating agency; and/or other creditworthy parties. The Trust’s investment policy requires that a majority of fixed income investments are rated BBB or better. The Trust's investments in pooled fixed income funds are similar to equity instruments. While the Trust has no direct credit risk arising from its investments in pooled fixed income funds, the Trust is exposed to the credit risks of these funds’ underlying investments. The manager of these funds ensures that the investments of these funds meet the Trust’s investment policy.

(Tabular amounts, excluding percentages and investment units, expressed in thousands of dollars)

17. Financial risk management (continued):

(a) Credit risk (continued):

Contributions and other receivables:

The Trustees believe credit risk with respect to receivables is limited due to the credit quality of the parties extended credit. Credit risk associated with amounts receivable from the Health Authorities, which represent the Trust's largest receivables, is minimal as the Health Authorities form part of the government reporting entity of the Province of British Columbia.

The Trust maintains allowances for potential credit losses, and any such losses to date have been within the Trustees' expectations. The following table presents an analysis of the age of amounts outstanding at the year-end in respect of accrued interest and other receivables, contributions receivable, underfunded actuarial benefits and exit levies receivable net of allowances for doubtful accounts:

	2017	2016
Current	$ 41,457	$ 86,126
30 - 60 days past billing date	4,477	217
61 - 90 days past billing date	196	108
Greater than 90 days past billing date	2,202	3,276
	48,332	89,727
Allowance for doubtful accounts	(865)	(765)
	$ 47,467	$ 88,962

The Trust must make estimates in respect of the allowance for doubtful accounts. Current economic conditions, historical information, reasons for the accounts being past due and line of business from which the receivable arose are all considered in the determination of when to allow for past due accounts; the same factors are considered when determining whether to write off amounts receivable as a charge to the allowance account. The following table presents a summary of the activity related to the Trust's allowances for doubtful accounts.

	2017	2016
Balance, beginning of year	$ 765	$ 724
Receivables written off during the year as uncollectible	(13)	(58)
Changes to the provision, net of recoveries	113	99
Balance, end of year	$ 865	$ 765

In 2017, nil (2016 - $49,205) of contributions receivable were written off for which no provision had been set up previously.

17. Financial risk management (continued):

(b) Liquidity risk:

Liquidity risk is the risk that the Trust will not be able to meet its obligations as they come due.

The Trust meets its liquidity requirements by holding assets that can be readily converted into cash and preparing annual cash flow budgets, including capital expenditure budgets, which are monitored and updated as required.

The Trust's benefits and accounts payable liabilities are due within one year of the Trust's year-end. The nature of the overfunded actuarial benefit liability is described in note 5.

(c) Market risks:

The Trust is exposed to market risks through the fluctuation of financial instrument fair values or cash flows due to changes in market factors. The significant market risks to which the Trust is exposed are interest rate risk, currency risk, and other price risk.

(*i*) Interest rate risk:

Interest rate risk refers to the risk that the fair value of financial instruments or cash flows associated with the instruments will fluctuate due to changes in market interest rates.

The interest rate exposure of the Trust arises from its interest bearing assets and its fixed income investments including bonds and mortgages, which are held indirectly through pooled investment vehicles.

The Trust's cash includes amounts on deposit with financial institutions that earn interest at market rates. The Trust manages its exposure to the interest rate risk of its cash by maximizing the interest income earned on excess funds while maintaining sufficient liquidity necessary to conduct operations on a day-to-day basis. Fluctuations in market rates of interest on cash do not have a significant impact on the Trust's results of operations.

The primary objective of the Trust with respect to its investments in fixed income investments is to ensure the security of principal amounts invested and provide for a high degree of liquidity, while achieving a satisfactory investment return.

(Tabular amounts, excluding percentages and investment units, expressed in thousands of dollars)

17. Financial risk management (continued):

(c) Market risks (continued):

(*i*) Interest rate risk (continued):

Maturity position - December 31, 2017:

	Demand	Less than twelve months	One to five years	Over five years	Total
Cash and cash equivalents	$ 88,984	$ -	$ -	$ -	$ 88,984
Underlying fixed income investments held through pooled investment vehicles	-	87,808	166,067	179,250	433,125
	$ 88,984	$ 87,808	$ 166,067	$ 179,250	$ 522,109

Maturity position - December 31, 2016:

	Demand	Less than twelve months	One to five years	Over five years	Total
Cash and cash equivalents	$ 40,841	$ -	$ -	$ -	$ 40,841
Underlying fixed income investments held through pooled investment vehicles	-	22,038	192,589	205,191	419,818
	$ 40,841	$ 22,038	$ 192,589	$ 205,191	$ 460,659

The weighted average yield of these financial instruments is 2.36% at December 31, 2017 (2016 - 2.08%). The weighted average term to maturity of interest bearing investments is 106 months (2016 - 102 months). Should prevailing market interest rates increase or decrease by 2%, with all other variables held constant, this would decrease or increase, respectively, the December 31 carrying value of the Trust's investments by ($67,816,534) or $ 82,134,596 (2016 - ($63,968,734) or $77,090,750).

(*ii*) Currency risk:

Currency risk refers to the risk that the fair value of financial instruments or future cash flows associated with the instruments will fluctuate relative to the Canadian dollar due to changes in foreign exchange rates.

(Tabular amounts, excluding percentages and investment units, expressed in thousands of dollars)

17. Financial risk management (continued):

(c) Market risks (continued):

(*ii*) Currency risk (continued):

The functional currency of the Trust is the Canadian dollar. The Trust infrequently transacts in U.S. dollars due to certain operating costs being denominated in U.S. dollars.

The Trust's investment manager monitors the Trust's foreign currency exposure and manages this risk through diversification and consideration of global asset mix.

At December 31, 2017, the Trust had $378,392,000 (2016 - $386,425,000) of investments denominated in foreign currencies held indirectly through pooled investment vehicles. If the Canadian dollar had appreciated or depreciated by 2% against the underlying foreign currencies of these investments at that date, with all other variables held constant, the fair value of the investments would have decreased or increased, respectively, by $7,568,000 (2016 - $7,729,000).

The underlying foreign currencies in which investments are denominated are:

	2017	2016
United States	$ 218,969	$ 234,432
European Union	43,648	44,051
Japan	28,706	31,128
United Kingdom	20,559	22,400
Hong Kong	10,213	10,662
Switzerland	9,582	10,614
Singapore	2,210	2,910
China	5,047	646
Other	39,458	29,582
	$ 378,392	$ 386,425

(*iii*) Other price risk:

Other price risk refers to the risk that the fair value of financial instruments or cash flows associated with the instruments will fluctuate because of changes in market prices (other than those arising from interest rate risk or currency risk). The Trust is exposed to other price risk through its investment in equities, infrastructure and real estate.

The long-term investment policy provides for an asset mix at the end of 2017 of 42% fixed income investments, 49% equities, and 9% private market investments, which includes infrastructure and real estate (2016 - 44.5% fixed income investment, 45% equities, and 10.5% private market investments). Risk and volatility of investment returns are mitigated through diversification of investments in different countries, business sectors, and corporation sizes.

17. Financial risk management (continued):

(c) Market risks (continued):

(*iii*) Other price risk (continued):

At December 31, 2017, the Trust’s total investments exposed to other price risk is $592,951,000 (2016 - $621,821,000) and excludes pooled fixed income funds, which are otherwise subject to interest rate risk. The Trustee’s best estimate of the effect on net assets as at December 31, 2017, of a reasonably possible increase or decrease of 10% in the equity and private markets, with all other variables held constant, would amount to an increase or decrease of approximately $59,295,000 (2016 - $62,182,000), respectively. In practice, the actual trading results may differ from this sensitivity analysis and the difference could be material.

(d) Sensitivity analyses:

The sensitivity analyses included herein should be used with caution as the changes are hypothetical and are not predictive of future performance. The above sensitivities are calculated with reference to year-end balances and will change due to fluctuations in the balances in the future. In addition, for the purpose of the sensitivity analyses, the effect of a variation in a particular assumption on the fair value of the financial instruments was calculated independently of any change in another assumption. Actual changes in one factor may contribute to changes in another factor, which may either magnify or counteract the effect on the fair value of the financial instrument.

Healthcare Benefit Trust
Actuarial Valuation as at December 31, 2017

March 22, 2018

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Table of Contents

Executive Summary

Financial Position	December 31, 2016 $000,000s	December 31, 2017 $000,000s
Assets (excluding UAL[1] / UFL[2] receivables)	1,119.7	1,146.4
Assets (including UAL / UFL receivables)	1,153.0	1,100.6
Total Liability	1,149.7	1,099.9
Surplus (Deficit) (excluding UAL / UFL receivables)	**(30.0)**	**46.5**
Funded Ratio (excluding UAL / UFL receivables)	**97.4%**	**104.2%**
Surplus (Deficit) (including UAL / UFL receivables)	**3.3**	**0.6**
Funded Ratio (including UAL / UFL receivables)	**100.3%**	**100.1%**

[1] Unfunded Actuarial Liability
[2] Unfunded Liability

Introduction

We have been retained by the Board of Trustees (the "Trustees") of Healthcare Benefit Trust (the "Trust") to conduct an actuarial valuation of the Trust as at December 31, 2017. The last valuation was conducted as at December 31, 2016.

This report was prepared for its intended users, the Trustees, for the following purposes:

- to provide a summary of the results of the actuarial valuation of the Trust's financial position to the Trustees; and
- to review the financial experience of the Trust in the year ending December 31, 2017.

This report does not provide advice on the Trust's funding or contribution requirements. Advice on funding and contribution requirements will be dealt with in a separate report to be prepared later in 2018.

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Changes Since the Last Valuation

The last actuarial valuation of the Trust was prepared as at December 31, 2016. Since the last actuarial valuation, the following changes have occurred:

1. The introduction of Joint Trusts from April 1, 2017 has led to contributions and the cost of claims incurred after March 31, 2017 to flow through the Joint Trusts for the following bargaining associations:
    - Communities Bargaining Association ("CBA");
    - Facilities Bargaining Association ("FBA"); and
    - Health Science Professional Bargaining Association ("HSPBA").
2. The economic and demographic assumptions were reviewed and revised based on expected future experience, if applicable.
3. Where appropriate, the economic and demographic assumptions were set and are applied based on the following agreement groupings:
    - CBA;
    - FBA;
    - HSPBA; and
    - Non-Joint Trust (remaining agreements).
4. The 1% discount rate margin and the 1% benefit indexing (CPI) margin were removed for the Permitted Employer pool. A 100% margin was applied to the liabilities calculated on a best estimate basis for the Permitted Employer pool.

Details of the above changes which affect the financial position of the Trust are outlined in this report.

Terms of Engagement

This report has been prepared in accordance with the Trust's Funding Policies.

Rounding

The sum of components may not equal the total within tables due to rounding.

Section 1 – Actuarial Opinion

This opinion is given with respect to Healthcare Benefit Trust. We conducted a valuation of the Trust as at December 31, 2017. The administrator has confirmed that, between December 31, 2017 and the date of this report, no subsequent events nor any extraordinary changes to the beneficiaries or plan provisions that would materially affect the results of this valuation have occurred, except as indicated in this report.

In our opinion, for the purposes of this report:

- The beneficiary data on which the valuation is based are sufficient and reliable for the purposes of the valuation;
- The assumptions are appropriate for the purposes of the valuation; and
- The methods employed in the valuation are appropriate for the purposes of the valuation.

We hereby certify that, in our opinion, as at December 31, 2017:

1. The Trust is fully funded on the basis of excluding UAL and UFL receivables. The assets exceed the liabilities by $46,500,000. The funded ratio is 104.2%.
2. We are not aware of any subsequent events, that have not already been taken into consideration, that could materially affect the results of this valuation.
3. The next valuation should be conducted no later than as at December 31, 2018.

The content herein has been prepared exclusively from a financial viewpoint. This report does not constitute a legal opinion on the rights and duties of the administrator, the Trustees or the beneficiaries concerning the Trust.

Actuarial valuation results are estimates only and are based on assumptions and methods developed in accordance with actuarial standards of practice. Emerging experience differing from the assumptions used will result in gains or losses which will be revealed in future valuations, and which may affect future actuarial opinions.

This report has been prepared, and our opinions given, in accordance with accepted actuarial practice in Canada.

We would be pleased to discuss any questions the user may have regarding the valuation.

Jeremy Bell
Fellow, Canadian Institute of Actuaries
March 22, 2018

Michael Greschner
Fellow, Canadian Institute of Actuaries
March 22, 2018

Section 2 – Financial Position

2.1 Financial Position

The following table describes the Trust's financial positions at December 31, 2017 and December 31, 2016. The liabilities are based on the costs for claims incurred prior to the valuation date.

Financial Positions	December 31, 2016 $000,000s	December 31, 2017 $000,000s
Assets (excluding UAL / UFL receivables)	1,119.7	1,146.4
Assets (including UAL / UFL receivables)	1,153.0	1,100.6
Liabilities		
Admitted LTD claims (reported)	901.3	894.8
Long-term disability (IBNR)	102.1	54.5
Active extended health (IBNR)	14.3	6.8
Active dental (IBNR)	5.3	2.1
Active group life and AD&D (IBNR)	1.5	0.7
Extended health for disabled claimants	72.9	92.9
Dental for disabled claimants	18.9	18.6
Group life and AD&D for disabled claimants	33.4	29.5
Total Liability	**1,149.7**	**1,099.9**
Surplus (Deficit) (excluding UAL / UFL receivables)	**(30.0)**	**46.5**
Funded Ratio (excluding UAL / UFL receivables)	**97.4%**	**104.2%**
Surplus/(Deficit) (including UAL / UFL receivables)	**3.3**	**0.6**
Funded Ratio (including UAL / UFL receivables)	**100.3%**	**100.1%**

Without provision for UAL/UFL receivables, the financial position improved in the year ending December 31, 2017 by $76.5 million.

With provision for UAL/UFL receivables, the financial position slightly deteriorated by $2.7 million in the year ending December 31, 2017.

2.2 Reconciliation of Financial Position

The following table reconciles the change in the financial position over the course of the inter-valuation period (on a without UAL/UFL receivables basis).

Reconciliation of Financial Position	$000,000s
Financial Position at December 31, 2016	**(30.0)**
1. Contributions different than base contributions[3]	35.5
2. Interest on funded position/amortizations	(0.6)
3. Investment return different than expected	25.1
4. LTD - Existing Claims (Terminations)	33.6
5. LTD - Existing Claims (Demographics)	(2.9)
6. LTD - Existing Claims (ERIB)	2.1
7. LTD - New Claims (New entrants / IBNR)	(54.1)
8. Active EHC/dental/life/AD&D experience	12.7
9. Disabled EHC/dental/life/AD&D experience	2.0
10. Gain / (Loss) due to Assumption Changes	31.7
11. Gain / (Loss) due to indexing/CPP updates	(0.9)
12. Gain / (Loss) due to Permitted Employer pool Funding Policy	(7.5)
Financial Position at December 31, 2017	**46.5**

[3] Contributions collected in excess of contributions required for current coverage, due to margins/deficit recovery surcharges within rates and UAL/UFL payments.

2.3 Analysis of Assumption Changes

The preparation of an actuarial valuation requires the actuary to make assumptions about future economic and Trust experience. Changes in the assumptions result in gains or losses.

As noted in Section 2.2, the Trust had a net gain of $31.7 million due to assumption changes from the previous valuation. The following table shows the main sources of these gains and losses.

Assumption change gains (losses)	$000,000s
1. Active Group Life/AD&D IBNR	0.8
2. LTD IBNR	17.9
3. Active Dental IBNR	0.7
4. Active EHC IBNR	2.8
5. Disabled Non-Income Benefits IBNR	4.4
6. CPI Indexing	0.2
7. EHC Escalation	(15.6)
8. Dental Escalation	(0.5)
9. Expenses	(0.2)
10. Termination from Disability	(4.9)
11. CPP Approval	(2.5)
12. Discount Rate	28.6
Total gains (losses)	**31.7**

Section 3 – Impact of Joint Trusts

3.1 Background

Since November 2013, the following bargaining associations have agreed to introduce joint trusts to provide health and welfare benefits:

- CBA;
- FBA; and
- HSPBA.

These joint trusts commenced on April 1, 2017. Once joint trusts were introduced, employers ceased to participate in the Trust on a similar basis going forward for an appreciable proportion of their employees. For these employees, contributions and incurred claims costs after April 1, 2017 flow through the joint trusts.

3.2 Post-March 31, 2017

From April 1, 2017:

- Contributions relating to the bargaining associations mentioned previously flow through each respective joint trust;
- Claims payments for claims incurred from April 1, 2017 flow through each respective joint trust. Non-disability income claims payments for claimants disabled prior to April 1, 2017 continue to flow through the Trust;
- Claims payments for claims incurred prior to April 1, 2017 flow through the Trust; and
- All other contributions and claims related to the Trust flow through the Trust.

Following the introduction of the joint trusts, the Trust's liabilities started to decrease due to the payment of claims incurred prior to April 1, 2017 for the bargaining associations mentioned previously. The Trust's assets and liabilities will eventually stabilize before increasing.

3.3 Investment Asset Mix

The Trust's invested asset mix and long-term policy is shown in Appendix C. We have assumed that the current asset mix will transition to the long-term policy over time.

3.4 Impacts on December 31, 2017 Valuation

In calculating the discount rate, the impact of the joint trusts was taken into account when determining expected cash flows. More details on the discount rate assumption can be found in Appendix E.

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Section 4 – Sensitivity Testing

Sensitivity tests have been conducted on certain assumptions, as prescribed by actuarial standards of practice.

4.1 Discount Rate Sensitivity

As the assumed discount rate has a significant impact on the Trust's liabilities, actuarial standards of practice require that the impact on the liabilities of a 1.0% decrease in the assumed discount rate be disclosed.

The following table shows the effect of a 1.0% decrease in the discount rate:

Discount Rate Change	Revised Liability ($000,000s)	Original Liability ($000,000s)	Change in Liability ($000,000s)
-1.0%	1,156.7	1,099.9	56.8

4.2 EHC and Dental Escalation Rate Sensitivity

The EHC escalation rate used within the valuation is 12.00% in the next year, decreasing by 0.57% per year to an ultimate escalation rate of 3.50% per annum. The dental escalation rate used within the valuation is 3.50% per annum.

The following table shows the effects of a 1.0% increase in the EHC and dental escalation rates:

+1.0% Rate Change	Revised Liability ($000,000s)	Original Liability ($000,000s)	Change in Liability ($000,000s)
EHC Escalation	1,106.1	1,099.9	6.2
Dental Escalation	1,101.0	1,099.9	1.1

Appendix A – Plan Provisions

A.1 Plan Provisions

The primary benefits provided by the Trust are Life Insurance, Accidental Death and Dismemberment (AD&D), Long Term Disability (LTD), Dental and Extended Health Care (EHC). The following summaries were provided to us by the Trust and capture the major plan provisions in effect as at December 31, 2017.

Although benefit provisions vary by benefit package, a number of the typical LTD benefit provisions have been summarized below by the major collective agreements. This is not an exhaustive list and some benefit packages may have provisions which differ from those shown in the table.

Provision	Community	Facilities	Nurses	Health Science Professionals	Community Social Services
Qualification Period	5 months after the date of disability	5 months after the date of disability	4 months after the date of disability	5 months after the date of disability	6 months after the date of disability
Eligibility for Benefits	After the Qualification Period has elapsed; the claimant is eligible for benefits if they continue to meet the Definition of Disability criteria.				
Definition of Disability	During the qualification period and for the subsequent own occupation period, the claimant is unable to perform each of the essential duties of their own occupation due to injury or sickness. After this period, the claimant is prevented from performing each of the essential duties of any occupation for which they are or may become reasonably qualified by education, training or experience.				
Own Occupation Period[4]	19 months	19 months	24 months	24 months	12 months
Gross Benefit Amount	70% of basic monthly earnings to a limit[5] and 50% of the excess or 66-2/3% of basic monthly earnings, whichever is greater				

[4] An agreement specific termination assumption is used for the CBA, FBA and HSPBA. A common termination assumption is used for all other agreements without adjusting for different Own Occupation Periods.
[5] Adjusted annually for new claims based on increases in the weighted average wage rate

Provision	Community	Facilities	Nurses	Health Science Professionals	Community Social Services
Limit for Gross Benefit Amount	$3,676 as at April 1, 2017	$3,676 as at April 1, 2017	$6,438 as at April 1, 2017	$6,089 as at April 1, 2017	$3,372 for the Community Living Services agreement, $3,605 for the General Services agreement and $4,526 for the Aboriginal Services agreement as at April 1, 2017
Indexation	Adjustments every 4 years after the date of qualification based on weighted average wage rate				
Offsets	The Gross Benefit Amount will be reduced by other sources of income including CPP Disability, rehabilitation and Workers' Compensation benefits				
Benefit End Date	Benefits cease the earlier of recovery, failure to provide proof of continuing disability, death, retirement or the attainment of age 65				

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Appendix B – Claimant and Claims Data

B.1 Source of Data

In performing the calculations for this valuation, we obtained data from the Trust.

LTD claimant data was provided to the Trust by Great-West Life. For the valuation data, the Benefits, Design and Reporting Department of the Trust provides the claims listing to us based on the data provided by Great-West Life.

For benefits aside from LTD, the actuarial valuation does not require individual claim data to perform the valuation. Reserves held are based on the aggregate payments in recent periods. Aggregate claims and contribution data are collected from the Trust's Financial Services Department. The data is provided to the Financial Services Department from Pacific Blue Cross (EHC and dental) and Great-West Life (life and AD&D).

In performing this valuation, we use asset data and financial statements provided to us by the Trust's Financial Services Department. The calculation of the asset position of the Trust within this report is detailed in Appendix C.

We have reviewed the data to ensure its sufficiency and reliability, and consistency with the data used in the last valuation. Specific tests included:

- A claimant-by-claimant reconciliation of the claimant data from December 31, 2016 to December 31, 2017.
- Tests for reasonableness of the data elements of the record of each individual receiving benefits under the Trust, including, but not limited to:
    - Benefit entitlements were reconciled with corresponding data from the previous valuation; and
    - Demographic data was reconciled with corresponding data from the previous valuation.
- The data files for terminated claimants were compared to the files used for the prior valuation and terminations that occurred during the inter-valuation period.

B.2 Summary of LTD Claims Data

The following tables summarize the composition of LTD claimants at December 31, 2017:

Duration of Disability	Age at Disability					
	Under Age 30	30 – 39	40 – 49	50 – 59	Age 60 and Over	Total
< 1 year	25	90	136	243	67	561
1 to 2 years	27	177	292	492	135	1,123
2 to 3 years	16	84	146	327	62	635
3 to 5 years	20	110	270	578	52	1,030
5 to 10 years	33	213	579	767	-	1,592
> 10 years	94	576	1,040	206	-	1,916
Total	**215**	**1,250**	**2,463**	**2,613**	**316**	**6,857**

The following table summarizes the total net monthly LTD income after assumed CPP approval of disabled employees at December 31, 2017:

Duration of Disability	Age at Disability					
	Under Age 30	30 – 39	40 – 49	50 – 59	Age 60 and Over	Total
	$	$	$	$	$	$
< 1 year	60,000	267,000	378,000	691,000	185,000	1,581,000
1 to 2 years	62,000	404,000	628,000	1,132,000	303,000	2,529,000
2 to 3 years	33,000	179,000	298,000	660,000	150,000	1,320,000
3 to 5 years	35,000	224,000	525,000	1,063,000	120,000	1,967,000
5 to 10 years	69,000	438,000	1,112,000	1,523,000	-	3,142,000
> 10 years	123,000	935,000	1,832,000	378,000	-	3,268,000
Total	**382,000**	**2,447,000**	**4,773,000**	**5,447,000**	**758,000**	**13,807,000**

B.3 Changes in LTD Claimant Data

The following table shows the changes in the LTD claimants since the last valuation:

Reconciliation of LTD Claimant Data	Number of Claimants
As at December 31, 2016	6,971
New entrants	1,813
Claim terminations	(1,927)
As at December 31, 2017	**6,857**

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Appendix C - Assets

C.1 Asset Information

The asset position is calculated from the Trust's financial statements (as provided by the Trust's Financial Services Department). The Trust's Financial Statements are prepared in accordance with International Financial Reporting Standards.

The table below shows the development of these assets from December 31, 2016 to December 31, 2017:

Calculation of Asset Position	($000,000s)
Assets – December 31, 2016	**1,119.7**
Contributions	373.3
Investment return (net of investment expenses)	82.8
Benefit payments	(407.9)
Non-investment expenses	(21.4)
Assets – December 31, 2017	**1,146.4**

C.2 Calculation of Asset Position

The following table shows the calculation of the asset position as at December 31, 2016 and December 31, 2017.

Calculation of Asset Position ($000,000s)	December 31, 2016	December 31, 2017
Cash and cash equivalents	40.8	89.0
Investments	1,041.6	1,025.0
Contributions receivable	53.2	30.7
Accrued Interest and Stop Loss Receivable	0.6	0.1
Accounts receivable	0.0	16.7
Property, equipment and intangible assets	0.5	0.7
Benefits and accounts payable	(16.9)	(15.8)
Asset position (excluding UAL/UFL receivables)	**1,119.7**	**1,146.4**
UAL/UFL receivables	**33.3**	**(45.9)**
Asset position (including UAL/UFL receivables)	**1,153.0**	**1,100.6**

C.3 Invested Asset Mix

Invested assets are held and invested by the Healthcare Investment Unit Trust ("HIUT") and British Columbia Investment Management Corporation ("bcIMC"). The following table shows the invested asset mix at December 31, 2017 of the Trust, along with the current transitional and long-term policies broken down by category:

Asset	Actual	Current Policy	Long-Term Policy
Fixed Income			
Cash and money market	10.0%	9.0%	2.0%
Universe bonds	32.2%	33.0%	18.0%
Subtotal	42.2%	42.0%	20.0%
Equity			
Canadian Equity	15.0%	15.0%	10.0%
Global Equity	30.3%	30.0%	22.0%
Emerging Markets Equity	4.1%	4.0%	8.0%
Subtotal	49.3%	49.0%	40.0%
Alternatives			
Infrastructure	2.6%	3.0%	25.0%
Real Estate	5.9%	6.0%	15.0%
Subtotal	8.5%	9.0%	40.0%
Total	**100.0%**	**100.0%**	**100.0%**

The current policy represents a transition toward the long-term policy.

C.4 Asset Valuation

The asset position is taken as the market value of assets at December 31, 2017. Reliance is placed on the provided Financial Statements for the appropriate valuation of the assets as well as the benefits and accounts payable balance.

Appendix D – Actuarial Methods

D.1 Actuarial Cost Method

As in the last valuation, the liabilities at the valuation date were calculated as the expected present value of future benefits for claims incurred up to the valuation date, where future payments incorporate future indexing. This actuarial method may be referred to as a “unit credit” cost method, although a unit credit method generally implies some accumulation in liabilities rather than event-driven liabilities.

An actuarial excess is the excess of the assets over the liabilities; an unfunded liability is the excess of the liabilities over the assets, as the case may be.

D.2 Asset Valuation Method

As in the previous valuation, the market value of the assets has been used as the assets.

D.3 Provision for Adverse Deviation (PfAD)

The Trust’s liabilities have been calculated on a best estimate basis apart from:

- Liabilities for the Permitted Employer pool have been calculated with a 100% margin applied to the liabilities calculated on a best estimate basis; and
- Liabilities for the Non-Taxable pool have been calculated with a 2% margin applied to the discount rate and CPI-based indexing.

D.4 Liability Valuation Methodology

The following outlines the methodology used for calculating the liability for each line of benefit. Future costs are discounted to the present assuming cash flows occur at the middle of each month. The liabilities for reported disabled claimants are calculated on an individual basis, whereas the liabilities related to incurred but not reported claims are determined on an aggregate basis.

Admitted LTD claims (Reported)

The liability for admitted (reported) LTD claims is equal to the actuarial present value of projected future benefit payments for LTD claimants as of December 31, 2017. The actuarial present value is calculated by applying the probability of receipt of disability (i.e., probability of the claim not terminating) to the projected benefit claim costs at future ages for each LTD claimant, and further discounted by the interest rate assumption to the calculation date. Benefit costs are projected based on indexing assumptions shown in Appendix E.

LTD (IBNR)

The liability for incurred but not reported LTD claims is calculated by taking the product of the LTD IBNR assumption shown in Appendix E and the base LTD contributions billed in the 12 months ending at the valuation date. The LTD IBNR for the CBA, FBA and HSPBA is adjusted to account for billed contributions and claims incurred up to March 31, 2017 (therefore excluding claims incurred after March 31, 2017).

Active extended health and dental (IBNR)

The liability for incurred but not reported extended health and dental claims is calculated by taking the product of the extended health and dental IBNR assumptions shown in Appendix E and the total extended health and dental claims and expenses paid[6] in the 12 months ending at the valuation date.

Active group life and AD&D (IBNR)

The liability for incurred but not reported group life and AD&D claims is assumed to be $700,000. The value of $700,000 was derived from the average length of time between a claimant's date of death and the date the claim was received applied to actual claims payments and expenses. This analysis excluded CBA, FBA and HSPBA experience.

Extended health and dental for disabled claimants

The liabilities for extended health and dental costs for disabled claimants is calculated at the pool level as the product of the average annuity factor for each line of benefit across all LTD claimants and the calculated annual difference between benefit claims and expected employee contributions[7]. The annuity factors incorporate the future benefit cost escalation assumptions listed in Appendix E. The liability is calculated for the healthcare pools as a whole and then allocated to each pool based on the reported LTD liability as a proportion of the total.

The extended health and dental IBNR for disabled claimants is equal to the ratio of the LTD (IBNR) to the admitted LTD claims liability, multiplied by the liabilities for extended health and dental costs for disabled claimants.

Group life and AD&D for disabled claimants

The liability for group life and AD&D is calculated as the present value of a payment at the life volume using the mortality assumption.

The group life and AD&D IBNR for disabled claimants is equal to the ratio of the LTD (IBNR) to the admitted LTD claims liability, multiplied by the liabilities for group life and AD&D costs for disabled claimants.

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[6] Excluding claims and expenses attributed to the CBA, FBA, and HSPBA.

[7] Actual employee contributions are adjusted to account for future increases based on actual claims experience since the last date employee contributions were adjusted.

Appendix E – Actuarial Assumptions

E.1 Summary of Assumptions

The valuation is based on the assumption that the Trust will continue to pay for benefits indefinitely into the future related to disabilities already incurred at the valuation date. At each valuation, past experience is compared to the assumptions made at the last valuation to determine if, together with known changes to plan provisions, investment policy, and expectations of future trends, the assumptions should be changed.

In this valuation, we reviewed the history of experience gains and losses and have provided a rationale for any assumption changes from the prior valuation which are described below. Emerging experience differing from these assumptions will result in experience gains and losses that will be revealed in future valuations.

The actuarial assumptions used in this and the last valuations are summarized in the following table. All rates and percentages are annualized unless otherwise noted.

Assumptions	December 31, 2016	December 31, 2017
Economic		
Discount rate	3.3% per year for the Non-Taxable pool 4.3% per year for the Permitted Employer pool 5.3% per year for all other pools	3.8% per year for the Non-Taxable pool 5.8% per year for all other pools
Retroactive CPP	Where CPP is assumed, retroactive CPP to a maximum of 18 months is assumed	Where CPP is assumed, retroactive CPP to a maximum of 18 months is assumed
Potential CPP benefits	Potential CPP benefits are calculated based on the following information (as set by the Canada Pension Plan): 2016 flat CPP monthly amount: $478.03 2016 maximum CPP monthly amount: $1,313.66.	Potential CPP benefits are calculated based on the following information (as set by the Canada Pension Plan): 2017 flat CPP monthly amount: $485.20 2017 maximum CPP monthly amount: $1,335.83.
Benefit indexing (indexing to wage increases)	Annual wage increases of 1.5% are assumed for agreements, except where negotiated wage increases are known. Where negotiated wage increases are known, these apply.	Annual wage increases of 1.5% are assumed for agreements, except where negotiated wage increases are known. Where negotiated wage increases are known, these apply.

Assumptions	December 31, 2016	December 31, 2017
Benefit indexing (indexing to CPI)	3.0% per year for the Permitted Employer pool 4.0% per year for the Non-Taxable pool 2.0% per year for all other pools	4.0% per year for the Non-Taxable pool 2.0% per year for all other pools
Benefit indexing (red-circling)	Benefits are never reduced below their original disability benefit	Benefits are never reduced below their original disability benefit
Future expenses as a percentage of claims payments[8]	Disability Income 5.0% Extended health 4.0% Dental 3.0% Life 11.0%	Disability Income 5.0% Extended health 4.0% Dental 4.0% Life 11.0%
Extended health escalation	Extended health costs for disabled employees are assumed to increase by 8.0% in the first year and decreasing by 0.5% per year until reaching the ultimate escalation rate of 4.0% per annum.	Extended health costs for disabled employees are assumed to increase by 12.0% in the first year and decreasing by 0.57% per year until reaching the ultimate escalation rate of 3.5% per annum.
Dental escalation	Dental costs for disabled employees are assumed to increase by 3.0% per annum.	Dental costs for disabled employees are assumed to increase by 3.5% per annum.
Demographic		
Termination from disability	Assumed based on adjustments for the Trust's experience applied to the aggregate female non-Quebec termination table published in of the CIA Report entitled "Canadian Group Long-Term Disability Termination experience 2004-2008." Table of adjustments is provided later in this appendix.	Assumed based on adjustments for the Trust's experience applied to the aggregate female non-Quebec termination table published in of the CIA Report entitled "Canadian Group Long-Term Disability Termination experience 2004-2008." Table of adjustments is provided later in this appendix.
Mortality	Assumed to be in accordance with the mortality tables for males and females in the CIA report entitled "Canadian Group Long-Term Disability Termination Experience 1988-1994".	Assumed to be in accordance with the mortality tables for males and females in the CIA report entitled "Canadian Group Long-Term Disability Termination Experience 1988-1994".

[8] Assumed disability expenses aren't intended to cover all disability expenses. The majority of disability expenses are incurred at the beginning of a claim and are covered with contributions, but are not incorporated into reserves.

Assumptions	December 31, 2016	December 31, 2017
CPP approval	Rates are based on age and duration since disability. Where CPP is approved, retroactive CPP to a maximum of 18 months is assumed. Table of approval rates is provided later in this appendix.	Rates are based on duration since disability. Where CPP is approved, retroactive CPP to a maximum of 18 months is assumed. Table of approval rates is provided later in this appendix.
Incurred but not reported		
Life and accidental death & dismemberment (AD&D)	$1,500,000	$700,000
Long-term disability	57% of base LTD contributions billed in the last 12 months	As a percentage of base LTD contributions billed in the last 12 months by agreement: - 48% non-Joint Trust (64% for the Non-Taxable pool) - 51% CBA - 57% FBA - 64% HSPBA
Active extended health	Calculated as 38/365ths of the annualized extended health care payments and expenses from the last 12 months.	Calculated as 27/365ths of the annualized extended health care payments and expenses from the last 12 months.
Active dental	Calculated as 16/365ths of the dental payments and expenses from the last 12 months.	Calculated as 12/365ths of the dental payments and expenses from the last 12 months.
Disabled non-income benefits (extended health, dental and life)	140% of corresponding liability for reported active LTD claims with dates of disability in the previous 12-month period.	The ratio of LTD IBNR to the reported LTD liability for each pool

E.2 Economic Assumptions

Discount Rate

The primary economic assumption used in the valuation is the discount rate, which is the rate of return that the assets are expected to earn over the long term, net of investment management expenses. In this valuation, we have used a discount rate of 3.8% per year for the Non-Taxable pool, and 5.8% per year for all other pools. The discount rate of 3.8% for the Non-Taxable pool includes a margin for adverse deviation of 2.0%. No margin for adverse deviation is included for all other pools.

In deriving the discount rate of 5.8%, we have assumed that the assets would be invested according to the six-year asset mix transition outlined in the Trust's Investment Policy. The proposed best estimate discount rate reflects the expected returns on various asset classes over the investment horizon which the Trust would need to earn its returns. The following tables provide additional detail on the assumptions:

Asset Class	Policy as at October 1, 2017	Long-Term Policy	10-Year Return[9]	25-Year Return[10]
Fixed Income				
Money market	9.0%	2.0%	1.4%	1.6%
Universe bonds	33.0%	18.0%	2.5%	2.9%
Subtotal	42.0%	20.0%		
Equity				
Canadian equity	15.0%	10.0%	6.5%	6.7%
Global equity	30.0%	22.0%	6.5%	6.7%
Emerging markets equity	4.0%	8.0%	7.0%	7.2%
Subtotal	49.0%	40.0%		
Alternatives				
Infrastructure	3.0%	25.0%	7.0%	7.0%
Real estate	6.0%	15.0%	5.5%	5.4%
Subtotal	9.0%	40.0%		

[9] Annualized
[10] Annualized

A blended long-term investment return weighted by future cash flows was determined based on the expected rates of return for each asset class by year, and this single rate was determined to be 5.65%.

Discount Rate	%
Long-term investment return	5.65
Investment management fees (%)	-0.15
Value added for rebalancing/diversification	+0.25
Value added for active management	+0.05
Margin for adverse deviation	0.0
Discount rate	**5.80%**

We have assumed that re-balancing to the benchmark asset mix would add value of 0.25%, the fees for investment management would cost 0.15%, and the active management would add 0.05% value.

Retroactive CPP

Where CPP is assumed, retroactive CPP to a maximum of 18 months is assumed.

Potential CPP benefits

Potential CPP benefits are set by the Canada Pension Plan.

Benefit indexing (indexing to wage increases)

Increases which are known to be agreed upon are used. For future increases which are unknown, the assumptions are based on expectations provided by HEABC, the Health Authority CFOs and CSSEA.

Benefit indexing (indexing to CPI)

The best estimate CPI assumption is based on the Bank of Canada's target. A margin of 1.0% has been added for the Non-Taxable pool.

Benefit indexing (red-circling)

Where known wage rate changes result in a negative indexing adjustment, it has been assumed that disability income benefits will not decrease for a claimant on disability. Future indexing adjustments are assumed to be mitigated appropriately to reflect the total increase from the original disability benefit amount. This assumption is line with the Trust's direction to the disability claims third party claims administrator.

Future expenses as a percentage of claims payments

For disability income benefits the assumption has been set equal to the 3rd party provider expense allocation assumption[11] for adjudication and administration but not including rehabilitation services, plus one percent and then rounded to the nearest percent.

For extended health and dental benefits the assumption has been set equal to the total future expense allocation assumption[11], plus half a percent and then rounded to the nearest percent.

For Life benefits the assumption has been set equal to the most recent total future expense allocation assumption[11], plus half a percent, plus two percent for Premium taxes and then rounded up to the nearest percent.

Extended health escalation

George & Bell's annual review of economic assumptions provided a short-term assumption of 12.00% per annum and a long-term assumption of 3.50% per annum. A linear reduction of 0.57% in the escalation rate was set to transition from the short-term assumption to the long-term assumption.

Dental escalation

George & Bell's annual review of economic assumptions provided an assumption of 3.50% per annum.

E.3 Demographic Assumptions

Claims may cease active status as a result of termination. The demographic assumptions used in the valuation are based on published tables, adjusted as appropriate if and when rates used in previous valuations appear to be no longer appropriate. In this valuation, we changed the termination and CPP approval assumptions.

[11] As provided by the Trust

Termination from disability

For the December 31, 2017 valuation, we used the CIA 2004-2008 non-Quebec, female termination table with adjustments based on actual experience of the Trust for the 60-month period ending June 30, 2017. For the prior valuation, the termination assumption used the CIA-2004-2008 non-Quebec, female termination table with adjustments based on actual experience of the Trust for the 48-month period ending June 30, 2016. The table below shows the assumed termination rates applied, as a percentage of the base CIA termination table.

Duration (months)	December 31, 2016	December 31, 2017			
	All Groups	Non-JT	CBA	FBA	HSPBA
4-12	55%	85%	75%	75%	80%
13-24	95%	85%	75%	75%	80%
25-27	105%	310%	215%	245%	270%
28	300%	310%	215%	245%	270%
29	460%	310%	215%	245%	270%
30	90%	310%	215%	245%	270%
31-36	90%	100%	85%	85%	75%
37-48	75%	100%	85%	85%	75%
49-60	120%	100%	85%	85%	75%
61-120	170%	140%	85%	145%	150%
120+	170%	140%	85%	145%	150%
Base CIA Disability Termination Table	2004 -2008	2004-2008			

Mortality

The mortality assumption is used to determine the liability for the life insurance benefit for currently disabled claimants. Mortality is assumed to be in accordance with the CIA 1988 to 1994 Mortality Tables for Males and Females. The assumption is consistent with the prior valuation.

CPP approval

The CPP approval assumption is based on a study performed using data from 2006 to June 30, 2017. The study was performed using information from rolling four-year periods for CPP approvals at various durations of claims. The same methodology was used for the prior valuation, with experience to June 30, 2016. The table below shows the assumed CPP approval rates applied.

Duration (months)	2016			2017			
	To age 55	55-60	60 and over	Non-JT	CBA	FBA	HSPBA
Less than 12	45%	60%	55%	30%	45%	35%	30%
13-24	45%	55%	50%	30%	45%	35%	30%
25-36	40%	45%	50%	35%	40%	60%	40%
37-60	35%	45%	50%	45%	45%	40%	50%
60+	0%	0%	0%	15%	20%	10%	20%

E.4 Incurred but not reported

Life and accidental death & dismemberment (AD&D)

The assumption for the life and AD&D IBNR was determined from a study comparing the date of death or dismemberment to the notification date for claims in the three years ending December 31, 2016. The methodology is unchanged from the previous valuation, except that the current study excludes CBA, FBA and HSPBA claims.

Long-term disability

The IBNR assumption for long-term disability represents the cost of claims incurred on or before the valuation date, but were not yet reported, as a percentage of base LTD contributions billed. The calculation uses claims reported in 2014, 2015, and 2016 which were not known at the previous year end, and base LTD contributions billed for the three years ending December 31, 2015. The IBNR assumption has been calculated for the following pool and agreement combinations:

- Healthcare pools (Health Authorities, Providence Health Care and the Affiliate pool):
  - CBA;
  - FBA;
  - HSPBA; and
  - Non-Joint Trust (remaining agreements).
- Permitted Employer pool; and
- Non-Taxable pool.

For the prior valuation the calculation uses claims reported in 2013, 2014, and 2015 which were not known at the previous year end, and base LTD contributions billed for the three years ending December 31, 2014 for the Trust as a whole.

Active extended health and dental

Run off claims (excluding CBA, FBA and HSPBA claims) for the period between June 2015 and May 2016 were used to calculate the proportion of claims paid in the 12 months after the month of incurral for each month of incurral.

For the prior valuation run off claims for the Trust as a whole were used to calculate the 24-month average of claims paid after the month of incurral to claims paid in the previous 12 months. The calculation was performed for each month of the 24-month period to December 2015 and the average lag time was used as the assumption.

Disabled non-income benefits (extended health, dental and life)

At the pool level, the ratio of the IBNR liability to the reported liability for each disabled non-income benefit is assumed to be the same as the ratio of the LTD (IBNR) liability to the admitted LTD claims liability for each pool. The IBNR liability for each disabled non-income benefit is calculated as the corresponding reported liability multiplied by the ratio of the LTD (IBNR) liability to the admitted LTD claims liability for each pool.

For the prior valuation the IBNR assumption for disabled non-income benefits represented the disability income cost of claims incurred on or before the valuation date, but were not yet reported, as a percentage of the disability income cost for known claims at the valuation date with a disability date in the prior year. The calculation used claims reported in 2013, 2014, and 2015 which were not known at the previous year end, and active claims at December 31, 2013, December 31, 2014 and December 31, 2015 with a disability date in the prior year. The same methodology was used in the prior valuation.

Appendix F - Detailed Results and Claims Movement

The table below shows the results of the LTD Income (Reported) liability by duration of disability and age at disability ($000,000s). This table excludes the impact of the Permitted Employer pool margin.

	Age at Disability					
Duration of Disability	Under Age 30	30 – 39	40 – 49	50 – 59	Age 60 and Over	Total
	$	$	$	$	$	$
< 1 year	2.2	12.5	19.5	28.1	3.5	65.8
1 to 2 years	3.1	24.4	39.6	51.3	5.0	123.3
2 to 3 years	3.3	17.6	28.1	38.0	2.2	89.3
3 to 5 years	4.7	28.9	57.1	58.8	0.8	150.4
5 to 10 years	10.5	60.5	109.4	62.5	-	242.8
> 10 years	15.1	93.0	100.8	7.5	-	216.4
Total	**38.8**	**236.9**	**354.6**	**246.2**	**11.6**	**888.0**

The table below shows the movement of active LTD claims by notional pool within the Trust.

Notional Pool	Claims as at Dec 31, 2016	Termination Reasons: Age 65	Death	Return to Work	ERIB	Change of Definition	Retired / Resigned	Other	New Entrants	Claims as at Dec 31, 2017
Fraser	1,301	(47)	(19)	(174)	(17)	(84)	(19)	(11)	352	1,282
Coastal	877	(25)	(4)	(117)	(6)	(57)	(14)	(17)	249	886
Island	1,089	(45)	(17)	(163)	(17)	(66)	(23)	(9)	291	1,040
Interior	1,150	(50)	(15)	(171)	(13)	(79)	(26)	(14)	370	1,152
Northern	355	(13)	(4)	(52)	(4)	(29)	(5)	(4)	104	348
Provincial	418	(13)	(2)	(53)	(4)	(33)	(12)	(6)	135	430
Providence	297	(13)	(7)	(43)	(2)	(12)	(5)	(5)	84	294
Affiliates	1,035	(55)	(13)	(72)	(10)	(41)	(14)	(23)	179	986
CSSEA	370	(18)	(8)	(5)	0	(6)	0	(4)	27	356
Non-HEABC	42	(3)	0	(1)	0	(4)	0	(1)	16	49
Non-taxable	37	(3)	(2)	(3)	0	(1)	0	0	6	34
Total	**6,971**	**(285)**	**(91)**	**(854)**	**(73)**	**(412)**	**(118)**	**(94)**	**1,813**	**6,857**

Appendix G – Best Estimate Reconciliation

The Trust's liabilities have been calculated on a best estimate basis apart from:

- Liabilities for the Permitted Employer pool have been calculated with a 100% margin applied to the liabilities calculated on a best estimate basis; and
- Liabilities for the Non-Taxable pool have been calculated with a 2% margin applied to the discount rate and CPI based indexing.

The following table reconciles the liabilities reported within this report to the liabilities on a best estimate basis:

Liabilities	Best Estimate Liabilities	Impact of Indexing margin	Impact of Discount Rate margin	Permitted Employer Margin	Reported Liabilities
	$000,000s	$000,000s	$000,000s	$000,000s	$000,000s
Admitted LTD claims (reported)	887.0	0.4	0.7	6.7	894.8
Long-term disability	53.7	-	-	0.7	54.5
Active extended health (IBNR)	6.8	-	-	0.1	6.8
Active dental (IBNR)	2.0	-	-	0.0	2.1
Active group life and AD&D (IBNR)	0.7	-	-	0.0	0.7
Extended health for disabled claimants	92.9	-	-	-	92.9
Dental for disabled claimants	18.6	-	-	-	18.6
Group life and AD&D for disabled claimants	29.5	-	-	-	29.5
Total Liability	**1,091.3**	**0.4**	**0.7**	**7.5**	**1,099.9**

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Appendix H – Data Certificate

With respect to the information used within this report, I hereby confirm that to the best of my knowledge and belief:

- LTD claimant data provided to the actuaries and summarized in Appendix B and Appendix G are a complete and accurate description of all individuals meeting the definition of disability under the Trust;
- The financial data provided to the actuaries and summarized in Appendix B are a complete and accurate representation of the contributions, claims and expenses by benefit line and notional pool;
- The plan provisions summarized in Appendix A are an accurate description of the provincial collective agreement disability related plan provisions in effect at the valuation date; and
- There have been no events subsequent to the valuation date, up to the report date, that would materially change the December 31, 2017 valuation results or the Trust's financial position or cost.

Sarah Hoffman
Chief Executive Officer
Date: March 22, 2018

Elisabeth Whiting
Executive Director, Client Service & Stakeholder Relations
Date: March 22, 2018

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