Financial Statements of the

Nova Scotia Health Employees' Pension Plan

Year ended December 31, 2019

STATEMENT OF FINANCIAL POSITION

As at December 31

		2019		2018
		($ Thousands)		
NET ASSETS AVAILABLE FOR BENEFITS				
Assets				
Investments (notes 3 and note 4)	**$**	**9,103,539**	$	7,692,041
Contributions receivable:				
Employers'		**9,233**		8,518
Employees'		**7,874**		7,298
Accrued income		**10,722**		9,076
Other receivables (note 5)		**296,714**		300,027
Cash		**110,092**		107,058
Restricted cash (note 6)		**1,347**		1,418
Other assets		**2,856**		867
		9,542,377		8,126,303
Liabilities				
Accounts payable and accrued liabilities (note 7)		**81,144**		7,099
Net assets available for benefits		**9,461,233**		8,119,204
ACCRUED PENSION OBLIGATIONS AND SURPLUS				
Accrued pension obligations (note 8)	**$**	**6,841,915**	$	6,123,783
Surplus		**2,619,318**		1,995,421
Accrued pension obligations and surplus	**$**	**9,461,233**	$	8,119,204

See accompanying notes
Commitments (note 15)
Contingency (note 16)

Approved on behalf of the Trustees:

Bruce Thomson

Mary Lee

STATEMENT OF CHANGES IN NET ASSETS AVAILABLE FOR BENEFITS

For the year ended December 31

($ Thousands)

		2019		2018
Increase in net assets available for benefits				
Investment income (notes 3 and 10)	**$**	**336,758**	$	351,548
Net realized and unrealized gains (losses) on investments		**1,007,269**		(392,505)
Contributions:				
Employers'		**146,780**		140,706
Employees'		**125,418**		120,662
Pension buybacks (note 12)		**3,215**		3,042
Transfers from other pension plans		**2,273**		1,292
Total increase in net assets available for benefits		**1,621,713**		224,745
Decrease in net assets available for benefits				
Pension benefits		**224,039**		205,455
Termination refunds, death benefits, and transfers to other pension plans (note 13)		**41,541**		35,637
Asset management and governance expenses (note 11)		**10,957**		11,818
Client service expenses (note 11)		**3,147**		2,814
Total decrease in net assets available for benefits		**279,684**		255,724
Change in net assets available for benefits		**1,342,029**		(30,979)
Net assets available for benefits, beginning of year	**$**	**8,119,204**	$	8,150,183
Net assets available for benefits, end of year	**$**	**9,461,233**	$	8,119,204

STATEMENT OF CHANGES IN PENSION OBLIGATIONS

For the year ended December 31

($ Thousands)

		2019		2018
Net assets available for benefits	$	**9,461,233**	$	8,119,204
Actuarial present value of accrued pension obligations, beginning of year		**6,123,783**		5,842,382
Benefits accrued		**263,694**		252,748
Benefits, refunds and transfers		**(265,580)**		(241,093)
Interest on accrued benefits		**391,862**		368,437
Impact of assumption changes		**328,156**		(98,691)
Actuarial present value of accrued pension obligations, end of year (note 8)	$	**6,841,915**	$	6,123,783
Funding surplus		**2,619,318**		1,995,421
Accrued pension benefit obligation and surplus	$	**9,461,233**	$	8,119,204

Independent auditor's report

The Sponsors and Trustees of the
Nova Scotia Health Employees' Pension Plan

Opinion

We have audited the financial statements of the **Nova Scotia Health Employees' Pension Plan** [the "Plan financial statements"], which comprise the statement of financial position as at December 31, 2019, and the statement of changes in net assets available for benefits and statement of changes in pension obligations for the year then ended, and notes to the financial statements, including a summary of significant accounting policies.

In our opinion, the accompanying financial statements present fairly, in all material respects, the financial position of the Plan as at December 31, 2019, and its changes in net assets available for benefits and its changes in pension obligations for the year then ended in accordance with the financial reporting provisions described in Section 67(1) and Schedule 1, Section 11(3), of the Pension Benefits Regulations made under Section 139 of the Pension Benefits Act (Nova Scotia).

Basis for opinion

We conducted our audit in accordance with Canadian generally accepted auditing standards. Our responsibilities under those standards are further described in the *Auditor's Responsibilities for the Audit of the Financial Statements* section of our report. We are independent of the Plan in accordance with the ethical requirements that are relevant to our audit of the financial statements in Canada, and we have fulfilled our other ethical responsibilities in accordance with these requirements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Emphasis of matter – Basis of accounting and restriction on use

We draw attention to Note 2 to the financial statements, which describes the basis of accounting. The financial statements are prepared to assist the Trustees and Sponsors of the Plan to meet the requirements of Nova Scotia Office of the Superintendent of Pensions. As a result, the financial statements may not be suitable for another purpose. Our opinion is not modified in respect of this matter. Our report is intended solely for the Trustees and Sponsors of the Plan and the Nova Scotia Office of the Superintendent of Pensions and should not be used by parties other than the Trustees and Sponsors of the Plan or the Nova Scotia Office of the Superintendent of Pensions.

Responsibilities of management and those charged with governance for the plan financial statements

Management is responsible for the preparation and fair presentation of the financial statements in accordance with the financial reporting provisions described in Section 67(1) and Schedule 1, Section 11(3), of the Pension Benefits Regulations made under Section 139 of the Pension Benefits Act (Nova Scotia), 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.

In preparing the fund financial statements, management is responsible for assessing the Plan's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless management either intends to liquidate the Plan or to cease operations, or has no realistic alternative but to do so.

Those charged with governance are responsible for overseeing the Plan's financial reporting process.

Auditor's responsibilities for the audit of the financial statements

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with Canadian generally accepted auditing standards will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements.

As part of an audit in accordance with Canadian generally accepted auditing standards, we exercise professional judgment and maintain professional skepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- Obtain an understanding of internal control relevant to the audit 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 Plan's internal control.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.
- Conclude on the appropriateness of management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Plan's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Plan to cease to continue as a going concern.
- Evaluate the overall presentation, structure, and content of the financial statements, including the disclosures, and whether the financial statements represent the underlying transactions and events in a manner that achieves fair presentation.

We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

Ernst & Young LLP

Chartered Professional Accountants

Halifax, Canada
May 12, 2020

1. DESCRIPTION OF PLAN:

The following description of the Nova Scotia Health Employees' (NSHE) Pension Plan (the "Plan") is a summary only. For more complete information, reference should be made to the Plan Text.

a) General:

On June 4, 2012, the Trust Agreement for the Nova Scotia Association of Health Organizations Pension Plan was revised. The new Trust Agreement reduced the Board of Trustees from 20 to 8 members with responsibility equally shared between union and non-union members, and the name of the plan changed to "Nova Scotia Health Employees' Pension Plan".

The Plan is a contributory defined benefit pension plan covering contributing employees of member organizations of the Nova Scotia Association of Health Organizations and Plan Sponsors. Contributions are made by both employees and employers. The Plan is registered under the *Pension Benefits Act* of Nova Scotia (Registration number NS 0355925).

Benefits are based on career average earnings and have been enhanced in the past by base year upgrades. As at the end of 2019, the Plan had a 2018 base year, meaning that benefits with respect to service up to and including 2018 are based on earnings and the Year's Maximum Pensionable Earnings (YMPE) level for Canada Pension Plan purposes in 2018.

b) Funding policy:

Plan benefits are funded by contributions and investment earnings. The determination of the value of the accumulated benefits and the required contributions is made on the basis of periodic actuarial valuations (see note 8).

c) Retirement pension:

Members are eligible for an unreduced retirement pension if their age is 65; they are age 60 or over with at least 10 years of continuous service; they are age 55 or over and their age plus continuous service equals 85 or more; or their age plus continuous service equals 90 (if enrolled before January 1, 1999).

Members are eligible for a reduced pension if they are age 50 or more and have 10 or more years of continuous service; are age 55 or over; or their age plus continuous service equals 80.

The pension benefit provides 1.4% of earnings up to the YMPE and 2% of any earnings in excess of the YMPE for each year of participation. A bridge benefit of 0.6% of earnings to the YMPE for each year of participation is also available from retirement to age 65 (or death if earlier).

d) Indexing:

Pensions in payment are subject to annual indexation for inflation up to a maximum of 3% per year. Indexing above 3% (if applicable) may be provided on an ad-hoc basis.

e) Disability pensions:

A disability pension for service prior to January 1, 1993, is available to qualifying individuals:

- who joined the plan prior to October 1, 1999;
- who have 10 years of continuous service prior to 1993; and
- who do not participate in an employer-sponsored Long-Term Disability Plan.

f) Survivor pensions:

A survivor pension is available to a spouse of a member who dies. There is also a survivor benefit payable to dependent child(ren), conditional on at least 10 years of continuous service if death occurs before pension commencement.

g) Death benefit:

A lump-sum death benefit is available as an alternative to the above noted surviving spouse pension with respect to any member who dies before retirement.

h) Termination refunds:

On termination of employment, a Member will receive a deferred pension, or prior to retirement eligibility, a locked-in transfer, dependent on the option they choose.

i) Income taxes:

The Plan is a Registered Pension Trust as defined in the *Income Tax Act (Canada)* and is not subject to income taxes.

2. SIGNIFICANT ACCOUNTING POLICIES:

a) Basis of presentation:

These financial statements are prepared on a going concern basis and present the aggregate financial position of the Plan as a separate financial reporting entity independent of the employers and Plan Members. They are prepared to assist the Plan Sponsors and Trustees in reviewing the activities of the Plan for the fiscal period.

These financial statements are prepared in accordance with the significant accounting policies set out below to comply with the financial reporting provisions described in Section 67(1) and Schedule 1, Section 11(3), of the Pension Benefits Regulations made under Section 139 of the *Pension Benefits Act* (Nova Scotia). The basis of accounting used in these financial statements differs from Canadian accounting standards for pension plans in Section 4600, "Pension Plans", in Part IV of the *CPA Handbook – Accounting*, because investments in real estate corporations, as defined by the Pension Benefits Regulations, are recorded at the Plan's proportionate ownership of the corporation's net assets, which may not be at fair value.

The Plan has applied Canadian Accounting Standards for Private Enterprises for those items not covered by Section 4600.

b) Measurement uncertainty:

The preparation of financial statements requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities at the date of the financial statements and the reported amounts of changes in net assets available for benefits and changes in pension obligations during the year. Actual results could differ from these estimates.

c) Contributions:

Contributions from employees of member organizations and contributions from member organizations are recorded in the period that payroll deductions are made.

d) Investments:

Investments are recorded as of the trade date and are stated at fair value, except for investments in real estate corporations, as at the reporting date. Fair value is the price that would either be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. The fair value of an asset or liability is measured using assumptions that market participants would use when pricing the asset or liability, assuming the market participants act in their economic best interest.

Investments in funds, including hedge funds and pooled funds, are stated at their fair values on the basis of the reported net asset value per unit or share for the respective fund. Money market, publicly traded bonds, equity securities, and derivatives are valued at quoted closing mid-market prices. Other investments for which market quotations are not available, such as real estate and infrastructure, are valued on a current market yield or appraised basis. Private equity values are estimated with appropriate valuation techniques and best estimates of managers or evaluators, with the exception of investments in real estate corporations, which are valued at the Plan's proportionate ownership of the corporation's net assets, in compliance with Schedule 1, Section 11(3), of the Pension Benefits Regulations.

Unrealized gains and losses arising from changes in fair values of investments are recognized in the statement of changes in net assets available for benefits as they arise. Realized gains and losses on investments are calculated on an average cost basis and are recognized in the statement of changes in net assets available for benefits.

e) Fixed assets:

Fixed assets are included in other assets, are stated at cost and consist of costs related to a software license, furniture and fixtures, and a website. Depreciation is being recorded on a straight-line basis over five years. Fixed asset additions costing less than $10,000 each are expensed in the year of purchase.

f) Investment income:

Dividends are recognized on the ex-dividend date, and interest income and real estate income is recognized on the accrual basis as earned.

g) Translation of foreign currencies:

(i) Assets and liabilities denoted in foreign currencies are translated into Canadian dollars at approximate quoted rates of exchange as at December 31.

(ii) Investment income and expenses are translated into Canadian dollars using the exchange rate prevailing at the date of the transaction.

(iii) The gains and losses arising from these translations are included in investment income.

3. INVESTMENTS:

The investment objectives of the Plan are to provide long-term security of pension benefits to Members and to minimize any increases in required contributions, while controlling risk at a level consistent with policy guidelines. A strategy of investing in assets as outlined in the table below is aimed at achieving these objectives.

a) Value of investments:

($ Thousands)

As at December 31	Assets 2019	% 2019	Income 2019	Assets 2018	% 2018	Income 2018
Investments held in Funds:						
Fixed Income - Emerging Market Debt	$446,087	4.9%	$14,414	$416,005	5.4%	$988
Equity - Canadian	20,304	0.2%	8,343	18,042	0.3%	18,225
- Foreign	1,779,447	19.5%	27,123	1,509,240	19.6%	24,319
- US	328,453	3.6%	7,722	277,591	3.6%	15,484
Alternatives - Hedge Funds	496,778	5.5%	-	812,770	10.6%	12,139
- Infrastructure	1,053,786	11.6%	78,949	952,071	12.4%	20,601
- Real Estate	706,143	7.8%	19,020	639,060	8.3%	12,516
	4,830,998	53.1%	155,571	4,624,779	60.2%	104,272
Investments held Directly:						
Fixed Income - Bonds	2,821,042	31.0%	90,058	2,015,569	26.2%	64,001
- Infrastructure Loans	44,026	0.5%	5,790	132,715	1.7%	3,168
- Mortgages	990,084	10.9%	38,547	904,732	11.8%	36,880
- Short-term	319,368	3.5%	4,386	194,477	2.5%	14,510
Equity - Canadian	2,370	-	2	1,680	-	2
Derivatives	95,651	1.0%	42,404	(181,911)	(2.4%)	128,715
	4,272,541	46.9%	181,187	3,067,262	39.8%	247,276
Total	**$9,103,539**	**100.0%**	**$336,758**	**$7,692,041**	**100.0%**	**$351,548**

The Plan's investment in a real estate corporation (included in Canadian equities held directly) is recorded at $2,370,000 (2018 - $1,680,000), which represents the Plan's proportionate ownership of the corporation's net assets, in compliance with Schedule 1, Section 11(3), of the Pension Benefits Regulations. Management has estimated the fair value of this investment to be approximately $23,265,000 (2018 - $19,215,000).

b) Derivative contracts:

Derivatives are financial contracts, the value of which is derived from the value of underlying assets, indices, interest rates or currency rates. Derivative contracts are transacted either in the over-the-counter market or in regulated markets. The Plan utilizes derivatives to manage its asset mix and foreign currencies exposure.

Notional amounts of derivative contracts represent the volume of outstanding transactions and do not represent the potential gain, loss or net exposure associated with the market, foreign currency or credit risk of such transactions. Rather, they serve as the basis upon which the returns from, and the fair market value of, the contracts are determined.

Derivative contracts are valued at fair market value. Realized and unrealized gains and losses from derivative contracts have been included in investment income as part of net gain on investments (see note 10).

The fair value of the derivatives, based upon their contractual maturity as at December 31, 2019 and 2018 are as follows:

($ Thousands)

As at December 31, 2019	Notional Value	Under 1 year	1 to 5 years	Over 5 years	Total as at 31-Dec-19
Equity Swaps	1,268,544	$ 74,942	$ -	$ -	$ 74,942
Currency Forwards	44,436	373	-	-	373
Bond Forwards	2,224,328	20,336	-	-	20,336
		$ 95,651	**$ -**	**$ -**	**$ 95,651**

($ Thousands)

As at December 31, 2018	Notional Value	Under 1 year	1 to 5 years	Over 5 years	Total as at 31-Dec-18
Equity Swaps	1,252,501	$ (155,163)	$ -	$ -	$ (155,163)
Currency Forwards	127,327	(5,509)	-	-	(5,509)
Bond Forwards	2,453,578	(21,239)	-	-	(21,239)
		$ (181,911)	**$ -**	**$ -**	**$ (181,911)**

d) Investments greater than 2%:

Section 67 (3) of the *Pension Benefits Regulations* requires disclosure of each investment asset that has a fair value greater than two percent of the fair value of all the investment assets of the Plan.

The following schedule presents a listing of all investments that have a fair value greater than two percent of the fair value of all investment assets.

($ Thousands)	**2019**	
Province of Quebec Debenture	$503,890	5.54%
Mesirow North Shore Fund	493,780	5.42%
William Blair International Leaders Pooled Fund	421,067	4.63%
Dimensional EM VL Portfolio	324,133	3.56%
Comgest Growth PLC Fund	303,670	3.34%
Province of Quebec Debenture	298,259	3.28%
Province of Quebec Debenture	279,151	3.07%
Brookfield Americas Infrastructure Fund	234,415	2.57%
Province of Ontario Debenture	233,577	2.57%
Ashmore SICAV EM Local Currency Bond Fund	224,531	2.47%
Ashmore Emerging Markets Liquid Investment Portfolio	221,556	2.43%
Private Mortgage	189,343	2.08%

($ Thousands)	**2018**	
Mesirow North Shore Fund	$812,770	10.57%
Province of Quebec Debenture	479,142	6.23%
William Blair International Leaders Pooled Fund	333,719	4.34%
Province of Ontario Debenture	300,484	3.91%
Dimensional EM VL Portfolio	273,793	3.56%
Comgest Growth PLC Fund	273,645	3.56%
Brookfield Americas Infrastructure Fund	259,716	3.38%
Ashmore SICAV EM Local Currency Bond Fund	208,310	2.71%
Ashmore Emerging Markets Liquid Investment Portfolio	207,695	2.70%
Private Mortgage	184,967	2.40%

e) Composition of underlying investments held in Funds:
The investment funds in which the Plan is invested use a wide variety of financial instruments in their trading strategies.

The table below provides concentrations (by fund type) of the underlying investments held by the investment funds. The extent of the Plan's liability with respect to the investment risk is limited to the Plan's investment in each investment fund.

As at December 31	Assets 2019	Assets 2018
Fixed Income Pooled Funds		
Emerging Market Debt	$446,087	$416,005
Equity Pooled Funds		
Canadian	6	7
Foreign	1,048,870	881,157
US	813	1,237
Total Equity Pooled Funds	1,049,689	882,402
Equity Segregated Funds		
Canadian	20,297	18,035
Foreign	730,578	628,082
US	327,641	276,354
Total Equity Segregated Funds	1,078,516	922,472
Alternatives		
Hedge Funds	496,778	812,770
Infrastructure Funds	1,053,786	952,071
Real Estate Funds	706,143	639,060
Total Alternatives	2,256,707	2,403,901
Total investments held in Funds	**$4,830,998**	**$4,624,779**

4. FINANCIAL INSTRUMENTS:

a) Fair value disclosure:

The fair value of investments and derivatives is determined as described in note 2(d). Fair value measurements recognized in the statement of net assets available for benefits are categorized using a fair value hierarchy that reflects the significance of inputs used in determining the fair values.

- **Level 1**: Fair value is based on inputs that reflect unadjusted quoted prices in active markets for identical assets or liabilities that the Investment Manager has the ability to access at the measurement date. Level 1 primarily includes investments in funds which have available prices in an active market with no redemption restrictions.

- **Level 2:** Fair value is based on valuation methods that make use of inputs other than quoted prices included in Level 1 that are observable for the asset or liability, either directly or indirectly, including inputs in markets that are not considered to be active. Level 2 primarily includes fixed income securities, mortgages and other loans, and derivative contracts not actively traded on a public exchange.

- **Level 3:** Fair value is based on valuation methods where inputs that are based on non-observable market data have a significant impact on the valuation. Level 3 primarily includes investment in funds with redemption restrictions, and private market investments.

Investments classified based on the valuation level within the fair value hierarchy are as follows:

($ Thousands)

As at December 31, 2019	**Total**	**Level 1**	**Level 2**	**Level 3**
Investments held in Funds:				
Fixed income - Emerging Market Debt	$446,087	$ -	$446,087	$ -
Equities - Canadian	20,304	20,304	-	-
- Foreign	1,779,447	1,779,447	-	-
- US	328,453	327,641	-	812
Alternatives - Hedge Funds	496,778	-	496,778	-
- Infrastructure	1,053,786	-	-	1,053,786
- Real Estate	706,143	47	-	706,096
	4,830,998	2,127,439	942,865	1,760,694
Investments held Directly:				
Fixed income - Bonds	2,821,042	-	2,821,042	-
- Infrastructure Loan	44,026	-	44,026	-
- Mortgage	990,084	-	990,084	-
- Short-term	319,368	71,137	248,231	-
Equities - Canadian	2,370	-	-	2,370
Derivatives	95,651	-	95,651	-
	4,272,541	71,137	4,199,034	2,370
Total	**$9,103,539**	**$2,198,576**	**$5,141,899**	**$1,763,064**

($ Thousands)

As at December 31, 2018	Total	Level 1	Level 2	Level 3
Investments held in Funds:				
Fixed income - Emerging Market Debt	$416,005	$ -	$416,005	$ -
Equities - Canadian	18,042	18,042	-	-
- Foreign	1,509,240	1,509,101	0	139
- US	277,591	276,354	0	1,237
Alternatives - Hedge Funds	812,770	0	812,770	0
- Infrastructure	952,071	0	0	952,071
- Real Estate	639,060	46	0	639,014
	4,624,779	1,803,543	1,228,775	1,592,461
Investments held Directly:				
Fixed income - Bonds	2,015,569	0	2,015,569	0
- Infrastructure Loan	132,715	0	132,715	0
- Mortgage	904,732	0	904,732	0
- Short-term	194,477	42,597	151,880	0
Equities - Canadian	1,680	0	0	1,680
Derivatives	(181,911)	0	(181,911)	0
	3,067,262	42,597	3,022,985	1,680
Total	**$7,692,041**	**$1,846,140**	**$4,251,760**	**$1,594,141**

The following table outlines the changes in the fair value of Level 3 assets of the fair value hierarchy:

		Fair Value December 31, 2018	Total gain Included in Income	Total loss Included in Income	Contributed Capital	Capital Returned	Fair Value December 31, 2019
Investments held in Funds:							
Equities	- Foreign	$139	$ -	$(139)	$ -	$ -	$ -
	- US	1,237	-	(425)	-	-	812
		1,376	-	(564)	-	-	812
Investments held Directly:							
Equities	- Canadian	1,680	690	-	-	-	2,370
Alternatives	- Real Estate	639,014	43,593	(34,266)	81,131	(23,376)	706,096
	- Infrastructure	952,071	22,949	(42,730)	197,746	(76,250)	1,053,786
		1,592,765	67,232	(76,997)	278,877	(99,626)	1,762,252
Total		**$1,594,141**	**$67,232**	**$(77,560)**	**$278,877**	**$(99,626)**	**$1,763,064**

		Fair Value December 31, 2017	Total gain Included in Income	Total loss Included in Income	Contributed Capital	Capital Returned	Fair Value December 31, 2018
Investments held in Funds:							
Equities	- Foreign	$ -	$139	$ -	$ -	$ -	$139
	- US	1,217	20	-	-	-	1,237
		1,217	159	-	-	-	1,376
Investments held Directly:							
Equities	- Canadian	1,530	150	-	-	-	1,680
Alternatives	- Real Estate	538,594	26,898	(25,242)	107,097	(8,333)	639,014
	- Infrastructure	1,037,931	173,974	-	76,745	(336,579)	952,071
		1,578,055	201,022	(25,242)	183,842	(344,912)	1,592,765
Total		**$1,579,272**	**$201,181**	**$(25,242)**	**$183,842**	**$(344,912)**	**$1,594,141**

b) Investment risk management:

Risk management relates to the understanding and active management of risks associated with all areas of the business and the associated operating environment. Investments are primarily exposed to interest rate volatility, market price fluctuations, credit risk, foreign currency risk and liquidity risk. The Plan has set formal investment policies that establish an asset mix among equity, fixed income and alternative investments such as real estate, infrastructure, and emerging market debt and require diversification of investments within categories. Trustee oversight, procedures and compliance functions are incorporated into the Plan's processes to achieve consistent controls and to mitigate operational risk.

(i) Interest rate risk

Interest rate risk refers to the fact that the Plan's financial position will change as market interest rates change. Interest rate risk is inherent in the nature of the pension plan business due to prolonged timing differences between cash flows related to the assets and liabilities of the Plan.

The value of the Plan's assets is affected by changes in nominal interest rates and equity markets. Pension liabilities are exposed to the long-term expectation of the rate of return on investments as well as expectations of inflation and salary escalation. To meet these liabilities, the Plan has established a long-term policy asset mix for each asset type. As at December 31, 2019, these were: 29.0% for equities, 31.0% for fixed income, and 40.0% for alternative investments (as at December 31, 2018: 42.5% for equities, 19% for fixed income, and 38.5% for alternative investments), plus additional derivative fixed income and equity exposures. A fixed income derivative exposure is used to change the Plan's sensitivity to changes in interest and expected inflation rates to more closely match the sensitivity of the Plan liabilities, thereby reducing interest and inflation rate risk.

The term to maturity classifications of interest-bearing investments, after allocating the effects of derivative contracts and based upon the contractual maturity of the securities, as at December 31, are as follows:

($ Thousands)

	≤ 1 yr	1 to 5 yrs	5 to 10 yrs	>10 yrs	Total	2019 Avg Yield
Short-term	$319,368	-	-	-	319,368	-
Debentures	1,787,055	-	35,255	1,718,496	3,540,806	1.738%
Real return bonds	1,135,215	-	298,259	786,647	2,220,121	1.874%
Mortgages	99,005	803,363	87,716	-	990,084	3.900%
Infrastructure loans	-	44,026	-	-	44,026	4.000%
Totals	**$3,340,643**	**$847,389**	**$421,230**	**$2,505,143**	**$7,114,405**	

Of the $3,340,643 shown above in the < 1 yr total, approximately $2,887,242 is related to various derivative exposures to bonds having a maturity date of greater than 10 years.

($ Thousands)

	≤ 1 yr	1 to 5 yrs	5 to 10 yrs	>10 yrs	Total	2018 Avg Yield
Short-term	$194,477	-	-	-	194,477	-
Debentures	1,811,745	-	1	1,254,614	3,066,360	2.027%
Real return bonds	1,179,168	2,084	132,217	617,353	1,930,822	1.392%
Mortgages	-	364,655	540,077	-	904,732	4.500%
Infrastructure loans	-	132,715	-	-	132,715	4.000%
Totals	**$3,185,390**	**$499,454**	**$672,295**	**$1,871,967**	**$6,229,106**	

Of the $3,185,390 shown above in the < 1 yr total, approximately $2,829,989 is related to various derivative exposures to bonds having a maturity date of greater than 10 years.

Excluding all other variables, a one percent increase in interest rates would decrease the fair value of the Plan by $919,318 (2018 - $785,533), and a one percent decrease in interest rates would increase the fair value of the Plan by $919,318 (2018 - $785,533). Any increase or decrease to the fair value of the Plan's assets as a result of a decrease or increase in real interest rates (excluding all other variables) is expected to have a similar impact on the value of benefit liabilities, and as a result the net impact to the Plan would be expected to be limited.

(ii) Market price risk

Market price risk is the risk of fluctuation in market values of investments from influences specific to a particular investment or from influences on the market as a whole. Market price risk does not include interest rate risk or foreign currency risk, which are also discussed in this note. As all of the Plan's financial instruments are carried at fair value with fair value changes recognized in the statement of changes in net assets available for benefits, all changes in market conditions will directly result in an increase or decrease in net assets. Market price risk is managed by the Plan through the construction of a diversified portfolio of instruments traded on various markets and across various industries. The maximum risk resulting from investments in funds is limited to the Plan's investment in each investment fund.

(iii) Credit risk

Credit risk is the risk of loss in the event the counterparty to a transaction fails to discharge an obligation and causes the other party to incur a loss.

Fixed income

The Plan's Conventional Fixed Income Program consists entirely of Government of Canada and provincial issues, and as such represents negligible risk of default by the issuers. Much of this portfolio is implemented on an unfunded basis through bond forwards, delayed settlement bonds and bond repurchase agreements. Fluctuations in the market value of these unfunded exposures are subject to counterparty risk with this risk being significantly mitigated through the regular exchange of collateral with counterparties by the third party investment manager that manages these exposures on the Plan's behalf. As at December 31, 2019, the Plan held approximately $21,756,000 in bond collateral posted by external counterparties (2018 - the Plan had posted approximately $20,640,000 in bond collateral and held approximately $12,613,000 in bond collateral posted by external counterparties).

The Plan is exposed to credit risk from the following interest earning investments, which are included in Fixed Income Bonds, Mortgages, and Infrastructure Loans:

($ Thousands)	**2019**	**2018**
Provincial government	$2,821,042	$2,015,569
Corporate	1,034,110	1,037,447
	$3,855,152	**$3,053,016**

The above totals include only the fair value of the Plan's physical assets and do not include approximately $2,918,130 in notional exposure to unfunded Federal and Provincial bonds (2018 - $2,990,912).

Derivatives

The Plan is exposed to credit-related losses in the event of non-performance by counterparties to derivative financial instruments. In order to mitigate this risk, the Plan deals directly with only highly rated major financial institutions, with whom International Swap and Derivative Association agreements have been executed. The credit risk on these exposures is significantly mitigated by monitoring the fair value of these exposures daily, and the regular exchange of collateral when exposures exceed very limited thresholds.

Real estate

Real estate investment managers mitigate risk through ongoing monitoring of tenant performance and arrears.

(iv) Foreign currency risk

Foreign currency exposure arises from the Plan's holding of foreign currency-denominated investments. Foreign currency risk is controlled by limiting foreign investments through asset allocation guidelines.

The Plan's foreign currency exposure, after the effect of derivatives (net of currency forwards), as at December 31 is summarized in the following table.

Currency Exposure	(CDN$ Thousands)	2019	2018
United States		$2,678,692	$2,541,381
European Union		417,192	403,480
Japan		188,367	163,728
Australia		125,751	113,201
United Kingdom		274,089	207,630
Other		379,111	346,868
		$4,063,202	**$3,776,288**

After the effect of hedging, and without change in all other variables, a ten percent increase in the Canadian dollar against all other currencies would decrease the fair value of the Plan's assets by $406,320 (2018 - $377,629). Similarly, a ten percent decrease in the Canadian dollar against all other currencies would increase the fair value of the Plan's assets by $406,320 (2018 - $377,629).

(v) Liquidity risk:

Liquidity risk is the risk of not meeting the cash obligations of the Plan in an efficient manner. Cash obligations are fulfilled from contributions to the Plan, cash income of the Plan, replacing physical assets with unfunded exposures, and planned dispositions of Plan assets as required. Cash requirements of the Plan are reviewed on an ongoing basis to provide for the orderly availability of resources to meet the financial obligations of the Plan. The Plan's investment policy ensures that the quality and liquidity of the investment vehicles within the cash portfolios are consistent with the needs of the Plan.

Liquidity of the Plan's investments range from daily to potentially a period of longer than one year, as defined by the respective investment funds' agreements. At December 31, 2019, approximately 69.2% (2018: 65.8%) of the Plan's investments are liquid within a six-month period or less. Conversely, at December 31, 2019, approximately 30.8 % (2018: 34.2%) of the Plan's investments are illiquid and could require a period longer than a year to dispose of.

5. OTHER RECEIVABLES:

($ Thousands)

	2019	2018
Cash collateral held by counterparties	-	158,930
Fund and other redemptions receivable	**296,714**	141,097
	$ 296,714	$ 300,027

The Plan has entered into various swap agreements with two counterparties that are linked to collateral management agreements between the parties. Depending upon the position of the swaps at a given point in time, one of the counterparties will be required to post collateral. As at December 31, 2019, the Plan held approximately $74,610,000 in cash posted by external counterparties (reference note 7) due to the position of the swaps at that date (2018 - external counterparties held approximately $158,930,000). The counterparties have an obligation to repay the collateral to the Plan upon settlement of the contracts. There are no other significant terms and conditions associated with the use of the collateral.

6. RESTRICTED CASH:

In conjunction with an investment holding, the Plan has authorized its bank to hold funds as collateral for the purposes of providing security on possible future cash calls by the investee. As at December 31, 2019, restricted cash totalled $1,347,000 (2018 - $1,418,000). The Plan does not believe that this cash will ultimately be called.

7. ACCOUNTS PAYABLE AND ACCRUED LIABILITIES:

($ Thousands)

	2019	2018
Cash collateral received from counterparties	**$ 74,610**	$ -
Trade and accrued liabilities	**6,483**	7,092
Due to Health Association Nova Scotia	**51**	7
	$ 81,144	$ 7,099

8. ACCRUED PENSION OBLIGATIONS:

The actuarial present value of accrued pension obligations as at December 31, 2019 was determined using the projected unit credit method prorated on service and the administrator's best estimate assumptions. Actuarial gains and losses are recorded using the immediate recognition approach. These results were extrapolated from the date of the last formal valuation of Plan liabilities, July 1, 2017.

The economic assumptions used in determining the accrued pension benefits were developed by reference to expected long-term market conditions. Significant long-term actuarial assumptions used in the valuation were as follows:

	2019	**2018**
Investment Assumption (discount rate)	**6.05% per annum**	6.40% per annum
Inflation	**2.00% per annum**	2.00% per annum
Salary / YMPE Increase	**3.20% / 2.50% per annum**	3.20% / 2.50% per annum
Mortality	**CPM 2014 combined with future mortality improvements using Scale MI-2017**	CPM 2014 combined with future mortality improvements using Scale MI-2017
Retirement	**75% earliest unreduced 25% age 65**	75% earliest unreduced 25% age 65

Future base year improvements and indexing of pensions to 100% of the change in the Consumer Price Index (not limited to 3%) are included in the actuarial present value of accrued pension benefits.

9. FUNDING POLICY:

In accordance with the Plan terms, employees were required to contribute 7.82% of their earnings up to the YMPE ($57,400 in 2019) as defined under the Canada Pension Plan, and 10.18% of earnings in excess of the YMPE. Employers remitted 9.22% up to the YMPE, and 11.58% of earnings in excess of the YMPE.

The most recent actuarial valuation for funding purposes was prepared by Mercer (Canada) Ltd. as at July 1, 2017, and a copy of this valuation was filed with the Nova Scotia Superintendent of Pensions and with the Canada Revenue Agency. This valuation disclosed a funding excess of $2.14 billion on a going-concern basis. The effective date of the next required actuarial valuation is on or before July 1, 2020.

Actuarial valuation results can be prepared on several different bases. Solvency results are based on the assumption that the Plan is to be wound up as of the date of the valuation report, and the assumptions that are used are for the most part mandated by the *Pension Benefits Act*. As a result, certain actuarial assumptions such as salary increases and inflation indexing of pensions have been excluded from these results. On a solvency basis, this valuation disclosed a funding excess of $573.2 million as at July 1, 2017.

10. INVESTMENT INCOME:

	($ Thousands) 2019	2018
Dividends	$ **43,166**	$ 44,814
Short-term interest	**6,726**	4,899
Bond interest	**90,058**	64,001
Real estate income	**19,020**	12,516
Infrastructure income	**78,949**	20,601
Infrastructure loan income	**5,790**	3,168
Mortgage income	**38,547**	36,880
Emerging market debt income	**14,685**	-
Swap income	**42,233**	128,674
Other foreign exchange gain (loss)	**(2,769)**	35,552
Securities lending income	**353**	443
	$ 336,758	$ 351,548

Net gains on investments are presented net of pooled fund expenses, which have been deducted directly from investment revenue by the investment manager. Pooled fund expenses are not direct cash flows of the Plan, are difficult to measure with a great deal of certainty, and as such only other investment expenses are directly reflected on the Plan's financial statements.

Other foreign exchange gain amounts include gains and losses not already recorded in other investment income categories.

11. EXPENSES:

($ Thousands)

ASSET MANAGEMENT AND GOVERNANCE	2019	2018
Investment management (note 10)	$ 9,681	$ 10,244
Salaries and benefits	386	734
Education and related travel	6	8
Trustee expenses	54	41
Sponsor expenses	-	1
Premises	23	16
Computer services	9	9
Custodial	400	414
Professional fees	28	26
Insurance	19	19
Depreciation	65	19
Administration	44	40
Audit	33	31
Consulting and performance measurement	209	216
	$ 10,957	$ 11,818

($ Thousands)

CLIENT SERVICES	2019	2018
Salaries and benefits	$ 1,785	$ 1,812
Professional fees	149	139
Benefit payment fees	314	305
Equipment and software	136	137
Communications	48	54
Depreciation	398	113
Administration	71	57
Premises	151	107
Computer services	52	52
Insurance	19	19
Trustee expenses	4	3
Education and related travel	4	4
Audit	16	12
	$ 3,147	$ 2,814

12. PENSION BUYBACKS:

($ Thousands)

	2019	2018
Pension buybacks:		
Members' past service purchases	**2,835**	2,917
Employer adjustments	**380**	125
	$ 3,215	$ 3,042

13. REFUNDS, BENEFITS, AND TRANSFERS:

($ Thousands)

	2019	2018
Termination refunds	**32,363**	28,173
Death benefits	**5,249**	5,032
Transfers to other plans	**3,929**	2,432
	$ 41,541	$ 35,637

14. CAPITAL MANAGEMENT:

Unlike a private corporation, the NSHE Pension Plan does not have a capital structure made up of direct debt and residual equity. While certain investments of the NSHE Pension Plan have related debt (e.g. mortgages that exist on some real estate assets), these are not directly the debt of the NSHE Pension Plan. The reason for this is these debt providers have no legal recall on any assets of the Plan beyond those of the asset being mortgaged and in limited cases to the third party manager funds that hold these assets and the Plan's related funding commitments to these funds. The *Income Tax Act (Canada)* also prevents registered pension plans such as the NSHE Pension Plan from having debt obligations except in very limited circumstances.

Instead of debt and equity obligations, the NSHE Pension Plan has obligations to its members as specified in the Plan terms. These obligations are defined as the Plan's capital. These are very long-term obligations, having characteristics that are somewhat similar to long-term fixed debt obligations. These obligations are valued regularly by the Plan's actuary for various purposes, including these financial statements and the actuarial valuation reports that are periodically filed with the pension regulators. To the best of management's knowledge, the NSHE Pension Plan has paid all member benefits to date in compliance with Plan terms.

15. COMMITMENTS:

The Plan has committed to enter into investment transactions that may be funded over the next several years in accordance with the terms and conditions agreed to. As at December 31, 2019, these potential commitments totaled $834.8 million (2018 - $454.4 million).

16. CONTINGENCY:

The NSHE Pension Plan may, from time to time, be involved in legal proceedings, claims and litigation that arise in the ordinary course of business that the Plan believes would not reasonably be expected to have a material adverse effect on the financial condition of the Plan.

The recent outbreak of a novel and highly contagious form of coronavirus ("COVID-19"), which the World Health Organization has declared to constitute a pandemic, has resulted in numerous deaths, adversely impacted global commercial activity and contributed to significant volatility in certain equity and debt markets. The global impact of the outbreak is rapidly evolving, and many countries have reacted by instituting quarantines, prohibitions on travel and the closure of offices, businesses, schools, retail stores and other public venues. Businesses are also implementing similar precautionary measures. Such measures, as well as the general uncertainty surrounding the dangers and impact of COVID-19, are creating significant disruption in supply chains and economic activity and are having a particularly adverse impact on transportation, hospitality, tourism, entertainment and other industries. The impact of COVID-19 has led to significant volatility and declines in the global public equity markets and it is uncertain how long this volatility will continue. As COVID-19 continues to spread, the potential impacts, including a global, regional or other economic recession, are increasingly uncertain and difficult to assess. Any public health emergency, including any outbreak of COVID-19 or other existing or new epidemic diseases, or the threat thereof, and the resulting financial and economic market uncertainty could have a significant adverse impact on the Plan, including the fair value of its investments. The financial statements of the Plan are as of, and for the year ended, December 31, 2019 and the effects, directly or indirectly, resulting from COVID-19 are not reflected in such financial statements.