

Financial Statements of the

**Nova Scotia
Health Employees'
Pension Plan**

Year ended December 31, 2017

STATEMENT OF FINANCIAL POSITION

As at December 31

(\$ Thousands)

	2017	2016
NET ASSETS AVAILABLE FOR BENEFITS		
Assets		
Investments (note 3 and note 4)	\$ 8,056,332	\$ 6,564,113
Contributions receivable:		
Employers'	7,108	7,006
Employees'	6,091	5,942
Accrued income	5,730	4,560
Other receivables	11,621	471,327
Cash	93,257	78,948
Restricted cash (note 5)	1,301	14,154
Other assets	160	196
	<u>8,181,600</u>	<u>7,146,246</u>
Liabilities		
Accounts payable and accrued liabilities (note 6)	31,417	5,592
Net assets available for benefits	8,150,183	7,140,654
Fair value of net assets available for benefits	\$ 8,150,183	\$ 7,140,654
ACCRUED PENSION BENEFITS AND SURPLUS		
Accrued pension benefits (note 7)	\$ 5,842,382	\$ 5,423,711
Surplus	2,307,801	1,716,943
Accrued pension benefits and surplus	\$ 8,150,183	\$ 7,140,654

See accompanying notes

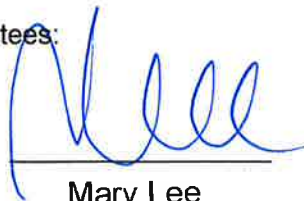
Commitments (note 14)

Contingency (note 15)

Approved on behalf of the Trustees:



Bruce Thomson



Mary Lee

STATEMENT OF CHANGES IN PENSION OBLIGATIONS

For the year ended December 31

(\$ Thousands)

	2017	2016
Fair value of net assets available for benefits	\$ 8,150,183	\$ 7,140,654
Actuarial present value of accrued pension benefits, beginning of year	5,423,711	4,998,978
Benefits accrued	234,120	239,781
Benefits, refunds and transfers	(234,281)	(208,249)
Interest on accrued benefits	347,112	313,421
Impact of assumption changes	71,720	79,780
Actuarial present value of accrued pension benefits, end of year (note 7)	\$ 5,842,382	\$ 5,423,711
Funding surplus	2,307,801	1,716,943
Accrued pension benefit obligation and surplus	\$ 8,150,183	\$ 7,140,654

STATEMENT OF CHANGES IN NET ASSETS AVAILABLE FOR BENEFITS

For the year ended December 31

(\$ Thousands)

	2017	2016
Increase in net assets available for benefits		
Investment income (note 9)	\$ 404,220	\$ 422,026
Net realized and unrealized gains on investments	601,689	83,503
Contributions:		
Employers' (note 11)	134,171	133,580
Employees' (note 11)	115,070	114,387
Pension buybacks (note 11)	1,712	3,216
Transfers from other pension plans (note 11)	1,756	1,572
Total increase in net assets available for benefits	1,258,618	758,284
Decrease in net assets available for benefits		
Pension benefits paid (note 12)	187,079	170,413
Termination refunds, death benefits, and transfers to other pension plans (note 12)	47,203	37,836
Asset management and governance expenses (note 10)	11,820	10,208
Client service expenses (note 10)	2,987	2,636
Total decrease in net assets available for benefits	249,089	221,093
Change in net assets available for benefits	1,009,529	537,191
Net assets available for benefits, beginning of year	\$ 7,140,654	\$ 6,603,463
Net assets available for benefits, end of year	\$ 8,150,183	\$ 7,140,654

NOVA SCOTIA HEALTH EMPLOYEES' PENSION PLAN

Notes to Financial Statements, page 1

Year ended December 31, 2017

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, but have been enhanced in the past by base year upgrades. As at the end of 2017, the Plan had a 2016 base year, meaning that benefits with respect to service up to and including 2016 are based on earnings and the Yearly Maximum Pensionable Earnings (YMPE) level for Canada Pension Plan purposes in 2016.

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 7).

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.

NOVA SCOTIA HEALTH EMPLOYEES' PENSION PLAN

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Year ended December 31, 2017

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 for contributions or investment income received.

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 rather than at fair value.

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

NOVA SCOTIA HEALTH EMPLOYEES' PENSION PLAN

Notes to Financial Statements, page 3

Year ended December 31, 2017

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 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 as at December 31, 2017. 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.

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.

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. Investment income also includes realized and unrealized gains and losses.

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.

NOVA SCOTIA HEALTH EMPLOYEES' PENSION PLAN

Notes to Financial Statements, page 4

Year ended December 31, 2017

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 of equities, fixed income, fixed income alternatives, real estate, infrastructure, money market securities and absolute return investments is aimed at achieving these objectives.

a) Market value of investments before allocating the effects of derivative contracts:

(\$ Thousands)

<u>As at December 31</u>	<u>Assets</u> <u>2017</u>	<u>%</u> <u>2017</u>	<u>Income</u> <u>2017</u>	<u>Assets</u> <u>2016</u>	<u>%</u> <u>2016</u>	<u>Income</u> <u>2016</u>
Fixed Income - Bonds	\$1,590,087	19.7%	\$49,777	\$1,077,060	16.4%	\$49,092
- Infrastructure Loans	85,761	1.1%	2,558	35,362	0.5%	1,424
- Mortgages	965,261	12.0%	35,415	855,526	13.1%	29,000
- Short-term	258,339	3.2%	1,830	206,308	3.1%	(2,318)
Equity - Canadian	26,610	0.3%	16,203	20,724	0.3%	26,592
- Foreign	1,869,724	23.2%	23,494	1,518,793	23.1%	24,864
- US	305,858	3.8%	10,905	296,459	4.5%	27,602
Alternatives - Commodities	-	-	-	4,098	0.1%	1,307
- Emerging Market Debt	408,793	5.1%	13,015	365,043	5.6%	5,388
- Hedge Funds	874,143	10.9%	67,772	719,304	11.0%	(32)
- Infrastructure	1,037,931	12.9%	31,763	944,972	14.4%	32,404
- Real Estate	538,648	6.7%	23,099	504,157	7.7%	17,110
Derivatives	95,177	1.1%	128,389	16,307	0.2%	209,593
Total	\$8,056,332	100.0%	\$404,220	\$6,564,113	100.0%	\$422,026

The Plan's investment in a real estate corporation (included in Canadian equities) is recorded at \$1,530,000 (2016 - \$1,620,000), 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 \$17,805,000.

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.

NOVA SCOTIA HEALTH EMPLOYEES' PENSION PLAN

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Year ended December 31, 2017

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 9).

The fair value of the derivatives, based upon their contractual maturity as at December 31, 2017 and 2016 are as follows:

(\$ Thousands)

	Under 1 year	1 to 5 years	Over 5 years	Total as at 31-Dec-17	Total as at 31-Dec-16
Equity Swaps	\$ 50,315	\$ -	\$ -	\$ 50,315	\$ (1,574)
Currency Forwards	(1,088)	-	-	(1,088)	1,910
Bond Forwards	45,951	-	-	45,951	15,971
	\$ 95,178	\$ -	\$ -	\$ 95,178	\$ 16,307

c) Market value of investments after allocating the effect of derivative contracts:

(\$ Thousands)

As at December 31	Assets 2017	% 2017	Assets 2016	% 2016
Fixed Income- Bonds	\$5,151,408	63.9%	\$4,493,220	68.5%
- Infrastructure Loans	84,672	1.1%	37,272	0.6%
- Mortgages	965,261	12.0%	855,526	13.0%
- Short-term	258,339	3.2%	206,308	3.1%
Equities - Canadian	543,210	6.7%	523,363	8.0%
- Foreign	1,869,724	23.2%	1,518,793	23.1%
- US	1,113,893	13.8%	990,536	15.1%
Alternatives - Commodities	-	-%	4,098	0.1%
- Emerging Market Debt	408,793	5.1%	365,043	5.5%
- Hedge Funds	874,143	10.9%	719,304	11.0%
- Infrastructure	1,037,931	12.9%	944,972	14.4%
- Real Estate	538,648	6.7%	504,157	7.7%
Leverage for Overlays	(4,789,690)	(59.5%)	(4,598,479)	(70.1%)
Total	\$8,056,332	100.0%	\$6,564,113	100.0%

NOVA SCOTIA HEALTH EMPLOYEES' PENSION PLAN

Notes to Financial Statements, page 6

Year ended December 31, 2017

d) Investments greater than 2%:

Section 67 (3) of the *Pension Benefits Act 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 Fund.

The following schedule presents a listing of all investments in pooled funds or securities outside of pooled funds that have a fair value greater than two percent of the fair value of all investment assets.

(\$ Thousands)	2017	
Mesirow North Shore Fund	\$874,143	10.85%
Province of Quebec Debenture	487,203	6.05%
William Blair International Leaders Pooled Fund	414,441	5.14%
CUBE Infrastructure Fund	345,235	4.29%
Comgest Growth PLC Fund	340,939	4.23%
Dimensional EM VL Portfolio	336,373	4.18%
Province of Ontario Debenture	314,931	3.91%
Brookfield Americas Infrastructure Fund	226,510	2.81%
Ashmore SICAV EM Local Currency Bond Fund	205,907	2.56%
Ashmore Emerging Markets Liquid Investment Portfolio	202,886	2.52%
Private Mortgage	196,534	2.44%
Emerald Canadian Short Term Investment Fund	184,594	2.29%

(\$ Thousands)	2016	
Mesirow North Shore Fund	\$719,128	10.96%
William Blair International Leaders Pooled Fund	341,998	5.21%
CUBE Infrastructure Fund	302,724	4.61%
Province of Quebec Debenture	299,616	4.56%
Dimensional EM VL Portfolio	286,816	4.37%
Comgest Growth PLC Fund	278,073	4.24%
Brookfield Americas Infrastructure Fund	233,048	3.55%
Ashmore Emerging Markets Liquid Investment Portfolio	190,105	2.90%
Emerald Canadian Short Term Investment Fund	175,408	2.67%
Ashmore SICAV EM Local Currency Bond Fund	174,938	2.67%
Montez Core Income Fund	149,842	2.28%
Private Mortgage	149,694	2.28%
Brookfield Brazil Motorways Holdings SRL (Arteris)	134,479	2.05%

NOVA SCOTIA HEALTH EMPLOYEES' PENSION PLAN

Notes to Financial Statements, page 7

Year ended December 31, 2017

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 publicly listed investments.
- **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 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 real estate and private market investments.

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

	(\$ Thousands)			
As at December 31, 2017	Total	Level 1	Level 2	Level 3
Fixed income - Bonds	\$1,590,087	\$ -	\$1,590,087	\$ -
- Infrastructure Loan	85,761	-	85,761	-
- Mortgage	965,261	-	965,261	-
- Short-term	258,339	184,594	73,745	-
Equities - Canadian	26,610	25,080	-	1,530
- Foreign	1,869,724	1,869,724	-	-
- US	305,858	304,640	-	1,217
Alternatives - Commodities	-	-	-	-
- Emerging Market Debt	408,793	-	408,793	-
- Hedge Funds	874,143	-	874,143	-
- Infrastructure	1,037,931	-	-	1,037,931
- Real Estate	538,648	55	-	538,594
Derivatives	95,177	-	95,177	-
	\$8,056,332	\$2,384,093	\$4,092,967	\$1,579,272

NOVA SCOTIA HEALTH EMPLOYEES' PENSION PLAN

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Year ended December 31, 2017

<u>As at December 31, 2016</u>	<u>Total</u>	<u>Level 1</u>	<u>Level 2</u>	<u>Level 3</u>
Fixed income - Bonds	\$1,077,060	\$ -	\$1,077,060	\$ -
- Infrastructure Loan	35,362	-	35,362	-
- Mortgage	855,526	-	855,526	-
- Short-term	206,308	175,408	30,900	-
Equities - Canadian	20,724	19,104	-	1,620
- Foreign	1,518,793	1,518,793	-	-
- US	296,459	294,388	-	2,071
Alternatives - Commodities	4,098	-	4,098	-
- Emerging Market Debt	365,043	-	365,043	-
- Hedge Funds	719,304	-	719,304	-
- Infrastructure	944,972	-	-	944,972
- Real Estate	504,157	54	-	504,103
Derivatives	16,307	-	16,307	-
	\$6,564,113	\$2,007,747	\$3,103,600	\$1,452,766

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

	Fair Value <u>December 31,</u> 2016	Total gain Included in Income	Total loss Included in Income	Contributed Capital	Capital Returned	Fair Value <u>December 31,</u> 2017
Equities - Canadian	\$ 1,620	\$ -	\$ (90)	\$ -	\$ -	\$1,530
- US	2,071	-	(854)	-	-	1,217
Alternatives - Real Estate	504,103	16,472	(36,271)	101,781	(47,491)	538,594
- Infrastructure	944,972	75,320	-	20,532	(2,893)	1,037,931
Total	\$1,452,766	\$91,792	\$(37,215)	\$122,313	\$(50,384)	\$1,579,272

NOVA SCOTIA HEALTH EMPLOYEES' PENSION PLAN

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Year ended December 31, 2017

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, 2017, these were: 42.5% for equities, 19% for fixed income, and 38.5% for alternative investments (as at December 31, 2016: 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)

					2017		2016	
	< 1 yr	1 to 5 yrs	5 to 10 yrs	>10 yrs	Total	Avg Yield	Total	Avg Yield
Short-term	\$258,339	-	-	-	258,339	-	\$206,308	-
Debentures	2,269,005	21,423	4,990	936,049	3,231,467	2.060%	2,934,738	2.747%
Real return bonds	1,292,515	-	25,812	669,211	1,987,538	1.985%	1,564,822	1.467%
Mortgages	-	322,694	642,567	-	965,261	3.790%	855,526	3.770%
Infrastructure loans	-	85,761	-	-	85,761	4.000%	35,362	4.000%
Totals	\$3,819,859	\$429,878	\$673,369	\$1,605,260	\$6,528,366		\$5,596,756	

Of the \$3,819,859 shown above in the < 1 yr total, approximately \$3,285,489 is related to various derivative exposures to bonds having a maturity date of greater than 10 years.

NOVA SCOTIA HEALTH EMPLOYEES' PENSION PLAN

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Year ended December 31, 2017

Excluding all other variables, a one percent increase in interest rates would decrease the fair value of the Fund by \$839,150 (2016 - \$707,338), and a one percent decrease in interest rates would increase the fair value of the Fund by \$839,150 (2016 - \$707,338). 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 and 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 Plan's investments in equities are sensitive to market fluctuations. After the effect of derivatives contracts, and without change in all other variables, a ten percent increase in market values of all public equities and privately owned equities would increase the fair value of the Plan's assets by \$352,683 (2016 - \$303,269). Similarly, a ten percent decrease in market values of all public equities and privately owned equities would decrease the fair value of the Plan's assets by \$352,683 (2016 - \$303,269).

(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 bonds 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, 2017, the Plan had posted zero dollars in bond collateral, and held approximately \$67,600,000 in bond collateral posted by external counterparties (2016 - the Plan had posted approximately \$13,570,000 in bond collateral, and held approximately \$6,340,000 in bond collateral posted by external counterparties).

NOVA SCOTIA HEALTH EMPLOYEES' PENSION PLAN

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Year ended December 31, 2017

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)

	<u>2017</u>	<u>2016</u>
Provincial government	\$1,590,087	\$1,077,060
Corporate	1,051,021	890,887
	<u>\$2,641,108</u>	<u>\$1,967,947</u>

The above totals include only the fair value of the Plan's physical assets and do not include approximately \$3,561,320 in notional exposure to unfunded Federal and Provincial bonds (2016 - \$3,416,160).

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)	2017	2016
United States		\$2,721,792	\$2,795,566
European Union		605,626	496,184
Japan		196,026	149,900
Australia		114,407	100,972
United Kingdom		192,079	160,117
Other		378,655	298,899
		<u>\$4,208,585</u>	<u>\$4,001,638</u>

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 \$420,858 (2016 - \$400,164). Similarly, a ten percent decrease in the Canadian dollar against all other currencies would increase the fair value of the Plan's assets by \$420,858 (2016 - \$400,164).

NOVA SCOTIA HEALTH EMPLOYEES' PENSION PLAN

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Year ended December 31, 2017

(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.

5. 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, 2017, restricted cash totalled \$1,301,000 (2016 - \$14,154,000). The Plan does not believe that this cash will ultimately be called.

6. ACCOUNTS PAYABLE AND ACCRUED LIABILITIES:

(\$ Thousands)

	2017	2016
Cash collateral received from counterparties	\$ 24,283	\$ -
Trade and accrued liabilities	7,132	5,590
Due to Health Association Nova Scotia	2	2
	<u>\$ 31,417</u>	<u>\$ 5,592</u>

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, 2017, the Plan held approximately \$24,283,000 in cash posted by external counterparties due to the position of the swaps at that date (2016 - neither the Plan nor its external counterparties held any cash posted as collateral). The Plan has an obligation to repay the deposit to the counterparties upon settlement of the contracts. There are no other significant terms and conditions associated with the use of the collateral.

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Year ended December 31, 2017

7. ACCRUED PENSION BENEFITS:

The actuarial present value of accrued pension benefits as at December 31, 2017 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:

	2017	2016
Investment Assumption (discount rate)	6.30% per annum	6.40% per annum
Inflation	2.00% per annum	1.90% per annum
Salary / YMPE Increase	3.20% / 2.50% per annum	3.10% / 2.40% per annum
Mortality	CPM 2014 combined with future mortality improvements using Scale MI-2017	CPM 2014 combined with future mortality improvements using Scale CPM-B
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.

8. FUNDING POLICY:

In accordance with the Plan terms, employees were required to contribute 7.82% of their earnings up to the YMPE (\$55,300 in 2017) 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.

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Year ended December 31, 2017

9. INVESTMENT INCOME:

(\$ Thousands)

	2017	2016
Dividends	\$ 40,041	\$ 39,809
Short-term interest	2,938	2,187
Bond interest	49,777	49,092
Real estate income	23,099	17,110
Infrastructure income	31,819	32,404
Infrastructure loan income	2,558	1,424
Mortgage income	35,415	29,000
Emerging market debt income	12,240	5,150
Swap income (loss)	129,973	207,023
Other foreign exchange gain	75,739	38,579
Securities lending income	621	248
	\$ 404,220	\$ 422,026

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.

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Year ended December 31, 2017

10. EXPENSES:

	(\$ Thousands)	
ASSET MANAGEMENT AND GOVERNANCE	2017	2016
Investment management (note 9)	\$ 9,748	\$ 8,642
Salaries and benefits	1,119	604
Education and related travel	5	4
Trustee expenses	15	31
Sponsor expenses	1	1
Premises	16	16
Computer services	10	10
Custodial	358	341
Professional fees	16	84
Insurance	19	19
Depreciation	13	14
Administration	38	30
Audit	30	30
Consulting and performance measurement	432	382
	\$ 11,820	\$ 10,208

	(\$ Thousands)	
CLIENT SERVICES	2017	2016
Salaries and benefits	\$ 1,769	\$ 1,509
Professional fees	438	394
Benefit payment fees	266	252
Equipment and software	128	100
Communications	55	58
Depreciation	72	82
Administration	51	46
Premises	100	102
Computer services	52	52
Insurance	19	19
Trustee expenses	4	6
Education and related travel	3	1
Audit	30	15
	\$ 2,987	\$ 2,636

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Year ended December 31, 2017

11. CONTRIBUTIONS:

	(\$ Thousands)	
	2017	2016
Employers	\$ 134,171	\$ 133,580
Employees	115,070	114,387
Transfers from other pension plans	1,756	1,572
Pension buybacks:		
Members' past service purchases	1,223	3,028
Employer adjustments	489	188
	\$ 252,709	\$ 252,755

12. BENEFITS, REFUNDS AND TRANSFERS:

	(\$ Thousands)	
	2017	2016
Pensioner benefits	\$ 187,079	\$ 170,413
Termination refunds	35,296	28,936
Death benefits	9,086	7,200
Transfers to other plans	2,821	1,700
	\$ 234,282	\$ 208,249

13. 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 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.

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14. 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, 2017, these potential commitments totaled \$318.2 million (2016 - \$402.2 million).

15. 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.