Grant Thornton

Financial Statements

University of Victoria Staff Pension Plan

December 31, 2020

Contents

Independent Auditors' Report

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To the Investments and Administration Committee

Opinion

We have audited the financial statements of the University of Victoria Staff Pension Plan, which comprise the statement of financial position as at December 31, 2020, and the statements of changes in net assets available for benefits and 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 University of Victoria Staff Pension Plan as at December 31, 2020, and its changes in net assets available for benefits and its changes in obligations for benefits for the year then ended in accordance with Canadian accounting standards for pension plans.

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 University of Victoria Staff Pension 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.

Responsibilities of Management and Those Charged with Governance 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.

In preparing the financial statements, management is responsible for assessing the University of Victoria Staff Pension 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 University of Victoria Staff Pension Plan or to cease operations, or has no realistic alternative but to do so.

Those charged with governance are responsible for overseeing the University of Victoria Staff Pension 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 University of Victoria Staff Pension 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 University of Victoria Staff Pension 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 University of Victoria Staff Pension 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.

Grant Thornton LLP

Victoria, Canada
May 26, 2021

Chartered Professional Accountants

University of Victoria Staff Pension Plan
Statement of Financial Position

December 31 (expressed in $000s)	2020	2019
Assets		
Cash	$ **162**	$ 47
Investments (Note 4)		
Short-term	**11,383**	12,398
Canadian bonds	**107,740**	95,799
Mortgages	**5,406**	4,990
Canadian equities	**33,642**	33,402
Foreign equities	**122,986**	104,817
Real estate	**28,494**	25,801
Infrastructure	**32,166**	33,319
	341,817	310,526
Receivables		
Members' contributions	**229**	200
University contributions	**570**	496
Accrued interest and dividend income	**210**	584
Transactions to be settled and other	**50**	15
	1,059	1,295
	343,038	311,868
Liabilities		
Accounts payable and accrued liabilities	**2,143**	375
Net assets available for benefits (Note 7)		
Available for supplementary benefits	**20,986**	18,778
Available for accrued pension benefits	**319,909**	292,715
	340,895	311,493
Obligations for benefits		
Voluntary contribution accounts	**1,084**	966
Supplementary benefits (Notes 7 and 9)	**20,986**	18,778
Accrued pension benefits (Note 6)	**276,245**	241,166
	298,315	260,910
Net assets available for benefits less obligations for benefits	$ **42,580**	$ 50,583

Approved by:

Chair, Staff Pension plan Investments and Administration Committee, University of Victoria

Vice-President, Finance and Operations University of Victoria

See accompanying notes to the financial statements.

University of Victoria Staff Pension Plan
Statement of Changes in Net Assets Available for Benefits

Year ended December 31 (expressed in $000s)		2020		2019
Change in net assets				
Net return on investments (Note 5)				
Interest and other income	**$**	**6,815**	$	6,587
Mortgage income		**171**		165
Dividend income		**1,031**		1,116
Net realized and unrealized gain (loss) on investments		**26,024**		32,092
Investment administration costs		**(1,146)**		(1,262)
		32,895		38,698
Contributions (Note 1(b))				
Members				
Basic		**2,391**		2,278
Supplementary		**128**		125
University				
Basic		**6,078**		5,855
Supplementary		**128**		125
CV transfer deficiency		**297**		237
		9,022		8,620
Total increase in assets		**41,917**		47,318
Payments to or on behalf of members				
Pensions to retired members				
Basic		**10,398**		9,767
Supplementary		**17**		19
Pensions to disabled members		**45**		56
Termination payments and transfers to other plans		**1,484**		1,336
		11,944		11,178
Operating expenses				
Actuarial fees		**119**		11
Office and administrative		**402**		407
Consulting, audit and legal fees		**37**		48
Provincial registration fees		**14**		14
		572		480
Total decrease of assets		**12,516**		11,658
Increase in net assets		**29,401**		35,660
Net assets available for benefits, beginning of year		**311,493**		275,833
Net assets available for benefits, end of year	**$**	**340,894**	$	311,493

See accompanying notes to the financial statements.

University of Victoria Staff Pension Plan
Statement of Changes in Obligations for Benefits

Year ended December 31 (expressed in $000s)	2020	2019
Change in obligations for benefits – accrued pension benefits		
Beginning balance	**$ 241,166**	$ 230,978
Actual plan experiences and changes in actuarial assumptions	**18,149**	-
Interest accrued on benefits	**20,370**	13,123
Benefits accrued	**8,469**	8,071
Benefits paid	**(11,909)**	(11,006)
Change in obligations for benefits	**35,079**	10,188
Ending balance	**$ 276,245**	$ 241,166
Change in obligations for benefits – supplementary benefits		
Beginning balance	**$ 18,778**	$ 16,267
Interest accrued on benefits	**1,968**	2,281
Contributions	**257**	249
Benefits paid	**(17)**	(19)
Change in obligations for benefits	**2,208**	2,511
Ending balance	**$ 20,986**	$ 18,778
Change in obligations for benefits – voluntary contribution accounts		
Beginning balance	**$ 966**	$ 993
Interest accrued on benefits	**136**	126
Contributions	**-**	-
Benefits paid	**(18)**	(153)
Change in obligations for benefits	**118**	(27)
Ending balance	**$ 1,084**	$ 966

See accompanying notes to the financial statements.

1. Description of plan

The following description of the University of Victoria Staff Pension Plan ("the Plan"), established by the University of Victoria ("the University"), is a summary only. For more complete information, reference should be made to the Plan text, which is available from Pension Services.

(a) General

The Plan is primarily a defined benefit pension plan that covers primarily regular members of the Canadian Union of Public Employees (CUPE) locals 917, 951 and 4163 and exempt staff.

(b) Funding

In accordance with the Plan text, members are required to contribute no less than 4.53% of their basic salary up to the Canada Pension Plan Year's Maximum Pensionable Earnings ("YMPE") ($58,700 in 2020), and 6.28% of their basic salary in excess of that amount to the Basic Plan to fund basic pension benefits.

If a valuation requires contribution changes (up or down) as a result of normal cost changes, then the increase or decrease will be shared on a one-for-one basis between the University and plan members.

A valuation for the plan was completed for the year ended December 31, 2019. Due to an increase in the plan's normal cost, the University's contribution rate has been increased to 12.08% (from 11.75%), and the member contribution rate has been increased to 4.86% below the YMPE (from 4.54%) and 6.61% above the YMPE (from 6.28%). Members and the University contribute an additional 0.25% of salary to the Supplementary Retirement Benefit Account (Note 9). The new contribution rates are in effect from October 1, 2020 to September 30, 2023.

Minimum contribution rates will be 10.5%for the University and 4.78% for the employee (6.53% on salary above YPME), except at a time when the plan has excess surplus as defined under the Income Tax Act and a further reduction in contributions becomes a requirement. The parties may also negotiate a one-time benefit improvement or a combination of an employee contribution holiday and a one-time benefit improvement to use the employees' share of excess surplus. Notwithstanding the above, should the University be required to make contributions as a result of a solvency and/or going concern deficiency, the University will contribute 100% of the cost and the University will then be entitled to 100% of future surplus until the amount contributed is fully recovered.

Up to December 31, 2015, members could elect to make additional contributions to a voluntary contribution account through payroll deduction or by transfer from other registered vehicles, subject to Income Tax Act maximums. These contributions are invested with the plan's other assets and investment returns match the rates earned by the other assets of the plan.

1. Description of plan (continued)

(c) Normal retirement

All members are eligible for a retirement benefit. Normal retirement is the end of the month in which the member reaches age 65. Pension benefits are calculated using the following formula:

Benefit accrual rate **x** highest five year average salary **x** years of credited service (full time equivalent).

The benefit accrual rates since the plan's inception in 1972 are as follows:

	On average salary up to the average YMPE	On average salary over the average YMPE
On service up to December 31, 1989	1.65%	2.00%
On service during 1990 and 1991	1.30%	2.00%
On service from 1992 through 1999	1.50%	2.00%
On service from January 1, 2000	1.70%	2.00%

(d) Early retirement

Members may elect early retirement at the end of any month following attainment of age 60 with no reduction provided that the member retired from active status. Members may retire between age 55 and 60 on a reduced pension. The reduction rates for retirement on an immediate pension are 3% for each year that the member is under age 60 when the pension commences. The reduction rates for retirement from inactive status (deferred) are actuarial and are between 5% and 6% for each year that the member is under age 65 when the pension commences.

(e) Disability pensions

Prior to April 1, 2006, members who became totally and permanently disabled and were in receipt of a disability pension from Canada Pension Plan were eligible to receive a disability pension from the plan equal to the pension they would have received had they continued to contribute to the plan to normal retirement. Only those members who met disability criteria prior to April 1, 2006 are in receipt of this benefit.

(f) Adjustments to pensions

Pensions are adjusted each January 1st by reference to the change in the Canadian Consumer Price Index (CPI) to a maximum of +/-3% per year since the member's last contribution date. The change in the CPI effective January 1, 2020 was 2.0%.

When the change in the CPI exceeds 3%, the Investments and Administration Committee may authorize additional indexing from the Supplementary Retirement Benefit Account (Note 9) to pensioners who are at least age 66, provided the actuary certifies

1. Description of plan (continued)

that the increase can be financed by the assets of the Supplementary Retirement Benefit Account on a sound actuarial basis.

(g) **Termination and portability benefits**

Upon termination of employment, members may leave their contributions on deposit for a deferred pension or elect to transfer the lump sum commuted value of their pension to a locked-in retirement account or another registered pension plan. If the lump sum value is less than 20% of the YMPE, the member may transfer the commuted value on a non-locked-in basis or receive a cash payment, less withholding tax.

(h) **Survivor benefits before retirement**

If a member has a spouse, their spouse is automatically entitled to the survivor benefit; however, they can designate another beneficiary if their spouse has waived their entitlement. A spouse who has not waived their entitlement has the choice of one of the following survivor benefits:

i) a lifetime monthly pension but guaranteed for 120 payments in any event which is the actuarial equivalent to the commuted value amount calculated in ii) below, payable the first of the month following the member's death; or

ii) a lump sum transfer of the full commuted value of the pension accrued to the member's date of death.

A beneficiary who is not a spouse is entitled to a lump sum equal to the full commuted value of the accrued pension.

(i) **Survivor benefits after retirement**

The survivor benefit after retirement or commencement of a disability pension is determined by the optional form selected by the member when the pension commenced. The normal form for a member who has a spouse is a joint and last survivor pension where 50% of the benefit continues to the surviving spouse. The normal form for a member who does not have a spouse is a single life pension where payments continue for the member's lifetime with a guaranteed minimum of 10 years if the member does not survive for 10 years after retirement.

If the member has a spouse, the member must select a form which provides at least a 60% survivor benefit unless the spouse completes a waiver.

(j) **Income taxes**

The Plan is a registered pension plan as defined in the Income Tax Act (Canada) and is not subject to income taxes.

2. Statement of compliance with Canadian accounting standards for pension plans

These financial statements have been prepared in accordance with Canadian accounting standards for pension plans.

3. Summary of significant accounting policies

Basis of presentation

Accounting standards for pension plans require entities to select accounting policies for accounts that do not relate to its investment portfolio or pension obligations. The University has chosen to apply International Financial Reporting Standards ("IFRS") for such accounts on a consistent basis and to the extent that these standards do not conflict with the requirements of the accounting standards for pension plans.

Investments

Investments are stated at fair value. Fair value is determined using market values where available. Fair value for international investments held by BC Investment Management Corporation, are estimated based on preliminary market values supplied by the BC Investment Management Corporation, and any differences between the estimated values and final market values are adjusted in the subsequent period. Where listed market values are not available, estimated values are calculated by discounted cash flows or based on other approved external pricing sources. Price comparison reports are used to compare the prices of the bonds and publicly traded equities held in pooled funds against a secondary source. Mortgages are valued at the end of each month based on a discounted cash flow model. Real estate investments are valued quarterly by BC Investment Management Corporation's real estate investment managers and, at least once every ten to eighteen months, by accredited independent appraisers to establish current market values. At the end of each quarter BC Investment Management Corporation uses financial statements provided by the external managers and general partners or valuation reports to calculate the share values and the unit values for the externally managed holding corporations and limited partnerships. Investment sales and purchases are recorded on trade date. Infrastructure investments are held through limited partnership units investing in infrastructure assets. The fair value of limited partnership units are stated at values reported in their respective audited financial statements. Investments are valued twice annually based on the most recent external managers' valuations of the underlying infrastructure assets.

Investment income

Investment income is recorded on the accrual basis. Any adjustments to investments due to the fluctuation of market prices are reflected as part of the return on investments in the statement of changes in net assets available for benefits.

3. Summary of significant accounting policies (continued)

Use of estimates

The preparation of financial statements, in conformity with Canadian accounting standards for pension plans, requires management, within the assumption parameters regarding pension liabilities approved by the Plan’s actuaries, to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of increases and decreases in assets during the period. Actual results could differ from those estimates. Significant areas requiring the use of management estimates relate to the valuation of investments and the estimate of the actuarial position of the obligations for benefits.

4. Investments

The Plan's investments are recorded at fair value or at amounts that approximate fair value. Fair value is the amount at which the investment could be exchanged in a current financial transaction between willing parties. The investments are categorized according to a hierarchy which gives the highest priority to unadjusted quoted prices in active markets for identical assets or liabilities (Level 1 measurement) and the lowest priority to unobservable inputs (Level 3 measurement). The three levels of the fair value hierarchy are as follows:

Level 1 – Inputs are quoted prices (unadjusted) in active markets for identical assets or liabilities that the reporting entity has the ability to access at the measurement date.

Level 2 – Inputs other than quoted prices included within Level 1 that are observable for the asset or liability either directly or indirectly.

Level 3 – Inputs that are unobservable for the asset or liability.

The Plan's proportionate share of investments in each fund, categorized according to the fair value hierarchy, is as follows:

(Expressed in $000's)			**2020**		2019
Short-term	Level 1	**$**	**11,383**	$	12,398
Canadian bonds	Level 1		**54,730**		36,310
Canadian bonds	Level 2		**53,010**		59,489
Mortgages	Level 1		**5,406**		4,990
Canadian equities	Level 1		**33,642**		33,402
Foreign equities	Level 2		**122,986**		104,817
Real estate	Level 3		**28,494**		25,801
Infrastructure	Level 3		**32,166**		33,319
		$	**341,817**	$	310,526
Fair value hierarchy					
Level 1		**$**	**105,161**	$	87,100
Level 2			**175,996**		164,306
Level 3			**60,660**		59,120
		$	**341,817**	$	310,526

4. **Investments** (continued)

The following table summarizes the changes in the fair value of the Plan's financial instruments classified as level 3 investments, this includes the hedges that were entered into within the scope of the real estate program which houses all level 3 investments:

(Expressed in $000's)	Real Estate	Infrastructure	**Total**
Beginning balance, January 1, 2020	$ 25,801	$ 33,319	**$ 59,120**
Purchases	32,198	4,980	**37,178**
Sales	(28,663)	(4,756)	**(33,419)**
Unrealized gains	(842)	(1,377)	**(2,219)**
Ending balance, December 31, 2020	$ 28,494	$ 32,166	**$ 60,660**
Beginning balance, January 1, 2019	$ 26,054	$ 28,542	**$ 54,596**
Purchases	11,752	11,271	**23,023**
Sales	(12,405)	(8,277)	**(20,682)**
Unrealized gains	400	1,783	**2,183**
Ending balance, December 31, 2019	$ 25,801	$ 33,319	**$ 59,120**

Short-term notes consist of Canadian money market securities, such as treasury bills, with terms of 12 months or less. Canadian bonds consist of government and corporate bonds and debentures. Mortgages consist of units in a pool of first mortgages on income-producing property in Canada. Equities consist of publicly traded shares. Real estate investments consist of diversified Canadian and Global income-producing properties. Infrastructure investments refer collectively to the roads, bridges, rail lines, and similar public works that are required for an industrial economy, or a portion of it, to function. Investments may be segregated or consist of units of pooled investment portfolios of the investment manager.

Currency contracts may be held individually by BC Investment Management Corporation. The contracts are used for defensive purposes in order to protect clients' foreign investments from the impact of an appreciating Canadian dollar (relative to the foreign currency). The manager purchases and sells currencies through the spot market, forward contracts, and/or futures. Unit values are calculated based on the net realized and unrealized gains/losses of the derivative financial instruments.

Commitments

The Plan has commitments in the amount of $6.5 million (2019: $1.8 million) to fund private equity infrastructure investments. It is anticipated that these commitments will be met in the normal course of operations.

5. Net return on investments

The Plan realized a gross rate of return of 11.01% (2019: 14.60%) and a net rate of return of 10.45% (2019: 13.90%). Net returns are as follows:

(Expressed in $000's)		**2020**		2019
Interest				
Cash and short-term notes	**$**	**71**	$	49
Bonds		**3,230**		3,099
Mortgages		**171**		165
Other income		**3,514**		3,439
Dividends from Canadian equities		**1,031**		1,116
Net realized gains		**9,675**		15,784
Net unrealized gains (losses)		**16,349**		16,308
		34,041		39,960
Investment costs				
Manager fees		**1,029**		1,145
Custodial fees		**70**		61
Other		**47**		56
		1,146		1,262
Total net investment return	**$**	**32,895**	$	38,698

6. Accrued pension benefit

The present value of accrued pension benefits was determined using the projected benefit method prorated on service and administrator's best estimated assumptions. An actuarial valuation was made as of December 31, 2019 by Willis Towers Watson. The calculations to December 31, 2020 are based upon an extrapolation from the December 31, 2019 valuation. The next required valuation will be as at December 31, 2022, which will be completed in the summer of 2023.

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

	December 31, 2020	December 31, 2019
Economic Assumptions:		
Interest - assets	5.70%	5.65%
Interest – liabilities	5.70%	5.65%
Salary escalation		
2016 to 2018	2.00%	2.00%
2019 onwards	2.25%	2.50%
Cost of living increase	2.00% per annum	2.00% per annum

6. Obligations for pension benefits (continued)

	December 31, 2020	December 31, 2019
Demographic Assumptions:		
Mortality table	110% of the 2014 Canadian Pensioners Mortality Table (2014CPM) projected generationally using improvement scale CPM-B	110% of the 2014 Canadian Pensioners Mortality Table (2014CPM) projected generationally using improvement scale CPM-B

7. Net assets available for benefits

The net assets available for benefits as at December 31 have been allocated as follows:

(Expressed in $000's)	**2020**	2019
Basic Plan	**$ 318,825**	$ 291,749
Supplementary Retirement Benefit Account	**20,986**	18,778
Additional Voluntary Contribution Accounts	**1,084**	966
	$ 340,895	$ 311,493

8. Actuarial valuation for funding purposes

The Plan is subject to the Pension Benefits Standard Act (BC) regulations (“PBSA”), which require solvency and going concern actuarial valuations to be performed every three years, at which time the Plan must take measures to eliminate any funding deficiencies that may arise. For this purpose, the plan actuary values both accrued assets and benefit obligations to the financial statement date, as well as contributions and benefits for future service.

The December 31, 2019 valuation on a going concern basis disclosed an actuarial surplus of $45.7 million (2016: $46.0 million). The solvency valuation resulted in a solvency deficiency of $87.4 million (2016: $64.8 million). The Pension Benefits Standards Regulation was amended effective December 31, 2019; the amendment introduced new going concern and funding methodologies. The solvency funding target is now 85% and any shortfall below that amount must be amortized over a factor of 5; a letter of credit may be secured in lieu of making payments. The University has arranged a letter of credit to secure the solvency deficiency payment.

9. Supplementary retirement benefit account

The Supplementary Retirement Benefit Account is a reserve to provide pensioners who have reached age 66 with increases that are supplemental to the increases provided under the Basic Plan (Note 1(f)). Supplementary increases are authorized by the Staff Pension Plan Investments and Administration Committee in consultation with the plan actuary and are subject to the availability of funds in the Supplementary Retirement Benefit Account. The increases are limited so that the total increase in any one year from the combined basic and supplementary provisions does not exceed the increase in the Canadian CPI.

10. Related party transactions

Administrative costs of $402,000 (2019: $407,000) represent a portion of the general administration costs incurred by the University and charged to the Pension Plan. The costs include salaries for Pension Services and other operating and administrative costs.

11. Risk management

The Plan's investments are recorded at fair value. Other financial instruments consist of cash, receivables, and payables and accruals. The fair value of these financial instruments approximates their carrying values. Fair values of investments are exposed to price risk, liquidity risk and credit risk.

Market risk

Market risk is comprised of currency risk, interest rate risk, and other price risk.

Currency risk: Currency risk relates to the possibility that the investments will change in value due to future fluctuations in US, Euro and other international foreign exchange rates. For example, a 5% strengthening (weakening) of the Canadian dollar against foreign currencies at December 31, 2020 would have decreased (increased) the value of foreign equities and infrastructure investments by approximately $7.8 million (2019: $6.9 million).

Currency risk associated with foreign equities may be hedged at the discretion of the Global Equity Manager, BC Investment Management Corporation, in order to protect the value of foreign equity investments from the impact of an appreciating Canadian dollar (relative to the foreign currency).

The Fixed Income Manager, the Foreign Equity Manager and the Infrastructure Manager will (or may) purchase securities denominated in foreign currencies. The Investments and Administration Committee may give discretion to a manager to hedge some or all of its foreign currency exposures. The Committee will make such direction for either defensive or strategic reasons.

11. Risk management (continued)

Market risk (continued)

Interest rate risk: Interest rate risk relates to the possibility that the investments will change in value due to future fluctuations in market interest rates and that pension liabilities are exposed to the impact of changes in long term market interest rates. Duration is an appropriate measure of interest rate risk for fixed-income funds as a rise in interest rates will cause a decrease in bond prices – the longer the duration, the greater the effect. At December 31, 2020, the average duration of the bond portfolio was 8.27 years (2019: 7.73 years). Therefore, if interest rates were to increase by 1%, the value of the bond portfolio would drop by 8.27% (2019: 7.73%).

Other price risk: Other price risk relates to the possibility that the investments will change in value due to future fluctuations in market prices. This risk is reduced by the investment policy provisions approved by the Board of Governors for a structured asset mix to be followed by the investment managers, the requirement for diversification of investments within each asset class and credit quality constraints on fixed income instruments. Other price risk can be measured in terms of volatility, i.e., the standard deviation of change in the value of a financial instrument within a specific time horizon. Based on volatility of the current asset class holdings outlined above, the Pension Plan has an estimated volatility of 10.7%. The volatility measures are calculated as average annual standard deviations over 20 years.

	Estimated volatility %
Short-term holdings	+/- 1.4
Bonds and mortgages	+/- 6.0
Canadian equities	+/- 20.0
Foreign equities	+/- 18.0
Real estate	+/- 12.5
Infrastructure	+/- 12.5

Benchmark for investments	% change	Net impact on market value (in thousands)
FTSE TMX Canada 91-day Treasury Bill Index	+/- 1.4	+/- 159
FTSE TMX Canada Universe Bond Index	+/- 6.0	+/- 6,789
S&P/TSX Capped Composite Index	+/- 20.0	+/- 6,728
MSCI World ex-Canada Net Index	+/- 18.0	+/- 22,137
Canadian Consumer Price Index (real estate)	+/- 12.5	+/- 3,562
Canadian Consumer Price Index (infrastructure)	+/- 12.5	+/- 4,021

Other price risk is managed by diversification of the portfolio, both by investment managers with differing investment styles and mandates and by allocation of equities across a range of sectors and companies.

11. Risk management (continued)

Liquidity risk

Liquidity risk is the risk of being unable to generate sufficient cash or its equivalent in a timely and cost effective manner in order to meet commitments as they come due. The primary liabilities in the Plan are future benefit obligations (Note 6) and operating expenses. Liquidity requirements are managed through income generated by monthly contributions and investing in sufficiently liquid (e.g. publicly traded) equities, pooled funds and other easily marketable instruments.

Credit risk

Credit risk relates to the possibility that a loss may occur from failure of a fixed income security issuer or derivative contract counter-party to meet its debt obligations. At December 31, 2020, the maximum risk exposure for this type of investment is $124.5 Million (2019: $113.2 Million).

The Plan limits the risk in the event of non-performance related to derivative financial instruments by dealing principally with counter-parties that have a credit rating of A or higher as rated by the Dominion Bond Rating Service or equivalent. The following shows the percentage of fixed income holdings in the portfolio by credit rating:

Rating	Allocation
Cash and short-term securities	9.7%
AAA	9.5%
AA	38.1%
A	20.8%
BBB	16.4%
BB and below	1.6%
Mortgages	3.9%
Total	100.0%

12. Capital disclosures

The purpose of Plan is to provide benefits to plan members. As such, when managing capital, the objective is to preserve assets in a manner that provides the Plan with the ability to continue as a going-concern. With the assistance of an outside consultant, the Plan’s Investments and Administration Committee and Pension Services regularly monitor the asset mix to ensure compliance with the Statement of Investment Policies and Procedures so that both immediate and long-term obligations can be met within an acceptable level of risk. An Asset-Liability Modeling Study (ALM) was also completed in 2018 for the purpose of determining a strategic asset mix that meets the objectives of the Plan given its underlying liability structure. The results of the study were used in the development of a strategic asset mix that meets the objectives of the Plan.

13. Impact of COVID-19

The outbreak of COVID-19 and related global responses have caused material disruptions to businesses around the world. Global equity markets have experienced significant volatility. While governments and central banks have reacted with monetary and fiscal interventions designed to stabilize economic conditions, the duration and extent of the impact of the COVID-19 outbreak, as well as the effectiveness of government and central bank responses, remains unclear at this time. To date, there have been no significant impacts to The Plan.