

Financial Statements

University of Victoria Combination Pension Plan

December 31, 2016

# Contents

	Page
ndependent Auditor's Report	1-2
Statement of Financial Position	3
Statement of Changes in Net Assets Available for Benefits	4
Statement of Changes in Obligations for Benefits	5
Notes to the Financial Statements	6-20



# Independent Auditor's Report

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To the Trustees of University of Victoria Combination Pension Plan

We have audited the accompanying financial statements of the University of Victoria Combination Pension Plan, which comprise the statement of financial position as at December 31, 2016, and the statement of changes in net assets available for benefits and the statement of changes in obligations for benefits for the year then ended, and a summary of significant accounting policies and other explanatory information.

# Management's responsibility for the financial statements

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

### Auditors' responsibility

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

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



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

# **Opinion**

In our opinion, the financial statements present fairly, in all material respects, the financial position of the University of Victoria Combination Pension Plan as at December 31, 2016 and the changes in net assets available for benefits and changes in obligations for benefits for the year then ended in accordance with Canadian accounting standards for pension plans.

Victoria, Canada March 13, 2017

Chartered Professional Accountants

Grant Thornton LLP

# **University of Victoria Combination Pension Plan Statement of Financial Position**

December 31 (expressed in \$000's)	2016		2015
Assets			
Cash	\$ 2,589	\$	2,188
Investments (Note 4)			
Short-term Y	17,833		2,404
Canadian bonds	297,707		290,330
Mortgages	18,808		21,145
Canadian equities	<b>248,560</b>		209,579
Foreign equities	410,796		417,799
Real estate	99,213		97,435
	1,092,917		1,038,692
Receivables		•	-,,
Accrued interest and dividend income	905		951
Transactions to be settled and other	<b>63</b> 8		5,385
	1,543		6,336
	1,0-10	•	0,000
	1,097,049		1,047,216
Liabilities			
Accounts payable and accrued liabilities	410		269
Currency hedges	-		159
	410		428
Net assets available for benefits (Note 7)			
Available for defined contribution benefits	927,578		895,756
Available for defined benefit pensions and supplements	169,061		151,032
, it all able to the ability about the posterior and cappionions		•	101,002
	1,096,639		1,046,788
Obligations for benefits	• •		
Defined contribution benefits	927,578		895,756
Accrued defined benefit pensions			•
and supplements (Note 6)	46,253		67,936
Net assets available for benefits			
less obligations for benefits	\$ 122,808	\$	83,096

Approved by the Board of Pension Trustees

# **University of Victoria Combination Pension Plan Statement of Changes in Net Assets Available for Benefits**

Year Ended December 31 (expressed in \$000's)	2016	2015
Change in net assets		
Net return on investments (Note 5) Interest income Mortgage income Dividend income Net realized and unrealized gain on investments Investment administration costs	\$ 11,335 \$ 605 2,143 41,007 (2,992) 52,098	\$ 9,990 708 2,921 74,710 (2,865) 85,464
Contributions (Note 1) Members' required Members' additional voluntary University's required Combined contribution accounts Defined retirement benefit account Transfers from other plans	8,836 311 10,716 8,244 3,542 31,649	8,516 194 10,359 7,957 3,027
Payments to or on behalf of members  Pensions to retired members or beneficiaries  Members' accounts transferred and refunded, and death benefits	(26,771) (6,534) (33,305)	(24,176) (3,996) (28,172)
Operating expenses Office and administrative costs Actuarial fees Audit, registration and legal fees	(450) (93) (48) (591)	(418) (146) (72) (636)
Increase in net assets	49,851	86,709
Net assets available for benefits, beginning of year	1,046,788	960,079
Net assets available for benefits, end of year	\$ 1,096,639	1,046,788

See accompanying notes to the financial statements.

# **University of Victoria Combination Pension Plan Statement of Changes in Obligations for Benefits**

Year Ended December 31 (expressed in \$000's)		2016		2015
Change in obligations for benefits - defined contribut	tion			
Beginning balance, obligations for defined contribution benefits	\$	895,756	\$_	828,968
Net investment returns Contributions Benefits paid Accounts transferred or refunded	_	41,138 23,404 (26,218) (6,502)	_	72,295 22,096 (23,631) (3,972)
Change in obligations for benefits		31,822	_	66,788
Ending balance	\$_	927,578	\$	895,756
Change in obligations for benefits - defined benefit				
Beginning balance, obligations for accrued defined benefit pensions and supplements	\$_	67,936	\$_	45,357
Actual plan experience and changes in actuarial assumptions Interest accrued on benefits Experience gains Benefits accrued Benefits paid	_	(20,515) 4,540 (9,533) 4,378 (553)	_	19,403 3,265 (2,651) 3,107 (545)
Change in obligations for benefits		(21,683)		22,579
Ending balance	<b>\$</b> _	46,253	\$	67,936

See accompanying notes to the financial statements.

December 31, 2016 (expressed in \$000's)

# 1. Description of plan

The following description of the University of Victoria Combination Pension Plan is a summary only. Plan assets are distributed over two funds: the Balanced Fund and the Defined Retirement Benefit Fund. Individual member accounts (Combined Contribution Accounts, Variable Benefit Accounts, and Additional Voluntary Contribution Accounts of active and inactive members) are held in the Balanced Fund. The Defined Retirement Benefit Fund holds the assets of the Defined Retirement Benefit Account from which defined benefit pensions and supplements are paid. For more complete information, reference should be made to the Trust Agreement.

### (a) General

The Plan is a defined contribution pension plan which contains, subject to eligibility and member choice, a defined benefit supplement to bring a retirement pension up to a minimum calculated under a defined benefit formula. The Plan covers all full-time faculty and administrative and academic professional staff holding regular appointments.

# (b) Funding policy

In accordance with the Trust Agreement and the recommendation of the plan actuary, members are required to contribute 4.35% of their basic salary up to the Canada Pension Plan Year's Maximum Pensionable Earnings (YMPE) (\$54,900 in 2016), and 6.35% of the basic salary in excess of that amount. The contributions are directed to the members' combined contribution accounts (defined contribution).

The University contributes 6.02% of basic salary up to the Canada Pension Plan YMPE, and 7.65% of the basic salary in excess of that amount. The contributions are directed to the members' combined contribution accounts. The University contributes an additional 5.05% of basic salary to fund the defined benefit minimum. These defined benefit contributions are directed to the Defined Retirement Benefit Fund. In the event that the actuary recommends additional contributions to fund the defined benefit minimum, the plan document provides for one-third and two-thirds sharing between members and the University.

The total combined member and University contributions to a member's combined contribution account in a calendar year are limited to the Income Tax Act (Canada) maximum (\$26,010 in 2016).

Subject to Income Tax Act (Canada) maximums, members may elect to make additional contributions to a voluntary contribution account through payroll deduction or by transfer from other registered vehicles.

#### (c) Investment options

Members' combined contribution accounts and additional voluntary accounts are invested in a balanced fund.

December 31, 2016 (expressed in \$000's)

# 1. **Description of plan** (continued)

#### (d) Retirement

All members are eligible for a retirement benefit. Normal retirement is the end of the month in which the member attains age 65. Members may elect early retirement any time after attaining the age of 55, or postpone retirement benefits until December 1<sup>st</sup> of the calendar year in which the member attains age 71.

# (e) Retirement options

At retirement, members can apply the balance in their combined contribution accounts to one or a combination of the following forms of benefits:

- Internal variable annuity with, subject to eligibility, a defined benefit supplement. The defined benefit supplement is the amount, if any, by which the defined benefit minimum exceeds the internal variable annuity. The defined benefit minimum at normal retirement is 1.3% of the member's final average earnings up to the three year average YMPE, multiplied by years of service; plus 2% of the member's final average earnings that are in excess of the three year average YMPE, multiplied by years of service. The final average earnings are calculated as the member's average for the highest consecutive five years. The defined benefit minimum is limited to \$2,890 per year of service credited after 1990 and is actuarially reduced for early retirement.
- External annuity from a life insurance company.
- Variable benefit.
- Transfer to (locked-in) registered retirement savings plans.
- Transfer to a combination of registered retirement income funds and life income funds.

### (f) Termination and portability benefits

Upon termination of employment, members may retain the balance in their combined contribution account or transfer it to (locked-in) registered retirement savings plans or to another registered pension plan that will accept the transfer.

Members may transfer pension entitlements from other registered pension plans to a voluntary account in the University of Victoria Combination Pension Plan.

### (g) Survivor benefits

A spouse is automatically entitled to the pre-retirement survivor benefit unless they waive that right by completing a Spousal Waiver (Pension Benefits Standards Regulation BC). The survivor benefit for a spouse is 100% of the benefit accrued by the Member. The surviving spouse is entitled to any of the options that are available to the Member, with the exception that the spouse need not have attained 55 years of age to commence a monthly benefit and the spouse's defined benefit minimum is the actuarial equivalent of the Member's defined benefit minimum. A surviving spouse must commence a pension benefit or elect a transfer from the plan by the later of one year following the Member's date of death or the end of the calendar year in which the spouse attains 71 years of age.

December 31, 2016 (expressed in \$000's)

# 1. **Description of plan** (continued)

### (g) Survivor benefits (continued)

The survivor benefit for a beneficiary who is not a spouse is the balance accumulated in the Combined Contribution Account (CCA) and, if applicable, Voluntary Contribution Account(s), payable in a cash lump sum, less applicable withholding tax.

The survivor benefit for a pensioner on the variable benefit is the total in the member's variable benefit account.

The survivor benefit for a pensioner in receipt of an annuity from the plan is determined by the optional form selected by the member immediately prior to commencement of the annuity. The optional forms available for internal annuities are as follows:

- Joint and last survivor where 66.7%, 75% or 100% of the benefit will continue to the spouse, if pre-deceased by the member.
- Joint and last survivor where 66.7% of the benefit will continue after the first death of either the spouse or the member.
- Joint and last survivor where payments will continue in full for the lifetime of the member or spouse, whoever lives longer, and with a guaranteed minimum of 10 or 15 years.
- Single life where payments continue for the member's lifetime with a guaranteed minimum of 0, 5, 10 or 15 years.

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

### (h) Adjustments to pensions

Internal variable annuities are adjusted each July 1st based on the investment performance of the underlying net assets for the preceding calendar year. As at July 1, 2016 the 3.5% and 5% internal variable annuities were increased for investment performance by 5.1% (2015: 8.1% increase) and 3.6% (2015: 6.6% increase), respectively. In accordance with the plan document these annuities are then subject to adjustment arising from the longevity experience of the annuitant group. As at July 1, 2016 the internal variable annuities were reduced by 0.2% (2015: 0.2% reduction) to reflect the annual adjustment for net mortality loss.

Defined benefit pensions and the defined benefit minimum for eligible 3.5% annuitants, are adjusted each July 1st, by reference to the annual change in the Canadian Consumer Price Index (CPI) to a maximum of 3% per year since the commencement date of the pension. The maximum adjustment in any one year is also 3%. The increase in the CPI was 1.2% from 2015 to 2016 resulting in an adjustment to defined benefit pensions and minimum benefits on July 1, 2016 of 1.2% (2015: 1.8%).

December 31, 2016 (expressed in \$000's)

# (i) Income taxes

The Plan is a registered pension plan as defined in the Income Tax Act (Canada) and is not subject to income taxes, but is subject to indirect taxes including British Columbia provincial sales tax (PST) and goods and services tax (GST). The Plan receives a 33% rebate of the GST paid.

# 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

As indicated in Note 2, these financial statements have been prepared in accordance with Canadian accounting standards for pension plans. Accounting standards for pension plans require entities to select accounting policies for accounts that do not relate to its investment portfolio or pension obligations in accordance with either International Financial Reporting Standards ("IFRS") or Canadian Accounting Standards for Private Enterprises ("ASPE"). The Trustees selected 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.

#### (a) 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.

#### (b) 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.

December 31, 2016 (expressed in \$000's)

# 3. Summary of significant accounting policies (continued)

#### (c) 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 defined benefit minimum.

#### 4. Investments (fair value)

Except for the assets of the Defined Retirement Benefit Account ("DRBA"), the assets of the Plan are pooled for investment purposes with the assets of the University of Victoria Money Purchase Pension Plan. At December 31, 2016, 94.09% (2015: 94.39%) of the assets held in the Balanced Fund were in respect of the University of Victoria Combination Pension Plan.

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 not observable for the asset or liability.

December 31, 2016 (expressed in \$000's)

# 4. Investments (fair value) (continued)

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

				2016				2015
	_	Balanced Fund		DRBA		Total	_	Total
Short-term notes - Level 1 Short-term notes - Level 2	\$	15,715 1,259	\$	859	\$	16,574 1,259	\$	1,065 1,339
Canadian bonds - Level 1		104,244		33,756		138,000		153,229
Canadian bonds - Level 2 Mortgages - Level 1		159,707 18,808		-		159,707 18,808		137,101 21,145
Canadian equities - Level 1		100,540		44,896		145,436		121,724
Canadian equities - Level 2 Foreign equities - Level 2		103,124 333,015		- 77,781		103,124 410,796		87,855 417,799
Real estate - Level 3	_	87,472	_	11,741	_	99,213	_	97,435
	\$_	923,884	\$	169,033	\$	1,092,917	\$	1,038,692
Fair value hierarchy								
Level 1	\$	239,307	\$	79,511	\$	318,818	\$	297,163
Level 2		597,105		77,781		674,886		644,094
Level 3	_	87,472		11,741	_	99,213		97,435
	\$	923,884	\$	169,033	\$	1,092,917	\$	1,038,692

The following table summarizes the changes in the fair value of the Plan's financial instruments classified as level 3 investments:

		Balanced Fund		DRBA		Total
	_	<u> </u>	-	DINDA	-	Total
Beginning balance, January 1, 2016 Sales Realized and unrealized gains	\$_	85,939 (2,663) 4,196	\$	11,496 (355) 600	\$	97,435 (3,018) 4,796
Ending balance, December 31, 2016	\$_	87,472	\$	11,741	\$_	99,213
Beginning balance, January 1, 2015 Purchases Sales	\$	92,844 - (11,582)	\$	12,408 - (1,548)	\$	105,252 - (13,130)
Realized and unrealized gains  Ending balance, December 31, 2015	\$	4,677 85,939	\$	11,496	\$_	5,313 97,435

December 31, 2016 (expressed in \$000's)

# 4. Investments (fair value) (continued)

Short-term notes consist of Canadian money market securities maturing in 12 months or less and include treasury bills and guaranteed investment certificates. 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 mainly of diversified Canadian income-producing properties. Investments may be segregated or consist of units of pooled investment portfolios of the investment managers.

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.

December 31, 2016 (expressed in \$000's)

### 5. Net return on investments

Net investment returns less operating expenses are distributed to members' combined contribution accounts, variable benefit accounts and additional voluntary contribution accounts at the end of each month.

The Balanced Fund earned a gross return of 4.98% (2015: 9.10%) and a net return of 4.64% (2015: 8.75%). The Defined Retirement Benefit Account incurred a net return of 6.61% (2015: 9.45%). Net investment returns by fund are as follows:

		2016		2015
	Balanced Fund	DRBA	Total	Total
Interest				
Cash and				
short-term notes	\$ 90	\$ 4	\$ 94	•
Bonds	9,072	2,169	11,241	9,857
Mortgages	605	-	605	708
Other	-	-	-	16
Dividends				
Canadian equities	2,046	97	2,143	2,921
Net realized gains	33,896	6,698	40,594	93,004
Net unrealized gains (losses)	(1,578)	1,991	413	(18,294)
	44,131	10,959	55,090	88,329
Investment costs				
Management fees	2,450	410	2,860	2,708
Custodial fees	47	14	<sup>′</sup> 61	86
Other	71		71	71
	2,568	424	2,992	2,865
Total net investment return	\$ 41,563	\$ 10,535	\$ 52,098	\$ 85,464

December 31, 2016 (expressed in \$000's)

# 6. Obligations for pension benefits – defined benefit minimum

An actuarial valuation, in respect of the defined benefit minimum, is performed at least once every three years. The latest valuation was made as of December 31, 2015 by Mercer (Canada) Limited. The calculations to December 31, 2016 are based upon an extrapolation from the December 31, 2015 valuation. The next valuation will be performed and filed as at December 31, 2018.

The best estimate obligation was calculated using the December 2015 actuarial valuation data and extrapolating the obligation forward to December 31, 2016 based on the best estimate assumptions, except for an adjustment for the actual returns of the Combined Contribution Accounts (CCA) for the calendar year 2016 which were 4.64%. Liabilities were calculated using the projected unit credit method, prorating on service. The extrapolation of the liabilities to December 31, 2016 is based on 2016 benefit disbursement information. The extrapolation does not reflect any new entrants who may have joined the plan after December 31, 2015. No other experiences have been reflected in the extrapolation.

The obligations disclosed in these statements are measured based on service earned to the date of measurement only, as required under accounting standards, and differ from the obligations used to determine funding requirements which include a provision for future service benefits.

December 31, 2016 (expressed in \$000's)

# 6. Obligations for pension benefits – defined benefit minimum (continued)

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

	December 31, 2016	December 31, 2015
Economic assumptions:		
Valuation discount rate	6.50% per annum	6.50% per annum
Assumed return on CCA	6.00% per annum	6.00% per annum
Salary scale – faculty members	2.50% per annum plus career progression increments (CPI), merit increments (MI), and dollar amount adjustments (DPA)	4.25% per annum (includes CPI, MI & DPA increases)
Salary scale – administrative and academic professional staff members	5.264% for the first 8 years of service, 2.00% thereafter	5.06% for the first 8 years of service, 2.00% thereafter
Annual rate of inflation	2.00% per annum	2.00% per annum
YMPE increase, increase to ITA maximum pension and contribution limits	3.00% per annum	3.00% per annum
Demographic assumptions:		
Termination rates	Faculty members:	Faculty members:
	Termination rate starts at 8% per year, trending down from 8% per year at age 30 to 1.5% per year from age 40 until age 55.	Termination rate starts at 6% per year, trending down from 6% per year at age 30 to 1.5% per year from age 40 until age 55.
	Academic and Professional Staff members:	Academic and Professional Staff members:
	Termination rate starts at 10% per year, trending down from 10% per year at age 35 to 4.5% per year from age 45 until age 55.	Termination rate starts at 10% per year, trending down from 10% per year at age 35 to 4.5% per year from age 40 until age 55.
Mortality table	90% of the Public Sector Canadian Pensioners Mortality Table with improvement scale CPM-B	90% of the Public Sector Canadian Pensioners Mortality Table with improvement scale CPM-B

December 31, 2016 (expressed in \$000's)

#### 7. Net assets available for benefits

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

	_	2016	_	2015
Combined contribution accounts ("CCA") Variable benefit accounts ("VBA") Additional voluntary contribution accounts ("AVC") Defined retirement benefit account ("DRBA") Internal variable annuity account ("IVAA")	\$ _	464,224 359,246 16,265 169,061 87,843	\$	466,792 342,181 14,984 151,032 71,799
	\$_	1,096,639	\$_	1,046,788

# 8. Combined contribution accounts ("CCA")

Each member of the plan who is not a pensioner has a CCA which is reported annually to the member. CCAs are invested in the Balanced Fund.

### 9. Variable benefit accounts ("VBA")

Each member of the plan in receipt of a variable benefit pension has a VBA. VBAs are invested in the Balanced Fund.

### 10. Additional voluntary contribution accounts ("AVC")

Additional voluntary contribution accounts are divided into restricted voluntary accounts ("RVA") and unrestricted voluntary accounts ("UVA"). Transfers from other pension plans that have restrictions imposed by the exporting plans are placed in RVA. Contributions made by members on a voluntary basis and transfers that are unrestricted are placed in UVA. All RVA and UVA are invested in the Balanced Fund as follows:

	 2016	 2015
Restricted voluntary accounts	\$ 7,347	\$ 6,520
Unrestricted voluntary accounts	 8,918	 8,464
	\$ 16,265	\$ 14,984

December 31, 2016 (expressed in \$000's)

# 11. Defined retirement benefit account ("DRBA")

The DRBA is a reserve to fund existing defined benefit pensions and supplements and to offset future obligations for defined benefit supplements.

### 12. Internal variable annuity account ("IVAA")

The IVAA provides benefits to members who elected to take internal variable annuities with all or part of their CCA, VBA and AVC. The IVAA is invested in the Balanced Fund.

### 13. Risk management

The Plan's investments are recorded at fair value. Other financial instruments consist of cash, receivables, and accounts payable and accrued liabilities. The fair value of these financial instruments approximates their carrying values. Fair values of investments are exposed to market risk, liquidity risk and credit risk.

#### Market risk

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

<u>Currency risk</u>: 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, 2016 would have decreased (increased) investments held in foreign currencies by approximately \$20.5 million (2015: \$20.9 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 may purchase US Treasury Bonds, provided the foreign currency exposure is hedged through the purchase of currency contracts.

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. Duration is an appropriate measure of interest rate risk for fixed-income securities (bonds, mortgages and short-term notes) as a rise in interest rates will cause a decrease in the price of fixed income securities – the longer the duration, the greater the effect. At December 31, 2016, the average duration of the fixed income securities was 7.6 years (2015: 7.4 years). Therefore, if nominal interest rates were to increase by 1%, the value of the fixed income securities would drop by 7.6% (2015: 7.4%).

December 31, 2016 (expressed in \$000's)

# 13. Risk management (continued)

#### Market risk (continued)

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 Pension Trustees 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 the volatility of the current asset class holdings shown in Note 4, the expectation is that over the long-term, the Balanced Fund will return around 5.9%, within a range of +/- 9.2% (i.e., results ranging from –3.3% to 15.1%) and the Defined Retirement Benefit Fund will return around 6.4%, within a range of +/- 11.9% (i.e., results ranging from –5.5% to 18.3%).

	Volatility %
Short-term holdings	+/- 1.5
Bonds and mortgages	+/- 5.4
Canadian equities	+/- 19.5
Foreign equities	+/- 17.1
Real estate	+/- 13.0

Benchmark for investments	% change	Net impact on marke valu	
		Balanced Fund	Defined Retirement Benefit Fund
FTSE TMX Canada 91-day Treasury Bill Index	+/- 1.5	\$255	\$13
FTSE TMX Canada Universe Bond Index	+/- 5.4	15.269	1,823
S&P/TSX Capped Composite Index MSCI World Net Index Canadian Consumer Price Index plus 4% (real estate)	+/- 19.5	39,715	8,755
	+/- 17.1	56,946	13,301
	+/- 13.0	11,371	1,526

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

#### 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 defined contribution entitlements (see CCA, VBA and AVC account balances in Note 7), internal variable annuities (see Note 7), future defined benefit obligations (see Note 6) and operating expenses. Liquidity requirements are managed through income generated by monthly contributions and investing in sufficiently liquid (eg. publicly traded) equities, pooled funds and other easily marketable instruments.

December 31, 2016 (expressed in \$000's)

# 13. Risk management (continued)

#### Credit risk

Credit risk relates to the possibility that a loss may occur from failure of a fixed income security issuer to meet its debt obligations. At December 31, 2016, the maximum risk exposure for this type of investment is \$299.7 million (2015: \$284.5 million) in the Balanced Fund and \$34.6 million (2015: \$29.4 million) in the Defined Retirement Benefit Fund.

The Plan limits credit risk by investing only in short term debt rated R1 or higher and other debt rated BBB or higher, as rated by the Dominion Bond Rating Service or equivalent. Debt rated below BBB is only permitted in the case of a high yield bond fund which has been specifically approved for investment by the Board of Pension Trustees.

The following shows the percentage of bond holdings in the portfolio by credit rating.

Rating	Balanced Fund	Defined Retirement Benefit Fund
AAA	29.5%	27.2%
AA	34.1%	35.0%
Α	17.8%	18.2%
BBB	17.3%	18.4%
BB and below	1.3%	1.2%

### 14. Capital disclosures

The purpose of the Plan is to provide pension 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, to have sufficient assets to meet future obligations for benefits and to have sufficient liquidity to meet all benefit and expense payments.

In accordance with regulatory requirements, the Board of Pension Trustees has established a Statement of Investment Policies and Procedures ("SIP&P") which sets out the investment principles, guidelines and monitoring procedures that are appropriate to the needs and objectives of the Plan. The SIP&P sets out benchmarks and asset allocation ranges that are intended to best secure the obligations for pension benefits and result in reasonable risk-adjusted return on investment. Individual investment decisions are delegated to investment managers subject to the constraints of the SIP&P and individual manager mandates. As required, the Board of Pension Trustees reviews the SIP&P and manager structure at least annually, and makes such changes to the SIP&P and/or mandates as it deems necessary. With the assistance of an outside consultant, the Board of Pension Trustees and the Pension Office regularly monitor the asset mix of each manager and fund to ensure compliance with the SIP&P and mandates.

December 31, 2016 (expressed in \$000's)

# 14. Capital disclosures (continued)

The benchmark and ranges for the funds are as follows:

	Balanced Fund		DRBA	
	Benchmark	Range	Benchmark	Range
Cash and equivalents	0%	0-21%	0%	0-20%
Canadian bonds	36%	20-46%	20%	15-25%
Canadian equities	22%	14-27%	25%	15-35%
Foreign equities	32%	20-40%	45%	40-50%
Real estate	10%	5-15%	10%	5-15%

The Plan is also subject to the Pension Benefits Standards Act (BC) and Regulations, which require that solvency and going concern actuarial valuations are performed every three years, at which time the Plan must take measures to eliminate any funding deficiencies that may arise.