Fund Financial statements of

The University of British Columbia Staff Pension Plan

December 31, 2017

The University Of British Columbia
Staff Pension Plan
December 31, 2017

Table of contents

Deloitte.

Deloitte LLP
2800 - 1055 Dunsmuir Street
4 Bentall Centre
P.O. Box 49279
Vancouver BC V7X 1P4
Canada

Tel: 604-669-4466
Fax: 778-374-0496
www.deloitte.ca

Independent Auditor's Report

To the Pension Board of
The University of British Columbia Staff Pension Plan

We have audited the accompanying fund financial statements of The University of British Columbia Staff Pension Plan (the "Plan"), which comprise the statement of financial position as at December 31, 2017 and the statement of changes in net assets available for benefits for the year then ended, and a summary of significant accounting policies and other explanatory information. The fund financial statements have been prepared by management of the Plan based on the financial reporting provisions of Section 47(2) of the regulations to the Pension Benefits Standards Act S.B.C. 2012 and a supplementary letter issued by the Financial Institutions Commission of British Columbia to the Plan dated April 11, 2016 ("Financial Reporting Framework").

Management's Responsibility for the Fund Financial Statements

Management is responsible for the preparation and fair presentation of these fund financial statements in accordance with the Financial Reporting Framework; this includes determining that the basis of accounting is an acceptable basis for the preparation of the fund financial statements in the circumstance, and for such internal control as management determines is necessary to enable the preparation of fund financial statements that are free from material misstatement, whether due to fraud or error.

Auditor's Responsibility

Our responsibility is to express an opinion on these fund 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 fund financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the fund financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the fund financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation of the fund 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 fund financial statements.

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

Opinion

In our opinion, the fund financial statements present fairly, in all material respects, the financial position of The University of British Columbia Staff Pension Plan as at December 31, 2017, and the changes in its net assets available for benefits for the year then ended in accordance with the Financial Reporting Framework.

Basis of Accounting and Restriction on Use

Without modifying our opinion, we draw attention to Note 2 to the fund financial statements, which describes the basis of accounting. The fund financial statements are prepared to assist the Plan to meet the financial reporting requirements of Section 47(2) of the regulations to the Pension Benefits Standards Act S.B.C. 2012 and the supplementary letter issued by the Financial Institutions Commission of British Columbia to the Plan dated April 11, 2016. As a result, the fund financial statements may not be suitable for another purpose. Our report is intended solely for the Pension Board of the Plan and the Financial Institutions Commission of British Columbia and should not be distributed to or used by parties other than the Pension Board of the Plan or the Financial Institutions Commission of British Columbia.

Deloitte LLP

Chartered Professional Accountants
June 21, 2018
Vancouver, British Columbia

The University of British Columbia
Staff Pension Plan
Statement of financial position
as at December 31, 2017
(Expressed in thousands of dollars)

	2017	2016
	$	$
Assets		
Investments (note 4)		
Short-term notes	**469**	545
Derivative investments, net	**3,330**	910
Bonds	**540,759**	456,182
Equities	**538,331**	496,358
Real estate	**177,742**	166,844
Infrastructure	**348,337**	348,070
	1,608,968	1,468,909
Cash (note 4)	**22,335**	18,826
Prepaid expenses	**210**	-
Investment income receivable	**-**	732
	1,631,513	1,488,467
Contributions receivable		
University	**3,762**	121
Members	**2,689**	95
	6,451	216
	1,637,964	1,488,683
Commitments (note 9)		
Liabilities		
Benefits payable	**222**	660
Accounts payable and accrued liabilities	**758**	1,283
	980	1,943
Net assets available for benefits	**1,636,984**	1,486,740

Approved on behalf of the Pension Board

________________________, Chair

________________________, Board Member

The accompanying notes to the financial statements are an integral part of this financial statement.

The University of British Columbia
Staff Pension Plan

Statement of changes in net assets available for benefits
year ended December 31, 2017

(Expressed in thousands of dollars)

	2017	2016
	$	$
Increase in net assets		
Members' required contributions	**31,341**	29,292
University's required contributions	**42,233**	38,925
Transfers from other plans for buyback	**223**	262
	73,797	68,479
Investment income (note 5)	**52,911**	47,925
Changes in fair value of investments (note 6)	**78,216**	58,739
	204,924	175,143
Decrease in net assets		
Payments to or on behalf of members		
Retirement benefits to members and beneficiaries	**35,846**	33,033
Members' accounts transferred or refunded	**9,449**	9,894
Death benefits	**1,202**	2,672
	46,497	45,599
Operations		
Administrative expenses (note 7)	**1,763**	1,605
Investment		
Consulting fees	**58**	132
Management fees (note 8)	**6,362**	6,373
	54,680	53,709
Net increase in net assets available for benefits	**150,244**	121,434
Net assets available for benefits, beginning of year	**1,486,740**	1,365,306
Net assets available for benefits, end of year	**1,636,984**	1,486,740

The accompanying notes to the financial statements are an integral part of this financial statement.

1. Description of plan

The following description of The University of British Columbia Staff Pension Plan (the "Plan") is a summary only. For more complete information, reference should be made to the Plan text, which is available from The University of British Columbia (the "University" or the "Sponsor") Pension Administration Office. The Plan is registered under the Pension Benefits Standards Act of British Columbia (registration no. 85439). As a registered pension plan under the Income Tax Act of Canada, the Plan is exempt from taxation.

(a) General

The Plan is a target benefit pension plan with fixed member and employer contributions. The Plan provides that benefits may be adjusted depending on the Plan's funded status. The Plan is open to all eligible full-time and certain part-time monthly-paid and hourly-paid staff, and compulsory after three years of service.

(b) Funding policy

The Plan text requires members to make contributions of 6.5% of basic salary and the University to make contributions of 9.13% of basic salary (increasing to 9.4% of basic salary on October 1, 2018).

(c) Benefits

Pension benefits are calculated using the following formula:

For service earned to June 30, 2009, 2% times the average of the member's three best years' pensionable earnings times such pensionable service less a Canada Pension Plan benefit offset equal to 0.7% of the lesser of best average pensionable earnings and average YMPE times such pensionable service. For service earned beginning July 1, 2009 onwards, the benefit is a flat 1.8% of best average pensionable earnings times such pensionable service. Calculated benefits in excess of Canada Revenue Agency's allowable eligible maximum benefit are paid in accordance with a Supplemental Retirement Arrangement ("SRA"), if the member is eligible. The SRA is a separate non-registered pension plan. Cost of living increases are calculated each year based on the Consumer Price Index for Canada and added to pension benefits, subject to the Plan's ability to pay.

Termination benefits are payable on termination of employment, and death benefits are paid in the event of death prior to retirement.

2. Basis of accounting

These financial statements present the aggregate financial position of the Plan as a separate financial reporting entity independent of the Sponsor and Plan members. The financial statements have been prepared in accordance with the significant accounting policies set out in note 3 to comply with the financial reporting provisions of Section 47(2) of the regulations to the Pension Benefits Standards Act S.B.C. 2012 and a supplementary letter issued by the Financial Institutions Commission of British Columbia ("FICOM") to the Plan dated April 11, 2016. The basis of accounting used in these financial statements materially differs from Canadian accounting standards for pension plans because it excludes the pension obligation of the Plan. The supplementary letter issued by FICOM confirms that their office permits audited financial statements to be prepared without disclosing the pension obligation. Consequently, these financial statements do not purport to show the adequacy of the Plan's assets to meet its pension obligations.

2. Basis of accounting (continued)

The accounting policies adopted in the preparation of these financial statements have been prepared on the basis of Part IV of the CPA Canada Handbook, Canadian accounting standards for pension plans (the "Handbook"), except for the exclusion of the pension obligation as noted above.

The Plan has adopted Canadian accounting standards for private enterprises in connection with any balances or transactions outside of the scope of Part IV of the Handbook.

3. Significant accounting policies

(a) Use of estimates

The preparation of fund financial statements requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and the disclosure of contingent assets and liabilities at the date of the fund financial statements and the amounts of increases and decreases in net assets available for benefits for the reporting period. The most significant estimates relate to the fair values of level 3 investments, as described in note 3 (b). Actual results could differ from those estimates.

(b) Investments

Investments are recorded on a settlement date basis and at fair value. Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date.

Fair values for investments are determined using the following methods:

(i) Short-term notes

Domestic money market securities are stated at cost plus accrued income which approximates fair value.

(ii) Pooled funds

Bonds and equities
Pooled fund net asset values are provided by the investment managers and are generally based on the quoted market price of the underlying investments. The underlying investments include publicly traded equities and bonds.

(iii) Private equities

Private equity investments are held through limited partnership units investing in private equity assets. The fair value of limited partnership units are based on net asset values reported in their respective audited financial statements. Fair values of the underlying assets are based on valuation methods which include, but are not limited to, the market approach (i.e. observable valuation measures for comparable companies) and the income approach (i.e. discounted cash flow model), with consideration for factors such as expected liquidation value, leverage, and economic conditions.

(iv) Real estate

Real estate investments are held in equities, real estate investment trusts and limited partnerships investing in real estate. The fair values of the shares, investment trust units and limited partnership units are based on the net asset values reported in their respective audited financial statements. Fair values of the underlying real estate assets are based on the most recent external manager appraisals of the properties such as commercial, industrial and residential properties. A combination of internal and external appraisals are used.

3. Significant accounting policies (continued)

(b) Investments (continued)

(v) Infrastructure

Infrastructure investments are held through limited partnership units investing in infrastructure assets, and in a pooled fund investing in publicly traded equities. The fair values of limited partnership units are based on the net asset values reported in their respective audited financial statements. Fair values of the underlying assets are based on the most recent external managers' valuations of the underlying infrastructure assets such as toll roads, water utilities, power and electrical utilities, communication towers and parts. Methods used by external fund managers include, but are not limited to, discounted cash flow models, the income approach or recent market transactions.

(vi) Derivatives

Foreign currency forward contracts are valued based on market closing forward rates from independent sources.

(c) Revenue recognition

Adjustments to investments due to the fluctuation of fair values are reflected as part of the change in fair value of investments in the statement of changes in net assets available for benefits. Realized gains and losses are calculated based on the average cost of the investments. Investment income is recognized as follows:

(i) Interest income is recognized in the period earned.

(ii) Dividend income is recognized on the ex-dividend date.

(iii) Income from investments in trusts and limited partnerships is recognized on an accrual basis when earned.

(iv) Pooled fund income is recognized on the date of distribution by the funds.

(d) Members' benefits transferred or refunded

Members' benefits transferred or refunded are recognized as a decrease in net assets on an accrual basis.

(e) Foreign currency translation

Transactions denominated in foreign currencies are translated at the rates of exchange at the date of the transaction. Assets and liabilities denominated in foreign currency are translated into Canadian dollars at the rate of exchange in effect at the statement of financial position date. Unrealized exchange gains or losses on foreign currency are included in the change in fair value of investments.

4. Investments

(a) Short-term notes

Investments in short-term notes are primarily securities issued by either Canadian chartered banks or the Bank of Canada that mature at various dates in the next fiscal year.

(Expressed in thousands of dollars)

4. Investments (continued)

(b) Fair value measurements – Hierarchy disclosure

Part IV of the Handbook establishes a three-tier hierarchy as a framework for disclosing fair values based on inputs used to value the Plan's investments. The hierarchy of inputs is summarized below:

- Level 1: quoted prices (unadjusted) in active markets for identical assets or liabilities;
- Level 2: inputs other than quoted prices included in Level 1 that are observable for the asset or liability, either directly (i.e. as prices) or indirectly (i.e. derived from prices); and
- Level 3: inputs for the asset or liability that are not based on observable market data (unobservable inputs).

The following is a summary of the inputs used as of December 31, 2017 in valuing the Plan's cash, investments and derivative financial instruments:

	Quoted prices in active markets for identical assets (Level 1)	Significant other observable inputs (Level 2)	Significant unobservable inputs (Level 3)	Total
	$	$	$	$
Cash and short-term notes				
Cash	22,335	-	-	22,335
Short-term notes	-	469	-	469
Derivative investments, net	-	3,330	-	3,330
Bonds	-	540,759	-	540,759
Equities				
Canadian equities	84,225	75,761	-	159,986
US equities	-	82,689	-	82,689
Foreign equities (i)	-	254,564	440	255,004
Hedge funds (ii)	-	-	209	209
Private equities (iii)	-	-	40,443	40,443
Real estate (iv)	-	-	177,742	177,742
Infrastructure (v)	-	85,892	262,445	348,337
Total investments	106,560	1,043,464	481,279	1,631,303

(Expressed in thousands of dollars)

4. Investments (continued)

(b) Fair value measurements – Hierarchy disclosure (continued)

The following is a summary of the inputs used as of December 31, 2016 in valuing the Plan's cash, investments and derivative financial instruments:

	Quoted prices in active markets for identical assets (Level 1)	Significant other observable inputs (Level 2)	Significant unobservable inputs (Level 3)	Total
	$	$	$	$
Cash and short-term notes				
Cash	18,826	-	-	18,826
Short-term notes	-	545	-	545
Derivative investments, net	-	910	-	910
Bonds	-	456,182	-	456,182
Equities				
Canadian equities	76,302	118,059	-	194,361
US equities	-	72,658	-	72,658
Foreign equities (i)	-	180,592	403	180,995
Hedge funds (ii)	-	-	481	481
Private equities (iii)	-	-	47,863	47,863
Real estate (iv)	-	-	166,844	166,844
Infrastructure (v)	-	104,006	244,064	348,070
Total investments	95,128	932,952	459,655	1,487,735

The following table provides the changes during the year ended December 31, 2017 for financial instruments for which Level 3 inputs were used in determining fair value:

	Foreign equities	**Hedge funds**	**Private equities**	**Real estate**	**Infrastructure**	**Total**
	$	**$**	**$**	**$**	**$**	**$**
Balance, January 1, 2017	**403**	**481**	**47,863**	**166,844**	**244,064**	**459,655**
Purchases	**-**	**-**	**7,820**	**16,278**	**31,251**	**55,349**
Sales	**-**	**(222)**	**(13,711)**	**(16,648)**	**(57,123)**	**(87,704)**
Realized gain (loss)	**(33)**	**385**	**8,557**	**6,236**	**21,172**	**36,317**
Unrealized gain (loss)	**70**	**(435)**	**(10,086)**	**5,032**	**23,081**	**17,662**
Balance, December 31, 2017	**440**	**209**	**40,443**	**177,742**	**262,445**	**481,279**

(Expressed in thousands of dollars)

4. Investments (continued)

(b) Fair value measurements – Hierarchy disclosure (continued)

The following table provides the changes during the year ended December 31, 2016 for financial instruments for which Level 3 inputs were used in determining fair value:

	Foreign equities	Hedge funds	Private equities	Real estate	Infrastructure	Total
	$	$	$	$	$	$
Balance, January 1, 2016	424	2,257	56,577	120,998	168,027	348,283
Purchases	-	-	4,563	53,601	84,787	142,951
Sales	-	(1,057)	(20,036)	(25,545)	(16,249)	(62,887)
Realized gain (loss)	-	(882)	12,643	8,367	11,188	31,316
Unrealized gain (loss)	(21)	163	(5,884)	9,423	(3,689)	(8)
Balance, December 31, 2016	403	481	47,863	166,844	244,064	459,655

The total unrealized and realized gains (losses) recognized during the year related to Level 3 investments was $53,979 (2016 - $31,308). There were no transfers between Level 1 and Level 2 during the years ended December 31, 2017 and 2016.

Level 3 investments consist of the following:

(i) Foreign equities

These comprise shares and units of investment trusts where the underlying investments are listed on global stock exchanges.

(ii) Hedge funds

The Plan has investments in two (2016 - three) hedge funds with two (2016 - three) hedge fund managers. The managers invest in a number of individual hedge funds with different strategies.

(iii) Private equities

Private equities consist of investments in limited liability partnerships that have invested in private equities.

(iv) Real estate

Real estate investments consist of investments in equities, real estate investment trusts and limited liability partnerships investing in real estate. Real estate investments are primarily in North American and Asian properties.

(v) Infrastructure

Infrastructure investments consist of investments in limited partnerships investing in infrastructure assets and a pooled fund investing in publicly traded equities. These investments are primarily in Canada, the United States, Australia and Europe.

(Expressed in thousands of dollars)

4. Investments (continued)

(c) Geographical allocation

The composition of the entire portfolio of investments, by country or region, is summarized as follows:

	2017	2016
	%	%
Canada	**64**	66
United States	**16**	16
United Kingdom	**3**	3
Europe	**14**	12
Asia	**3**	3
	100	100

5. Investment income

	2017	2016
	$	$
Interest income	**3,863**	3,564
Dividend income	**3,377**	4,712
Real estate income	**5,165**	5,344
Infrastructure income	**21,257**	13,929
Pooled fund distributions		
Bonds	**12,982**	13,590
Equities	**6,267**	6,620
Mortgages	**-**	166
	52,911	47,925

6. Changes in fair value of investments

	2017	2016
	$	$
Realized gains on investments	**66,235**	37,471
Change in unrealized gains on investments	**11,981**	21,268
	78,216	58,739

(Expressed in thousands of dollars)

7. Administrative expenses

	2017	2016
	$	$
Salaries and administrative costs	**1,184**	1,176
Actuarial services	**232**	126
Custodian	**200**	125
Other	**105**	142
Audit	**42**	36
	1,763	1,605

8. Related party transactions

The Plan reimburses UBC Investment Management Trust Inc. ("IMANT"), an entity wholly owned by the Sponsor, for its proportionate share of IMANT's operating costs. Costs for the year ended December 31, 2017, which are included in management fees, totaled $892 (2016 - $966).

9. Commitments

(a) Investments

In addition to investments already made in the following asset classes, the Plan is committed to invest the following amounts as at December 31:

	2017	2016	**2017**	2016	**2017**	2016
	€	€	**US$**	US$	**Cdn$**	Cdn$
Real estate	**-**	-	**29,848**	40,149	**15,514**	19,877
Infrastructure equity	**525**	525	**1,088**	5,883	**1,941**	12,187
Infrastructure debt		-		-	**60,826**	73,407
Private equities	**14,305**	-	**29,558**	22,889	**714**	2,183
	14,830	525	**60,494**	68,921	**78,995**	107,654

As at December 31, 2017, the total commitment in Canadian dollars was $177,104 (2016 - $200,822).

(Expressed in thousands of dollars)

9. Commitments (continued)

(b) Leases

The Plan has entered into an operating lease for office premises with an expiry date of October 31, 2022. As of December 31, 2017, the future minimum lease payments are due as follows:

	$
2018	75
2019	75
2020	75
2021	75
2022	62
	362

10. Financial instruments

The fair values of the Plan's cash, investment income receivable, contributions receivable, benefits payable and accounts payable are considered by management to approximate their carrying values due to the short-term nature of these financial instruments.

The Plan's investments are recognized at fair value in accordance with the significant accounting policy disclosed in note 3 (b).

11. Risk management

The Plan's investment activities expose it to a variety of financial risks: market risk (including currency risk, interest rate risk and price risk), credit risk and liquidity risk. As a pension plan, the Plan is fundamentally concerned with the management of risk. The Plan's overall risk management program seeks to maximize the returns derived for the level of risk to which the Plan is exposed and seeks to minimize potential adverse effects on the Plan's financial performance. The risk exposure is set to achieve the overall liability requirements of the Plan design.

The assets of the Plan are managed by a wholly-owned subsidiary of the University, IMANT. The Plan employs a Statement of Investment Policies and Procedures ("Policy") to identify, assess, manage and monitor its financial risks. The Policy provides asset mix ranges and limitations on the quality and concentration of investments the Plan is to hold. The Board of the Plan ("Pension Board") formulates the Plan's policy asset mix and the terms in the Policy document, which it recommends to the UBC Board of Governors for approval. The day to day management and adherence to the policy is the responsibility of the staff of IMANT. IMANT employs 39 investment managers (2016 - 37) across 60 mandates (2016 - 54).

The Pension Board oversees the management of the Plan with a focus on effective plan design, governance, investment policy, financing, administration and legal compliance. IMANT staff monitors the investment performance of the fund, including asset class and manager performance against specified benchmarks and reports regularly to the Pension Board on overall performance and compliance with the Policy.

A majority of the Plan's assets are invested in pooled funds. Pooled funds provide a more cost effective means of achieving diversification within selected asset classes. The manager of each pooled investment fund is governed by the manager's own investment policy for the pooled fund. IMANT staff is responsible for ensuring that the detailed investment policy statement setting out the investment constraints for the managers of such segregated accounts is prepared and agreed to by the managers.

(Expressed in thousands of dollars)

11. Risk management (continued)

(a) Price risk

The Plan is exposed to price risk. This arises from investments held by the Plan for which prices in the future are uncertain. The value of the various holdings in the funds may move up or down, sometimes rapidly. The Plan manages price risk by allocating its assets across a number of different investment managers with different mandates and investment styles. Different types of investments have historically reflected higher levels of risk, as measured by their volatility of returns.

Given the overall asset class holdings of the Plan, management expects most annual returns to be within a +/-8% (2016 - +/-9%) range of an expected long-term return of roughly +5% (2016 - +6%) (i.e. results ranging from -3% to +13%). This is based on AON's capital market assumptions as at December 31, 2017. While there may be some changes to the expected return from year to year of the individual asset classes, these changes should not be significant as the expected returns and volatilities are based on long-term results. The range of expected annual returns is based on the following average asset class standard deviation figures:

	2017	2016
Short term notes	+/- 1.2%	+/- 2%
Bonds	+/- 9.4%	+/- 8%
Canadian equities	+/- 16.3%	+/- 19%
Global equities	+/- 14.5%	+/- 17%
Private equities	+/- 23.2%	+/- 20%
Real estate	+/- 12.5%	+/- 13.5%
Infrastructure debt	+/- 9.9%	+/- 9.5%
Infrastructure equity	+/- 19.0%	-
Hedge funds	-	+/- 11%

	Market value at December 31, 2017	**Percentage of investments**	Market value at December 31, 2016	Percentage of investments
	$		$	
Short-term notes	**469**	**0%**	545	1%
Bonds	**540,759**	**34%**	456,182	31%
Canadian equities	**159,986**	**10%**	194,361	13%
Global equities	**337,693**	**21%**	253,653	17%
Private equities	**40,443**	**2%**	47,863	3%
Real estate	**177,742**	**11%**	166,844	11%
Infrastructure debt	**144,720**	**9%**	348,070	23%
Infrastructure equity	**203,617**	**13%**	-	0%
Hedge funds	**209**	**0%**	481	1%
	1,605,638	**100%**	1,467,999	100%

(Expressed in thousands of dollars)

11. Risk management (continued)

(a) Price risk (continued)

Based on the estimated range of volatility by asset class this would equate to the following dollar amounts, with all other variables held constant:

	2017		2016	
	Potential change in price	**Impact on overall Plan's net assets (+/-)**	Potential change in price	Impact on overall Plan's net assets (+/-)
		$		$
Short-term notes	**+/- 1.2%**	**6**	+/- 2.0%	11
Bonds	**+/- 9.4%**	**50,831**	+/- 8.0%	36,495
Canadian equities	**+/- 16.3%**	**26,078**	+/- 19.0%	36,929
Global equities	**+/- 14.5%**	**48,965**	+/- 17.0%	43,121
Private equities	**+/- 23.2%**	**9,383**	+/- 20.0%	9,573
Real estate	**+/- 12.5%**	**22,218**	+/- 13.5%	22,524
Infrastructure debt	**+/- 9.9%**	**14,327**	+/- 9.5%	33,067
Infrastructure equity	**+/- 19.0%**	**38,687**	-	-
Hedge funds	**+/- 11.0%**	**23**	+/- 11.0%	53

(b) Interest rate risk

The Plan is subject to interest rate risk. Interest rate risk is the risk that the fair value of future cash flows of a financial instrument will fluctuate because of changes in market interest rates. Rising interest rates cause a decrease in bond prices.

Duration is the most common measure of this risk and quantifies the effect of changes in bond prices due to a change in interest rates. The bond portfolio has an average duration of roughly 14 years (2016 - 14 years). Therefore, if long-term interest rates increased by 1%, the bond portfolio would fall in value by approximately 14% (2016 - 14%).

The impact on the value of the Plan's investments from an increase in interest rates will be partially or fully mitigated by the decrease in the value of the Plan's pension obligation.

(Expressed in thousands of dollars)

11. Risk management (continued)

(c) Foreign currency risk

Foreign currency risk is the risk that the value of non-Canadian investments, denominated in other than Canadian dollars, will increase or decrease because of changes in foreign currency exchange rates. The Plan has significant investments denominated in foreign currencies across a majority of the asset classes including U.S. and international equities, real estate and hedge funds. The Plan's investment policy includes a benchmark target requirement to hedge 100% exposure in non-Canadian real estate and infrastructure investments. In addition to direct hedging by some of the investment managers, the Plan retains an external manager to implement a rolling monthly foreign currency forward program to achieve the 100% hedging target. This program includes hedging of U.S. dollar, Euro, Japanese Yen and Pound Sterling investments. As of December 31, 2017, roughly 36% (2016 - 35%) of the Plan's assets were invested outside of Canada, and 23% (2016 - 24%) of this exposure was hedged. U.S. dollar exposure accounts for 16% (2016 - 16%) of the non-Canadian investment while Europe, Australasia, and Far East ("EAFE") currencies account for 20% (2016 - 19%) of the exposure. A 10% strengthening/weakening of the Canadian dollar versus the U.S. dollar at December 31, 2017 would have decreased/increased the U.S. dollar exposure by roughly $26,101 (2016 - $23,815). This amount would be reduced by non-Canadian real estate and infrastructure investments hedged through the currency hedging program. This assumes that all other variables remain constant.

(d) Credit risk

Credit risk is the risk of financial loss to the Plan if a counterparty to a financial instrument fails to meet its contractual obligations. The Plan's cash, investment income receivable, contributions receivable, short-term notes, and bonds are subject to credit risk. The maximum exposure to credit risk on these instruments is their carrying value of $570,015 (2016 - $476,501). The Plan manages the risk by limiting the credit exposure allowed by the investment managers. The investment policies of the various bond managers provide limits to the credit exposure and/or set a minimum overall average portfolio quality allowed by each manager. The Plan also invests in derivative strategies to replicate equity index exposure and to hedge foreign currency exposure. Counterparties for these investments are restricted to a minimum credit rating of "A" or "A2".

The overall credit ratings as a percentage of the total bonds and mortgages as of December 31, 2017 held in the Plan are as follows:

	2017	2016
	%	%
AAA	**23**	18
AA	**28**	24
A	**24**	28
BBB	**9**	11
Mortgages	**5**	6
Unrated	**11**	13

11. Risk management (continued)

(e) Liquidity risk

Liquidity risk for the Plan refers to the likelihood of any potential loss from a large percentage of requests for redemptions by Plan members. If all members with a deferred pension entitlement under age 55 had requested a transfer of their termination benefit on December 31, 2017 this would represent approximately 5.0% (2016 - 6.0%) of the Plan's assets.

All of the Plan's benefits payable, accounts payable, and accrued liabilities presented on the statements of financial position are due within one year.

Most of the Plan's assets are invested in large pooled funds of which the Plan is just one of many parties invested in these pooled funds which provides a high degree of liquidity. The Plan's managers typically invest in equities and bonds that are very marketable and that have a high degree of liquidity should they need to be sold in a relatively short timeframe.

Liquidity risk for the investment program refers to the risk that the Plan may not be able to generate sufficient cash resources to settle its obligations in full as they fall due or can only do so on terms that are materially disadvantageous.

The investments are exposed to monthly settlement of foreign currency forward contracts as well as cash calls related to the private equity, real estate and infrastructure investments. The sources of funding for these settlements are from the liquid portion of the Plan, the public market securities, as well as capital distributions related to private equity, real estate and infrastructure investments.

Investments in infrastructure, real estate, private equity and hedge funds have more restrictive liquidity constraints than public securities and may require continuing investment commitments. Infrastructure, real estate and private equity investments are mostly made through limited partnership agreements typically with contractual 10 year terms. Investments in the infrastructure, real estate and private equity limited partnerships occur over four to five year periods and redemptions are at the investment manager's discretion. For hedge fund investments, redemptions are on a quarterly or semi-annual basis and require 90 days' notice.

12. Capital management

The Plan defines its capital as the net assets available for benefits. The Plan's objectives when managing capital are to safeguard its ability to continue as a going concern, so that the Plan can provide the basic benefit to the Plan members and indexing subject to the Plan's ability to pay.

The Plan manages the capital structure and makes adjustments to it through implementation of the Statement of Investment Policies and Procedures that affects the earnings of the Plan and through the benefits/funding policy that affects the benefits paid. The Plan is not subject to externally imposed capital requirements.

The UBC Board of Governors is ultimately responsible for monitoring and evaluating the Plan's investment performance on a regular basis.