Annual Report

2018-19

THE MEMORIAL UNIVERSITY PENSION PLAN

DEPARTMENT OF HUMAN RESOURCES, MEMORIAL UNIVERSITY OF NEWFOUNDLAND

MEMORIAL UNIVERSITY

Annual Report of
The Memorial University Pension Plan

April 1, 2018 to March 31, 2019

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September 2019

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Chairperson’s Message

September 10, 2019

Honorable Christopher Mitchelmore
Minister of Advanced Education, Skills and Labour
West Block, Confederation Building
P.O. Box 8700
St. John’s, NL
A1B 4J6

Dear Minister Mitchelmore:

I am pleased to submit the 2018-19 Annual Report of the Memorial University Pension Plan. This report covers the period April 1, 2018 to March 31, 2019.

This is the second performance-based report to be presented under the Memorial University Pension Plan’s Activity Plan for 2017-2020. This document sets forth in clear language how the University has addressed the objectives that were outlined in the plan.

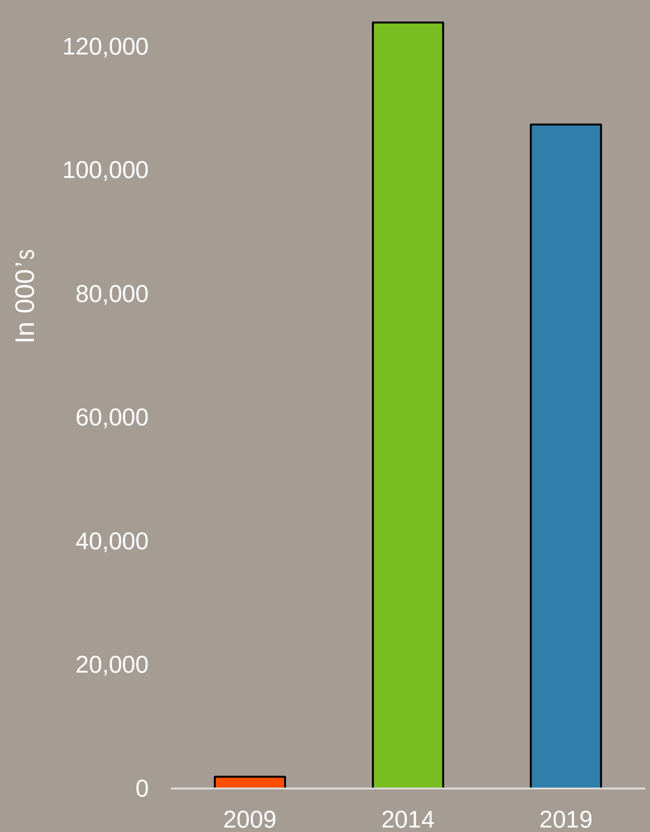
My signature below is on behalf of the Board of Regents and is indicative of our accountability for the actual results reported.

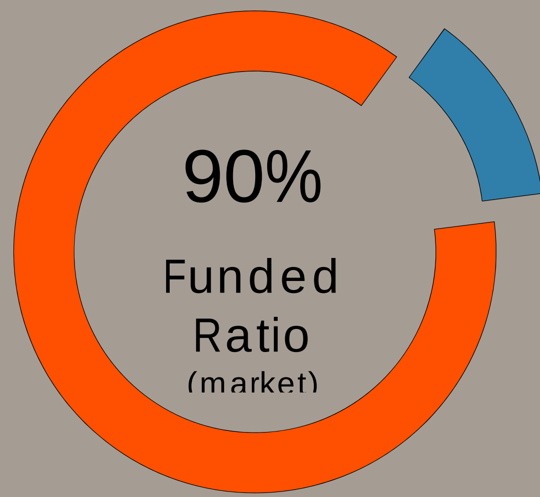
Respectfully submitted,

Iris Petten
Chair, Board of Regents

Pension Plan Highlights

Investment Income Comparison





8.13%
Annual Rate of Return

Benchmark Return
7.25%

1.67 Billion

Net Assets Available for Benefits

Membership Profile

The number of active members decreased by 6.75% over the last 5 years and the number of retirees increased by 31.5%.

Plan Membership Highlights

1,987
Females (55%)

ACTIVE
MEMBERS

Males (45%)
1,656

Active Member to
Retiree Ratio

2009 2.60 : 1

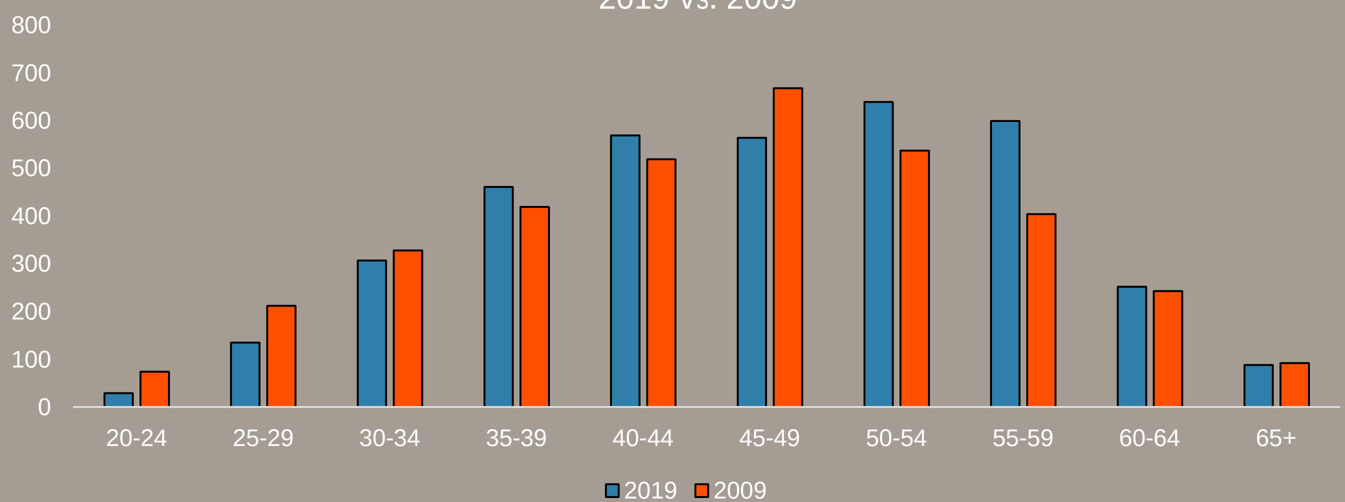
2019 1.54 : 1

34

Active
employees
over age
71

			March 31		
	2019	**2018**	**2017**	**2016**	**2015**
Active Members	3,643	3,778	3,860	3,961	3,907
Average Age of Active Members	47.3	47.2	46.8	46.6	46.5
Retirees (incl. Prin. Ben.)	2,362	2,209	2,084	1,961	1,796
Deferred Pensioners	303	260	252	268	362
Average Age at Retirement	61.33	61.30	61.23	61.02	60.97

Age Distribution - Active Members
2019 vs. 2009



Pension Plan Overview

The three-year Activity Plan prepared for the Memorial University Pension Plan (the "Plan") set out the Plan's objectives for the period April 1, 2017 to March 31, 2020. This Annual Report discusses the outcome of those objectives for the period April 1, 2018 to March 31, 2019 and provides additional information on the operation of the Plan for the year then ended. The Board of Regents, as trustee of the Fund, is responsible to ensure compliance with the **Memorial University Pensions Act** and operates under its own vision, mission, and mandate. Refer to the Activity Plan for more information on the Plan's mandate: https://www.mun.ca/hr/services/benefits/Activity_Plan_2017-2020.pdf

About the Plan

The Memorial University Pension Plan is one of the largest public sector pension plans in the Province and provides a lifetime defined benefit pension upon retirement. The Plan is funded through contributions made by employees and Memorial, as well as income from its investments. The majority of employees at the University's main campuses are participants in the Plan (i.e., Grenfell Campus, Marine Institute, Labrador Institute, and the St. John's Campus).

Pension Plan Design

The Plan is a contributory defined benefit pension plan, established in 1950 under statute of the provincial legislature. It is designed to provide retirement benefits to full-time permanent employees and qualifying contractual employees of the University. In addition, employees of certain separately incorporated entities of the University and affiliated employers are eligible to participate in the Plan. Benefits, which are integrated with the Canada Pension Plan, are based upon employees' years of pensionable service, best five-year average pensionable salary, and a two per cent accrual factor.

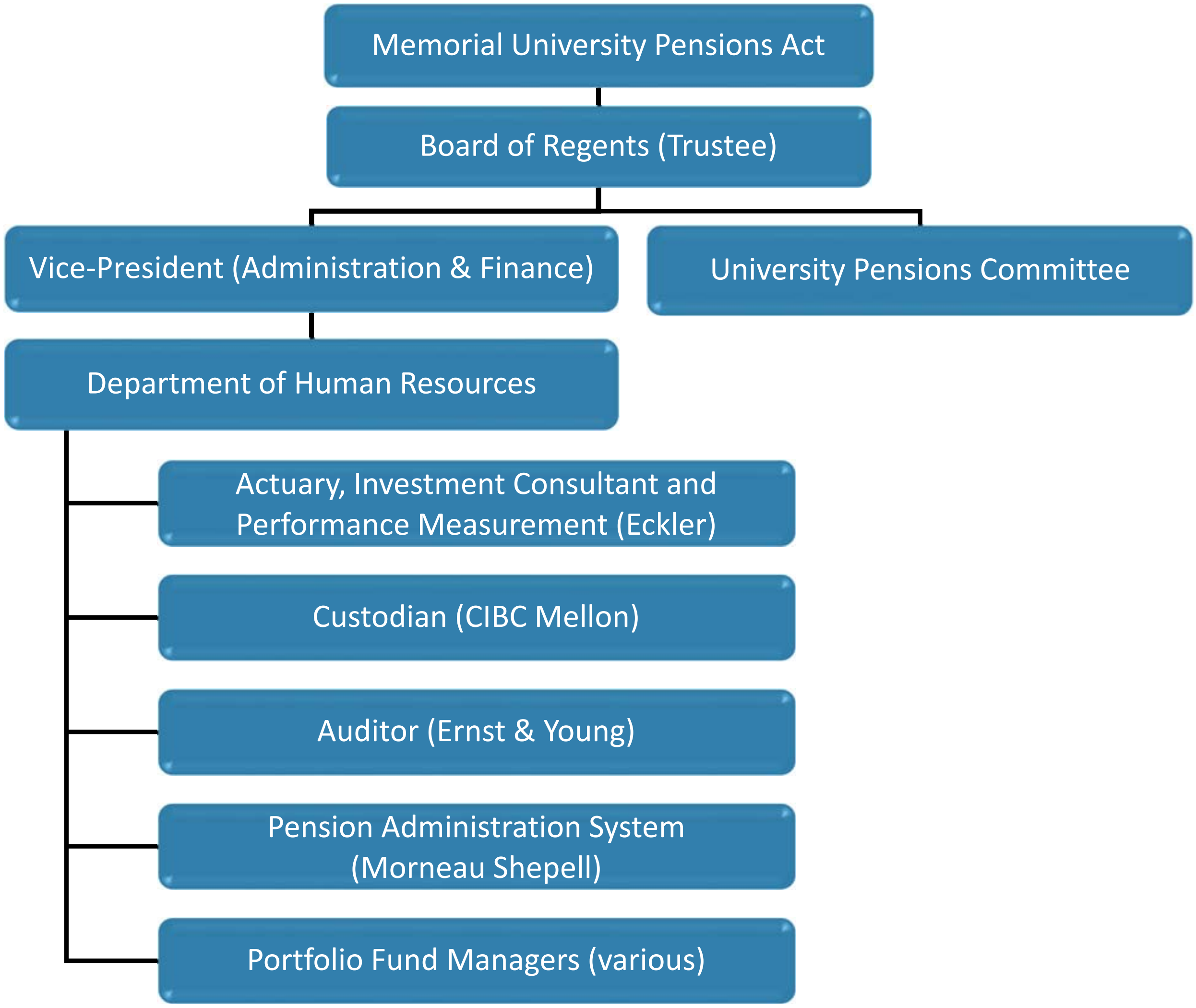
PENSION FORMULA:

2% x best 5-year average salary x years of pensionable service (inclusive of a "bridge benefit" to age 65)

The Plan operates under authority of the **Memorial University Pensions Act**, which prescribes the Board of Regents of the University as trustee. To assist with its responsibilities as trustee, the Board has established a University Pensions Committee to provide advice on matters relating to the Plan. This advisory committee, which has representation from across the entire University community, operates under terms of reference set out by the Board. The actual administration of the Plan is carried out by the University's Department of Human Resources.

The administrative and governance structure of the Plan is outlined below:

Figure 1: Organization Chart



Investments

All employee and University contributions are paid into the Memorial University Pension Fund (the Fund) for investment by external investment managers. The Statement of Investment Policy and Objectives that has been developed to guide the investment of the Fund, sets out a policy asset mix with the objective of maintaining predictable and stable benefit costs and contributions within a reasonable and acceptable level of risk. The Fund is invested in 13 separate investment mandates that include equities, traditional fixed income, real estate, and mortgages. Of the total investment, 31 per cent has been allocated to foreign equity markets.

The University Pensions Committee routinely monitors the performance of the Fund and where appropriate will recommend changes to the investment policy and its implementation. During the 2018-19 fiscal year, there were no changes to either the asset allocation or the existing investment management firms appointed to invest the Fund. There were, however, significant changes in the ownership structure of two of the investment management firms. In May 2018, Scotiabank completed an acquisition of Jarislowsky Fraser and in November 2018, TD Bank acquired Greystone Managed Investments. The Committee will continue to monitor the ongoing investment strategy and performance of these firms to ensure they satisfy the investment objectives set for the Plan.

Investing Locally

Through the Greystone Real Estate Fund, the Plan is invested locally in “351 Water Street” and “Scotia Place” in St. John’s and “Beclin Business Park” in Mount Pearl. The investment management firms engaged to manage the real estate portfolio routinely assess the local marketplace to identify further opportunities for investment.

Policy Asset Mix

The policy asset mix set for the investment of the Fund is set out below:

Table 1: Policy Asset Mix

Asset Class	Percentage Allocation	Benchmark Index
Canadian Equity	25%	S&P/TSX
U.S. Equity	21%	S&P 500
International Equity	10%	MSCI ACWI ex-US
Canadian Fixed Income	25%	FTSE TMX Universe
Cash/Short Term	3%*	n/a
Real Estate	8%	CPI + 4%
Mortgages	8%	60% TMX short + 40% TMX mid + 0.5%

* Note: For monthly re-balancing purposes, cash is included with active fixed income.

Investment Manager Benchmark Distribution

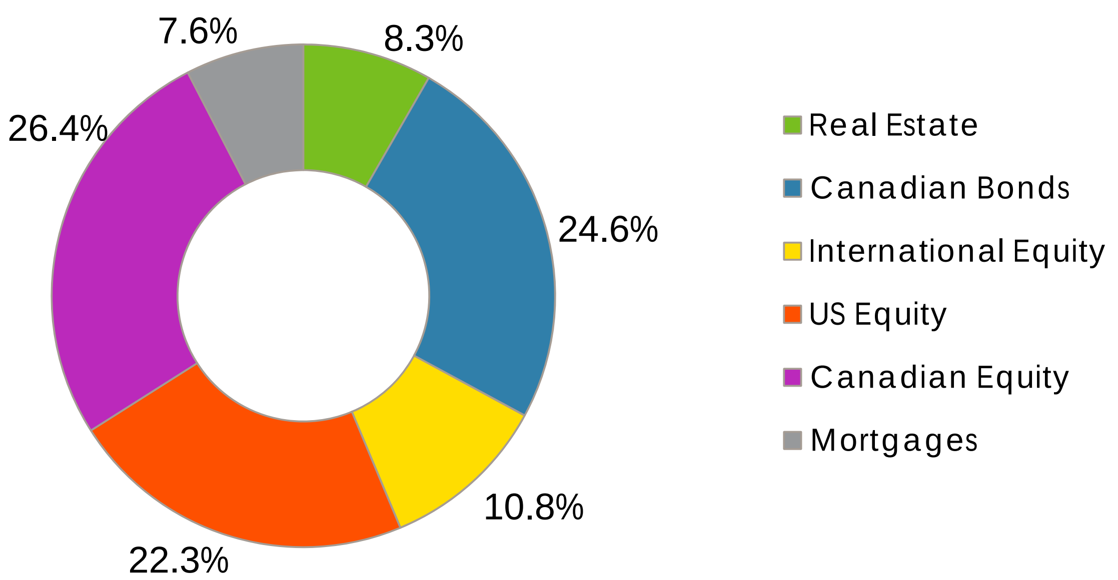
The Fund is invested by external institutional investment management firms. Their mandates and fund allocations are detailed in the table below:

Table 2: Benchmark Distribution

Manager	Mandate	Benchmark Allocation	Actual Allocation March 31, 2019
Jarislowsky Fraser Limited	Canadian Equity	12.5%	13.8%
Connor Clark & Lunn	Canadian Equity	6.25%	6.1%
Fidelity Investments Canada	Canadian Equity	6.25%	6.5%
Greystone Managed Investments Inc.	Canadian Fixed Income	7.75%	6.6%
Jarislowsky Fraser Limited	Canadian Fixed Income	7.75%	6.4%
CIBC Global Asset Management Inc.	Canadian Index Bonds	12.5%	11.6%
Alliance Bernstein	US Equity	21%	22.3%
Wellington	International Equity	3.75%	3.8%
Fiera	International Equity	3.75%	4.3%
Baillie Gifford	International Equity	2.5%	2.7%
IAM Real Estate Group	Real Estate	3.2%	3.0%
Greystone Managed Investments Inc.	Real Estate	4.8%	5.3%
Greystone Managed Investments Inc.	Mortgages	8%	7.6%

The relative distribution of assets across the entire Fund, as at March 31, 2019, is illustrated in the following chart:

Figure 2: Distribution of Assets

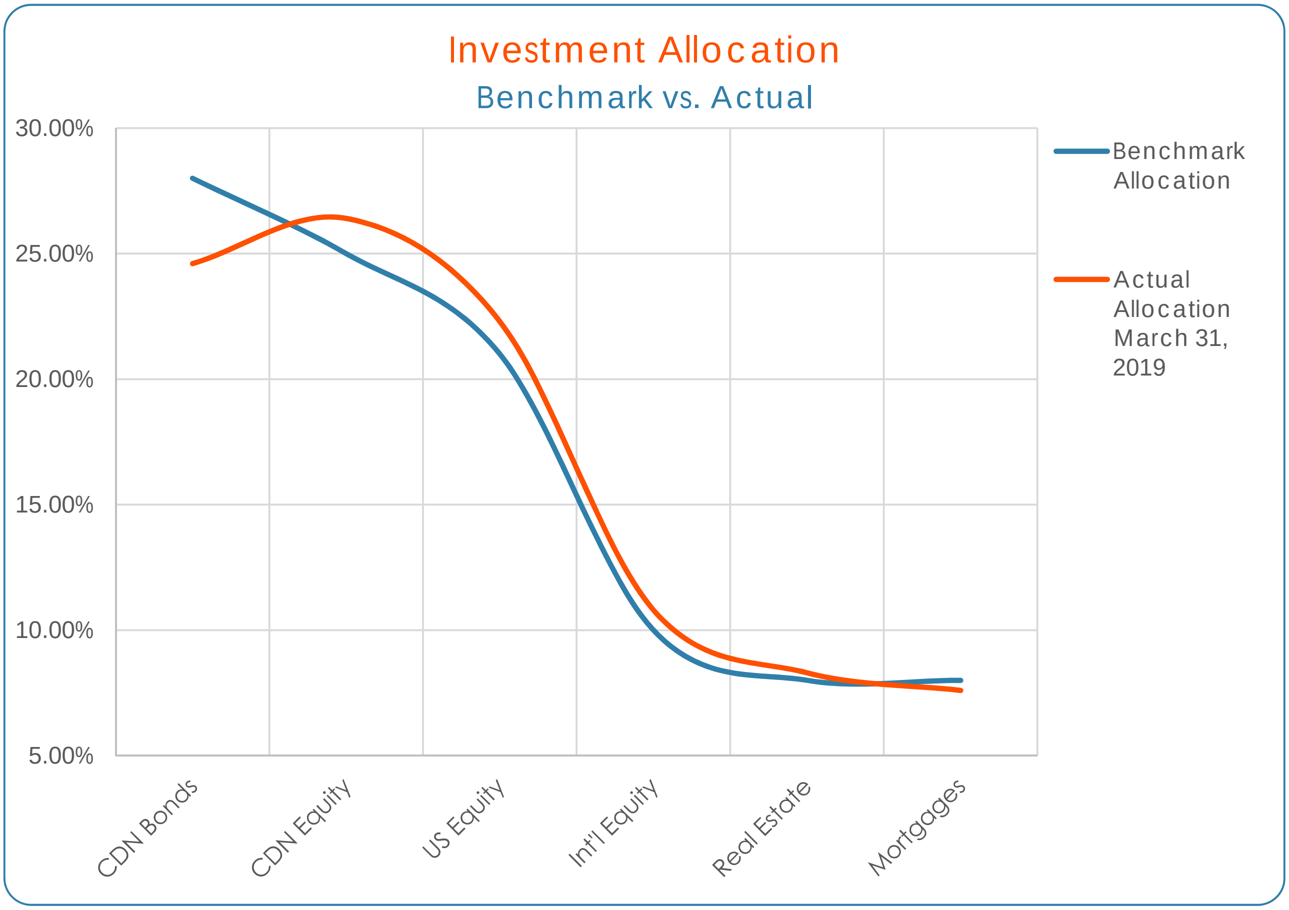


Rebalancing of Assets

The actual distribution of assets will vary from the policy asset mix over time due to the impact of market forces. Once an asset class moves outside a pre-determined range, a re-balancing will be performed by the University to move funds to, or from, that asset class to bring it back in line with investment policy limits.

Figure 3: Investment Allocation

Canadian Bonds and Mortgages were underweight, while the remaining investment allocations were overweight. All mandates are within their rebalancing limits.



Investment Performance

The 2018-19 fiscal year was one of significant volatility for the Fund. Investment returns were strong in the first quarter, buoyed primarily by gains in North American equity markets, with marginal positive support from international markets and domestic fixed income. The US market continued to be strong in the second quarter while domestic and international equity markets began to experience declines as did domestic bonds. It was during the third quarter, however, when the Fund experienced a period of significant downward pressure on performance stemming from a worldwide decline in global equity markets. There was, however, a slight offset to the underperforming stock market in Q3 from Canadian bonds arising from expectations of lower inflation and fewer interest rate increases. As much as the Fund lost value in the third quarter, it recovered those losses and more in quarter four due to a significant worldwide rebound in both equity and bond markets. Throughout each of the four quarters in 2018-19, the real estate and mortgage portfolios continued to provide their stabilizing effect on fund performance.

	Fund Value ($ Millions)	Quarterly Return (%)
Quarter 1	1,625.1	3.78
Quarter 2	1,637.9	1.24
Quarter 3	1,560.5	-4.22
Quarter 4	1,668.1	7.45

Despite a challenging third quarter the Fund achieved an annual return of 8.13 per cent for the fiscal year ended March 31, 2019. This was 2.33 percentage points ahead of the Plan's long term objective of 5.8 per cent, established for discounting liabilities and 0.88 percentage points above the benchmark return set for the Fund. In a universe of similarly invested funds it ranked in the third percentile where the first percentile represents the top performer and the 100th percentile, the worst.

Annual Return:

March 31, 2019 ……	8.13%
March 31, 2018 ……	6.00%

Over the longer term the Fund continues to perform well relative to its benchmark, comparator group and actuarial hurdle. The five year annualized return of 8.16 per cent surpassed the benchmark by 1.17 percentage points. On a ten year basis the Fund has generated an annualized return of 9.83 per cent, an excess of one percentage point over its benchmark and ranking it in the 19th percentile.

The performance of the Fund has exceeded the benchmark in nine of the last ten years and has ranked above the median balanced fund in eight of those years. Selected performance metrics are as follows:

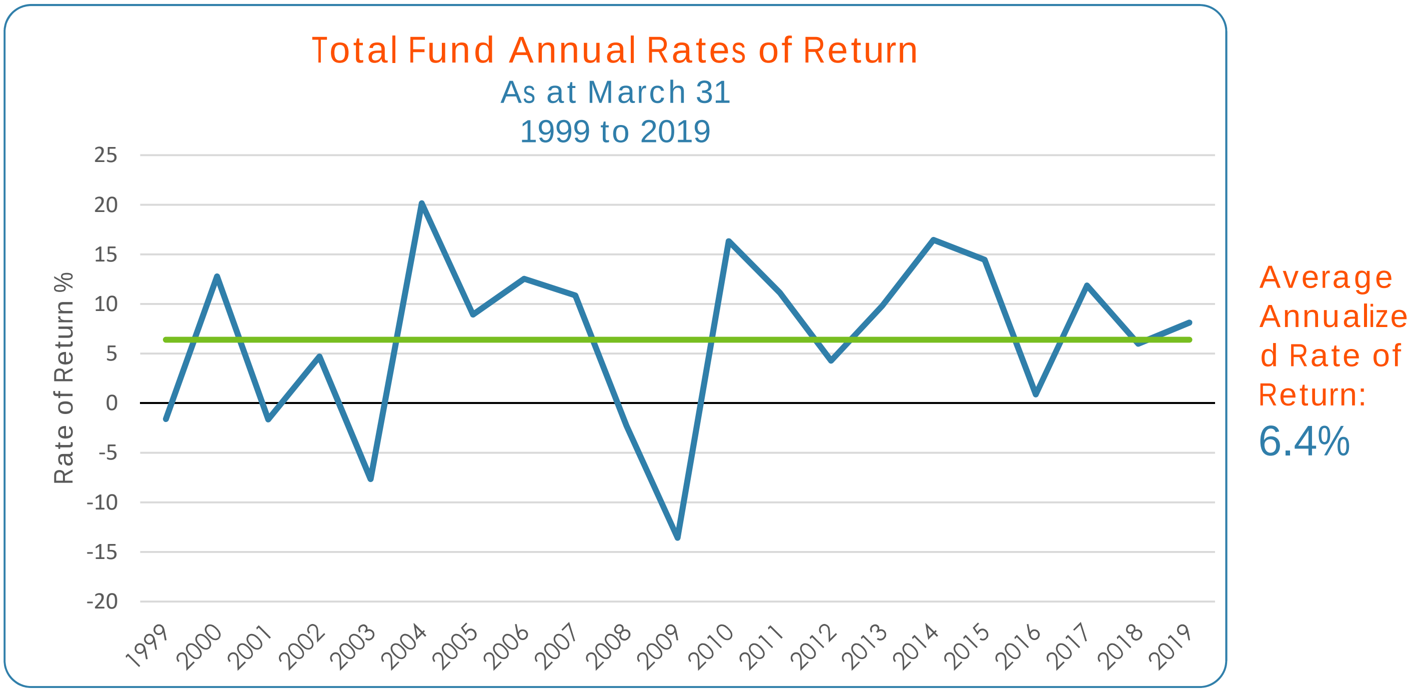
Table 3: Investment Performance (March 31)

	1 year	4 years	5 years	10 years
Annualized Return	8.13%	6.64%	8.16%	9.83%
Benchmark Return*	7.25%	5.61%	6.99%	8.83%
Value Added	**0.88%**	**1.03%**	**1.17%**	**1.00%**
Percentile Ranking	3	1	3	19

* The benchmark is the expected return of the Fund based upon a passive investment in the indices underlying the policy asset mix.

Figure 4: Rate of Return

Annual fund returns over the period 1999 to 2019 are presented in the chart below.



Note: For presentation purposes, long term returns are available from 1999 onwards. Past returns should not be viewed as an indicator of future fund performance.

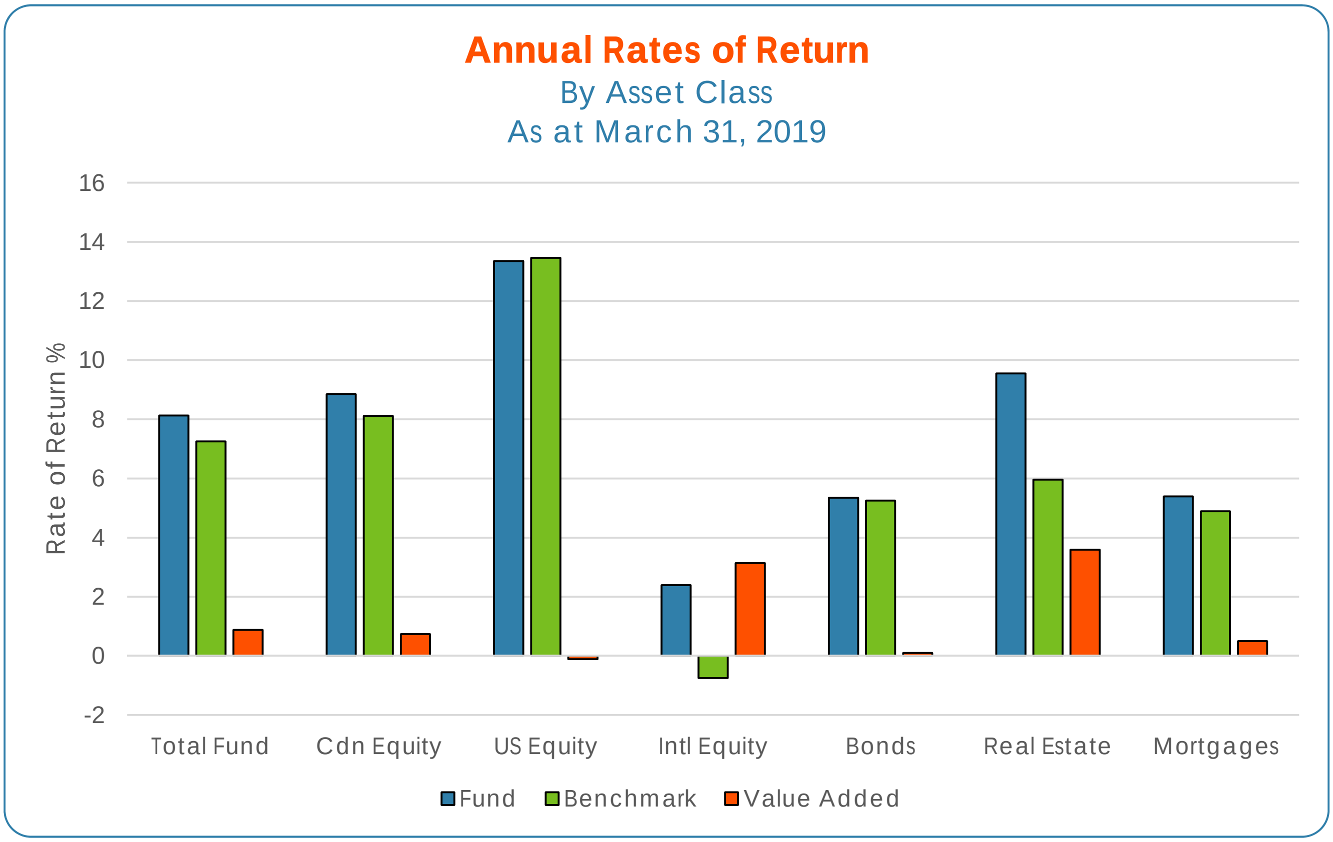
Mandate Performance

80% of the Fund's mandates outperformed their respective benchmarks over 12 months ending March 31, 2019.

100% of the Fund's mandates with 4 year performance track records outperformed their respective benchmarks over 4 years ending March 31. 2019.

Figure 5: Asset Class Rate of Return

Annual returns by asset class for the one year period ended March 31, 2019 are shown below:



Actuarial Valuation

An actuarial valuation of the Plan was performed as at December 31, 2018 and the results have been extrapolated to March 31, 2019 for reporting purposes. Annual valuations have been performed since 2006 as required by the provincial Office of the Superintendent of Pensions as a condition of granting a solvency funding exemption under the **Pension Benefits Act Regulations.** The most recent solvency funding exemption expired on December 31, 2018.

An actuarial valuation for funding purposes is required at least once every three years by pension standards legislation. The December 31, 2018 valuation is a funding valuation and will be used to determine special payments against the Plan's unfunded liability and to set the contribution rate for employees and the University. The results of the extrapolation to March 31, 2019 and the December 31, 2018 valuation are highlighted in the following table together with comparative figures for an extrapolation of the Plan's financial position to March 31, 2018:

Table 4: Actuarial Results

Actuarial Balance Sheet						
	March 31, 2019 ($ Millions)		December 31, 2018 ($ Millions)		March 31, 2018 ($ Millions)	
	Going Concern	Solvency	Going Concern 1	Solvency 2	Going Concern	Solvency
Actuarial Value of Assets 4	1,648.0	See Note 3) below	1,602.9	1,711.8	1,546.2	See Note 3) below
Actuarial Liabilities	1,861.8		1,842.0	2,163.6	1,798.4	
Unfunded Liability	(213.8)		(239.1)	(451.8)	(252.2)	

1) The going concern unfunded liability, as at December 31, 2018, includes approximately $73.9 million related to the introduction of indexing in July 2004. A financing plan is in place to amortize this portion of the unfunded liability over a remaining period of 25.5 years from December 31, 2018.
2) Solvency assets at December 31, 2018 include the present value of five years' worth of going concern special payments ($153.1 million).
3) An extrapolation of the solvency position was not performed as at March 31, 2019 or March 31, 2018.
4) The actuarial value of assets includes a fair value adjustment to "smooth" market effects over a three year period.

Funding

The December 31, 2018 actuarial valuation of the Plan is the basis for funding. It revealed a going concern unfunded liability of $239.1 million of which approximately $73.9 million is in respect of past service costs associated with the introduction of indexing in 2004. By special provision of the **Pension Benefits Act, 1997** (PBA), the University and employees are financing the indexing liability over a remaining period of 25.5 years from December 31, 2018 through contributions equivalent to 1.2 per cent of pensionable payroll (shared equally by the University and employees). The balance, namely $165.2 million, must be liquidated by the University through special payments of 10.7 per cent of pensionable payroll over a period of 15 years. For the fiscal years 2015-16, 2016-17 and 2017-18 the University was given regulatory approval to defer the required going concern special payments. With respect to the 2018-19 special payment, the University will address this with its broader review of Plan funding as part of its joint sponsorship negotiations.

The Plan's unfunded liability is addressed as Issue Two in the Report on Performance section of this Activity Report and the status of joint sponsorship negotiations is outlined in Issue Three.

Current Service Cost

Current service cost is the basis upon which the Plan's contribution rate for both employees and the University is determined. The December 31, 2018 actuarial valuation revealed that current service cost had increased by 0.8 per cent over levels identified in the last funding valuation, at December 31, 2015. The Plan's new contribution rate is shown below in comparison to the current rate:

Table 5: Contribution Rate

Rate Structure	Current Contribution Rate	New Contribution Rate *
Earnings up to Year's Basic Exemption under Canada Pension Plan	11.4%	11.8%
Earnings between Year's Basic Exemption under Canada Pension Plan and the Year's Maximum Pensionable Earnings under Canada Pension Plan	9.6%	10.0%
Earnings above Year's Maximum Pensionable Earnings under Canada Pension Plan	11.4%	11.8%

* proposed implementation date – January 1, 2020

Report On

Performance 2018-19

Three primary issues and related goals and objectives as identified in the 2017-2020 Activity Plan.

Responsible stewardship in the collection, investment and disbursement of the Fund

The Board of Regents, as trustee of the Fund, is responsible to ensure that funding objectives for the Plan are met and that contributions are invested in a prudent and timely manner. The funding objectives include an actuarially sound contribution rate, an appropriate investment strategy and a special payment stream to liquidate unfunded liabilities. The special payment stream is addressed in Issue Two. The Board must further ensure that the Plan is administered in accordance with the **Memorial University Pensions Act** and other governing legislation.

Over the past year of the Plan, the Board of Regents ensured that the funding objectives of the Plan were met and that current contributions were invested in a timely and prudent manner in accordance with all governing legislation. In doing so, they successfully achieved their objective as outlined in the 2017-2020 Activity Plan. During the period April 1, 2018 to March 31, 2019 a total of $65.9 million in contributions from the University and its employees were paid into the pension fund for investment while the plan paid out a total of $81.6 million in benefits to eligible retired employees and their beneficiaries. Over that same period, $6.7 million in administrative expenses were paid in addition to $5.8 million in termination benefits. The following details the Plan's successful achievement of the indicators, and therefore the objective presented in the activity plan for the 2018-19 fiscal year.

Objective

By March 31, 2019, the Memorial University Pension Plan will have met its funding objectives, including the awarding of monies to eligible retired members or their principal beneficiaries[1] and the payment of associated administrative expenses.

Indicators:

- <u>Collected and invested contributions</u>
  During the 2018-19 fiscal year, the Plan collected a total of $65,870,000 in contributions, representing amounts paid by the University and its employees and funds transferred from other employers' plans. All contributions are paid into the Pension Fund for investment by external investment managers. Summary information on the Plan's investment structure and performance has been included in this Report under the "Investments" section.

- <u>Ensured eligible retired members/principal beneficiaries[1] received pension benefits</u>
  The Plan paid a total of $81,609,000 in benefits to eligible retired employees or their beneficiaries in 2018-19.

- Paid associated administrative expenses
  During 2018-19, the Plan paid a total in $6,743,000 in administrative expenses and $5,795,000 in termination benefits.

[1]The University has replaced the term “survivor” with “principal beneficiary” in Plan documentation and communications.

2019-20 Objective

By March 31, 2020, the Memorial University Pension Plan will have met its funding objectives, including the awarding of monies to eligible retired members or their principal beneficiaries and the payment of associated administrative expenses.

Indicators: Collected and invested contributions

Ensured eligible retired members/principal beneficiaries received pension benefits

Paid associated administrative expenses

Unfunded Liability

As the employer, Memorial University must comply with the pension plan funding requirements of the **Pension Benefits Act, 1997** (PBA). When the Plan experiences funding deficiencies, as measured by periodic actuarial valuations, the University must make additional special payments into the Plan. The PBA requires that going concern deficiencies be amortized over a period not greater than 15 years, while solvency deficiencies must be paid over not more than 5 years.

The University was exempt from the requirement to fund solvency deficiencies until December 31, 2018. In addition, through special provision under the PBA, the past service costs associated with the introduction of indexing in 2004 are being amortized over a remaining period of 25.25 years from March 31, 2019.

With respect to going concern funding, the University was given regulatory approval to defer the required special payments for 2015-16, 2016-17 and 2017-18. The deferrals were granted while the University and its employee groups were engaged in a governance review of the Plan focused on joint sponsorship.

In July 2018, a preliminary agreement on a framework for joint sponsorship was reached between the University and its unionized employee groups represented by the Canadian Union of Public Employees, local 1615 (CUPE), the Newfoundland Association of Public and Private Employees (NAPE) and the Memorial University of Newfoundland Faculty Association (MUNFA). This agreement contemplated that the Plan would become jointly sponsored before March 31, 2019 and included a funding policy that ensured the Plan’s ongoing viability as well as measures to address the existing going concern unfunded liability. Further discussions on joint sponsorship have, however, been deferred pending ongoing discussion with the Provincial Government on the proposed agreement and the funding proposal.

An actuarial valuation of the Plan was performed as at December 31, 2018 for funding purposes. The valuation revealed a going concern unfunded liability of $239.1 million and this includes approximately $73.9 million in respect of indexing introduced in 2004. Under the PBA the balance of $165.2 million must be amortized over a 15 year period with special annual payments of 10.7 per cent of pensionable payroll.

Objective

By March 31, 2019, Memorial University will have utilized a funding policy to guide the long term sustainability of the Pension Plan and to address the unfunded liability.

Indicator: Implemented a funding policy to guide the sustainability of the Pension Plan and address future surpluses and deficits.

The University and its major unionized employee groups (CUPE, NAPE and MUNFA) reached preliminary agreement on a framework for reform of the Plan in July 2018. This agreement contemplated that by March 31, 2019, responsibility for the Plan and its governance would have become the joint responsibility of the University and employees. It included key elements of a proposed funding policy that dealt with the Plan's existing unfunded liability and provided guidelines for future funding, including rules governing the disposition of emerging deficits and sharing of future surpluses. The University, with the support of the Unions, provided a draft Reform Agreement to the Provincial Government in August, 2018 and discussions are ongoing.

Due to the status of the proposed agreement on reform of the Plan, Memorial University did not meet the objective of utilizing a funding policy to guide the long term sustainability of the Plan and to address the unfunded liability as set out in the 2017-2020 Activity Plan. The University will continue to work with Plan stakeholders, including the Provincial Government, toward finalizing the process of structural change for the Plan and the implementation of a funding policy in the next fiscal year.

With respect to the portion of the unfunded liability related to indexing, this is being financed by ongoing contributions from the University and employees at a combined rate of 1.2 per cent of pensionable payroll. It is proposed that this financing arrangement will continue under a jointly sponsored pension plan.

2019-20 Objective

By March 31, 2020, Memorial University will have utilized a funding policy to guide the long term sustainability of the Plan and to address the unfunded liability.

Indicator: Implemented a funding policy to guide the sustainability of the Pension Plan and address future surpluses and deficits.

Joint Sponsorship

Within the province of Newfoundland and Labrador, other large public sector pension plans have undergone a transformational pension reform process which has culminated in the establishment of shared responsibility for pension plan management and funding.

In consideration of the Plan's status as a public sector pension plan and in recognition of its funding challenges, the Provincial Government has requested that the University and Pension Plan stakeholders also move to establish joint sponsorship of the Plan and formulate a funding policy to guide its future sustainability. Under this structure, the Plan would be jointly sponsored by the University and employee groups and the sponsors will share equally in the Plan's management and funding.

During the fiscal year 2018-19, the University and its major unionized employee groups (CUPE, NAPE, and MUNFA) reached preliminary agreement on a framework for Pension Plan reform to jointly sponsor the Plan. This draft agreement was provided to the Provincial Government in August, 2018. Discussions are ongoing and the University continues to work with the Provincial Government on a resolution.

Objective

By March 31, 2019, the Memorial University Pension Plan will have transitioned to a jointly sponsored pension plan.

Indicators: Continued negotiations with employee groups toward the development of a joint sponsorship agreement for the future management and funding of the Pension Plan.

Signed reform agreement.

Signed joint sponsorship agreement.

Due to the status of the proposed agreement on Pension Plan reform, Memorial University did not meet the objective of transitioning to a jointly sponsored pension plan by March 31, 2019. Subject to the outcome of discussions with the Provincial Government on the proposed reform agreement, the University and employee groups will recommence joint sponsorship discussions in fiscal year 2019-20.

2019-20 Objective

By March 31, 2020, the Memorial University Pension Plan will have transitioned to a jointly sponsored pension plan.

Indicators: Continued negotiations with employee groups toward the development of a joint sponsorship agreement for the future management and funding of the Plan.

Signed reform agreement.

Signed joint sponsorship agreement.

Highlights and Partnerships

Financial Highlights

Selected financial highlights for the Plan are shown in the table below. More detailed information can be found in the audited financial statements beginning on page 29 of this report.

Table 6: Financial Highlights

	March 31 2019	2018
Net Assets Available for Benefits *	1,667,740,000	1,569,748,000
One-Year Annual Rate of Return	8.13%	6.00%
Realized Investment Income	107,373,000	107,205,000
Pensions Paid**	78,559,000	71,679,000
Current Contributions: Employee	29,818,000	30,478,000
University	29,818,000	30,479,000
Buyback Contributions: Employee	3,659	3,538
University	130	201
University special payments:		
Going Concern	Nil	Nil
Solvency deficit (refunds)	2,445,000	3,757,000

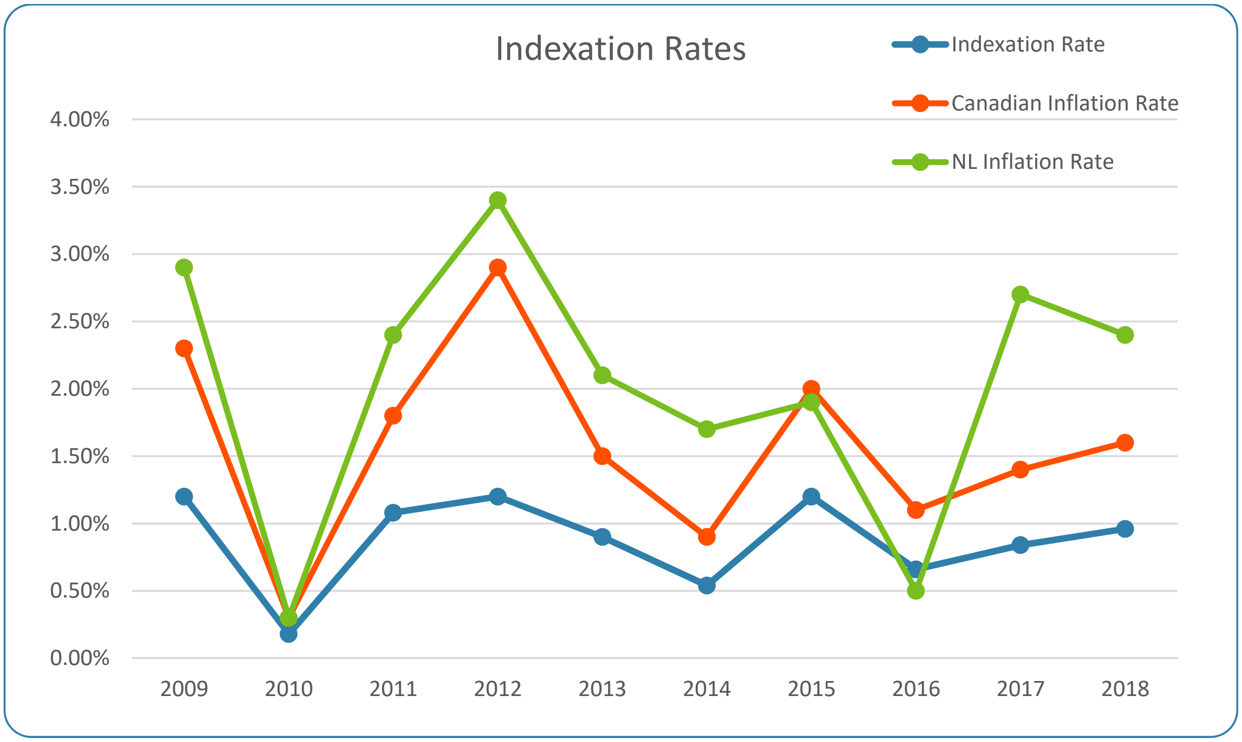
* Net assets available for benefits is reported at fair value and does not include the actuarial smoothing adjustment. Refer to note 6 of the accompanying financial statements for further information.

** Not inclusive of death benefits or refunds.

On July 1, 2018, 1,680 retirees and principal beneficiaries received a 0.96 per cent indexing adjustment to their pensions. Indexing was introduced under the Plan in July 2004, with yearly adjustments calculated as 60 per cent of the annual change in the consumer price index, as measured by Statistics Canada, to a maximum yearly increase of 1.2 per cent.

Figure 6: Indexation Rates

Indexation rates from 2009 to 2018 are showing in the chart below:



Average Indexation Rate:

0.88%

For the 10 year period from 2009 to 2018.

Membership Movement and Distribution

Throughout the fiscal year the Plan's participant distribution will inevitably change with retirements, new hires, etc. Movement within the 2018-19 fiscal year is shown below:

Table 7: Membership Movement

Membership Group	March 31, 2019	April 1, 2018
Actives	3,643	3,778
Retirees	2,086	1,941
Principal Beneficiaries	276	268
Deferred	303	260

Voluntary Retirement Program

In Spring 2018, the University announced that it would be offering a voluntary retirement program (VRP) to eligible employees who were either members of the Plan or participated in an alternate retirement savings program offered by the University. The eligibility criteria were aimed at longer serving employees who were of retirement age and whose retirement would facilitate academic renewal and contribute to budgetary reduction initiatives. The retirement incentive consisted of a lump sum payment by the University to the employee based upon their existing salary and years of service. The program was structured to run in four phases of varying age and service combinations with a requirement to retire by December 31, 2018. Of those that were eligible to avail of the program, 40 per cent were approved and retired in the 2018 calendar year.

Table 8: VRP Participation

Phase	Age and Service Criteria	Number of Retirements		
		Faculty	Staff	Total
1	Age 71 with no service minimum	14	0	14
2	Age 65 – 71 with minimum 30+ years of pensionable service	21	4	25
3	Age 60-65 with minimum 35+ years of pensionable service	8	6	14
4	Age 60-65 with minimum 30+ years of pensionable service	7	9	16
	Totals	**50**	**19**	**69**

Totals include two employees who were not members of the Plan but instead participated in an alternate retirement savings program (i.e. group RRSP) offered by Memorial University.

Retirement Planning Seminars

To help Memorial employees plan for their retirement, full day retirement planning seminars are held annually. With almost 1,000 employees eligible for unreduced retirement by 2019, this year's seminar had approximately 194 participants. The seminar was open to employees and their spouses and was attended by those who anticipate

retiring in the next few years and those who are planning ahead for retirement in the years to come. During the seminar, participants learned about the University's pension and post-retirement benefits, the Canada Pension Plan and Old Age Security Benefits. Presentations were also provided by a representative of Memorial University of Newfoundland Pensioners' Association (MUNPA) and from a financial planning and consulting firm. The University also provides pension information sessions upon request from individual departments.

Actuarial Valuation and Financial Position

A full valuation of the Plan was performed at December 31, 2018 and extrapolated to March 31, 2019 for financial reporting purposes. The results of this valuation are reported upon in an earlier section. The financial position of the Plan improved from the prior year due primarily to:

i. investment returns of 8.13 per cent exceeding the discount rate of 5.8 per cent; and
ii. experience gains relative to the assumptions used to value pension liabilities

The Plan's funded position over the past five years is shown below:

Table 9: Financial Position

	March 31				
	2019 (000s)	2018 (000s)	2017 (000s)	2016 (000s)	2015 (000s)
Net Assets at Market Value	1,667,740	1,569,748	1,500,468	1,358,381	1,359,270
Pension Obligations	1,861,829	1,798,415	1,736,599	1,657,148	1,465,989
Deficit	194,089	228,667	236,131	298,767	106,719
Funded Ratio	90%	87%	86%	82%	93%

- Results of December 31 valuations are extrapolated to March 31 for financial reporting.
- Financial positions and funded ratios are reported at market value as per Pension Plan financial statements and do not reflect asset "smoothing" adjustments contained in actuarial valuation reports.

Opportunities and Challenges Ahead

Opportunities

The following areas of opportunity have been identified for 2019-20:

- Providing retirement planning seminars;
- Individual employee meetings on preparing for retirement.

Challenges

The following challenges have been identified for 2019-20:

- Continued monitoring of the investment performance of fund managers and review of the Statement of Investment Policy and Objectives;
- Development of a funding strategy to address the unfunded liability;
- Continued negotiation with employee groups on reaching agreement on joint sponsorship of the Plan and development of a future oriented funding policy and governance model.

Conclusion

The Plan performed well during the 2018-19 fiscal year. The growth in Plan assets outpaced pension liabilities leading to an improvement in the funded ratio which stood at 90 per cent at March 31, 2019. Net assets available for benefits increased by $100 million to end the year at $1.67 billion while pension liabilities grew to $1.86 billion, representing an increase of $63 million over the prior year.

On the investment side, the Pension Fund posted an annual return of 8.13 per cent for the year ranking it in the third percentile when compared to a universe of similarly invested funds. This result was well above of the Plan's actuarial hurdle of 5.8 per cent and was a significant contributor to the improved financial position. The unfunded liability measured on a market value basis, as reported in the Plan's financial statements, declined by approximately $34.6 million from the prior year to $194.1 million at March 31, 2019.

Significant progress was made during the year on joint sponsorship as the proposed Plan sponsors reached preliminary agreement on a framework for reform. A draft pension plan reform agreement has been developed which details how the plan would be managed in the future and includes, among other things, provisions for a funding policy and disposition of the existing unfunded liability. The draft agreement has been provided to Government and discussions are ongoing.

The Board, through the work of the University administration and stakeholder groups, will continue its efforts to ensure that funding and governance goals are achieved and that the Plan remains competitive and affordable for its constituent groups.

With respect to the objectives set out in the Board of Regents' three-year activity plan intended to guide the Plan for the fiscal years 2017-18 to 2019-20, the University met the funding objective relative to the collection, investment, and disbursement of the fund. Due to the status of the draft Pension Plan reform agreement, the objectives related to the unfunded liability and joint sponsorship have not been met. The University anticipates that these objectives will be fulfilled in 2019-20, subject to the outcome of discussions with Government on the framework for pension reform and successful conclusion of joint sponsorship negotiations.

Financial Statements

Memorial University of Newfoundland Pension Plan

March 31, 2019

Independent auditor's report

To the Board of Regents of
Memorial University of Newfoundland

Opinion

We have audited the financial statements of **Memorial University of Newfoundland Pension Plan** [the "Plan"], which comprise the statement of financial position as at March 31, 2019, 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 Plan as at March 31, 2019, and its changes in net assets available for benefits and its changes in pension obligations for the year then ended in accordance with 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 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 individual charged with governance for the financial statements

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

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

Auditor's responsibilities for the audit of the financial statements

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

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

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

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

Ernst & Young LLP

Chartered Professional Accountants

St. John's, Canada
July 8, 2020

Memorial University of Newfoundland Pension Plan

STATEMENT OF FINANCIAL POSITION

As at March 31
[thousands of dollars]

	2019	2018
ASSETS		
Receivables		
Contributions receivable	**590**	687
Accrued interest and dividends	**2,807**	2,252
Amounts due from pending trades	**2,554**	323
Due from Memorial University of Newfoundland *[note 4]*	**3,427**	1,745
	9,378	5,007
Investments *[notes 5& 10]*		
Cash and short-term investments	**44,047**	48,160
Bonds and debentures	**408,096**	371,686
Equities	**949,312**	900,427
Real estate	**138,448**	128,995
Mortgages	**126,483**	120,022
	1,666,386	1,569,290
Intangible assets *[note 9]*	**175**	218
Total assets	**1,675,939**	1,574,515
LIABILITIES		
Accounts payable and accrued expenses	**1,418**	1,320
Accrued pension refunds	**3,500**	1,948
Amounts payable from pending trades	**3,281**	1,499
Total liabilities	**8,199**	4,767
Net assets available for benefits	**1,667,740**	1,569,748
Pension obligations	**(1,861,829)**	**(1,798,415)**
Deficit	**(194,089)**	**(228,667)**

See accompanying notes

On behalf of the Board:

Sue Petten

Robert Bishop

Chair of the Board of Regents

Chair of the Finance Committee

Memorial University of Newfoundland Pension Plan

STATEMENT OF CHANGES IN NET ASSETS AVAILABLE FOR BENEFITS

Year ended March 31
[thousands of dollars]

	2019	2018
INCREASE IN ASSETS		
Investment income		
Interest income	**17,333**	11,778
Dividend income	**21,779**	20,967
Current-period increase (decrease) in fair value of investments	**18,896**	(17,286)
Realized gain on sale of investments	**68,261**	74,460
	126,269	89,919
Contributions *[note 7]*		
Employee - current service	**29,818**	30,478
- past service	**3,659**	3,538
Employer - current service	**29,818**	30,479
- past service	**130**	201
- special payments	**2,445**	3,757
	65,870	68,453
Total increase in assets	**192,139**	158,372
DECREASE IN ASSETS		
Benefits paid	**78,559**	71,679
Refunds of contributions	**5,795**	7,709
Death benefits	**3,050**	2,995
Administrative expenses *[note 8]*	**6,743**	6,709
Total decrease in assets	**94,147**	89,092
Increase in net assets	**97,992**	69,280
Net assets available for benefits, beginning of year	**1,569,748**	1,500,468
Net assets available for benefits, end of year	**1,667,740**	1,569,748

See accompanying notes

Memorial University of Newfoundland Pension Plan

STATEMENT OF CHANGES IN PENSION OBLIGATIONS

Year ended March 31
[thousands of dollars]

	2019	2018
Actuarial present value of accrued pension benefits, beginning of year	**1,798,415**	1,736,599
Experience gains	**(15,578)**	(19,831)
Changes in actuarial assumptions/methodology	**-**	556
Interest accrued on benefits	**104,486**	100,993
Benefits accrued	**61,910**	62,481
Benefits paid, death benefits and refunds of contributions	**(87,404)**	(82,383)
Actuarial present value of accrued pension benefits, end of year *[note 6]*	**1,861,829**	1,798,415

See accompanying notes

NOTES TO FINANCIAL STATEMENTS

March 31, 2019
[tabular amounts in thousands of

1. DESCRIPTION OF PLAN

The following description of the Memorial University of Newfoundland Pension Plan [the "Plan"] is a summary only. For more complete information, reference should be made to the *Memorial University Pensions Act (the "Act").*

General

The Plan is a contributory defined benefit pension plan covering eligible employees of Memorial University of Newfoundland [the "University"] in accordance with the Act.

Where differences exist between the provisions of the Act and the Newfoundland *Pensions Benefits Act, 1997* [the "PBA"], the minimum standards prescribed by the PBA will prevail unless the Plan provisions exceed these standards.

Funding policy

The Plan is subject to the funding provisions of section 35 of the PBA and section 12 of the PBA Regulations which require that the employer contribute an amount equal to the normal actuarial cost allocated to the employer in the most recently filed actuarial valuation. In addition, where the Plan experiences a solvency deficiency, the employer is required to contribute an amount sufficient to liquidate the solvency deficiency within five years of the solvency valuation date. Likewise, going concern unfunded liabilities are required to be liquidated by the employer over a period not exceeding 15 years.

Provincial guarantee

The Plan is being underwritten by the Province of Newfoundland and Labrador. Section 6 of the Act states:

> All pensions, payments, and refunds and all expenses of the administration of this Act are a charge upon and payable out of the fund and if at any time there is not sufficient money at the credit of the fund for those purposes as they fall due for payment the Minister of Finance shall pay to the board an amount to cover the deficiency, and the board shall deposit that amount to the fund.

Service pensions

A service pension is available based on the number of years of service times two percent of the best five-year average pensionable salary. Pensions are indexed from age 65 at the rate of 60% of the annual change in the Consumer Price Index, as measured by Statistics Canada, to a maximum annual increase of 1.2%.

Survivors' pensions

A survivor pension is paid to a surviving principal beneficiary or dependent child, as defined in the Act, of a member who has a minimum of two years' credited service.

Death refunds

A death refund is payable to the estate of a pensioner or survivor where such pensions have not been paid to the full extent of the individual's contributions plus interest. In a similar manner, a death refund is payable to the estate of a contributor where no survivor pension is paid. A death refund may also be paid to a surviving principal beneficiary who elects to transfer the commuted value of their survivor pension from the Plan where the death of a contributor precedes the commencement of their pension.

Refunds

Upon application and subject to locking-in provisions, a terminated employee may withdraw their contributions and accumulated interest.

Income taxes

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

2. BASIS OF PRESENTATION

These financial statements have been prepared on a going concern basis as set out in Section 4600, Pension Plans, in Part IV of the Chartered Professional Accountants of Canada ["CPA Canada"] Accounting Handbook. These financial statements present the information of the Plan as a separate reporting entity independent of the sponsor and participants of the Plan.

3. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Use of estimates

The preparation of financial statements in conformity with Canadian accounting standards for pension plans requires management 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 revenues and expenses during the year. Actual results could differ from these estimates. These estimates are reviewed periodically and, as adjustments become necessary, they are reported in earnings in the period during which they become known. Areas of key estimation include the actuarial assumptions for the determination of the pension obligations [see note 6] and the fair value of investments [see note 10].

Investments

Investments are stated at fair value and transactions are recorded as of the trade date. Fair value is the amount of consideration that would be agreed upon in an arm's length transaction between knowledgeable willing parties who are under no compulsion to act. In determining fair value, adjustments have not been made for transaction costs as they are not considered to be significant. The change in the difference between the fair value and cost of investments, at the beginning and end of each fiscal year, is reflected in the statement of changes in net assets available for benefits as current-period change in fair value of investments.

Fair value of investments is determined as follows:

Bonds, debentures and equities are valued at year-end quoted market prices where available. Where quoted prices are not available, estimated fair value is calculated using comparable securities. In the case of bonds and debentures, fair value measurement is based upon the bid price whereas equities are valued at the mid-point of the bid-ask spread.

Short-term notes, treasury bills and term deposits maturing within a year are valued at amortized cost, which, together with accrued interest income, approximates fair value given the short-term nature of these instruments.

Guaranteed investment certificates and term deposits maturing after one year are valued at fair value determined as the present value of estimated future cash flows discounted at interest rates in effect on the last business day of the year for investments of a similar type, quality, and maturity.

Pooled fund investments are valued at the unit value supplied by the pooled fund administrator, which represents the Plan's proportionate share of underlying net assets at fair value determined using closing market prices.

The investment in real estate is comprised of units in both a closed-end real estate fund and an open-end real estate fund. The fair value of properties in both funds is determined at least annually by independent accredited appraisers. New acquisitions are carried at cost for the first 12 months.

Investment income

Investment income, which is recorded on the accrual basis, includes realized gains (losses) on the sale of investments, interest income, dividends and unrealized changes in fair value.

Realized gain on sale of investments

The realized gain on the sale of investments is the difference between proceeds received and the average cost of investments sold.

Recognition of contributions and benefits

Contributions and benefits are recognized on the accrual basis of accounting.

All current service and required contributions from the University and Plan participants, respectively, are reflected in the year of the Plan participant's earnings.

Foreign currency translation

The fair value of foreign currency denominated investments, included in the statement of net assets available for benefits, is translated into Canadian dollars at year-end rates of exchange. Gains and losses arising from translations are included in the current-period increase in fair value of investments.

Foreign currency denominated transactions including cost amounts, are translated into Canadian dollars at the rates of exchange in effect on the dates of the related transactions.

Intangible assets

Intangible assets are amortized on the basis of their estimated useful lives using the straight line method and the following duration:

Software 10 years

Fair value of financial instruments

Investment assets and liabilities are measured at fair value as disclosed elsewhere in these financial statements. Other assets and liabilities do not have significant fair value risk as they are all due within twelve months.

4. DUE FROM MEMORIAL UNIVERSITY OF NEWFOUNDLAND

The treasury function of the Plan is administered by the University and, therefore, the Due from Memorial University of Newfoundland account represents funds owed to the Plan by the University.

[tabular amounts in thousands of

5. INVESTMENTS

[a] The following table summarizes investments at fair value:

	2019	2018
Cash and short-term investments	**44,047**	48,160
Canadian bonds and debentures:		
Federal	**71,685**	71,148
Provincial	**60,982**	51,605
Corporate	**81,209**	64,568
Pooled funds	**194,220**	184,365
	408,096	371,686
Canadian equities:		
Common stock	**319,687**	288,967
Pooled funds	**115,437**	111,707
	435,124	400,674
Foreign equities:		
Common stock	**334,795**	325,065
Pooled funds	**179,393**	174,688
	514,188	499,753
Total equities	**1,401,455**	900,427
Canadian Real estate	**138,448**	128,995
Canadian Mortgages	**126,483**	120,022
	1,666,386	1,569,290

[b] Realized losses arising from foreign currency translation amounted to $64,611 for the year ended March 31, 2019 [2018 – loss of $311,920]. For financial statement presentation purposes, these amounts have been included in realized gain on sale of investments.

[tabular amounts in thousands of

6. OBLIGATION FOR PENSION BENEFITS

The present value of accrued pension benefits was determined using the projected benefits method prorated on service and the administrator's best estimate assumptions. The Actuary, Eckler Limited, performed an actuarial valuation as at December 31, 2018, and extrapolated the results to March 31, 2019.

The actuarial present value of benefits as at March 31, 2019, was estimated to be $1,861,829 [2018 – $1,798,415]. The statement of changes in pension obligations outlines the principal components of change in actuarial present value from one year to the next.

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 December 31, 2018, valuation were:

Discount rate	Salary escalation rate
5.8% [2017 – 5.8%] pre- and post-retirement	4.0% [2017 – 4.0%] per annum

The actuarial value of net assets available for benefits has been determined at amounts that reflect long-term market trends [consistent with assumptions underlying the valuation of the accrued pension benefits]. The fair value is the underlying basis and incorporates an investment reserve calculated as the unamortized difference between expected and actual investment returns over a period of three years.

The actuarial asset values used in the extrapolations for 2019 and 2018 were as follows:

	2019	**2018**
Net assets available for benefits	**1,667,740**	1,569,748
Actuarial value changes not reflected in fair value of net assets	**(19,677)**	(23,530)
Actuarial value of net assets available for benefits	**1,648,063**	1,546,218

[tabular amounts in thousands of

7. FUNDING POLICY

Pursuant to the Act, employees are required to contribute to the Plan in accordance with the following schedule:

11.4%	of pensionable earnings up to the Year's Basic Exemption ["YBE"] under the *Canada Pension Plan Act*;
9.6%	of pensionable earnings above the YBE up to and including the Year's Maximum Pensionable Earnings ["YMPE"] under the *Canada Pension Plan Act*;
11.4%	of pensionable earnings above the YMPE.

An actuarial valuation of the Plan was prepared as at December 31, 2018 for funding purposes. The valuation revealed that the current service cost of benefits accruing to members had increased by 0.8%. Current service costs are shared equally between the University and employees. A contribution rate increase of 0.4% is scheduled for implementation effective January 1, 2020.

The University is required to contribute an amount equal to the contributions paid by employees and any additional amounts required to be paid by an employer under the PBA. For the period April 1, 2015 to March 31, 2019, the University was exempt from the going concern funding requirements of the PBA thereby allowing deferral of the special payments otherwise due for the fiscal years 2015/16 through 2018/19.

With respect to solvency, the University is exempt to March 31, 2020, from the PBA requirement to liquidate solvency deficiencies within five years of the solvency valuation date. Where the solvency ratio is below prescribed limits the University will, however, make special payments into the fund representing the solvency deficiency on refunds and transfers paid out of the fund.

A valuation of the Plan was performed as at December 31, 2018, and the results have been extrapolated to March 31, 2019, for financial statement reporting. The extrapolation revealed that the going concern unfunded liability is $213.7 million at March 31, 2019, based on current Plan provisions and PBA requirements. A portion of the unfunded liability relates to the past service cost of indexing, introduced under the Plan, effective July 1, 2004. A funding arrangement was implemented coincident with the introduction of indexing to liquidate this unfunded liability over a period of 40 years. At March 31, 2019, approximately 25.25 years are remaining in the amortization schedule. The indexing liability is amortized on a declining balance basis along with recognition that if the indexing contributions (i.e., an additional 0.6% of payroll being made by both the University and Employees) exceed the originally scheduled amortization payment, then 15 years' worth of these excess contributions can be accounted for when determining the University's special payments.

The December 31, 2018, actuarial valuation disclosed a going concern unfunded liability of $239.1 million. The University is required to make special payments to amortize the unfunded liability over a period of not more than 15 years. The portion of the going concern unfunded liability (after accounting for the indexing liability) to be amortized was $165.2 million and the required amortization payment for fiscal 2019/2020 is $32.6 million [or 10.7% of pensionable payroll]. The next actuarial valuation for funding is due no later than December 31, 2021 [i.e., within three years of the December 31, 2018, actuarial valuation].

[tabular amounts in thousands of

8. ADMINISTRATIVE EXPENSES

Administrative expenses are paid by the University on behalf of the Plan. The Plan then reimburses the University on a monthly basis. A detailed breakdown of these expenses is as follows:

	2019	2018
Administrative expenses:		
Actuarial fees	177	354
Administrative services	283	279
Audit fees	12	12
Custodial fees	375	339
Investment management fees	5,378	5,219
Salaries and benefits	461	449
Amortization	44	44
Other fees	13	13
	6,743	6,709

9. INTANGIBLE ASSETS

	2019			2018		
	Cost	**Accumulated Amortization**	**Net Book Value**	**Cost**	**Accumulated Amortization**	**Net book Value**
Software	**437**	**262**	**175**	437	219	218

[tabular amounts in thousands of

10. FAIR VALUE MEASUREMENTS, FINANCIAL RISKS AND RISK MANAGEMENT

The fair value of investments is as described in notes 3 and 5[a]. The fair value of other financial assets and liabilities, namely contributions receivable, accrued interest and dividends, due from Memorial University of Newfoundland, accounts payable and accrued expenses, and accrued pension refunds are measured at amortized cost. The fair value of amounts due from pending trades and amounts payable from pending trades is represented by the fair value of the underlying securities.

Fair value hierarchy

	2019	2018
Level 1		
Cash & short term investments	**44,047**	48,160
Equities	**654,482**	614,032
	698,529	662,192
Level 2		
Equities – Pooled Funds	**294,830**	286,395
Bonds & debentures	**408,096**	371,686
Mortgages	**126,483**	120,022
	829,409	778,103
Level 3		
Real estate	**138,448**	128,995
	1,666,386	1,569,290

Financial instruments measured at fair value are classified according to a fair value hierarchy that reflects the importance of the data used to perform each valuation. The fair value hierarchy is made up of the following levels:

Level 1- valuation based on quoted prices (unadjusted) in active markets for identical assets or liabilities;

Level 2- valuation techniques based on inputs other than quoted prices included in Level 1 that are observable for the asset or liability and derived, either directly as prices or indirectly from prices;

Level 3- valuation techniques using inputs for the asset or liability that are not based on observable market data (unobservable inputs).

[tabular amounts in thousands of

The fair value hierarchy requires the use of observable data on the market each time such data exists. A financial instrument is classified at the lowest level of hierarchy for which significant input has been considered in measuring fair value. There have been no significant transfers between Levels for all reporting periods presented.

The following table summarizes the changes in the fair value of financial instruments classified in Level 3 for the year ended March 31:

Level 3

	2019	2018
Real estate		
Balance at beginning of year	**128,995**	104,423
Net purchases	**670**	15,000
Net dispositions	**(837)**	(415)
Net dividends earned	**2,559**	1,756
Net dividends transferred out	**(2,430)**	(1,588)
Net realized gains	**53**	91
Net unrealized gains	**9,567**	9,896
Administrative expenses	**(129)**	(168)
	138,448	128,995

Fair values of investments are exposed to price risk, liquidity risk and credit risk.

Price risk

Price risk is comprised of currency risk, interest rate risk, and market risk.

[a] **Currency risk:** Currency risk relates to the possibility that the investments will change in value due to future fluctuations in the U.S., Euro, and other international foreign exchange rates. For example, a 5% strengthening of the Canadian dollar against the U.S. dollar at March 31, 2019, would have decreased the U.S. investment value by approximately $18,500,000. Conversely, a 5% weakening of the Canadian dollar against the U.S. dollar at March 31, 2019, would have increased the U.S. investment value by approximately $18,500,000.

A 5% strengthening of the Canadian dollar against the U.K. Pound at March 31, 2019, would have decreased the U.K. investment value by approximately $1,300,000. Conversely, a 5% weakening of the Canadian dollar against the U.K. Pound at March 31, 2019, would have increased the U.K. investment value by approximately $1,300,000.

[tabular amounts in thousands of

A 5% strengthening of the Canadian dollar against the Euro at March 31, 2019, would have decreased the European investment value by approximately $2,600,000. Conversely, a 5% weakening of the Canadian dollar against the Euro at March 31, 2019, would have increased the European investment value by approximately $2,600,000.

A 5% strengthening of the Canadian dollar against the Swiss Franc at March 31, 2019, would have decreased the Swiss investment value by approximately $950,000. Conversely, a 5% weakening of the Canadian dollar against the Swiss Franc at March 31, 2019, would have increased the Swiss investment value by approximately $950,000.

[b] **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, thereby impacting pension liabilities which are exposed to longer-term fixed-income instruments. 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 March 31, 2019, the average duration of the bond portfolio was 7.5 years. Therefore, if interest rates were to increase by 1%, the value of the bond portfolio would drop by 7.5%.

	Within 1-year	**1-5 years**	**5-10 years**	**Over 10 years**	**No specific maturity**	**Total**
Cash and short-term investments	44,047	—	—	—	—	**44,047**
Bonds and debentures						
Federal	—	37,255	25,422	9,008	—	**71,685**
Provincial	—	12,060	16,161	32,761	—	**60,982**
Corporate	5,838	47,044	11,715	16,612	—	**81,209**
Pooled funds	—	—	—	—	194,220	**194,220**
Total bonds and debentures	5,838	96,359	53,298	58,381	194,220	**408,096**
Total fixed income	**49,885**	**96,359**	**53,298**	**58,381**	**194,220**	**452,143**

[c] **Market risk:** Market 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 Plan's investment policy which incorporates diversification of the investment portfolio across various asset classes and within each asset class. Equity price risk is managed by investing in Canadian, U.S. and international equities through the use of five external investment managers utilizing differing

[tabular amounts in thousands of

investment styles. The equity portfolio is diversified across a range of economic sectors and companies and is limited to stocks traded on recognized stock exchanges.

Fixed-income market risk is managed by diversifying across various government and corporate issuers and by maintaining minimum quality ratings of "A" as determined by recognized bond rating agencies. The minimum quality rating for the pooled index bond fund is "BBB".

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 Plan's current asset class holdings shown below, the expectation is that over the long term (15 years), the Plan will return approximately 6.0%, with a 95% probability of the 15 year annualized return falling within the range of 2.1% to 9.8%.

	Estimated volatility %
Asset class	
Canadian equities	+/- 18.40
U.S. equities	+/- 17.70
International equities	+/- 18.80
Real estate	+/- 8.20
Mortgages	+/- 3.40
Cash and short-term investments	+/- 1.20
Canadian bonds and debentures	+/- 3.30

	Market value at March 31, 2019	Investments %
Held-for-trading securities		
Cash and short-term investments	44,047	2.6
Canadian bonds and debentures	408,096	24.5
Canadian equities	435,124	26.1
U.S. equities	334,795	20.1
International equities	179,393	10.8
Canadian real estate	138,448	8.3
Canadian mortgages	126,483	7.6
Total	1,666,386	100.0

[tabular amounts in thousands of

	% change	Net impact on market value
Benchmark for investments		
S&P/TSX Composite Index	**+/- 18.40**	+/- 80,063
S&P 500 C$	**+/- 17.70**	+/- 65,736
MSCI EAFE C$	**+/- 18.80**	+/- 33,726
CPI	**+/- 8.20**	+/- 11,367
Blended FTSE (60% short; 40% mid)	**+/- 3.40**	+/- 4,300
FTSE Universe	**+/- 3.30**	+/- 13,467

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 *[see note 6]* and operating expenses. Liquidity requirements are managed through net monthly contributions and by 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. At March 31, 2019, the maximum risk exposure for this type of investment amounts to $408,096. The Plan limits credit risk by purchasing individual fixed-income instruments that have a credit rating of "A" or higher as rated by recognized Canadian bond rating services. The Plan also owns units of an indexed bond fund which may hold fixed-income instruments with credit ratings of "BBB" and above.

The following table shows the percentage of fixed-income holdings in the portfolio by credit rating:

Rating	%
AAA	36.8
AA	41.0
A	16.4
BBB	5.8

11. CAPITAL DISCLOSURES

The purpose of the Plan is to provide pension benefits to Plan members. The Plan's objective when managing capital is to preserve assets in a manner that provides it with the ability to continue as a going concern. To accomplish this objective, a broadly diversified investment portfolio is utilized to achieve the highest rate of return within an acceptable level of risk. With the assistance of an outside consultant, the Plan's pension advisory committee and the University's administration department regularly monitor the asset mix to ensure compliance with the Statement of Investment Policies and Objectives.

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