Annual Report

2021-22

THE MEMORIAL UNIVERSITY PENSION PLAN

DEPARTMENT OF HUMAN RESOURCES, MEMORIAL UNIVERSITY OF NEWFOUNDLAND

Annual Report of
The Memorial University Pension Plan

April 1, 2021 to March 31, 2022

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September 2022

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Chairperson's Message

Honorable John Haggie
Minister of Education
West Block, Confederation Building
P.O. Box 8700
St. John's, NL
A1B 4J6

Dear Minister Haggie:

I am pleased to submit the 2021-22 Annual Report of the Memorial University Pension Plan, a Category 3 entity under the **Transparency and Accountability Act**. This report covers the period April 1, 2021 to March 31, 2022.

This is the second performance-based report to be presented under the Memorial University Pension Plan's Activity Plan for 2020-2023. 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.

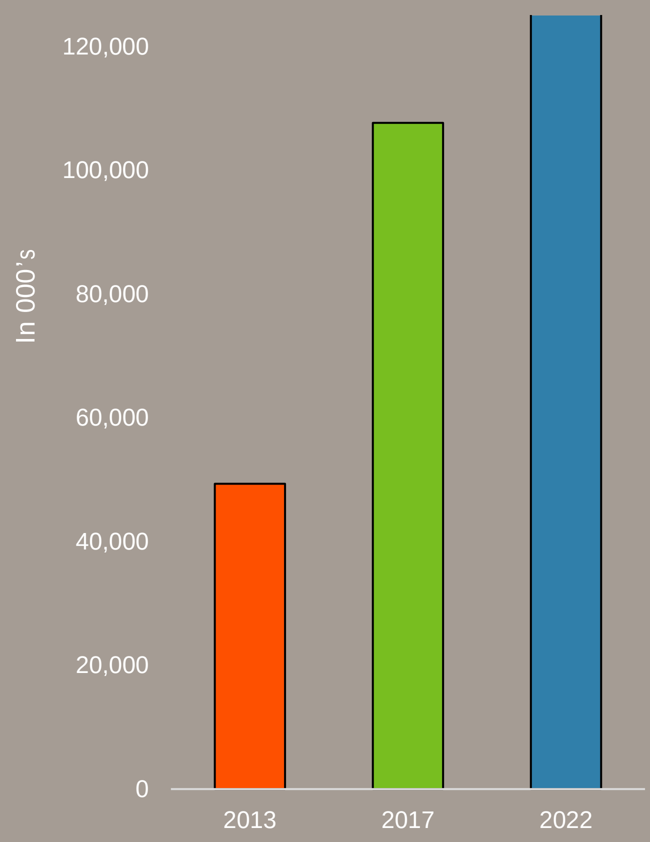
Respectfully submitted,

Cathy Duke

Cathy Duke
Acting Chair, Board of Regents

Pension Plan Highlights

Investment Income Comparison



99.4%

Funded Ratio
(market)

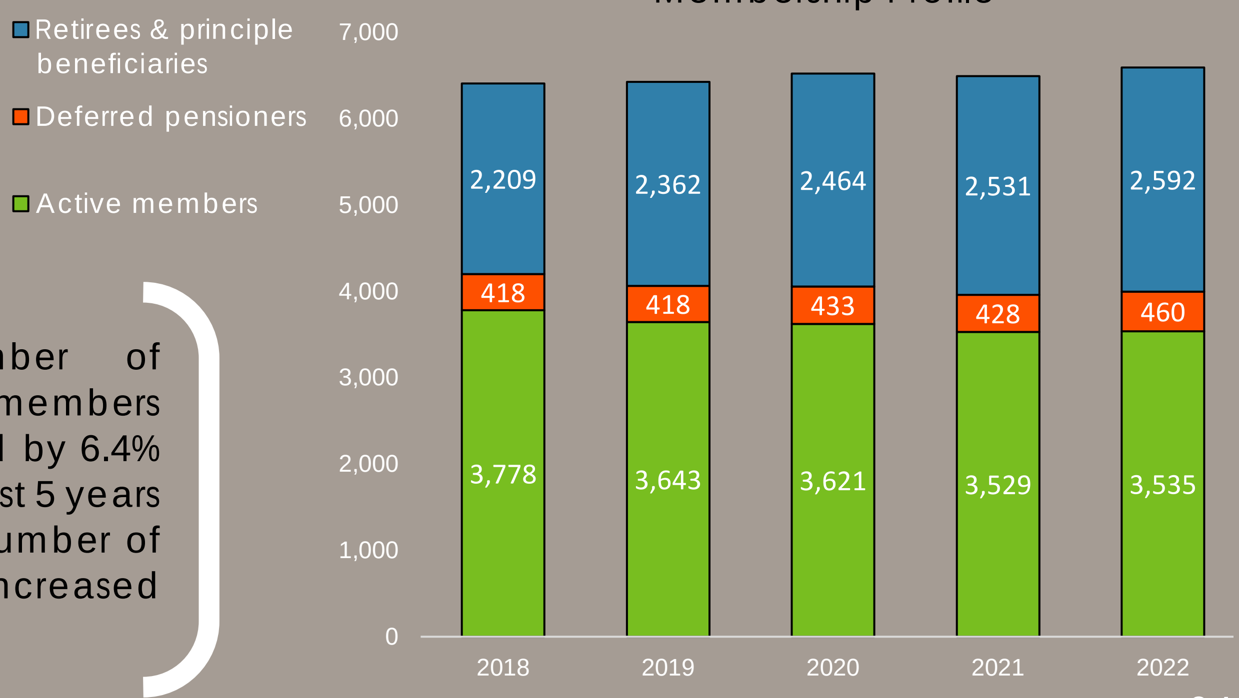
5.0%
Annual Rate of Return

Benchmark Return
7.46%

$2.01 Billion

Net Assets Available for Benefits

Membership Profile



The number of active members decreased by 6.4% over the last 5 years and the number of retirees increased by 17.3%.

Plan Membership Highlights

1,963
Females
(55.5%)

ACTIVE MEMBERS

Males (44.5%)
1,572

Active Member to Retiree Ratio

2013 **2.3 : 1**

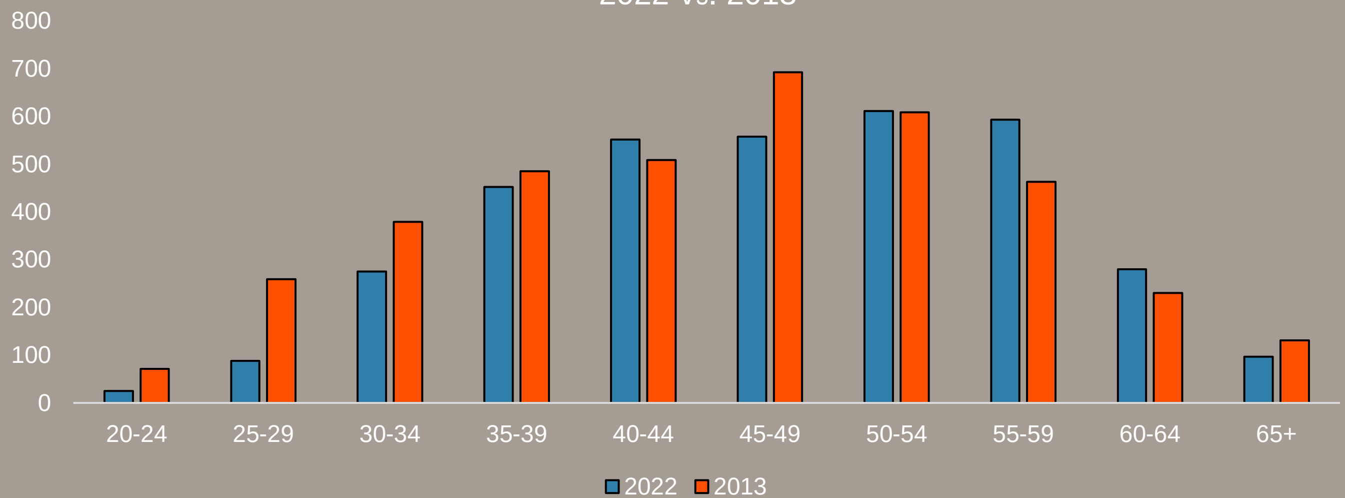
2022 **1.4 : 1**

43

Active employees over age 71 receiving a pension

	March 31				
	2022	**2021**	**2020**	**2019**	**2018**
Active Members	3,535	3,529	3,621	3,643	3,778
Average Age of Active Members	47.8	47.8	47.5	47.3	47.2
Retirees (incl. Prin. Ben.)	2,592	2,531	2,464	2,362	2,209
Deferred Pensioners	460	428	433	418	418
Average Age at Retirement	60.76	61.12	61.24	61.33	61.30

Age Distribution - Active Members
2022 vs. 2013



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, 2020 to March 31, 2023. This Annual Report discusses the outcome of those objectives for the period April 1, 2021 to March 31, 2022 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/media/production/memorial/administrative/human-resources/media-library/services/benefits/PensionPlanActivityPlan2020-2023.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, Signal Hill 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:

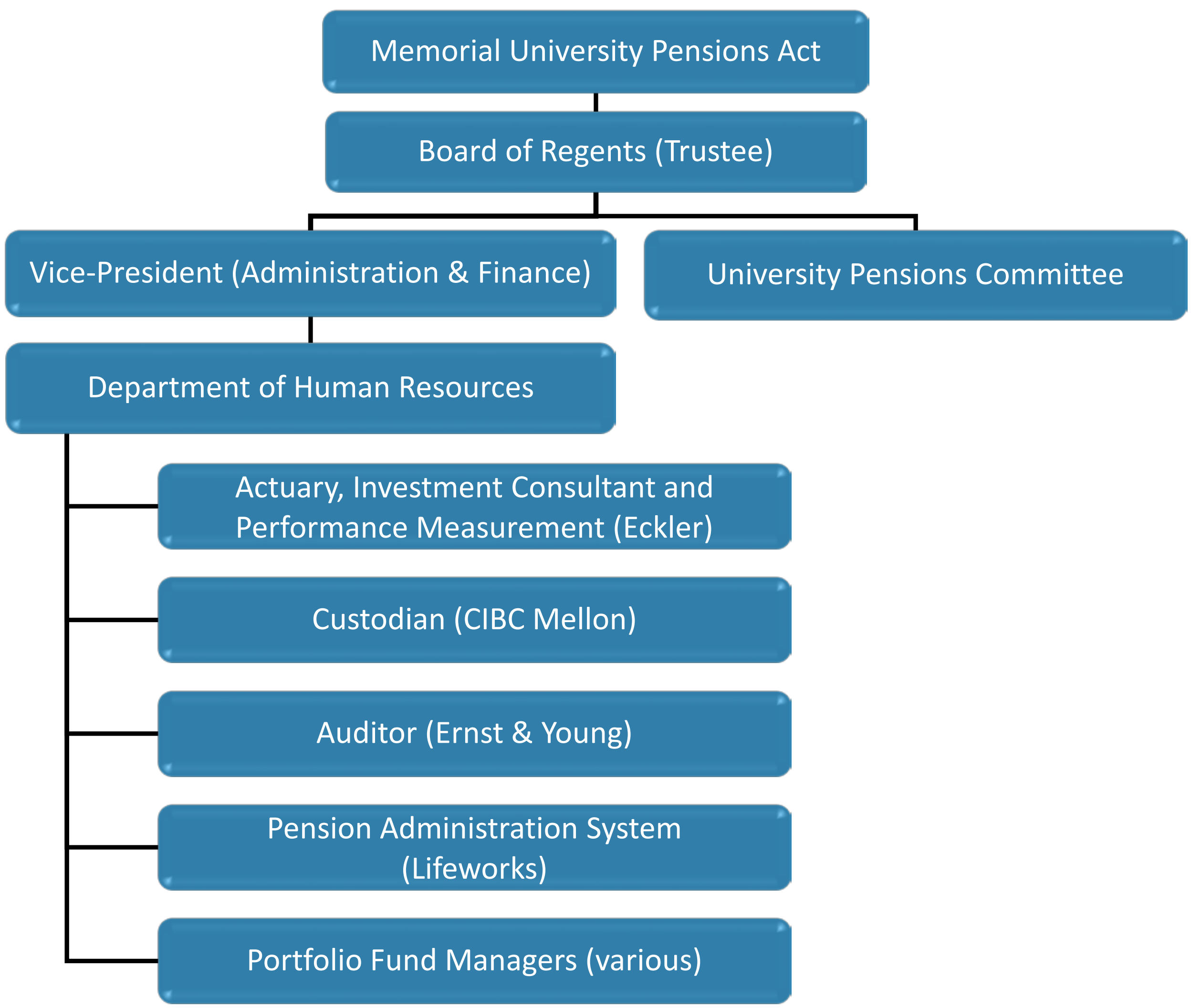
2% x best 5-year average salary x years of pensionable service (inclusive of a “bridge benefit” to age 65)

Authority and Administration

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

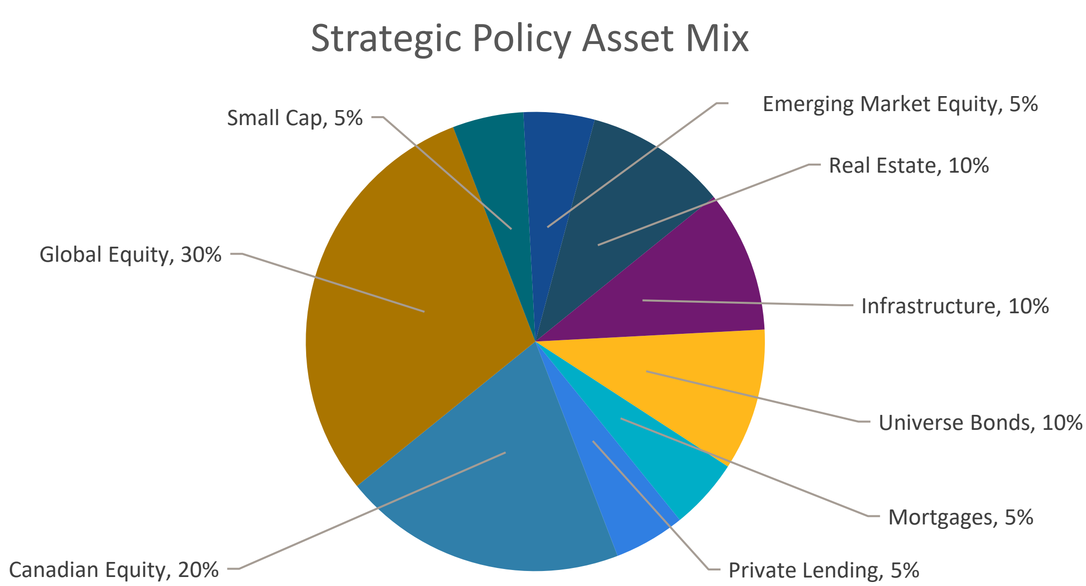


Investments

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.

During the prior year the Board approved a new strategic asset mix for the Fund that would improve upon its level of diversification and its long term expected return. The new asset allocation model will reduce the Plan's exposure to universe bonds and add two new alternative asset classes to the mix, private lending at a five per cent allocation and infrastructure at ten per cent. In addition, emerging market and small cap equity have now become separately identified mandates at five per cent each. Previously these were incorporated into the Fund on an opportunistic basis through the Canadian and international equity portfolios.

Figure 2: New Policy Asset Mix



Strategic Policy Asset Mix

The process of transitioning the Fund to the strategic policy asset mix began during fiscal year 2021/22 with a reallocation from US equity to the existing three international equity mandates to align with the Fund's global equity allocation. In addition a search process for infrastructure and private lending investment managers was concluded during the year which resulted in the appointment of three private investment firms to manage these new mandates. Funding will begin during the next fiscal year and is expected to occur over a 12 to 24 month period. Capital committed to private market vehicles typically requires a longer time horizon to fully invest due to the time needed to source and fund suitable investment opportunities. The remaining asset classes, namely small cap equity and emerging markets may be funded by a reallocation amongst existing mandates or the hiring of additional investment managers.

Table 1: Policy Asset Mix Transition

	Strategic Asset Mix	
	Former	New
Cash	3%	-
Universe Bonds	25%	10%
Mortgages	8%	5%
Private Debt	-	5%
Canadian Equity	25%	20%
US Equity	21%	-
International Equity	10%	-
Global Equity	-	30%
Small Cap Equity	-	5%
Emerging Market Equity	-	5%
Real Estate	8%	10%
Infrastructure	-	10%
Total	100%	100%

The asset mix for the investment of the Fund and associated benchmarks are set out below:

Table 2: Policy Asset Mix and Benchmarks

Asset Class	Percentage Allocation	Benchmark Index
Canadian Equity	20%	S&P/TSX
Global Equity	30%	Weighted Average MSCI ACWI ex-US and S&P 500
Small Cap Equity	5%	MSCI ACWI Small Cap
Emerging Market Equity	5%	MSCI Emerging Market
Canadian Fixed Income	10%	FTSE TMX Universe
Real Estate	10%	MSCI Realpac
Infrastructure	10%	CPI +4%
Mortgages	5%	60% TMX Short + 40% TMX Mid + 0.5%
Private Lending	5%	8% Net

Investing Locally

In its real estate portfolio the pension plan has invested in local commercial real estate:

Office: 351 Water Street, Scotia Place and O'Leary Business Park
Industrial: Beclin Business Park

Investment Manager Portfolio Distribution

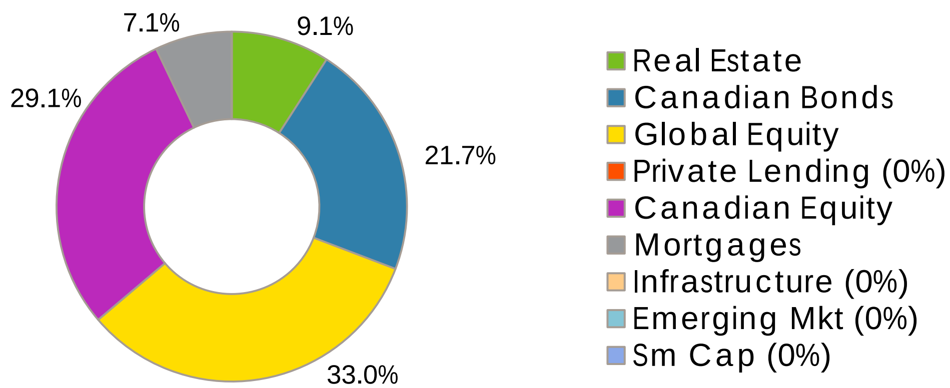
For the year ended March 31, 2022, the Fund was invested by external institutional investment management firms. As the Fund continues to transition its asset mix actual allocations will migrate to policy targets over time. The mandates and fund allocations are detailed in the table below:

Table 3: Asset Allocation

Manager	Mandate	Benchmark Allocation	Actual Allocation March 31, 2022
Jarislowsky Fraser	Canadian Equity	10.0%	13.6%
Connor Clark & Lunn	Canadian Equity	5.0%	7.8%
Fidelity Investments Canada	Canadian Equity	5.0%	7.7%
TD Greystone	Canadian Fixed Income	Nil	5.8%
Jarislowsky Fraser	Canadian Fixed Income	Nil	5.8%
CIBC Global Asset Management	Indexed Bonds	10.0%	10.1%
Alliance Bernstein	US Equity	15.0%	17.3%
Fiera Capital	International Equity	5.625%	6.2%
Wellington Management	International Equity	5.625%	6.1%
Baillie Gifford	International Equity	3.75%	3.4%
Fiera Real Estate	Real Estate	3.2%	3.5%
TD Greystone	Real Estate	4.8%	5.6%
TBD	Real Estate	2.0%	Nil
TD Greystone	Mortgage	5.0%	7.1%
CBRE Caledon	Infrastructure	5.0%	Nil
Northleaf	Infrastructure	5.0%	Nil
Monroe Capital	Private Lending	2.5%	Nil
Northleaf	Private Lending	2.5%	Nil
TBD	Emerging Markets	5.0%	Nil
TBD	Small Cap	5.0%	Nil

The relative distribution of assets across the entire Fund, as at March 31, 2022, is illustrated in the following chart:

Figure 3: Distribution of Assets

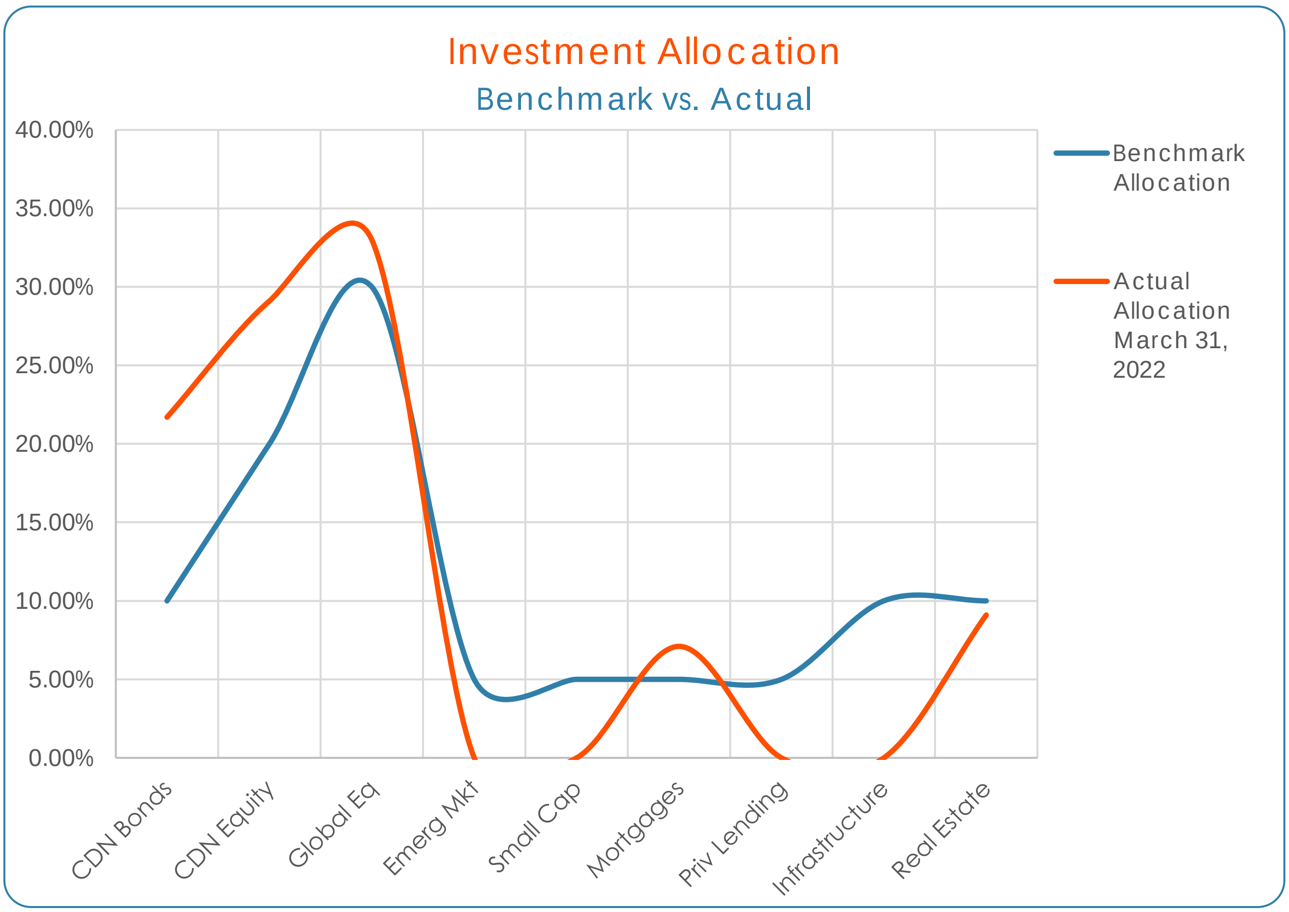


Rebalancing of Assets

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. While the Fund is in the process of transitioning to the new strategic asset mix re-balancing activities will be adjusted accordingly as the asset mix is implemented.

Figure 4: Investment Allocation

As the Fund transitions to the new asset mix a transitionary rebalancing schedule has been adopted. All mandates were within their rebalancing limits in accordance with this schedule at March 31, 2022.



Investment Performance

The Fund began the year with strong performance in the first quarter achieving a 5.2 per cent return for the quarter ended June 30, 2021, ahead of the policy benchmark by 0.5 percentage points. Returns were more muted in the following quarter and the Fund generated a return of 1.1 per cent for the quarter ended September 30, 2021, just 0.19 percentage points above the benchmark. By December 31, 2021 returns were again on the upswing at 4.6 per cent for the quarter and .03 percentage points above benchmark. Things began to change in 2022 as equity markets corrected and bond yields began to increase. Interest rates began to rise in 2022 as central banks attempted to combat inflationary pressures brought on by supply shortages, strong consumer demand and the war in Ukraine. These headwinds created a challenging environment for the Fund and resulted in a -5.5 per cent quarterly return at March 31, 2022, which was 2.89 percentage points behind the benchmark.

	Fund Value ($ Millions)	Quarterly Return (%)
June 30, 2021	2,054.5	5.2
September 30, 2021	2,064.7	1.1
December 31, 2021	2,143.2	4.6
March 31, 2022	2,012.4	-5.5

The Fund ended the year with a 1 year return of 5.0 per cent which was 2.46 per cent below the benchmark return objective of 7.46 per cent. Annual performance was slightly under the Plan's long term hurdle rate, also known as the discount rate, of 5.6 per cent. This placed the Fund in the 76th percentile in a universe of comparator funds. A first percentile ranking represents the top performer in the universe whereas the 100th percentile represents the worst.

Annual Return:

March 31, 2022 …… 5.0%
March 31, 2021 ….. 23.9%

Over the longer term the Fund continues to perform well relative to its benchmark and comparator universe. The five year annualized return of 8.18 per cent surpassed the benchmark by 0.62 percentage points. On a ten year basis the Fund has generated an annualized return of 9.37 per cent, an excess of 1.16 percentage points over its benchmark and ranking it in the sixth percentile.

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

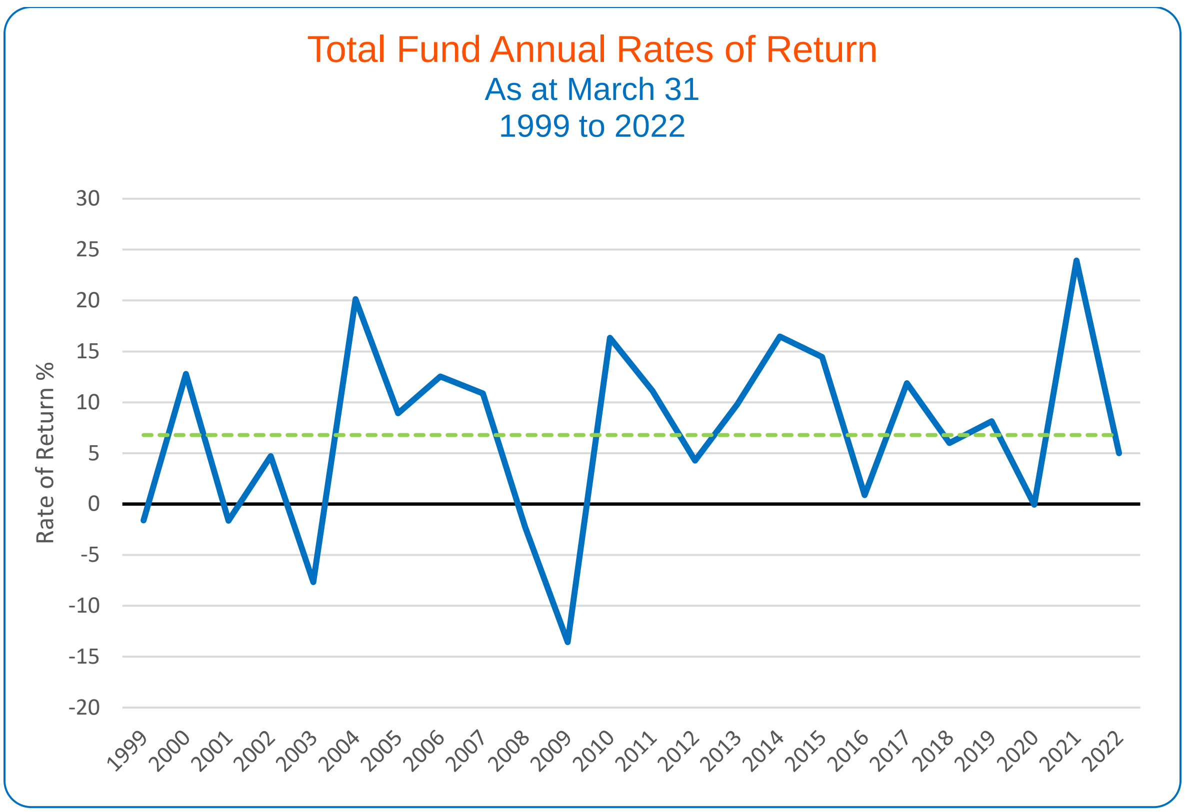
Table 4: Investment Performance (March 31)

	1 year	4 years	5 years	10 years
Annualized Return	5.0%	8.73%	8.18%	9.37%
Benchmark Return*	7.46%	8.28%	7.56%	8.21%
Value Added	**-2.46%**	**0.45%**	**0.62%**	**1.16%**
Percentile Ranking	76	15	15	6

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

Figure 5: Rate of Return

Annual fund returns over the period 1999 to 2022 are presented in the chart below.



Average Annualized Rate of Return:
6.8%

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.

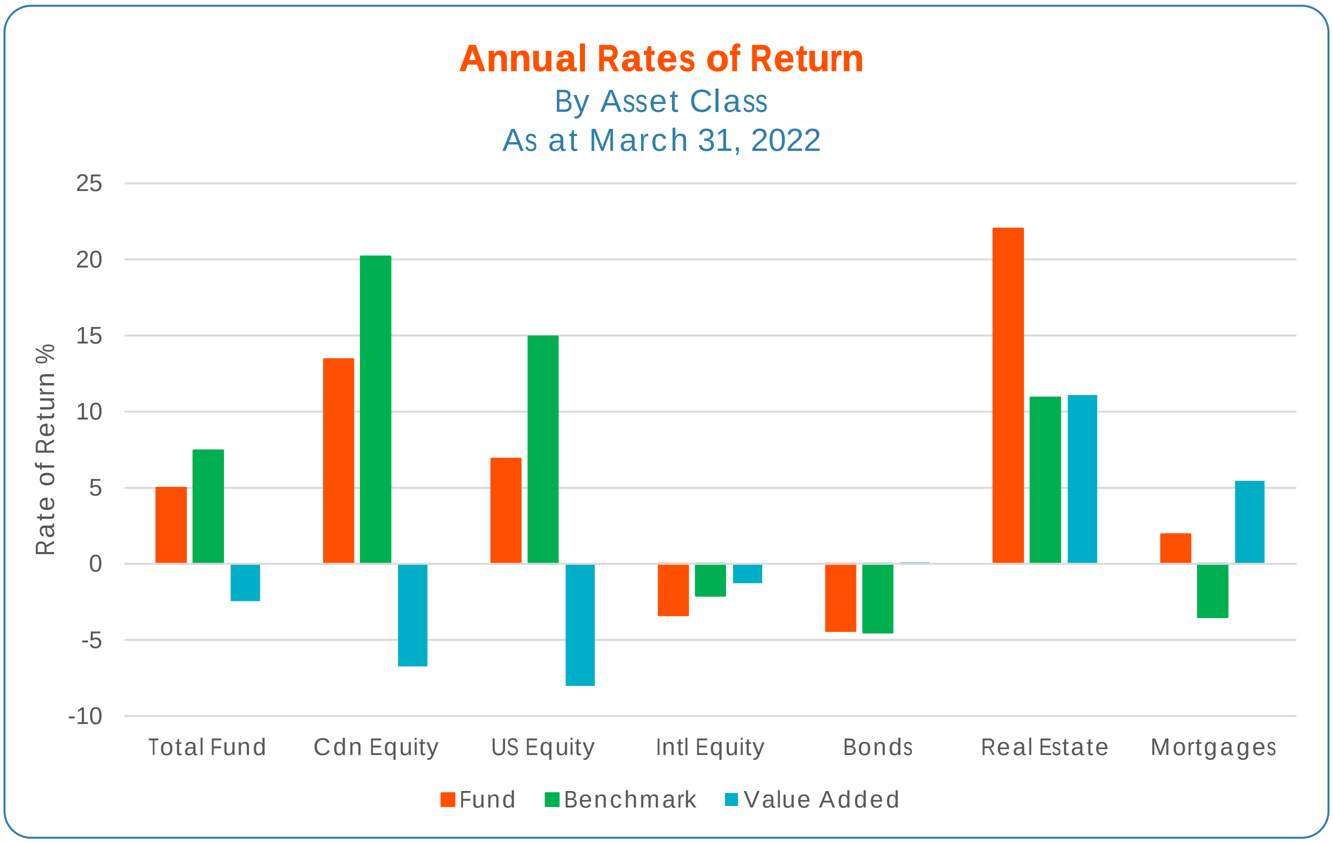
Mandate Performance

60% of the Fund's mandates outperformed their respective benchmarks over 12 months ending March 31, 2022.

85% of the Fund's mandates with 4 year performance track records outperformed their respective benchmarks over 4 years ending March 31, 2022.

Figure 6: Asset Class Rate of Return

Annual returns by asset class for the one year period ended March 31, 2022 are shown below:



Actuarial Valuation

An actuarial valuation of the Plan was performed as at December 31, 2021 and the results have been extrapolated to March 31, 2022 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 Plan was exempt from solvency funding to March 31, 2022.

In addition to reporting on the solvency position of the Pension Plan, an actuarial valuation is performed to determine the ability of the Pension Plan to meet its obligations or "pension promises" on a going-concern basis. It is also used to project the cost of benefits that will accrue to active plan members in the years following the valuation. The results of the extrapolation to March 31, 2022 and the December 31, 2021 valuation are highlighted in the following table together with comparative figures for an extrapolation of the Pension Plan's financial position to March 31, 2021:

Table 5: Actuarial Results

Actuarial Balance Sheet						
	March 31, 2022 ($ Millions)		**December 31, 2021 ($ Millions)**		**March 31, 2021 ($ Millions)**	
	Going Concern	**Solvency**	**Going Concern[1]**	**Solvency[2]**	**Going Concern**	**Solvency**
Actuarial Value of Assets	1,923.9	See Note 3) below	2013.0	2,325.3	1,806.2	See Note 3) below
Actuarial Liabilities	2,024.2		2,010.0	2,471.1	1,965.6	
Surplus (Unfunded Liability)	(100.3)		3.0	(145.8)	(159.4)	

Notes:

1) The going concern liability, as at December 31, 2021, includes approximately $64.2 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 22.5 years from December 31, 2021. This indexing amount is not reflected in the actuarial financial position shown above.
2) Solvency assets at December 31, 2021 include the present value of five years' worth of going concern special payments ($183.3 million).
3) An extrapolation of the solvency position was not performed as at March 31, 2022 or March 31, 2021.
4) The actuarial value of assets includes a fair value adjustment to "smooth" market effects over a three-year period.

Funding

The Pension Plan will be funded in accordance with the December 31, 2021 actuarial valuation, which disclosed a going-concern surplus $3.0 million.

This surplus position does not include approximately $64.1 million in expected future cash flows in respect of the 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 22.5 years from December 31, 2021 through contributions equivalent to 1.2 per cent of pensionable payroll (shared equally by the University and employees).

While the Plan had a going concern surplus at December 31, 2021, there remained a solvency deficit of $145.8 million to be funded by the University over a period of not greater than five years. The PBA indicates that as long as the Plan is subject to solvency funding, both going concern special payments established in previous valuations and solvency special payments must be continued.

For the fiscal years 2015-16 through 2021-22, the University was given regulatory approval to defer the required going concern special payments and was exempt from solvency funding.

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, 2021 actuarial valuation revealed that current service cost had decreased by 0.8 percentage points over levels identified in the previous funding valuation, at December 31, 2018. Current service cost is shared equally between employees and the University and on January 1, 2023 the rate paid by each will be lowered by 0.4 percentage points. The Plan's contribution rate is shown below:

Table 6: Contribution Rate

Rate Structure	Current Contribution Rate	Jan 1, 2023 Contribution Rate
Earnings up to Year's Basic Exemption under Canada Pension Plan	11.8%	11.4%
Earnings between Year's Basic Exemption under Canada Pension Plan and the Year's Maximum Pensionable Earnings under Canada Pension Plan	10.0%	9.6%
Earnings above Year's Maximum Pensionable Earnings under Canada Pension Plan	11.8%	11.4%

Report On

Performance

2021-22

Three primary issues and related goals and objectives as identified in the 2020-2023 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 2020-2023 Activity Plan. During the period April 1, 2021 to March 31, 2022 a total of $67.9 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 $93.8 million in benefits to eligible retired employees and their beneficiaries. Over that same period, $7.8 million in administrative expenses were paid in addition to $11.1 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 2021-22 fiscal year.

Objective

By March 31, 2021, 2022 and 2023 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 2021-22 fiscal year, the Plan collected a total of $67,907,000 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>Eligible retired members/principal beneficiaries are receiving pension benefits</u>
  The Plan paid a total of $93,832,000 in benefits to eligible retired employees or their beneficiaries in 2021-22.

- Paid associated administrative expenses
  During 2021-22, the Plan paid a total in $7,795,000 in administrative expenses and $11,079,000 in termination benefits.

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

Funding Policy for Unfunded Liabilities

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 to March 31, 2022. 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 22.25 years from March 31, 2022.

With respect to going concern funding, the University was given regulatory approval to defer the required special payments for 2015-16 through 2021-22. The deferrals were granted while the University and its employee groups continued to work toward reaching agreement on joint sponsorship of the Plan.

By the end of the 2018-19 fiscal year, a preliminary framework for joint sponsorship-was developed by 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 framework included a funding policy that ensured the Plan's ongoing viability as well as measures to address the then existing going concern unfunded liability.
Following consultation with the Provincial Government, University stakeholders re-visited the proposed terms of pension reform and an updated proposal was provided to Government during the 2020-21 fiscal year. Due to the impact that the COVID-19 pandemic had on the normal operations of both the University and Government, further deliberations on a framework for pension reform did not resume until Spring 2022. It is expected that the parties will continue work on the issue in 2022-23.

An actuarial valuation of the Plan was performed for funding purposes as at December 31, 2021 which revealed a going concern surplus of $3.0 million. As the Plan was in surplus at this measurement date there was no unfunded liability related to the past service costs of indexing, introduced in the Plan in 2004. The Plan's contribution rate includes 0.6 percent of salary from each of the University and employees to amortize past service indexing costs over an original period of 40 years from 2004. The present value of these future indexing cashflows is approximately $64.1 million and this is in addition to the going concern surplus of $3.0 million.

While the Plan will be funded based upon the December 31, 2021 actuarial valuation, an extrapolation of its financial position to March 31, 2022 was performed for reporting purposes. The extrapolation revealed that the actuarial position of the Plan had deteriorated as a result of a protracted market correction. At March 31, 2022 the Plan had an actuarial deficit of $100.3 million.

Objective

By March 31, 2021, 2022 and 2023, 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: Employed a funding policy to guide the sustainability of the Pension Plan and address the unfunded liability.

The University and its major unionized employee groups (CUPE, NAPE and MUNFA) reached preliminary agreement on a framework for reform of the Plan in the 2018-19 fiscal year. The draft framework included key elements of a proposed funding policy that dealt with the Plan's then existing unfunded liability and provided guidelines for future funding, including rules governing the disposition of emerging deficits and sharing of future surpluses. An updated proposal was provided to Government during the 2020-21 fiscal year, however, due to the impact of the COVID-19 pandemic further deliberations on a framework for pension reform were deferred for 2020-21 and most of 2021-22. The parties to pension reform recommenced discussions during Spring 2022.

As a result, Memorial University did not meet the objective of utilizing a funding policy to guide the long term sustainability of the Plan and address the unfunded liability as set out in the 2020-2023 Activity Plan. The Plan did however emerge from a deficit position at its actuarial funding measurement date of December 31, 2021 where a $3.0 million surplus was revealed. By March 31, 2022, however, a new deficit of $100.3 million had materialized as a consequence of unfavorable investment market conditions.

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 unfunded past service costs related to pension indexing, these costs were eliminated as at December 31, 2021 with an all-inclusive surplus position of $3.0 million. While the indexing liability was eliminated the current indexing contributions from both the University and employees at a total 1.2 percent of salary are continuing. The present value of future indexing contributions is approximately $64.1 million. With the emergence of a new deficit position at March 31, 2022, these future indexing contributions will be attributed to the indexing liability.

Joint Sponsorship of the Pension Plan

Within the province of Newfoundland and Labrador, other large public sector pension plans have completed the process of converting their governance and administration models to one of joint sponsorship by the employer and employee groups.

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 previous fiscal year 2020-21, an update to an earlier preliminary framework on pension reform was provided to the Provincial Government for its review and comment. Due to the disruption in normal operations brought on by the COVID-19 pandemic, further deliberations on joint sponsorship were deferred in 2020-21 and most of 2021-22. The parties to pension reform recommenced discussions during Spring 2022.

Objective

By March 31, 2021, 2022 and 2023 the Memorial University Pension Plan will have continued work towards transitioning to a jointly sponsored pension plan.

Indicators: Continued the development of a joint sponsorship agreement for the future management and funding of the Pension Plan.

During the year Memorial University met the objective of continuing work towards reaching agreement with employee groups on jointly sponsoring the pension plan. Due to the impact of the COVID-19 pandemic, discussions on joint sponsorship were deferred for most of 2021-22 and resumed late in the fiscal year in consultation with the Provincial Government.

Plan Highlights

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 7: Financial Highlights

		March 31	
		2022	2021
Net Assets Available for Benefits *		2,012,364,000	1,957,805,000
One-Year Annual Rate of Return		5.0%	23.93%
Realized Investment Income		185,369,000	130,867,000
Pensions Paid**		92,737,000	89,092,000
Current Contributions:	Employee	30,744,000	30,185,000
	University	30,744,000	30,185,000
Buyback Contributions:	Employee	1,996	1,700
	University	177	103
University special payments:			
	Going Concern	Nil	Nil
	Solvency deficit (refunds)	4,246,000	3,359,000

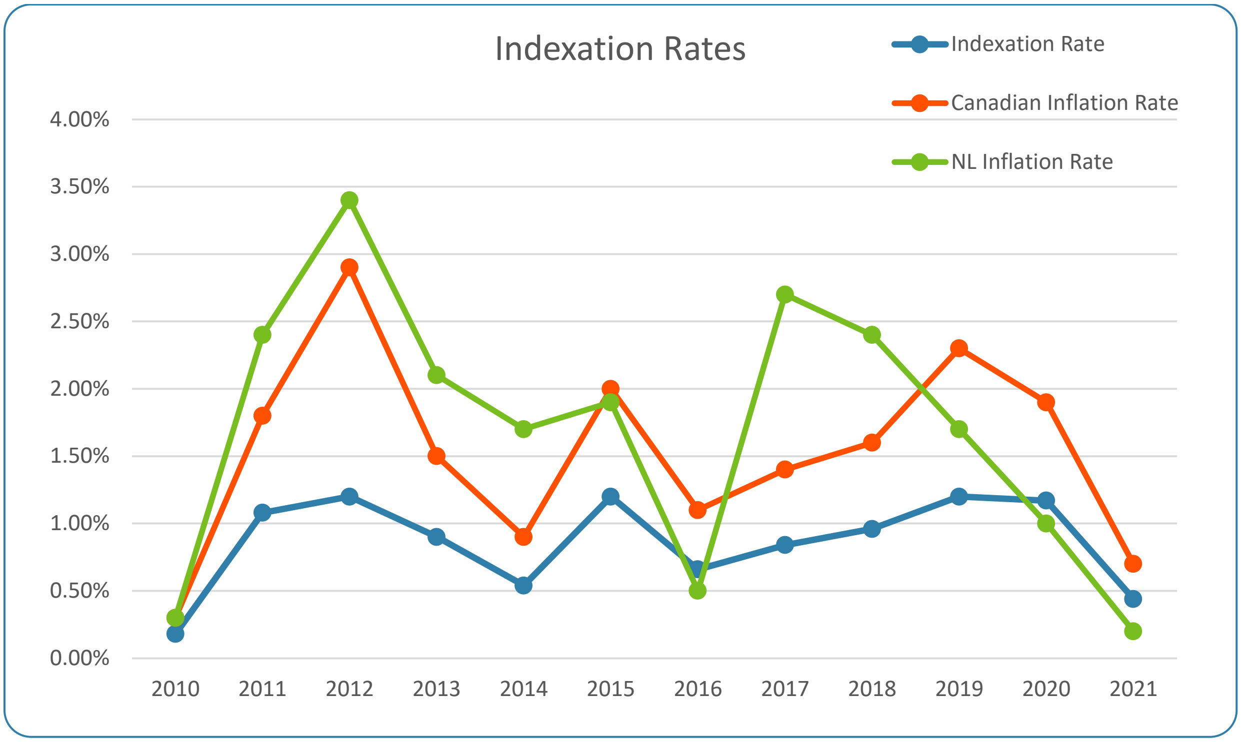
* Net assets available for benefits is reported at fair value and does not include the actuarial smoothing adjustment. Refer to note 6 of the accompanying financial statements for further information.

** Not inclusive of death benefits or refunds.

On July 1, 2021, 1,803 retirees and principal beneficiaries received a 0.44 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 7: Indexation Rates

Indexation rates from 2010 to 2021 are shown in the chart below:



Average Indexation Rate:

0.91%

For the 10-year period from 2012 to 2021.

Throughout the fiscal year the Plan's participant distribution will inevitably change (e.g, retirements, new hires). Movement within the 2021-22 fiscal year is shown below:

Table 7: Membership Movement

Membership Group	March 31, 2022	April 1, 2021
Actives	3,535	3,529
Retirees	2,277	2,227
Principal Beneficiaries	315	304
Deferred	460	428

Actuarial Valuation and Financial Position

A full valuation of the Plan was performed at December 31, 2021 and extrapolated to March 31, 2022 for financial reporting purposes. The results of this valuation are reported upon in an earlier section.

The Plan's unfunded liability was eliminated at December 31, 2021 and the Plan generated a going concern surplus of $3.0 million. By March 31, 2022, however, a new unfunded liability had emerged as a result of a precipitous decline in the market value of the Fund, which resulted in a 5.5% reduction in value over the quarter. On an annual basis the 1 year return at March 31, 2022 was 5.0%, just short of the Plan's discount rate of 5.6%.

A five year history of the Plan's financial position at market value is presented below:

Table 9: Financial Position

	March 31				
	2022 (000s)	2021 (000s)	2020 (000s)	2019 (000s)	2018 (000s)
Net Assets at Market Value	2,012,364	1,957,805	1,616,811	1,667,740	1,569,748
Pension Obligations	2,024,185	1,965,634	1,918,674	1,861,829	1,798,415
Deficit	11,821	7,829	301,863	194,089	228,667
Funded Ratio	99%	99%	84%	90%	87%

- 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 area of opportunity has been identified for 2022-23:

- Assessment of investment manager complement for potential placement of capital to fund alternative equity mandates and incremental allocation to real estate.

Challenges

The following challenges have been identified for 2022-23:

- Monitoring and assessment of the performance of investment fund managers ;
- Completion of investment management agreements for infrastructure and private lending and commencement of mandate funding;
- Continued implementation of new Strategic Asset Mix for the pension fund;
- Implementation of changes to contribution rate;
- 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.

Financial Statements

Memorial University of Newfoundland
Pension Plan

March 31, 2022

Memorial University of Newfoundland Pension Plan

Financial Statements

March 31, 2022

Building a better working world

Independent auditors' 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 consolidated statement of financial position as at March 31, 2022, and the consolidated statement of operations, re-measurement gains and losses, changes in net deficiency and cash flows for the year then ended, and a summary of significant accounting policies and other explanatory information.

In our opinion, the accompanying financial statements present fairly, in all material respects, the financial position of the University as at March 31, 2022, and the results of its operations and its cash flows for the year then ended in accordance with Canadian public sector accounting standards.

Basis for opinion

We conducted our audit in accordance with Canadian generally accepted auditing standards. Our responsibilities under those standards are further described in the *Auditor's responsibilities for the audit of the financial statements* section of our report. We are independent of the University 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.

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 public sector accounting standards, and for such internal control as management determines is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, management is responsible for assessing the University's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless management either intends to liquidate the University or to cease operations, or has no realistic alternative but to do so.

Individuals charged with governance are responsible for overseeing the University's financial reporting process.

Auditor's responsibilities for the audit of the financial statements

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

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

- Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the University's internal control.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.
- Conclude on the appropriateness of management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the University's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the University 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.
- Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the consolidated entity to express an opinion on the consolidated financial statements. We are responsible for the direction, supervision and performance of the audit. We remain solely responsible for our audit opinion.

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 19, 2022

Memorial University of Newfoundland Pension Plan

Statement of financial position

[thousands of dollars]

As at March 31

	2022 $	2021 $
ASSETS		
Receivables		
Contributions receivable	**265**	248
Harmonized Sales Tax Receivable	**449**	-
Accrued interest and dividends	**2,307**	2,690
Amounts due from pending trades	**3,245**	1,824
Due from Memorial University of Newfoundland *[note 4]*	**1,120**	3,953
	7,386	8,715
Investments *[notes 5 & 10]*		
Cash and short-term investments	**35,289**	42,131
Bonds and debentures	**434,601**	454,218
Equities	**1,227,753**	1,177,421
Real estate	**180,951**	150,459
Mortgages	**142,404**	139,684
	2,020,998	1,963,913
Intangible assets *[note 9]*	**44**	87
Total assets	**2,028,753**	1,972,715
LIABILITIES		
Accounts payable and accrued expenses	**2,024**	4,144
Accrued pension refunds	**3,013**	4,167
Amounts payable from pending trades	**11,027**	6,599
Total liabilities	**16,064**	14,910
Net assets available for benefits	**2,012,364**	1,957,805
Pension obligations	**(2,024,185)**	(1,965,634)
Deficit	**(11,821)**	**(7,829)**

See accompanying notes

On behalf of the Board:

Cathy Duke

Acting 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

[thousands of dollars]

Year ended March 31

	2022 $	2021 $
Increase in assets		
Investment income		
Interest income	**18,654**	14,257
Dividend income	**23,430**	26,193
Current-period increase (decrease) in fair value of investments	**(86,011)**	252,239
Realized gain on sale of investments	**143,285**	90,417
	99,358	383,106
Contributions *[note 7]*		
Employee		
Current service	**30,744**	30,185
Past service	**1,996**	1,700
Employer		
Current service	**30,744**	30,185
Past service	**177**	103
Special payments	**4,246**	3,359
	67,907	65,532
Total increase in assets	**167,265**	448,638
Decrease in assets		
Benefits paid	**92,737**	89,092
Refunds of contributions	**11,079**	8,660
Death benefits	**1,095**	2,486
Administrative expenses *[note BJ*	**7,795**	7,406
Total decrease in assets	**112,706**	107,644
Increase in net assets	**54,559**	340,994
Net assets available for benefits, beginning of year	**1,957,805**	1,616,811
Net assets available for benefits, end of year	**2,012,364**	1,957,805

See accompanying notes

Statement of changes in pension obligations

[thousands of dollars]

Year ended March 31

	2022 $	2021 $
Actuarial present value of accrued pension benefits, beginning of year	**1,965,634**	1,918,674
Experience gains	**(4,284)**	(16,478)
Changes in actuarial assumptions/methodology		
Interest accrued on benefits	**109,903**	107,145
Benefits accrued	**57,843**	56,531
Benefits paid, death benefits and refunds of contributions	**(104,911)**	(100,238)
Actuarial present value of accrued pension benefits, end of year *[note 6]*	**2,024,185**	1,965,634

See accompanying notes

Notes to financial statements

[tabular amounts in thousands of dollars]

March 31, 2022

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. Due to prevailing market conditions, precipitated by the global pandemic, real estate appraisals are subject to material valuation uncertainty at March 31, 2022.

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.

Notes to financial statements

[tabular amounts in thousands of dollars]

March 31, 2022

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.

5. Investments

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

	2022 $	2021 $
Cash and short-term investments	**35,289**	42,131
Canadian bonds and debentures:		
Federal	**69,768**	63,883
Provincial	**73,932**	89,480
Corporate	**86,752**	86,823
Pooled funds	**204,149**	214,032
	434,601	454,218
Canadian equities:		
Common stock	**401,138**	371,658
Pooled funds	**177,631**	148,537
	578,769	520,195
Foreign equities:		
Common stock	**333,114**	428,482
Pooled funds	**315,870**	228,744
	648,984	657,226
Total equities	**1,277,753**	1,177,421
Canadian Real estate	**180,951**	150,459
Canadian Mortgages	**142,404**	139,684
	2,020,998	1,963,913

[b] Realized losses arising from foreign currency translation amounted to $707,906.29 for the year ended March 31, 2022 [2021 - loss of $48,974. For financial statement presentation purposes, these amounts have been included in realized gain on sale of investments.

[tabular amounts in thousands of dollars]

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, 2021, and extrapolated the results to March 31, 2022.

The actuarial present value of benefits as at March 31, 2022, was estimated to be $2,024,185 [2021 - $1,965,634]. 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, 2021, valuation were:

Discount rate	Salary escalation rate
5.6% [2020 - 5.6%] pre- and post-retirement	3.75% [2020- 3.75%] 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 2022 and 2021 were as follows:

	2022 $	**2021** $
Net assets available for benefits	**2,012,364**	1,957,805
Actuarial value changes not reflected in fair value of net assets	**(88,496)**	(151,624)
Actuarial value of net assets available for benefits	**1,923,868**	1,806,181

7. Funding policy

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

11.8%	of pensionable earnings up to the Year's Basic Exemption ["YBE"] under the *Canada Pension Plan Act;*
10.0%	of pensionable earnings above the YBE up to and including the Year's Maximum Pensionable Earnings ["YMPE"] under the *Canada Pension Plan Act;*
11.8%	of pensionable earnings above the YMPE.

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, 2022, 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 2021/22.

[tabular amounts in thousands of dollars]

With respect to solvency, the University is exempt to March 31, 2022, 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, 2021 and the results have been extrapolated to March 31, 2022, for financial statement reporting. The extrapolation revealed that the going concern unfunded liability is $100.3 million at March 31, 2022, based on current Plan provisions, PBA requirements and asset smoothing. Based upon market values, the unfunded liability would instead be $11.8 million at March 31, 2022.

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, 2022, approximately 22.25 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, 2021, actuarial valuation disclosed a going concern surplus of $3 million and a solvency deficit of $329.1 million. In accordance with the PBA, as long as the Plan has a solvency deficiency and is subject to solvency funding, going concern special payments established in prior years must be maintained. The University is required to make special payments to amortize previous unfunded liabilities over periods of not more than 15 years. The required going concern special payment for fiscal 2022/2023 is $38.7 million [or 12.6% of pensionable payroll].

The Plan is being funded in accordance with the December 31 2021 actuarial valuation. The next actuarial valuation for funding is due no later than December 31, 2024 [i.e., within three years of the December 31, 2021, actuarial valuation].

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:

	2022 $	**2021** **$**
Administrative expenses:		
Actuarial fees	**170**	255
Administrative Services	**307**	303
Audit fees	**13**	13
Custodial fees	**399**	362
Investment management fees	**488**	424
Salaries and benefits	**44**	44
Amortization	**13**	13
Other fees	**13**	13
	7,919	7,406

Notes to financial statements

[tabular amounts in thousands of dollars]

March 31, 2022

9. Intangible assets

	2022			2021		
	Cost $	Accumulated amortization $	Net book value $	Cost $	Accumulated amortization $	Net book value $
Software	**437**	**393**	**44**	437	350	87

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

	2022 $	2021 $
Level 1		
Cash and short-term investments	**35,289**	42,131
Equities	**734,252**	800,141
	769,541	842,272
Level2		
Equities - Pooled Funds	**493,501**	377,280
Bonds and debentures	**434,601**	454,218
Mortgages	**142,404**	139,684
	1,070,506	971,182
Level3		
Real estate	**180,951**	150,459
	2,020,998	1,963,913

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).

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.

Notes to financial statements

[tabular amounts in thousands of dollars]

March 31, 2022

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

	2022 $	2021 $
Real estate		
Balance at beginning of year	**150,459**	140,057
Net purchases	**721**	12,335
Net Dispositions	**(162)**	(1,149)
Net dividends earned	**----**	2,741
Net dividends transferred out	**----**	(2,691)
Net realized gains (loss)	**(29)**	406
Net unrealized gains	**29,962**	(1,190)
Administrative	**----**	(50)
	180,951	**150,459**

[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, 2022, would have decreased the U.S. investment value by approximately $20,100,000. Conversely, a 5% weakening of the Canadian dollar against the U.S. dollar at March 31, 2022, would have increased the U.S. investment value by approximately $20,100,000 .

A 5% strengthening of the Canadian dollar against the U.K. Pound at March 31, 2022, would have decreased the U.K. investment value by approximately $2,600,000. Conversely, a 5% weakening of the Canadian dollar against the U.K. Pound at March 31, 2022, would have increased the U.K. investment value by approximately $2,600,000.

A 5% strengthening of the Canadian dollar against the Euro at March 31, 2021, would have decreased the European investment value by approximately $4,100,000. Conversely, a 5% weakening of the Canadian dollar against the Euro at March 31, 2021, would have increased the European investment value by approximately $4,100,000.

A 5% strengthening of the Canadian dollar against the Swiss Franc at March 31, 2022, would have decreased the Swiss investment value by approximately $1,800,000. Conversely, a 5% weakening of the Canadian dollar against the Swiss Franc at March 31, 2022, would have increased the Swiss investment value by approximately $1,800,000.

[tabular amounts in thousands of dollars]

[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, 2022, the average duration of the bond portfolio was 7.9 years. Therefore, if interest rates were to increase by 1%, the value of the bond portfolio would drop by 7.9%.

	Within 1-year $	1-5 years $	5-10 years $	Over 10 years $	No specific maturity $	Total $
Cash and short-term investments	35,289					35,289
Bonds and debentures						
Federal		35,799	23,231	10,738		69,768
Provincial		4,958	15,840	53,133		73,932
Corporate	160	46,038	8,548	32,006		86,752
Pooled funds					204,149	204,149
Total bonds and debentures	160	86,795	47,619	95,877	204,149	434,601
Total fixed income	35,449	86,795	47,619	95,877	204,149	469,890

[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 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 6.8%, with a 95% probability of the 15-year annualized return falling within the range of 1.2% to 11.4%.

	Estimated volatility %
Asset class	
Canadian equities	+/- 17.30
U.S. equities	+/- 16.50
International equities	+/- 16.30
Real estate	+/- 8.20
Mortgages	+/- 2.30
Cash and short-term investments	+/- 1.50
Canadian bonds and debentures	+/- 4.20

Notes to financial statements

[tabular amounts in thousands of dollars]

March 31, 2022

	Market value at March 31, 2022	Investments %
Held-for-trading securities		
Cash and short-term investments	**35,289**	**1.7**
Canadian bonds and debentures	**434,601**	**21.5**
Canadian equities	**578,769**	**28.6**
U.S. equities	**333,114**	**16.5**
International equities	**315,870**	**15.6**
Canadian real estate	**180,951**	**9.0**
Canadian mortgages	**142,404**	**7.0**
Total	**2,020,998**	**100.0**

	% change	Net impact on market value
Benchmark for investments		
S&P/TSX Composite Index	+/- **17.30**	**+/-100,127**
S&P 500 C$	+/- **16.50**	+/- **57,639**
MSCI EAFE C$	+/- **16.30**	+/- **51,487**
CPI	+/- **8.20**	**+/-14,838**
Blended FTSE [60% short; 40% mid]	+/- **2.30**	+/- **3,275**
FTSE Universe	+/- **4.20**	+/- **18,253**

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, 2022, the maximum risk exposure for this type of investment amounts to $434,601. 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	34.2
AA	29.3
A	29.9
BBB	6.6

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.