

New Brunswick Public Service Pension Plan

Annual General Meeting

Summary of Actuarial Valuation Results as at January 1, 2018

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September 6, 2018



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Agenda

- Highlights of Funding Policy Valuation
 - Membership Summary
 - Plan Assets
 - Main Economic Assumptions
 - Financial Position
 - Normal Cost and Excess Contributions
 - 15-Year Open Group Funded Ratio
- Risk Management Test Results
- Cost of Living Adjustment (COLA) and Early Retirement Reductions

Funding Policy Valuation – Membership Summary

	January 1, 2018
Active Members	
• Number	18,010
• Average salary	\$69,633
• Average age	46.8 years
• Average pensionable service	12.5 years
Deferred Vested Members	
• Number	3,842
• Average age	47.3 years
Retirees & Survivors	
• Number	16,099
• Average age	71.3 years
• Average annual lifetime pension	\$21,239
• Average annual bridge benefit	\$8,412

Funding Policy Valuation

– Reconciliation of Market Value of Assets

(in \$M)	2017	2016
Market value at January 1 st	\$7,241.0	\$6,926.7
Plus:		
• Members' contributions	\$97.3	\$97.1
• Employers' contributions	\$146.5	\$145.3
• Investment income (including net capital gains/losses)	\$559.2	\$450.1
Minus:		
• Pension and refunds	(\$378.0)	(\$364.5)
• Expenses	(\$14.0)	(\$13.7)
Market value at December 31 st	\$7,652.0	\$7,241.0
Investment return (before expenses)	7.81%	6.58%

Funding Policy Valuation

– Breaking down \$1 of benefit paid

\$0.20 comes from
Contributions



\$0.80 comes from
Investment return

At a 6.0% investment return

Funding Policy Valuation

– Main Economic Assumptions

Item	January 1, 2018
Discount rate	4.75% per annum
Inflation	2.25% per annum
Future cost of living adjustments	Not included in liability until it is granted by the Trustees

- Although we use 4.75% per annum to discount future cash flows, we estimate that the pension fund will earn an average of about 5.9% per annum over the next 20 years
 - Discount rate is a very conservative assumption
 - Investment return in excess of 4.75% per annum will be used to further secure pension benefits and provide cost of living adjustments

Funding Policy Valuation – Financial Position

	January 1, 2018	January 1, 2017
	In \$M	In \$M
A. Market value of assets	\$7,652.0	\$7,241.0
B. Funding policy liabilities	\$6,831.0	\$6,656.1
• Active members	\$2,297.4	
• Retirees & survivors	\$4,303.6	
• Deferred vested members and outstanding refunds	\$230.0	
C. Excess (Unfunded liability) [A. – B.]	\$821.0	\$584.9
D. Termination value funded ratio [A. / B.]	112.0%	108.8%

Funding Policy Valuation

– Normal Cost and Excess Contributions

Item	Year Following January 1, 2018	
	In \$M	% of Pay
A. Total normal cost	\$149.4	12.40%
B. Members' contributions	\$99.4	8.25%
C. Employers' contributions	\$150.5	12.50%
D. Total contributions in excess of normal cost [B.+ C. – A.]	\$100.5	8.35%
Present value of next 15 years of excess contributions	\$1,215.8 M	

Funding Policy Valuation

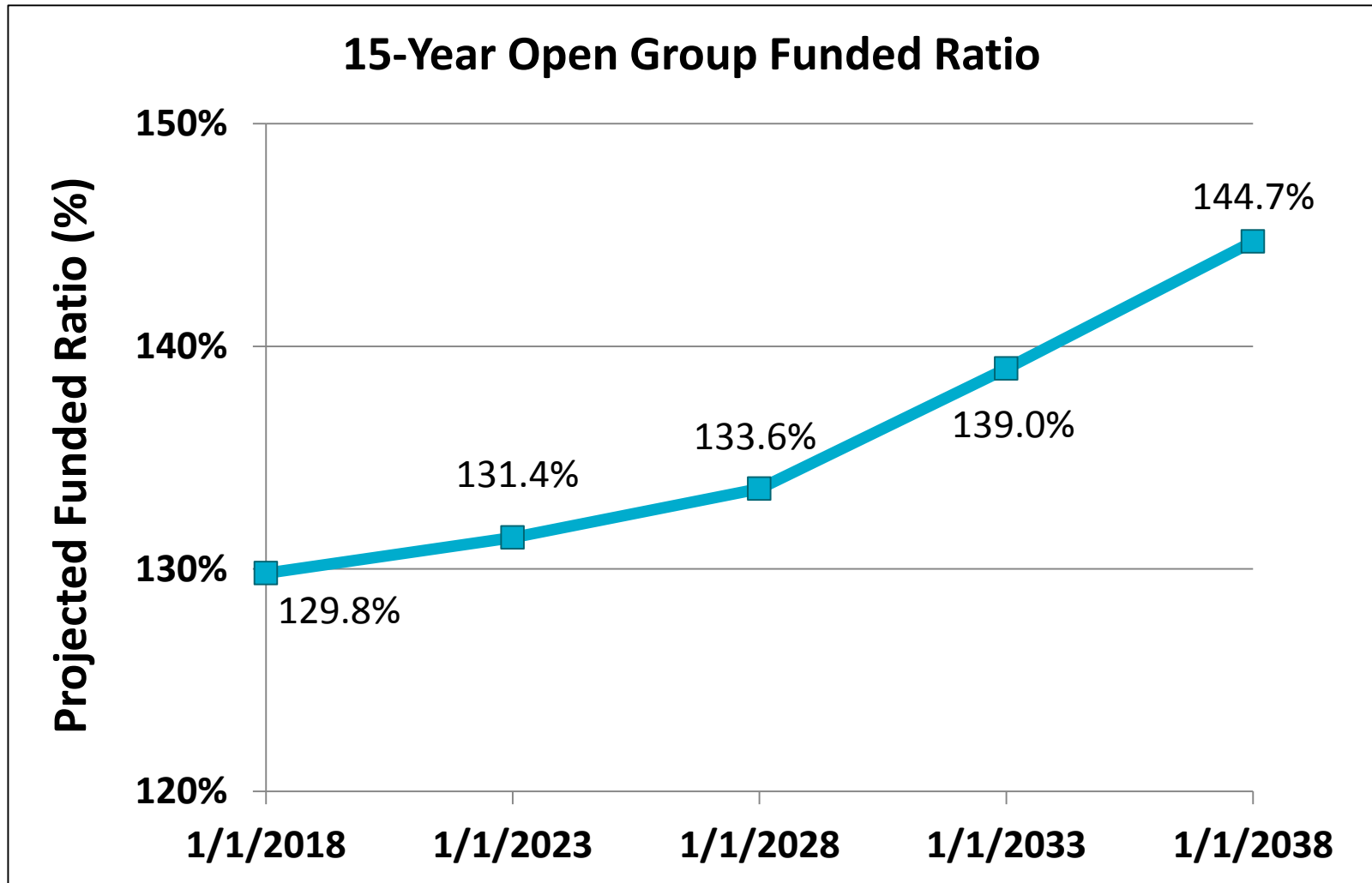
– 15-Year Open Group Funded Ratio

Item	January 1, 2018	January 1, 2017
A. Market value of assets	\$7,652.0 M	\$7,241.0 M
B. Present value of next 15 years of excess contributions	\$1,215.8 M	\$1,210.1 M
C. Total assets with PV of excess contributions [A. + B.]	\$8,867.8 M	\$8,451.1 M
D. Funding policy liabilities	\$6,831.0 M	\$6,656.1 M
E. 15-year open group funded ratio [C. / D.]	129.8%	127.0%

Risk Management Test Results

Main Risk Management Tests	January 1, 2018	January 1, 2017
<p>Primary risk management goal Probability that base benefits will not be reduced at any point over the next 20 years (Must be at least 97.5% to be able to award cost of living adjustments)</p>	<p>98.95%</p>	<p>98.30%</p>
<p>Secondary risk management goal Average cost of living adjustments over the next 20 years (The goal under legislation is to exceed 75% of CPI)</p>	<p>86.3% of CPI</p>	<p>82.3% of CPI</p>

Projection of 15-Year Open Group Funded Ratio



Cost of Living Adjustment at January 1, 2019

- Cost of living adjustment awarded as of January 1, 2019

Increase in Consumer Price Index (inflation) for purpose of adjustment as at January 1, 2019	1.88%
Cost to provide a cost of living adjustment of 1.88%:	\$121.6 M
• Active Members	\$43.2 M
• Retirees & Survivors	\$74.1 M
• Deferred Vested Members	\$4.3 M

- **Board of Trustees granted cost of living adjustment of 1.88% effective January 1, 2019**

Impact of Cost of Living Adjustment at January 1, 2019 on a New Retiree

- Sample impact on a new retiree:

A. Assumed new retiree annual pension amount Assumed salary at retirement of about \$68,000, 30 years of service and retired at age 60 on 1.1.2018	\$37,000 per annum
B. Impact of cost of living adjustment of 1.88% [0.0188 x A.]	\$696
C. Annual pension amount starting January 1, 2019 [A. + B.]	\$37,696 per annum

Note: Amounts shown include lifetime pension and bridge payable up to age 65.

Impact of Cost of Living Adjustment at January 1, 2019 on an Active Member

- Sample impact on a typical active member:

	Pension accrued before January 1, 2014	Pension accrued after January 1, 2014
A. Accrued pension of a typical active member at January 1, 2018 Age 58 and 25 years of service at 1.1.2018	\$25,000 per annum	\$5,000 per annum
B. Impact of cost of living adjustment of 1.88% granted January 1, 2019 [.0188 x A.]	\$470	\$94
C. Accrual of pension for year 2018 [.02 x \$69,000] Assumed salary in 2018 of \$69,000	n/a	\$1,380
D. Accrued pension as at January 1, 2019 [A. + B. + C.] Age 59 and 26 years of service at 1.1.2019	\$25,470 per annum	\$6,474 per annum

Note: Pension amounts shown include lifetime pension and bridge payable up to age 65.

Impact of Early Retirement Reductions

- Same sample active member retires on January 1, 2019:

	Pension accrued before January 1, 2014	Pension accrued after January 1, 2014	Total
A. Accrued pension of our typical active member at January 1, 2019 Age 59 with 26 years of service at 1.1.2019	\$25,470 per annum	\$6,474 per annum	\$31,944 per annum
B. Early retirement reductions Assume Member Retires at Age 59	3% per year that pension starts before age 60: 1 year early: 3% reduction	5% per year that pension starts before age 65: 6 year early: 30% reduction	
C. Impact of early retirement reductions	Minus \$764 (3% x \$25,470)	Minus \$1,942 (30% x \$6,474)	Minus \$2,706
D. Pension payable starting January 1, 2019 [A. - C.] Age 59 with 26 years of service at 1.1.2019	\$24,706 per annum	\$4,532 per annum	\$29,238 per annum

Note: Pension amounts shown include lifetime pension and bridge payable up to age 65.



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Thank You!