

Toronto Fire Department Superannuation and Benefit Fund

December 31, 2019 Funding Valuation
Pension Committee Meeting

May 26, 2020



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Highlights of the valuation results

Highlights of the valuation results

- Last valuation was performed as at December 31, 2018
 - Solvency ratio was 106%; therefore the next required valuation date is December 31, 2021
- December 31, 2019 actuarial valuation was performed to assess the financial positions of the plan in order to grant COLA to pensioners
 - The filing of this valuation report is optional as it is not required
- The plan remains in surplus position on a going concern basis
 - Going concern position decreased by 6% to 109% (115% at last valuation)
 - In fact, position remains unchanged at 115% after reflecting 2019 COLA; and
 - Decrease by 6% to 109% after actual spouse data and change in discount rate

Highlights of the valuation results (Cont'd)

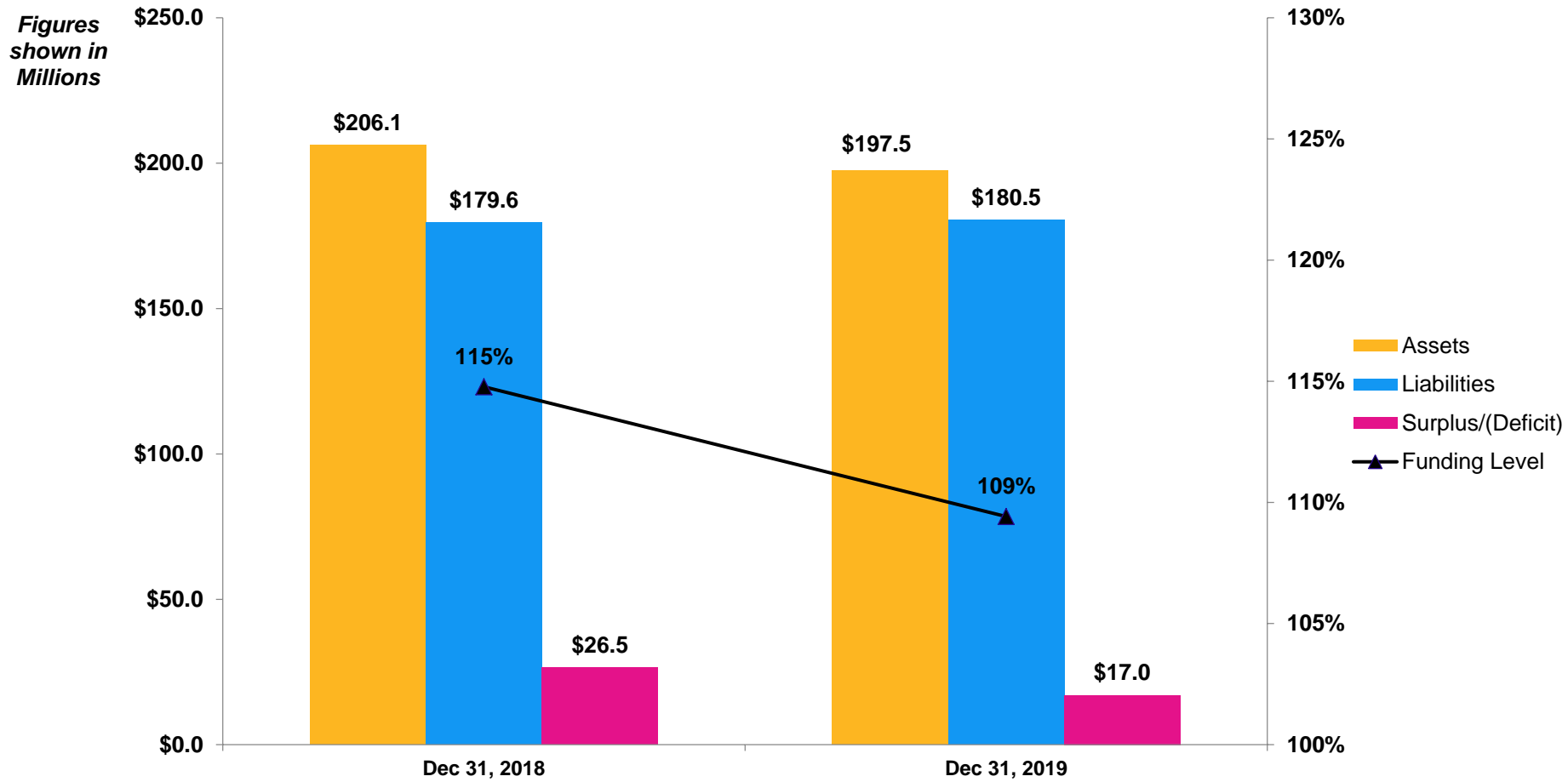
- Solvency position increased since the last valuation
 - Solvency position increased by 2% to 108% (106% at last valuation)
 - Increase mainly attributable to higher investment return on plan assets (increase to 112% with new assumptions and prior to actual spouse data) and decrease to 108% after reflecting the actual spouse data
- Overall the use of actual spousal data for this valuation resulted in:
 - \$5.4 million additional liability on Going concern basis; and
 - \$6.6 million additional liability on Solvency basis
- Given the financial positions of the plan, no contributions are required based on this valuation results

Highlights of the valuation results (Cont'd)

- Cost of January 1, 2020 COLA based on 100% CPI (1.95%) is approximately \$3.5 million (including PfAD) on a going concern basis and \$3.7 million on a solvency basis
- 5-year smoothed rate of 5.95%, as at December 31, 2019, exceeds solvency rate by 3.15%
- Estimated surplus after COLA is \$13.5 million and \$11.1 million on going concern and solvency basis respectively
- Based on the above, an automatic COLA is warranted in respect of 2019 equal to 1.95%
- The next valuation is due by December 31, 2022

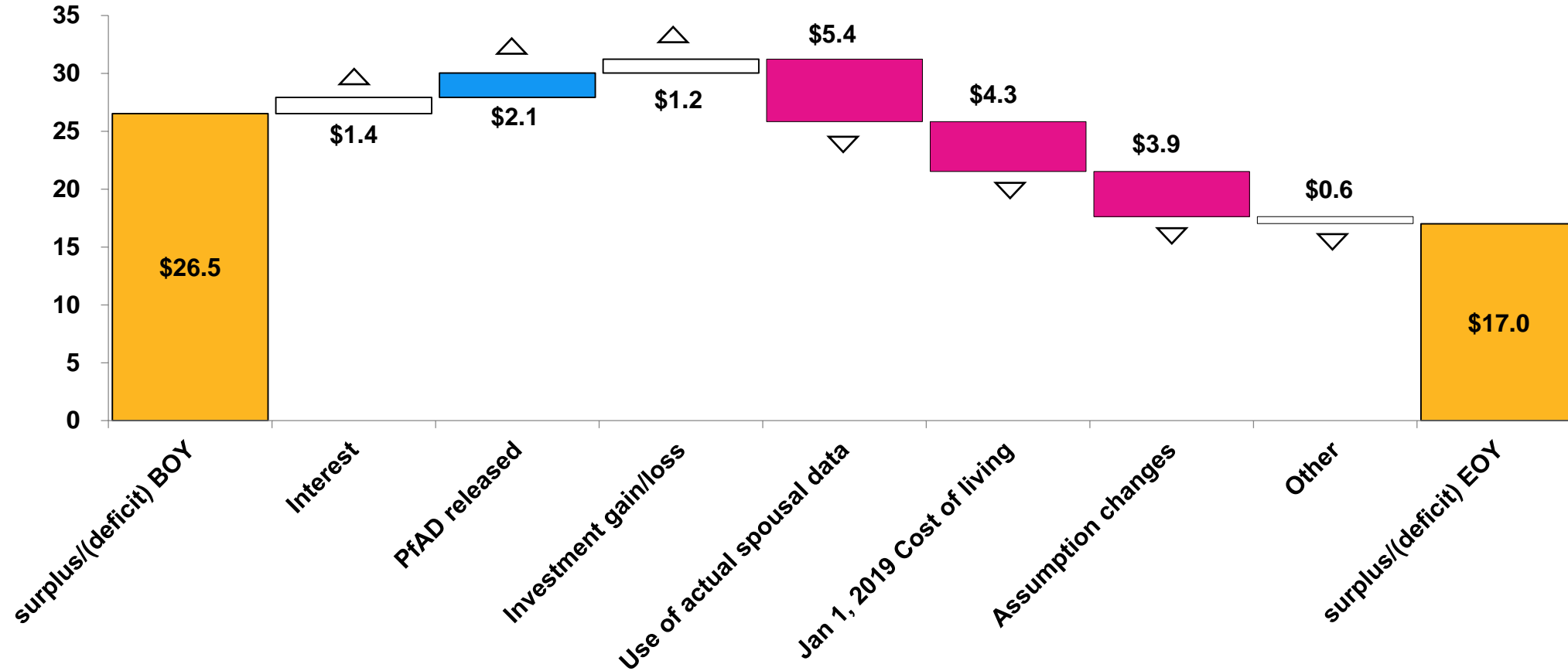
December 31, 2019 valuation results

Summary of going concern results



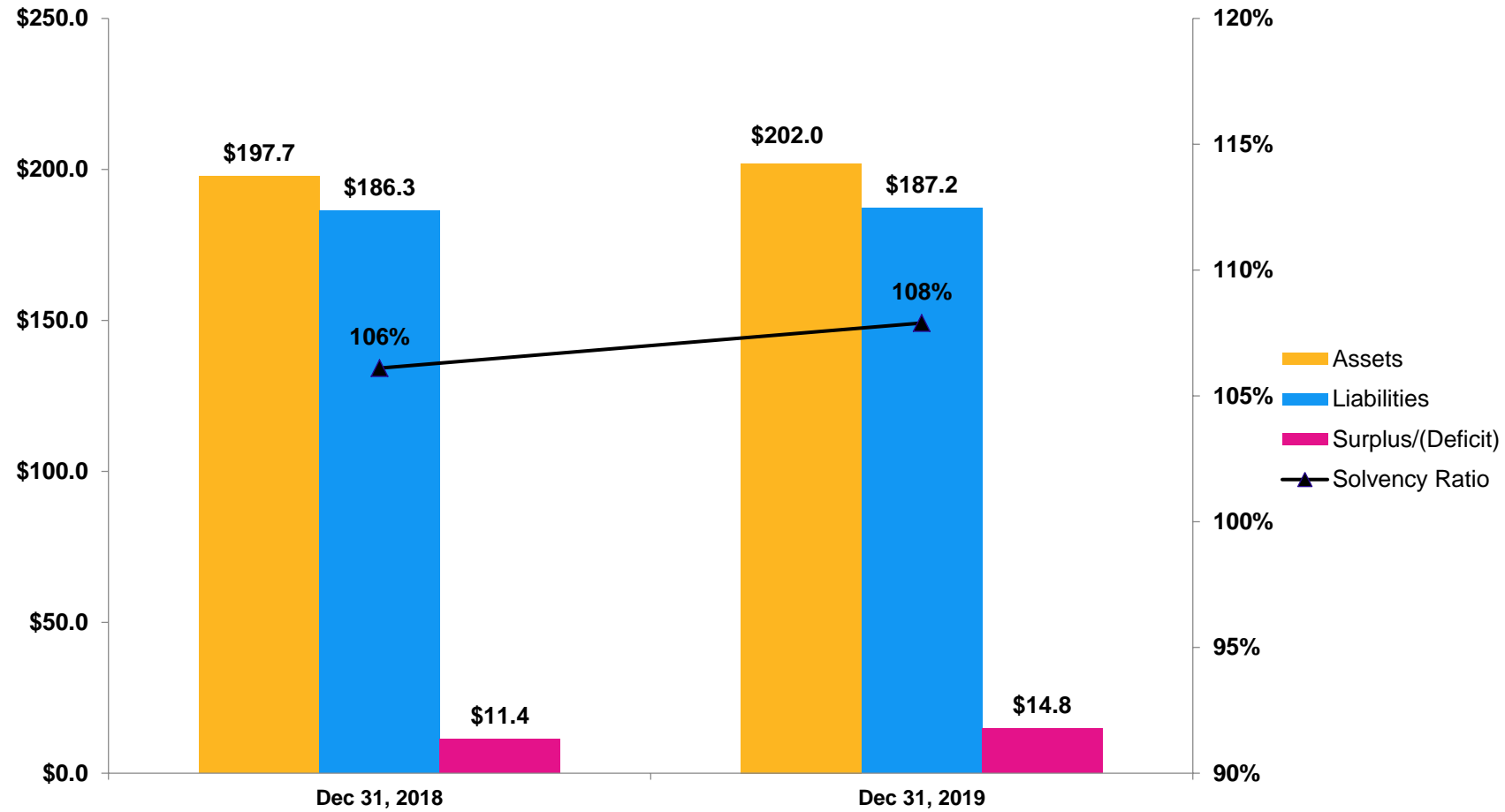
Reconciliation of going concern position

Figures shown in millions

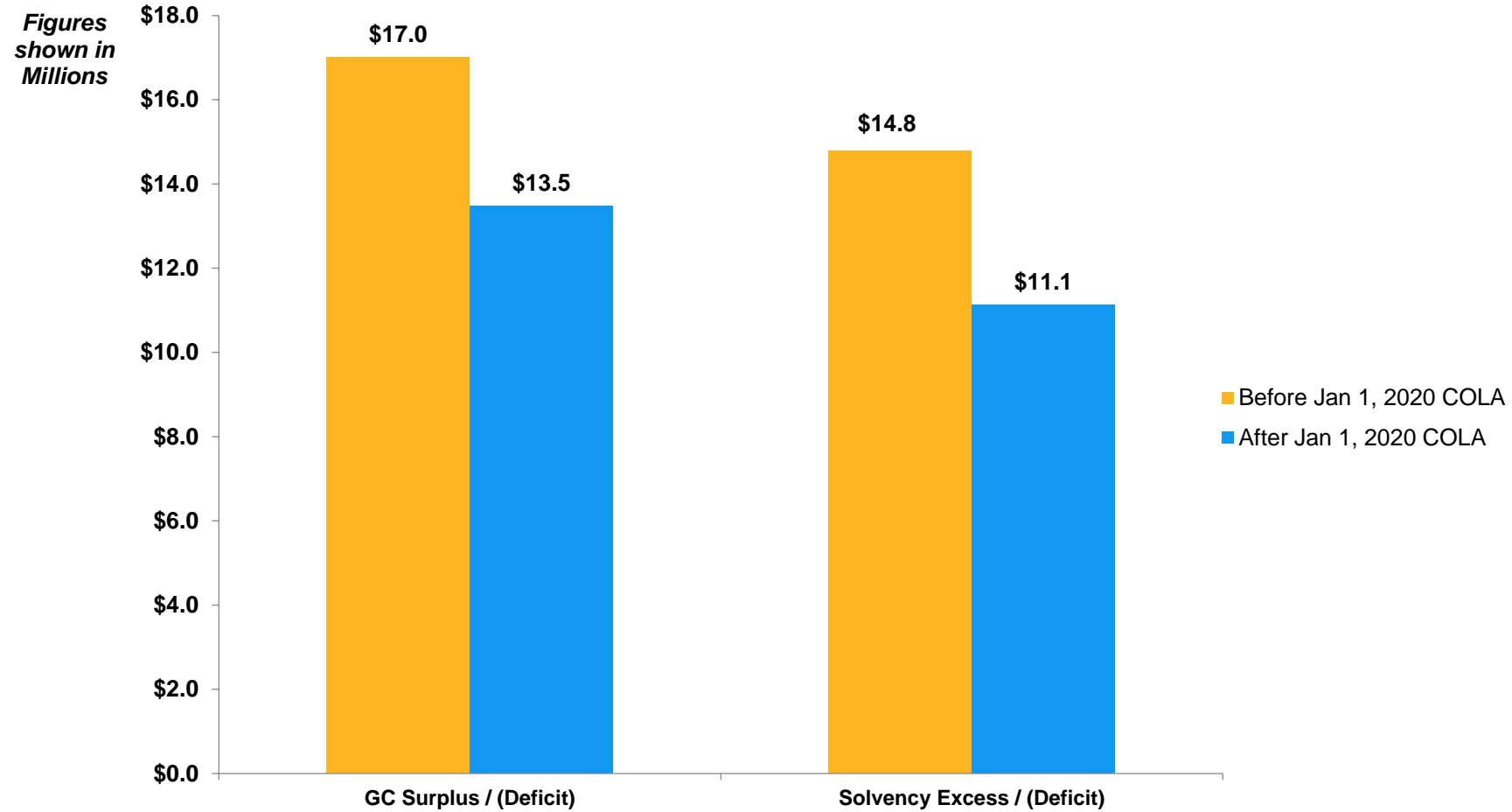


Summary of solvency results

Figures shown in Millions



Impact of January 1, 2020 COLA



Next steps

Next step

- Prepare and file the actuarial valuation report based on the final decision of the Committee

Actuarial opinion

Actuarial opinion

Purpose

This presentation has been prepared for the internal use of the Benefit Fund Committee of the Toronto Fire Department Superannuation and Benefit Fund and the City of Toronto and presents the financial position as at December 31, 2019 on going concern funding and solvency bases of the Toronto Fire Department Superannuation and Benefit Fund (“the Plan”).

This presentation is not intended nor suitable for other purposes. Further distribution of all or part of this presentation to other parties or other use of this material is expressly prohibited without Buck’s prior written consent.

Plan assets and membership data

Plan asset information as at December 31, 2019 is based on the pension fund statements provided by the City of Toronto. This information has been relied upon by Buck’s tests for reasonableness with respect to contributions, benefit payments and investment income.

The membership data was provided by City of Toronto as at December 31, 2019. The data have been reviewed for reasonableness and consistency with the previous valuation data; these tests indicate that the data are sufficient and reasonable for the purposes of the valuations. This year, the City of Toronto has also provided us with the available spousal data for current pensioners. The valuation includes the financial impact of incorporating the spousal data at December 31, 2019 actuarial valuation.

Actuarial opinion (Cont'd)

Assumptions, methods and plan provisions

Except as noted in the presentation, the results presented herein have been based on the same assumptions, methods and plan provisions disclosed in the December 31, 2018 valuation report filed with FSRA (formerly FSCO).

Actuarial opinion

In our opinion, for the purposes of this actuarial valuation, the membership data on which the valuations are based are sufficient and reliable and the assumptions and methods used in the valuations are appropriate. This presentation has been prepared, and our opinions have been given, in accordance with accepted actuarial practice in Canada. This actuarial valuation has been conducted in accordance with the funding and solvency standards prescribed by the Pension Benefits Act (Ontario) Regulations (“the PBA Regulations”), and in conformity with the requirements of the Income Tax Act (Canada) Regulations.

Buck Canada HR Services Limited

Alfonse Souka, FCIA, FSA

March 25, 2020

Appendix

Market value reconciliation

Asset reconciliation	2019
Adjusted market value of assets at beginning of period	\$ 197,908,815
Employer contributions	-
Benefit payments	(19,308,101)
Investment earnings	25,420,717
Fees and expenses	<u>(936,758)</u>
Market value of assets at end of period	203,084,673
Plus: Net outstanding amounts - investments	(87,056)
Less: Net benefits payables	(826,515)
Adjusted market value of assets at end of period	\$ 202,171,102

Performance of the fund

Year	Net return on Investments ⁽¹⁾	Net return on smoothed value
2019	12.96 %	5.87 %
2018	(2.04)%	4.50 %
2017	8.09 %	7.66 %
2016	5.85 %	9.33 %
2015	5.44 %	10.96 %
Five-year average	5.95 %	7.64 %

Smoothed value of assets

Year end	Investment gain/(loss) \$	% of gain/(loss) Deferred	Deferred gain/(loss) \$
2019	\$ 14,528,463	75 %	\$ 10,896,347
2018	(15,526,044)	50 %	(7,763,022)
2017	6,164,751	25 %	1,541,188
Smoothed value of assets adjustment			\$ 4,674,513

Smoothed value of assets	December 31, 2019
Adjusted market value of assets	\$ 202,171,102
Less: Smoothed value of assets adjustment	(4,674,513)
Smoothed value of assets	\$ 197,496,589

Summary of going concern results

Financial position	December 31, 2019	December 31, 2018
Smoothed value of assets	\$ 197,497,000	\$ 206,125,000
Going concern liabilities		
Pensioners	\$ 106,335,000	\$ 106,547,000
Beneficiaries	<u>57,752,000</u>	<u>56,722,000</u>
Total going concern liabilities	\$ 164,087,000	\$ 163,269,000
Going concern surplus/(unfunded liability)	\$ 33,410,000	\$ 42,856,000
PfAD on liabilities ⁽¹⁾	\$ 16,409,000	\$ 16,327,000
Going concern surplus/(unfunded liability) after PfAD	\$ 17,001,000	\$ 26,529,000

Reconciliation of going concern position

Reconciliation of financial position from previous valuation			
	Before PfAD	PfAD	After PfAD
Going concern surplus/(unfunded liability) at beginning of period	\$ 42,856,000	\$ (16,327,000)	\$ 26,529,000
Interest on going concern surplus/(unfunded liability)	2,250,000	(857,000)	1,393,000
PfAD released from the benefit payouts	<u>n/a</u>	<u>2,066,000</u>	<u>2,066,000</u>
Expected going concern surplus/(unfunded liability)	\$ 45,106,000	\$ (15,118,000)	\$ 29,988,000
Experience gains/(losses) due to:			
Investments	\$ 1,206,000	n/a	\$ 1,206,000
Mortality	<u>(498,000)</u>	<u>(50,000)</u>	<u>(548,000)</u>
Total experience gains/(losses)	\$ 708,000	\$ (50,000)	\$ 658,000
Cost of living adjustments in 2019	(3,951,000)	(395,000)	(4,346,000)
Assumption gains/(losses) due to:			
Economic	\$ (3,537,000)	\$ (354,000)	\$ (3,891,000)
Demographic	<u>(4,906,000)</u>	<u>(491,000)</u>	<u>(5,397,000)</u>
Total assumption gains/(losses)	\$ (8,443,000)	\$ (845,000)	\$ (9,288,000)
Other experience	(10,000)	(1,000)	(11,000)
Going concern surplus/(unfunded liability) at end of period	\$ 33,410,000	\$ (16,409,000)	\$ 17,001,000

Summary of solvency results

Financial position	December 31, 2019	December 31, 2018
Solvency assets		
Adjusted market value of assets	\$202,171,000	\$197,909,000
Wind-up expenses	<u>(200,000)</u>	<u>(200,000)</u>
Total solvency assets	\$201,971,000	\$197,709,000
Solvency liabilities		
Pensioners	\$121,200,000	\$121,039,000
Beneficiaries	<u>65,988,000</u>	<u>65,300,000</u>
Total solvency liabilities	\$187,188,000	\$186,339,000
Solvency surplus/(unfunded liability)	\$ 14,783,000	\$ 11,370,000

Key valuation assumptions: Going concern

Valuation date	December 31, 2019	December 31, 2018
Economic assumptions		
Discount rate	4.90% p.a.	5.25% p.a.
Provision for adverse deviation	Same	10.0% of liabilities
Post-retirement indexation	Same	No provision for future post-retirement ad hoc adjustments in the liabilities.
Demographic assumptions		
Mortality	Same	CPM2014 Publ (scale CPM-B) with size adjustment factors of 1.0106 for males and 0.9943 for females
Marital status	Married for retirees with spouse name on file and Single for the rest	60% assumed to have a spouse based on recent Plan retiree experience
Spouse's age	Actual; Records missing spouse date of birth: Females three years younger than males	Females three years younger than males

Key valuation assumptions: Solvency

Valuation date	December 31, 2019	December 31, 2018
Economic assumptions		
Discount rate	2.80% p.a. ⁽¹⁾	3.06% p.a.
Provision for windup expense	Same	\$200,000
Post-retirement indexation	Same	No provision
Demographic assumptions		
Mortality	Same	CPM2014 (scale CPM-B) with no size adjustment factors
Marital status	Married for retirees with spouse name on file and Single for the rest	60% assumed to have a spouse based on recent Plan retiree experience
Spouse's age	Actual; Records missing spouse date of birth: Females three years younger than males	Females three years younger than males

⁽¹⁾ Based on Preliminary guidance for Assumptions for Hypothetical Wind-Up and Solvency Valuations with Effective Dates on or after December 31, 2019 (but no later than December 30, 2020) and plan duration of 6.98 years.

Summary of plan participants

	December 31, 2019	December 31, 2018
Pensioners		
Number	317	340
Average age (years)	82.3	81.6
Annual benefit	\$12,385,133	\$12,944,019
Average annual benefit	\$39,070	\$38,071
Beneficiaries		
Number	299	303
Average age (years)	82.2	81.8
Annual benefit	\$7,307,565	\$7,177,555
Average annual benefit	\$24,440	\$23,688

⁽¹⁾ At December 31, 2019, 249 out of 317 pensioners have spouses.

Data reconciliation

	Pensioners	Beneficiaries	Total
Number at December 31, 2018	340	303	643
Changes due to:			
Deaths	(23)	(21)	(44)
New survivor	0	17	17
Family law separation new record	<u>0</u>	<u>0</u>	<u>0</u>
Total changes	(23)	(4)	(27)
Number at December 31, 2019	317	299	616

